ABSTRACT

CZECHOSLOVAK ECONOMIC RELATIONS WITH THE DEVELOPING COUNTRIES

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Work on relations between developing countries (LDCs) and the socialist countries has tended to focus on the Soviet Union because of its superpower status. This thesis adopts an alternative approach by examining relations between LDCs and a smaller, but still important country; because the absence of 'superpower' attitudes and concerns permits a less exclusive identification of the factors involved in bilateral economic relations between LDCs and a planned socialist economy.

The immediate post-Stalinist era in Eastern Europe coincided with the post-colonial era in the Third World. Because Western literature in this period often imputed sinister motives to socialist countries' efforts to develop relations with the new states, this thesis has analysed (with the benefit of two decades of hindsight) the relative importance of political and economic factors in the evolution of Czechoslovak/LDC economic relations. Qualitative analysis was reinforced where appropriate with statistical correlations between economic variables (including delta coefficients) and an index of UN voting patterns developed to approximate bilateral Czechoslovak/LDC 'political affinity'. The comprehensive approach adopted contributed significantly to placing specific aspects of bilateral relations between Czechoslovakia and a core group of 41 LDCs in a broader and therefore enhanced perspective. A number of selected but interrelated issues were examined - inter alia, historical antecedents; the direction, composition, and stability of trade; payments; politics; the terms of trade; barriers to trade; development assistance; and the arms trade - within the analytical framework of the 'intensity' approach to foreign trade.

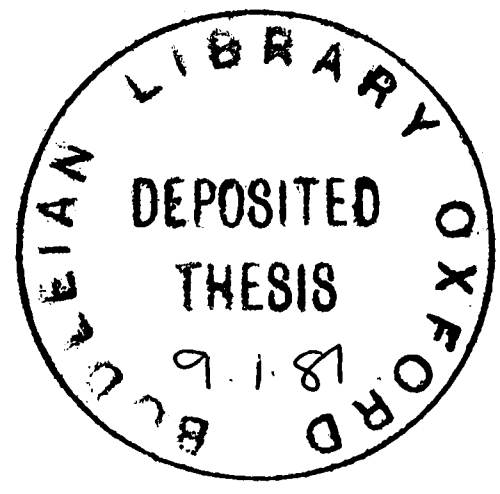
It was found that trade with LDCs has been historically concentrated on a small number of the larger economies, consisting of an exchange of Czechoslovak manufactures for raw materials or semi-processed products. The overall trade share of LDCs has declined slowly but steadily since the early sixties. Relations in the period 1960-1975 appear to have been based primarily on commercial considerations. World prices are allegedly preferred in trade, entrepots are used, development assistance is extended with domestic interests in mind, etc. Political biases are apparent only on the broader level: e.g. the preponderance of India and Egypt in trade with LDCs.

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PREFACE

Substantive research for this thesis was terminated in December 1978 because the author's economic instincts suggested that a firm offer of employment could not be ignored lightly in current economic conditions. Unfortunately it was realized only after his acceptance of the offer, that employment might be synonymous with work; leaving little spare time for the pursuit of private study and thesis writing. Nevertheless a degree of perseverance has finally resulted in the completion of what had been begun at St. Antony's almost five years earlier.

During this time much invaluable assistance was received from, among others, Dr M. Hauner, Dr G. Hughes, Dr V.V. Kusin, Dr R. Notel, Professor J.O.N. Perkins, Dr E.A. Radice, Professor P.J.D. Wiles and Dr W. Zmudzki; but particularly from Mr M.C. Kaser, Professorial Fellow at St. Antony's, Oxford, and the author's supervisor, whose guidance was indispensible. To all, and the many not named here, the author wishes to express his sincere gratitude, while exonerating them of any complicity in whatever faults the thesis may have retained. The author is equally grateful to Mr G. Mazzarino of the Oxford Institute of Economics and Statistics, for computing services rendered; to the staff of the numerous libraries used, especially the Bodleian, the IES and St. Antony's, for their cheerful help; and especially to Mrs V. Murn for typing the final manuscript at such short notice and with such skill and dedication - to her husband go my apologies for the disruption to his family life.

The views expressed in this thesis are the author's alone, and reflect in no way those of the Australian Government or the Australian Department of Foreign Affairs.

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Canberra

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ABBREVIATIONS AND ACRONYMS

ACC	:	Advanced Capitalist Country
ACDA	:	(U.S.) Arms Control and Disarmament Agency
CIP	:	Complete Industrial Plant
CMEA	:	Council for Mutual Economic Assistance
CoCom	:	the Coordinating Committee of the North Atlantic Treaty Organization's embargo
Comecon	:	see CMEA
CPE	:	Centrally Planned Economy
c.p.p.p.	:	Commercial Purchasing Power Parity
CSR	:	Czechoslovak Republic
CSSR	:	Czechoslovak Socialist Repulic
CTN	:	Commodity Trade Nomenclature
Deltaex	:	Delta coefficient calculated by dividing the Czechoslovak (export) share in another country's total imports, by Czechoslovakia's share of total world exports (section 3.2.1)
Deltaim	:	Delta coefficient calculated by dividing the share of a country in total Czechoslovak imports, by that country's share of world exports. (section 3.2.1).
Deviza	:	Foreign exchange form of currency. Applied to currency used for foreign trade to distinguish it from domestic currency under a Preisausgleich. Synonymous with 'valuta'.
ECE	:	(U.N.) Economic Commission of Europe.
ECOSOC	:	(U.N.) Economic and Social Council
EEC	:	European Economic Community
FAO	:	Food and Agricultural Organization
fto	:	foreign trade organization
GATT	:	General Agreement on Tariffs and Trade
GDP	:	Gross Domestic Product

GDR	:	German Democratic Republic
GNP	:	Gross National Product
GSP	:	Generalised System of Preferences
IBEC	:	International Bank for Economic Cooperation
IIB	:	International Investment Bank
IMF	:	International Monetary Fund
NIC	:	Newly Industrialising Country
KSC	:	Komunisticka Strana Ceskoslovenska (Czechoslovak Communist Party)
LDC	:	Developing Country (synonymous with now little used 'Less Developed Country')
MFN	:	Most Favoured Nation
milliard	:	thousand million (billion)
NMP	:	Net Material Product
ODA	:	Official Development Assistance (OECD usage)
OECD	:	Organization for Economic Development and Cooperation
Preisausgleich	:	The separation of foreign and domestic prices. According to Wiles (1968), p. xii, "the budgetary measures taken in an STE, q.v., to skim the profits of importers and make good the losses of exporters in home currency."
SDR	:	Special Drawing Rights (IMF)
SIPRI	:	Stockholm International Peace Research Institute
SITC	:	Standard International Trade Classification
STE	:	Soviet Type Economy
UNCTAD	:	United Nations Conference on Trade and Development
UNDP	:	United Nations Development Programme
UNIDO	:	United Nations Inaustrial Development Organization
VRCV	:	Soustava Vnitrniho Reprodukcniho Cenoveho Vyrovnani (the system of Internal Reproductive Price Equalization). (see section 1.3, p. 33.)

EXPLANATORY NOTES

All foreign trade values for post-1948 data are in foreign trade ('valuta' or 'deviza') koruny, or in $U.S. converted at official rates given in the U.N. *Yearbook of International Trade Statistics*, 1975, p. 307; unless otherwise indicated.

Kc	:	Czechoslovak koruna, interwar period
K	:	Bohemian-Moravian koruna, Second World War
Kcs	:	Czechoslovak koruna, postwar period

In tables:

Two dots (..) indicate that data are not available or are not separately reported.

A dash (-) indicates that the amount is nil or negligible.

A blank indicates that the item is not applicable.

'Developing countries'(synonymous with Less Developed Countries: LDC's) includes the Caribbean area, Central and South America, Africa (other than South Africa), the Asian Middle East (other than Israel) and East and South-East Asia (other than Japan). 'Developed market economies' includes North America (Canada and the United States of America). Europe (other than Eastern Europe), Australia, Israel, Japan, New Zealand and South Africa. 'Centrally planned economies' includes Albania, Bulgaria, China, Czechoslovakia, the Democratic People's Republic of Korea, the German Democratic Republic, Hungary, Mongolia, Poland, Romania, the Union of Soviet Socialist Republics and Viet Nam. In some tables the classification may differ from that given above, depending on the source cited.

For stylistic reasons certain other denominations of country groups are also used in the text. The words 'South', 'Third World' and corresponding forms refer to all developing countries. The word 'North' and corresponding forms refer to the industrialised market economy countries, broadly synonymous with the OECD area. 'Socialist countries', 'East' and corresponding forms refer to 'centrally planned economies' as above. These definitions are not rigorous however.

Dates divided by a slash (1960/61) indicate a crop year or a financial year.

Dates divided by a hyphen (1960-1965) indicate the full period involved, including the beginning and end years.

The terms milliard and billion signify a thousand million.

Annual rates of growth or change refer to annual compound rates, unless otherwise specified.

z : refers to values of the standard normal distribution.
t : refers to values of Student's t distribution.
U : Mann-Whitney test statistic.
r : Spearman's rank correlation coefficient.
n : Number of observations.

BIBLIOGRAPHICAL ABBREVIATIONS

AER	:	American Economic Review
APSR	:	American Political Science Review
BOXES	:	Bulletin of the Oxford University Institute of Economics and Statistics
CDSP	:	Current Digest of the Soviet Press
CFT	:	Czechoslovak Foreign Trade
CSP	:	Canadian Slavonic Papers
EBFE	:	Economic Bulletin for Europe
EE	:	East Europe
EEE	:	Eastern European Economics
EJ	:	Economic Journal
ER	:	(Australian) Economic Record
FACTS	:	Facts on Czechoslovak Foreign Trade
FEER	:	Far Eastern Economic Review
FT	:	Financial Times (London)
FU	:	Finance a Uver
HJE	:	Hitotsubashi Journal of Economics
HN	:	Hospodarske Noviny
ICR	:	International Currency Review
JIT	:	Journal of Industry and Trade (New Delhi)
MP	:	Mezinarodni Politika
MV	:	Mezinarodni Vztahy
NM	:	Nova Mysl
NZO	:	Noviny Zahranicniho Obchodu
ON	:	Obzor Narodohspodarsky
PE	:	Politicka Ekonomie
PEEE	:	Papers in East European Economics (St Antony's College, Oxford)
PH	:	Planovane Hospodarstvi
RES	:	Review of Economics and Statistics
RP	:	Rude Pravo (Party Daily)
SAEEFT	:	Soviet and Eastern European Foreign Trade
SH	:	Svet Hospodarstvi
SR	:	Statisticka Rocenka

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SS	:	Soviet Studies
SYTAA	:	(League of Nations) Statistical Yearbook of the Trade in Arms and Ammunition
TEEFT	:	(U.S. Department of Commerce, Joint Publications Research Service) Translations on East European Foreign Trade
VE	:	Voprosi Ekonomiki
WD	:	World Development
WP	:	World Politics
WT	:	World Today
ZO	:	Zahranicni Obchod
ZORC	:	Zahranicni Obchod Republiky Ceskoslovenske

CHAPTER 1

CZECHOSLOVAK TRADE: BACKGROUND

1.1 TRADE POLICY

1.1.1 The Level of Trade

Czechoslovakia has never regained the share of world trade it held on the eve of the Second World War, although Table 1.1 shows that it was close to attaining its prewar share in the early sixties. By 1975, however its share of world exports[1] was only 54 percent of that held in 1937. There are several reasons for this attenuation in trade shares. Firstly, Czechoslovak trade in the postwar period has been principally directed towards the Comecon countries. Because Comecon prices after 1949 have been on a lagged trend in relation to world prices, and given that the latter moved sharply upwards after 1973, the use of value estimates of trade lead to a downward bias in the comparison of the Czechoslovak share of world trade in 1975 relative to its share in 1937. The second reason is that before the war, Czechoslovakia, as a market economy trading freely with other market economies, could specialize its exports on the products in which it had greatest comparative advantage. Membership of Comecon compelled Czechoslovakia - at least initially - to broaden its export profile because other members relied on it for a wide range of industrial products. As those countries developed their own industrial capacity in the sixties, Czechoslovakia was left producing goods in which it had a relative disadvantage elsewhere on world markets. Moreover lack of specialization resulted in relative inefficiency in production. Thirdly, the Second World War led to the loss of both territory (Ruthenia) and skilled labour and entrepreneurs, particularly Sudeten Germans. Not only was skilled manpower lost, but a smaller population meant that exports were even more necessary to achieve economies of scale. Finally, the share of imports in world trade is artificially low in Table 1.1 because Czechoslovak data are in f.o.b. values, while most other countries report imports as c.i.f.

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1 The preferable measure to imports because c.i.f. data for Czechoslovakia are unavailable after 1948.

TABLE 1.1 CZECHOSLOVAKIA'S SHARE OF WORLD TRADE

(*percent*)

	1937	1948	1955	1960	1965	1970	1975
imports[a]	1.45	1.07	1.08	1.34	1.36	1.12	1.00
exports[b]	1.79	1.31	1.26	1.51	1.44	1.21	0.96

Source: United Nations, *Statistical Yearbook*, various years.

[a] World data 1937-1975 and Czechoslovakia 1937 in c.i.f. values. Czechoslovak data 1948-1975 are f.o.b.

[b] All data f.o.b.

1.1.2 Autarky and Trade Participation

There are two directions - autarky and hyperpoly - in which an economy may move from the ideal position defined under the assumption of perfect competition: that is, with the exchange rate acting as an equilibrating mechanism between flows of goods and capital, and equal to the purchasing power parity of the domestic currency. Autarky is defined to exist where an economy trades at a volume lower than the optimal position of perfect competition, while hyperpoly represents a position of relative over-trading.[1] It was common among Western economists in the past to assume that most Eastern European economies engage in autarky as an *ex ante* or deliberate decision.[2] On the other hand, Czechoslovak sources have continually stressed the inadequacy of the domestic raw materials base and the limited domestic market, and hence the highly trade-dependent nature of the economy.[3] An attempt is made below to measure the degree of trade participation of the

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[1] P. Wiles, *Communist International Economics,* Blackwell, Oxford, 1968, ch. 15, especially pp. 419-426. Wiles is probably the first to have used the term 'hyperpoly'. Note that his definition of autarky, rather than its stricter meaning as the complete absence of trade, is followed here.

[2] F.D. Holzman, 'Soviet central planning and its impact on foreign trade behaviour and adjustment mechanisms', p. 283 in A.A. Brown and E. Neuberger, *International Trade and Central Planning. An Analysis of Economic Interactions,* University of California Press, 1968.

[3] e.g. J. Vlach, 'Foreign trade - a means of economic effectiveness', *CFT*, no. 6, 1963, pp. 3-6. Also J. Kubalek, 'Kriteria efektivnosti v zahranicnim obchode', *PE*, no. 11, 1973, p. 1028.

Czechoslovak economy, but given the implied (by Western economists) ex ante nature of autarky and hyperpoly, it was felt necessary to briefly review economic thought on trade in Czechoslovakia. It must be stressed that this brief review is merely meant to highlight certain trends and is in no way an exhaustive or systematic study of such thinking.

The Cold War period was probably a good example of attempted autarky particularly towards the West; an attempt based primarily on grounds of national security and probably conservation of foreign exchange.[1] Use of the material balances method of planning meant that import needs were determined first, and sufficient exports (proferably surplus production) were then scraped together to pay for the imports. In this import-determined model of trade, imports were seen as enriching the economy, while exports deprived a country of goods - a view analogous to the medieval 'policy of provision'.[2] Use of the identity:

production + imports - exports ≡ consumption

led directly to the conclusion that a negative balance of trade (where credit was available) was a desirable goal because it made available producer goods, and hence a possible increased rate of accumulation, than would have been the case in the absence of trade.[3] This 'exports are bad' doctrine - in direct contrast to the Keynesian view that exports are good because they stimulate demand - is based on the premise of a fully-employed economy.

A modification of this attitude seems to have resulted from an increasing preoccupation in the early and middle sixties with economic efficiency and external competitiveness (balance of payments problems were no doubt

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1 R. Simacek, 'Zahranicni obchod a narodni duchod', *ZO*, no. 10, 10 March 1950, pp. 165-167, attributes to the economist J. Goldmann the view that steel production required fewer imported inputs than, for example, the textile or leather industries, and was therefore preferable.

2 Wiles (1968), p. 450, draws this East European parallel with Eli Hecksher's term for autarkic tendencies in the Middle Ages.

3 K. Jirova, *Planovani Zahranicniho Obchodu v CSSR*, VSE, Statni Nakladetelstvi Pedagogicke, Prague, 1963, pp. 7-8.

instrumental in this).[1] Instead of exports being an unwelcome necessity arising from the need to import, the rationale was now inverted to 'exports first':

> "The basic and permanent task of economic policy is to enforce the active direction of the whole economy towards effective exports and the increased competitiveness of our products on world markets. In doing so, the basic preconditions for growth of imports will also be created and our economy will become more open to foreign competition. An immediate problem is to regain equilibrium in ... the balances of trade and payments ...".[2]

Spurred on perhaps by the deficit on the balance of trade in 1968, the debate on the function and relative utility of imports and exports continued until at least 1970 without a firm victory for proponents of either view.[3] Thereafter there is the propagation of the concept of 'external economic relations' (vnejsi ekonomicke vztahy) - a term often used to express increased cooperation with CMEA countries[4] - which is meant to reflect the integration of economic policies, where trade is no longer seen as an isolated or 'rump' sector of the planned economy.[5] It seems that this new approach was a direct result of attempts at greater economic integration and growth within

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1 "It is no coincidence that we only discovered some of the shortcomings of foreign trade theory when we began to concern ourselves with questions of the profitability of foreign trade as one of the factors in the effectiveness of foreign trade". V. Cerniansky, *Ekonomika Socialistickeho Zahranicniho Obchodu*, SNTL, Prague, 1961, p. 24, footnote 2.

2 B. Simon, *et. al.*, 'Vnejsi hospodarske vztahy Ceskoslovenska', *NM*, no. 4, 1968, p. 436. The epilogue (p. 439) states that this article is one of a series attempting to formulate current Party policy.

3 M. Churanek, 'Zahranicni obchod - faktor rustu a ekonomicke rovnovahy', *ZO*, no. 5, 1970, p. 42, refers to the "incorrect thesis on the passive role of foreign trade ... still existing in the minds of some economists".

4 M. Hrncir, 'Funkce vnejsich ekonomickych vztahu v centralne planovane ekonomice', *PE*, no. 11, 1973, p. 981, footnote 2, attributes the origin of the concept to the fourteenth Party Congress in 1971. J. Tauchman, 'Teoreticke otazky vnejsich ekonomickych vztahu CSSR', *NM*, no. 9, 1970, p. 1246, claims the same meaning for the term but says it is in common use (in 1970).

5 J. Nykryn, 'Statni monopol vnejsich ekonomickych vztahu', *PE*, no. 11, 1973, especially p. 1047.

CMEA.[1] Increased external indebtedness in recent years has also led to the suggestion that the narrow range of possibilities for increasing exports could be partially overcome by concentrating on the export of services (which have low raw materials requirements) such as tourism, licences and patents, education, scientific knowledge, culture, etc.[2]

Several other strands run through the debate on the importance of trade to the economy. Initial concern with the harmful effects of international trade cycles on the domestic economy - reinforced by defence considerations and fear of excessive dependence on a hostile West - has diminished. In 1973 Miroslav Hrncir argued that trade is precisely an instrument for dampening domestic economic cycles, although he qualified this by saying that there must not be simultaneous fluctuations in other economies and that an efficient and competitive export industry is essential.[3] As was the case in the West, early preoccupation with cyclical problems has given way to an examination of the growth process. Czechoslovak economists initially accepted Kalecki's thesis that as the socialist economy develops, its growth is limited by (balanced) trade.[4] At higher stages of development, the demand for imports rises and because trade is balanced (imports equal exports) in the model, then *ceteris paribus*, exports must be increased. But the attempt to increase exports encounters marketing difficulties abroad - this seems to rest on the assumption of a static level of world trade and of growth of other economies - while the expansion of export industries results in domestic bottlenecks in construction and raw materials sectors, assuming that the value of 'u' (the parameter of increased efficiency which may result from

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1 M. Havlickova, 'K problematice ulohy zahranicniho obchodu v procesu hospodarskeho rustu', *PE*, no. 11, 1973, p. 1065.

2 M. Hrncir, 'Vnejsi ekonomicke vztahy v planovane ekonomice', in Z. Haba and Z. Mosna (eds), *Ceskoslovenska Ekonomika v Sedmdesatych Letech (vybrane problemy)*, CSAV, Prague, 1975, pp. 200-201.

3 Hrncir (1973), pp. 989-990.

4 M. Kalecki, *Introduction to the Theory of Growth in a Socialist Economy*, Blackwell, Oxford, 1969, pp. 44-45. J. Goldmann, 'Fluctuations and trend in the rate of economic growth in some socialist countries', *EEE*, Fall 1965, pp. 14-15, is an example of Czechoslovak agreement with Kalecki.

institutional change and reorganization) remains constant. By 1973 there is an explicit rejection of this view, coupled with a statement proposing that the " ... function of foreign trade as a growth factor increases with economic development ...".[1] Exports, because of their contribution to efficiency are seen as vital to economic growth and not as a barrier to it.

The degree of autarky cannot be quantified because it is not possible to judge what the level of trade 'would have been' under free trade. It is possible however to calculate participation rates and to compare these with rates for countries of comparable size. Two major types of participation rates are commonly used: the level of trade per head of population and its level relative to national income. These ratios should reflect the importance of trade to a country, although little work has been done on this aspect of trade theory. It must also be borne in mind that many other factors are highly pertinent to a country's level of trade; in particular resource endowment, trade barriers and geographical position (e.g. proximity to a large trading nation). If it is assumed that autarky, or the unwillingness to trade (in a planned economy) is the major variable, then examination of participation rates over time and between countries should indicate at least the approximate importance of autarkic tendencies.

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[1] Havlickova (1973), p. 1065.

TABLE 1.2 PER CAPITA TRADE PARTICIPATION RATIOS[a]
(million deviza koruny per head at constant prices)[b]

Year	imports	exports	population (thous.)	imports per head	exports per head
1950	41.1	41.0	12389	0.33	0.33
1953	56.9	56.9	12820	0.44	0.44
1955	69.8	72.0	13093	0.53	0.55
1960	130.7	138.9	13654	0.96	1.02
1965	200.9	197.3	14159	1.42	1.39
1970	266.3	251.2	14334	1.86	1.75
1975	314.8	320.6	14857	2.12	2.16

Sources:

Trade data from *Facts on Czechoslovak Foreign Trade*, various years. Price indices from J. Vanous, *The Determinants of East-West Trade Flows, and the Causes of Deficit Spending of CMEA Economies* discussion paper no. 376 prepared for the meetings of the Eastern Economic Association, Hertford, Connecticut, 14-16 April 1977, Tables 4 and 5. Population figures from *30 let CSSR. Dlouhodobe Casove Rady*, Tables 1 and 39, and *Statisticka Rocenka*.

[a] Trade data include re-exports.

[b] Price indices for trade with West only (1960 = 100).

Table 1.2 shows per capita import and export participation rates in constant prices. The only price indices readily available for Czechoslovakia for the period were for trade with the West. Because CMEA trade prices have generally lagged behind those of the West[1] the results probably underestimate participation rates. This underestimation is not uniform over the entire period so that precise conclusions cannot be drawn. It is obvious however that despite population growth, per capita trade volume has increased, probably reflecting the increasing stress laid by Czechoslovak economists and politicians on the importance of trade to the economy. In a market economy, the increase in per capita imports could be partially attributed to the growth in per capita income, but this is not a realistic explanation where

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[1] M. Kaser, 'Impact of Western inflation in Eastern Europe', *ICR*, September-October 1974, pp. 27-29.

planners rather than consumers determine the level and composition of imports. Another explanation is that economic development leads naturally to higher dependence on trade as the economy becomes more specialized (producing more 'surplus' goods which are exchanged for goods produced at a comparative advantage abroad). If planners do not act in an autarkic fashion, even a planned economy could be subject to this effect. Unfortunately, two cross-country studies produced conflicting results on the Czechoslovak level of per capita trade participation compared with other European countries.[1] In any case such comparisons are not very reliable in determining relative levels of autarky because of the multiplicity of other variables (e.g. resource endowment) which may influence the results.

An alternative measure of trade participation is the trade/product ratio: the proportion of national income generated by (or spent on) foreign trade. The major difficulty with this approach is that the preisausgleich (or separation of domestic prices from foreign trade prices) precludes the direct calculation of trade values in the units used to measure national income for the period 1948-1975. Nevertheless, an attempt was made to form an estimate of trade participation, and the results are presented in Tables 1.3 and 1.4. Table 1.3 relies primarily on Hrncir[2] but is corroborated by other secondary sources;[3] and by information for 1960 and 1966 in *Statisticka Rocenka* which yielded figures for the percentage of industrial production exported,[4] and the percentage of industrial goods in total

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1 M. Kaser, *Comecon. Integration Problems of the Planned Economies*, O.U.P., 1967 (2nd edition), p. 140, found that for the period 1950-1965, Czechoslovakia was the most trade-dependent (per capita) of the East European countries. Another study, ('Trade dependence in European countries', ECE, *EBFE*, 1970, no. 1, p 43) encompassing 23 European countries as well as Japan and North America, came to virtually the opposite conclusion.

2 M. Hrncir, *et. al., Vnejsi Ekonomicke Vztahy a Efektivnost Cs. Narodniho Hospodarstvi*, Horizont, Prague, 1975, Table 1, p. 10.

3 J. Stouracova, 'K problematice zvysovani narodohospodarske efektivnosti cs. vnejsich ekonomickych vztahu', *PE*, no. 11, 1973, p. 1015. Also V. Prucha, *Hospodarske Dejiny Ceskoslovenska v 19. a 20. Stoleti,* Svoboda, Prague, 1964, p. 410.

4 *SR*, 1959, p. 363; 1965, p. 384.

exports,[1] as well as absolute values in domestic prices of gross industrial production. Furthermore, Tables 1.3 and 1.4 are consistent at least for orders of magnitude with Western estimates relying on input/output tables.[2]

However, caution must be exercised in drawing conclusions about the level and the (very rapid) growth of the trade participation ratio from 1950 to 1974.[3] Firstly, the level of trade participation is overstated because national income (NMP) data do not include services. It is also possible that the degree of overstatement has varied over time, but because the value of services in national income was not known, this could not be accurately determined. Secondly, because prices do not reflect scarcity values,[4] it is difficult to meaningfully compare Czechoslovak participation ratios with ratios for other countries. Methods of determining prices have also changed over time - notably in 1967 - and this has almost certainly affected the data. An attempt was made to overcome this problem by using volume indices for trade and NMP but these also proved unreliable over a long period of time. A third, conceptual problem is the inclusion of re-exports; for which separate data are unavailable. The existence of re-exports, either in 'improvement' trade or as entrepot trade, increases trade participation levels. This complicates cross-country comparisons but it is submitted that re-export should always be included because their existence in a socialist economy is by deliberate choice in the allocation of resources for the creation of the national income.

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1 *SR*, 1968, p. 428; 1969, p. 411. No explanation accompanies these tables nor does this information appear to have been presented in other issues.

2 *EBFE*, no. 1, 1970, p. 49, upper Table.

3 J. Krejci cautions (in private correspondence) against the apparently excessive trade participation ratios revealed in Table 1.4, although he uses the same data - for a different purpose - in 'Measurement of aggregate efficiency in the Czechoslovak economy', *SS*, October 1974. Moreover, he argues on p. 599, footnote 20, of this article that trade data in domestic prices for 1967 are unreliable; and in private correspondence that the 1967 price reform may have affected the results of Table 1.3, row (1). However the apparently excessive levels of the ratios appear to be due to the slower rate of growth of NMP (in the sixties and the seventies) than of trade, and the 1967 price reform does not appear to have affected the results of Table 1.3, row (5).

4 J. Pleva, 'Foreign trade and the new system of management' *SAEEFT*, November-December 1965, p. 43, for example, claims that producers tended to deliberately import more expensive imports, process them in a "primitive way" and then re-export them, in order to more easily fulfill plan targets.

TABLE 1.3 TRADE/PRODUCT RATIOS, AND RATIOS OF TRADE VALUES IN DOMESTIC PRICES TO FOREIGN (DEVIZA) VALUES SELECTED YEARS

Variable[a]	row	1950	1955	1960	1965	1969	1970
% share of exports in NMP produced	(1)	9.6	10.5	15.9	21.9	26	26.9
NMP produced (mn. Kcs in d.p.)	(2)	85406	133669	162956	173519	293717	312345
exports (mn. Kcs in d.p.)	(3)	8199	14035	25910	38001	76366	84021
ratio of exports in d.p. to 'deviza' values of exports	(4)	1.46	1.66	1.87	1.96	3.20	3.08
% share imports in NMP utilised	(5)	8.6	11.7	16.9	25.0	24	25.7
NMP utilised (mn. Kcs in d.p.)	(6)	82644	131163	158171	169643	250366	300841
imports (mn. Kcs in d.p.)	(7)	7107	15346	26731	42411	60088	77316
ratio of imports in d.p. to 'deviza' values of imports	(8)	1.54	2.02	2.04	2.20	2.53	2.91

Sources:

Variable (1) and (5). Except for 1969, M. Hrncir, *et. al.*, *Vnejsi Ekonomicke Vztahy a Efektivnost Cs. Narodniho Hospodarstvi*, Horizont, Prague, 1975, Table 1, p. 10. The 1969 figure is probably an approximation and is taken from the text of p. 21 of *Facts on Czechoslovak Foreign Trade*, 1971. Neither source explains the method of calculation, but the proportions are not in 'deviza' units.

Variables (2) and (6). 'Vytvoreny narodni duchod v beznych cenach' and 'uzity narodni duchod v beznych cenach' respectively, from *Statisticka Rocenka*, relevant years.

Variables (3) and (7). Derived from rows (1) and (2); and rows (5) and (6).

Variables (4) and (8). Values in d.p. from rows (3) and (7). Deviza values from *Statisticka Rocenka*, relevant years.

[a] NMP = Net Material Product
d.p. = domestic prices
mn. = million
Kcs = koruny

TABLE 1.4 RATIOS OF TRADE VALUES IN DOMESTIC PRICES TO FOREIGN (DEVIZA) VALUES AND TRADE/PRODUCT RATIOS, 1968-1974

Variable	Row	1968	1969	1970	1971	1972	1973	1974
exports (d.p.)	(1)	60638	71807	83947	93185	100807	109786	131766
exports (f.t.p.)	(2)	21638	23900	27305	30095	32588	35322	41213
export ratio	(3)	2.80	3.00	3.07	3.10	3.09	3.11	3.20
share exports in NMP produced	(4)	23.5	24.4	26.9	28.4	29.1	30.2	33.7
imports (D.P.)	(5)	59021	68002	77743	84840	91855	107482	136066
imports (f.t.p.)	(6)	22155	23718	26605	28870	30912	35805	43974
import ratio	(7)	2.66	2.87	2.92	2.94	2.97	3.00	3.09
share imports in NMP utilised	(8)	23.3	23.8	25.8	27.1	27.7	30.2	35.0

Source:

Statisticka Rocenka 1970-1977. Import and export data in domestic prices (d.p.) are published only for 1968 onwards, in the chapter on national income and social product. No data in d.p. for 1975 were available in the 1977 edition.

d.p.	:	domestic prices
f.t.p.	:	foreign trade prices
export (import) ratio	:	exports (imports) in d.p. divided by exports (imports) in f.t.p.
rows (4) and (8)	:	percentage ratio of exports (imports) in d.p. to NMP produced (utilised) in d.p. That is, the trade participation ratio.

Notwithstanding these shortcomings in the data, it can be generally concluded that Czechoslovak trade participation has grown markedly since 1950. It is not, however, possible to say whether this represents a shift from an autarkic position to 'normal' trade levels, or even to hyperpoly, because the 'normal' level is a hypothetical one and cannot be measured. Wiles[1] compared postwar participation rates with those for 1929 and 1937

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[1] Wiles (1968) p. 443, Table 15. Both Wiles (1968) and J. Michal, 'Czechoslovak foreign trade', *Slavic Review*, June 1968, p. 212, concluded that trade participation levels extant in 1937 were reached again by the middle sixties.

with the latter two dates representing trade under conditions of 'perfect competition'. While this is probably a valid comparison, it has not been used here because the fundamental change in international trading patterns, pre- and post-Second World War, make comparisons over such a long historical period rather tenuous. Cross-country comparisons also suffer from drawbacks. Wiles[1] found no clear pattern, but his results agree with the conclusion reached in an ECE study,[2] that Czechoslovakia had low trade participation rates relative to other European countries. However the ECE study also found that most European countries substantially increased their trade participation rates between 1953 and 1967 as industrialization progressed.[3]

1.1.3 Politics and Trade

While political considerations form an important basis for socialist trading relations, only a brief examination of this aspect of trade is undertaken here (see also Section 3.7). The failure of Czechoslovak foreign policy at Munich in 1938 convinced President Benes that Czecboslovakia should be part of both East and West and not exclusively of one bloc or the other.[4] This policy failed too when Stalin vetoed Czechoslovak participation in the Marshall Plan[5]; and, within a year, Gottwald had announced in a speech to the National Assembly that:

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1 Wiles (1968), pp. 442-444.

2 *EBFE*, no. 1, 1970, p. 51.

3 *ibid.*, p. 43.

4 E. Benes, *Memoirs of Dr Edvard Benes. From Munich to New War and New Victory*, Arno Press, N.Y., 1972, p. 282.

5 H. Ripka, *Czechoslovakia Enslaved: the Story of the Communist coup d'etat*, Gollancz, London, 1950, book 2, ch. 1. Also E. Loebl, *Sentenced and Tried*, Elek books, London, 1969, p. 26. Neither Ripka nor Loebl were present at Gottwald's meeting with Stalin in Moscow on 9 July 1947 but both were close to the negotiators.

> "The semblance that Czechoslovak foreign policy sits on two stools is at an end. Let it be said to all that Czechoslovakia is, and remains, a loyal and reliable member of the Slav family, and it also feels allied to other People's Democracies. In no way does this exclude the fact that from our side we wish to do everything to maintain relations with other states, a relationship which must, however, be mutual. We do not want anything from them except honest trading relations and non-interference in our internal affairs."[1]

While this suggests that it was the intention in 1948 to maintain trade with the West, the Cold War and participation (particularly from the middle fifties) in CMEA - which was founded as a "riposte to the Organization for European Economic Cooperation"[2] - led to a redirection of trade from West to East. There ruled "an absolute identity of opinion"[3] on international politics between the Czechoslovak and Soviet Communist Parties. Indeed, in the twelve years prior to 1968 the Czechoslovak Central Committee had never even discussed foreign policy.[4]

Trade was also seen as an instrument of foreign policy, for example in 'economic warfare' against Yugoslavia following the Tito-Stalin break. In 1948 A. Gregor, Minister for Foreign Trade, stated in the National Assembly that "foreign trade is no less significant a political factor"[5] and that the new trade ties with Eastern Europe contributed to stronger political ties. These political ties also determined trade patterns and the switch to heavy engineering for the purpose of supplying Eastern Europe with machinery was seen as "... arising from political union with these states".[6] Even in

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1 Ustav pro Mezinarodni Politiku a Ekonomii, *Dokumenty Ceskoslovenske Zahranicni Politiky, 1945-1959*, SNTL, Prague, 1960, p. 46.

2 Kaser (1967a.), p. 9.

3 Ustav pro Mezinarodni Politiku a Ekonomii, (1960), p. 83, Speech by Novotny in the Soviet Union, July 1958.

4 V.V. Kusin, *The Intellectual Origins of the Prague Spring. The Development of Reformist Ideas in Czechoslovakia, 1956-1967*, C.U.P., 1971, p. 128.

5 *Tesnopisecke Zpravy o Schuzich Ustavodarneho Narodniho Shromazdeni*, meeting 108, 27 April 1948.

6 Ministerstvo Informaci a Osvety, *Prvni Ceskoslovensky Petilety Plan*, 1948, p. 120.

1968 one of the principles of the foreign trade monopoly was its task of "carrying our economic policy in accord with the foreign policy orientation of the CSSR".[1] A more recent statement of this policy is that by A. Barcak, Minister for Foreign Trade:

> "The present territorial structure of Czechoslovak foreign trade is the result of our political-economic orientation in external relations. This long-range and, one must state, permanent concept of developing our economic relations with foreign countries is embodied in the decisions of the 14th CPCS Congress and earlier resolutions of the supreme party bodies."[2]

Not only is foreign policy important in distinguishing between East and West, but LDC's are also differentiated economically for political reasons:-

> "It is necessary to look at Czechoslovak economic ties with the non-socialist world separately for the two entirely distinct sets of countries; the industrially developed capitalist countries and the developing world. This dichotomy is necessary because Czechoslovak foreign policy, and in accord with it, commercial policy, towards these regions is different."[3]

The geographic composition of trade - a direct result of political considerations - is described in section 1.2.1. While CMEA is not examined here to any significant degree (except where it influences Czechoslovak relations with LDC's) Table 1.5 is instructive because it highlights both the preponderance of CMEA in total Czechoslovak trade, and the relative constancy of the proportions involved. Gaps in the trade statistics and the time-consuming nature of calculating delta coefficients - explained in section 3.2 - limited their presentation to selected years. Deltaim represents CMEA exports (measured here by Czechoslovak imports from the area)

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1 M. Maruska and V. Novacek, 'Vnejsi hospodarske vztahy a akcni program', *ZO*, no. 5, 1968, p. 17. See also B. Simon (1968) p. 429.

2 Radio Free Europe Research (30 April 1976), *RAD background report/96*, p. 4.

3 V. Havlin, 'Obchod v sulade s politikou', *Nove Slovo*, no. 51, 18 December 1975, p. 19.

TABLE 1.5 DELTA COEFFICIENTS FOR CZECHOSLOVAK TOTAL TRADE WITH CMEA MEMBERS AND THE REST OF THE WORLD

Year	CMEA[a]		Rest of the World[b]	
	deltaim	deltaex	deltaim	deltaex
1953	11.02	10.39	0.43	0.36
1955	8.76	9.11	0.44	0.40
1960	7.19	6.92	0.42	0.40
1965	7.32	7.42	0.40	0.33
1970	7.29	7.58	0.49	0.39
1975	8.03	7.23	0.53	0.43

Source:

Facts on Czechoslovak Foreign Trade for Czechoslovak imports and exports and the U.N. *Statistical Yearbook* for world trade figures and data on individual country imports and exports.

[a] Includes Mongolia from 1962 and excludes Albania from that date. Cuba was not included in 1975 for reasons of greater comparability although it joined CMEA in 1973. Inclusion of Cuba in CMEA for 1975 would have given deltaim = 7.72 and deltaex = 6.96. Mongolia was also omitted from the 1965 figures because of insufficient data.

[b] Consists of the following: Austria, Denmark, Finland, France, West Germany, U.K., Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Yugoslavia, Australia, Canada, U.S.A., China, Cuba, Argentina, Brazil, India, Egypt. Unavailability of data led to the exclusion of Yugoslavia in 1953 with the probable result of a small upward bias for both deltaim and deltaex for that year.

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to Czechoslovakia, as a proportion of total Czechoslovak imports; deflated by CMEA's share of total world exports. That is, the proportion of the Czechoslovak import market held by CMEA, deflated by CMEA's relative export potential. Both deltaim and deltaex have analogous meanings for trade with non-CMEA partners (rest of the world). Thus deltaex represents the share obtained by Czechoslovakia on CMEA markets or in the rest of the world, deflated by the share of Czechoslovak exports in world trade (i.e. Czechoslovak export potential). Increasing delta values over time would thus be a good indicator of increasing integration through (or intensity of)

trade because they would show CMEA and Czechoslovakia capturing (or rather allocating) progressively larger shares of each others' markets relative to their trade potential.

Attempts at integration began in earnest only in the late fifties, but Table 1.5 shows that Czechoslovakia and the CMEA countries were of significantly greater mutual importance in each others' trade patterns in the Cold War period, than in later years.[1] Trade with the West on the other hand, has shown a less marked change, although there was an increase in delta ratios between 1970 and 1975.[2]

Two possible reasons for the seemingly low level of integration over the fifteen years to 1975 are that the clash between supporters of sovereignty (e.g. Romania) and of increased specialization (e.g. Czechoslovakia) within CMEA have hindered integrative efforts and proposals; and the need for technical progress through imports (and hence exports to gain necessary foreign exchange) from the West. A third possibility is that for political reasons long-term trade shares are alloted by Czechoslovak planners to geographical regions (section 1.4.3). If such shares are allocated to the West then this reduces by definition the proportion of trade which it is possible to allocate to CMEA, the share of 'other socialist' countries being relatively small. If trade shares are predetermined by planners, then it is a truism that fixed trade shares for the West limit the degrees of freedom of planning trade with CMEA

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1 The lack of a test statistic precludes definite conclusions on the significance of changes in delta ratios. While changes of the order of magnitude of those between 1953 and 1955 are obviously significant, it would be incorrect to emphasise smaller changes in later years without taking into account other possible influences such as inaccuracies in trade statistics, or indeed random fluctuations in such data.

2 The construction of the delta ratios themselves allows for inflation because trade shares are deflated by a factor directly dependent on world trade levels in value terms. CMEA prices were generally 3% to 4% lower in 1973 and 1974 (section 1.4.5) but this did not significantly alter calculated values for delta ratios because both the numerator and denominator required comparable (but unequal) adjustment.

and the possibility of increased integration. This might also be put another way: if for reasons of security or desire for greater integration, a given share of trade is alloted to CMEA, then this automatically determines trade with the West. If a certain amount of trade is necessary with the developed West (technical progress, political considerations,[1] etc.), then the trade with LDC's is also predetermined. The criteria for trade with this latter group of countries are further examined in chapter 3 to determine the relevant factors in determining Czechoslovak trade flows *within* the developing country group.

1.1.4 Membership of International Economic Organizations

Czechoslovak multilateral economic and political cooperation occurs mainly through CMEA and the United Nations system, but the former has been restricted until recent years to relations with the Soviet Union and Eastern Europe; and is not discussed except where it is relevant (in subsequent chapters) to relations with LDC's. Through Benes, Czechoslovakia was an active member of the League of Nations in the interwar period. Immediately after the War this involvement continued in the League's successor, the United Nations Organization. From 1948 however, in accord with the reorientation of foreign policy and domestic politics, Czechoslovak participation has been heavily influenced, if not orchestrated, by Soviet views. Soviet influence has also been important in questions concerning multilateral aid to LDC's particularly in bodies such as UNIDO; in the (never established) SUNFED; and in UNCTAD. Czechoslovakia has also been a member of ECOSOC six times between 1946 and 1975, and was thus entitled to participate in deliberations of regional economic commissions such as ESCAP (ECAFE). Czechoslovak sources stress that "... Czechoslovakia attends regularly the sessions of all United Nations regional economic commissions",[2] and that "in view of its traditional economic and trade

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1 Havlin (1975).

2 V. Barton, 'World trade and international cooperation in 1963', *CFT*, no. 5, 1963, p. 21.

relations with nearly all countries of the regions in question, Czechoslovakia participates regularly in their consultations".[1] Membership of other United Nations agencies, such as FAO and ILO, is not discussed here because they are not directly concerned with trade relations.

A participant in the Bretton Woods Conference, Czechoslovakia was a founding member of the International Monetary Fund (IMF), with an initial subscription of $125 million ($122.6 million in koruny and $2.4 million in gold). On 1 June 1953, Czechoslovakia devalued the koruna (in the context of domestic monetary reform) without first consulting the Fund or seeking its concurrence.[2] Following complaints from other IMF members, the Executive Directors in November 1953 declared Czechoslovakia ineligible to use the resources of the Fund; but on the grounds of its retention of payments restrictions and currency inconvertibility.[3] Given the Cold War atmosphere, however, there is good reason for the view that:-

> "The truth about this period is that the Fund had little to offer the Communist countries. Its principal purpose was to provide resources for the stabilization of internationally agreed exchange rates without the object of encouraging full freedom for current exchange transactions. The Communist countries were doing very little international trade at that time ... They had no reason to subject their exchange rates and economies to IMF surveillance and good reasons for not doing so, or for giving information to the Fund ... and ... through the Fund to adversaries and to their own nationals."[4]

On the other hand, it is possible that the Fund may have tolerated the continued lack of economic information from Czechoslovakia had that country not broken IMF rules so flagrantly in 1953. Other countries[5] maintained

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1 *Facts*, 1969, p. 280.

2 IMF *Annual Report*, 30 April 1954, p. 86.

3 *ibid.*, p. 106. In the event it refused to accept the expulsion and resigned 'voluntarily' in May 1955.

4 'International Monetary Fund: Communist countries, Switzerland and the IMF', *ICR*, September-October 1972, p. 47.

5 Rumania was later tolerated without public disclosure of reserves and other data.

multiple exchange rates and inconvertible currencies well into the seventies and Czechoslovakia may well have been permitted to do so too. Expulsion (or rather withdrawal) resulted not only in the loss of hard currency,[1] but also in the loss of potential World Bank (IBRD) finance, which is conditional on IMF membership. Fund approval for drawings usually also results in easier credit terms from Western banking institutions. That membership would have been particularly advantageous during the economic reforms of the sixties is apparent from tentative Czechoslovak approaches to the Fund before the 1968 Soviet invasion.[2] A gradual easing of currency restrictions (in the context of domestic price reform) and a move to convertibility, made economically more palatable through Fund borrowing, could have brought the benefits of multilateral trade. The international trade recession has so far mitigated what might prove the greatest opportunity cost of non-membership - the lack of an allocation of Special Drawing Rights. Should these become a major reserve asset in future, trade expansion and gains therefrom might be more inhibited than they otherwise would have been.

Czechoslovakia was also an original contracting party to GATT but was initially in a rather unique position, being the only GATT member with a planned economy. However, in the early years of GATT's existence it was not alone in availing itself of article 12 (or article 18B)[3] which permitted quantitative restrictions for agricultural or balance of payments reasons. The 1955 revision of the Agreement further eased Czechoslovakia's anomalous position by allowing (under article 17.3) for direct

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1 Almost $4 million repayable over five years from January 1956. IMF *Annual Report*, 30 April 1956, p. 127.

2 'International Monetary Fund: Communist countries, Switzerland and the IMF', *op. cit.*, pp. 46-47.

3 M. van Meerhaeghe, *International Economic Institutions,* Longmans, London, 1971 (2nd edition), p. 104. On State-traders in GATT, see also G. Curzon, *Multilateral Commercial Diplomacy: the General Agreement on Tariffs and Trade and its Impact on National Commercial Policies and Techniques*, Michael Joseph, London, 1965, pp. 290-312.

negotiations between members, where State-trading occurred.[1] Despite their irrelevance on the macroeconomic level, tariffs were retained by Czechoslovakia to provide a bargaining position in mutual tariff reductions,[2] but even this role became largely redundant within the context of GATT during the Kennedy Round (1964-1967) when it was agreed that " ... a planned increase of imports from the contracting parties by communist countries must be considered equivalent to a tariff concession."[3] Czechoslovakia (together with New Zealand) was also excused from the provisions of article 15, which stipulates compulsory membership of the IMF.[4] Moreover, in 1956, in response to an article which barred all subsidies on manufactured goods which lead to export prices lower than the domestic prices of the exporter, Czechoslovakia:-

> " ... drew attention to the fact that the GATT definition cannot be used for countries with a collectivist system, where products are often sold on the domestic market at a much higher price than their cost. Hence, sale abroad at a price lower than the domestic one is to a certain extent understandable. Consequently, it was agreed that dumping in article 6 relates to private commercial enterprises."[5]

In practice, Czechoslovakia usually extends MFN treatment to trading partners through bilateral trade agreements. However, there are exceptions to this: Peru and Malaysia among the LDC's, for instance, were accorded MFN privileges through GATT.[6] Accession to GATT by an LDC might not automatically mean that it is accorded MFN treatment by other GATT signatories because article 35 allows countries which do not assent to the

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1 van Meerhaeghe (1971), p. 106.

2 Prucha (1964), p. 413. Also section 1.4.2.

3 van Meerhaeghe (1971), p. 107.

4 *ibid.*, p. 103 and p. 105.

5 *ibid.*, p. 108.

6 V. Wacker, *et. al.*, *Ekonomika Zahranicniho Obchodu CSSR*, Svoboda, Prague, 1968, p. 224.

accession of a new member " ... to refrain from applying the provisions of the Agreement".[1] In actual fact, it would probably be unlikely that Czechoslovakia would avail itself of this provision in respect of an LDC for political reasons and because trade patterns would invariably be complementary. The gain to Czechoslovakia of easier access for its own manufacturers - and thus equal opportunity of competition with other industrial MFN exporters - would not be offset by an equivalent demand for reciprocal access for manufactures on (centrally controlled) Czechoslovak markets by LDC's.

Finally, Czechoslovakia also participates in some of the international commodity agreements. A major European sugar producer in the inter-War period, it was a regular participant in efforts to stabilize the world sugar market and was a signatory to the Chadbourne Agreement of 1931 which sought to eliminate "surplus by the regulation of exports and production".[2] In the postwar period, Czechoslovakia's relative importance as a world sugar producer has declined, but the Agreement remains important for it, if only because it is the only major commodity agreement in which it participates as a producer. As a consumer, it has also joined several other agreements: International Tin Agreement (1966), Coffee (1965), Rubber (1957), Zinc and lead (1959), as well as cooperating with bodies such as the FAO and the International Council for Olive Oil.[3]

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1 van Meerhaeghe (1971), p. 93.

2 *ibid.*, p. 135.

3 J. Uradnik, 'Czechoslovakia and the solution of problems of international trade in raw materials'. *CFT*, no. 5, 1977, p. 11.

1.2 THE GEOGRAPHIC AND COMMODITY COMPOSITION OF TRADE

1.2.1 Geographic Composition

It is clear from Table 1.6 that there was a significant and fundamental redirection of trade from West to East between 1948 and 1953. However, since 1955 the trade shares of the various regions have remained remarkably steady (see also section 1.4.3) despite the changes which have occurred in the conduct of foreign trade over the period 1958-1975. Czechoslovak sources offer little explanation for the existence of this phenomenon and one must conclude that the direction of two-thirds of trade to CMEA countries is a matter of long-term policy, and, perhaps because of long-term agreements and conservativeness on the part of fto's did not change much even in the 1966-1969 period. The share of CMEA countries shown is probably underestimated, particularly for imports (of raw materials),[1] relative to the share of the West, because of the method of price determination used within CMEA since 1949. The share of the ACC's has expanded in the seventies after falling to a Cold War 'low' in the early fifties. Again, inflation in the West in the seventies probably overstates - at least partially - the increased share of that area in Czechoslovak trade. Notwithstanding frequent statements of support for LDC's and their attempts at economic development, trade with them has decreased in relative importance and has never regained 1948 levels. In 1955, when serious attempts were made to increase economic, and above all political, cooperation with these countries, their share in total Czechoslovak trade doubled compared with 1953 levels, but has fallen steadily ever since.

The Soviet Union is Czechoslovakia's dominant trade partner, accounting for approximately one third of both imports and exports (Table 1.7). Its share is thus about half of Czechoslovakia's trade with CMEA as a whole.

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[1] Kaser (1974), pp. 27-29, provides a good overview of the lag of CMEA raw materials prices behind world market values.

TABLE 1.6 SHARES OF TOTAL TRADE WITH VARIOUS REGIONS

(percent)

Year	Imports[b]				Exports[b]			
	CMEA[a]	other social.	advanced capitalist	LDC's	CMEA[a]	other social.	advanced capitalist	LDC's
1948	32	7	47	13	32	7	44	16
1950	55	2	35	9	54	1	35	11
1953	73	6	15	6	71	7	15	7
1955	65	7	16	12	63	6	17	14
1960	64	7	19	10	64	9	17	11
1965	68	5	19	8	68	5	17	10
1970	64	6	24	6	65	6	20	9
1975	66	4	25	6	66	5	20	9

Source: *Facts on Czechoslovak Foreign Trade* and *Statisticka Rocenka.*

[a] CMEA includes Cuba from 1973 and Mongolia from 1962. Albania is included throughout.

[b] percentages may not add to 100 due to rounding error.

By contrast the GDR since 1955 has received only about 10% of total Czechoslovak exports[1]. In terms of delta ratios however the GDR and the Soviet Union are not very different in their importance to Czechoslovakia. Bulgaria, still a predominantly agricultural country, has, on the other hand, shown a gradual decrease in mutual dependence in trade with Czechoslovakia. This may be due to increasing industrialization in Bulgaria and, since 1971, the Czechoslovak policy of increasing self-sufficiency in foodstuffs[2]. The idealogically induced break with China in the early sixties and the closer ties with Cuba in the same period are clearly apparent from both trade shares and delta

[1] Figures for trade shares and delta ratios are not entirely accurate when comparing (within CMEA) a raw materials producing country with one which specializes in manufactures, because of the relative price disparities which existed over much of the period 1948-1975. Comparisons between Western and CMEA countries are also not entirely accurate because of the different pricing systems used. See section 1.4.4 below and also J. Kleer, *Integracja Gospodarcza w RWPG*, PWN, Warsaw, 1978, p. 169.

[2] A policy adopted at the 14th KSC Congress in May 1971. See A. Cerna, 'Zahranicni obchod CSSR a sobestacnost v zemedelsko-potravinarskych vyrobcich', *PE*, no. 11, 1973, p. 1003.

ratios. Among the ACC's Austria, Britain and the FRG have been Czechoslovakia's main trading partners; with the relative importance of both Austria and Germany increasing in the last decade, although mutual trade dependence remains below that with Bulgaria. The direction of trade within the LDC group is examined in greater detail in chapter 3 below.

1.2.2 Commodity Composition of Trade

Priority during postwar reconstruction was given to heavy industry, a trend greatly accelerated after 1948 for political reasons: the Soviet Union discontinued imports of machinery from the West (particularly 1949-50), and Czechoslovakia began to supply its needs, as well as those of other bloc countries. Moreover, increased self-sufficiency by overseas countries during the War in light industrial production (gloves, porcelain etc) was accompanied by a decline in Czechoslovak capacity in these areas,[1] because of wartime concentration on heavy industry. Table 1.9 shows that by the end of the fifties, machinery and metal-working had doubled its share of domestic industrial production, and has accounted for almost one third of it since then. The chemical industry, while relatively small, has also grown rapidly - albeit from a low base - more than doubling its share of production over about twenty-five years; but Czechoslovakia remains a net importer of chemicals. 'Traditional' products such as glass, ceramics, porcelain, textiles and foodstuffs, have simultaneously declined in relative importance. Only the leather and footwear industry seems to have maintained its share from 1955 to 1975, although it too has declined in relative importance since 1948. It was also considered undesirable to maintain the import of " ... a dangerously large portion of important raw materials or other essential commodities from the dollar and sterling area ..."[2], and some protagonists of continued

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1 W. Diamond, *Czechoslovakia Between East and West*, Stevens and Sons, London, 1947, especially pp. 135-137.

2 L. Frejka in a speech to KSC conference on 10 January 1948. *26. unora v cs. Hospodarstvi*, p. 27.

trade with the West were branded as saboteurs during the internal Party power struggle centering on the Slansky trials.[1]

Commodity trade patterns closely reflect changes in domestic production (Table 1.10). The relatively low level of domestic development in chemicals has meant a steady proportion of imports with an increase in exports evident only in recent years. The share of raw materials has fluctuated around a constant level, but the source of supply was switched (Table 1.11) to the CMEA countries after 1948. Exports of raw materials such as coal have also been predominantly to CMEA, although the share sold there has diminished in the last decade, possibly because of the hard currency potential of such commodities. Attempts at self-sufficiency and higher living standards (and thus consumption) in the rest of CMEA - limiting amounts available for export to Czechoslovakia - have lowered the share of foodstuffs. Exports of machinery increased quickly in the fifties as emphasis was placed on production in this sector. However, about 80 percent (Table 1.11) of such exports have gone to CMEA countries, partially because of the inability to sell on Western markets as a result of relative inefficiency and inferior technology.[2] There is also some conflict between criteria of comparative advantage and foreign exchange returns:-

> "A dilemma arises between the effectiveness of exports of sugar and some machinery products. High 'reproduction costs' [of foreign exchange] in sugar exports contrast with low ones in the export of machinery. The export of sugar leads to prompt cash returns, while the export of some types of machines is associated with budgetary investment, material and energy costs in metallurgy and its fuel base and with cheap [to the foreign buyer], large credits. Part of the problem is also due to a large extent to internal price relationships, to the fungeability of sugar and machines on capitalist markets ..."[3]

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1 Speech by K. Gottwald: J. Zajonc (ed), *Celostatni Konference Komunisticke Strany Ceskoslovenske*, 'Rude Pravo', Prague, 1953, p. 20.

2 Hrncir (1975 a.), p. 44, referring to analyses by the State Planning Commission, states that Czechoslovak industry uses, on average, about 40 percent more in material inputs than do Western economies. J. Pleva, 'Some structural problems of Czechoslovak foreign trade', *SAEEFT*, November-December 1967, pp. 16-17, points out that the relatively higher material inputs are due to lack of technical progress.

3 Z. Soucek 'Zahranicni obchod v ekonomice CSR', *PH*, no. 7, 1970, p. 45. The 'reproduction cost' of sugar is given as about 90 Kcs for one dollar for the period 1968-1969.

The significant increase in machinery imports from about 1958 reflects increasing specialization in production, an economically beneficial aspect of trade. However, an extremely high proportion of such imports originate in the socialist countries and this has probably limited potential gains from technology transfers. On the other hand, the switch of import sources for machinery to the West in the seventies (Table 1.11) has been limited by the hard-currency constraint.

TABLE 1.7 SHARES OF SELECTED TRADE PARTNERS IN CZECHOSLOVAK IMPORTS AND EXPORTS

(per cent)

Country	*a*	1948	1950	1953	1955	1960	1965	1970	1975
Soviet Union	M	16.4	30.1	39.1	34.7	34.7	35.7	32.7	32.1
	X	16.0	25.4	32.3	34.3	34.1	38.0	32.2	33.0
German Democratic Republic	M	1.4	4.7	6.9	9.3	10.9	10.8	12.1	12.2
	X	1.3	5.3	6.2	6.8	10.1	10.3	12.0	12.3
United Kingdom	M	11.3	6.6	2.6	2.7	3.0	2.7	2.5	2.2
	X	3.6	5.1	2.9	1.9	2.0	2.2	2.1	2.1
German Federal Republic	M	1.0	2.4	1.0	1.6	3.3	3.3	5.7	6.4
	X	2.0	3.2	1.5	2.6	3.5	3.4	5.5	5.5
China	M	0.0	1.6	6.3	5.8	5.1	0.5	0.7	0.6
	X	0.2	0.7	6.1	4.9	5.7	0.7	0.8	0.8
Bulgaria	M	1.6	2.3	2.3	2.3	3.1	3.3	2.5	2.5
	X	2.1	2.5	3.9	3.7	3.2	2.3	2.5	2.2
Austria	M	2.6	4.5	1.8	1.6	2.1	1.8	2.8	3.2
	X	4.1	3.3	1.4	1.6	1.4	1.6	2.0	2.4

Source: *Facts on Czechoslovak Foreign Trade*, various years.

[a] M = imports, X = exports.

TABLE 1.8 DELTA COEFFICIENTS FOR SELECTED CZECHOSLOVAK TRADE PARTNERS

Country	*b*	1948	1950	1953	1955	1960	1965	1970	1975
Soviet Union	DM	7.2	10.2	10.9	9.3	8.0	8.1	8.0	8.4
	DX	7.5	10.7	9.6	10.4	7.8	8.8	8.6	7.8
German Democratic Republic	DM	..	7.0	5.9	6.8	6.3	6.5	8.2	10.5
	DX	..	6.9	5.1	5.4	5.9	6.8	7.8	9.5
United Kingdom	DM	1.0	0.7	0.3	0.3	0.4	0.4	0.4	0.4
	DX	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.3
German Federal Republic	DM	0.8	0.8	0.2	0.2	0.4	0.3	0.5	0.6
	DX	0.7	0.7	0.3	0.4	0.4	0.4	0.6	0.6
China	DM	..	1.6	5.0	3.9	3.4	0.5	1.0	1.0[a]
	DX	..	0.7	3.9	2.7	3.6	0.7	1.1	0.7[a]
Bulgaria	DM	..	..	9.2	9.1	7.0	5.3	3.8	4.7
	DX	..	..	15.8	13.7	6.4	3.6	4.3	3.6
Austria	DM	7.6	9.1	2.7	2.1	2.4	2.1	3.0	3.7
	DX	6.0	4.7	2.2	1.7	1.3	1.4	1.8	2.2
Cuba	DM	0.0	0.0	0.0	0.3	0.1	4.1	4.6	1.8
	DX	0.0	0.1	0.1	0.2	1.1	2.7	1.7	1.4

Source: *Facts on Czechoslovak Foreign Trade*; and data for world trade taken from United Nations *Statistical Yearbook*, various years.

[a] data for China for 1974 because 1975 data unavailable at time of calculation.

[b] DM = deltaim, DX = deltaex.

TABLE 1.9 GROWTH AND SHARE OF PRODUCTION IN SELECTED INDUSTRIAL SECTIONS

(1948 = 100 . Percentages in brackets)

Sector	1948[a]	1955	1960	1965	1970	1975
Metallurgy	(9.1) 100	(9.1) 230	(9.1) 375	(9.2) 488	(10.4) 608	(9.8) 788
Machinery and metal working	(15.5) 100	(26.1) 341	(30.9) 663	(32.7) 909	(28.3) 1414	(30.8) 2294
Chemicals, rubber and asbestos	(3.5) 100	(4.2) 282	(5.3) 577	(6.8) 958	(7.1) 1534	(8.2) 2470
Glass, ceramics, porcelain	(2.0) 100	(1.4) 154	(1.5) 267	(1.5) 351	(1.3) 511	(1.3) 761
Textiles	(10.8) 100	(8.0) 171	(6.6) 238	(6.0) 277	(5.3) 350	(5.2) 474
Leather, footwear and furs	(3.2) 100	(2.7) 148	(2.6) 238	(2.5) 298	(2.5) 394	(2.5) 547
Foodstuffs (excluding confectionery)	(22.5) 100	(22.5) 197	(18.4) 264	(16.4) 305	(16.0) 371	(14.7) 467

Sources: *30 let CSSR. Dlouhodobe Casove Rady*, VUSEI, Prague, 1975, p. 23-24, and *Statisticka Rocenka*, 1958, p. 122; 1965, p. 182; 1966, p. 191; 1971, p. 243; 1976, p. 231; 1977, p. 333.

[a] For 1948 'Machinery and metal working' consists only of 'machinery'; and 'chemicals etc' may exclude 'asbestos'.

TABLE 1.10 THE COMMODITY STRUCTURE[a] OF CZECHOSLOVAK TRADE

(per cent)

Section	*b*	1948	1950	1955	1960	1965	1970	1975
I Machinery	M	7.2	11.8	13.3	21.7	29.9	33.3	36.9
	X	20.3	27.9	43.5	45.1	48.5	50.2	48.0
IIa Fuels, inorganic raw materials, metals	M	20.1	26.2	24.2	27.8	27.5	23.7	28.8
	X	23.0	22.0	28.6	19.7	20.3	18.9	19.6
IIb Chemical products	M	8.7	8.0	8.5	9.2	7.6	8.9	8.5
	X	5.6	3.2	2.9	2.8	3.8	4.7	4.8
IIc Building materials	M	1.0	1.0	1.0	1.0	1.2	1.2	1.0
	X	5.1	2.5	2.1	1.5	1.5	2.2	2.2
IId Raw materials of animal and vegetable origin	M	27.2	26.0	20.0	15.2	12.5	9.3	8.4
	X	9.9	7.0	5.7	5.2	4.8	3.5	3.7
IVa Raw materials for foodstuff production	M	19.5	17.6	16.0	11.0	7.2	5.5	3.6
	X	1.7	4.4	2.8	1.8	1.5	1.4	1.1
IVb Foodstuffs	M	13.9	7.6	13.0	10.9	8.7	9.3	5.6
	X	3.8	8.0	3.4	3.4	3.0	2.4	3.1
V Manufactured consumer goods	M	2.7	2.6	4.1	3.3	5.2	8.5	7.2
	X	30.7	24.6	11.0	20.4	16.5	16.5	17.4

Sources: *30 let CSSR. Dlouhodobe Casove Rady*, VUSEI, Prague 1975, pp. 48, 50; and *Facts* 1976, p. 40.

[a] Group III, 'Live animals' has been omitted because its percentage share in total trade was insignificant (zero to the first decimal place) for both imports and exports.

[b] M = imports; X = exports.

TABLE 1.11 THE SHARE OF THE SOCIALIST COUNTRIES IN SELECTED CZECHOSLOVAK COMMODITY TRADE CATEGORIES[a]

(per cent)

Section	*b*	1948	1950	1955	1960	1965	1970	1975
I Machinery	M	6.2	30.7	92.5	86.0	83.7	69.8	74.6
	X	53.1	76.1	82.7	81.8	84.3	82.4	83.4
IIa Fuels, inorganic raw materials, metals	M	47.8	64.2	90.0	67.1	84.4	85.9	84.7
	X	48.0	70.6	79.3	79.2	76.7	61.0	66.0
IId Raw materials of animal and veg. origin	M	22.4	33.9	45.9	44.8	41.2	43.0	35.1
	X	18.7	29.5	31.3	25.2	28.0	29.1	35.0
IVb Foodstuffs	M	47.1	84.0	56.6	82.5	81.9	63.5	61.0
	X	38.2	34.7	57.9	47.6	29.7	25.4	25.4
V Manufactured consumer goods	M	27.8	37.2	90.1	84.9	83.8	75.4	71.0
	X	33.0	40.8	33.1	68.7	62.6	66.0	65.8

Sources: *30 let CSSR. Dlouhodobe Casove Rady*, VUSEI, Prague, 1975, pp. 48-49, and 51-52, and *Facts*, 1976, pp.40-41.

[a] Note that this is *not* the same as the commodity composition of Czechoslovak trade with Socialist countries.

[b] M = imports; X = exports.

1.3 EXCHANGE RATES[1]

At the time of signing the Bretton Woods Agreement in 1946, Czechoslovakia declared an official exchange rate of fifty koruny to the United States dollar, but in 1953 official parities were redefined in terms of gold content;[2] although in practice the koruna is still related to the dollar and rates for other currencies are determined by this relationship.[3] The domestic currency reform of 1953, which debased the (domestic) koruna at a rate of five old koruny to one new, was inconsistent with the devaluation of the 'external' or deviza koruna at the rate of 6.94 : 1. Moreover, because the 'shadow' rate of exchange[4] in 1952 was probably about 10.40 koruny to the dollar, the koruna was overvalued by a factor of about 44 percent at its new rate of 7.20 koruny to the dollar. Rates against socialist currencies remained stable for more than twenty years after 1953 - with the exception[5] of the 1961 rouble devaluation - possibly for reasons of prestige.[6] The 'stop-prices' of 1949-1950 used in Comecon to 1956, and the general inflexibility of foreign

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1 A full discussion of exchange rates is not possible here. M. Kaser, 'Czechoslovak koruna', *ICR*, September-October 1977a., pp.149-152; M. Kaser, 'Exchange-rate policy in member-countries of the International Bank for Economic Cooperation, *PEEE*, 1978a. Wiles (1968), ch. 6; J. Wilczynski, *Comparative Monetary Economics*, Macmillan, London, 1978, ch. 11; S. Borisov, *et. al. Valyuty Stran Mira*, Finantsi, Moscow, 1976, p. 264; provide fuller discussion of various aspects.

2 Wacker (1968), p. 249. In the absence of arbitrage this facilitates orderly cross-rates.

3 Kaser (1978a.), p. 14, Mean annual rates of the koruna against a range of currencies are published annually in *Statisticka Rocenka*. Monthly rates, set in advance for the coming month by the State Bank, have been published in *Hospodarske Noviny* since 4 June 1965.

4 'skutecny reprodukcni naklady'; J. Kubalek, 'Ceny v zahranicnim obchode a jejich zprostredkujici uloha', *PH*, no. 7, 1970, p. 50, who gives no derivation for this figure.

5 Bulgaria carried out currency adjustments in 1952 and 1962; the GDR in 1953; and Romania in 1952 and 1954.

6 Wiles (1968), p. 130.

trade prices from 1957 (combined with inflexible exchange rates) led to their divergence from world prices despite acceptance of the principle of conformity.

One result of fixed prices was the emergence of 'hard' (e.g. energy and raw materials) and 'soft' (e.g. machinery) goods,[1] in intra-CMEA trade. Another result was the use of the Preisausgleich arrangement as a means of absorbing losses on exports and gains on imports arising from the conversion of foreign prices into domestic currency at official exchange rates. The Preisausgleich was used where the official rate of exchange stood above the actual purchasing power parity of the currency; and was operated by the foreign trade monopoly purchasing export products from domestic producers or selling imported goods to domestic enterprises at relevant domestic prices, irrespective of the foreign prices received for exports or charged for imports. In this way foreign and domestic prices were fully separated and bore no relationship to each other: a domestic producer or importer neither needed to know, nor generally knew, the foreign price of goods he sold or bought from a foreign trade enterprise. The foreign trade monopoly was concerned only with balancing export proceeds and import costs in foreign exchange at the official exchange rate. (Domestically, the 'tax' on imports and 'subsidy' to exports were part of the State budget). The result of the Preisausgleich system was therefore the ostensible maintenance of a single unified exchange rate, although conceptually there were as many separate exchange rates as there were goods traded. Neither the 'clearing rouble' scheme of 1957-1963 nor the IBEC 'transferable rouble' system have led to a significant multilateralization of trade, however.[2]

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1 Kaser (1978a.), p.4, points out the analogy to 'hard' and 'soft' currencies under a regime of exchange-control among market economies. 'Soft' goods are those in surplus at the set price and 'hard' goods are in deficit at the set price.

2 *ibid.*, pp. 4-5. In 1974 for example, only 4% of intra-CMEA current transactions were multilateral.

A first step towards discarding the Preisausgleich system was the introduction from 1 January 1967 of new wholesale prices as part of the general economic reform. Because full currency convertibility was the ultimate aim,[1] an attempt was first made to bring domestic prices under the influence of international market price relativities. To this end, the planners provided enterprises (both producers and fto's) with two unified (by currency area) currency conversion coefficients,[2] which were to be used in conjunction with official exchange rates for calculating import and export values. The official exchange rate for the dollar was thus multiplied "...by a coefficient of about 3, that of the rouble by a coefficient of about 2, so that the koruna was effectively devalued";[3] the devaluation being greater against Western currencies because of the lower rate of inflation within CMEA.[4] In 1969 and 1970 the coefficients were 2.25 for the rouble and 3.75 for the dollar but little information is available on values after these dates.[5]

These coefficients were not true exchange rates; they were used solely as economic criteria by enterprises buying or selling goods on world markets. To avoid serious disruption to the economy, the system of coefficients was ameliorated by the use of an associated provisional system of 'surcharges' and 'discounts'[6] on certain products and product groups. Because they affected prices paid or received by domestic enterprises, their effect was perhaps

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1 *EBFE*, vol. 24 (1973), no. 1, p. 49.

2 officially termed the 'system of internal reproductive price equalization' (system vnitrniho reprodukcniho cenoveho vyrovnani - VRCV): and colloquially referred to as 'cvrcek'.

3 H. Matejka, 'Foreign trade systems', p. 461 ch. 14, in H. Hohmann, M. Kaser and K. Thalheim (eds) *The new Economic Systems of Eastern Europe* Hurst, London, 1975. There were thus about 21.6 koruny to the dollar, compared with the official rate of 7.20 Kcs/$.

4 Kaser (1977a.), p. 150.

5 Neither Kaser (1977a), nor Matejka (1975) mention other values and Czechoslovak sources were uninformative.

6 'cenove prirazky a srazky'. This terminology was preferred here to that used by Matejka (1975), p. 461 - taxes and subsidies - to avoid confusion with the system of compensatory 'taxes' and 'subsidies' to fto's trading under a Preisausgleich system. (i.e. pre-1967)

analogous to the use of tariffs as a crude method of exchange control in market economies. Unfortunately it is not clear what happened to the system of 'surcharges' and 'discounts' after 1969. Matejka mentions only a scheduled reduction of 20 percent in their levels.[1] Kaser points out that following the 1971 dollar devaluation:

> "... so many rebates and premia have ... been applied to the convertible currency coefficients in the context of floating Western currencies and inflating Western prices, that multiple exchange rates have, in effect, been reintroduced. These adjustments are now applied to so many products or product groups that without a precise weighting by traded products, no exact average can be cited."[2]

On the other hand, a review of the development of the system of 'surcharges' and 'discounts' by Urban, points out the shortcomings of the system and the abuses it was subject to by producers and fto's. He claims that in 1969 there was a change in concept of the surcharge system, whereby surcharges were considered to be a direct charge, and hence the price of, foreign trade services rendered to domestic firms.[3] As 'prices', he continues, they were included in the price freeze which began on 1 January 1970, and confirmed by a new price list valid from 1 January 1974. If this account is indeed accurate,[4]

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1 Matejka (1975), p. 462.

2 Kaser (1977a.), p. 150.

3 V. Urban, 'Vysledky prestavby obchodnich prirazek a srazek organizaci zahranicniho obchodu a dalsi problemy' *FU*, no. 6, 1974, p. 415. The relevant change excluded foreign exchange costs, but included domestic costs for transport, warehousing, insurance and other overheads. (see his footnote 1, p. 414). Urban's use of the term 'obchodni srazky a prirazky' may mean that he is not discussing the system of 'cenove srazky a prirazky' (see footnote 6 page 33), but his general descriptions and definitions indicate that the two systems are in fact identical.

4 M. Hrncir, *Vnejsi ekonomicke Vztahy a Efektivnost Cs. Narodniho Hospodarstvi*, Horizont, Prague, 1975, pp. 50-54, makes no reference to the changes described by Urban. However section 1(5) of *Sbirka Zakonu*, no. 168/1969, pp. 551-553, stipulates that "charges, if need be markups of commercial organizations, including foreign trade organizations, and marketing, supply and purchasing organizations, are permitted to a maximum of those current on the day on which this regulation comes into force" (1 January 1970) Wholesale prices were frozen at their 1 January 1969 levels. S. Knap, 'Financni planovani a vnejsi ekonomicke vztahy', *PH*, no. 4, 1976, p. 42, says only that "the flexibility and regulatory power of the system of price surcharges and discounts were shown to be insufficient."

then one must conclude that de facto multiple exchange rates for commercial transactions[1] have not been re-introduced, although the system of 'surcharges' and 'discounts' to currency conversion coefficients has lost its flexibility as an instrument of economic control.

So far we have been concerned with exchange rates used in commercial transactions and with official rates; because the former form the most important category, and the latter are the rates used for converting foreign trade prices (in dollars etc.) to deviza,[2] or foreign trade, koruna values. There are also several other tiers of exchange rates. Blackmarket rates for the koruna represent one tier, but are of little use in analysis because they express 'market' values only for conditions of distorted demand and supply. For instance, there was a fall in blackmarket dollar values because of restrictions on travel abroad and emigration to the West in October 1969; and a dishoarding of dollars and associated shift into Austrian schillings and West German marks followed the February 1973 dollar devaluation.[3] A fourth tier of rates which might also be classed as a stratum of the 'commercial transactions' tier, are switch rates created by the sale of unused balances from clearing accounts against convertible currencies. Such rates exist only for bilateral payments relations with Western (mainly developing) countries and thus also represent a 'distorted' or limited market. They are not published officially, but Pick quoted switch rates in March 1977 as official rates for the koruna discounted at between 2 percent and 4.5 percent.[4]

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1 F. Pick (ed), *Pick's Currency Yearbook 1976-1977*, Pick Publishing, N.Y., 1978, p. 180, refers enigmatically to an 'effective' exchange rate "applicable to most transactions" established on 1 June 1972, but offers no further explanation. He makes no mention of currency conversion coefficients.

2 No reference to 'deviza crowns' (devizove koruny) was found in the (Czechoslovak) literature although analogous terms are used elsewhere in Eastern Europe to distinguish domestic and foreign trade currency values. 'Deviza koruna' has been used throughout the present work for the sake of convenience.

3 Pick (1978), p. 182.

4 *ibid.*, p. 180.

TABLE 1.12 ESTIMATED GLOBAL COMMERCIAL PURCHASING POWER PARITIES

Variable[b]	Row	1950[a]	1955	1960	1965	1968	1969	1970	1971	1972	1973	1974
imports	(1)	1.54	2.02	2.04	2.20	2.66	2.87	2.92	2.94	2.97	3.00	3.09
exports	(2)	1.46	1.66	1.87	1.96	2.80	3.00	3.07	3.10	3.09	3.11	3.20
Kcs/$ (M)	(3)	11.1	14.5	14.7	15.8	19.2	20.7	21.0	21.2	19.6	17.6	18.1
Kcs/$ (X)	(4)	10.5	12.0	13.5	14.1	20.2	21.6	22.1	22.3	20.4	18.2	18.8
Kcs/Rb. (M)	(5)	2.8	3.6	3.7	17.6	21.3	23.0	23.4	23.5	23.8	24.0	24.7
Kcs/Rb. (X)	(6)	2.6	3.0	3.4	15.7	22.4	24.0	24.6	24.8	24.7	24.9	25.6

Sources: rows (1) and (2) : Tables 1.3 and 1.4.
rows (3) and (6) : official exchange rates (from *Statisticka Rocenka)* multiplied by relevant c.p.p.p. in rows (1) and (2).

[a] The 1950 commercial purchasing power parity ratios are based on 1953 prices so the relevant exchange rate to be used for 1950 is the post reform (1953) one. The 1950 c.p.p.p.'s are thus consistent with trade values (in official Czechoslovak statistics) which are also normally given in post (1953) reform values.

[b] M = imports, X = exports, $ = U.S. dollar, Rb. = Soviet rouble, Kcs = Czechoslovak koruna.

Rates pertaining to non-commercial transactions constitute a fifth tier, which contains a number of strata. One stratum of non-commercial rates is determined by a weighted average of diplomatic and tourist transactions and remittances, for socialist countries. The separation of commercial from non-commercial rates occurred in 1956 and 1957,[1] and from 1963 the latter have been determined on a multilateral rather than a bilateral basis.[2] Non-commercial rates with socialist countries remained static between 1967 and 1974 inclusive but there has been some movement since, particularly against the forint which appreciated against the koruna in 1975 and the zloty which depreciated in the same year.[3] Tuzex rates provide another stratum of non-commercial rates, but apply only to hard currencies privately exchanged for coupons (bony) within

1 Wacker (1968), p. 254.

2 K. Podlaha, 'Kurs koruny a jeji smenitelnost v kontextu ekonomicke reformy', *FU*, no. 6, 1968, p. 381.

3 See first issue each month of *Hospodarske Noviny.*

Czechoslovakia. The 'Tuzex' stratum is further differentiated from time to time by premia for certain transactions. Remittances from abroad received by Czechoslovak residents in 1977 were exchanged at the Tuzex rate with a 100% premium,[1] while in the summer of 1976 foreigners received a 75% premium on purchases of Tuzex coupons. It was also possible in 1976 at least for Western tourists to purchase (for hard currency) petrol coupons before entering Czechoslovakia.[2]

The plethora of rates used precludes the calculation of a mean rate of exchange for the koruna or the direct conversion to domestic prices of foreign trade values. An attempt was made in Tables 1.3 and 1.4 above to calculate approximate global purchasing power parities,[3] and these have been combined in Table 1.12. The commercial purchasing power parity (c.p.p.p.) value estimates are in wholesale prices and thus exclude services and taxes normally embodied in retail prices and cannot therefore be used to represent tourist purchasing power parities (t.p.p.p.'s). Because they exclude retail values and invisibles, they cannot be used as true shadow exchange rates which in theory reflect all social benefits and costs. Inaccuracies due to differing price levels for traded goods in CMEA and in the West have also not been allowed for, because of lack of precise data. Moreover it was not possible to calculate c.p.p.p.'s in a way which might have yielded 'exchange rates' by dollar and rouble areas separately.

Nevertheless the c.p.p.p.'s shown in Table 1.12 for the late sixties seem consistent with orders of magnitude of the official currency conversion coefficients referred to above; and the koruna/dollar and koruna/rouble rates for 1971 are consistent with 'reproduction costs' (reprodukcni naklady) for these currencies given in Czechoslovak sources.[4] It is therefore submitted that Table 1.12 is useful in terms of results and the information contained therein has been utilised again in chapter 5.

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1 Kaser (1977a.), p. 151.

2 Mimeographed information from Czechoslovak Embassy in London.

3 a slight variation on the term used by Wiles (1968), p. 426: commodity purchasing power parity.

4 *Cisla Pro Kazdeho,* 1972, p. 302, give the following rates for the first three quarters of 1971: 18.22 Kcs (exports) and 20.89 Kcs (imports) per rouble; and 28.16 Kcs (exports) and 27.36 Kcs (imports) per dollar.

1.4 INSTITUTIONAL ASPECTS OF TRADE

1.4.1 Planning in General[1]

The era of 'democratic market socialism' (described briefly in section 2.4.1) which existed from 1945 to 1947, was replaced in 1948 by the more comprehensive Soviet method of economic planning.[2] General 'directive' planning through a limited number of government-determined parameters was replaced by detailed balancing of supply and demand in physical quantities on a macro-level:

> "For any given commodity, the central planning agency draws up a budget of estimated production, stocks at the beginning of the planning period and imports, and compares it to estimated consumption, ascertained by applying technical coefficients (similar to the technological input-output ratios) to the industries using the commodity in question, and adding exports and stocks at the end of the period. The aim is to make total availabilities coincide with total needs. In the first stage, the planned output of, say, sector I is distributed to the other industries using the particular goods. These, given their inputs, proceed to frame their output plans, which will in turn be distributed to other consuming industries. The problem of consistency almost inevitably arises at this point, since the outputs of sectors II, III, etc. may not be sufficient to satisfy the input needs of sector I. By successive iterations, however, a consistent plan should eventually emerge."[3]

Under this system, imports and exports were treated as adjuncts, used for filling gaps in the Plan. Where certain goods could not easily be

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1 Further detail may be found in the following works: M. Kaser and J. Zielinski, *Planning in East Europe. Industrial Management by the State*, The Bodley Head, London, 1970; A. Nove, *The Soviet Economy*, Allen and Unwin, 1968 (3rd revised edition); Brown and Neuberger (1968); Jirova (1963); Wilczynski (1970); F.D. Holzman, *International Trade Und Communism - Politics and Economics*, Macmillan, London, 1976; A. Boltho, *Foreign Trade Criteria in Socialist Economies*, C.U.P., 1971; Cerniansky (1961).

2 O. Sik, *Czechoslovakia: the Bureacratic Economy*, International Arts and Sciences Press, N.Y., 1972, p. 3, states that by 1951 the Czechoslovak economy was directed entirely along Soviet lines.

3 Boltho (1971), p. 50. It should be noted that the 'technological input-output ratio' referred to, relates to all the inputs from a given industry (so that if all industries are listed, the total non-labour inputs are shown), whereas input norms used in material balances apply to single products. In practice, consistency in planning is rarely achieved because iteration does not normally proceed beyond a fourth stage, matrices are too large for inversion, and information is often inadequate.

produced domestically, they were 'obtained' through the import sector of the overall Plan. A level of exports necessary to pay for these imports was then determined[1] and both imports and exports entered into the iterative procedure of the Plan in the normal way. The system of material balances thus relied on administrative methods at the micro-level. Not only are parameters such as prices[2] and wages determined centrally, but firms are also allocated specific and detailed production, purchasing and selling tasks.[3] Domestic prices do not reflect opportunity costs or relative costs of production and are anyway ignored as criteria by planners. While planners can specify 'consistent' product mixes for the economy in this way, they cannot determine an optimum one, and economic efficiency consequently suffers. By planning mainly from the production side and virtually ignoring demand, planners also introduce a degree of automatism into the allocation of resources. The corollary in foreign trade is the perpetuation of existing trade flows[4] because of ease in planning and (often) lack of information from below. (The implication is that comparative advantage for the economy is static, though in reality it is not).

The problems associated with this form of planning[5] - in 1955 the Planning Commission balanced 827 items, although this fell to 226 in the early sixties[6] - led to attempts at economic reform in 1958. A major change

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1 Boltho (1971), p. 55, lists exceptions to this simplified description: for example, the tendency to export surpluses.

2 O. Kyn, 'Czechoslovakia', in Hohmann, Kaser and Thalheim (1975), p. 107, points out that prices were fully centralized in Czechoslovakia only in 1953.

3 Compulsory 'indicators' were specified either in physical terms or as the 'global value of output'. The latter is defined as all production within an enterprise during a given period, and thus includes materials bought from other enterprises. See Kaser and Zielinski (1970), p. 103.

4 Kaser (1967 a.), pp. 37-39.

5 Matejka (1975), p. 447, discusses some of these.

6 Jirova (1963), p. 25. Kaser and Zielinski (1970), p. 68, give the number of items balanced in 1966 as 76.

was the replacement of chief administrations (glavki in the USSR) by large trusts (vyrobne hospodarske jednotky) which represented amalgamations of enterprises producing similar commodities. It was accompanied by greater autonomy for firms, but in practice the flow of directive information from the centre did not diminish.[1] The greater degree of enterprise control over financial resources, unaccompanied by a corresponding increase in real resources or by price flexibility caused problems which led to recentralization from about 1961.[2] Only after the failure of this recentralization and the 1962-1963 balance of payments crisis was it realized that the concept of the 1958 reform was correct, but that the measures taken had been inadequate. Thereafter stress was placed on economic regulation through controlled market values to eliminate irrationalities and resulting economic inefficiency.

In January 1965 the blueprint for economic reform, which had been developed during the previous year, was approved. Published as the *Main Directions for the Improvement of Planned Management of the National Economy*, its main features were the elimination of most obligatory targets, greater price flexibility, and decentralized investment; but little was said on foreign trade and there were some inconsistencies with plans for recentralization.[3] A better proposal was published in May 1966 under the title of *The Planned Principles of Accelerated Implementation of the New System of Management*, which placed greater stress on market mechanisms - the planning function was to be restricted to broad goals in key sectors.[4] A first step was the revision of wholesale prices implemented on 1 January 1967.

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1 Kaser and Zielinski (1970), p. 55. On the 1958 reform see also A. Nove, *The Soviet Economy*, Allen and Unwin, London, 1961, pp. 242-247.

2 Kyn (1975), p. 108. It is also a deficiency of central planning methods that short-term financial flows cannot be accurately identified with physical flows in material balancing: Kaser and Zielinski (1970), p. 71.

3 Kyn (1975), p. 109.

4 A crucial shortcoming of 'indicative' planning was the priority often enjoyed by annual plans over five-year ones: Kaser and Zielinski (1970), p. 51.

Economic, and especially political uncertainty at the time, however, prevented the successful implementation of the reforms. Moreover enterprises were still consulted on their estimates of costs, so that the planning procedure often degenerated into negotiations over plan targets and resource availability (hidden reserves) as it had done in the past under iterative procedures of more centralized planning.[1]

Political developments associated with the ousting of Novotny also led in April 1968 to the publication of the *Action Programme* which further developed the reform proposals by calling for the separation of economic management from political control (thus emphasising the primacy of economic criteria in the planning process) and organizational freedom for enterprises - the freedom to join or leave associations of producers (Vyrobne Hospodarske Jednotky).[2] Government control was still considered to be indispensible, but only economic criteria were credited with the power of ensuring a rational allocation of resources.[3] The Warsaw Pact invasion of August 1968 precluded further reform, however.

From the summer of 1969, directives were once again transmitted downwards to enterprises from the Ministry of Planning and the Board for Industry, particularly for 'key' consumer goods sectors and exports to Comecon. By 1970 the term 'plan' had once more replaced 'economic directives of the government' which had been used for two years previously.[4] Central economic management was formally reaffirmed by the Party in June 1971, although a complete return to the pre-1967 period has been avoided so far.

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1 'Recent economic developments in Eastern Europe and the Soviet Union', ch. 2 of *Economic Survey of Europe*, 1967, p. 64.

2 This freedom was never granted: Kaser and Zielinski (1970), p. 96.

3 Kaser and Zielinski (1970), p. 96.

4 *ibid.*, pp. 49, 69.

1.4.2 The Foreign Trade and Foreign Exchange Monopolies

Under an October 1945 decree, the Minister for Foreign Trade was empowered:

> "... to administer and control imports and exports of all kinds by means of a licensing system, to determine their prices and quality, and to choose the firms who would be permitted to engage in international trade under his supervision. Under this latter authority, there has been a tendency to establish foreign trade monopolies. Typical of the type of organization established for this purpose is KOOSPOL, an import-export arm of Kooperativa, the purchasing association of the cooperatives of Prague. Such organizations have also been set up by the central directorates of some of the nationalized industries ..."[1]

There is some similarity between this situation and the NEP in the Soviet Union - but it was not until 1948 that the Ministry of Foreign Trade assumed full monopsonistic/monopolistic power over Czechoslovak foreign trade.[2] The 'foreign trade monopoly' thus introduced was also copied from the Soviet model[3] which gave exclusive trading rights for specified commodities to organizations entirely independent of producers. The 'monopoly' is thus only an internal one. Foreign trade enterprises possess no monopolistic or monopsonistic powers on world markets - it is this lack of control over external economic parameters which was one reason for the Preisausgleich - but the state as a whole faces external traders as a monolithic organization.[4] Moreover, the delineation of enterprise trading responsibility - seen as

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1 Diamond (1947), p. 135.

2 *Sbirka Zakonu*, no. 119/1948 (28 April 1948). From May until the end of 1948 trade was carried out by producers, but from early 1949 to 1953 this function was taken over by specialized (joint-stock) companies; apparently to ensure that Western companies continued to trade with them in the uncertain period of the Cold War, and to limit the State's legal liabilities: K. Dostrasil, and J. Vrany, *Odberatelske a Dodavatelske Vztahy v Zahranicnim Obchode*, SNTL, Prague, 1963, p. 14.

3 J. Quigley, *The Soviet Foreign Trade Monopoly. Institutions and Laws*, Ohio State University Press, 1974, pp. 62-63. A slight difference is that Czechoslovakia did not have geographic monopolies like the Soviet 'Vostokintorg'.

4 Cerniansky (1961), p. 74, states one of the main functions of the monopoly to be the ability of the State to pursue consistent "internal, foreign and commercial policy".

strengthening trading positions - precludes competition between fto's on overseas markets, either in imports or in exports; an aspect the economic reforms of the sixties sought to change, as a means of increasing efficiency.

A primary reason for the introduction of a foreign trade monopoly was the necessity to control leakages (imports and exports) to ensure consistency within the economic Plan, because of the suppression of equilibrating mechanisms in prices and exchange rates. Even where exchange rates based fairly closely on relative price levels are used, socialist countries have been forced to limit tourist purchases of consumer goods because the domestic availability of these goods would suffer through unplanned foreign buying. However unplanned 'leakages' were permitted in the early and middle sixties under special circumstances: the basic precondition being that imports of goods (or patents or production licences etc.) led directly to an equal or a greater value in exports to the relevant currency area.[1] The importance of unplanned trade is difficult to gauge, but for the years 1963-1965, the discrepancy between total trade and its planned components was about 2% to 3% for exports, and between 4% and 5% for imports.[2] Although these are not large proportions, the possibility of circumventing the plan did provide an element of flexibility for the economy.

Use of a foreign trade monopoly led to serious problems, particularly because it came to be regarded (or used) by planners in an entirely negative way:-

> "In the past, the role of monopoly in foreign trade was usually regarded as a way of protecting it from the influence of the capitalist economy, from the economic 'cold war'. But other functions were more or less neglected: (1) as a link with the world economy in general and the socialist system in particular; (2) as a valuable index of development of world technique and technology; (3) as an instrument of world division of labour - a criterion of development in this sphere of our own economy and an element of healthy competition as a counterbalance to the unfavourable result of production monopolies on the domestic market."[3]

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1 M. Strebl, 'Prispevek k definici pojmu vyvoz a dovoz', *NZO*, no. 9, 1966, pp. 3-4. For trade with socialist countries it was necessary to offset imports with exports within the annual plan period.

2 *ibid.*, pp. 3-4.

3 Pleva (1965), p. 40. Czechoslovakia was partially driven into this 'Cold War' position by CoCom action.

Attempts at overcoming the adverse effects of the Preisausgleich on the economy took different forms, such as the use of currency conversion coefficients (section 1.3). As early as 1957, some economists were also advocating the return of trading rights to production enterprises,[1] but fundamental changes occurred only in the later sixties. In 1967 producers were permitted to participate in joint-stock companies which held trading rights, with shares being held by producers, trade enterprises and (usually) the Czechoslovak Commercial Bank. Four such companies (in 1967) were Exico, Centrotex, Motokov and Chemapol. (It should be noted that there is a basic difference between these and the joint-stock companies which existed between 1948 and 1953 when producers did not have trading rights). As far back as 1964, Dr Ota Sik had foreseen that within the context of market-oriented reforms, enterprises which had for historical reasons acquired large-scale plants - large relative to the domestic market - might obtain monopolistic control.[2] It was for this reason too that so much emphasis was placed on the 'threat' of allowing producers trading rights and the subsequent introduction of such rights through administrative action from 19 August 1968.[3] Eleven trade enterprises were also established in 1970 to represent foreign interests on the domestic market,[4] but they were limited to pre-contractual and post-contractual activity - they could not trade on their own account - consisting mainly of mediation in business deals, provision of commercial and technical information, advertising, and so on. Not until 1 January 1976, were foreign firms permitted to establish separate representation on Czechoslovak soil.[5]

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1 For example, J. Nykryn and J. Votruba, 'K nekterym aktualnim problemum zahranicniho obchodu', *ZO*, no. 3, 1957, p. 104.

2 M. Kaser, 'The East European economic reforms and foreign trade', *WT*, December 1967, p. 519, Also, Kaser and Zielinski (1970), p. 97.

3 J. Sereghyova, 'Jak probihaji organizacni zmeny v zahranicnim obchode', *ZO*, no. 10, 1969, particularly pp. 25-26.

4 J. Fiala and S. Kubanek, 'Foreign trade agencies and their position in the Czechoslovak economy', *CFT*, no. 5, 1972, p. 12.

5 *The Times*, 15 December 1975, p. 17.

Despite the adoption of a State foreign trade monopoly by which absolute control over both imports and exports was achieved, tariffs were never abolished. Because tariffs conventionally fulfill only protective or revenue-raising functions, it may be argued that their retention in a socialist economy is anachronistic because the State's ability to levy turnover tax and its direct control over trade make them redundant.[1] However, tariffs were retained for several very cogent reasons.

Firstly, Czechoslovak membership of GATT at a time when it alone within that body possessed a planned economy required the retention of tariffs, if only for the purpose of a formal bargaining position:-

> "Tariffs however remained in force especially so that Czechoslovakia could maintain its bargaining position during commercial negotiations with capitalist states, because it could demand tariff concessions or the maintenance of the status quo on the basis of mutuality. In the years 1949-1951, Czechoslovakia successfully obtained new tariff concessions at GATT conferences."[2]

Even in the sixties, tariffs were used as an instrument of commercial retaliation against Switzerland for not including previously negotiated tariff concessions to Czechoslovakia in its new customs duties.[3] Secondly, tariffs were also used either to raise revenue, or to serve to effect equilibrium between aggregate effective demand by households and the supply of consumers' goods and services; industrial raw materials tended to be duty free while foodstuffs and passenger cars were subject to relatively high duties.[4] However, in the socialist economy tariffs on consumer goods imported by fto's do not in themselves affect the final price to the consumer, and are effectively a disguised but integral component of turnover tax which

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1 Even in the period 1967-1969, tariffs were redundant because protection could have been afforded by the system of surcharges and discounts on currency conversion coefficients.

2 Prucha (1964), p. 413. Wacker (1968), pp. 216-217 is similarly explicit. See also section 1.1.4.

3 K. Svec, 'What is the function of custom duties in Czechoslovakia?', *CFT*, no. 5, 1961, p. 11.

4 See table of duties on selected goods in K. Stepan, K. Svec and M. Pokorna, *Celni Politika v Mezinarodnim Obchodu*, SNTL, Prague, 1963, p. 162.

is transferred directly into the State's consolidated revenue.[1] As Wiles points out, their real impact in terms of consumer goods is on private gifts from abroad.[2] A third effect of tariffs was on the direction of trade (under specific conditions) at the enterprise level:-

> "The minimum quantity of coffee to be imported during a given year is planned and the entire import is conducted by the foreign trade corporation of KOOSPOL which also pays the duty from its budget. There are two tariff rates for coffee. 240 Kcs per 100 kilograms from the most-favoured-countries and 440 Czechoslovak Crowns from other countries. If KOOSPOL imports coffee from a country which does not mutually accord to Czechoslovakia the most-favoured-nation treatment, KOOSPOL must pay the aforementioned considerably higher tariff rate and bear all the financial consequences."[3]

That this is not merely a theoretical possibility is evident from the fact that in 1959 almost 17.5 million koruny in duty was collected on coffee and almost 20 million Kcs on wine, oranges and watches.[4] Because domestic retail and wholesale prices were set by planners, fto's could not pass on tariff charges to consumers. Thus, where trade enterprises were given material incentives based on profit there would have existed a strong inducement to purchase dutiable imports from MFN countries in preference to other sources.[5] (See also section 3.4.1).

Nevertheless tariffs were probably of relatively limited importance in practice: their "overall applicability" in 1970 was only about 10 percent,[6] and duty on some LDC imports was further lowered from 28 February 1972 under the Generalised System of Preferences which involved non-reciprocal waivers

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1 Prucha (1964), p. 413.

2 Wiles (1968), pp. 221-222.

3 Svec (1961), p. 10; but Matejka (1975), p. 446, states that tariffs are restricted to the transactions of private individuals.

4 Svec (1961), p. 11. Amounts collected in 1960 are given in Stepan, Svec and Pokorna (1963), p. 164.

5 Wiles (1968), p. 220, arrives at the same conclusion but speculates that the necessary preconditions are "probably never fulfilled".

6 V. Brzak and K. Marsikova, 'New methods of management and organization of foreign trade in socialist countries' *SAEEFT*, Fall-Winter, 1970, p. 252.

of MFN rules. However, the Czechoslovak cuts did not apply to sugar, cigarettes, poultry, beer, meat offal, carpets, hats, or clothing; products which would have been of greatest interest to developing countries.[1]

The monopoly of foreign exchange is often thought of as being a mere adjunct to the foreign trade monopoly,[2] but their functions are theoretically different. While the latter is concerned with preventing unplanned leakages of real goods into and out of the economy, the foreign exchange monopoly is concerned with financial flows and thus ultimately with their effect on the domestic money supply as well as on foreign exchange reserves. The foreign exchange monopoly also encompasses non-commercial transactions while the trade monopoly by definition cannot. Barter transactions, on the other hand, involve only the latter. The monopoly of foreign exchange under a Preisausgleich means that valuty are not exchanged for domestic currency in trade: the Ministry of Foreign Trade balances the foreign exchange account it holds with the 'rest of the world', but deals with domestic fto's solely in domestic currency. These receipts and outlays in domestic currency - maintained separately from the valuta balance - are also balanced, with (usually) the Ministry of Finance making up the shortfall where necessary.[3]

In 1946 the Act on Foreign Exchange Economy[4] consolidated previous legislation and subjected all foreign exchange transactions to licensing by the National Bank (Narodni Banka). This system was similar to those instituted in other Western countries at the time and did not represent a monopoly of foreign exchange because private individuals possessed rights of ownership and trade: the State presumed merely to control this trade to preserve existing exchange rates. However, this method of control proved

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1 Z. Jung, 'Lowering Czechoslovak import tariffs for goods originating in developing countries', *CFT*, no. 6, 1972, p. 15.

2 Possibly because of lack of explicit mention in early legislation of a 'foreign exchange monopoly': Wacker (1968), p. 236.

3 Wiles (1968), pp. 129-139, discusses the Preisausgleich in detail.

4 M. Bakes, 'Outline of Czechoslovak foreign exchange legislation between 1918 and 1970', *CFT*, no. 7, 1977, p. 41.

insufficient because merchants allegedly engaged in under-invoicing, false declarations of the value of goods, granting of discounts, etc.[1] Such malpractice on the part of private firms was effectively blocked in 1948 by nationalization, but the 1946 Foreign Exchange Act itself was not substantially amended until 1953 so that it would be incorrect to speak of a full foreign exchange monopoly until the latter date; although the government had effective control over financial flows because banks had also been nationalized. The 1953 legislation gave the State full control over all foreign currency, portfolio capital held overseas, and precious metals to which the Czechoslovak government laid claim.[2]

It was not until April 1965, when domestic producers gained the right to a share of foreign exchange earned in the over-fulfilment of export plans or by saving foreign exchange on imports - prior agreement with relevant fto's was necessary - that the foreign exchange monopoly was changed.[3] These foreign exchange shares could be used for extra imports of commodities or patents, for trips abroad for technical purposes, and so on. The enterprise was also permitted to sell such shares - for domestic koruny at an enhanced rate of exchange - to the Commercial Bank and thus represented a first step towards an embryonic foreign exchange market. However, demand far outstripped supply in 1966, and Commercial Bank reserves were insufficient to create and support such a market.[4]

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1 Wacker (1968), p. 236.

2 Svoboda and Vogl, 'Vyznam zakona o devisovem hospodarstvi', *FU*, no. 5, 1954, p. 143. In March 1959, the fto Metalimex was given trading rights in precious metals used for industrial purposes: *Sbirka Zakonu*, no. 11/1959, p.21.

3 P. Linhart, 'Pusobeni devizovych podilu v prumyslu', *FU*, no. 9, 1966, pp. 555-558. Between 5% and 30% of the improvement (in foreign prices) could be given as a reward: A. Holesovesky, 'Devizova zainteresovanost vyroby na vysledcich zahranicniho obchodu', *ZO*, no. 3, 1966, p. 30. Such a scheme had been mooted as far back as 1958: 'Interview Ministra Zahranicniho Obchodu Richarda Dvoraka se zpravodajem CTK', *ZO*, no. 5. 1958, pp. 2-4.

4 L. Kovacik, 'Ceskoslovenska obchodni banka v nove soustave rizeni', *NZO*, no. 3, 1966, p. 2.

From April 1969 the State Bank resumed full responsibility for foreign exchange, including the functions which had been devolved onto the Ministry of Foreign Trade in 1952; thus reflecting the separate roles of the trade and foreign exchange monopolies. The new principles were embodied in the Act on Foreign Exchange of 20 December 1970, which integrated the foreign exchange plan into the overall currency plan which "constitutes a synthesis of the credit plan, the cash plan and the foreign exchange plan".[1]

1.4.3 Planning in Foreign Trade

Under the system of material balancing which operated until 1958, quantitative import requirements were determined first to fill gaps in the domestic Plan - the 'imports first' policy - and a sufficient quantity of exports was subsequently allocated to pay for them. This led to a very rudimentary form of comparative advantage, whereby Czechoslovakia exported machinery and consumer goods in return for raw materials imports; but at the expense of overall economic efficiency because of the (necessarily arbitrary) administrative allocative mechanism.

A more sophisticated approach to the problem of comparative advantage was not possible because domestic prices were set administratively and were divorced from world market prices under the Preisausgleich system. The lack of knowledge of foreign requirements for type, quality or prices on the part of producers also resulted in the production for export of unsaleable goods. Moreover, unrealistic exchange rates provided disincentives to commercial efficiency because a foreign trade enterprise working with an overvalued exchange rate makes disproportionate but illusory profits. If it earns a 'profit' of say 200% on an import, there is little incentive to find a supplier who would sell at a price 10% lower.[2] Furthermore, planning was

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1 L. Bakalar, 'On the activities of Statni Bank Ceskoslovenska', *CFT*, no. 4, 1971, p. 7. See also L. Vaskovic, 'Foreign-exchange plan as a part of the currency plan of the Statni Bank Ceskoslovenska', *CFT*, no. 5, 1971, p. 7.

2 Holzman (1976), p. 32.

facilitated by the adoption of bilateralism in trade because bilaterally balanced trade left neither surplus nor deficit on the total foreign account. Both the use of (payments) bilateralism and the fact that the foreign trade monopoly was equally in charge of imports and exports, created the tendency to take a barter approach to trade, so that the estimation of 'profitability' was constrained by a bilateral 'terms of trade' approach.[1]

Efficiency indicators or indexes[2] were developed in the middle fifties in Hungary and Czechoslovakia as a means of overcoming the problem of calculating comparative advantage under a Preisausgleich. In their simplest form, export efficiency indexes express the ratio of domestic costs of production to foreign trade prices for particular commodities (global indexes).[3] Import efficiency indexes are the ratio of the domestic price of the imported commodity to its cost in foreign exchange. The usefulness of efficiency indexes is nevertheless constrained in a socialist economy by unresolved problems which are features of the economic system. Distorted domestic prices make their calculation unreliable, although the more sophisticated versions attempt compensatory adjustments.[4] Furthermore the indexes are *ex post* calculations and fail to take account of current supply and demand.

It is also not clear what use was actually made of efficiency indexes in trade planning. Wilczynski reported that they had been calculated in the GDR. for about 70% to 80% of all exports in 1959, and in Hungary in 1961 for 60%

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1 *ibid.*, p. 23.

2 For greater detail see Boltho (1971), ch. 5; and A. Zauberman, 'The criteria of efficiency in foreign trade in Soviet-type economies', *Economica*, February 1964, pp. 5-12.

3 For overall values of export efficiency with socialist and capitalist countries 1953-1973 see J. Vaner, 'Narodohospodarska efektivnost - problemy a mereni', table 28, ch. 5, in Z. Haba and Z. Mosna, (eds), *Ceskoslovenska Ekonomika v Sedmdesatych Letech*, CSAV, Prague, 1975. See also Krejci (1974).

4 E.A. Hewett, *Foreign Trade Prices in the CMEA*, C.U.P., 1974, p. 140. Boltho (1971), pp. 73-76, examines other defects in the system.

to 80% of industrial products.[1] Hewett states that they were calculated automatically from information available in foreign trade plans and were used mainly as " ... a tool for identifying gross inefficiences." [2] On the other hand, in Czechoslovak sources, Cerniansky states only that fto's presented estimates to planners on the basis of the preceding year's results " ... inclusive of the effectiveness of exports and imports",[3] but Kubalek[4] is imprecise about the role (if any) of efficiency indexes in practice. It is similarly difficult to obtain information on the actual use in Czechoslovak planning of other techniques, such as linear programming.[5]

A major planning change - apart from decentralized decision-making in trade[6] and investment - was the expression and balancing of trade data in both domestic and foreign trade prices.[7] Because items which had been determined by the Planning Commission (fondovane) had previously been expressed only in physical units, no overall comparison of import and export levels, or calculation of 'profitability' had been possible prior to 1958. Nevertheless the system of 'material balancing' remained in principle, so that trade was still used primarily for plugging gaps in the National Plan.[8]

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1 J. Wilczynski, 'The theory of comparative costs and centrally planned economies', *EJ*, March 1965, p. 78.

2 Hewett (1974), pp. 140 and 142.

3 Cerniansky (1961), p. 88.

4 Kubalek (1973), p. 1032, footnote 2.

5 B. Plchova, 'Moznosti vyuziti meziodvetovych bilanci pri analyze zahranicniho obchodu', *PE*, no. 11, 1973, pp. 1053-1063, examines methodological problems using 1959 data, but her bibliography consists largely of foreign sources and the title of her article suggests that the technique remains only a possibility.

6 For example, import and export licences were abolished in 1957 and fto's were given general trading rights: J. Pleva, 'Some economic and legal aspects of foreign trade in Czechoslovakia' *SAEEFT*, May-June 1967, p. 10.

7 J. Nejedly, 'Vyznam nove soustavy planovani pro zahranicni obchod', *ZO*, no. 7, 1958, p. 16.

8 Maruska and Novacek (1968), p. 14.

Moreover, because of consistent trade imbalances, global limits were placed on the export of commodities (particularly machinery) not already allowed for in the export plans, as well as on machinery imports [1] in 1957.[2] An attempt had also been made in 1955 to improve the quality of goods produced for export through State Bank supervision because enterprise success was measured solely in terms of (quantified) Plan fulfilment. This scheme was unsuccessful primarily because of the lack of supervision at enterprise level and it was abandoned a little over a year after its introduction.[3] In 1966 the old 'khozrashchot' control of the State Bank over fto fulfilment of import, export and foreign exchange plans was replaced by credit granted (now by the Commercial Bank) on the basis of economic performance by the enterprise. Through various sanctions (including the refusal of credit), the Commercial Bank could force fto's to make better use of foreign exchange and other funds.[4] Incentives in the form of foreign exchange shares (introduced in 1965) for overfulfilment of plans by enterprises have already been referred to above (section 1.4.2).

The year 1967 represents a clear break in planning concepts and procedure. The detailed administratively-determined material balances system which had been modified in 1958, was superseded by 'indicative' planning. Economic control was to be limited to the provision by central planners of only a few key items in the nature of guidelines, and the allocative mechanism was to be left to domestic market forces which were to be subject to greater external influence. Indeed, by 1969:-

> "The authority of the plan and of planning organs declined ... The plan was no longer considered an essential instrument of control, but as a mere information centre of

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1 Nejedly (1958), p. 16.

2 Jirova (1963), p. 25.

3 J. Havlena, 'Zvysit pomoc Statni Banky zahranicnimu obchodu', *FU*, no. 4, 1957, p. 161.

4 Kovacik, (1966), p. 1.

> interest to enterprises only in so far as conditions created by economic instruments were favourable."[1]
>
> "In Czechoslovakia and Hungary [in 1967] ... the intention was not merely to shift from production and import oriented to export oriented planning, but to alter the planning sequence to add weight to the initiative of the producer, and to broaden targets with respect to the direction and commodity composition of trade. It was, while emphasizing the importance of trade as a resource-saving alternative and not simply a supplement to domestic production, to abolish target control of trade altogether, and to replace it by indirect control through the price mechanism."[2]

It was seen above that in 1967 the Preisausgleich was replaced by currency conversion coefficients (section 1.3), and producers were permitted to trade on their own account (section 1.4.2). A reform of wholesale prices was also instituted on 1 January 1967; and, despite a large number of centrally-determined prices, a large range of prices were permitted to fluctuate within a predetermined range or around an average level.[3]

Warsaw Pact intervention and subsequent recentralization of economic control reversed many of these reforms, but the reversal was not a complete return to the pre-1967 situation. Indirect controls were maintained to some extent and not all prices were immediately fixed, but the concept of allocation of resources by plan rather than market was reintroduced. In 1972 compulsory centrally determined export targets formed only 21,07% of exports to socialist countries and 34.93% of those to the West.[4] Only 20.2% of imports in the same year had centrally determined prices.[5] Thus, while there was some recentralization after 1969, it was not a complete reversion (by 1975 at least) to pre-reform methods.

Little seems to have been published on the planning of trade by

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1 M. Churanek, 'Novy pristup a problemy socialistickeho planovani vnejsich ekonomickych vztahu', *ZO*, no. 2, 1971, p. 14.

2 Matejka, (1975), pp. 455-456.

3 Kaser (1967b.), p. 518.

4 Hrncir (1975a.), p. 42, footnote 28.

5 *ibid.*, p. 45.

geographic areas,[1] although it is obvious that the availability of specific types of foreign exchange may affect the direction of trade unless such reserves can be converted into other currencies. Replying to Western criticism of alleged discrimination in trade, Cerniansky claims that:

> "Although it is true that foreign trade enterprises are given import and export tasks, where these enterprises sell these goods (in their relations with capitalist countries) or from whom they buy them, is left, within the possibility of payments, fully to them and decisions are made on the basis of commercial considerations and the profitability of business transactions."[2]

Nevertheless, Table 1.6 above revealed a surprising degree of stability in trade shares of the four groups of countries: CMEA, Other Socialist, Capitalist, and LDC's. These shares stabilized after about 1955, leading to the hypothesis that planners employ normative values for distributing trade between different groups of countries. A chi-square test was used to test this hypothesis on the basis of annual data of the type presented in Table 1.6. The period 1958-1975 was chosen because the third Five-Year Plan began in 1958. (Inclusion of data for 1955-1957 would not have significantly altered the results and full data for 1954 were unavailable). Because no independent estimate of the hypothesized planners' normative trade share values was available, the arithmetic mean of trade shares for each of the four groups over the period 1958-1975 was used. (Although this effectively masked the long-term decline of LDC trade shares in favour of the proportion of trade conducted with the developed West.) The results of the chi-square test were highly significant for all groups for both imports and exports.[3] It is therefore possible to state with a high degree of

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1 F. Hejduk, 'O teritorialni optimalizaci', *NZO*, no. 6 (pp. 1,2) and no. 7 (p. 2), 1966; presents a two-country two-good model which seems to bear no relationship to contemporary practice. Brzak and Marsikova (1970), pp. 224 and 259, also indicate that in 1969 the use of such models was merely experimental.

2 Cerniansky (1961), p. 89.

3 For 17 degrees of freedom, chi-square values were for imports and exports respectively: CMEA=1.69, 1.93; Other Socialist=5.34, 10.84; Advanced Capitalist=7.27, 4.83; LDC's=4.68, 2.71.

confidence that trade shares for the four areas were stable around their long-term mean values.

Unfortunately it is not possible without extraneous information to conclude whether the stability of the pattern which developed in the fifties is due to long-term (or 'perspective') planning or whether it is due to 'automatism ' in planning (or on the part of fto's) - the tendency, for administrative convenience, to change trade plans as little as possible from year to year. From the evidence presented in section 1.1.3 above it would seem reasonable, however, to conclude that foreign policy and a desire to avoid economic dependence on the West are major factors for the observed constancy of regional trade shares.

1.4.4 Payments

Wiles' distinction between bilateralism and reciprocity has been adhered to throughout this thesis.[1] Bilateralism refers solely to the method of effecting payments between two countries and can be identified by the existence of a bilateral payments agreement between them. Such agreements - sometimes referred to as clearing agreements - often provide for the conversion of the inconvertible residual balances into other (convertible) currencies, commodities or gold. Bilateral trade agreements on the other hand are simply agreements to trade (often specified) commodities. They may be accompanied by a bilateral payments agreement (bilateralism), or trade may be carried out using convertible currencies (multilateralism). The effect of bilateralism is that residual balances arising from trade between two countries cannot be used (without prior agreement) in trade with third countries. While bilateralism is determined *ex ante* by Central Bank or government agreement, reciprocity is an *ex post* observable relationship referring to the degree of equivalence of imports and exports between any two countries. Because a time period must be specified for the measurement of reciprocity, results can be rather arbitary, depending on such factors

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[1] Wiles (1968), pp. 254-265.

as seasonality in trade, shipping times and delays etc. Irreciprocity (imbalance between exports and imports) is difficult to sustain over a long period under bilateralism because it results in the granting of an involuntary credit by the net exporter - representing an opportunity cost unless the rate of interest charged on outstanding balances is equal to rates of return obtainable elsewhere. This also implies that trade under bilateralism is limited to the absorptive capacity of the weaker partner, or to the lesser amount either of the two partners desires to trade.

Czechoslovakia does not appear to have inflexibly pursued a policy of bilateralism. It was not alone before 1958 in possessing an inconvertible currency and had, in the decade which preceded the 1958 European Monetary Agreement, expressed interest in multilateral trade. As far back as 1954 it was officially willing to enter into " ... trilateral and even multilateral commercial agreements",[1] and at least one economist recognized that "the obstacle to further growth in international trade and payments relations is precisely this bilateralism ...".[2] The much-publicised, but relatively unimportant, trilateral agreements with Finland and the USSR (1949-1959) on the one hand, and with the USSR and Burma (1956) on the other, were presented as proof of willingness to trade multilaterally, or at least trilaterally.[3] On the other hand, Datar[4] reports that Indian officials considered the East European countries (especially the Soviet Union) to have been reluctant to allow currency transferability within their group, after an agreement had been negotiated to transfer surplus rupee accounts from Bulgaria to Hungary, and from Czechoslovakia to East Germany, but Czechoslovakia's attitude to the agreement is not specified by her.

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1 Correspondence of the Minister for Foreign Trade, R. Dvorak, in letter column of Izvestia (Moscow) 6 June 1954. Quoted by S. Jiranek, 'Formy platebniho styku s cizinou podpuruji rozvoj zahranicniho obchodu', *ZO*, no. 9, 1954a., p. 378.

2 Jiranek (1954a.), p. 380.

3 e.g. A. Votruba, 'Bilateral or Multilateral trade?' *CFT*, no. 8, 1961, p. 16.

4 A.L. Datar, *India's Economic Relations with the USSR and Eastern Europe 1953 to 1969*, C.U.P., 1972, p. 89, footnote 1.

Increased discussion (in the context of Western multilateralism) after 1958 called forth the following statement:

> "In its commercial relations, Czechoslovakia avoids neither bilateral trade nor multilateral commercial arrangements ... Therefore in the foreign trade of the Czechoslovak Socialist Republic it is not a question of bilateral *or* multilateral forms of trade, but rather a question, in given circumstances, of ensuring the best proportional growth of trade and the national economy ... Under different conditions, both these forms may have positive and negative effects."[1]

That this was not a purely theoretical position is evident from the decline in the number of clearing agreements between Czechoslovakia and the West - particularly the LDC's - in the sixties (section 3.9). The socialist LDC's have also presented problems with untransferable positive balances held by Czechoslovakia,[2] but there has not been a concomitant multilateralization of payments with them.

Multilateral forms of trade are also possible within bilateralism if the debtor partner permits re-exports. Thus if the creditor exports goods supplied by the debtor to a third country, in exchange for convertible currency (or even for other commodities), multilateralism is achieved indirectly. (Switch transactions are similar to re-exports but the goods are re-exported directly from the debtor to a third country and the creditor obtains foreign exchange or goods in return without physically importing and re-exporting). Many LDC's have in the past been opposed to re-exports - resulting in trade agreements with 'no re-export' clauses - and the extent of such trading by Czechoslovakia is not easily ascertainable, although it probably occurs[3] (see also section 2.5.2).

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1 K. Schuster, 'K diskusim o multilateralite a konvertibilite v mezinarodnim obchodu', *ZO*, no. 10, 1961, p. 10 (emphasis in original).

2 R. Selucky, 'The impact of the economic reforms on the foreign economic relations of the Socialist countries', *SAEEFT*, Fall 1968, p. 78. (Selucky is mainly concerned with the need for limiting exports by less efficient enterprises which find it easier to sell to such countries.)

3 Nejedly (1958), p. 17, gives such transactions as examples of the work carried out in foreign trade planning. Czechoslovak trade statistics apparently include switch deals: e.g. *Statisticka Rocenka*, 1965, p. 380.

In the early postwar years, Czechoslovak payments relations with Eastern Europe differed little from those with Western trade partners. Clearing accounts were denominated in koruny - then a relatively strong East European currency - until 1951 when Soviet roubles became the unit of account.[1] From 1948 onwards there was greater coordination of trade in the area, commercial letters of credit were gradually eliminated and payments were effected more rapidly, until the system of 'immediate payments' was accepted in 1958. This system obviates the need for credit and simplifies administration because when goods are dispatched to a foreign buyer, the seller receives credit immediately upon presenting to his own (domestic) bank documentary evidence (e.g. an invoice) even without confirmation by the buyer or the buyer's bank. The seller's bank simultaneously debits the account held with it by the buyer, and transfers the seller's documents to the buyer's bank which in turn debits the buyer's account (in domestic currency) and credits the bank of the seller with an equivalent amount, delivering the documents to the buyer.[2]

Although the principle of multilaterality in intra-CMEA trade was accepted in 1949, little occurred, with the exception of a few trilateral arrangements, until the establishment in 1957 of a clearing union. This union was not very successful, clearing only something like 1.5% of intra-trade in the six years of its existence.[3] It was replaced on 1 January 1964 by the International Bank for Economic Cooperation (IBEC) which itself, in the period 1964-1968, cleared only " ... about 2% of intra-CMEA trade ... multilaterally ...",[4] using transferable roubles. Even in 1972 the average member effected only 4% of its trade multilaterally within IBEC.[5]

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1 Much of the information for this section comes from Wacker (1968) pp. 243-248.

2 I. Meznerics, *Banking Business in Socialist Economy with Special Regard to East-West Trade*, Sijthoff, Leyden, 1968, p. 367.

3 Kaser (1967a.), p. 169.

4 Hewett (1974), p. 15.

5 M. Kaser, 'Exchange and interest rates in IBEC', *ICR*, November-December 1973, p. 19.

Multilateral trade with capitalist countries in the immediate postwar period was largely confined to the dollar area, and was gradually extended to all of Western Europe by the sixties. Vehicle currencies used in multilateral trade have been the American dollar (the dollar area: American continent, Philippines, Liberia, South Korea etc.); the pound sterling (sterling area, including Syria, Iraq, Burma etc.); with 'own' currencies used by Canada and many Western European countries.[1] Where bilateral payments agreements have existed in the postwar period, the dollar has been the unit of account used in most cases, with the pound sterling and the Swiss franc used to a lesser extent.[2] Agreements specify precisely the types of (current account) payments permitted . This may include payment for services such as transport, as was the case with Argentina in 1948 for goods carried on Argentine ships.[3] It is thus possible for trade relations under bilateralism to show irreciprocal commodity trade balances. (Indexes measuring reciprocity may not therefore be reliable indicators of the existence of bilateral payments agreements). Payments agreements have in the past generally been concluded for periods of one year, with automatic annual extensions. Swing credits, to cover temporary imbalances in clearing accounts, were granted for three to six months and their size varied from about 5% to 20% of the value of the agreement.[4] Liquidation of outstanding balances at the termination of an agreement or swing credit period is normally subject to previously agreed conditions but settlement often takes the form of gold or of convertible currency.

Balance of payments data are not revealed by the authorities, but because it is generally acknowledged that Czechoslovakia is a net importer of services, the (commodity) balance of trade - which is a major component

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1 For detail see Wacker (1968), p. 240.

2 T. Dubrovay, '10 let Ceskoslovenske Obchodni Banky', *FU*, no. 12, 1974, p. 797.

3 *Uredni List*, part I, no. 90, 22 January 1948, pp. 77-78.

4 Wacker (1968), p. 241.

of the balance of payments[1] is a reasonable guide to the payments position. Over the period 1948-1975, the balance of trade was invariably in surplus, but the three years 1973-1975 were ones of rapidly increasing and significant deficits. Transport costs alone were said (in 1971) to form about 13-15% of export values and 9-10% for imports in trade with the West, although they vary with distance.[2] Czechoslovakia also relies heavily on CMEA port and transport facilities,[3] and its own receipts from transit trade are insufficient to match such payments.[4] Of total tonnage chartered by Cechofracht between 1955 and 1975, about 5% was consistently carried in ships under the Czechoslovak flag; but the share of 'other CMEA' flag carriers has increased from 19% in 1955 to 65% in 1975.[5] Thus, a positive balance of trade - given in f.o.b. values in official sources[6] - is normally necessary to cover the cost of invisibles, and a negative commodity trade balance is almost certainly indicative of a balance of payments deficit.

The traditionally positive balance of trade with CMEA was reversed in 1974 and substantially so in 1975, probably because the terms of trade turned against Czechoslovakia in that year (section 1.4.5). Table 1.13 indicates

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1 V. Zahalka, 'Poznamky k vyvoji platebni bilance CSSR', *ZO*, no. 8, 1970, p. 9

2 Churanek (1971), p. 16. The first closure of the Suez Canal - and probably the second - affected transport costs significantly: M. Churanek, 'Devisovy monopol a problemy devisoveho planovani', *FU*, no. 4, 1958, p. 221.

3 O. Tomala, 'Privoz provozu ceskoslovenskych namornich lodi pro zahranicni obchod CSSR', *ZO*, no. 8, 1973, p. 19. Tonnages provided by O Novy, 'Cechofracht: mediator of exports and imports of goods', *CFT*, no. 12, 1977, p. 12, indicate that Czechoslovak shipping consistently carried only about 5-10% of ocean freight; while other CMEA members carried an increasing proportion, rising from about 20% in 1955 to 65% in 1975.

4 J. Beranek, 'Czechoslovak foreign trade and transport in the course of the second Five-Year Plan', *CFT*, no. 2, 1962, p. 12.

5 Novy (1977), p. 12. The CMEA shares grew as follows: 1955 = 19% 1960 = 34%; 1965 = 56%; 1970 = 60%; 1975 = 65%. Fto's are apparently encouraged to sell cif and to buy fob to increase the proportion of tonnage carried by socialist shipping.

6 Churanek (1971), p. 18, reports that from 1967 production enterprises were set import and export tasks in f.o.b. values but planners used special c.i.f. conversion coefficients to ensure consistency between the trade and foreign exchange plans. Such coefficients do not appear to have been published.

TABLE 1.13 COMMODITY STRUCTURE OF THE BALANCE OF TRADE WITH SOCIALIST AND CAPITALIST COUNTRIES[b]

(millions of koruny in current prices)

Commodity group[a]		1950	1955	1960	1965	1970	1975
socialist countries							
I	Machinery	1023	2111	2691	3097	5112	4740
II	Raw materials	-232	-466	-1524	-2462	-3276	-7211
IV	Foodstuffs & materials	-835	-1269	-2013	-1769	-2247	-2267
V	Industrial consumer goods	222	28	1572	1156	1276	2745
capitalist countries							
I	Machinery	27	563	744	530	-271	-1043
II	Raw materials	-629	-272	-1349	-1043	-178	-2329
IV	Foodstuffs & materials	368	-411	-125	-436	-650	428
V	Industrial consumer goods	750	593	1069	1032	978	1720

Source: 30 let CSSR. Dlouhodobe Casove Rady, VUSEI, Prague, 1975, pp. 49-50, 52-53; and *Facts on Czechoslovak Foreign Trade*, 1976, p. 44

[a] Group III (live animals) has been omitted because it is insignificant.
[b] Figures without sign show a positive balance of exports over imports.

that the deficit was due mainly to raw materials imports - the indebtedness being funded by credits from IBEC.[1] Generally positive balances with 'Other Socialist' countries probably represent a form of aid through 'soft' loans or unconverted bilateral balances. The structure of the balance of trade with capitalist countries is more complex. The almost continuous deficit in commodity trade with the West has been due entirely to relations with the ACC's. Trade with LDC's as a group has consistently been in surplus but bilateralism in the sixties meant that such balances were generally inconvertible and could not be used entirely to cover deficits with ACC's. Even in the seventies, when payments relations were increasingly multilateral, only about half of the trade balance was convertible because of the preponderance of Egypt and India (section 3.9). Separate figures for LDC's and ACC's are not readily available but Table 1.13 shows that the group as a whole was responsible for a positive balance in consumer goods but generally negative balances in raw materials and foodstuffs. Both of the

[1] Zahalka (1970), p. 10.

latter formed a major portion of imports from LDC's. Machinery, a surplus item in trade with the LDC's was also used to pay for imports from the ACC's until the end of the sixties when it also became a deficit item in trade with that area.

The drive to improve technology and economic efficiency through imports of Western machinery has been one reason for the growing hard-currency indebtedness of Czechoslovakia to the West - Poland is in a similar position - and raw materials inflation has been another: it has been estimated that Czechoslovak hard-currency indebtedness to the West has increased from $0.3 billion in 1970 to $1.5 billion in 1975.[1]

1.4.5 Foreign Trade Prices

Foreign trade price determination is adequately discussed - particularly for intra-CMEA trade - by Hewett[2] and only a brief review is conducted here (see also section 3.8). The 1962 Varna Conference failed tc produce complete agreement on the Independent Price Basis ('own price') for intra-CMEA trade, which had been originally suggested by Bulgaria. Intra-CMEA trade prices have therefore been based throughout on adjusted world market prices because there are no substantial markets within CMEA on which to determine market prices. The inflation in commodity prices initiated by the (1950-53) Korean War induced CMEA members to isolate their economies from 'unwarranted' capitalist price movements. Between 1951 and 1956 (the 'stop-price' period) foreign trade prices were officially based on world prices which prevailed in the 1949-1950 period, although the price freeze was not entirely effective.[3] At the ninth session of CMEA (the 1958 Bucharest Agreement)

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1 J. Zoeter, 'Eastern Europe: the growing hard currency debt', in U.S. Congress Joint Economic Committee, *East European Economies post-Helsinki,* 25 August 1977, pp. 1350-1368, Table 2. J. Budin and M. Kopriva, 'Vnejsi ekonomicke vztahy CSR do roku 1975', *PH*, no. 1, 1970, p. 17, reveal that repayment of Western credits in 1970 represented about 5% to 6% of exports to capitalist countries.

2 Hewett (1974) surveys the field as well as carrying out substantial analysis of his own. See also Kaser (1974); and Kaser (1967a.), ch.9.

3 Hewett (1974), pp. 27-31.

a complex 'Price Clause' was agreed upon. Prices were to be determined by selecting an appropriate world price base, 'cleansing' it to compensate for value-distorting influences and for CMEA's geographic location relative to the relevant world market, and, in certain cases, adjusting it to stimulate the production of certain commodities. There has been little or no change in this system since then, but bilateral negotiation of prices has meant that identical products are often traded within CMEA at different prices between different trade partners; a factor important in delaying multi-lateralization of trade.

Different periods have been used for the price base. For instance 1960-64 and 1968-1970 were used as price bases for the 1966-1970 and 1971-1975 Five-Year Plans respectively. A decision by the CMEA Executive Committee in January 1975 (effective from the second half of that year) led to the adoption of a moving average of world prices. (For Czechoslovakia the average was set at five years prior to the year of transaction). One reason for this change was that the intra-CMEA terms of trade had been biased against raw materials because reasonably homogenous commodities whose prices were 'comparable' to those on world markets were traded on price bases of a previous period according to the CMEA 'Price Clause' method of price determination; whereas 'non-comparable' goods such as machinery were in practice traded effectively at prevailing world prices.[1] Apart from creating a distinction in trade between 'hard' goods (in deficit at set prices) such as raw materials, and 'soft' goods (in surplus within CMEA and not readily disposable on Western markets) such as machinery, the system of CMEA price determination has meant a general disparity between CMEA prices and world market prices. Kleer estimated that intra-CMEA trade prices in 1973 and 1974 were 3% to 4% lower than those in the West.[2]

Because of their relative economic size - in 1975 their share of world

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1 Kaser (1978a.), p. 7. The escalation of fuel and raw materials prices after 1973 increased the disparity.

2 Kleer (1978), p. 169.

trade was only about 10% - the CMEA economies are generally price-takers on Western markets and trade with the West is based on current world prices. However imports by CMEA countries are often above average world prices because of large-scale buying, Western markups for associated currency and administrative difficulties, etc.[1] Export prices on the other hand, may often be lower because of the need to penetrate Western markets, often with commodities of inferior quality. It has been accepted in Czechoslovakia for some time that in trade with the West, and LDC's in particular:-

> "The relatively best guarantee of just international trade are the so-called world prices formed at the main markets for a given kind of good. Although they are not the ideal expression of the international value of goods, the CSSR tries to adhere to world prices because they do offer the relatively most objective basis for equivalence, while the use of any other price can lead to either partner thinking it unfavourable".[2]

One manifestation of its desire (for planning purposes) of price and supply stability is its membership of international commodity organizations (section 1.1.4).

Czechoslovak terms of trade data have been published for the years 1967 to 1974 inclusive for both socialist and capitalist (but not separately for developing) countries. They are reproduced in Table 1.14 and show generally favourable global terms of trade until 1975 when a sudden large adverse shift occurred, probably because of the institution in the latter half of that year of the 'Moscow Agreement' on CMEA price determination. The effect of increased raw materials (imported by Czechoslovakia) prices on Western markets is clearly discernible in 1973, but the slightly adverse terms of trade with socialist countries in 1970-1972 are not entirely consonant with the terms of trade advantage which CMEA machinery exporters are supposed to have had in this period and further investigation (not possible here) may be warranted.

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1 Wilczynski (1978), pp. 86-88, lists some of the reasons for higher import and lower export prices.

2 M. Brozik, 'O hospodarskych vztazich s rozvojovymi zememi', *RP*, 25 May 1965, p. 5.

TABLE 1.14 CZECHOSLOVAK IMPORT AND EXPORT PRICE INDEXES[b]

(1 January 1967 = 100)

Index[a]	1967	1968	1969	1970	1971	1972	1973	1974	1975
All trade									
imports	99.6	98.0	103.2	104.9	107.6	110.6	122.4	151.8	170.1
exports	100.0	99.5	103.8	112.0	115.3	114.5	125.6	161.8	165.2
capitalist countries									
imports	99.3	95.7	105.8	108.4	111.2	114.6	140.1	198.1	..
exports	100.0	99.2	106.7	122.1	125.3	123.2	140.8	199.4	..
socialist countries									
imports	99.8	100.2	100.9	101.9	104.4	107.1	106.8	110.3	..
exports	100.0	100.2	100.4	101.2	102.6	103.2	106.2	114.1	..

Source: *Statisticka Rocenka,* 1977, p. 239; 1975, p. 497; 1973, p. 481

[a] Prices are in f.o.b. values.

[b] Constructed from quarterly data for 355 import items and 626 export items using a Laspeyre's index. Aggregates for commodity groupings are weighted by trade shares. The base used was adjusted by currency conversion coefficients (koeficienty vnitrniho reprodukcniho cenoveho vyrovnani). *Statisticka Rocenka*, 1977, p. 235.

1.5 FOREIGN TRADE STATISTICS

1.5.1 Major Sources

Two major regular sources of annual foreign trade statistics are published by the Czechoslovak authorities.[1] The better known of these is *Statisticka Rocenka*, first published in 1957 by the State Statistical Office. Early issues provided relatively little detailed information on trade but this changed in the early sixties, although data are still only presented for major trading partners. A lesser known source is *Facts on Czechoslovak Foreign Trade*, published in English by the Chamber of Commerce of Czechoslovakia from 1962. It provides reasonably detailed trade figures for the two years immediately preceding the year of issue. The greater amount of information available led to the use of *Facts* in this thesis in preference to *Statisticka Rocenka*.[2] Both sets of data are in 1953 prices and in f.o.b. values. Conversion to U.S. dollars for 1948-1953 data should therefore be made at the rate of $1.00 = 7.20 Kcs where koruny values refer to foreign trade prices ('deviza' koruny). A useful long-term time-series of trade and other statistics is available in *30 let CSSR. Dlouhodobe Casove Rady*.[3] Secondary sources published in Czechoslovakia - for example articles in *Zahranicni Obchod* - occasionally provide further information but this is sporadic and gives information for a limited number of years only, often in percentages or index values.

Western sources of trade data also exist, but vary in their coverage and may estimate or 'smooth' official data, often by using mirror data, with possible consequential inaccuracy (section 1.5.5) One source is

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1 Pre-1948 data were taken from Statni Urad Statisticky, *Zahranicni Obchod Republiky Ceskoslovenske*, Bursik & Kohout, Prague.

2 The two sources are not entirely consistent. For example *SR*, 1972, p. 426, gives 1970 exports to Egypt as 307m. Kcs while *Facts*, 1971, p. 151, gives them as 554 m. Kcs. See also section 5.4 below.

3 Ministerstvo Zahranicniho Obchodu, *30 let CSSR. Dlouhodobe Casove Rady*, VUSEI, Prague, April 1975.

Marer,[1] and the related data bank. Gaps in his data for Czechoslovak commodity trade for 1949-1952 and 1954 (Tables II.CTN.M.C. and II.CTN.X.C. have since been filled by Tables 42-47 of *Dlouhodobe Casove Rady*. However, Marer provides other useful statistics, such as Western European exports to Czechoslovakia by SITC classes. Van Brabant[2] estimates shares of CTN commodity classes for Czechoslovak trade with CMEA, ACC's and LDC's, although there are necessarily gaps in his coverage, which extends from 1949 to 1972. A third source is provided by the United Nations publications *Statistical Yearbook* and *Yearbook of International Trade Statistics*, but both of these are based on official Czechoslovak statistics. Mirror estimates are also available by extracting trade with Czechoslovakia for all partner countries given in the *Yearbook of International Trade Statistics*. A fourth source which did not appear to be generally available at the time of writing is the CMEA-Fortram data bank compiled by Professor J. Vanous of the University of British Columbia in Canada, where CMEA country imports and exports by CTN classes are given in SDR's (pre-devaluation $U.S.) for various areas (e.g. LDC's) for the period 1950-1975.

1.5.2 Coverage and Characteristics

A major change[3] in the method of reporting and coverage occurred at the end of 1950. Until that date, statistics were based on returns submitted by traders and confirmed at the Czechoslovak border by the customs authorities. Since then, foreign trade corporations have submitted their own returns based on f.o.b. values for both imports and exports; c.i.f. values have not been published. It is from this date too that re-exports have been

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1 P. Marer, *Soviet and East European Foreign Trade 1946-1969, Statistical Compendium and Guide*, Indiana University Press, 1972.

2 J.M. van Brabant, *A Reconstruction of the Composition of intra-CMEA Trade Relations,* Bericht des Osteuropa-Instituts an der Freien Universitat Berlin, 1974, heft 107, especially Tables MU2, RE2, RO2 and MD2.

3 For details see *SR*, 1957, p. 182.

integrated into total exports ('general' trade), rather than being given separately ('special' trade), although this is inconsistent with both United Nations and CMEA recommendations.[1] Czechoslovak trade statistics also include switch transactions[2] - 're-exports' which are sold from the vendor country to a third country buyer without crossing the frontiers of the trader (in this case Czechoslovakia) - which from the point of view of the national economy are financial transactions, analogous to those of 'middlemen', but often made solely to achieve currency convertibility. It is logically consistent to include *both* switch transactions and re-exports because their results are identical and only their transport routes differ. However, the integration of re-exports and switch transactions into the trade data leads to conceptual problems[3] in the calculation of trade participation ratios, and in comparing them with those of other countries which do not include re-exports in trade statistics.

The third major change introduced in 1950 was in the definition of the country of export and import. Previously the consignor or consignee, the criterion from 1950 has been the country of purchase or sale; specifically the country of residence of the contracting party.[4] For this reason trade with LDC's is probably understated, especially for the fifties, because middlemen resident in other countries were used (section 2.5.2). The

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1 Marer (1972), Table D-3, p. 355.

2 *SR*, 1965, p. 380. The data given in this volume go back to 1955 and are reported to be fully compatible with earlier issues so that switch transactions are probably included from at least 1950 onwards. Cf. U.N. *Yearbook of International Trade Statistics* 1975, p. 265, which implies that switch transactions have been included in the statistics "for recent years". The definition of re-exports in *SR*, 1957, p. 182, also states that the goods need not cross frontiers.

3 Strebl (1966), p. 4, argues that re-exports should be given separately in the statistics, and only 'direct' (primy) imports and exports be used for analysis.

4 *SR*, 1957, p. 182; and subsequent issues. Marer (1972), p. 359, correctly points out that the United Nations "defines Czechoslovakia's trade partners as 'countries of consignment' ... an apparent error".

TABLE 1.15 INCLUSIONS AND EXCLUSIONS IN CZECHOSLOVAK FOREIGN TRADE STATISTICS FOR BOTH IMPORTS AND EXPORTS

Inclusions	Exclusions
1. Value of all goods, wages and services exported or imported (incl. Tuzex). Includes a. repairs to ships, aeroplanes etc.; b. bunkerage etc.; films; d. goods bought or sold at trade fairs etc.; e. goods bought and sold in warehouses.	1. Goods delivered without payment (except intergovt. gifts).
2. All re-exports and switch transactions.	2. Technical designs and documentation within the sphere of technical-scientific cooperation.
3. Barter deals resulting from internal trade transactions.	3. Transit trade.
4. Imports and exports arising from direct economic cooperation.	4. Goods and film for exhibition only (subsequent return) and animals and vehicles for competitions etc.
5. Imports and exports of complete plants and parts and designs built in one country with the help of another.	5. Temporary or transient import or export of packaging, containers and transport vehicles.
	6. Value of means of transport sent abroad or returning from abroad for purposes of repair.
	7. Gold as a means of payment, payments in foreign currency for technical aid etc.
	8. Raw materials and semi-manufactures for refining or improving (i.e. value added only).

Source: K. Jirova, *Planovani Zahranicniho Obchodu v CSSR,* Statni Pedagogicke Nakladatelstvi, 1963, pp. 30-31.

United Kingdom for example, was the source of 24% of cocoa bean imports in 1960 but lost its position as a major source temporarily in the sixties because of Czechoslovak-Ghanaian political relations (section 3.8). Apparently rapid rates of growth in trade with LDC's in the late fifties and early sixties may therefore be partially due to elimination of entrepot trade, although the ultimate import sources themselves did not necessarily change.

Table 1.15 summarizes items included and excluded from trade statistics.[1]

[1] Jirova (1963) presents this table as inclusions and exclusions in the Five and One Year plans. There is no indication however - as there is for geographic classification (p. 33 *ibid.*) - that the table might differ from procedures adopted in the compilation of official trade statistics. Moreover, the table is broadly consistent with, for example, *SR*, 1965, p. 380.

It is generally consistent with Marer's presentation,[1] and provides further information, filling gaps in his table. 'Parcel post' for example, seems to be excluded (item 1, exclusions, Table 1.15), and 'Government trade' included; 'bunkerage' etc. is included (item 1, inclusions, Table 1.15), as are 'ship etc. repairs'. Non-monetary gold may also have been included in merchandise trade statistics since 1 March 1959. From that date, control over "gold, silver, platinum ... destined for industrial or technical use or for consumption"[2] passed from the State Bank to the Ministry of Foreign Trade as an extension of the latter's powers under the 1948 law on foreign trade. On the other hand, it may be that these items were still regarded as foreign exchange - although administrative responsibility had changed - because transfer of control did not affect the existing regulations on foreign exchange.

Classification of countries by broad regions is straightforward. Socialist countries are those which possess communal (state) ownership of a substantial part of the means of production and which plan the development of their economies.[3] Advanced capitalist countries include all non-socialist European countries (except Malta, Gibraltar, Cyprus and Turkey), Japan, South Africa, Canada, USA, Australia, and New Zealand.[4] In practice this means that from 1960 Cuba was transferred from the Developing to the Socialist group of countries.[5] Commodity classification has in the past been in CMEA (CTN) nomenclature[6] but is not given in detail for individual countries. *Statisticka Rocenka* 1970, first published SITC data (for 1967-1969) and the SITC classification is available in *Facts on Czechoslovak Foreign Trade* for 1967 onwards.[7] However, complete commodity-by-country

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1 Marer (1972), Table D-3, p. 355.

2 *Sbirka Zakonu*, no. 11, 1959, paragraph 1(1).

3 *SR*, 1957, p. 182.

4 New Zealand is included despite its omission in some references. (Correspondence with the Czechoslovak Chamber of Commerce).

5 Marer (1972), Table 5, p. 280.

6 Marer (1972), pp. 309-321, describes the changes which have occurred.

7 SITC data were first collected in 1965 but have not been published in detail.

information is unavailable. A detailed concordance between SITC and CMEA's SFTC has been published by the Secretariat of the ECE, as 'Correspondence Table between the United Nations' Standard International Trade Classification (SITC) and the Standard Foreign Trade Classification of the Council for Mutual Economic Assistance', *Document CES/AC.38/4*, of 12 July 1978.

1.5.3 The Data Bank

A data bank of trade statistics was constructed and stored in the Oxford University Computing Service 1906 computer, covering the years 1948 to 1975. The following sources were used:

1. Chamber of Commerce of Czechoslovakia, *Facts on Czechoslovak Foreign Trade*, (annual) 1962-1976.

2. E. Zukal, 'Hospodarska situace Barmy a vyvoj spoluprace s CSR', *Zahranicni Obchod*, no. 1, 1958, pp. 25-29.

3. E. Hradecky, 'Czechoslovak-Mexican trade relations', *Czechoslovak Foreign Trade*, no. 6, 1967, pp. 11-12.

4. J. Bula, 'Czechoslovakia's economic relations with African countries', *Czechoslovak Foreign Trade*, no. 12, 1967, p. 11.

5. B. Korner, *Zahranicni Obchod Ceskoslovenska s Rozvojovymi Zememi 1948-1955*, VSE, Prague, May 1969, Table 4, pp. 50-53.

6. Ministerstvo Zahranicniho Obchodu, *Ceskoslovensky Zahranicni Obchod s Vybranymi Rozvojovymi Zememi v letech 1966 a 1967: podle zbozovych skupin mezinarodniho trideni SITC.* Vyzkumny Ustav Zahranicniho Obchodu, Prague, November 1968.

Data used were in current f.o.b. prices. Conversion to $U.S. (where necessary) was by means of the conversion factors given on p. 307 of the U.N. *Yearbook of International Trade Statistics,* 1975.

1.5.4 Consistency of data

An attempt is made in Table 1.16 to gauge the reliability of published Czechoslovak data for regions. The figures in the body of the table give the ratio of aggregated trade statistics published for individual countries,

TABLE 1.16 DISCREPANCIES BETWEEN PUBLISHED TOTALS OF CZECHOSLOVAK TRADE DATA FOR VARIOUS AREAS, AND AGGREGATES OF TRADE WITH INDIVIDUAL COUNTRIES (RATIO OF SOURCE 1 TO SOURCE 2), SELECTED YEARS

Area[h]	g	1948	1950	1953	1955	1957	1959	1960	1961	1964	1965	1969	1970	1974	1975
CMEA [a i]	M	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.99	1.00
	X	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	0.99	0.99	0.98	0.99
Advanced capitalist countries [b]	M	1.08	1.07	0.94	0.94	0.95	0.87	0.91	0.92	0.95	0.97	0.96	0.97	0.96	0.96
	X	0.95	0.95	0.95	0.93	0.95	0.93	0.96	0.96	0.95	0.96	0.96	0.93	0.96	0.94
LDC's[c] (total)	M	1.06	1.10	0.97	0.99	0.85	0.89	0.96	0.85	0.95	0.97	0.91	0.94	0.95	0.96
	X	0.77	0.87	0.88	0.73	0.56	0.76	0.78	0.68	0.74	0.80	0.93	0.84	0.94	0.95
LDC's[d] Asia	M	1.04	..	1.00	1.00	0.83	0.78	0.97	0.70	0.97	1.00	1.00	1.00	0.93	0.99
	X	0.72	..	0.92	0.93	0.57	0.76	0.85	0.71	0.81	0.91	0.96	0.97	0.94	0.96
LDC's[e] Africa	M	0.95	..	0.86	0.93	0.87	0.94	0.89	0.93	0.92	0.95	0.79	0.82	0.97	0.95
	X	0.69	..	0.76	0.28	0.43	0.58	0.69	0.51	0.66	0.68	0.84	0.62	0.98	0.98
LDC's[f] America	M	1.18	..	1.00	1.02	0.93	1.00	0.99	1.00	0.94	0.91	0.90	0.98	0.94	0.94
	X	0.96	..	0.95	0.96	0.75	0.98	0.73	0.95	0.68	0.64	0.91	0.93	0.87	0.87

Source 1: The sum of trade (aggregate) with individual countries in a given area in million Kcs. The information is taken from the Data Bank (section 1.5.3).

Source 2: Total trade with areas shown, as published in *Facts on Czechoslovak Foreign Trade*.

[a] *Source 1:* Albania (1948-61 inclusive), Bulgaria, Cuba (1974-75), German Democratic Republic, Hungary, Mongolia (1962-75 inclusive), Poland, Rumania, USSR. *Source 2:* unspecified.

[b] *Source 1:* For years for which data were available, Austria, Denmark, Finland, France, West Germany, U.K., Greece, Italy, Iceland, Ireland, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Australia, Canada, Japan, South Africa, USA. *Source 2:* unspecified.

[c] *Source 1:* total of totals for LDC's Africa, Asia and America. *Source 2:* unspecified.

[d] *Source 1:* for years for which data were available, Singapore, Afghanistan, Bangladesh, Burma, Cambodia, Ceylon, India, Indonesia, Malaysia (excluding Singapore), Pakistan, Thailand, Cyprus, Iran, Iraq, Jordan, Kuwait, Lebanon, Saudi Arabia, Syria, Turkey, South Yemen, Nepal, Philippines. *Source 2:* unspecified.

[e] *Source 1:* for years for which data available, Algeria, Egypt, Libya, Morocco, Sudan, Tunisia, Ethiopia, Ghana, Guinea, Kenya, Nigeria, Sierra Leone, Zambia, Liberia, Gabon, Malawi, Senegal, Ivory Coast, Southern Rhodesia, Zaire, Cameroon, Mali, Tanzania, Uganda. *Source 2:* unspecified.

[f] *Source 1:* For years for which data available, Argentina, Bolivia, Brazil, Chile, Colombia, Cuba (1948 to 1959 inclusive), Ecuador, Mexico, Panama, Peru, Uruguay, Venezuela, Dominican Republic, Haiti, Nicaragua. *Source 2:* unspecified.

[g] M = imports, X = exports.

[h] 'Other Socialist Countries' were excluded because of their low share in total trade and because of the time-consuming nature of the computations. Belgium and Luxembourg were excluded from 'Advanced Capitalist Countries' because no data had been collected for them for the Data Bank - they were included in tests for certain years.

[i] The actual import figure for 1961 is 0.9955 and for 1975 it is 0.9958. For exports, 1961, it is 0.9968 and for 1965, 0.9953.

to the totals for each region published in *Facts on Czechoslovak Foreign Trade*. A ratio of unity represents perfect concordance between published totals and the sum of data given for individual countries. A value below unity is indicative either of a gap in the Data Bank of individual country statistics or of inconsistent Czechoslovak reporting of data. A figure greater than one is theoretically impossible within a tolerance limit for rounding error. Inclusion of Albania from 1962 (and Cuba from 1973) in CMEA leads to perfect concordance between aggregates and totals. Why the Czechoslovak authorities should continue to treat Albania as statistically a CMEA country is unclear,[1] but consistency of time series is probably one aim. Another explanation is that Albania never formally left CMEA, and thus remains a nominal member.[2] Values for ACC's show a reasonably high degree of agreement between aggregates and totals and this is increased substantially by including data for Belgium, Luxembourg and New Zealand which were originally excluded from the Data Bank. Remaining discrepancies for the ACC's may possibly be explained by reporting ambiguities of Czechoslovak goods to West Germany pass through the GDR to evade EEC duties;[3] but the author has no evidence that Czechoslovakia engages in such practices.

The classification of LDC's into three geographical regions (Asia, Africa, America) is identical to interwar statistical practice, with the exception of Turkey which was reclassified at some time after 1948 from a European to an Asian country.[4] Asia encompasses all countries west of longitude 180 degrees West of Greenwich (except Japan, Australia and New Zealand) to the east bank of the Red Sea and Sinai. China, Korea etc. are included among 'Other Socialist', a category not examined in Table 1.16. Africa includes

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1 *SR*, 1977, p. 433, includes Albania with CMEA.

2 Kaser and Zielinski (1970), p. 18.

3 M. Kaser, 'GDR Mark (Ostmark)', *ICR*, no. 5, 1977, p. 155.

4 *Uredni List*, part I, 30 December 1948, no. 257, p. 2445, classifies Turkey within Europe for statistical purposes.

the whole of the continent (except for South Africa) and probably Mauritius, the Canary Islands, Seychelles etc., although trade with the latter three is statistically insignificant. American LDC's include all of central and southern America and probably the Caribbean, with the exception of Cuba after 1959 when it became part of 'Other Socialist' until its membership of CMEA in 1972 (and its inclusion statistically in that group from 1973). Trade with Greenland, almost certainly insignificant, is probably attributed to Denmark if it occurs.

Values greater than unity occur in five places, but only for imports, suggesting that the discrepancy is due to reporting differences. Weight is lent to this hypothesis by the fact that only the 1955 figure for American LDC's occurs after the 1950 change in statistical reporting methods. It is possible that conversion from c.i.f. to f.o.b. values was carried out with non-additive correction coefficients so that totals do not correspond to aggregates. However this leaves unexplained the perfect concordance of the CMEA ratios and the aberration for the 1955 imports from American LDC's. No logical explanation was found for the latter phenomenon but the discrepancy involved (2%) is rather smaller than those for 1948 and 1950 and may therefore be attributable to rounding or reporting errors of some nature.

Three major trends or tendencies in ratios over time are worth noting. Firstly, dates which Czechoslovak sources tend to use for comparative purposes (1948, 1955, 1960, 1965, 1970, 1975) usually have ratios closer to unity than do other years. This reflects the greater availability in the sources of data on individual countries for these years. Secondly, although difficult to demonstrate here, practical work led to the general impression that as trade relations with a region or country develop, it takes time for the relevant information-gathering agencies to take cognizance of this fact and to publish data for that area or partner. Trade data for

individual American LDC's have been reported reasonably fully and consistently throughout, because such countries were almost all independent before 1948 and had established trade relations with Czechoslovakia. (It is not clear, however, why the ratios for 1974 and 1975 should be lower than for 1970.) Increased trade with Asian LDC's after 1954 resulted in lower ratios for several years (1960 is an exception due to the first tendency referred to above) but once the 'clientele' of trading partners had been established in the early sixties, statistical coverage improved. African LDC's do not reveal any clear pattern, possibly because of the discontinuation of information on Southern Rhodesia, Ghana and Guinea in the sixties. Only in the middle seventies is coverage substantial.

A third trend, that of differences in ratios for imports and exports, is of greater interest because it occurs only for LDC's. Differences in ratios for imports and exports are greatest in 1948 and gradually, but not progressively, diminish over time; especially from the late sixties. Over the entire period these differences in import and export ratios seem generally to have been smallest for American LDC's and largest for the African countries. This, and the gradual decrease in differences over time (as direct trade contacts increased) suggests that the explanation lies in the presence of middlemen: import sources in such cases are easier to identify than export destinations. However this explanation is untenable for two reasons. In the first place, total trade data should not be affected differently from individual returns and hence the aggregate value of individual returns. Secondly, trade statistics are compiled according to the domicile of the contracting party, and not by country of origin. Unless export totals are recorded by destination, the presence of middlemen should not affect the aggregate/total export ratio.

An alternative explanation is that the discrepancies in import and export ratios indicate arms sales to LDC's - a view put forward originally

to explain similar discrepancies in Soviet statistics.[1] While not ruling out this possibility in the case of Czechoslovakia, there are several cogent arguments against such an explanation. Firstly, arms sales are a closely guarded secret and it is unlikely that the Czechoslovak authorities would have continued for so long to publish such discrepancies, especially after they had been pointed out by Western authors. Secondly, known arms sales by Czechoslovakia did not begin until 1955 (with the exception of Israel 1948 and Guatemala 1954) and increased thereafter. Yet the differences between aggregates and total exports to LDC's *diminish*[2] with time after 1955. Moreover, it is unlikely that arms were sold continuously or on a large scale to American LDC's, particularly during the Cold War period. Thus while the method of using the aggregate/total export residuals in East European trade with LDC's provides an attractive and generally accepted methodology for estimating arms sales, serious doubt is cast on its accuracy in the Czechoslovak case. While this does not rule out the possibility that these 'export residuals' include arms sales, the uncertainty involved is sufficient to preclude viable or accurate estimation. It is therefore submitted that the only possible conclusion is that such residuals may, and probably do, include arms exports, but that little further precise information can be deduced from them. (Arms exports are further examined in chapter 4 below).

In reply to a query on Table 1.16, the Czechoslovak Chamber of Commerce suggested that there were three reasons for the observed discrepancies in aggregates and totals. One reason given was the incomplete list of individual countries available for aggregation. A second explanation was the aid given to LDC's. However Czechoslovak grant aid is minimal (see chapter 5) and was

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1 Nove (1968), pp. 350-351; Marer (1972), pp. 360-368; and A. Nove, 'What are the Russians trying to hide?', *The Times*, 18 August 1978, p. 17. See also section 4.5 below.

2 On the other hand this is consistent with Czechoslovakia's apparently diminishing importance as a world arms exporter (section 4.6).

not extended in the early fifties. A third reason given by the Chamber was that exports are sometimes returned in the form of faulty goods and discounts are given to LDC's, and that both of these would appear in the total but not in individual country data. If this were an important effect however, it would have had the opposite effect by yielding ratios greater than unity. Moreover the observed differences were too large and occurred only in the case of trade with LDC's. It is therefore necessary to bear in mind that unexplained discrepancies do exist in the statistics, although there is no other reason to question the accuracy of individual country statistics.

1.5.5 Mirror Estimates

Tables 1.17 and 1.18 compare Czechoslovak reporting of imports and exports with analogous data reported by the relevant trade partner. The five countries shown were selected to provide a range of countries, but a more extensive analysis (not reproduced here) which included many LDC's also led to the conclusion that mirror estimates are a highly inaccurate method of identifying trade flows. Hungary was chosen because it is contiguous to Czechoslovakia along almost all of its northern frontier and it is probable that mutual trade is conducted almost exclusively across this border. Disparities in reporting due to the passage of time in transportation should therefore not occur. Both Czechoslovak imports and Hungarian exports are in f.o.b. values, and variations in reporting should theoretically occur only before 1957 because Hungary reported exports as 'special trade' (i.e. excluding re-exports) while Czechoslovakia would have reported all Hungarian imports. The Soviet Union was chosen primarily for its importance as a trade partner and for use of f.o.b. reporting. Although eastern Czechoslovakia is contiguous to the USSR and trade does occur across this border, the possibility of transhipment, particularly through Poland, remains. Results can therefore be contrasted with those for Hungary, although transhipment through Poland is probably an unimportant factor in differences in reporting.

TABLE 1.17 A COMPARISON OF CZECHOSLOVAK IMPORTS FROM SELECTED COUNTRIES AS REPORTED IN OFFICIAL CZECHOSLOVAK SOURCES WITH EXPORTS TO CZECHOSLOVAKIA AS REPORTED BY THE PARTNER COUNTRY[c]

(million U.S. dollars)

Country[b]	Row[a]	1948	1950	1953	1955	1957	1960	1962	1965	1967	1970	1972	1975
Australia	M	3.9	5.1	10.0	14.0	24.4	21.0	13.5	18.3	17.4	10.8	21.3	20.2
	X	2.8	7.4	6.0	11.4	14.8	19.9	10.9	13.8	11.5	8.4	10.8	..
Austria	M	17.9	28.9	15.7	16.7	25.0	37.6	35.3	48.5	52.9	88.2	114.8	289.7
	X	14.9	18.6	9.3	10.8	22.6	29.4	30.7	37.2	41.2	61.8	71.3	190.9
Hungary	M	21.3	34.0	73.5	77.1	73.3	93.9	139.4	171.4	150.8	182.4	265.3	476.6
	X	..	..	70.0	79.1	75.0	93.9	137.0	179.3	153.2	185.1	273.4	511.1
Sweden	M	39.9	25.3	6.4	5.1	11.8	9.7	13.6	18.8	22.6	40.3	38.9	69.1
	X	28.4	19.3	5.5	5.2	9.2	12.2	13.4	18.9	21.7	36.0	33.2	75.3
Soviet Union	M	111.7	192.2	343.9	365.4	535.6	630.4	781.4	954.7	965.3	1208.8	1548.4	2914.2
	X	..	..	..	356.0	551.3	630.8	770.7	925.9	967.4	1203.0	1512.3	2799.4

Sources: Row M. Data Bank converted to U.S. dollars by conversion coefficients on p. 307, U.N. *Yearbook of International Trade Statistics*, 1975

Row X Report of partner countries in U.N. *Yearbook of International Trade Statistics*, various years.

[a] Row M: imports reported by Czechoslovakia (fob). Row X: exports reported by partner countries (fob).

[b]
Australia Row X: General exports, fob, by country of consumption. Years ending 30 June for1948-1965.
Austria Row X: Special exports, fob, by country of last consignment.
Hungary Row X: Special exports, fob, for 1953-57; general exports thereafter. By country of consignment.
Sweden Row X: Special exports, fob, 1948-70; general exports 1972 and 1975. By country of consumption.
USSR Row X: General exports, fob, by country of consumption.

[c] Czechoslovak trade is 'general', i.e. includes imports destined solely for re-export. Country classification is by domicile of contracting party.

TABLE 1.18 A COMPARISON OF CZECHOSLOVAK EXPORTS TO SELECTED COUNTRIES AS REPORTED IN OFFICIAL SOURCES, WITH IMPORTS FROM CZECHOSLOVAKIA AS REPORTED BY THE PARTNER COUNTRY[c]

(million U.S. dollars)

Country[b]	Row[a]	1948	1950	1953	1955	1957	1960	1962	1965	1967	1970	1972	1975
Australia	M	6.0	11.0	2.3	5.2	5.5	5.8	5.8	7.3	7.3	8.9	10.6	19.9
	X	11.3	8.2	2.6	4.2	4.9	6.3	5.8	6.7	6.1	7.9	9.4	16.3
Austria	M	27.0	18.2	10.2	15.2	18.9	23.0	25.0	38.0	37.4	67.4	86.5	191.5
	M*	24.3	16.4	9.2	13.7	17.0	20.7	22.5	34.2	33.7	60.7	77.9	172.3
	X	30.8	25.7	14.3	18.8	20.6	27.1	27.9	42.5	46.3	75.6	108.6	198.7
Hungary	M	..	..	69.8	56.3	79.0	111.9	120.0	134.5	152.2	197.9	269.1	538.2
	M*	..	..	62.8	50.7	71.1							
	X	22.2	33.3	70.4	64.0	76.0	111.7	125.0	132.2	152.4	199.7	261.2	490.6
Sweden	M	31.5	21.2	9.7	7.0	7.3	11.6	13.3	21.9	21.0	31.9	34.2	77.2
	M*	28.3	19.1	8.8	6.3	6.6	10.4	12.0	19.7	18.9	28.7	30.8	69.5
	X	29.7	24.3	6.7	6.7	7.5	10.3	12.4	18.1	19.0	28.1	30.6	69.5
Soviet Union	M	..	..	..	386.5	385.6	652.4	824.8	1035.4	982.2	1233.9	1655.2	2622.3
	X	120.1	197.9	321.3	402.8	398.1	658.6	828.3	1022.8	977.1	1221.5	1668.3	2756.9

Sources: Row M. Partner country reports of imports from U.N. *Yearbook of International Trade Statistics.*
Row X. Data Bank converted to U.S. dollars by conversion coefficients on p. 307 of U.N. *Yearbook of International Trade Statistics*, 1975.

[a] Row M : imports reported by the partner country, cif except for Australia, Soviet Union, Hungary - see note *c* below.
Row M*: imports, cif, in Row M minus 10% to allow for cif factor.
Row X : exports, fob, reported by Czechoslovakia.

[b] Czechoslovak trade is 'general', i.e. includes re-exports. Country classification is by domicile of contracting party.

[c]
Australia	Row M:	General imports, fob, by country of production. Years ending 30 June for 1948 to 1965.
Austria	Row M:	Special imports, cif, by country of production.
Hungary	Row M:	Special imports to 1957, cif; general imports from 1960, fob. By country of production.
Sweden	Row M:	Special imports, cif, to 1970; general imports for 1972 and 1975. By country of production.
USSR	Row M:	General imports, fob, by country of production.

Of the Western partners, Australia was chosen for two reasons. Firstly, Australian imports are recorded f.o.b. so that adjustment for trade-related costs need not be made. Secondly, time elapsed in shipment is probably longest for this trade partner and so the Australian case is therefore useful for examining the effects of lengthy transport routes on recording differences. Austria was chosen for contrast with Hungary and the Soviet Union. (The most natural trade route is across the common border, although transit via Hungary or West Germany is also possible.) Unfortunately, Austrian imports are recorded as c.i.f. and the normal 10% adjustment was made in Table 1.18 although this is probably an overestimate of costs involved. Finally, Sweden was selected as a reasonably proximate but non-contiguous representative of European partners.

As expected, Czechoslovak data on imports from Hungary were highly consistent with Hungarian export statistics, but, as for the USSR, 1975 is an unexplained anomaly (Table 1.17). Table 1.18 also shows reasonable consistency between Czechoslovak and Hungarian reporting for years when Hungarian imports were in f.o.b. values. Results for trade with the USSR were less consistent but not unreasonably so. For both Hungary and the USSR, 1975 again proved puzzling. Czechoslovak imports from Austria could have been expected to show greater consistency - being analogous to the Hungarian case in terms of geographical contiguity - but the results indicate the unreliability of accurate identification of trade flows for even contiguous trade partners, let alone more distant ones such as Sweden. A possible explanation for the Austrian discrepancies is that Austria records 'special' exports and thus excludes re-exports. The size of such re-exports is not readily available unfortunately, and it is therefore not possible to attribute the whole of the difference solely to them. Moreover, Austrian reporting of imports from Czechoslovakia (c.i.f.) are consistently *below* Czechoslovak f.o.b. reporting of exports to Austria, a seemingly irreconciliable discrepancy. Table 1.17 shows inconsistency with

Australian reporting, but exports to Australia (Table 1.18) are reasonably consistent with Australian import data.

It must therefore be concluded that the method of mirror estimation is too unreliable for accurately identifying trade flows with Czechoslovak trade partners. Unknown transport and other trade-related costs impose an element of arbitrariness in the reduction of c.i.f. values, and differences in reporting of re-exports (special versus general trade) introduce a further complicating factor. Yeats, employing United States and partner country trade data, also concluded that, due to variable transport costs and differences in reporting methods, serious discrepancies existed in mutual reporting.[1] It has therefore been preferred to accept gaps in Czechoslovak data rather than estimating values on the basis of mirror reports. Resulting analysis can thus lead to firmer conclusions because strong results need not be questioned on the basis of underlying (estimated) data.

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[1] A.J. Yeats, 'On the accuracy of partner country trade statistics', *BOXES*, 1978, pp. 341-361.

CHAPTER 2

SOME HISTORICAL PERSPECTIVES

2.1 INTRODUCTION

An examination is made in this chapter of the historical background to Czechoslovak trading relations with developing countries. Parallels are drawn between the interwar and postwar periods to enable us to see such relations in a long-term historical perspective. Trade in the twenties was relatively free and based on private enterprise and hence on the principles of comparative advantage. The thirties on the other hand, saw a distortion of trading patterns resulting in greatly increased Czechoslovak trade with developing countries (LDC's in this chapter include colonies) as a means of replacing traditional and more proximate trading partners. Thus the twenties provide some basis for the comparison of Czechoslovakia's 'natural' comparative advantage, and its pattern of production, with later periods. The thirties on the other hand, are useful for the insights they bring to the effect of industrialization in both Czechoslovakia and the LDC's in the sixties and seventies. The confused and restricted trading relationships of the thirties do not allow for an 'ideal' comparison - in the sense of a controlled experiment - of trade with the developing countries by a particular country under both socialism and capitalism, although certain inferences can still be made. The arms trade, a special case, is dealt with separately in chapter 4 and a discussion of aid is superfluous here because the LDC's were almost exclusively colonies during the interwar period.

The founding of a Czechoslovak Republic in October 1918 ended Austrian and Hungarian political rule. The prelude to independence, in the nineteenth century, saw not only increasing nationalism, but also the beginning of an industrial revolution concentrated in the Czech lands. Industries were able to develop within a large customs union (the Austro-Hungarian Empire). However the dissolution of the Empire also meant adjusting to a smaller domestic market coupled with barriers to exports

in what had formerly been part of a larger domestic market: a 'customs union effect in reverse'. The systasis of the Czech lands and Slovakia did not compensate the loss of other markets and produced further problems, particularly backwash effects within the new 'customs union' of the two areas. Although this chapter is concerned primarily with economic problems, it should also be borne in mind that political problems, especially with national minorities, often constrained economic capabilities.

2.2 THE TWENTIES: INTERNAL STABILIZATION AND CONSOLIDATION

2.2.1 The Legacy of the Dual Monarchy

Disparities in the levels of development of the various areas of the Austro-Hungarian Empire (the Dual Monarchy) were reflected by the systasis of the Czech lands - which had been administered from Vienna - and Slovakia (and Ruthenia from the Treaty of Trianon in 1920) which had been under Hungarian rule. It was only in the west of the newly created Czechoslovak state that industrialization had occurred to any significant extent. Moreover, trade routes ran north-south, rather than east-west, resulting in an infrastructure more suited to commerce with Vienna and Hamburg than to the needs of the Republic created in 1918. As a result, it was necessary in the twenties to divert economic resources to rectify this situation. A further problem, but one which did not lead to serious difficulties until the years immediately prior to Munich, was the retention of a large German minority within the Czech lands, particularly in border areas.

On the credit side, Czechoslovakia was left with much of the industrial capacity of Austria-Hungary. At least 13 million of the 16 million metric tons of coal potential, 60% of lignite deposits, 66.5% of steam boilers etc.[1] remained within the new territory. More importantly, it was left with large shares of the export industry of the former Empire. Table 2.1 shows that, except for distilling, at least half of all the other major export industries were located within Czechoslovakia.

An unwelcome legacy of the 1914-1918 war were the residual inflationary pressures. These stemmed partially from shortages in the supply of many commodities, but primarily from the excessive printing of money by the Bank of Austria-Hungary as a means of offsetting heavy government borrowing. Currency in circulation had risen almost fifteen-fold during the course

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[1] G. Schacher, 'Czechoslovakia's economic development and achievements', in R.J. Kerner (ed), *Czechoslovakia*, University of California Press, 1949, p. 242.

TABLE 2.1 SHARE OF EXPORT INDUSTRY OF THE AUSTRO-HUNGARIAN EMPIRE LOCATED IN CZECHOSLOVAKIA IN 1918

(per cent)

92	sugar refining	46	distilling
76	cotton	57	brewing (beer)
80	wool	87	malt
90	jute	50	food
92	glass	70	leather
100	porcelain	90	gloves
60	iron	75	footwear
75	chemicals	65	paper

Source: Ceskoslovenska Vlastiveda, volume 6, 'Sfinx', Prague, 1930, p. 182.

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of the War and prices had increased by even more.[1] Priority was therefore given by the new government to controlling inflation, in particular through monetary reform. At the cessation of hostilities, Austria and Hungary continued printing banknotes. Since their notes were still identical to the ones in use in Czechoslovakia, it was necessary to distinguish them. This was done on 10 April 1919 by stamping and overprinting, but the value of the 'new' currency was not defined in terms of precious metal content. Steps were taken simultaneously which reduced the money supply by about 20 percent.[2]

Finance Minister Rasin introduced this policy of deflation primarily to maintain the Czechoslovak koruna (Kc) at pre-war parity, in a (misguided) belief that this was essential to Czechoslovak financial 'prestige'.[3]

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1 Z. Pryor, 'Czechoslovak economic development in the interwar period', in V. Mamatey and R. Luza (eds), *A History of the Czechoslovak Republic, 1918-1948*, Princeton University Press, 1973, p. 194.

2 *ibid.*, p. 195. L. Pasvolsky, *Economic Nationalism of the Danubian States*, Macmillan, N.Y., 1928, p. 207, gives the figure as 30% but neither author is specific about dates.

3 Czechoslovak economic thinking in the interwar period laid great stress on the 'prestige' element of maintaining exchange rate parity because devaluation was perceived as being tantamount to a (dishonest) method of repudiating external debt. Exchange rate stability was seen as reflecting Czechoslovakia's financial reliability, and thus attracting foreign capital. For this reason, successive governments gave priority to domestic budgetary equilibrium.

This aim was soon abandoned however, and the koruna fluctuated until its stabilization at the end of 1922, following a sudden appreciation in that year due to large inflows of 'hot' Austrian and German funds seeking refuge from domestic hyper-inflation. It was supported at its 1922 rate until the devaluation of 1934 despite its apparent overvaluation. The effect of overvaluation on exports was, however, partially mitigated by increased German demand for Czechoslovak coal and iron ore after the French and Belgian occupation of the Ruhr. Another result of the pegging of the koruna at an artifically high level was the reintroduction of exchange controls from 1924-1928 to counteract the outflow of German and Austrian funds which were returning to their own countries; having been responsible for the initial appreciation of the koruna in 1922. The elimination of such controls was followed on 7 November 1929 by the adoption by Czechoslovakia of the Gold Standard, ostensibly as a precondition for participation in the Bank for International Settlements. Unfortunately, the lack of flexibility in exchange policy, induced by the misguided identification of currency stability with economic and political prestige, exacerbated the effects of the crisis of 1930-1931 when Czechoslovakia opted for the retention of the Gold Standard.

The redistribution of land under the Land Reform Bills of the twenties effectively increased the profitability of farms after large estates were divided, and smaller holdings which proved inefficient were amalgamated into larger units. One result was the creation of a large agricultural bourgoisie which, through the concentration of capital in agricultural cooperatives[1] and its political participation through the Agrarian Party, gained significant political power. It was probably the strength of Czechoslovak agricultural interests which was the most important indirect cause of the reorientation of trade in the thirties from South-Eastern Europe to the

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[1] A. Teichova, 'Structural and institutional change in the Czechoslovak economy 1918-1938', *PEEE*, February 1972, p. 15.

West and the developing countries. Tariffs on agricultural products, imposed in 1925 and 1926, had increased Czechoslovak self-sufficiency in food, thereby curtailing potential imports from the other Danubian countries, which were still largely agricultural. In the system of multilateral trade which existed in the twenties, this was relatively unimportant as South-Eastern Europe could offset trade deficits with Czechoslovakia by export surpluses elsewhere. However the methods of bilateral payments adopted in the thirties meant that financial flows had to be bilaterally balanced. Czechoslovak exports were thus effectively limited to the order of magnitude of (mainly agricultural) imports from the countries of the Danube basin, a development further discussed below.

A further important legacy of the Dual Monarchy was the relatively (to the West) uncompetitive nature of Czechoslovak industry, hitherto nurtured behind high tariff barriers. The dissolution of what was in effect a customs union within which Czechoslovak industrial goods could move freely, resulted in the need for Czechoslovak exporters to compete on their former 'domestic' markets with Western, and in particular German, producers, on equal terms. For Czechoslovak exporters the change was further compounded by the tariff barriers erected by the Successor States to protect their own infant industries. Since such industries tended to be precisely in those branches in which Czechoslovakia was already specialized (e.g. textiles)[1], the effect was particularly deleterious. A further problem was the lack of finance for export credits even when markets were available.[2] It has been estimated that Czechoslovak industries recovered up to 80 percent of their pre-First World War markets in northern and western Europe. They managed to regain only 30 to 40 percent of those in East Central Europe.[3] The result was a partial redirection of trade to new markets; a process

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1 Pasvolsky (1928), p. 271.

2 K. Uhlig, 'Textilni krise' *ON*, 1929, p. 937.

3 Pryor (1973), p. 198.

accelerated by the destruction of multilateral trade channels in the thirties. Czechoslovak tariff protection of its own industries - higher in the twenties than before the war[1] - was offset to some extent by the policy of signing MFN agreements, beginning in 1923 with France, to open up export markets.

2.2.2 Czechoslovakia in the Pattern of World Trade

Due to improvements in transport and increases in production, the pattern of world trade existing in the twenties had begun its evolution in about 1870. The result was a unified world economy where:-

> " ... triangular or multilateral settlement within small groups of countries were relatively unimportant and ... almost all balances belonged to a single world-wide system which also provided for the transfer, along round-about routes, of interest, dividends and other payments due from debtor countries to European creditor countries, particularly the United Kingdom."[2]

One such 'round-about' route led through Germany and Czechoslovakia. Germany was a net importer from non-European countries but ran export surpluses with several European countries, including Czechoslovakia, which in turn ran export surpluses with the United Kingdom.[3] The system as a whole was balanced by net British capital exports to the tropics and some of the British Dominions. These in turn had export surpluses with the United States and Continental Europe, leading to the circular pattern of transfer via Britain.

It was the reduction of capital exports and the repatriation of liquid funds by creditor countries from the middle of 1928 which led to the eventual breakdown of the system. Until 1931 its complete collapse was avoided because many countries were able to settle their international accounts through the sale of gold or by drawing on liquid assets abroad.[4] However the financial crisis of 1931 which followed the collapse in May of the

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1 Pasvolsky (1928), p. 277.

2 League of Nations, *The Network of World Trade*, Geneva, 1942, p. 9.

3 *ibid.*, p. 81.

4 *ibid.*, pp. 9, 93.

largest Viennese bank, the Kredit Anstalt, led to import controls, a prohibition on the export of gold, and other governmental interference with trade. This in turn led to retaliatory discrimination and trade degenerated into a mutual balancing of trade between pairs of countries. Multilateralism was thus replaced by a bilaterally[1] balanced system of trade. The resultant reduction in overall purchasing power meant, for many countries, a diminished ability to purchase raw materials whose prices on world markets consequently fell. This in turn reduced returns (i.e. income) on capital investment in primary-producing countries and decreased the extent of further capital exports; a spiral which resulted in the Depression of the thirties.

Czechoslovakia was affected (discussed further below) primarily through the measures adopted by Germany in this situation. In 1934, the latter declared a transfer moratorium on long-term debts, forcing its European creditors to recover their loans by means of bilateral agreements.[2] Its exports were switched to sources of foodstuffs and primary commodities, particularly South-Eastern Europe, under a system of rigid trade bilateralism which eventually led to a high degree of control over those economies.[3] From 1929 onwards Germany significantly increased tariffs and other controls on agricultural imports.[4] This (and lower prices generally) decreased incomes in the Danube Basin and therefore directly affected Czechoslovak industrial exports to the region. It has already been pointed out (above) that Czechoslovak exporters had insufficient funds to grant credit, and that agricultural imports were both unwelcome and unnecessary to Czechoslovakia, thus effectively precluding trade in an increasingly bilateral system of commodity exchange.

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1 Even within 'Empire trade' metropolitan countries tended to balance trade bilaterally with each territory. *ibid.*, p. 91.

2 *ibid.*, p. 94.

3 A. Hirschmann, *National Power and the Structure of Foreign Trade*, University of California Press, 1969, p. 110. Hirschmann found (p. 111) that Czechoslovakia was not significantly 'controlled' by Germany.

4 A. Basch, *The Danube Basin and the German Economic Sphere*, Kegan Paul, London, 1944,pp. 41-46.

2.3 THE THIRTIES: THE DISINTEGRATION OF WORLD MULTILATERAL TRADE

2.3.1 The Evolution of Bilateralism and Economic Groupings[1]

South-eastern Europe and Germany, Czechoslovakia's major trade partners in the twenties, offer a good example of the degeneration of world trade from multilateral to bilateral forms. Initial problems were caused by barriers imposed on the agricultural exports of the Danube area by the more industrialised countries of Europe. Czechoslovakia itself increased protection for its domestic agricultural producers from the middle twenties and the trade war with Hungary, begun on 18 December 1930, reduced trade to a fraction of its former levels, causing grave problems for the latter.[2] Italy and France too, instituted, from 1929, major drives towards agricultural self-sufficiency. It was Germany however, which from 1925, but espeically after 1929, introduced the most severe forms of agricultural protection. This autarkic policy had severe effects on the Danube area; for which Germany had represented over 20 percent of export markets.[3] A more indirect effect, damaging both to the agricultural countries and to Czechoslovakia, was the effective exclusion by Germany of imports from the latter of malt, hops, barley, sugar, timber etc. The resulting switch of land use in Czechoslovakia from beet and other exports to grains[4] merely increased self-sufficiency in that country and further limited trade opportunities with the rest of south-eastern Europe under the bilateral payments systems adopted later. Moreover, falling world prices for agricultural commodities, and strong competition from non-European food producers, exacerbated the export difficulties of the agricultural Danube countries. This, combined with the effects of the 1931 financial crisis, produced balance of payments

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1 This section relies heavily on Basch (1944) especially chapters 3-6.

2 *ibid.*, p. 39. Basch argues (p. 47), however, that Czechoslovak protectionism was relatively mild.

3 *ibid.*, p. 39.

4 *ibid.*, p. 48.

pressures which those countries chose to solve through foreign exchange control which eventually evolved into bilateral clearing arrangements. Neither the abortive 'Plan Tardieu', which advocated a form of Danubian customs union, nor the 1932 Stresa Conference, which examined the problems of foreign debt and prices of cereals, succeeded in alleviating the financial and trade problems of the area.[1]

Massive withdrawals of short-term credit from the Danube area from May 1931 made untenable the balance of payments positions of these countries. The agricultural countries in particular had been dependent for payments equilibrium upon capital inflow. Basch argues that devaluation was precluded as a policy measure " ... for psychological and political reasons even more than for economic ones"[2] because of disagreeable memories of postwar monetary instability. The alternative - foreign exchange control - was adopted by Hungary in August 1931; by Czechoslovakia, Yugoslavia and Austria in October 1931; and by Romania in February 1932. Price deflation, the necessary corollary to foreign exchange control in the attempt at regaining a competitive export position, failed in Czechoslovakia which devalued first in 1934 and again in 1936.

As a creditor nation in the area, Czechoslovakia was opposed to the clearing system proposed by the other Danubian countries. Imports were controlled and reduced according to the availability of foreign exchange in Czechoslovakia, but claims by overseas suppliers were always met.[3] In contrast, the other countries in the area initially preferred not to control imports, but payment for them was blocked; and this was quickly extended to cover purely financial claims, including services. The arbitrary methods employed in satisfying these blocked claims led to

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1 Basch (1944) ch. 4, describes the proposals in detail. The Plan Tardieu envisaged Czechoslovak participation.

2 *ibid.*, p. 72.

3 *ibid.*,pp. 74-75.

pressure from creditors and their governments for some payment, even at lower rates.[1] This in turn led to bilateral payments or 'clearing' agreements between countries. Imports were paid for in the domestic currency of the exporter through reciprocal central bank arrangements, and balances could not be transferred to third countries. Moreover, most of the 'clearing' countries also imposed import restrictions which were used to protect domestic infant industries[2] and were a further factor in limiting trade with industrial countries like Czechoslovakia. On the other hand, Czechoslovakia imposed quantitative restrictions on both agricultural and industrial imports from such countries. Only where there existed a danger of retaliation to its own exports, particularly to free currency areas, did the Czechoslovak authorities refrain from controlling imports.

Similar trends occurred elsewhere in the world, leading eventually to the degeneration of the integrated multilateral world system of trade into a series of largely independent economic groups.[3] Table 2.2 shows the extent of this development within colonial groups. In each case, the metropolitan country increased the share of its trade devoted to its dependent territories. One of the reasons for this phenomenon was the common currency used within each area, but discriminatory measures were also important. For example, the 1932 Imperial Preferences (in tariffs) granted by Britain on bilaterally reciprocal terms to the Sterling Area countries discriminated against non-members such as Czechoslovakia which required market access to free currency areas to offset their purchases (in free currency) of raw materials. Germany and Japan acted similarly. The former increased its trade with Bulgaria, Greece, Hungary, Rumania, Turkey and Yugoslavia at the expense of trade with other European countries,[4] as a

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1 *ibid.*, p. 76.

2 *ibid.*, p. 79.

3 League of Nations, *Review of World Trade*, 1938, p. 35.

4 *ibid.*, p. 34.

TABLE 2.2 SHARE OF 'EMPIRE TRADE' IN THE TRADE OF SEVEN COUNTRIES

(per cent)

Trade of	Share of	Imports			Exports		
		1929	1932	1938	1929	1932	1938
U.K.	Brit. Common., colonies, protectorates etc.	30.2	36.4	41.9	44.4	45.4	49.9
U.S.A.	Philippines	2.9	6.1	4.8	1.6	2.8	2.8
France	French colonies, protectorates etc.	12.0	20.9	27.1	18.8	31.5	27.5
Belgium	Belgian Congo	3.9	3.8	8.3	2.6	1.3	1.9
Netherlands	Neth. o'seas territ.	5.5	5.0	8.8	9.4	5.9	10.7
Italy	Italian colonies and Ethiopia	0.5	1.1	1.8	2.1	3.6	23.3
Portugal	Portug. o'seas territ.	7.9	10.4	10.2	12.7	13.9	12.2
Japan	Korea and Formosa	12.3	26.2	30.0	16.8	21.6	32.9
	Kwantung	6.0	4.0	1.6	4.8	6.8	13.7
	Manchuria	1.9	2.7	9.0	2.5	1.5	8.1
	Rest of China	5.8	4.0	4.4	10.9	7.3	8.0
Germany	South-east Europe[1]	4.5	5.5	12.0	5.0	3.9	13.2
	Latin America	12.2	11.2	15.6	7.8	4.3	11.5

Source: League of Nations, *Review of World Trade*, 1938, tables on pp. 34-35.

[1]Bulgaria, Greece, Hungary, Rumania, Turkey, Yugoslavia.

TABLE 2.3 CZECHOSLOVAKIA'S SHARE OF WORLD TRADE

(per cent)

Year	Imports	Exports	Total
1929	1.66	1.83	1.74
1930	1.60	1.95	1.77
1931	1.66	2.05	1.85
1932	1.58	1.68	1.65
1933	1.37	1.47	1.44
1934	1.34	1.62	1.47
1935	1.42	1.64	1.48
1936	1.41	1.54	1.49
1937	1.39	1.60	1.50

Source: League of Nations, *Review of World Trade*, relevant years.

deliberate[1] policy of economic domination of the area. Both Germany and Japan significantly increased trade with Africa and Latin America; but Japan also created a 'yen bloc'[2] in eastern Asia which became increasingly dependent on trade with Japan to the exclusion of the rest of the world. These developments severely constrained Czechoslovak attempts at diverting exports away from south-eastern Europe in the thirties.

2.3.2 Changes in the Direction of Czechoslovak Trade

The year 1929 represents as much a break in economic growth and trade relations for Czechoslovakia as it does for the rest of the world. It has been estimated[3] that about 30 percent of GNP in the late twenties was composed of merchandise exports, and that domestic growth was highly dependent on exports.[4] This high degree of trade dependence is one reason why Czechoslovakia was affected for a longer period by the Depression than most other European countries.[5] Table 2.3 shows the fall, over the period from 1929 to 1937 of Czechoslovakia's share of world trade. There are several reasons for this fall. It was pointed out above that Czechoslovakia inappropriately adopted the Gold Standard in 1929. Coupled with the devaluation of the British pound in 1931 (followed by other Sterling Area currencies), the Czechoslovak policy of price adjustment through deflation proved unsuccessful and it was necessary to devalue on 17 February 1934 in response to the devaluation of the United States dollar. Even this 16.66 percent

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1 Basch (1944), pp. 165-184. The clearing system of payments was instrumental in this.

2 *Review of World Trade* 1938, pp. 34-35.

3 F. Pryor, Z. Pryor, 'Foreign trade and interwar Czechoslovak economic development', International Development Research Centre, Indiana University, *Working Papers* no. 21, March 1973, p. 3, 20-21.

4 *ibid*, p. 2, Table 1.

5 Austria recovered more slowly. F. Pryor, Z. Pryor, M. Stadnik, G. Staller, 'Czechoslovak aggregate production in the interwar period', *Review of Income and Wealth*, March 1971, p. 48, Table 7.

devaluation was insufficient to offset the Sterling Area devaluations (of up to 40 percent), a factor particularly disastrous at a time when Czechoslovakia needed to switch exports to free currency areas. A further devaluation of the koruna on 9 October 1936, as a response to the Gold Bloc devaluation in September of that year, appears to have been more successful and the Czechoslovak share of world exports increased marginally. (The overall depreciation of the koruna between 1933 and the end of 1936 was 29.99 percent.) On the other hand, the increase in trade may have been due more to world rearmament and hence Czechoslovak arms exports.[1] This inflexibility in exchange rate policy and the failure of deflation (compounded by officially inspired cartelisation domestically, particularly after 1936,[2] which raised price levels) was one factor in depressing Czechoslovak trade.

However, the greatest loss in trade was caused by the trend to bilateralism by Czechoslovakia's largest trading partners, Germany and the countries of the Danube Basin. Between 1927 and 1930 the export surplus with the Danubian countries was greater than tne overall Czechoslovak balance of trade,[3] making it indispensible in covering deficits with other areas. However it was precisely this surplus which prevented Czechoslovakia from trading bilaterally with these countries: largely self-sufficient in food, it could not substantially increase its imports to offset (blocked) export balances. Trade was therefore limited to the level of potential (agricultural) imports.[4] In January 1932 an Exchange Commission, established

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1 Pryor (1973), p. 202, states that economic recovery was due to domestic investment and rearmament.

2 A. Spinks, *Report on Economic and Commercial Conditions in Czechoslovakia,* Department of Overseas Trade, HMSO, February 1937, p. 30. Teichova (1972), pp. 33-34. Cartels also limited Czechoslovak exports. For example exports by the Skoda Works to France and her colonies were limited by Schneider et Cie-Creusot. A. Teichova, *An Economic Background to Munich,* Cambridge University Press, 1974, p. 213.

3 Basch (1944), p. 106.

4 Clearing agreements were concluded in 1932 with Yugoslavia, Austria, Greece, Bulgaria and Rumania; and in 1933 with Germany.

in the Ministry of Finance, refused import (payments) licences for goods " ... from countries where Czechoslovakia possessed large blocked amounts"[1] of credit which could be used to pay for these goods. The loss of the Danubian markets especially

> "... affected the old light industries exporting mass products. There was little chance of finding export possibilities in other parts of Central Europe, and definitely no chance of receiving an export surplus in free exchange."[2]

Because essential industrial raw materials were imported mainly from free currency areas, payment for them could not be offset by blocked accounts in south-eastern and central Europe. The result was a redirection of trade away from Czechoslovakia's traditional trade partners and it was this development, among others, which provided the impetus to trade with developing countries.

Table 2.4 illustrates this reorientation of the direction of trade away from the clearing countries to countries with no exchange restrictions. An attempt was also made to increase trade with the Soviet Union: a long-term trade treaty was signed in 1935 to replace temporary agreements dating back to 1922. However German competition and a lack of credit facilities on the part of Czechoslovak exporters limited significant increases in trade.[3] The importance of the Soviet Union probably lay more in the access and transport facilities it afforded to Turkey, Iran, Afghanistan, Mongolia, China and Japan.[4]) The shift away from clearing countries, represents a fundamental change in trade policy with respect to markets and import sources. One result of this change was the development of a duality in trade, with " ... two foreign market spheres with different prices, two trade balances,

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1 Basch (1944), p. 79.

2 *ibid.*, p. 108.

3 Spinks (1937), p. 27.

4 Ministerstvo Zahranicnich Veci, *Vestnik Ministerstva Zahranicnich Veci*, 1935, Orbis, Prague, p. 506.

TABLE 2.4 DIRECTION OF CZECHOSLOVAK TRADE BY PAYMENTS AREA

Year	imports current Kc as % of 1929	exports current Kc as % of 1929	import volume[1] 1929 = 100.0	export volume[1] 1929 = 100.0	imports % total value of trade	exports % total value of trade
			CLEARING COUNTRIES[2]			
1929	100.0	100.0	100.0	100.0	46.2	55.3
1933	27.0	23.3	50.5	33.7	40.6	44.6
1937	41.8	40.6	54.9	48.2	35.1	38.5
			COUNTRIES WITHOUT EXCHANGE CONTROL[3]			
1929	100.0	100.0	100.0	100.0	41.6	35.7
1933	33.1	37.0	61.9	53.5	44.9	45.7
1937	73.5	85.4	96.8	101.3	55.7	52.2
			STERLING AREA[4]			
1929	100.0	100.0	100.0	100.0	11.8	13.9
1933	37.8	31.9	70.8	46.1	14.6	15.3
1937	104.6	92.9	137.6	110.2	22.5	22.1

Sources: (1) Current value data for 'Countries without exchange control' taken from A. Basch, *The Danube Basin and the German Economic Sphere*, Kegan Paul, London, 1944, table X, p. 115.

(2) All other trade data taken from Ministerstvo Zahranicniho Obchodu, *Zahranicni Obchod Republiky Ceskoslovenske*, Bursik & Kohout, Prague, relevant years.

[1] Import and export price indexes taken from F. Pryor, Z. Pryor, 'Foreign trade and interwar Czechoslovak economic development', International Development Research Centre, Indiana University, *Working Papers* no. 21, March 1973, Table 15, p. 29. Being constructed for overall trade they may not be entirely appropriate for the groups shown here.

[2] Germany, Austria, Hungary, Rumania, Yugoslavia, Greece, Bulgaria, Italy, Turkey.

[3] Composition not specified in source.

[4] The Sterling Area was not defined until 1939 but countries which held large sterling balances or maintained close parity with the pound after the British devaluation of 1931 are generally considered to have belonged to the group. Assignation to the group is arbitrary and its composition changed during the thirties, but the following are included: United Kingdom, Ireland, British Dominions and colonies (excepting Canada, Hong Kong and Newfoundland), Iran, Egypt, Scandinavia, Siam and Portugal. Argentina and Japan, usually classified as being on the 'fringe' of the group are not included. See A.C.L. Day, *The Sterling Area*, Oxford University Press, 1956, ch. 4.

and two balances of payments";[1] a duality which has persisted since, although due to different causes. Had the Second World War not intervened, with all its geopolitical consequences, it is possible that in time Czechoslovakia may have eventually redirected its trade primarily towards countries outside Central and Eastern Europe.

2.3.3 Commodity Composition and Comparative Advantage[2]

On a general level, Czechoslovakia was an importer of raw materials and semi-manufactures and an exporter of manufactured products (Table 2.6). (But it was not entirely specialized because agricultural tariffs created a high degree of domestic self-sufficiency in foodstuffs.) This pattern remained relatively constant throughout the interwar period, with about 60 percent of imports composed of raw materials, foodstuffs and agricultural products; and 70 percent of exports as finished goods. The sectors in Table 2.5 are arranged in descending order of the pattern of comparative advantage identified by the Pryors to have existed in 1929 for Czechoslovak trade.[3] The estimate - based on the concept of comparative advantage in a relatively free economy being reflected by a consistent export surplus of a particular good, and approximately measureable by the ratio of net exports to domestic production for each sector - showed that Czechoslovakia's pattern of comparative advantage was already established by about 1925. The increased share of 'leather and shoe products' between 1925 and 1929 (continued in the thirties) may be at least partially ascribed to the entrepreneurial ability of Tomas Bata. The high export dependence of some comparative disadvantage industries such as 'chemicals' and 'metallurgy and metals' may be explained in two ways.[4] Firstly, the general nature of the sectors shown in Table 2.5

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1 *ibid.*, p. 117. Nevertheless, multiple exchange rates were avoided, in contrast to the period after 1948.

2 This section relies heavily on both Pryor (1972); and Pryor and Pryor (1973).

3 Pryor and Pryor (1973), p. 6.

4 Pryor (1972), p. 17.

TABLE 2.5 SECTORAL COMPOSITION OF EXPORTS

(percent, constant 1929 prices)

Sector by order of comparative advantage in 1929	1920	1925	1929	1933	1937	export as % of 1929 prodn.
Total manuf. & agriculture	100	100	100	100	100	30.9
Stone, glass, clay production	12.6	10.3	9.6	9.7	6.8	54.4
Leather and shoe production	3.2	4.3	7.8	11.5	10.7	54.0
Paper and printing production	2.8	2.0	2.5	5.0	4.4	19.8
Wood products	5.4	4.1	2.7	2.3	2.8	19.7
Textiles and clothes	21.5	33.2	34.7	28.8	27.3	46.7
Processed food production	15.1	13.3	9.2	8.5	5.9	10.6
Machinery and metal production	9.7	7.5	9.0	6.2	9.1	20.6
Mining prod. and ores	8.1	5.3	6.1	7.6	7.4	17.9
Metallurgy and metals	6.1	5.4	7.0	5.1	9.1	47.7
Agriculture	8.0	10.6	7.3	9.1	9.1	6.9
Chemical and rubber products	7.5	4.0	4.2	6.3	7.2	28.4

Source: F. Pryor, Z. Pryor, 'Foreign trade and interwar Czechoslovak economic development', International Development Research Centre, Indiana University, *Working Papers* no. 21, March 1973, Table 6 (p. 14) and Table 9 (p. 18).

TABLE 2.6 COMMODITY COMPOSITION OF CZECHOSLOVAK TRADE

(per cent)

		1921-1923	1928-1929	1932	1935	1937-1938
IMPORTS						
I	Food, beverages & other agric.	35.1	25.5	27.5	26.6	22.3
II	Raw materials	29.4	30.0	26.8	31.0	30.6
	Total primary products	64.5	55.5	54.3	57.6	52.9
III	Light industry	19.1	22.2	17.4	19.1	17.0
IV	Machines, vehicles	5.9	8.3	7.6	7.9	9.6
V	Other manufactures	10.5	14.0	20.7	15.4	20.5
	Total manufactures	35.5	44.5	45.7	42.4	47.1
EXPORTS						
I	Food, beverages & other agric.	19.5	16.4	16.1	10.2	12.9
II	Raw materials	17.2	9.9	11.1	12.3	11.2
	Total primary products	36.7	26.3	27.2	22.5	24.1
III	Light industry	50.5	55.1	51.7	45.2	42.0
IV	Machines, vehicles	3.2	4.4	5.3	5.2	8.1
V	Other manuafactures	9.5	14.2	15.8	20.1	25.8
	Total manufactures	63.3	73.7	72.8	70.5	75.9

Source: Z. Drabek, 'Trade performance of East European countries 1919-1939', *PEEE*, no. 37, October 1973, p. 78, Table A-7.

means that they probably include goods produced at both comparative advantage and at comparative disadvantage: the categories used are too broad to take account of 'two-way trade' within categories shown. Secondly, domestic buyers may have preferred imported goods to goods produced domestically at comparative advantage for subjective reasons such as fashion. Both reasons would have decreased the apparent 'comparative advantage' of the sector concerned, by decreasing net exports (exports-imports).

Evidence also exists to show[1] that production and trade declined more, during the Depression, in those industries in which Czechoslovakia had a comparative advantage, than in other, less advantageous industries. This is contrary to expectation, because one might expect that in a situation of intense competition for markets, the more competitive industries would have been more successful. However this does not take into account tariff policies of other countries. Textiles for example, received high degrees of protection in south-eastern Europe. Moreover, *pace* the Pryor results, Czechoslovakia may have already begun losing its comparative advantage in textile production and other light industry in the thirties. (In other words, the assumption of a static comparative advantage may be untenable even disregarding tariff distortion to free trade). Japanese competition was at least partially responsible for a severe curtailment of Czechoslovak 'Gablonz' (Jablonecke) wares to the Indian, African and European markets.[2] German and British competition,[3] particularly under Imperial Preference may have further robbed Czechoslovakia of comparative advantage in certain light industries. Vondracek attributes decreased exports of glassware, porcelain, gloves etc. to the 1931 devaluation of sterling[4] which Czechoslovakia failed to offset until 1936. He also sees the decline in textile exports as being

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1 *ibid.*, pp. 22-24.

2 H. Kershaw, Commercial Secretary to H.M. Legation in Prague, *The Economic Situation in Czechoslovakia, 1935*, Department of Overseas Trade, HMSO 1935, p. 33.

3 Spinks (1937), p. 14.

4 F. Vondracek, *The Foreign Policy of Czechoslovakia, 1918-1935*, Columbia University Press, N.Y., 1937, pp. 337-338.

due to Civil war in China and a series of bankruptcies in South America. Such disturbances could have affected the Pryor figures and partially produced the paradoxical results of greater trade increases in industries with lower comparative advantage.

Czechoslovak textile production, for example, was confined to relatively low grade[1] goods. It is therefore logical that Japanese, Chinese and Indian firms should have become increasingly competitive on Asian markets:-

> "The reality that Czechoslovakia in 1929 achieved an even lower percentage of prewar production [in textiles] than England, whose cotton industry crisis is the subject of world-wide discussion, shows eloquently how Czechoslovakia has also been affected by the powerful process of the destruction of the cotton industry by the low-wage [Asian] nations ..."[2]

Other factors were important too. Former south-east European markets became increasingly protectionist as they sought to develop indigenous industry and Czechoslovak exporters lacked sufficient financial resources to grant export credits.[3] Conclusions regarding the effect of the Depression on the problem of Czechoslovakia's comparative advantage as shown by the Pryor figures, are, by Pryor's own admission,[4] influenced by the inclusion of agriculture and metallurgy in the 'comparative disadvantage' sectors. Metallurgical exports were affected by increasing rearmament after 1935 and thus presented the apparently spurious result of a greater increase in exports of relatively disadvantaged goods. Heavy tariff protection and export subsidies on agricultural produce had a similar effect in increasing exports of that sector despite its comparative disadvantage. Finally, the devaluations of 1934 and 1936 would have increased costs in what were highly import dependent industries. Exports generally had an import content of between 20 percent and 38 percent over the period 1929 to 1937,[5] and the figure for textiles

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1 H. Kershaw, *The Economic Situation in Czechoslovakia as at March 1929*, Department of Overseas Trade, HMSO, 1929, p. 10.

2 K. Uhlig, 'Boj Asie proti evropskemu bavlnarskemu prumyslu', *ON* 1930, p. 343.

3 Uhlig (1929), p. 937.

4 Pryor (1972), p. 23.

5 *ibid.*, Table 9, p. 15.

would almost certainly have been higher.

It is therefore submitted that it is not possible, in a situation of general world protectionism and economic groupings, to comment definitively on the pattern of Czechoslovak comparative advantage. On the one hand, there is some evidence that Asia and other countries were rapidly becoming more efficient than Czechoslovakia in the production of sugar and of mass produced consumer goods. On the other hand, the world pattern of free trade was so seriously distorted after 1929, that the determination of 'true' comparative advantage is almost impossible for the thirties. One can therefore only conclude that the Czechoslovak pattern of comparative advantage in 1929 (as shown in Table 2.5) was in the final stages of production of mass-produced consumer goods; but that this pattern was subject to potentially rapid and extensive change as other, more efficient, producers entered the market.

2.4 THE SECOND WORLD WAR AND ITS AFTERMATH

2.4.1 General Economic Developments

Germany's occupation of Czechoslovakia began with the Munich agreement of September 1938 under which it annexed the Sudetenland region directly to the Third Reich. (Tesin was annexed by Poland in the same year.) In March 1939 a German Protectorate was imposed on Bohemia and Moravia and an 'independent' puppet state was instituted in Slovakia. From this date until 1 October 1940, Germany recognised and respected prewar Czechoslovak trade agreements and commercial treaties, thus providing for itself a backdoor means of obtaining raw materials from countries refusing to trade directly with Nazi Germany.[1] Even this form of trade ceased with the formation of a customs union between the Protectorate and the Reich (including Austria) in October 1940. Czechoslovak trade agreements were thereafter treated as agreements between Germany and the countries concerned. It is thus all but meaningless to speak of Czechoslovak external economic relations in the period from 1939 to 1945. On the other hand, a brief examination of the German occupation is important to the analysis of postwar trends because of its effects on the allocation of resources and distortion of the pattern of production.

Despite escaping the worst effects of war damage from bombing etc., Czechoslovak industry and resources suffered from direct economic exploitation designed to aid the German war effort. Assets under Jewish ownership were confiscated, substantial numbers of intellectuals and businesmen died in concentration camps, and material resources such as coal, were depleted. An excessive increase in the money supply, accompanied by price control, produced serious suppressed inflation;[2] a legacy which hampered postwar reconstruction. Foreign exchange reserves were depleted in several ways. In March 1939, the

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1 R. Olsovsky, *et. al., Prehled Hospodarskeho Vyvoje CSR, 1918-1945,* Vysoka Skola Ekonomicka, Prague, 1961, p. 367.

2 Detailed data given in J. Krejci, 'Aggregate analysis of the Bohemian-Moravian war economy', *PEEE*, June 1972, Table T20, p. 17.

Reichsbank forced the transfer by Czechoslovakia of 6 million pounds deposited in the Bank of International Settlements in Switzerland to itself[1] and reserves held in Prague by the National Bank (Narodni Banka) were transferred to the Goldiskontbank in Berlin in April 1940. Czech (but not Slovak) export earnings were held in blocked accounts in Berlin and towards the end of the war the National Bank was forced to purchase rapidly depreciating currencies such as the zloty from Germany.

Of greatest significance however was the imposition for most of the War of an unrealistic exchange rate.[2] An artificially overvalued reichsmark (RM) against the Bohemian-Moravian Koruna (K) meant that Germany obtained goods and services at levels below their true scarcity values. Lack of suitable and complete records and data make the estimation of total Czechoslovak losses due to German occupation difficult, although several such estimates do exist. Radice for example calculates that losses due to occupation in the Protectorate of Bohemia-Moravia were of the order of $850 per head; the highest rate of exploitation in the occupied countries of eastern Europe.[3]

On the other hand, there was a partial restitution after the War of gold and foreign exchange seized by Germany. Large, free, supplies of UNRRA commodities, sent to Czechoslovakia after the war also decreased the extent to which it was necessary to save out of current income to provide for investment for postwar reconstruction.

Between 1945 and 1948, Czechoslovakia maintained an economic system which has been described as 'democratic market socialism'[4], a system

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1 G. Rhode, 'The protectorate of Bohemia and Moravia 1939-1945', in Mamatey and Luza (1973), p. 301.

2 E.A. Radice, 'Economic changes in Eastern Europe 1939-1944', *PEEE*, no. 12, June 1972, p. 3.

3 *ibid.*, table on p. 9 and text. See also estimates by J. Krejci, 'Aggregate analysis of the Bohemian-Moravian war economy', pp. 9-10; and L. Chmela, *The Economic Aspect of the German Occupation of Czechoslovakia*, Czechoslovak Sources and Documents, no. 30, Orbis, Prague, 1948.

4 M. Bernasek, 'Czechoslovak planning 1945-1948', *Soviet Studies*, July 1970, p. 95.

characterised by a limited parliamentary democracy, a high degree of nationalisation, increased industrial concentration, and by economic planning. It was the experience of the thirties which led many economists and officials to believe that a highly trade-dependent Czechoslovakia could not maintain full employment of resources - labour in particular - under free market conditions.[1] In common with other European countries (e.g. France, Netherlands) at this time, Czechoslovakia instituted economic planning. An Economic Council was created in August 1945 with the task of constructing an economic plan for the whole economy, although it possessed an advisory role only and could not interfere with decisions of individual ministries.[2] As a result of the Council's work, a Two-Year Economic Plan, effective from 1 January 1947, was enacted. Planning was solely 'from above' with no provision for counterplanning but was relatively unsophisticated, containing only 142 basic targets.[3] Its primary aim was the elimination of bottlenecks to aid the process of reconstruction so that about two-thirds of the economy remained undirected.[4] Foreign trade, although subject to government licensing and foreign exchange restrictions, was not one of the directly 'planned' sectors. The Planning Commission itself recognized the difficulties by pointing out that the production of luxury items (cut glass etc.) for export was justifiably as important as coal output because of the foreign exchange gained.[5] The basic aim of foreign trade within the Plan was to export sufficient output to enable the import of the raw materials necessary for the fulfillment of other Plan targets.

Under the Kosice Program of 5 April 1945, many key industries were fully nationalized, but nationalization in others depended on the size of

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1 Benes (1972), p. 258, footnote 9. Also Kershaw (1935), p. 3.

2 Bernasek (1970), pp. 99-100.

3 Michal (1973), p. 443.

4 E. Outrata, Chairman of the Central Planning Commission in the preface to *The First Czechoslovak Economic Plan: Explanatory Memorandum on the Bill and the Text of the Two-Year Economic Plan Act*, Orbis, Prague, second edition 1948.

5 *ibid.*, p. 98.

the labour force of the enterprise concerned.[1] Nevertheless, firms were meant to operate under conditions of economic efficiency by buying and selling on free markets in competition with the private sector. In practice, of course, this was not feasible because in many sectors, the influence of private competition was negligible and import and exchange controls excluded international competition. Price control too made considerations of market allocation of resources all but irrelevant. On a macro-economic level, the expulsion of the German minority and the nationalization of their assets also had deleterious effects on the economy. Many of those expelled had been either skilled agricultural or industrial workers, or were entrepreneurs. Their loss therefore far outweighed mere considerations of the drop in effective domestic demand or the loss of (human) resources - such as those of Ruthenia which was ceded to the Soviet Union - caused by a sudden decline in population.

2.4.2 Trade and Industry

The distorting effects of the war on the pattern of production were most obvious in the stress placed on heavy industry at the cost of light industrial output. German policy was to utilise the Protectorate as an economic hinterland supplying equipment and food towards the war effort of the Reich. Light industry, of secondary importance during the war, was allowed to stagnate, so that equipment depreciated through deterioration and obsolescence. However, this restructuring of industry had already begun in the thirties, with increasing investment in iron, steel and chemicals,[2] due in large part to rearmament. Dobry shows that the shift from light to heavy industry was manifest in the late twenties and again in the late thirties.[3] Table 2.7 shows that two of the three heavy industrial

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1 Michal (1973) deals with the criteria for, and the problems associated with, nationalization, more fully.

2 Diamond (1947), p. 126.

3 A. Dobry, 'Zakladni smery vyvoje ceskoslovenskeho prumyslu v letech 1933-1938 a nektere otazky socialne politicke', *Ceskoslovensky Casopis Historicky*, no. 5, 1964, Table 13, p. 741.

TABLE 2.7 CZECHOSLOVAK PRODUCTION IN FIVE INDUSTRIAL SECTORS, 1924-1948

(1937 = 100)

Year	Total	Mining	Metals & engineering	Chemicals	Textiles	Food
1924	79	94	56	58	79	..
1937	100	100	100	100	100	100
1947	87	104	97	102	60	65
1948	102	113	116	125	77	77

Sources: 1924-37. A. Teichova, 'Structural and institutional change in the Czechoslovak economy 1918-1938', *PEEE*, February 1972, p. 24, table 15.
1937-48. J. Michal, 'Postwar economic development', in Mamatey and Luza (1973), p. 435, table 3.

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sectors - mining, metals and engineering, and chemicals - grew faster than textiles, a trend accelerated by war time policies.[1] A comparison of prewar and postwar values also shows the emphasis placed after the war on heavy industries at the relative expense of growth in light industry.

Apart from the impetus provided by wartime policies, this structural change was the result of postwar reconstruction and development. Foreign trade policy in particular exerted a direct influence. For the first time since 1918 the government had direct control (rather than resorting to indirect weapons such as tariffs) over the economy. General government policy therefore played a central role in influencing trade and industry. For example, it was realised that the war had greatly increased Western heavy industrial capacity, but changes in foreign policy led to serious expectations of greater cooperation with the Soviet Union, whereby products of Czechoslovak heavy industry would be exchanged for raw materals.[2] Uncertainty about world trade and the experiences of the thirties enhanced the attractiveness of the Soviet market for heavy industrial goods because of the stability it would guarantee for such exports. This policy of heavy industrial export was also aimed at south-eastern Europe and at the end of

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1 Radice (1972), pp. 24-25.

2 Speech by the Minister for Foreign Trade on April 1946, quoted in Diamond (1947), pp. 138-139.

1946 the Minister of Industry toured the area " ... for the express and widely publicised purpose of making long-range contracts for the sale of machinery, vehicles and other products of heavy industry."[1] The trade agreement of February 1947 with Yugoslavia, dovetailing with its Five-Year Plan, was one result of this. Expectations of the long-term loss of German export potential in heavy industry encouraged this thinking and it was expected that Germany itself would become a market for Czechoslovak heavy industry;[2] a reversal of prewar patterns. The expelled German minority would also, it was thought at the time, re-establish their light industries in Germany, creating export problems for Czechoslovak industry in this field. Nevertheless, this early euphoria in official thinking seems to have dissipated as it was gradually realised that Czechoslovak production capacity was insufficient to fill the gap left by Germany.[3] Concentration on exporting iron and steel goods to Eastern Europe would also have tied Czechoslovakia to soft currency earnings while it was still dependent on the West for many of its imports. Thus trade with the Soviet Union dropped significantly as a proportion of total trade between 1945 and 1947, and increased only in 1948 for political reasons.

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1 *ibid.*, p. 140.

2 *ibid.*, p. 138. Diamond quotes newspapers and refers to a speech by President Benes.

3 *ibid.*, pp. 140-141. Diamond quotes E. Outrata, Chairman of the State Planning Office who expressed doubts about Czechoslovak capacity, particularly in the output of black coal.

2.5 LONG-TERM PERSPECTIVES ON TRADE WITH DEVELOPING COUNTRIES

2.5.1 The Direction of Trade

Table 2.8 shows the volume of trade with LDC's compared with total trade volume. Two sets of price indexes have been used to deflate imports. The Pryor index is far more comprehensive, but probably less relevant to LDC's because of the wide assortment of goods (including heavy machinery etc.) it contains. It is more suited to total trade data than to raw materials imports. The Own Index, it is submitted, though less extensive in the range of commodities included, is of greater relevance to imports from LDC's. Given the diversity of exports to LDC's, however, the Pryor index is probably sufficiently accurate for exports. Column 6 shows imports by country of production; that is, manufactured in LDC's but bought from third countries. Lack of knowledge of many import sources (e.g. goods shipped through Hamburg: section 2.5.2) means that the volumes in the twenties are probably understated. Unfortunately no comparable data giving ultimate destination of exports were available. Nevertheless it is clear that trade with LDC's in the twenties grew faster than total trade, almost certainly because of its lower initial levels.

The greater degree of growth and higher trade level between 1929 and 1937 reflect the redirection of trade away from the 'clearing' countries to free payments areas[1] (section 2.3.2). The roots of the Czechoslovak choice of trade partners can therefore be said to lie in the bilateralism of the thirties, though this must be qualified by the trends of the preceeding decade. Czechoslovak trade was more complementary to that of the LDC's than it was to its major partners in south-eastern Europe because of its high degree of self-sufficiency in agriculture. (This was not a 'natural'

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[1] MFN agreements, for example, were signed with LDC's as follows: Afghanistan (1937), Argentina (1937), Bolivia (1936), Brazil (1931, 1936), Chile (1930, 1933), Colombia (1937), Ecuador (1937), Egypt (1930), Guatemala (1936), Iran (1929), Turkey (1927, 1929, 1934) and despite lack of a formal treaty, MFN treatment to Iraq from 1932. Since other LDC's were at this time (with the exception of Siam and Cuba) colonies, MFN agreements could not have been signed directly with them.

specialization, but due in large part to protective tariffs). In the multilateral system of world trade these differences in degree of complementarity were of little import because reciprocity in trade was unnecessary. However, the bilateralism of the thirties forced Czechoslovak exporters and importers to broaden their horizons.

There would have been little incentive after the Second World War to switch away from overseas import sources developed during the thirties. Similarly, markets, once penetrated, and a clientele established, would, ceteris paribus, have remained more attractive with little incentive to switch back to more proximate buyers. The beneficial effect on exports of well-known brands (e.g. Skoda) was emphasised even in the sixties when attempts were made to penetrate LDC markets.[1] On the other hand, the war and subsequent trading difficulties, (due especially to transport bottlenecks and to currency inconvertibility) as well as foreign policy, broke the trend of the thirties sharply. However the need for greater machinery imports from the West for purposes of reconstruction, particularly from 1946, would almost certainly have necessitated continued exports to some of the LDC's as a means of earning the requisite foreign exchange. This must remain speculation however because from 1948 a centrally directed system of trade was instituted. Apparent continuity in some pre- and post-war aspects of Czechoslovak trade with LDC's make it desirable to further explore these similarities.

The data in Table 2.9 are fairly consistent in the intertemporal composition of the areas shown because they are based on totals - rather than aggregates - employing virtually identical definitions of the geographical areas. The years shown were selected to provide a long-term

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[1] e.g. "Czechoslovakia's trade and economic relations with the countries of Latin America have a long-standing tradition. Czechoslovak goods, on account of their quality and reliability, had a good reputation in all countries to which they were delivered as far back as prior to the Second World War." L. Zamlar, 'Economic relations between Czechoslovakia and Latin American countries', *CFT*, no. 10, 1966, p. 11.

TABLE 2.8 VOLUME INDICES OF CZECHOSLOVAK TRADE WITH DEVELOPING COUNTRIES IN THE TWENTIES AND THE THIRTIES[1]

(1929 = 100.0)

Year	Exports		Imports				Own import price index
	total[2] (1)	LDC's[2] (2)	total[2] (3)	LDC's[2] (4)	LDC's[2] (5)	LDC's[3] (6)	
1924	71.2	43.0	74.1	19.7	22.4	21.3	121.4
1925	80.5	53.8	79.1	35.2	37.3	34.2	118.3
1926	81.6	69.0	74.2	37.0	38.1	40.9	106.3
1927	95.4	76.4	89.4	75.7	68.7	89.9	95.7
1928	99.4	94.6	93.8	88.7	90.4	89.5	104.4
1929	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930	91.7	85.6	91.8	70.2	70.2	74.9	85.6
1931	79.6	74.6	86.8	82.7	72.7	91.6	59.8
1932	61.7	61.7	69.9	76.1	64.6	79.9	49.6
1933	41.8	61.8	57.4	111.3	88.6	88.2	42.5
1934	47.5	94.6	57.5	127.8	108.5	86.7	47.2
1935	52.8	86.2	59.2	136.6	119.6	90.7	49.9
1936	54.8	100.6	64.7	155.6	134.3	103.2	52.8
1937	69.3	139.8	72.3	199.9	181.3	117.1	68.9

Source: *Zahranicni Obchod Republiky Ceskoslovenske*, relevant years, for trade data. Price indexes were taken from (a) Z. Pryor 'Czechoslovak economic development between the two world wars', *PEEE*, June 1972, Table 8, p.13 The Pryor import index was calculated from 253 items and the export index from 227 items (privately communicated). Items were selected to represent at least half of the trade volume in each of the 51 general tariff classes. (b) The Own Index was calculated by the author from imports of nine items: cotton, greasy wool, green hides, dry hides, jute, husked rice, tobacco, raw rubber, and coffee; using 1929 weights (quantity). Both the Pryor and the Own Index have utilised unit values, rather than actual prices; both use the Laspeyre's index.

[1] Columns (1), (2), (3), (4) deflated by Pryor Price indexes. Columns (5) and (6) deflated by the Own import price index.

[2] Special trade by country of consignment for exports and by country of commercial origin for imports.

[3] Special trade by country of production.

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perspective, and fluctuations such as those between 1929 and 1937 have been excluded. Over the whole period Asia has in general been more important in its share of Czechoslovak trade than America, which in turn was more important than Africa. Trade shares with the Soviet Union and south-eastern Europe are shown for two reasons. Firstly, in the interwar period, the Soviet share of trade was much lower than for any of the LDC areas; and in 1947 Asia itself took more of Czechoslovak exports than the

USSR. Had Japan and China been included, the difference would have been even greater. Secondly, in 1929, imports from LDC's were almost as important as trade with the agricultural countries of south-eastern Europe, and may have even exceeded it.[1] By 1937 the LDC's were clearly more important although they lost ground relatively after the war, probably because of transport and other problems.[2] The 1947 trade and payments agreement with Argentina, for example, was seen as important for " ... the procuring of necessary supplies of wheat and food for the Czechoslovak Republic, and on the other hand the export of industrial goods required by Argentina";[3] precisely the pattern of trade which might have been carried on with the agricultural countries of south-eastern Europe in the thirties in the absence of protective tariffs on agricultural imports.

The predominance of both the USSR and south-eastern Europe from 1948 - despite their many similarities in trade and production capacities to the LDC's - increased dramatically for political reasons. The share of exports to Asian and American LDC's immediately after the war actually increased, almost certainly as a consequence of the elimination of Japanese and German competition in both regions; a factor which had hindered trade in the thirties. In the 1946 National Assembly debate on ratification of the 21 October 1937 trade agreement with Afghanistan, Dr Spanik, spokesman for the Foreign Affairs Committee, stated that Asian markets provided healthy competition and that:

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1 Imports are shown by country of purchase, not country of production. At this time there was a large element of entrepot trade: section 2.5.2.

2 e.g. "It is cheering to think that despite great transport difficulties, we were able to export last year about 40 million crowns' worth of goods to China and 45 million crowns' worth to British India". Statement on foreign policy made to Constituent National Assembly by J. Masaryk, 20 March 1947. *Czechoslovak Sources and Documents*, no. 28, Orbis, Prague, 1947, p. 37.

3 Speech by Dr Horakova in the National Assembly, 22 January 1948, in *Tesnopisecke Zpravy o Schuzich Narodniho Shromazdeni*, meeting 91, pp. 10-11. No wheat was in fact imported from Argentina in the years 1945-47 inclusive.

TABLE 2.9 SHARE OF FIVE AREAS IN CZECHOSLOVAK TRADE, 1929-1975

(per cent of current value)

Area[1]	1929	1937	1947	1948(1)	1948(2)	1960	1975
IMPORTS							
Total LDC's	8.32	18.30	13.67	13.24	12.98	9.78	5.56
Asian LDC's	3.91	7.60	5.80	5.35	5.50	5.29	2.04
African LDC's	1.67	4.59	3.71	3.84	3.71	2.52	2.03
American LDC's	2.74	6.11	4.16	4.05	3.77	1.97	1.49
Soviet Union	1.28	1.14	6.20	15.61	16.39	34.72	32.09
agricultural S.E. Europe	9.48	10.92	10.70	14.57	15.96	13.22	13.96
EXPORTS							
Total LDC's	6.76	13.73	12.42	14.14	16.27	11.04	8.61
Asian LDC's	3.03	4.54	5.15	7.19	9.35	5.15	4.70
African LDC's	1.40	4.99	2.81	3.19	3.19	2.99	2.72
American LDC's	2.33	4.20	4.46	3.76	3.73	2.90	1.19
Soviet Union	1.26	0.78	5.05	15.95	15.95	34.13	32.98
agricultural S.E. Europe	16.60	13.05	12.58	15.10	15.11	13.51	15.14

Sources: (a) 1929 - 1947 *Zahranicni Obchod Republiky Ceskoslovenske*, relevant years. Gives Special Trade by country of commercial origin or destination. Imports c.i.f., exports f.o.b.

(b) 1948(1) *Mesicni Prehled Zahranicniho Obchodu*, December 1948, data as for 1929 and 1937 and 1947.

(c) 1948(2), 1960, 1975 *Facts on Czechoslovak Foreign Trade*, 1962-1976. General Trade by country of residence of supplier (exports) or purchaser (imports). Both imports and exports f.o.b.

[1] Asian LDC's: All of Asia (including Turkey) east of Suez, not including the socialist countries, Palestine (later Israel), Taiwan, or Japan.

African LDC's: All of Africa, excluding South Africa. 1929 slightly understated because excludes other British southern Africa.

American LDC's: Central and southern American continent including Caribbean but excluding Cuba 1937 onwards.

S.E. Europe: Bulgaria, Hungary, Rumania, Yugoslavia.

> "Another important future advantage[is] ... that before the last world war, Germany was heavily involved in the development of Afghanistan. Our firms also had similar interests, especially Skoda and Lanna. Today after the elimination of Germany from international competition our industry has a unique and very advantageous opportunity to let down deep and permanent roots in exports to Afghanistan. I mention indirectly here that this will guarantee employment for our workers ...."[1]

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[1] *Tesnopisecke Zpravy o Schuzich Ustavodarneho Narodniho Shromazdeni*, meeting 13, 2 October 1946, pp. 11-13.

It was explicitly stated during the same discussion that the elimination of both German and Japanese competition in Liberia provided similar opportunities for export expansion,[1] but Table 2.9 indicates that trade with Africa actually declined in relative importance.

However, it is the steady decline in the share of trade conducted with LDC's after 1948 which is the most striking. It was not due wholly to the increased share of trade with Comecon for that had become relatively stabilised by 1960 while LDC trade shares continued to fall steadily thereafter to 1975. The relative fall was due to increased trade with the developed West; a not unsurprising result, given the postwar - compared with prewar patterns of trade complementarity or 'vertical' trade - pattern of increased horizontal specialization: the industrialised countries have all tended increasingly to trade amongst themselves rather than with LDC's. But there have also been other reasons. German and Japanese competition, not to mention that of North America and other Western European countries, has been particularly strong. With the adoption of convertibility after about 1958 by these courtries, LDC's preferred to export raw materials to them, thus limiting the amounts available for export to socialist countries, which in turn limited (bilaterally balanced) trade opportunities. The reversion to multilateral forms of trade with LDC's from the late sixties did not stem this decline, probably because of the growing relative uncompetitiveness of Czechoslovak exports. In a multilateral system there is far less inducement for LDC's to buy Czechoslovak goods in preference to, say, Japanese ones.

Trade in the sixties was increasingly concentrated on India (in Asia) and Egypt (in Africa), both of which maintained bilateral payments relations with Czechoslovakia. Czechoslovak reluctance, until the seventies, to enter profit-sharing schemes in LDC's further limited trade opportunities.

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[1] Speech by Dr Horakova, *Tesnopisecke Zpravy o Schuzich Narodniho Shromazdeni*, 12 February 1947, meeting 35, p. 12.

Difficulties in granting hard currency credits for exports to LDC's were another factor,as was limited production capacity. Finally, lower growth of living standards in Czechoslovakia relative to the West were partially responsible for limiting trade. Wacker points out that in 1965, 10,703 tons of coffee were imported while the figure for 1937 was 11,012 tons (see also section 3.4.3). In general it could be argued that the long-term reversal in the sixties of the trends to greater trade with LDC's which began in the thirties, was due basically to the type of economic system adopted in 1948. It might thus be effectively speculated that under a system of freer trade and domestic economic activity, the reversal would not have occurred, or at least not have been as great.

Nevertheless, an examination of LDC shares in Czechoslovak trade alone may not be sufficient for a balanced view of trade. It is also necessary to examine, for example, the export potential of the LDC's when looking at Czechoslovak imports. If a country's or area's share of Czechoslovak imports falls, it may not necessarily be due to Czechoslovak policy or to the system of planning. The fall may be due to a relative decline, in terms of world trade, in the export potential of the country or area concerned. If, for example, Czechoslovak trade is growing at a rate equal to that of the world as a whole, but a particular area's trade growth stagnates, its ability to supply the growing Czechoslovak market, without diverting trade from other areas, will fall. Delta ratios, explained in greater detail in section 3.2.1, are ideal for such analysis. Deltaim measures the proportion of the Czechoslovak import market obtained by an LDC relative to the LDC's share in world exports (i.e. its export potential). Deltaex on the other hand, measures the Czechoslovak share of LDC markets relative to its own export potential in world trade for any given year.

Some results showing movements in deltaim and deltaex over a period of almost fifty years are given in Tables 2.10 and 2.11. So far as possible, territorial and statistical consistency between years was maintained,

TABLE 2.10 DELTAEX[1] VALUES FOR CZECHOSLOVAK TRADE WITH DEVELOPING COUNTRIES, 1929-1975, SELECTED YEARS

Area[10]	1929	1937	1948	1960	1975
Asian LDC's[2]	0.379	0.792	0.952	0.683	0.668
African LDC's[3]	0.476	0.600	0.771	0.904	0.869
American LDC's[4]	0.284	0.584	0.419	0.541	0.274
India[5]	0.481	0.499	0.588	0.554	0.989
Turkey	2.670	2.927	3.826	1.851	0.314
Iran[6]	0.304	5.045	1.772	0.709	0.531
Thailand	..	0.537	..	..	0.137
Malaysia[7]	..	0.147	0.558	0.485	0.018
Syria[8]	0.994	1.376	..	1.118	3.438
Indonesia	0.190	0.368	0.410	0.829	0.055
Algeria	0.047	0.127	..	..	0.143
Tunisia[9]	0.119	0.344	0.118	0.488	0.302
Morocco	0.163	1.237	0.136	0.418	0.480
Egypt	1.225	1.352	0.956	2.003	2.141
Argentina	0.352	0.857	0.521	0.583	0.251
Brazil	0.349	0.571	0.606	0.863	0.246
Chile	0.185	0.258	0.039	0.111	..
Columbia	0.447	1.073	0.131	0.248	0.236
Bolivia	..	0.660	0.134	0.667	0.837
Ecuador	..	1.667	0.212	0.369	0.257
Mexico	0.293	0.373	0.189	0.124	0.156
Peru	0.251	0.681	0.252	0.173	0.289
Uruguay	0.426	1.068	0.736	0.378	0.235
Venezuela	0.522	0.583	0.160	0.130	0.323

Sources: 1929, 1937. *Zahranicni Obchod Republiky Ceskoslovenske,* relevant years, and League of Nations, *Memorandum on Trade, 1938,* Annex III, and Annex IV.

1948-75 Facts on Czechoslovak Foreign Trade, various years, United Nations, *Statistical Yearbook,* relevant years.

Data were adjusted to ensure maximum comparability between pre and post 1948 statistics, with c.i.f. values assumed to be 10 percent higher than f.o.b. ones.

1 For explanation see section 3.2.1.
2 excluding Japan, Taiwan, Korea and socialist countries.
3 excluding South Africa.
4 excluding Cuba.
5 includes Burma, Pakistan, Bangladesh, 1929, 1937.
6 includes Afghanistan, 1929, 1937.
7 British Malaya, 1937.
8 includes Lebanon, 1929, 1937.
9 French and Spanish Morocco, 1929, 1937.
10 There are minor discrepancies, particularly for 1929 and 1937, between Czechoslovak and League of Nations statistics.

TABLE 2.11 DELTAIM[1] VALUES FOR CZECHOSLOVAK TRADE WITH DEVELOPING COUNTRIES, 1929-1975, SELECTED YEARS

Area[2]	1929[3]	1937[3]	1948	1960	1975
Asian LDC's	0.416 (0.737)	0.836 (0.917)	0.614	0.705	0.195
African LDC's	0.610 (0.882)	1.006 (1.035)	1.064	1.048	0.681
American LDC's	0.287 (0.612)	0.597 (0.645)	0.243	0.348	0.436
India	0.787 (1.404)	1.194 (1.303)	0.960	0.623	1.301
Turkey	2.750 (3.250)	3.161 (3.161)	5.869	3.538	0.307
Iran	0.066 (0.242)	0.105 (0.133)	0.820	0.649	0.119
Thailand	..	0.213 (0.220)	..	..	0.044
Malaysia	..	0.394 (0.443)	0.289	2.110	0.709
Syria	0.013 (0.350)	1.092 (1.130)	..	4.629	1.496
Indonesia	0.134 (0.396)	0.949 (1.120)	0.030	0.501	0.150
Algeria	0.113 (0.227)	0.206 (0.219)	..	..	0.255
Tunisia	0.135 (0.142)	0.465 (0.474)	0.000	0.653	1.626
Morocco	0.697 (0.835)	1.251 (1.323)	0.263	0.664	1.381
Egypt	1.279 (1.352)	2.686 (2.686)	2.925	2.724	6.813
Argentina	0.370 (0.794)	0.728 (0.762)	0.825	0.935	0.505
Brazil	0.391 (0.956)	1.171 (1.207)	0.797	0.988	0.686
Chile	0.747 (1.100)	0.807 (0.935)	0.000	0.040	..
Colombia	0.017 (0.079)	0.659 (0.664)	0.000	0.315	0.211
Bolivia	..	0.008 (0.014)	0.000	0.000	1.319
Ecuador	..	1.725 (2.026)	0.441	0.136	0.996
Mexico	0.036 (0.200)	0.163 (0.193)	0.151	0.064	0.078
Peru	0.106 (0.127)	0.564 (0.621)	0.149	0.000	1.489
Uruguay	0.409 (0.819)	1.585 (1.807)	0.653	0.379	1.700
Venezuela	0.014 (0.074)	0.040 (0.042)	0.045	0.004	0.016

Sources: as for Table 2.10.

[1] For explanation see section 3.2.1.
[2] see Table 2.10 for notes on areas and countries.
[3] Figures in brackets give deltaim showing Czechoslovak imports (LDC exports) by country of production, rather than by country of commercial origin.

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although pre- and post-1948 figures are probably less comparable than comparisons within each of the sub-periods 1929-37 and 1948-75. It was not felt however that the discrepancies were serious enough to invalidate the results of intertemporal comparisons. The data should therefore reflect the changes in the importance (or trade dependence) an LDC attaches to its exports to Czechoslovakia and vice versa. Figures in brackets for deltaim 1929 and 1937 are values calculated on the basis of imports by Czechoslovakia by country of production. They are thus a more realistic reflection of trade potential assuming the absence of middlemen.

Aggregated results by area are given at the top of Tables 2.10 and 2.11. Deltaim for all these areas shows a strong increase during the thirties but a decline between 1960 and 1975 for Asia and Africa. In other words, the importance of Czechoslovakia as a market for LDC's (relative to their supply capabilities relative to the world) in these areas grew in the thirties, was adversely affected by the war, and, for Africa and Asia, fell after 1960. The reason for the increase in the thirties and the temporary postwar decline are clear from the discussion above. There is little in the figures to support the claim, often made by socialist countries, that they are important markets for the developing countries. In 1960, for example, Czechoslovakia was not as important (with the possible exception of Africa, of which Egypt formed the bulk of trade) a market as it had been even in the relatively restricted conditions of world trade in 1937. Table 2.10 shows that the importance of Africa and Asia (but not Latin America) to Czechoslovakia increased immediately after the war, probably because of the initial absence of Japanese and German competition. The gradual decline thereafter means that their importance to Czechoslovakia is not significantly greater than it was in the interwar period. Delta values are also presented for the individual countries for which their calculation was possible. Only India, Syria and Egypt have increased in their importance to Czechoslovakia (deltaex) between 1937 and 1975, although other countries, e.g. Indonesia, were equally important in the sixties and late thirties. A comparison of deltaim values for 1937 by country of production (i.e. no entrepot trade) and 1975 supports the conclusions reached already with respect to broad geographical areas. Only for Syria, Tunisia, Egypt, Bolivia and Peru was the Czechoslovak market, relative to their trade with the rest of the world, of increased importance.

Unfortunately, the special conditions, all fundamentally disparate, which underlie each of the periods represented by the data in Tables 2.10 and 2.11, complicate judgement on the extent of changes in trade patterns,

which may have occurred after 1948. The year 1929 represents multilaterality of trade and is thus ideal for comparative purposes, but at this stage trade with LDC's was relatively undeveloped. Moreover both 1937 and 1929 could not be said to be ideal patterns of trade on which to base judgement because the LDC's themselves traded in a distorted fashion due to their colonial positions. Only the Latin American countries and Thailand were fully independent countries in the thirties. However the former were under the economic if not the political dominance of Germany at the time - and of the United States in the sixties - so that the effect is similar. A further distorting factor for 1937 was the breakdown of multilaterality in world trade. Czechoslovak trade with LDC's in the thirties increased at the expense of more proximate but protectionist neighbours, so the resulting pattern of mutual trade dependence is hardly entirely 'natural'. The limitations of using 1948 as a basis of comparison with later periods are also obvious: the initial absence of German and Japanese competition, a largely bilateral system of world trade, changes in the Czechoslovak economic system, transport problems, continuing reconstruction etc. On the other hand, the commodity pattern of trade with LDC's in 1948 was broadly similar to that of the interwar period in that exports still consisted chiefly of consumer goods. At this stage the LDC's had not seriously begun the drive to industrialisation and Czechoslovakia had not completed the first Five-Year Plan of industrial reconstruction from light to heavy industry. In this sense, their economies are sufficiently comparable to those of the interwar period. Thus there are drawbacks in choosing either of the dates 1937 or 1948 as a point of comparison for Czechoslovak trade under a 'free market' system domestically and internationally, with post-1948 trading relations with LDC's. Both years are strongly influenced by distorting non-market factors, and definitive conclusions cannot be drawn with any degree of confidence.

Similarly, it is difficult to choose 'representative' dates for the post-1948 period. The years 1960 and 1975 - the beginning and end of the period examined in greater detail in chapter 3 - are somewhat arbitrary; but 1960 is useful as a reference point for relations with LDC's at the beginning of the post-colonial era. Moreover, the choice of 'key' years masks fluctuations, and limits analysis to years which are deliberately chosen for their 'significance' and are biased to this extent. Nevertheless, they do provide a reasonable indication of long-term changes in trade trends.

2.5.2 Entrepot Trade

There are two aspects to entrepot trade in Czechoslovak relations with developing countries over the period 1918-1975. Firstly, imports have been acquired through European or other middlemen. Secondly, Czechoslovakia itself has engaged in re-export of commodities purchased in LDC's. Both of these aspects are examined briefly here, although the interwar period, with its better statistical coverage, is easier to analyse.

Land-locked Czechoslovakia had always relied on foreign ports for its sea trade and the old Hanseatic ports owed a large share of their prosperity to trade with Bohemia and Silesia.[1] In the interwar period, Hamburg and Bremen were generally important, while Trieste and Rijeka (Fiume) were used,[2] just as in the postwar period, for trade with the Middle East and the Far East.[3] These four ports, as well as Danzig (Gdansk) and Gdynia, were available to Czechoslovakia under the provisions of the Treaty of Versailles. However this applied only to use of port facilities etc. by Czechoslovak merchants. Imports or exports through Hamburg merchants acting as

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1 L. Perutz, 'Terst', *ON*, 1918, p. 447.

2 Price competition, in terms of transport charges, between the northern and southern ports was extremely beneficial to Czechoslovakia in this period. See Z. Prochazka, *Foreign Trade and Economic Development of Czechoslovakia, 1919-1937*, unpublished doctoral thesis, Radcliffe College, Cambridge, Mass., March 1960, pp. 46-47.

3 Perutz (1918), p. 448. Also section 3.4.2.

middlemen had traditionally been repacked by them in Hamburg as a means of maintaining their monopoly on trade.[1] Only after negotiations lasting six years, was this secrecy ended by the Agreement of the Trilateral Commission (Germany, United Kingdom and Czechoslovakia) on 29 November 1929.[2] It contained three major provisions. A ninety-nine year lease of port space was granted, under Czechoslovak government control, to the Ceskoslovenska Plavebni Akciova Spolecnost Labska (Czechoslovak Joint-stock Shipping Company of the Elbe). Secondly, free and uncontrolled imports and exports, under seal, were to be allowed. But most importantly, there was provision for the annual publication of statistics giving the country of origin for Czechoslovak imports and the destination of Czechoslovak exports, passing through Hamburg warehouses. Nevertheless, entrepot trade did not begin to diminish significantly until after 1932, (see Table 2.12) for two major reasons. Because of technical difficulties, the first detailed statistics of the country composition of Hamburg entrepot trade were not published until 1932 (giving details for part of 1929, and for 1930). Secondly, Hamburg traders provided indispensible advantages to Czechoslovak entrepreneurs who lacked the requisite knowledge of overseas markets and conditions, as well as funds for granting export credits.[3] For example, there were no Czechoslovak commercial banks specialising in overseas trade, and the network of consulates and hence Commercial Services was scanty.[4] Only the small and medium-sized importers however, were dependent on Hamburg

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1 For an analysis of the role of Austria as a 'middleman' in Czechoslovak trade with south-eastern Europe, see Z. Drabek, 'Trade performance of East European Countries, 1919-1939,*PEEE* October 1973, pp. 64-65 and Table A-3, p. 74.

2 *Ecoulement des Marchandises Tchecoslovaques, Exportees via le Port Franc de Hambourg a Destination d'outre-mer dans les Quatre Derniers Mois de 1929 at en 1930. Importation (faite au commerce special) du Port Franc de Hambourg en Tchecoslovaquie, en 1930, d'apres les Pays de Production.* L'Office de Statistique de la Republique Tchecoslovaque. Bursik & Kohout, Prague, 1932, p. 5*.

3 *ibid.*, pp. 22*-23*.

4 R. Olsovsky, *Svetovy Obchod a Ceskoslovensko, 1918-1938*, Statni Nakladetelstvi Politicke Literatury, Prague, 1961, p. 269.

TABLE 2.12 CZECHOSLOVAK ENTREPOT TRADE THROUGH HAMBURG AS A PROPORTION OF TOTAL TRADE, 1924-1937

(per cent)

Year	M	X	Year	M	X	Year	M	X
1924	4.4	4.7	1929	9.2	3.5	1934	4.1	0.7
1925	6.1	5.8	1930	8.8	3.4	1935	2.6	0.5
1926	9.7	6.8	1931	9.7	3.5	1936	2.6	0.8
1927	10.3	4.3	1932	8.3	3.4	1937	0.7	1.3
1928	9.7	4.7	1933	6.1	2.1			

Source: Zahranicni Obchod Republiky Ceskoslovenske, relevant years.

M = imports; X = exports.

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merchants; the larger firms had their own arrangements.[1] In fact it was predicted that precisely because the services provided to smaller traders were indispensible, Hamburg would maintain its important position in Czechoslovak overseas trade.[2]

It is not entirely clear why events belied the prediction, but the publication of the 'entrepot' statistics was obviously a necessary condition to increased direct trade, and the decline in Hamburg's importance dates from soon after their publication in 1932. Economic nationalism and a fear of German domination[3] may also have been influential. Apart from this, it would have been only natural for entrepreneurs, as they gained in experience from 1918 onwards, to make direct contacts in their quest for new markets; especially after 1931 when there was a need to redirect trade away from south-eastern Europe. Tomas Bata, though exceptional as an entrepreneur, created an important precedent:

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1 L'Office de Statistique de la Republique Tchecoslovaque (1932), pp. 23*-24*.

2 *ibid.*, p. 23*.

3 For example, University professor G. Slemr, speaking about middlemen from Hamburg London and Vienna, claimed that a foreigner would always show preference to the goods of his own country, although he tempered this warning by pointing to the credit risks etc. assumed by middlemen which Czechoslovak entrepreneurs could not incur. Report of a lecture in *ON*, 1924, p. 94.

> "Bata's flight through Egypt and Persia to India rightly attracted considerable attention at home and abroad. The head of one of the largest exporting firms in the world undertook a long journey by air in order to personally ascertain new export possibilities in the Far East for his products."[1]

Government export credits and export insurance during the Depression, as well as administrative measures aimed at facilitating direct contacts with overseas markets[2] were also instrumental in breaking the monopoly of middlemen in Hamburg and elsewhere on Czechoslovak overseas trade.

Diminished use of merchants in Hamburg and the other Free Ports was an important factor in increasing direct trade contacts with the developing countries. Tables 2.13 and 2.14 show that a significant proportion of Hamburg entrepot trade (imports and re-exports) was with the developing countries of Asia and Latin America. The significance of this is apparent from the fact that the proportion of entrepot trade (through Hamburg) with LDC's was far greater than the share of those countries in total Czechoslovak trade.

Table 2.15 clearly shows that, from 1932 onwards, an increasing proportion of imports came directly from the (LDC) countries of production,[3] and by 1937 only an insignificant share of imports from developing countries came from middlemen in Hamburg and elsewhere. After the war however, probably because of disrupted trade contacts, middlemen once again reasserted their position in Czechoslovak trade. The major entrepots in 1946 were Britain, France, Germany and Sweden[4], suggesting that the possession of

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1 report in *ON*, 1932, p. 234.

2 I. Jez, 'Foreign trade', in *Ten Years of the National Bank of Czechoslovakia*, National Bank of Czechoslovakia, Prague, 1937, pp. 397-398.

3 This seems to conflict with a statement by Prochazka (1960), p. 81: "In the balance of payments, the ratio of agents' commissions to exports and imports remained about stable throughout the interwar period". However in 1937 for example, imports from the United States, China, South Africa and Japan - none of which are included in Table 2.15 - still came through middlemen to a significant extent.

4 *Statistical Digest of the Czechoslovak Republic*, 1948, State Statistical Office, 22 January 1948, p. 95.

TABLE 2.13 BREAKDOWN BY ORIGIN OF CZECHOSLOVAK IMPORTS FROM HAMBURG[a], BY AREA OF PRODUCTION

(per cent of value)

Area[b]	1930	1935	1936	1937
Europe	8.3	8.8	10.8	6.5
Australasia	1.7	3.8	2.3	3.9
U.S.A.	21.8	26.8	25.7	17.3
Canada	12.3	4.7	5.5	1.5
Asia	25.5	30.2	33.7	38.3
Africa	4.2	5.1	3.7	3.2
Latin America	22.2	13.7	12.4	17.5
Total	96.0	93.1	94.1	88.2

Source: Ecoulement des Marchandises Tchecoslovaques, Exportees via le Port Franc de Hambourg a Destination d'outre-mer dans les Quatre Derniers Mois de 1929 et en 1930. Importation (Faite au Commerce Special) du Port Franc de Hambourg en Tchequoslovaquie, en 1930, d'apres les Pays de Production. L'office de Statistique de la Republique Tchecoslovaque (Bursik & Kohout, Prague, 1932). Table 5, p. 21*. Also *Zahranicni Obchod Republiky Ceskoslovenske* 1935, (p. 149); 1936 (p. 159); 1937 (p. 183).

[a] These were the only years available.

[b] The figures in this table differ from those in the original sources because of differences in definition of areas. The last three categories include only developing countries so that the total breakdown shown is less than 100 percent. Percentages refer to share in value of trade, not volume or weight.

Asia excludes Japan, China, Palestine
Africa excludes South Africa
Latin America excludes Cuba

TABLE 2.14 BREAKDOWN BY DESTINATION OF CZECHOSLOVAK GOODS RE-EXPORTED FROM HAMBURG[a]

(per cent of physical volume and of value)

Area[b]	1930	1935	1936
Europe	63.1	56.6 (37.3)	54.6 (43.2)
Australasia	0.6	0.8 (1.7)	0.9 (2.1)
U.S.A.	6.9	11.9 (23.6)	12.7 (23.6)
Canada	1.4	2.2 (2.4)	3.0 (2.5)
Asia	7.0	7.2 (14.4)	7.6 (7.6)
Africa	4.5	6.0 (4.8)	5.1 (5.1)
Latin America	10.8	10.5 (10.4)	10.1 (9.0)
Total	94.3	95.2 (94.6)	94.0 (93.1)

Source: L'Office de Statistique de la Republique Tchecoslovaque (1932), p. 9*, table 1; and *Zahranicni Obchod Republiky Ceskoslovenske* 1936, p. 171.

[a] These were the only figures available.

[b] As for Table 2.13, discrepancies between this table and the original source are due to definition and the fact that only developing countries are included in the last three categories. Since data for 1930 were available only by volume, 1935 and 1936 are also shown by weight to ensure internal tabular consistency, with value data in brackets.

TABLE 2.15 RATIO OF CZECHOSLOVAK IMPORTS BY COUNTRY OF PRODUCTION TO COUNTRY OF COMMERCIAL ORIGIN, FOR DEVELOPING COUNTRY AREAS, 1927 - 1946

Area[1]	1927	1929	1930	1931	1932	1933	1934	1935	1936	1937	1946
Asia	1.91	1.76	1.99	1.72	1.76	1.33	1.27	1.20	1.18	1.08	1.49
Africa	1.36	1.30	1.31	1.30	1.50	1.30	1.14	1.21	1.09	1.03	1.43
America	3.26	2.14	2.18	2.90	2.37	1.66	1.22	1.21	1.24	1.08	1.62
Total	2.13	1.80	1.90	1.98	1.90	1.43	1.22	1.20	1.18	1.07	1.51

Sources: 1927-1937 *Zahranicni Obchod Republiky Ceskoslovenske*, relevant years. 1946 *Statistical Digest of the Czechoslovak Republic*, 1948, State Statistical Office, Prague, 22 January 1948, pp. 95-96.

[1] Asia excludes Japan, China, Taiwan, Korea and Palestine.
Africa excludes South Africa.
America excludes Cuba from 1932 inclusive.

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merchant shipping may have been important. Unfortunately data for years beyond this date do not appear to be available, but it seems that Western European middlemen were important in Czechoslovak trade with developing countries until at least the late fifties, particularly after 1954, when trade with LDC's began to increase rapidly. For example, writing of trade ties with Egypt, Urban began a review of trade relations with the following statement:

> "Economic relations were developing as early as the period between the two World Wars. Their characteristic feature was, however, that business partners for Czechoslovak trade were, in a number of cases, West European merchants who acted as middlemen for Czechoslovak purchases of Egyptian cotton and, on the other hand, controlled the channels of Czechoslovak exports to Egypt. This system of exchanging goods through third countries, which was the result of the semi-colonial status of Egypt, was maintained even in the first post-war years. ... Conditions for direct trade were created only in 1952, when the revolutionary, anti-feudal movement deposed the king ..."[1]

Assuming that middlemen also controlled part of the trade between Czechoslovakia and other LDC's then there may be a case for saying that the apparent increase in mutual trade, which resulted from the signature of

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[1] J. Urban, 'Economic relations between the Czechoslovak Socialist Republic and the United Arab Republic', *CFT*, no. 2, 1962, p. 6.

trade agreements from the middle fifties, was not due entirely to an independent, exogenous, increase in the exchange of commodities. At least part of the apparent increase would have been due to the elimination of middlemen, so that the rapid growth of trade in that period is to some extent illusory.

In the absence of statistical material, it is difficult to quantify the extent of entrepot trade with LDC's in the sixties and seventies. On the one hand, there exist unequivocal statements in the literature, for example:

> " ... some articles are still being exported to Czechoslovakia through third countries, and we do not regard this as a suitable method of trading. We understand that this is due to the influence of old commercial links, which are extremely interested in maintaining their position on the Czechoslovak market. Nevertheless, Czechoslovak trade policy will continue to insist on direct deals and on excluding mediators."[1]

A decree issued in June 1973 by the Minister for Foreign Trade made mandatory his consent to purchases by foreign trade organisations of goods produced in developing countries but imported from third countries.[2] It is not clear whether this was a means of increasing the flexibility of the 'no middlemen' policy by creating exceptions by Ministerial consent; or whether it was meant to constrain such trade by subjecting it to closer Ministerial scrutiny. However, it is shown below (section 3.8.1) that middlemen have been acceptable in cases such as Zambian copper, or Ghanaian cocoa, where it was possible to buy commodities at lower prices on the London market than in the producing country. Thus in both the interwar and the postwar period, Czechoslovak trade policy has attempted consciously to eliminate middlemen from its relations with other countries, and especially with the developing countries. In both periods, on the other hand, there have been factors which have made middlemen useful and have mitigated this striving. It seems therefore that the (probably politically inspired) attempt by Czechoslovakia to cut out

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1 D. Lhotsky, 'Economic cooperation between Czechoslovakia and countries of Latin America', *CFT*, no. 6, 1977, p. 16.

2 V. Klucar, 'Celni kontrola obchodniho zbozi', *ZO*, no. 11, 1974, p. 21.

middlemen in the postwar period foundered mainly because the services provided by them were in fact profitable.

Czechoslovakia itself was an entrepot centre, acting as a re-exporter[1] though to a much smaller extent. Table 2.16 gives, for selected commodities, the proportion of exports to imports. Given Czechoslovakia's dearth of raw materials, it is surprising that wet hides, rubber and wool should have been exported. The bulk of the raw materials (but no foodstuffs) re-exports[2] imported from developing countries, went to Germany, the Danube countries, Britain, and the United States. One explanation for the phenomenon is given in Table 2.17 which shows the unit value 'terms of trade' for each commodity. According to the figures there, the re-export of rice, hides and cotton, may have been profitable. For example, cotton (possibly even from British India) was exported to Britain in 1933, a year when the 'terms of trade' might have produced a profit in hard currency. However the export of raw materials, often bought from free currency areas, to the Clearing countries is puzzling. Wet hides in particular could easily have been tanned domestically and then used by the existing and well-developed leather industry. Moreover, export to the Clearing countries would have been profitable to Czechoslovak merchants only if profits were sufficient to offset loss of interest on blocked accounts etc. Re-exports of wool and rubber to either free or bilateral payments areas would have involved substantial loss. There seems to be no simple explanation bar the possibility that this apparent re-export was in fact improvement trade, where raw materials were processed abroad (e.g. in south-eastern Europe) and then reimported as intermediate products for further processing. Credence is lent to this possibility by the data

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1 Vondracek (1937), p. 247, claims that in the twenties: "For a long time no treaties could be made with Latin American states because of mutual distrust, poor contacts, and tariff policies, hence the process of regaining the important pre-war traffic as middleman for coffee and colonial products was retarded".

2 It is assumed that they were re-exports and not merely exports of similar domestically produced Czechoslovak products.

in Table 2.16: the three 'foodstuffs' - coffee, tobacco and rice - were not as important in this re-export trade as were industrial raw materials. However further research, involving a larger sample of commodities, would be necessary to provide a definitive answer.

The data available for the post-1948 period do not indicate the presence of any significant entrepot trade by Czechoslovakia for such easily identifiable products as coffee, rice etc. In a planned economy, where foreign trade is less flexible than under private enterprise and where the profit motive is secondary or non-existent, re-exports seem less likely. Imports depend directly on the physical requirements of the economy and re-exports would need to be planned separately. However, if a system of bilateral payments exists with some countries at least *and* there is a persistent export surplus to those countries, then either switch trading or re-exports of balances on clearing account is logical. Indeed, in a situation of hard currency shortage, re-export or switch sales from soft to hard currency areas are a very useful means of earning foreign exchange.

While Czechoslovak trade statistics specifically include re-exports and switch deals,[1] the extent of such forms of trade with the LDC's was probably small because in many cases bilateral payments agreements prohibit them; but no data have been officially released, so that it is difficult to be certain. Only in the case of the re-export of Cuban sugar does Czechoslovakia appear to have engaged in regular entrepot trade on a large scale. This is not to say that it will not do so in the future, or that it did not do so in the sixties and seventies; but only that there is no overt evidence of it. Deepak Nayyar found little evidence of the re-export of easily identifiable goods by Socialist countries;[2] but Asha Datar quotes Indian officials as saying that re-exports of Indian cashew nuts, hides and

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1 *SR*, 1965, p. 380.

2 D. Nayyar, 'India's trade with the socialist countries', *WD*, May 1975, pp. 289-293.

TABLE 2.16 RATIO OF EXPORTS TO IMPORTS OF SELECTED RAW MATERIALS AND FOODSTUFFS

(per cent)

Commodity	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Coffee	-	0.01	-	-	-	..	-	-	-	..	..	..
tobacco	0.07	..	0.03	-	..	..	..	..	..	..	..	..
rice	0.04	-	-	-	-	-	-	-	0.02	0.02	-	-
raw hides	2.35	16.16	27.71	19.38	43.09	49.92	66.96	59.01	52.62	74.74	32.86	24.35
dry hides	0.93	0.21	0.02	0.62	0.48	1.18	4.31	2.64	0.77	1.39	0.32	0.25
cotton	0.40	0.25	0.15	0.24	0.11	0.16	0.18	0.36	0.06	0.07	0.25	0.04
jute	0.52	0.10	0.03	..	..	3.19	4.36	..	..	0.05	..	..
greasy wool	11.08	8.03	7.15	5.98	2.86	4.03	3.07	3.11	3.15	0.63	1.72	1.12
raw rubber	6.25	7.45	4.16	4.86	3.92	3.83	5.72	5.95	5.08	2.46	0.07	0.01

Source: *Zahranicni Obchod Republiky Ceskoslovenske*, relevant years.

TABLE 2.17 UNIT VALUE TERMS OF TRADE FOR SELECTED RAW MATERIALS AND FOODSTUFFS[1]

Commodity	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
coffee	2.00	1.17	1.63	..	..	..	..	..	..	..	..	..
tobacco	..	..	0.62	..	..	..	..	..	..	..	..	..
rice	1.14	1.18	1.00	..	..	..	..	..	1.36	1.29	..	..
raw hides	1.08	1.20	0.98	0.95	1.11	1.18	1.21	1.33	1.38	1.48	1.55	1.42
dry hides	0.96	1.31	0.92	1.11	1.08	1.16	1.27	1.43	1.40	1.75	1.58	2.02
cotton	0.86	0.90	0.91	0.94	1.19	1.22	1.18	1.42	1.05	0.83	0.78	0.70
jute	0.93	0.98	0.81	..	..	0.97	1.09	..	..	1.45	..	..
greasy wool	0.68	0.71	0.67	0.73	0.82	0.63	0.72	0.67	0.81	0.91	0.71	0.86
raw rubber	0.63	0.47	0.46	0.49	0.52	0.30	0.80	1.01	0.61	0.31	..	1.04

Source: *Zahranicni Obchod Republiky Ceskoslovenske*, relevant years.

[1] Export unit values divided by import unit values.

skins, jute, tea, etc., have occurred, but are difficult to trace.[1] Some consideration also appears to have been given in the seventies to re-exporting Indian goods within the framework of industrial cooperation:

> "Prospective items in Czechoslovakia's imports from India, within the framework of the international division of labour, could be components, spare parts, elaborate components requiring a high amount of labour; all this especially in branches where the two countries have already established ties of cooperation. The mentioned items would not only be imported for use in Czechoslovakia but also for exports to third countries."[2]

Once again, however, there are no detailed data available on the extent, if any, of entrepot trade emanating from such cooperation.

2.5.3 Commodity Composition of Trade

Czechoslovak exports in the thirties consisted mainly of sugar, glass, metallurgical products (including machinery), footwear and textiles. Sugar was produced from domestically grown sugar beet and it was not till the sixties that (Cuban) cane sugar was imported; though beet sugar continued to be produced. Raw materials for glass-making were also domestically available and metallurgical products were produced with ores imported almost entirely from geographically proximate countries. Pyrites and iron ore were bought from Sweden, other European countries and, to a lesser extent, from the Mediterranean area. Other ores, such as manganese and zinc were bought further afield but still largely from Europe. Industrial fuels were also readily available domestically and within Europe: coal from Poland and petroleum from Rumania. But raw materials for footwear and textiles were more likely to come from overseas at a time when natural fibres were the rule rather than the exception. Such fibres required reasonably organised

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1 Datar (1972), p. 162.

2 V. Loskot, 'Present trade and economic relations between the Czechoslovak Socialist Republic and the Republic of India, *CFT, no. 8, 1971, p. 7.*

agricultural production so that it is not surprising that they were imported from either industrial countries like the United States, or from the more advanced developing countries. The growth of trade with British Malaya in the thirties was due largely to Bata's diversification into rubber production (in competition with established firms like Semperit). This highlights the propensity to trade with major world producers. Another example was green cowhides, more than half of which came from Argentina in 1936. This concentration of imports on major producing countries continued in the sixties, but was influenced by new political and economic ties. Cotton for example was also imported from the Soviet Union and tobacco came to be bought increasingly from Bulgaria and so on. It is this import concentration which partially explains the concentration in the direction of trade on major raw materials producers within the LDC group, an aspect further discussed below.

Commodity trade data for the interwar period are published only by classes. Aggregation of country data (giving trade by commodity classes) to provide details of the commodity pattern of trade with all LDC's would have proved overly time-consuming; so that trade patterns are examined here only for the major LDC trade partners: Egypt, Turkey, Argentina, and British India. Table 2.18 gives major imports from each of these countries.[1] Imports from Egypt consisted primarily of cotton but minerals (manganese and iron ores) and foodstuffs (onion and garlic) were also imported. The cotton was, up to about 1930, imported mainly through middlemen in Hamburg and Bremen. After this date, imports came primarily from the United States, Egypt and India. Despite the increasing share of Brazil in world production of cotton at this time, its share of Czechoslovak trade did not increase substantially. The salient point here however is that imports from Egypt

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[1] The years for the interwar period (1925 , 1928, 1930, 1933, 1936) were the only ones available when the tables were compiled. Since the process was a fairly lengthy one, the tables have not been reworked. A check revealed that the conclusions would not have been significantly altered had other years been selected.

TABLE 2.18 COMPOSITION OF MAJOR IMPORTS FROM FOUR DEVELOPING COUNTRIES, SELECTED YEARS

(per cent)

Class Brussels[1] nomen.	Class SITC[2]	Commodity[3]	1925	1928	1930	1933	1936	1966	1975
		EGYPT							
XXII	263 +651	cotton, yarn, etc. (raw cotton)	92.7	98.2	96.9	88.7	92.3	71.0	73.0
		TURKEY							
III	052	southern fruits (dried grapes)	3.1	10.7	9.8	1.9	6.3	3.4	0.7
V	12	tobacco and products (leaves)	88.4	47.8	41.8	76.4	51.7	28.4	51.2
VII	051	fruit, vegetables (hazelnuts)	2.8	24.9	23.0	12.4	28.3	7.3	6.9
X	211	animal products (skins)	2.2	1.4	2.4	3.4	5.7	0.4	..
		ARGENTINA							
VI	041 +043	wheat, malt etc. (wheat, millet)	13.0	23.7	0.3	40.2	0.0	0.0	..
VII		fruit, vegetables, plants (flax seed)	1.2	24.2	28.9	16.2	11.7	..	..
X	211	animal products (raw hides)	20.6	9.3	13.5	14.9	64.3	57.5	0.5
XIX	532	paints, tanning materials (quebracho extr.)	6.2	3.5	24.6	9.8	13.9	5.5	4.1
XXIV	262	wool, yarn etc. (greasy and washed)	37.1	36.0	30.5	14.1	7.4	30.4	5.5
		BRITISH INDIA[4]							
VI	042	wheat, malt, rice (rice)	8.2	3.9	3.5	23.2	19.4	0.0	..
VII		fruit, vegetables, plants (copra)	0.3	20.3	29.4	31.2	17.4	..	..
X	211	animal produces (dry hides)	4.8	4.3	3.2	2.7	5.7	7.9	0.0
XXII	263 +651	cotton, yarn etc. (raw cotton, wastes)	34.1	43.5	44.5	14.0	24.0	0.9	11.5
XXIII	264	flax, hemp, jute (jute)	50.5	25.2	12.7	20.7	27.2	7.2	4.2

Sources: 1925-1936: *Zahranicni Obchod Republiky Ceskcslovenske*, relevant years

1966: Ministerstvo Zahranicniho Obchodu, *Ceskoslovensky Zahranicni Obchod s Vybranymi Rozvojovymi Zememi v Letech 1966 a 1967*, VUZO, 1968

1975: *Facts on Czechoslovak Foreign Trade*, 1976

1 Refers to years 1925-1936 inclusive

2 Refers to years 1966, 1975.

3 Major commodity group. Commodity in parenthesis refers to major good within that group for 1925-1936.

4 British India includes Bangladesh, Burma, Pakistan.

were almost exclusively raw materials. Even in the sixties and seventies, when cotton, cotton yarn, etc, formed only about 70 percent of imports (raw cotton alone formed 69.8% and 66.6% of total imports from Egypt in 1966 and 1975) this remained true. Rice, fruit, and nuts increased their relative shares of imports in the sixties and seventies - thus decreasing the share of cotton. Section 3.5 examines this predominance of raw materials and foodstuffs further and it is sufficient here to point out the continuity in the pre and postwar commodity composition of imports.

The trends for the other countries are similar. Turkey's major export to Czechoslovakia remained tobacco[1] (though it lost ground to Bulgaria) in the sixties. The decrease in the share of foodstuffs was offset by mineral and textile raw materials in the sixties. Imports from Argentina reflect to a greater extent the effects there of industrialisation and other economic differences. The large fluctuations in grain imports for example, reflect the fact that Czechoslovakia operated a protectionist agricultural policy between the wars, but still required imports to fill occasional shortfalls in production. It was apparently cheaper to import from Argentina, despite transport costs, than from south-eastern Europe, which, because of high tariffs, was a relatively inefficient producing area.[2] The decline in importance of Argentinian wool on the other hand is matched by increasing imports of it from Australia, which may have been a cheaper source for that product. Only with the import of raw hides (for the footwear industry and for re-export: Table 2.16) was there a significant change between the interwar and postwar periods which adequately reflected Argentinian industrialisation. Quebracho bark is an important source of tannin and

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[1] Fluctuations in purchases of tobacco in the thirties were due to periodic imports, at government behest, by the Czechoslovak Tobacco Monopoly as a means of running down blocked accounts in Turkey. At this time Czechoslovakia was also attempting to establish a domestic tobacco industry.

[2] Basch (1944), p. 96, gives the Yugoslav minimum wheat price as 100 percent above world prices and goes on to show that a similar situation existed elsewhere in the region.

and the tanning process itself is an industrially unsophisticated one, so that it is not surprising that Czechoslovak imports of both quebracho extract and raw hides should have been supplanted, by 1975, by exports of Argentinian leather. It is noteworthy, however, that the switch to finished products in the leather industry took place only after 1966. Other imports in the sixties and seventies were still predominantly raw materials and foodstuffs. British India - a territory comprising present-day India, Pakistan, Bangladesh and Burma - also reflects the predominantly raw material pattern of Czechoslovak imports (iron and other ores are also important in the postwar period) but comparatively rapid industrialisation has led to some exports of manufactures and semi-manufactures in the sixties and seventies. Other, less advanced, LDC's however, show little change in the composition of their exports to Czechoslovakia, between the interwar and postwar periods.

Exports to LDC's were far more diverse than imports, because of the greater differentiation inherent in industrial products. Czechoslovak exports to the LDC's were invariably far less concentrated than the imports from each particular country. Data for only one case are presented in Table 2.19 but are typical of figures for trade with other LDC's, both in the low concentration of commodities and in the preponderance of industrial consumer goods. Nevertheless Turkey is to some extent atypical of exports to most LDC's. Some industrialisation had already occurred in the nineteenth century during Ottoman rule, and further State intervention (Etatism) in the economy of the new Republic between 1923 and 1939 accelerated this development. To the detriment of Czechoslovak exports, the Turkish government, in the twenties, saved the domestic silk industry and started sugar production.[1] The latter was accomplished partially through the import of Czechoslovak sugar-refining machinery. In 1933, for example,

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[1] P. Beaumont, G. Blake, J. Wagstaff, *The Middle East: a Geographical Study*, John Wiley, 1976, p. 431.

almost 10 percent of total exports of these machines from Czechoslovakia went to Turkey. In the thirties, two Five-Year Plans led to the development of the cement, textiles, paper, chemical and iron and steel industries; as well as attempts at import substitution in consumer goods. Machinery and metal products increased their share of exports as sugar and textiles declined. However it is not possible to tell how much of this decline in textiles was due to Turkey's own industrialisation and how much to German competition, particularly within the framework of Clearing agreements. Exports to Egypt, on the other hand, consisted, throughout the interwar period, of consumer goods. Only sugar exports showed a relative decline. Textiles etc. maintained their share in the total. Argentina and British India showed similar commodity import patterns to Turkey with traditional consumer goods exports to them decreasing while commodities and machines necessary in the industrialisation process increased.

This should be seen in the context of the point often made in Czechoslovak sources, that in the interwar period only consumer goods were exported to LDC's, whereas in the post-1948 period, machinery has been the major export; with the implication[1] that only socialist Czechoslovakia has been interested in aiding development in LDC's. Such analysis however ignores two basic facts. Firstly, in the interwar period, only a handful of LDC's were in the process of developing industry and it was precisely those which did in fact import machinery from Czechoslovakia. The lower share of machines in such imports is natural given the lower level of development at the time. Secondly, the lower share of machines in Czechoslovak exports was also due to lower productive capacity within Czechoslovakia. The low overall share of machinery in total Czechoslovak

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[1] e.g. E. Psenicka, 'Czechoslovak economic relations with countries of South-East Asia',*CFT*, no. 5, 1963, pp. 10-11.

TABLE 2.19 COMPOSITION OF MAJOR CZECHOSLOVAK EXPORTS TO TURKEY, 1925-1936

(per cent)

Brussels nomen-clature	Commodity[1]	1925	1928	1930	1933	1936
IV	sugar (refined sugar)	16.8	8.7	4.2	0.4	1.7
XXII	cotton, cotton yarn, etc. (yarn, printed cloth)	32.6	30.1	26.5	22.9	13.6
XXIII	flax, hemp, jute (jute bags, misc. woven goods)	9.4	7.1	4.3	4.4	0.6
XXIV	wool, woollen yarn etc. (misc. woven goods)	8.2	12.9	13.7	6.2	2.0
XXVI	clothing	9.4	1.7	0.8	0.2	0.5
XXIX	paper, paper goods (printing paper)	0.6	1.3	3.4	4.3	0.9
XXXII	tanned hides, leather goods (footwear, gloves)	0.7	4.1	0.4	0.0	0.0
XXXV	glass, glass products (bottles)	7.2	5.0	5.2	4.9	2.2
XXXVIII	iron and products (cooking vessels, nails)	5.5	13.1	13.3	35.8	61.4
XXXIX	common metals and products (jewellery)	1.6	4.7	1.4	0.4	0.5
XL	non-electric machines (ploughs, misc.)	0.8	3.4	2.7	4.8	5.8
XLI	electric machines (telegraph inst. machinery)	0.0	1.0	0.6	0.5	0.9
XLII	vehicles (tractors, motor spares, misc.)	0.0	0.0	5.0	0.1	4.4
XLVI	chemical materials (carbon disulphide, charcoal)	0.3	0.1	13.7	1.4	0.8

Source: *Zahranicni Obchod Republiky Cekoslovenske,* relevant years.

[1] major products within class traded in parentheses.

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exports can be seen from Table 2.6. The percentage share of machinery exports to Turkey does not differ much from the share of machinery in total exports for the interwar period. It was only after the end of the first Five-Year Plan of 1948-53 that capacity for large exports of machinery was created. Thus while it is true that the commodity pattern of Czechoslovak exports to LDC's has changed, the explanation lies not in any supposed conspiracy to prevent industrialization, but in the needs and potentials of the respective economies of the time.

The decline in the share of sugar exports to Turkey (Table 2.19) is characteristic of its decline in foodstuffs exports to all countries in the interwar period (Table 2.6), although Czechoslovakia remained for a time a major European and world sugar producer. Although sugar cane is the traditional source of sugar, commercial production of sugar beet had been established in Europe in the nineteenth century. The First World War however, led to the destruction of beet fields, causing a shortage of sugar, which in turn resulted in increased acreages of sugar cane planted in the United States and Cuba. Other tropical countries also increased production, and the introduction of new high-yield cane in Java[1] from 1926 led to world gluts of sugar. European countries, too, worked towards self-sufficiency during the interwar period. Britain for example combined increased cultivation with a scheme for decreasing rural unemployment and maintaining farm incomes. None of the international sugar agreements were entirely effective in limiting production and Czechoslovakia switched agricultural production to grains, which, incidentally, exacerbated the problems of trade with south-eastern Europe in the thirties.[2] Thus sugar is a fairly spectacular example of a traditional Czechoslovak export succumbing to competition from the LDC's, just as the comparative advantage in textiles was later lost to such countries. On the other hand the demand thus created overseas for sugar refining and other machinery, helped switch industrial production from light to heavy industry, a trend continued during and after the Second World War.

Finally, it is worthwhile mentioning an element of consistency in the direction of trade based on the commodity composition of the goods traded. Trade with LDC's is based throughout on relations with the economically

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1 J. Hartmann, 'Cukerni krise', *ON*, 1929, p. 900. Indian competition in the thirties, however, created problems even for Java.

2 The domestic linkages of sugar refining - in agriculture, coal mining, fertiliser manufacture, transport etc. - worsened unemployment. Unemployment in machine-building for example, was attributed to lack of investment funds in the sugar industry. G. Heidler, 'Nase otazka cukerni', *ON*, 1926, p. 574.

more advanced countries of that amorphous group: Egypt, India, Turkey, Brazil and Argentina, in particular. In the interwar period this was due in large measure to the productive capacities (in raw materials) of these countries. World cotton production for example was concentrated in Egypt, India, Burma, Brazil and the United States. Argentina and Uruguay were major wool producers. The indispensibility of these materials to the Czechoslovak textile industry made these producers obvious trading partners. Turkey, a producer of foodstuffs and tobacco was a market for Czechoslovak arms as was Iran. Political influences, planners' preferences and changed industrial (now heavy) requirements within Czechoslovakia have reordered the ranking of importance of trade partners but the basic pattern remains. Brazil has become more important than Argentina, for example, but trade with both is important relative to many other LDC's. Raw materials are still exchanged for manufactured goods, although the latter have changed from light to heavy industrial products. Industrialization in countries such as Brazil may, however, inevitably change the pattern and possibly the level of this still basically 'colorial' form of trade. Should Czechoslovakia not accept manufactures, on the other hand, the importance of trade with the more industrialized LDC's will decline while the importance of the more advanced (or larger) raw materials producers will remain.

2.5.4 Bilateralism and Economic Coercion

Similarities exist between the use of bilateralism in the thirties and during the fifties and sixties. The period as a whole saw, first, the development of a duality in the Czechoslovak balance of payments in the thirties, as south-eastern Europe and some Latin American countries[1] insisted on bilateral payments relations in trade. General postwar

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[1] "The trade with ... Argentina, Brazil, Chile and Uruguay, although not regulated by formal clearing agreements, was conducted through collective accounts at the central banks." (referring to the 1930's). Prochazka (1960), p. 274.

international inconvertibility, except in the dollar area, maintained this trend. As world multilateralism re-emerged after 1958, the duality in Czechoslovak payments became apparent once more. Trade with the CMEA countries (some of which had also been in the Clearing group before the war) was conducted within a strict bilateralism, while trade with the developed West and later the LDC's was in freely convertible currencies. It is possible, though not probable in the near future, that rouble convertibility will be adopted by the CMEA countries. Were this to occur, then the circle would be complete for Czechoslovakia, with payments arrangements as they were in the late twenties; on a fully multilateral basis.

Within this schematic point of view, however, there exist important similarities and differences between the interwar period and the fifties and sixties. In the thirties, bilateralism had been virtually forced on an unwilling[1] Czechoslovakia by developments in the south-eastern European countries and the world at large. A net exporter to the region, it was against such payments arrangements because they would have led to blocked surpluses and restricted trade. In the fifties, on the other hand, Czechoslovakia encouraged bilateralism with LDC's as a means of increasing trade (section 3.9) in a situation where both it and prospective partner countries lacked sufficient hard currency resources. In the late sixties and seventies, when the disadvantages of a persistent export surplus to developing countries began to be felt, Czechoslovakia opted again for multilateralism in trade with these countries. A further similarity between bilateralism in the thirties and sixties was that it resulted in higher prices in trade, although generally for different reasons. In the thirties "an exporter who knew that he would be unable to obtain the counter-value in free exchange or payment without delay took this fact into consideration as a type of greater risk and expressed it by means of higher prices".[2] During the sixties it

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[1] Basch (1944), p. 83.

[2] *ibid*, p. 85.

was some of the LDC's which, to enable rapid repayment of their bilateral debts to Czechoslovakia charged higher prices for their exports (section 3.9). Creditor countries which engage in switch trading under bilateralism also tend to raise prices because of the costs of arranging such deals.

Sight was not lost of the advantages of multilateralism even during periods of bilateral payments relations, however. During the thirties trade was gradually directed away from clearing countries towards free currency areas both because trade in the former was limited, and because raw materials sources tended to be concentrated within the latter. In the immediate postwar period, general international uncertainty and inconvertibility led the government to maintain short-term bilateral trade relations, but the preference for multilaterality remained.[1] Even in the fifties the limitations of bilateralism were recognized by Czechoslovak writers (section 3.9.1). Similarly, one of the alleged aims of the economic reforms of the sixties was eventual convertibility for the koruna.[2]

During the thirties, particularly immediately prior to the War, Germany engaged in what is usually termed 'economic warfare'; seeking to dominate the economies of south-eastern Europe through its trade policies. One of the methods used was to impose a strict bilateralism on partner countries, and it may therefore be instructive to compare interwar German and postwar Czechoslovak use of bilateralism to see if the latter also sought in some way to coerce or 'control' the LDC's. Just as Germany was industrialised and economically large relative to south-eastern Europe, Czechoslovakia is relatively highly industrialised and economically large relative to many of the smaller LDC's (e.g. Cyprus, Kuwait, Lebanon, Libya, Chad, Paraguay, etc.). The analogy is imperfect because the relative power of Germany at the time was far greater, and there was not an alternative ideological 'camp' of nations willing to support small countries which might be the object of

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1 Diamond (1947), pp. 144-145.

2 *EBFE*, vol. 20, no. 1 (November 1968), p. 48.

power policies.[1] However, claims such as that by Beck, that Czechoslovakia was used by the Soviet Union for initial economic 'penetration' of LDC's, particularly in Africa,[2] are a good reason for investigating, at least briefly, the respective policies pursued by Germany and Czechoslovakia.

A country which finds itself the object of a power policy[3] which involves the threat of trade and hence overall economic disruption, can protect itself by diversifying trade. The less concentrated are imports and exports, the lower will be the disruption to the economy should any one partner cease or limit trade through tariffs or other controls. The potential threat of such action is therefore also limited. It is thus in the interests of the aggressor (A) to engage the object of his power policy (B) in a form of trade where the costs of a shift to other partners by (B) are greater than the continuation of trade with (A). This was precisely Germany's policy towards south-eastern Europe in the thirties. It aimed to increase its share in the total trade of the region to about 60 percent, and by 1939 it succeeded in capturing between about 50 percent and 70 percent of trade with each country there.[4] The share of the Danube region in Germany's trade in 1937, on the other hand, was only of the order of 10 percent.[5] That is, not only was German influence in the Danube area extremely strong, but the reciprocal influence of each individual country of the region in German trade was only a fraction of 10 percent.

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1 Basch (1944), pp. 222-223, refers to British efforts in 1940 to divert trade with some of the Balkan countries towards itself through pre-emptive buying to deny Germany required raw materials (p. 218). At this stage of the war, these efforts were doomed to failure.

2 C. Beck, 'Czechoslovakia's penetration of Africa, 1955-1962', *WP*, April 1963, pp. 403-416.

3 This section relies heavily on Basch (1944), especially chapter 15, pp. 214-226; and on Hirschmann (1969), especially pp. 29-52.

4 Basch (1944), pp. 216-217.

5 *ibid.*, Table 12, p. 180.

An examination of Czechoslovak trade with the LDC's showed that its share in the total imports or exports of each country was rarely greater than about 10 percent, with the mean share being about 1% to 2%.[1] Czechoslovakia's share of LDC imports exceeded 10 percent in Guinea (1960 = 10.1%) and Syria (1968 = 11.7%) but these were maxima rather than consistent shares over the period 1948-1975. Smaller countries like Burma, Ethiopia, Gambia and Afghanistan, only relied on Czechoslovakia for about 3 to 4 percent of their total imports. Export shares going to Czechoslovakia were relatively high in only a few instances: Egypt (14.9% = 1956, 1961; 10.3% =1965); Afghanistan (8.4% = 1963), an exceptional level for that country; Syria (6.1% = 1960); and Turkey (8.1% = 1949). There was obviously little scope then for economic domination or control of these economies on the 'German' model. Moreover, Germany selected the smaller Danubian nations for domination while Czechoslovakia has tended to trade with the more advanced LDC's. Further to this, Germany was a debtor nation to its Clearing partners and possessed the leverage of unrequieted blocked accounts. Czechoslovakia on the other hand was on the whole the creditor country. Disruption of trade might have meant the loss of (inconvertible) trade surpluses and would therefore have been of greater detriment to Czechoslovakia than to the LDC's.

A further method of increasing domination through trade dependence is for country A to alter the structure of production in country B, encouraging the production of commodities complementary to A's economy but difficult to dispose of elsewhere. A corollary to this is to offer attractive terms of trade or other preferential advantage. By doing so, B's products will enjoy comparative advantage in trade with A, but will become relatively high-cost with respect to the rest of the world and hence uncompetitive there (assuming no beneficial price effects from economies of scale from increased production, etc.). Within a system of bilateralism, the payment by

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[1] All data were taken from U.N. *Yearbook of International Trade Statistics*, relevant years.

country A of higher than world prices for the goods of country B, need not necessarily be inhibitive since its own exports can also be increased in price: this is the Wiles' 4000 zloty dog, two 2000 zloty cats situation. Germany did precisely this, but the world economic situation at the time gave it a special advantage because of the marketing difficulties faced by the agricultural countries of south-eastern Europe in the thirties. Although many LDC's in the fifties and sixties have faced similar situations through temporary lack of demand for particular raw materials, there has never been a situation analogous to the thirties where protectionism created such strong barriers to trade. Furthermore, Czechoslovakia has not sought to keep (nor could it have kept) its trade partners in a permanent position of complementarity by discouraging indigenous industrial development. Nor has it followed a policy of consistently offering higher than world prices for LDC exports. In both theory and practice (section 3.8) it seems to have kept fairly closely to world market prices. Even in discussions on economic aid to LDC's, the idea of paying higher prices for their products has been dismissed as "economic romanticism"[1] which ignores the damage such a policy would cause to the socialist countries, whose primary role it allegedly is to maintain their strength as the core of world revolution.

Possibly the greatest limitation on Czechoslovak ability to 'capture' other economies is its own low absorptive capacity. With a population of under 15 million (approximately that of Australia) and trade turnover not much greater than Austria's, it could hardly have become a monopolist or monopsonist to any but the smallest of the LDC's even in a situation such as that which Germany utilised to its advantage in the thirties. Re-exports or switch trading might have made up for lack of a domestic market, but this would have made Czechoslovakia more of an entrepot centre than a monopsonist. It might conceivably have encouraged manufactured goods,

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[1] Brozik (1965), p. 5. Also section 5.2.1.

complementary to its own industry (e.g. India, Egypt) with technical specifications making them difficult to sell elsewhere, but there is no evidence to suggest that this has happened; and even if it had, its extent would have been limited because of restricted Czechoslovak buying capacity. 'Monopsony' in raw materials is unrealistic given world demand (unless favourable terms of trade were offered); and in any case would be of little benefit because cessation of trade would be as harmful to Czechoslovakia as to the LDC. A further difference between Germany and Czechoslovakia is that the former was geographically more proximate to the objects of its power policies and the secondary or potential threat of military aggression was, especially in the later thirties, a real one. Finally, direct investment in partner countries can yield disproportionate amounts of economic power, but Czechoslovakia has only relatively recently (section 3.7.1) overcome ideological scruples in this field.

It should therefore be reasonably clear that Czechoslovakia was never in a position, nor did it attempt to, dominate any of the LDC's economically. On the contrary there seems to have beer some fear throughout of the possibility of manipulation by the West of its own dependence on trade. Major LDC trade partners appear to have been chosen on grounds of political compatibility to minimise the risk and costs of possible disruption to trade.[1]

It is always possible however that Czechoslovakia was used by the Soviet Union to create trade dependence of certain LDC's on Eastern Europe as a whole. Presumably, concerted action by CMEA would yield the requisite amount of power in econonic warfare.[2] An examination of this possibility is beyond the scope of this thesis but Wiles, in an examination of Soviet economic warfare,[3] cites Soviet embargoes on trade with Yugoslavia 1948-55,

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1 Wacker (1968), p. 196.

2 e.g. 60% of Egyptian exports in each year 1970-1972 went to the Soviet bloc. R. Mabro, 'Egypt's economic relations with the socialist countries', *WD*, May 1975, Table 1, p. 305.

3 Wiles (1968), ch. 17.

1958-60; Albania 1961 +; Australia 1954-59; Finland 1958; and China 1960 +. Czechoslovak trade with Australia 1954-59 actually increased steadily (in current prices), and remained reasonably steady with Albania after 1961 with the exception of a temporary drop in imports in 1962. Trade with Finland did fall in 1958 but only seems to have been the beginning of a longer trend. It is more likely that the fall was due to an adjustment of the high levels reached under the trilateral Finnish-Soviet-Czechoslovak trade and payments agreement of 1953-56, than to temporary, politically motivated trade restrictions. Trade with China and Yugoslavia did fall significantly within the critical periods, but it is not clear to what extent this was solely the wish of Czechoslovakia.

It is thus unclear to what extent Czechoslovakia has cooperated with the Soviet Union in economic warfare. The cases just discussed seem to indicate that ideological quarrels with major antagonists may have been important but more evidence is required. It must therefore be concluded that Czechoslovakia has apparently neither engaged in economic warfare, nor has it overtly threatened any LDC with its use. If this is accepted, the implication is that even within a system of bilateralism, Czechoslovakia has probably possessed little, if any, disproportionate bargaining power in trade negotiations with the LDC's. Its economic size and the relatively open world economic system (with its trading alternatives) have meant that smaller countries have not inevitably been in a weaker position, and have therefore not been susceptible to coercion.

CHAPTER 3

POSTWAR TRADE AND PAYMENTS RELATIONS

3.1 INTRODUCTION

The present chapter examines bilateral trade and payments relations with the developing countries in the period 1960-1975. Chapter 1 highlighted the planned nature of trade and the fact that market mechanisms play little or no part in determining either the volume of trade, or its direction. For this reason, the use of 'gravity' models was considered inappropriate.[1] Extensive use was made instead of delta coefficients - an innovation in studies of East European trade with LDC's - as part of an 'intensity approach' to the examination of bilateral trade flows. Theoretically such flows should be equal between all pairs of countries, but in the real world, various resistances and biases affect actual trade levels. Some of these are analysed here although lack of suitable data has not always permitted precise measurement and specification; hence prediction is not attempted. Biases due to historical ties have already been examined in the previous chapter, and the trade bias - relatively minor in extent - due to tied bilateral concessional lending is touched upon, but not examined in detail, in chapter 5. Complementarity, or 'commodity bias' is examined in section 3.5, while more subjective biases and resistances due to politics and planning (including long-term trade agreements) are discussed in sections 3.7 and 3.6 respectively, as well as in 3.4.3. Biases involved in relative terms of trade (3.8) and payments relations (3.9) are also discussed. 'Resistances' or barriers to bilateral trade in the form of tariffs and geographical distance are further examined in section 3.4. The arms trade, a special form of bilateral trade in that it is determined by factors which may differ significantly from those which influence normal commercial relations, is dealt with in chapter 4. In the absence of a significant amount of

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[1] Attempts at explaining trade levels with econometric models incorporating variables such as national product, relative prices, exchange rates etc., have not proved entirely successful. e.g. I. Sujan, 'The first tentative econometric model of the Czechoslovak economy', Discussion paper, 13 November 1970, Wharton School of Finance and Commerce, University of Pennsylvania.

information (statistical and policy) - and given the fact that the Czechoslovak government's economic decisions are in the final analysis unconstrained by market parameters - a general equilibrium solution was not feasible. It has been the aim, rather, to identify any rationality (political or economic) which may lie behind the bilateral trading relations of a particular planned economy/one-party autocracy with a fairly distinct set of countries.

3.2 THE ANALYTICAL FRAMEWORK

3.2.1 The Intensity Approach to Examining Bilateral Trade Flows

Traditional two-good, two-country, international trade theory seeking to explain global commodity flows in terms of such factors as comparative cost or relative factor endowments, is largely irrelevant to the analysis of bilateral trade flows because it assumes away many real-world influences. No account is taken, for example, of such factors as political and historical ties between trade partners, or the effect of the complementarity of resource endowments of a country I relative to a regional partner J, rather than to the whole world. The neo-classical assumptions of free mobility of resources (particularly labour and capital) and determination of costs at the margin made by traditional theory are, moreover, untenable in the Czechoslovak case.

International trade in a world of n countries may be illustrated by the following matrix, where X_{ij} indicates the flow of goods from country I to country J and $X_{i.}$ and $X_{.j}$ represent total exports by country I, and total imports by country J respectively. The total trade of the system $X_{..}$ is given by the sum of the $X_{i.}$ or of the $X_{.j}$ over n countries.

exporting country \ importing country	1	2	3	.	.	j	.	.	n	total exports
1	0	X_{12}	X_{13}	.	.	X_{1j}	.	.	X_{1n}	$X_{1.}$
2	X_{21}	0	X_{23}	.	.	X_{2j}	.	.	X_{2n}	$X_{2.}$
3	X_{31}	X_{32}	0	.	.	X_{3j}	.	.	X_{3n}	$X_{3.}$
.	.	.	.	0	.	.	.	.	.	.
i	X_{i1}	X_{i2}	X_{i3}	.	0	X_{ij}	.	.	X_{in}	$X_{i.}$
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.
n	X_{n1}	X_{n2}	X_{n3}	.	.	X_{nj}	.	.	0	$X_{n.}$
total imports	$X_{.1}$	$X_{.2}$	$X_{.3}$	.	.	$X_{.j}$	.	.	$X_{.n}$	$X_{..}$

Two basic approaches have been adopted in attempts at explaining the trade flows represented by the elements of the matrix. The gravity model approach - based on the law of gravity where the mutual force of attraction of two bodies is a direct function of the product of their masses but is inversely related to the square of the distance between them - seeks to explain each bilateral trade flow X_{ij} in an analogous way by treating the value of the foreign trade sectors (or GNP) at two points as 'masses' and dividing by a 'resistance' factor, often represented by some function of geographic distance.[1] An underlying assumption in models of this kind is that bilateral trade flows (X_{ij}) are independent of each other, and estimates of countries' total imports and exports ($X_{.j}$ and $X_{i.}$) are derived as sums of the estimated bilateral flows.

The intensity approach, on the other hand, acknowledges the interdependence of levels of bilateral trade on different routes and takes countries' total imports and exports ($X_{.j}$ and $X_{i.}$) as given, seeking to explain and measure bilateral flows (X_{ij}). This approach has been formally presented[2] in terms of probability theory on the assumption that world trade consists, in any given period, of a large number of independent transactions. Since exports by country I represent a proportion ($X_{i.}/X_{..}$) of total world trade, then, in the given period, this value also represents the (marginal) probability with which any bilateral transaction contains I as the sending partner. Similarly ($X_{.j}$ / $X_{..}$) may be thought of as the (marginal) probability that country J is the receiving partner in such a transaction. The joint probability that I is the sending country and J the recipient is therefore the product of these two values, assuming they are independent and that resistances to trade such as tariffs or distance are equal on

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1 The literature on both gravity and intensity models is examined in E. Leamer and R. Stern, *Quantitative International Economics*, Allyn and Bacon, Boston 1970, pp. 157-170; and in P. Drysdale, Australia-Japan trade in 1985: the analysis and projection of bilateral trade flows, *Australia-Japan Economic Relations Research Project*, Research Paper no. 38, ANU, June 1976.

2 The exposition here follows that given in 'Trade network projections and international consistency tests', *EBFE*, vol. 24 (1973), no. 2, pp. 3-4, which also lists some of the previous literature.

all bilateral trade routes; so that the assignment of suppliers to demanders is a simple random process. Thus the expected flow of goods from I to J is given by:

$$\hat{X}_{ij} = (X_{i.} / X_{..}) \ (X_{.j} / X_{..}) \ (N\beta) \qquad (1)$$

where $N\beta = X_{..} = \sum_{i=1}^{n} X_{i.} = \sum^{n} X_{.j}$

N = the number of transactions in world trade during the period

β = the value of each transaction

$\hat{X}_{ij}$ = the expected flow of goods from I to J

By including a factor in equation (1) which captures resistances to trade on each bilateral route, it is possible to write more realistically

$$X_{ij} = \delta_{ij} \ (X_{i.} / X_{..}) \ (X_{.j} / X_{..}) \ (X_{..}) \qquad (2)$$

where the delta coefficient (δ_{ij}) is a measure of inverse 'resistance' to trade between a pair of countries, so that its reciprocal is an approximate measure of 'economic distance' between bilateral trade partners.

In historical analyses of the type pursued in this chapter, X_{ij} is known so that equation (2) may be transposed and simplified as equation (3) to give the delta coefficient:

$$\delta_{ij} = \left(\frac{X_{ij}}{X_{.j}} \right) \div \left(\frac{X_{i.}}{X_{..}} \right) \qquad (3)$$

This particular formulation was derived by the Economic Commission for Europe[1] following unsatisfactory attempts at the projection of bilateral

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[1] *EBFE*, vol. 22 (1971), no. 1, pp. 51-63; and vol. 24 (1973), no. 2 pp. 1-5. It was also used by J. Cuddy, 'A note on projections of international trade based on coefficients of trade intensity', *EJ*, December 1973, pp. 1222-1235.

flows (X_{ij}) from the share of an exporting country I in the market of an importing country J ($X_{ij} / X_{.j}$). Delta coefficients proved to be more stable than corresponding import shares - the numerator in equation (2) - because the denominator, an expression of the relative export potential of country I in world trade, introduces supply factors into the relationship. In this form, the delta coefficient may be interpreted as representing the share obtained by an exporting country I on the market of an importing country J, deflated by the share of total exports of country I in world trade. The analysis may be further refined by disaggregating trade flows into commodity groupings, but lack of sufficiently detailed data precluded this in the present thesis.

An alternative formulation, pioneered by Brown,[1] which is identical in value to equation (3) is given in equation (4).

$$\delta_{ij} = \left(\frac{X_{ij}}{Xi.} \right) \div \left(\frac{X_{.j}}{X..} \right) \qquad (4)$$

where $X_{..}$ represents total world imports.[2] Country I's export trade is then seen to be more intensive with country J when its exports to J are larger in relation to its export to the whole world than country J's total imports are in relation to total world imports. Drysdale refined the use of equation (4) by developing new indexes that separate the effects of the commodity composition of two countries' foreign trade (called complementarity, or commodity bias) from other factors (called special country bias),

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1 A.J. Brown, *Applied Economics. Aspects of the World Economy in War and Peace*, Allen & Unwin, London, 1947, table XXIII, p. 215.

2 K. Kojima, 'The pattern of international trade among advanced countries', *HJE*, June 1964, p. 19 modified the value of X.. - as did Brown (1947) - by subtracting from it the value of country I's imports because country J cannot export goods to itself and the only meaningful import share it can therefore have is in the imports of all countries other than itself. This adjustment was not used in the present work because it assumes importance only for large traders, or in more disaggregated analysis such as that of Drysdale.

reflecting a range of resistances, which influence the intensity of bilateral trade.[1] Unfortunately these two indexes could not be used because of the lack of detailed commodity data in Czechoslovak trade with LDC's.[2]

The present thesis utilised the approach indicated by equation (3) above. Clearly bilateral trade implies mutuality so that delta coefficients may be calculated for either partner. Unless it is assumed that all countries are identical in the size of their foreign trade sectors and that bilateral trade flows occur instantaneously (so that both partners record an equal value for their bilateral exchange of goods in any given time period), δ_{ij} will differ from δ_{ji}. Delta coefficients have been calculated for both Czechoslovakia, and for its trade partners: referred to as deltaex and deltaim respectively. Deltaex posits Czechoslovakia as the exporting country I, while deltaim measures delta coefficients with each developing country as the exporter (country I) and Czechoslovakia as the importer (country J). The two indexes used concurrently are therefore indicative of the mutual trade intensity between partners, or the mutual importance of each partner in the others' markets. Significant changes over time reflect changes in resistances or biases in bilateral trade, and different absolute values of the delta coefficients reflect different degrees of mutual trade intensity between Czechoslovakia and its various trade partners.

Empirical results obtained may not, however, be entirely accurate. For both deltaex and deltaim $X_{..}$ has been taken to be total world exports (fob) as given by the United Nations *Yearbook of International Trade Statistics* which was also a source for $X_{.j}$ (cif) in deltaex and for $X_{i.}$ (fob) in deltaim. All other variables (fob) were taken from the

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1 P.D. Drysdale, *Japanese-Australian Trade. An approach to the Study of Bilateral Trade Flows.* Unpublished Ph.D, ANU, February 1967. A survey of both this approach and later extensions is given in Drysdale (1976). His indexes are more readily available in P. Drysdale, 'Japan, Australia, New Zealand: the prospect for Western Pacific economic integration', *ER*, 1969, pp. 321-342.

2 Kojima (1964), p. 18 considered even three-digit SITC data to be inadequate in distinguishing commodities.

Data Bank (section 1.5.3) and so reflect the period during which the goods crossed the Czechoslovak border. It is thus probable that neither deltaex nor deltaim are fully compatible with each other or for inter-country comparisons. On the other hand, these problems are consistently present, so that intertemporal comparisons for specific delta coefficients are probably not greatly affected. The period chosen for study was 1960-1975, partially because of data availability, and partially because it was from about the beginning of this period that most of the African countries achieved their independence.

3.2.2 Statistical Techniques

Both in this chapter and in other parts of the thesis, tests of statistical significance have employed non-parametric techniques, rather than classical statistical tests of significance. There is no way of telling for certain whether a population is in fact normally distributed, without complete enumeration. Common practice is to either 'assume away' non-normality, or to qualify results with cautionary comments on the non-applicability of the rather strict preconditions to classical methods, but to accept their results anyway. It was felt here that the assumption of bivariate normality, which is essential to the validity of parametric tests, could often not be proved because little was known of the population characteristics of the distributions investigated. For many of the trade variables in a planned economy, even a symmetric distribution cannot easily be assumed. It was therefore considered to be more justifiable to use non-parametric tests throughout - even where cardinal measurement was used - and therefore increase the certainty with which conclusions could be accepted. Such tests were also more compatible with the frequent use of medians as the measure of central tendency; a usage necessitated by the invariably skewed sample distribution of the variable used.

One drawback of using non-parametric techniques is that their relative efficiency is lower under conditions of normality than the analogous parametric test. Spearman's correlation coefficient (denoted as r throughout) in a bivariate normal distribution, relative to Pearsonian correlation methods, for example, has an efficiency of about 91 percent.[1] (On the other hand its relative efficiency is higher under conditions of non-normality). Nevertheless it was preferred to accept the penalty of a possible small loss in the power of tests in return for the increased certainty of the validity of the results and conclusions. It is noteworthy that other writers have also used nonparametric methods in analysing problems similar to those dealt with below.[2]

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1 S. Siegel, *Nonparametric Statistics for the Behavioural Sciences*, McGraw-Hill Kogakusha, International Student Edition (date unspecified), original copyright 1956, p. 213. This was the reference used for all non-parametric techniques used.

2 e.g. E. Neuberger, 'Is the USSR superior to the West as a market for primary products?', *RES*, August 1964, pp. 287-293; G.J. Staller, 'Patterns of stability in foreign trade: OECD and COMECON, 1950-1963', *AER*, September 1967, pp. 879-888; C.W. Lawson 'The decline in world export instability - a reappraisal', *BOXES*, 1974, pp. 53-65.

3.3 GENERAL TRENDS IN THE SIZE, GROWTH AND DIRECTION OF TRADE

Throughout the period 1960 to 1975 Czechoslovakia's trade was predominantly with the Asian LDC's, followed by Africa, and least of all with the Latin American countries (with the exception of Cuba). This is clearly shown in Table 3.1 where the inequality of the distribution of trade between regions can be seen to be more marked for exports than for imports. Analysis on such an aggregated level is not particularly useful however because of the 'arbitrary' assignment of countries to the three regions. Each region includes a major trading partner - India, Egypt and Brazil respectively - and the percentage share of each region in the total therefore depends unduly on the level of trade with one country in each group. One cannot therefore accept such generalizations as: "the low level of economic relations with [Latin America] ... is due primarily to the attitude of these countries to economic relations with socialist countries",[1] without taking into account resistances and biases specific to each bilateral trade route, as well as resistances common to a region (such as geographical distance).

Just as before the Second World War, Czechoslovak trading relations with LDC's in the period 1960-75 were highly concentrated on a relatively small number of countries; in particular on India, Egypt, Turkey and Brazil. Iran and Iraq have gained in importance, while Argentina's post-War importance declined. These seven countries accounted over the period 1960-75, on average, for 57% of total Czechoslovak imports from, and 49% of exports to developing countries. Egypt alone accounted for over half of all imports from Africa and 42% of exports to that continent. Some idea of the relative importance of the 41 developing countries most prominent in Czechoslovak trade can be gained from Table 3.2. (The median is probably

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[1] Wacker (1968), p. 200.

TABLE 3.1 GEOGRAPHIC DISTRIBUTION OF CZECHOSLOVAK TRADE WITH DEVELOPING COUNTRIES AMONG THREE REGIONS

(stated units)

Year	Imports				Exports			
	Total (mill. Kcs)	Asia %	Africa %	America %	Total (mill. Kcs)	Asia %	Africa %	America %
1960	1279	54.10	25.80	20.09	1535	46.64	27.10	26.25
1961	1551	41.84	37.85	20.31	1741	49.45	33.83	16.66
1962	1251	42.85	33.01	24.14	1642	53.35	28.99	17.66
1963	1448	49.24	32.32	18.30	1628	51.11	33.66	14.99
1964	1421	48.21	36.52	15.20	1796	54.96	29.51	15.26
1965	1508	45.76	35.61	18.63	1901	55.23	30.88	13.68
1966	1659	42.31	42.62	15.07	2202	49.46	31.47	18.85
1967	1489	46.68	36.13	17.19	1918	53.81	29.14	16.84
1968	1465	46.35	38.84	14.81	2138	59.49	25.07	15.34
1969	1492	47.59	33.11	19.30	2375	63.62	27.71	8.67
1970	1629	43.34	30.02	26.64	2462	55.20	34.77	10.03
1971	1653	44.22	28.49	27.28	2891	63.23	27.43	9.30
1972	1869	48.15	29.32	22.53	2786	52.76	35.25	11.81
1973	2336	45.59	27.48	26.93	2661	59.83	28.97	10.94
1974	3222	42.24	37.31	20.45	3560	53.79	33.76	12.22
1975	2819	36.86	36.47	26.78	4019	54.59	31.62	13.78

Source: *Facts on Czechoslovak Foreign Trade*, various years.

the measure best suited[1] to such comparisons because of its relatively stable character.) Deltaim and deltaex measure the relative importance of each country in a less conventional sense, by indicating the mutual intensity of trade. Thus countries like Afganistan (2.65), Cambodia (2.46), Lebanon (2.75), Egypt (5.08), and Guinea (3.77), were relatively heavily represented on Czechoslovak markets in relation to their trade potential, while the median deltaim value for India (1.54) was exceeded even by Cyprus (1.66) and Uruguay (1.72). Imports which appear large relative to those from other LDC's (e.g. from Brazil) do not therefore necessarily mean that Brazil is highly dependent on Czechoslovakia in its export trade. The same is true of

[1] On the other hand, where trade links have developed only in the later part of the period 1960-75, it is possible to obtain a median of zero even when the mean is well above this. Bolivia is a case in point; imports were negligible or non-existent until 1970 when they began rising rapidly; but because 9 years out of the 15 available observations showed zero imports, the median is also zero. In general, the combined effects of inflation and growing trade volume may be expected to produce means greater than medians. Where the reverse is true, a significant shift has probably occurred in trade levels during the period.

Czechoslovak market penetration in the developing countries. While the seven countries listed above received a large proportion of Czechoslovak exports to LDC's, Czechoslovakia's relative market share (deltaex) was greatest in countries like Burma, Iraq, Syria and Egypt; but relatively low in all the Latin American countries. Possible reasons for the varying degrees of trade intensity are discussed below.

The rate of growth of aggregate trade levels as well as of the degree of trade intensity also varied significantly between countries. Total trade with the developing countries grew at about 5% for imports over the whole period, and slightly faster (6%) for exports. African countries reflected this pattern, but import growth from Latin America was significantly faster than Czechoslovak exports to the region. It is possible that this was due to a greater period of currency convertibility there which allowed Latin American countries a greater choice of suppliers, especially in the presence of strong North American competition. Imports from Asia on the other hand, did not grow as quickly as exports. In general, exports were found to be better specified in regression equations (higher $\bar{R}^2$) when an exponential formulation was used; indicating an overall acceleration of growth rates for the period. One explanation may be the relatively low initial level of exports at the beginning of the period, but it seems more realistic to assume that the apparent acceleration owes more to inflation, because trade data are expressed in current prices. Unfortunately no reliable export price index for LDC's was available but the indexes presented in Table 1.14 show that export prices to the West as a whole almost doubled between 1967 and 1974. (The contribution to this effect of LDC trade is difficult to assess, but the weight of LDC's in current-priced trade with capitalist countries fell from about 50% in the early sixties to about 25% in the middle seventies for imports, and from about 70% to 40% for exports.) In this context, growth rates of 5% and 6% lose much of their significance, for both exports

and imports. Given the strong concentration of imports on raw materials which were affected by generally increasing world raw materials prices from 1973, this would be especially true of import growth rates. Similarly, the degree to which mutual trade intensities between LDC's and Czechoslovakia grew or declined over time also differed widely between developing countries.

TABLE 3.2

AVERAGES AND GROWTH RATES FOR TRADE LEVELS AND INTENSITIES FOR 41 DEVELOPING COUNTRIES, 1960-1975

(millions of Koruny)

Country[a]	Imports			Exports			Deltaim			Deltaex		
	$\bar{Y}$	Med.	Gr.	$\bar{Y}$	Med.	Gr.	$\bar{Y}$	Med.	Gr.	$\bar{Y}$	Med.	Gr.
Total LDC's	1756	1530	1.05	2328	2170	1.06						
Argentina	75	64	1.01	32	68	0.96	0.52	0.45	0.98	0.22	0.28	0.95
Bolivia	3	0	1.75	11	8	1.09	0.39	0.00	1.58	0.75	0.65	1.03
Brazil	131	97	1.06	98	86	1.02	0.60	0.58	0.96	0.44	0.42	0.92
Chile	3	3	1.03	10	8	1.01	0.05	0.05	0.99	0.14	0.11	0.99
Colombia	17	16	1.07	14	13	1.02	0.29	0.31	1.03	0.22	0.21	1.00
Eduador	16	15	1.23	6	5	1.09	0.63	0.51	1.14	0.27	0.25	0.98
Mexico	10	5	0.96	26	25	1.08	0.09	0.05	0.91	0.13	0.13	1.01
Peru	56	42	1.34	13	11	1.09	0.74	0.61	1.31	0.20	0.17	1.06
Uruguay	32	30	1.08	7	8	0.98	1.76	1.72	1.06	0.39	0.34	0.98
Venezuela	3	3	1.10	32	29	1.08	0.01	0.01	1.07	0.22	0.22	1.03
American LDC's	375	295	1.07	322	291	1.02						
Afghanistan	20	16	0.96	13	10	0.96	2.85	2.65	0.91	1.05	0.82	0.96
Burma	9	3	0.95	35	33	1.03	0.45	0.26	1.07	2.63	2.25	1.14
Cambodia	14	13	0.89	13	10	0.84	2.47	2.46	0.99	1.50	1.21	0.88
Ceylon	21	22	1.01	16	18	0.90	0.66	0.63	1.05	0.45	0.46	0.92
India	281	272	1.08	295	280	1.03	1.65	1.54	1.05	1.24	1.20	1.05
Indonesia	35	39	0.96	33	31	0.81	0.37	0.32	0.88	0.45	0.09	0.75
Malaysia	94	74	1.02	10	5	0.85	0.83	0.71	0.98	0.11	0.06	0.82
Pakistan	24	24	0.91	76	49	1.14	0.47	0.43	0.88	0.95	0.57	1.15
Thailand	14	12	0.89	17	16	1.05	0.21	0.19	0.83	0.15	0.14	0.99
Cyprus	14	12	1.12	16	14	1.14	1.70	1.66	1.08	0.88	0.77	1.09
Iran	71	60	1.08	104	97	1.14	0.36	0.33	0.92	0.72	0.68	1.01
Iraq	33	4	1.17	222	216	1.20	1.74	0.04	1.05	3.59	2.90	1.10
Jordan	1	0	..	16	15	1.04	0.01	0.00	..	0.85	0.93	1.00
Kuwait	0	0	..	19	16	1.09	0.00	0.00	..	0.35	0.33	1.01
Lebanon	40	44	1.10	105	84	1.13	3.42	2.75	0.95	1.73	1.74	1.08
Saudi Arabia	0	0	..	24	15	1.13	0.00	0.00	..	0.34	0.32	0.97
Syria	37	26	1.07	115	147	1.20	1.67	1.31	1.01	3.69	3.97	1.12
Turkey	79	81	0.98	75	74	0.99	1.68	1.64	0.93	0.99	1.03	0.92
Asian LDC's	784	704	1.04	1286	1181	1.07						
Algeria	34	28	1.19	37	27	1.12	0.31	0.29	1.04	0.34	0.30	0.97
Egypt	331	283	1.07	305	248	1.09	5.35	5.08	1.04	3.80	2.56	1.08
Libya	0	0	..	83	36	1.27	0.09	0.00	..	0.97	0.83	1.10
Morocco	51	49	1.06	36	29	1.02	1.07	1.18	1.01	0.63	0.49	0.97
Sudan	23	24	0.98	24	22	1.04	1.09	1.13	0.97	0.87	0.85	1.01
Tunisia	22	16	1.09	15	15	1.02	1.13	1.07	1.01	0.52	0.54	0.97
Ethiopia	6	7	0.99	17	16	1.02	0.57	0.58	0.95	1.27	1.27	1.00
Ghana	30	33	1.09	37	29	0.92	1.08	1.20	1.07	0.97	0.92	0.93
Guinea	18	18	0.92	11	7	0.92	4.28	3.77	..	2.38	1.18	..
Kenya	8	9	1.14	9	10	1.08	0.43	0.44	1.09	0.28	0.31	1.03
Nigeria	19	11	0.88	36	31	1.05	0.28	0.22	0.77	0.41	0.39	0.98
Sierra Leone	0	0	..	8	9	1.15	0.00	0.00	..	0.83	0.89	1.15
Zambia	9	1	..	10	11	1.29	0.15	00.1	..	0.24	0.23	1.25
African LDC's	595	538	1.05	717	624	1.06						

Source: Data Bank, and U.N. *Yearbook of International Trade Statistics*, various years.

$\bar{Y}$ = arithmetic mean Med. = Median Gr. = annual growth rate estimated by regressing semi-log equation of the relevant variable over time.

[a] Area totals (and Total LDC's) given by Czechoslovak sources, not aggregates of individual country totals shown in the body of the table.

3.4 SOME RESISTANCES TO BILATERAL TRADE FLOWS

3.4.1 Tariffs

It was seen in section 1.4.2 that tariffs, while of no intrinsic consequence on the macroeconomic level, may still affect the direction of trade through effects at the operational level. An fto dependent on financial results for bonuses or wages will tend to buy from countries with which Czechoslovakia has an MFN agreement in preference to all other countries, assuming no offsetting price differences. Bilateral trade flows are therefore directly affected. Similarly, an fto would find MFN markets, *ceteris paribus*, more accessible and would thus tend to sell more to such countries.

One method[1] of examining the role which tariffs on imports from LDC's have played in practice - but one which assumes that prices and other factors play no part in observed changes - is to compare the years before and after the termination or the institution of an MFN agreement between Czechoslovakia and an LDC. Increased Czechoslovak imports or trade intensities (deltaim) should be apparent in respect of countries instituting such agreements. Because MFN treatment accords mutual privileges some corresponding increase in Czechoslovak exports and deltaex could also be expected. Under bilateral payments arrangements, of course, such an increase (perhaps lagged) would be a precondition to increased imports.

We examine the period 1960-1975 for termination and institution of MFN agreements. Chile, Peru, Malaysia and Sierra Leone all apparently terminated their MFN agreements with Czechsolovakia in 1964. On the other hand, five developing countries instituted MFN agreements during this time: Burma (October 1971), Malaysia (1972 agreement ratified in 1974), Cyprus (1974), Sudan (1964) and Libya (1974).[2] However this sample of countries is unsuitable

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[1] A cross-section analysis, comparing countries with and without MFN agreements would be unsuitable because it would not be possible to specify for either group what trade levels would have been under other conditions.

[2] All dates from information in *Facts*. Dates of termination not precisely known.

for determining the effect of changes in tariffs on bilateral trade flows for two major reasons. Firstly, except for Sudan and Sierra Leone, all these countries acceeded to GATT at various times. Existing members of GATT may, under article 35, refuse to extend MFN privileges to new signatories; and Czechoslovakia may well have used this option though there is no evidence for this. Secondly, commodities imported by Czechoslovakia from these countries were: copper (Chile); rubber (Burma and Malaysia); cotton and oil seeds (Sudan); fresh fruit and nuts (Cyprus); feeding stuff for animals (Peru). Only the latter two countries would possibly have faced tariffs on the exports quoted (section 1.4.2) and direct imports from Libya and Sierra Leone were negligible or nil. These two considerations probably explain the contradictory and unexpected movements observed in Czechoslovak imports and in deltaim. For instance, imports (and deltaim) from Peru increased significantly after 1963 despite the apparent termination of its MFN agreement with Czechoslovakia.

It is possible therefore that the Czechoslovak preoccupation with signing bilateral MFN agreements is connected more with the advantage gained for its own exports to LDC's - particularly in the presence of competition - from equal tariff treatment on foreign markets:

> "While bicycle spare-parts have for a number of years figured regularly on the list of Czechoslovakia exports to Zambia, until the end of 1966 not a single bicycle had been sold to that country. It was only the cancellation of the preferential tariffs which enabled the Motokov Foreign Trade Corporation to offer Zambia bicycles under the same conditions as those accorded to firms from other countries. In spite of the fact that the imports of Czechoslovak bicycles began much later ... within three months 20,000 of them were sold."[1]

Unfortunately an examination of export data and deltaex values in relation to the institution and termination of MFN agreements was just as unsuccessful as that carried out for imports and deltaim.

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[1] J. Zeman, 'Czechoslovak-Zambian trade relations', *CFT*, 1968, no. 2, p. 7.

One can only conclude therefore that while there are strong *a priori* reasons for believing that tariffs act as resistances in bilateral trade flows between LDC's and Czechoslovakia, no conclusive or significant empirical evidence was found to support this proposition for either the intensity of trade relations or their general level.

3.4.2 Geographical Distance

Favaretto has calculated that the cost per ton of transporting machinery from Prague to Alexandria and to Beirut differs little whether the goods are transported by rail to Hamburg or to Fiume, and shipped from there.[1] However little other work has been done on the influence on Czechoslovak trade of geographical distance. The question is examined here because shipping distances and costs are the most obvious 'resistances' leading to different levels of bilateral trade flows in the 'intensity' model of foreign trade.[2] It is generally recognized - particularly in gravity models of foreign trade - that bilateral trade flows are greatest with more proximate partners, so that it might be postulated that Czechoslovak trade relations should be weakest with LDC's most distant from shipping ports. Weight is lent to this proposition by Czechoslovakia's ownership of only a small maritime fleet.[3] Because transport costs cannot therefore be subsidized to the same extent as in other socialist countries[4] it can be further argued that Czechoslovak fto's are likely to be relatively sensitive to transport

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1 T. Favaretto, 'La funzione del'alto Adriatico nei traffici di transito del'est Europeo: difficolta e possibilita di Trieste', *Est-Ovest*, no. 2, 1974, p. 12, Table 3.

2 Under conditions of negligible transport costs, equality of trade barriers and consumer preferences in all countries, all delta coefficients in the world trade matrix would have a value of unity.

3 10 vessels totalling 70,000 tons gross in 1960, and 14 vessels in 1975 of about 100,000 tons gross. Information from Lloyd's Register of Shipping, 71 Fenchurch Street, London. See also section 1.4.4.

4 e.g. M. Baily, 'Why the red flag signals danger for Western ship owners', *The Times*, 16 January 1978, p. 19.

costs,[1] preferring to trade with relatively more proximate LDC partners. Transport costs have, of course, also been an integral factor in determining the 'cleansed' world market prices used as a basis for setting intra-CMEA trade prices.[2]

Because the Adriatic ports (particularly Trieste[3]) are most frequently used for Czechoslovak trade with Asian, and probably other, developing countries, geographical distances were obtained for shipping routes from Trieste to Czechoslovakia's developing country trade partners.[4] These shipping distances were treated as rough indicators of distance-related resistances, and were correlated with both trade levels (imports, exports) and trade intensity values (deltaim, deltaex). It was found that the shipping distance between Trieste[5] and each LDC shown in Table 3.2 was strongly but inversely related to median values of both exports ($r = -0.386$, $n = 41$, $t = -2.613$) and deltaex ($r = -0.560$, $n = 41$, $t = -4.221$). This result confirms findings elsewhere[6] that delta coefficients are related to geographic proximity; but it should be noted that it is not possible to conclude that Czechoslovak export performance and intensity of trade are inversely related to shipping costs. Geographic distance also introduces other resistances such as knowledge of markets, relative distance of competitors (e.g. North Americans in Latin America), as well as regional

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1 See also *Facts*, 1963, p. 197.

2 Hewett (1974), pp. 31-34.

3 Favaretto (1974), p. 9, tables 1 and 2.

4 Data taken from A. Porbrick, W. Needham, *Reed's Tables of Distances*, Thomas Reed, London, 12th edition, 1953 (?). Shortest routes were calculated, so that no account is taken in correlations of the closure of the Suez Canal in 1967.

5 Results were weaker for distances from Hamburg (which is also used for trade with LDC's) and the relationship with median export levels was not significant at the 5% level.

6 e.g. *EBFE*, vol. 22 (1971), no. 1, pp. 55-57.

political influences and trade patterns and currency areas. These are not examined here because they can all be assumed to be direct functions of geographic distance, and require separate explanation for individual bilateral flows.

On the other hand, no statistically significant relationship was found to exist between shipping distance and median values of imports or deltaim, although theory suggests that distance should be equally important in the case of both imports and exports in bilateral flows. One reason may be the fact that the raw materials imported by Czechoslovakia are unequally distributed over the globe. For example, it may be cheaper to buy raw hides from Argentina than from a costlier but more proximate European or North African source. The possibility too of buying major commodities on the London market or elsewhere at prices equal or lower to those in the producing country (see section 3.8) also detracts from the importance of shipping distance in imports. On the other hand, relatively high transport costs allegedly preclude purchase of Nigerian oil,[1] and it has been stated that the closure of the Suez Canal made the import of bulk cargoes, such as iron ore from India, uneconomical and led to a fall in such imports.[2] However this is not reflected in aggregate imports from India - which increased between 1967 and 1968 - nor in the value of deltaim for total trade with India. Imports of Indian iron ore, moreover, did not fall in physical volume until 1969. Their decline thereafter would need to be carefully studied to establish a link with increased transport costs, because imports of Brazilian ore also declined from about 1967. (Both sources were replaced to some extent by increased imports from the Soviet Union). Other factors such as long-term contracts or difficulties in finding alternative supplies

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1 UNCTAD Secretariat, *Prospects for Trade and Economic Cooperation Between Nigeria and the Socialist Countries of Eastern Europe*, TD/B/748, 3 August 1979, p. 24.

2 I. Peter (Deputy Minister for Foreign Trade), 'Hospodarska spoluprace CSSR s Indii', *ZO*, no. 12, 1971, p. 19. Also Loskot (1971), p. 6. Soviet ships (larger than Czechoslovak ones) also could not "... bypass the Suez Canal economically". G. Sick, 'The USSR and the Suez Canal', *Mizan*, November 1970, pp. 91-92.

of ores of similar grades may also outweigh the influence of increased transport costs. Similarly the lack of a strong relationship with deltaim may be due partially to Czechoslovak use of middlemen to ensure lower import prices - a factor which may swamp the effect of distance - and partially to a possible indifference amongst countries on the periphery of European trade routes between sales of commodities to Czechoslovakia or to European entrepots.

A satisfactory resolution of the question of the relative importance of geographic distance in bilateral trade between Czechoslovakia and developing countries would require far more intensive study and a far greater amount of information than were possible or available here. It can only be concluded that distance is a relatively important factor in aggregate bilateral trade flows from Czechoslovakia to its LDC partners,but the reverse is probably not true.

3.4.3 Other Barriers to Trade

A form of resistance to bilateral trade flows within the 'intensity approach' unique to planned economies is that arising from planned consumption and production, and hence planned imports and exports. The nature of planning in Czechoslovakia has already been discussed in section 1.4, and it is intended here only to briefly indicate the types of resistances which may arise from centralized economic control.

By assuming that the component of sales tax which is above the national average represents a barrier to trade, Pryor showed that for a sample of relatively unprocessed 'tropical' products, relative discrimination - measured by the ratio of domestic retail price of the country concerned, to the minimum retail price level of the countries in the sample for a particular import - was far greater in CMEA countries (including Czechoslovakia) than

in the West.[1] Hanson confirmed the existence of strong (relative to the U.K.) discrimination by the Soviet Union against cocoa products, but went on to emphasise that the effective barriers to imports were planners' preferences,[2] because retail prices are not necessarily set to clear the market. A more direct method of determining the existence of barriers to imports of 'tropical' foodstuffs is to compare Czechoslovak per capita consumption levels - which are basically determined by planners - with those in roughly comparable Western countries. Such data are not readily available for a large range of commodities over extended periods of time, but Table 3.3 indicates the position for the middle sixties.

With the exception of rice,[3] Czechoslovak average 1964-66 consumption of 'tropical' commodities was generally well below per capita levels in the five Western countries, particularly for bananas, (total) citrus fruits, and coffee. Assuming that consumer preferences were not satisfied by planners - and the perennial shortage of most such 'luxury' goods supports this assumption - so that imports were lower than they would otherwise have been, it can be argued that the planning process acts as a restrictive force in bilateral trade with LDC's which desire to export 'tropical' commodities to Czechoslovakia. This is not say, however that planners deliberately restrict trade with specific countries. The apparent discrimination is rather a result of a more general bias against the consumption of 'luxury' goods requiring the utilisation of scarce currency reserves, which also happen to be produced mainly in LDC's. Indeed planners' lack of sensitivity to consumer preferences may also lead to impediments to bilateral trade flows based on short-term technical inflexibility:

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1 F.L. Pryor, 'Trade barriers of capitalist and communist nations against foodstuffs exported by tropical underdeveloped nations', *RES*, 1966, pp. 406-411. Sales tax on a particular commodity which is below or equal to national average sales tax is assumed to be imposed purely for revenue-raising purposes.

2 P. Hanson, 'Soviet imports of primary products: a case-study of cocoa', *SS*, July 1971, p. 72.

3 The retail price of top quality rice between 1960 and 1975 was 5 Kcs/kg, a low price relative to other feedstock, leading to its use as poultry feed - see 'Podvod se stabilitou cen', *Listy* (Rome), September 1979, p. 6 - and this may partially explain high apparent rates of per capita consumption.

TABLE 3.3 PER CAPITA CONSUMPTION OF 'TROPICAL' COMMODITIES IN CZECHOSLOVAKIA AND SELECTED WESTERN COUNTRIES, 1964-66 (AVERAGE) AND 1973

(kilograms/head)

Commodity	Czechoslovakia		Australia	Austria	Denmark	Italy	FRG
	1964-1966	1973	1964-1966	1964-1966	1964-1966	1964-1966	1964-1966
rice	4.6	4.5	3.2	2.9	1.1	5.0	1.8
bananas	0.9	2.9	11.1	6.6	7.4	5.2	9.4
cocoa	1.0	1.5	1.7	2.2	1.9	0.5	2.7
coffee	0.8	0.98	1.3	2.5	10.5	2.4	4.6
tea	0.1	0.09	2.5	0.1	0.3	..	0.1
oranges-tang.	2.3	..	17.7	12.1	14.9	17.3	17.4
lemons-limes	1.9	..	1.6	3.6	2.3	2.3	2.6
other citrus fruit	0.3	..	0.8	0.4	2.3	..	1.1

Source: average 1964-66: FAO, *Agricultural Commodity Projections 1970-80,* volume II, Italy, 1971, table A.

1973: Rice, sugar, cocoa beans (1972), tea, coffee (roasted); *Statisticka Rocenka,* 1975, p. 490. Banana imports from FAO Committee on Commodity Problems (Intergovernmental Group on Bananas), *Proposals for International Action to Secure Renumerative and Equitable Prices and to Improve Market Access*, CCP: BA 75/3, March 1975, table 10, p. 23.

> "The main immediate barrier to increased banana consumption [in Czechoslovakia] is technical, i.e. inadequate ripening facilities. The market is still essentially Gros Michel, although shops would prefer Cavendish variety bananas. There is one ripening room equipped to handle Cavendish, although there are plans to construct modern ripening chambers over the next three years."[1]

The availability of scarce currency resources is also an important determinant in the import of both bananas and of other tropical fruits.[2] Foreign exchange reserves are, of course, another general constraint on Czechoslovak bilateral trade flows, and are dealt with in sections 1.4 and 3.8.

Other resistances to trade which owe a good deal to the planned nature of the Czechoslovak economy are the often unresponsive nature of exports to

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1 FAO Committee on Commodity Problems (Intergovernmental Group on Bananas), *Import Policies and Outlook for Imports of Bananas into the USSR, Eastern Europe and Yugoslavia,* CCP: BA 74/4, April 1974, p. 6.

2 *ibid.*, p. 5.

overseas demand, and the (planned) availability of goods for the export sector. Neither of these factors are examined in detail here, but are referred to in section 3.5 and in chapter 1 above. Nor are the effects of trade missions, the activities of the Czechoslovak Chamber of Commerce, trade fairs, and so on, examined in this thesis. Finally, factors such as political affinity (which may bias trade flows), ideological attitudes on issues such as direct foreign investment (which restricted trade opportunities in the early seventies at least) and the effect of tied development loans are also examined below.

3.5 SPECIALIZATION IN TRADE RELATIONS

3.5.1 Commodity Composition and Complementarity

Both Czechoslovakia and the developing countries have undergone significant economic change in the post-War period. The former adopted a system of planning and concentrated production in the engineering and heavy industrial sectors. The developing countries on the other hand have by and large all achieved political independence and former 'colonial' economic relationships have consequentially been disrupted. From the middle sixties their share in world manufacturing value added began to increase, and their share of world manufacturing exports (including SITC 3, mineral fuels and related materials) increased by almost 70% between 1965 and 1975.[1] A large proportion of this growth has been contributed by the growth of the Newly Industrializing Countries(NIC's) whose share in Czechoslovak imports of manufactured goods is examined in section 3.5.3.

A general picture of trade with LDC's is presented in Table 3.4 The overall pattern is one of complementarity: a more industrialized country, Czechoslovakia tended to concentrate exports on manufactures, while imports have been preponderantly of raw materials because of their domestic scarcity or unavailability Indeed it seems to have been recognized soon after the War that possibilities of mutual gains from such 'vertical' trade existed. One of the many examples of this attitude is:

> "... Pakistan remains an open market (nedotcenou zemi) with which it will be possible to establish wide-reaching commercial relations. On the one hand, Pakistan possesses valuable raw materials such as jute, cotton and hides, and on the other, requires practically everything, from small consumer items to large investment plants."[2]

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[1] UNIDO, *World Industry since 1960: Progress and Prospects*, N.Y., 1979, (ID/229), table II.1, p. 33, and table V.1, p. 141.

[2] P.K. (author's initials), 'Obchod s Pakistanem', *ZO*, 25 March 1949, p. 218.

TABLE 3.4

COMMODITY COMPOSITION OF CZECHOSLOVAK TRADE WITH THE DEVELOPING COUNTRIES[b]

(per cent)

CTN	1948	1949	1950	1951	1952	1953	1954	1955	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973[a]	1974
	IMPORTS																						
I	0.1	0.2	0.2	0.1	0.0	0.6	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.5	0.8	1.1	0.8	1.1	0.7	0.6	0.9	0.9	0.5
II	79.3	87.3	87 ?	90.4	92.0	75.8	68.4	67.3	82.1	78.4	77.9	74.9	68.8	70.7	70.6	74.2	68.0	68.3	64.9	70.2	66.8	54.7	71.5
IV	20.3	11.9	12.4	9.5	7.8	23.6	31.5	32.6	17.7	21.5	21.9	24.9	30.8	27.7	26.5	21.9	26.4	25.4	31.3	25.8	29.0	24.8	22.8
V	0.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	1.0	2.1	2.9	4.9	5.1	3.0	3.5	3.2	3.8	5.0
	EXPORTS																						
I	18.7	33.3	24.3	21.0	16.8	17.2	22.5	38.1	50.7	55.8	54.4	50.0	47.6	48.5	58.8	59.6	62.7	66.3	60.2	64.0	63.2	56.9	50.6
II	36.6	21.5	26.1	24.0	19.6	22.5	28.4	31.1	19.3	15.6	16.1	16.8	21.7	22.6	18.8	18.5	17.8	16.1	21.3	19.4	19.0	22.0	29.3
IV	3.0	3.3	5.9	12.3	21.5	14.6	9.7	5.2	6.4	8.7	7.7	11.9	10.3	8.1	4.3	4.0	3.5	3.6	4.2	4.0	3.5	4.8	5.2
V	41.7	42.0	43.7	42.7	42.0	45.7	39.4	25.5	23.6	19.9	21.8	21.3	20.4	20.8	18.1	17.8	16.0	14.1	14.3	12.5	12.3	14.5	14.3

Sources: *1948-55*: B. Korner, *Zahranicni Obchod Ceskoslovenska s Rozvojovymi Zememi 1948-1955*, Vysoka Skola Ekonomicka, Prague, 1969, Tables 9 and 10, pp. 61-62.
1960-72: J. Filip, 'Ceskoslovensko a rozvojove zeme v obchodni a hospodarske spolupraci', *ZO*, no. 3, 1974, pp. 14, 16.
1973-74: J. Filip, 'Czechoslovak trade relations with less developed countries', *Svet Hospodarstvi*, 3 June 1975, p. 3; 6 June 1975, p. 3. (From a translation supplied by a Western embassy in Prague).

I machinery, transport equipment, spares
II fuels, non-foodstuff raw materials, metals, chemical products
III live animals (omitted: absolute values negligible)
IV foodstuffs, foodstuff raw materials
V industrial consumer goods
CTN CMEA Commodity Trade Nomenclature

[a] 1973 imports do not sum to 100%, probably because of the low CTN II value. A typing error may have occurred in translation.

[b] Data for 1956-59 and 1975 not readily available.

Following the completion of the first Five-Year Plan (and the death of Stalin) in 1953, greater consumerism led to a significant increase in the share of foodstuffs in imports from LDC's. Despite increasing levels of per capita consumption of some tropical and 'southern' foodstuffs[1] however, the share of foodstuffs in imports from LDC's stabilized not far above the 1948 level; probably because imports of non-foodstuff raw materials increased at a similar rate.

A more fundamental change has been, since about the middle sixties, a quite perceptible increase in the import of manufactured consumer goods (group V, Table 3.4). It seems that this was at least partially due to deliberate attempts to achieve some of the gains from greater specialization in 'horizontal' (two-way) trade, even in 'traditional' industries:

> "Many people in this country will be surprised to hear that we are preparing to import this year several hundred thousand pairs of shoes, boots, etc., from the developing countries, in spite of the fact that we count ourselves among the giants of the footwear industry. We believe that our own producers can only profit from this foreign competition. Similar steps will be taken with regard to some textile products ... . Many of these countries have built modern plants which are sometimes more advanced technically than those in this country or in the West ...".[2]

In the event, such imports were apparently limited both by low standards of quality, and by the prices demanded by some LDC's:

> "Czechoslovakia makes sincere efforts to diversify its imports from the developing countries, yet it must be stated in this connection that some developing countries demand unusually high prices for their products, particularly if they are approached by the socialist countries. Should the developing countries persist in this price

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1 Imports of bananas, for example, rose from 4000 tons in 1960, to 28800 tons in 1970 and 42000 in 1973. FAO (1974); CCP: BA 74/4, p. 6.

2 Brozik (1965), p. 5. A more oblique reference to this aspect of economic efficiency is made by J. Kohout (Deputy Minister for Foreign Trade), 'Nase hospodarske styky s rozvojovymi zememi', NZO, no. 32, 1965, p. 2.

> policy with respect to the socialist countries, their participation in higher consumer goods export to the latter could be only of limited extent."[1]
>
> "The first deliveries of footwear ... showed however that there remains the problem of maintaining a homogenous degree of quality in mass production. We are of the opinion that the sale of low quality goods to consumers would benefit neither the good name of our Egyptian friends nor our national economy ... [turning to Indian goods] Of the metal goods, Czechoslovakia is interested in the purchase of armatures and fittings. Despite their nice appearance and flawless superficial finish, there are still complaints about the low quality of these products, particularly in their internal sealing."[2]

In spite of these problems, it is probable that the trend of increasing imports of manufactured consumer goods - particularly under bilateral payments agreements with India and Egypt - will continue, as LDC industrialization proceeds and while relative labour shortages persist in Czechoslovakia. The same is probably true of group I (machinery etc.) imports which were apparently limited until the early seventies by relatively small-scale production in the LDC's, as well as "... quality and prices, availability of services and prompt and regular supply of spare parts, etc.".[3]

In the fifties and early sixties, ideological objections - and probably a sincere belief that the burden of debt repayment was inimical to development[4] - prevented direct investment in LDC's, but by the middle of the decade there

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1 F. Korbel, 'Czechoslovak economic and trade relations with the developing countries', *CFT*, no. 7, 1966, p. 10. An identical complaint was made with regard to East African manufactured goods whose prices " ... exceed the world price level": (anonymous) 'Czechoslovak trade relations with East African countries', *CFT*, no. 8, 1973, p. 18.

2 F. Ruzicka (Deputy Minister for Foreign Trade), 'Vyhled dovozu spotrebního zbozi z rozvojovych zemi', *ZO*, no. 9, 1973, p. 2.

3 M. Pravda, V. Novacek and Z. Venera, (Study prepared at request of UNCTAD Secretariat), *Trade Prospects in Socialist Countries. Czechoslovakia: Conditions, Policies, Approaches,* TD/B/305, 17 June 1970, p. 25.

4 R. Wagner, 'Czechoslovak Socialist Republic and direct investment in Economically Developing Countries', *CFT*, no. 6, 1962, pp. 23-25. (Ideological considerations may also have been important. Lenin's theory of Imperialism presents the final stage of capitalism as one of an exploitative export of capital).

appears to have been a cautious search for an acceptable form of such activity:

> "Some forms of combining suitably the Czechoslovak loan and technical assistance on share-in-production, share-in-profit or other basis may be found in future when putting into operation plants built with Czechoslovak loan and technical assistance."[1]

By the early seventies it seems to have become acceptable to engage in direct investment and in specialization agreements, with repayments in commodities produced by the LDC's to be used in Czechoslovakia or re-exported.[2]

A phenomenon often referred to as 'higher forms of cooperation'; coproduction and subcontracting out is confined mainly to India (the fitting of tyres and tubes to Czechoslovak tractors is the most oft-quoted example, and arms imports from India may also involve compensation arrangements: section 4.4.2), but the Strojexport fto coproduces mining machinery in Colombia; Karaexport coproduces furs in Uruguay; and Jablonex cooperates with the Mexican firm Bizuteria Moderna.[3] Even profit-sharing had become an acceptable concept by the seventies,[4] but the extent of Czechoslovak participation in such schemes is not precisely known. Trilateral ventures also began in the middle sixties, but Poland and Hungary appear to have been the most actively involved of the East European countries.[5] In 1971

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1 Korbel (1966), p. 12.

2 e.g. Loskot (1971), pp. 7-8.

3 J. Filip, 'Prumyslova kooperace socialistickych zemi s rozvojovymi zememi', *ZO*, no. 9, 1971, p. 17.

4 *ibid.*, p. 18. J. Zeman, 'S NZO po svete: Nigerie-Ghana', *NZO*, no. 16, 1971, p. 2 also refers to the new opportunities created " ... by the new legal provisions liberalizing the conversion of profits ... and the possibility of transferring dividends". It is not clear whether he is referring to Nigerian or to Czechoslovak legislative changes, but in either case there is the implied acceptance of profit-sharing and profit repatriation.

5 UNCTAD Secretariat, *Tripartite Industrial Cooperation and Cooperation in Third Countries*, TD/243/Supp. 5, May 1979, p. 10.

Skodaexport was cooperating with the French firm Babcock Atlantique in the construction of a thermal power station in Algeria, and was supplying chassis to Peru for the construction of British Leyland automobiles.[1] Vlach claims that Czechoslovakia requested CMEA to include in its integration program scope for specialization in production with third countries, particularly LDC's.[2] Given the long gestation periods of many projects, the import effects will probably not become apparent in Czechoslovak statistics until the eighties, but the increasing perception of a need for specialization in trade (combined with bottlenecks in CMEA) make it highly probable that the share of manufactured goods in imports from LDC's will increase substantially in the coming decade.

The rise in Czechoslovak imports of manufactures from LDC's is reflected in exports to them, because such imports contemporaneously imply greater self-sufficiency in LDC domestic industrial production. Foodstuff exports remained a relatively steady proportion of total exports as did other industrial materials (group II) although the latter fluctuated substantially. The significant and steady decline of exports of manufacturerd consumer goods (group V) over the entire perioc is due to three main factors. An initial decline occurred at the end of the first Five-Year Plan period in Czechoslovakia (1948-53), reflecting the restructuring of the economy from light to heavy industrial production; thus lowering the export potential of industries in the former category. A concomitant increase in machinery exports (group I) is readily observable in Table 3.4. Secondly, the drive to industrialization and import-substituting production by the LDC's, especially in the sixties, further reduced Czechoslovak export opportunities.[3] (It should be recalled that Brazil, Egypt and India, countries pursuing such policies, form the bulk of trade relations). This process has, as in the case

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1 Filip (1971), p. 18.

2 Vlach (1963), p. 4. (Such a policy was seen as being potentially beneficial to Czechoslovakia).

3 The Czechoslovak literature is interspersed with references to this phenomenon, e.g. Loskot (1971); probably because of difficulties encountered in such markets.

of the West, been compounded by Czechoslovak exports of industrial plant and machinery for the production of precisely those consumer products which previously formed the bulk of exports; for example, shoes, textiles, sugar refining, ceramics, etc. The increasing multilaterality of trade is probably a third reason for lower export levels of consumer goods. Countries trading in freely convertible currency possess a greater degree of choice, being economically indifferent between alternative sources of supply from the aspect of foreign exchange. Assuming a higher degree of quality (or advertising) in the West they might well have switched suppliers, given roughly equivalent prices:

> "The volume and composition of Czechoslovak exports to Ghana are currently influenced by a range of factors, of which an especially negative one is the fact that in trade in free currencies it is necessary to accept payment on credit conditions of 180 days. It is not to the advantage of exports that because of payments difficulties, receipts are affected with a delay of several months. The change to payments in freely convertible currency decreased the ability to compete (zyvsil narocnost na schopnost konkurovat) with other foreign suppliers. This export (sic) significantly affected Czechoslovak exporters and was to a certain extent responsible for the fall in Czechoslovak exports to Ghana in the year 1970". (emphasis added)[1]

On the other hand, Egypt[2] and India (and Brazil to 1967) have maintained bilateral payments relations throughout, so that this argument is relevant only to smaller trading partners.

Apart from the increased proportion exported in the period 1948-53 as a result of domestic industrial change, machinery has maintained a steady share in exports probably for two major reasons. The first consideration, which is difficult to show empirically in the trade figures, is the limit placed on machinery exports, and hence their relative share, by limits in

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1 Zeman (1971), p. 2.

2 Nevertheless, R. Macek, 'Obchodni a hospodarske styky mezi CSSR a Egyptskou Arabskou Republikou', *ZO*, no. 11-12, 1976, p. 30 links falling trade levels with Egypt to the increasing economic orientation of that country to the West. Egyptian exports to convertible currency areas are encouraged through undervalued conversion rates and imports are increasingly influenced by private Western loans.

production capacity. Zetor tractors, for example, have been a popular export, particularly to India. Yet by 1976 at least, production capacity was insufficient to meet world demand, basically because lack of construction capacity had precluded alterations to the plant built in Brno in 1942.[1] A second undercurrent which is indiscernible without detailed trade data (which are unavailable) is the frequently made Czechoslovak claim that the type of machinery exported has changed. For example, while Czechoslovakia delivered a wide range of machinery to Brazil between 1950 and 1960, industrial development in that country has since limited demand to the most advanced and efficient types of machines, thus excluding 'traditional' machinery exports such as compressors, diesel motors, etc.[2]

3.5.2 The Export of Complete Industrial Plants

Complete industrial plants (CIP's) had already been exported before the Second World War, but their importance appears to have been elevated after the War to the extent that domestic investment policies were tailored to propagate such exports. In 1949 President Zapotocky referred to the need to adapt domestic industry to the production of CIP's to help prevent capitalist exploitation of "industrially backward countries",[3] although he was referring to the People's Democracies rather than to Western LDC's. An article written twenty years later, however, states explicitly that the export of CIP's to both developing and socialist countries affected investment policy[4].

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1 K. Gooding, 'Capacity shortfall holds back exports of Czech tractors', *FT*, 19 October 1976, p. 3. See also section 3.5.2. On the other hand, the XV Party Congress decided to increase the export of machinery and complete industrial plants to developing countries during the sixth Plan period (1976-80). 'Vyssie formy: hospodarske vzt'ahy medzi CSSR a rozvojovymi krajinami', *Pravda* (Bratislava), 11 November 1976, p. 6.

2 V. Stanc, 'Obchodni a hospodarske styky mezi CSSR a Brazilii', *ZO*, no. 11, 1977, p. 3.

3 'Z referatu na IX sjezdu KSC', 26 May 1949, Quoted in *ZO* no. 11, 1957, p. 459.

4 Z. Krejci, 'Ceskoslovensky vyvoz investicnich celku do rozvojovych zemi', *ZO*, no. 6, 1969, p. 25.

Apart from the psychological or propagandist effect of supplying large, visible, industrial plants to developing countries at a time when many Western governments were counselling economic development based on agriculture, there were several cogent reasons for the special emphasis given to exports of complete industrial plants (sometimes called 'turnkey' plants).

One perceived advantage of such exports was in facilitating market penetration:

> "The export of complete industrial plants currently leads, as a rule, to more intensive penetration of the corresponding economic sector of the importing country than is possible by merely exporting individual items, and therefore significantly strengthens the long-term politico-economic relations with the relevant country."[1]

A similar view, referring specifically to LDC's, had been expressed already in 1957, with the author also stressing domestic multiplier effects on employment[2] - presumably assuming under-employment of labour in the economy. More tangibly, individual machines and components effectively commanded higher prices as integral parts of a CIP, than they did when marketed individually. Commissions to foreign agents needed to be paid only rarely - but were the rule in the case of individual machines - and then at lower rates, in the case of a CIP. The differences in prices obtained for the machinery involved has been estimated at 15 percent.[3] Furthermore, a CIP enabled the exporter to more readily sell 'invisibles' such as technical know-how, consultation, purchase of production licences etc. - leading to an estimated price differential of 10-30% over exports of individual machines.[4]

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1 J. Pasek, 'Nektere problemy ceskoslovenskeho vyvozu investicnich celku', *ZO*, no. 3, 1975, p. 17.

2 V. Kosik, 'Nekolik poznamek k vyvozu investicnich celku', *ZO*, no. 2, 1957, p. 83.

3 J. Dvoracek, 'Co nabizi vyvoz strojirenskych celku', *NZO*, no. 47, 1966, p. 2.

4 Pasek (1975), p. 17.

Finally, national prestige and hence foreign policy kudos - provided a project was seen to be successful - was involved:

> "Because of the complexities involved in supplying them, the international trade in complete industrial plants has become in a certain sense a confrontation between the technical-economic maturity and reliability of their suppliers. The export of complete industrial plants is therefore a significant factor in external economic relations not only from the economic point of view, but also from the political one."[1]

That the export of CIP's was not encouraged solely on economic grounds is further indicated by continued exports to LDC's in the face of serious payments difficulties experienced by these countries. Krejci claims that responsibility for these uneconomic exports was primarily due to central planning, and suggests that in the new economic system the exporting enterprises themselves should bear full financial responsibility for sales of CIP's.[2] He is almost certainly alluding to the fact that since CIP's were usually (but not always) sold on the basis of long-term concessional (development) loans, the government itself assumed financial responsibility because it alone granted such loans, invariably at 2.5% interest.[3] If CIP exports were indeed uneconomic - despite the apparent advantages inherent in their sale - then it was probably a long-term economic advantage that they were in fact constrained by insufficient domestic production capacity, and by their uncompetitiveness abroad.[4]

Detailed time-series data on CIP exports to developing countries were

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1 *ibid.*, p. 17.

2 Krejci (1969a.) p. 26.

3 J. Filip, 'Vyvoz investicnich celku a zarizeni z clenskych statu RVHP do rozvojovych zemi', *ZO*, no. 11, 1973, p. 23, gives several examples of CIP exports under concessional loans.

4 Pasek (1975), pp. 18-19.

unavailable,[1] and any figures which are available are probably not entirely reliable.[2] Table 3.5 shows the increasing importance of CIP's in machinery exports to LDC's. The rapid increase in the share of CIP's in machinery exports to LDC's occurred simultaneously with a significant decrease in the share of CIP exports in total Czechoslovak trade. In 1960 CIP's formed 21.9% of total machinery exports (to all countries)and 9.9% of total Czechoslovak exports. By 1965, these shares had fallen to 14.3% and 6.9% respectively, and appear to have stabilized at these levels thereafter.[3] It seems clear therefore that, for whatever reason, CIP's became (from the middle sixties) relatively more important in Czechoslovak trade with LDC's but decreased in relative importance in trade with socialist and developed Western countries. Unfortunately lack of data precludes an examination of the effect of industrialization in the LDC's in the seventies on such exports.

TABLE 3.5 THE SHARE OF COMPLETE INDUSTRIAL PLANTS IN CZECHOSLOVAK EXPORTS OF MACHINERY TO DEVELOPING COUNTRIES

(per cent)

1955	1956	1957	1959	1960	1961	1962	1963	1964	1965	1966	1967
2	3	11	16	11	11	20	26	34	33	34	40

Source: Z. Krejci, 'Ceskoslovensky vyvoz investicnich celku do rozvojovych zemi', *ZO*, no. 6, 1969, p. 25

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1 *SR*, 1968, p. 439; 1969, p. 436; 1972, p. 443; 1974, p. 447; provides (three digit) SITC figures for 1966-73 on the export of CIP's to socialist and to capitalist countries. All of these are classified as section 9 SITC (commodities and transactions not specified according to kind). On the assumption that section 9 does not include armaments, it might have been expected that Table 3.8 would provide an estimate of CIP exports to LDC's. However the figures there were not even in broad agreement with those for 1966-67 in Table 3.5. Nor did they appear to tally with reports of numbers of CIP's exported to various countries, as given by Filip (1973), p. 22; and I. Peter, 'CSSR a rozvojove staty', *NZO*, no. 18, 1971, p. 2.

2 Kosik (1957), p. 84, argues that misclassification often occurs, so that CIP statistics often include less complex products.

3 Figures given by Pasek (1975), p. 18 (table).

3.5.3 The Import of Manufactures and the Newly Industrialising Countries

One of the basic tenets of the intensity approach is that in the absence of all resistances to trade, or in the event of their equality on all bilateral trade routes, the allocation of suppliers to demanders in world trade should be a simple random process so that countries should trade with equal intensity with all other countries. Biases and resistances to trade in the real world, however, lead to trade partners trading more or less intensely with each other than they do with the rest of the world. Analogous reasoning applies to the commodity composition of trade. If an LDC has captured a higher proportion of the world market for manufactures, relative to all other LDC's, then, ceteris paribus, it should expect to obtain a similar proportion of the Czechoslovak import market for manufactured goods. Unfortunately systematic detailed commodity data were unavailable to calculate delta coefficients disaggregated by commodities, but the issue is nevertheless briefly examined by utilising the data presented in Table 3.6.

Table 3.6 is not entirely consistent internally because the definition of 'manufactures' (based on SITC sections 5 to 8) has been adjusted by the source in calculating the 1972 export shares of 73 developing countries. Nevertheless, it is clear that country bias exists in Czechoslovak imports of manufactures from LDC's; notably in favour of Egypt and India. Egypt was not even amongst the top ten exporters of manufactures among the sample of 73 LDC's used in Table 3.6, and India's overall share of 45% of Czechoslovak imports of manufactures for 1966-75 was well above the 9.5% share it held in 1972 among the sample of developing countries. There may be several reasons for such bias in trade relations, all of which are similar to the reasons for the overall preponderance, in total Czechoslovak imports from LDC's, of these two countries. Political affinity, bilateral payments arrangements, bilateral commodity complementarity, planners' preferences, transport distance, knowledge of markets, etc., or any

TABLE 3.6

PROPORTION OF MANUFACTURED GOODS[1] FROM TWELVE DEVELOPING COUNTRIES IN CZECHOSLOVAK IMPORTS OF MANUFACTURES FROM ALL DEVELOPING COUNTRIES

(per cent)

	Share in Czechoslovak imports of manufactured goods from all developing countries											1972 share[2] of world exports of manufactures by 73 LDC'S
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	Total 1966-1975	
Argentina	2.6	1.7	0.6	0.2	0.1	0.3	0.9	1.1	5.0	5.2	2.3	4.2
Brazil	1.0	0.5	0.4	0.4	0.9	0.5	0.7	0.8	0.4	1.0	0.7	7.7
Egypt	23.3	33.6	36.2	24.2	18.7	20.0	16.4	22.7	21.8	19.5	22.4	..
Hong Kong	..	..	..	..	..	..	..	..	..	..	..	19.6
India	65.7	59.8	46.4	55.6	58.6	28.1	56.8	46.3	35.1	31.0	45.0	9.5
Malaysia	0.0	0.0	0.0	1.1	8.4	10.4	4.9	5.0	4.7	3.5	4.2	2.5
Mexico	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.9	0.2	5.2
Pakistan	0.4	0.1	0.6	0.2	2.0	14.9	2.7	1.3	0.7	1.6	2.3	2.9
South Korea	..	..	..	..	..	..	..	..	..	..	..	10.7
Singapore	..	..	..	..	0.0	0.0	0.0	3.0	2.4	2.9	1.3	7.4
Thailand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Turkey	1.3	0.9	3.4	1.0	2.5	1.0	0.4	0.3	0.2	1.4	1.0	..

Source: (1) Data Bank and Table 3.7 used to calculate shares in Czechoslovak imports of manufactures from all LDC's.
(2) UNIDO, *World Industry Since 1960: Progress and Prospects,* N.Y., 1979, (ID/229), Table V.4, p. 151, used for 1972 share of world exports of manufactures by 73 developing countries.

[1] Defined as SITC sections 5 to 8; except for 1972 share of world exports of manufactures by 73 LDC's, which has been adjusted to allow for discrepancies in SITC classification.

[2] The source does not specify the sample of 73 LDC's used, but Taiwan has probably been excluded, so that the percentages given are probably overstated.

combination of these may be the determining factors.[1]

The decreasing Indian and Egyptian shares of Czechoslovak imports of LDC manufactures (Table 3.6) were offset by imports from a variety of other LDC's, but not simultaneously. (The sudden drop of imports from India in 1971 was due to a fall of about 50% in the value of imports of 'textile yarns and thread'.) This particular shortfall was 'made up' in the following year, so the apparent decrease was probably due to late delivery. Imports from Tunisia were relatively large from 1966 to 1969 and those from Iran (mainly clothing) increased suddenly in 1968, but particularly from 1970. Imports of Malaysian tin began in 1969 and rose to a level of about 20,000 Kcs thereafter, equivalent to about half the value of manufactures imported from Egypt in 1970 and 1971. Singapore's suddenly increased share of the import market was due almost exclusively to sales of tin, the world price of which increased substantially after 1972. Imports of Pakistani yarn and thread, as well as fabrics and footwear, increased suddenly in 1971 by a factor of about ten, but dropped back from 1972 in the aftermath of the civil war and the India-Pakistan War (1971). With the exception of Indonesian tin and Cypriot clothing, imported at signficant levels from about 1974 and 1973 respectively, most of the remaining increases were concentrated on Latin America.[2] The sudden but ephemeral increase in imports (mainly copper) from Chile were due to overtly political developments connected with the Allende government. Bolivia's traditional export, tin, also suddenly assumed significance in Czechoslovak imports in 1971 - probably as a result of links with the short-lived left-wing Torres government[3] - and increased in the following year to Malaysian levels. Peru in 1973 began subsequently

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1 Statistical relationships between the import shares for 1966-75 shown in Table 3.6, and political affinity (section 3.7) and the duration of bilateral payments arrangements (section 3.9), were found to be not significant.

2 Lhotsky (1977), p. 14, reports increased Czechoslovak interest in the region from about 1972.

3 Surprisingly, the level did not fall following the August 1971 right-wing coup by Colonel Banzer Suares; a bilateral trade agreement was signed on 6 September 1972.

substantial deliveries of silver (SITC group 681). Apart from Uruguay which exported relatively small amounts of miscellaneous textile articles, the only Latin American country to have changed the structure of its traditional exports to Czechoslovakia was Argentina which in 1974 substituted, by almost equivalent amounts, the export of leather for raw hides.

It is clear therefore that Czechoslovakia's apparent diversification of import sources for manufactures between 1966 and 1975 was illusory in the sense that SITC section 7 (machinery) and section 8 (manufactured articles) continued to come predominantly from India and Egypt. Much of the apparent change was due to increased imports from LDC's of processed raw materials. (The increased prices of such materials after 1972 have also magnified the extent of the apparent diversification). Imports of Bolivian tin alone represented, in the years 1973-75, 6.4%, 12.4%, and 7.2% of Czechoslovak imports of manufactures from the LDC's. It must therefore be concluded that Czechoslovak imports of manufactures from LDC's in the period 1966-1975 involved a substantial degree of bias against consumer goods and machinery from some of the newly industrialising countries, in favour of the more established suppliers, India and Egypt.

3.5.4 Commodity Concentration in Bilateral Trade

Studies of the concentration of imports and exports in international trade have focused on attempts to explain variations in countries' concentrations of total imports and exports. Michaely,[1] for example, found that the more industrialized the economy, the greater its export diversification, while exports of primary producers (even ones with high per capita incomes such as Australia) tended to be highly concentrated. Import concentration ratios, on the other hand, he found to be of relatively

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[1] M. Michaely, 'Concentration of exports and imports; an international comparison', *EJ*, December 1958, pp. 722-736. Centrally planned economies were omitted from this study.

TABLE 3.7 CZECHOSLOVAK IMPORTS FROM DEVELOPING COUNTRIES[1] BY SITC SECTION

(millions of Koruny and per cent)

Section[2]	Unit[3]	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Total	(1)	1519	1359	1341	1408	1547	1528	1813	2300	3124	2653
	(2)	100	100	100	100	100	100	100	100	100	100
0	(1)	438	345	456	471	498	550	666	920	892	748
	(2)	28.8	25.4	34.0	33.5	32.2	36.0	36.7	40.0	28.6	28.2
1	(1)	33	47	45	53	34	37	73	60	64	40
	(2)	2.2	3.5	3.3	3.8	2.2	2.4	4.0	2.6	2.1	1.5
2	(1)	883	785	652	642	762	717	771	806	1544	1219
	(2)	58.1	57.8	48.7	45.6	49.2	46.9	42.6	35.1	49.4	46.0
3	(1)	16	8	0	0	0	0	0	163	112	131
	(2)	1.1	0.6	0.0	0.0	0.0	0.0	0.0	7.1	3.6	4.9
4	(1)	20	7	21	19	17	11	19	45	61	38
	(2)	1.3	0.5	1.6	1.3	1.1	0.7	1.0	2.0	2.0	1.5
5	(1)	9	11	16	14	70	40	14	31	19	53
	(2)	0.6	0.8	1.2	1.0	4.5	2.6	0.8	1.3	0.6	2.0
6	(1)	92	130	100	137	128	125	203	163	304	325
	(2)	6.1	9.6	7.4	9.7	8.3	8.2	11.2	7.1	9.7	12.2
7	(1)	9	9	7	14	3	9	18	29	22	12
	(2)	0.6	0.6	0.5	1.0	0.2	0.6	1.0	1.3	0.7	0.4
8	(1)	18	18	44	57	36	37	48	81	97	86
	(2)	1.2	1.3	3.3	4.1	2.3	2.5	2.6	3.5	3.1	3.2
9	(1)	0.1	0.0	0.0	0.1	0.1	0.8	1.5	0.1	9.3	1.6
	(2)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.1

Source: Aggregation of data for countries given in footnote 1. Data for individual countries taken from *Facts on Czechoslovak Foreign Trade*, and from Ministerstvo Zahranicniho Obchodu, *Ceskoslovensky Zahranicni Obchod s Vybranymi Rozvojovymi Zememi v Letech 1966 a 1967*, VUZO, 1968.

[1] Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, Uruguay, Venezuela, Afghanistan, Burma, Cambodia, Ceylon, India, Indonesia, Malaysia, Pakistan, Thailand, Cyprus, Iran, Iraq, Jordan, Kuwait, Lebanon, Saudi Arabia, Syria, Turkey, Bangladesh, Singapore, Algeria, Egypt, Libya, Morocco, Sudan, Tunisia, Ethiopia, Ghana, Guinea, Kenya, Nigeria, Sierra Leone, Zambia, Zaire. Data were not available for all of these countries over the entire period 1966-1975.

[2] 0 Food and live animals
1 Beverages and tobacco
2 Crude materials, inedible, except fuels
3 Mineral fuels, lubricants and related materials
4 Animal and vegetable oils and fats
5 Chemicals
6 Manufactured goods classified chiefly by material
7 Machinery and transport goods
8 Miscellaneous manufactured articles
9 Commodities and transactions not classified according to kind

[3] (1) = millions of koruny (2) = per cent

TABLE 3.8 CZECHOSLOVAK EXPORTS TO DEVELOPING COUNTRIES[1] BY SITC SECTION

(millions of Koruny and per cent)

Section[2]	Unit[3]	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Total	(1)	1570	1467	1587	2244	2077	2763	2666	2502	3340	3800
	(2)	100	100	100	100	100	100	100	100	100	100
0	(1)	77	69	60	66	74	105	97	121	167	186
	(2)	4.8	4.7	3.8	3.0	3.6	3.8	3.7	4.8	5.0	4.9
1	(1)	0.5	0.5	0.5	0.4	0.3	0.5	0.5	0.4	0.7	1.0
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	(1)	23	19	20	17	20	11	12	12	61	73
	(2)	1.5	1.3	1.3	0.8	0.9	0.4	0.5	0.5	1.8	1.9
3	(1)	0.0	1.1	3.0	1.6	0.0	7.0	7.3	0.5	0.3	9.7
	(2)	0.0	1.1	0.2	0.1	0.0	0.3	0.3	0.0	0.0	0.3
4	(1)	0.0	0.0	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	(1)	45	39	43	55	83	81	76	89	78	119
	(2)	2.8	2.6	2.7	2.4	4.0	2.9	2.9	3.6	2.4	3.1
6	(1)	435	417	377	427	532	586	598	663	1084	1064
	(2)	27.2	28.5	23.8	19.0	25.6	21.2	22.4	26.5	32.4	28.0
7	(1)	842	788	969	1507	1238	1817	1711	1454	1752	2112
	(2)	52.7	53.7	61.1	67.1	59.6	65.8	64.1	58.1	52.5	55.6
8	(1)	159	127	106	127	119	147	152	155	192	218
	(2)	10.0	8.7	6.7	5.7	5.7	5.3	5.7	6.2	5.8	5.7
9	(1)	15	6	7	42	12	8	10	8	4	16
	(2)	0.9	0.4	0.4	1.9	0.6	0.3	0.4	0.3	0.1	0.4

Source: As for Table 3.7

1 as for Table 3.7

2 as for Table 3.7

3 as for Table 3.7

high uniformity across all countries. The questions addressed in this section, however, are different from those posed by studies of the type carried out by Michaely. Of interest here is the pattern of concentration in *bilateral* trade (i.e. not total imports or exports of an economy) involving LDC's and a planned economy, Czechoslovakia. It is a characteristic of planned economies that planners determine bilateral trade flows, so that it may not necessarily follow that trade with the more developed LDC's will be less concentrated (in both imports and exports) than it will with the less advanced monoculture economies.

Trade with a relatively large and advanced economy like Brazil, for example, could develop in any one of a number of ways. Planners could on the one hand exploit as far as possible the advantages of bilateral specialization in trade, exporting a large assortment of goods in which they considered Czechoslovakia to possess a comparative (bilateral) advantage, and at the same time, import a large range of consumer goods and other manufactures. Both import and export concentration ratios would then be low. Bilateral trade flows would be highly concentrated on the other hand, if only Brazilian coffee were of interest to Czechoslovak planners, and they were prepared to offer in return only a narrow assortment of commodities. The analysis is further complicated by the introduction of bilateral payments mechanisms. It may be the case that planners wish to develop relations with a small, basically monoculture economy - perhaps for political reasons - and are prepared to export a large variety of goods desired by the LDC. Unless re-exports are permitted under the clearing agreement (which is not always the case), imports will be limited by Czechoslovak absorptive capacity for the main good produced (e.g. bananas) by the LDC. In such a case, it may be necessary for planners to also import 'unwanted' goods - goods they would not otherwise have bought to balance bilateral payments accounts. Bilateralism may, therefore, theoretically lead to a lower degree of

bilateral import concentration than would have been the case under multilateral forms of trade. Tables 3.7 and 3.8 provide some idea of the type of commodity concentration one might expect in Czechoslovak bilateral trade with LDC's: imports concentrated on SITC sections 0 and 2, with some spread over sections 6 to 8; while exports were concentrated on manufactures (sections 5 to 8). This is simply a reflection of the 'vertical' form of trade apparent in section 3.5.1 above, but the pattern was closely mirrored in bilateral trade with individual LDC's so that the question arises of how concentrated individual trade flows are. Machinery and transport equipment (SITC section 7), for example, formed just over half of total exports to LDC's, but the proportion in individual cases was often higher.

Lack of consistent or complete detailed trade statistics precluded serious analysis of concentration levels, but Gini Coefficient[1] values were calculated using single-digit SITC section values for 1966-75 for imports and exports between Czechoslovakia and the 41 LDC's shown in Table 3.2. The high degree of commodity aggregation involved limited the sensitivity of measurement of concentration, but probably to a much lower degree than it would have done for 'horizontal' forms of trade between two industrialized countries.

Even with highly conflated commodity categories however, it was found that bilateral import concentration coefficients were invariably substantially above those for exports. For countries like Argentina and Brazil these differences were small, and, in some cases (e.g. India, Egypt, Mexico, Turkey), were reversed. It appears therefore that patterns in total country imports and exports in international trade are reflected in bilateral trade: where a high degree of commodity complementarity exists, (primary producing)

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[1] $G = \sum_{i=1}^{n} (Vi/V)^2$ where total exports or imports in each bilateral flow (V) are the sum of the n categories of value Vi. The range of G is then given by $1/n \leq G \leq 1.0$, where the upper limit of unity is attained when imports or exports are concentrated on a single category.

LDC's trade in a more concentrated way with a country of a given level of development (Czechoslovakia) than do economically more advanced LDC's. Unfortunately, no significant relationships were found between concentration coefficients and variables such as political affinity (the existence of which might have indicated preferential treatment by planners), or even with GDP levels in the developing countries themselves (indicating that the level of development was not as important a factor in bilateral trade concentration as it is in wider relationships).

3.6 THE STABILITY OF BILATERAL TRADE

3.6.1 The Analysis of Stability

The examination of the stability of bilateral trade flows is especially important in trade between a socialist economy and a developing country, because both sides emphasize the desirability of stability, albeit for their own reasons. Planners require steady and reliable sources of supply (in physical terms) and, indeed, it is claimed that the command economy is conducive to stability:-

> "The planned foreign trade monopoly of Czechoslovakia creates favourable conditions also for the stability of economic relations as socialist economy (sic) does not know such phenomena as crises accompanied by decreased production and a drop in the exchange of goods as it ensures systematic growth of production and consumption and thus of foreign trade."[1]

It has been widely accepted on the other hand that stable foreign exchange earnings are required by LDC's if their economic growth is not to be impeded. Unfortunately, the supporting evidence for this latter proposition appears to be ambiguous. MacBean's seminal work on the subject produced no plausible relationship between the growth of investment in an LDC and the instability of export proceeds;[2] while a more recent work has indicated that MacBean's conclusions may have been at least partially influenced by the time period employed in his analysis, and that export instability does lead to reduced investment levels.[3] Either way, some investigation of stability is desirable, because Czechoslovakia itself has expounded - at the United Nations - on the importance to the growth of LDC's of stable markets and prices.[4] Lawson has also pointed out that in Soviet usage, stability

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1 *Facts*, 1963, p. 45.

2 A.I. MacBean, *Export Instability and Economic Development*, Allen & Unwin, London, 1966, p. 109. Unstable foreign exchange earnings affect national income and imports directly as well as creating uncertainty for entrepreneur

3 P. Kenen and C. Voivodas,'Export instability and economic growth', *Kyklos*, 1972, fasc. 4, pp. 791-803.

4 J. Petran, 'Economic questions in the United Nations Organization', *CFT*, no. 8, 1961, p. 7.

may mean "... the degree to which markets can be regarded as assured from one year to the next ...",[1] but this primarily *ex ante* concept of certainty of supply sources has not been examined here.

Stability has been defined rather in terms of the deviation of observed values from their long-term trend. Specifically, the Stability Index (SI) is calculated analogously to the coefficient of variation - which divides the standard deviation of a series by its mean to give a measure of relative variation - by treating the trend line as the long-term 'mean':-

$$SI = \left[\frac{1}{n-2} \sum_{1}^{n} (Y_i - \hat{Y})^2 \right]^{\frac{1}{2}} \Big/ \bar{Y}$$

where Y_i represents any observation, $\hat{Y}$ is the estimated time-trend value of the series, and $\bar{Y}$ its mean. The lower limit of SI is zero. Because the numerator of the equation is the Standard Error of Estimate (SEE), SI is in fact the coefficient of variation, corrected for trend by the factor $\sqrt{1 - R^2}$, and is therefore valid whether a trend exists or not.[2] The denominator (the mean) corrects for country size and thus facilitates inter-country comparisons. Although some series (particularly for trade values) were found to be better specified by a semi-logarithmic equation, only the linear form was used throughout because sums of residuals $(Y_i - \hat{Y})$ derived from linear and log forms cannot be meaningfully compared for mathematical reasons.[3] An underlying assumption is therefore that

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1 C. Lawson, 'An empirical analysis of the structure and stability of communist foreign trade 1960-1968', *SS*, April 1974a., pp. 226-227.

2 J. Cuddy and P. Della Valle, 'Measuring the instability of time series data', *BOXES*, 1978, pp. 79-85, use a corrected coefficient of determination $\bar{R}^2$, which may, on their own admission (footnote 1, p. 82), lead to inaccuracy in the case of a very small R^2 and few degrees of freedom (giving a negative $\bar{R}^2$). Other authors have utilised 'decline' indexes, or deviations from moving averages.

3 Moreover, corresponding linear and semilog derivations of stability indexes for the LDC's were found to be significantly related at the 1% level using Spearman's correlation coefficient.

stability is represented by constant absolute increments, rather than by constant rates of change.

3.6.2 Stability in Import Planning

From the point of view of the Czechoslovak planner, it is the stability in the (physical) volume available for import which is all-important, but advantages are seen to accrue to both partners:-

> "An important feature of commercial relations between certain African countries and Czechoslovakia is the conclusion of long-term agreements, which enable both partners to count several years in advance with a specific volume of export and import. This prevents crisis vacillations, to which especially the African countries are often exposed in their commercial dealings with capitalist states."[1]

Lack of data, particularly price indexes, precluded the estimation of bilateral trade volumes, but trade volume in individual commodities was examined for stability. Commodities of a relatively homogenous nature were required to allow inter-country comparisons, so that data available were effectively limited to imports from a small number of countries. Availability of long-term series was also a problem. Even so, the assumption was made that the stability of imports of commodities has been determined solely by planners' preferences, and was not influenced by consumer tastes, or by other factors affecting the 'mix' of varieties imported. This is particularly important for commodities such as tea or rice, which can readily be differentiated in terms of consumption habits. The other assumption made is that planners import precisely the amounts they require of each commodity - the buying of LDC surpluses does not occur, either for altruistic reasons, or for speculative purposes.

The results shown in Table 3.9 are fairly clear. Without exception, the stability of total Czechoslovak imports of a particular commodity

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[1] J. Zeman, 'Czechoslovak commercial and economic relations with Africa', *CFT*, no. 8, 1972, p. 13.

is greater than the stability of imports of the same commodity from individual countries. In a situation where imports from individual countries are indpendently determined, the greater stability of total imports of a particular commodity could be attributed to the effect of aggregation or the 'law of large numbers'. However total Czechoslovak imports of any commodity are determined (by planners) as an initial step, and imports of that commodity are *then* 'allocated' by planners or fto's to the various sources. It can therefore be said that Czechoslovak planners are more concerned with the stability of supply of aggregate imports, than they are with providing stable markets for individual developing countries. This proposition is reinforced by the apparently greater relative stability enjoyed by Soviet exports - and those of China and Vietnam in the case of tea - on the Czechoslovak market. It is submitted that this tendency is probably due as much to the ability of centrally-planned economies to allocate previously agreed exports to Czechoslovakia - thus proving more attractive to Czechoslovak import planners - as it is to the additional attraction of greater relative price stability in such economies.

Lawson drew attention to the fact that, as a group, communist countries' total exports (in value terms) are more stable than their imports.[1] (Indeed his results for Czechoslovakia are confirmed in Table 3.10 where all measures of stability, for all groups, show export values to have been more stable than import values, over the period 1960-1975). He begins by pointing out that conventional thinking sees foreign trade as being 'import determined' by planners who plan imports to fill gaps in the national plan and subsequently allocate exports to pay for import requirements (see also section 1.4.3). Hence, it is argued that because planners determine imports first, and with greater care, imports will - according to the consensus view - be more stable than the exports 'scraped together' to pay for them. This latter part of the conventional argument is rejected by Lawson,

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[1] Lawson (1974a.). (His data period was 1960-68).

TABLE 3.9 STABILITY INDEXES FOR PHYSICAL VOLUMES OF IMPORTS BY CZECHOSLOVAKIA OF TEN SELECTED COMMODITIES, 1960-1975

Imports from	iron ore	manga-nese	raw rubber	cotton	phos-phate	jute	cocoa beans	tea	coffee	rice
Total	0.040	0.182	0.192	0.101	0.076	0.130	0.128	0.276	0.130	0.349
USSR	0.046	0.225		0.146	0.180			0.290		
India	0.153	0.481						0.730	0.244[e]	
Brazil	0.413								0.221	
Sweden	0.265									
U.K.			0.524				0.398			
Morocco	0.404[a]				0.163[c]					
Indonesia			0.408							
Sri Lanka			0.312							
Malaysia			0.296							
Egypt				0.290	0.582[a]					0.421[g]
Iran				0.371						
Syria				0.623[b]						
Lebanon					0.269					
Bangladesh						0.240				
Ghana							0.656[d]			
China								0.513		
Vietnam								0.519		
Netherlands								2.217		
Colombia									0.388	
Kenya									0.465[f]	

Source: *Statisticka Rocenka*, various years.

[a] 1960-1973
[b] 1966 value assumed to be 100 tonnes.
[c] 1968-75 data only, coefficient of variation calculated.
[d] 1961-1970
[e] 1962-1975
[f] 1965-1975
[g] 1961-1975

TABLE 3.10

STABILITY INDEXES FOR THE VALUE OF CZECHOSLOVAK TRADE WITH COUNTRY GROUPINGS, 1960-1975

Country Grouping	Imports			Exports		
	aggregate value[1]	weighted mean[2]	median	aggregate value[1]	weighted mean[2]	median
Total trade	17.17	22.33	37.08	13.05	16.17	29.03
CMEA	16.11	16.95	16.08	14.03	15.25	17.55
Other Socialist	20.62	35.14	30.66	15.68	29.95	29.64
Advanced Capitalist	23.17	28.58	28.68	16.49	20.34	23.51
Total LDC's	20.61	43.16	50.19	12.53	34.74	39.19
Asian LDC's	17.84	34.08	48.32	11.67	33.57	36.79
African LDC's	29.48	48.15	43.85	18.31	45.03	37.91
American LDC's	28.06	54.50	55.24	27.63	40.63	40.22

Source: Data Bank (section 1.5.3)

[1] Stability index derived from the aggregate value of trade with each group.

[2] Stability indexes for each country were weighted by the share of that country in the total trade (imports or exports) of all the countries in the sample. The weighted mean was then derived by dividing the sum of weighted stability indexes for each country grouping by the sum of weights for that group. The sample of countries included 7 CMEA members, 6 Other Socialist (including Cuba, Albania and Yugoslavia) 20 Advanced Capitalist and 41 developing countries (listed in Table 3.2). Over 98% of both total Czechoslovak imports and exports were accounted for by this sample of countries.

but the presumed precedence given to imports over exports in planning trade is acknowledged.[1] But he offers instead his own (and more acceptable) hypothesis, which emphasises the importance of foreign exchange in explaining the greater stability of export values than of import values:

> "While imports are ... more important than exports in fulfilling the domestic plan, they are less stable because a foreign exchange constraint is operating, a constraint the influence of which is enhanced by a relative reluctance to use international short- and long-term credit, and to favour bilateral trading arrangements. Hence a steady growth of exports is encouraged to facilitate the easing of foreign exchange bottlenecks."[2]

The conclusions to be drawn therefore are that the relatively greater instability of Czechoslovak (physical) import volume of LDC primary commodities is due both to their use for filling gaps (especially where imports also come from preferred suppliers such as the Soviet Union) in total import needs, and to the fact that Czechoslovak importers are probably influenced by stable prices. Another constraint which may have affected the year-to-year stability of import volumes, but which is not examined here, is the need in many instances to balance clearing accounts; a requirement which may have led to irregular annual purchases from specific developing countries. The apparently greater relative stability of *total* Czechoslovak export earnings with various country groupings is probably best explained by the need for planners to generate a steady flow of export income to pay for both planned and unplanned imports.

3.6.3 The Stability of Bilateral Import and Export Values

A substantial literature has grown up on the instability of export earnings in different countries, much of it based on a reinterpretation or a recalculation, for different time periods, of work by earlier writers.

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1 *ibid.*, p. 236.

2 *ibid*, p. 236.

The most extensive studies were the earlier ones by Coppock and by MacBean.[1] MacBean established only weak links between the degree of specialization and concentration in primary commodities and greater export earnings instability (compared with developed countries); but both their data periods ended in 1958. Work since then has focused on two major issues: the relative degree of export instability experienced by developed and developing countries, and the effect of instability on the latter group. Erb and Schiavo-Campo found that export instability for both developed and developing countries was substantially lower for the period 1954-66 than for 1946-58 (Coppock's data period), but that LDC's continued to exhibit greater export instability; and further, that larger LDC's (measured by GDP) showed consistently lower levels of instability.[2] Leith, Lawson, and then Love[3] all separately examined the apparent decline in world export instability indicated by Erb and Schiavo-Campo, but qualified their results heavily by pointing out that much depended on data periods and the use of particular stability indexes. Massell, on the other hand, has concentrated on explaining instability through variables representing commodity and geographic concentration, per capita income, and so on.[4]

Other authors have conducted similar studies. Among those dealing with the Soviet Union and Eastern Euorpe, Neuberger[5] examined Soviet claims of superiority over the West in providing stable markets for developing countries in a case study of fourteen primary commodities. He concluded

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1 J.D. Coppock, *International Economic Instability*, McGraw-Hill, N.Y., 1962; and MacBean (1966) who used some of Coppock's empirical work.

2 G. Erb and S. Schiavo-Campo, 'Export instability, level of development, and economic size of less developed countries', *BOXES* November 1969, pp. 263-283.

3 J. Clark Leith, 'The decline in world export instability: a comment', *BOXES*, August 1970, pp. 267-272; C.W. Lawson, 'The decline in world export instability - a reappraisal', *BOXES*, 1974b.,pp. 53-65; J. Love, 'The decline in export instability?', *BOXES*, November 1977, pp. 355-359.

4 B.F. Massell, 'Export concentration and fluctuations in export earnings: a cross-section analysis', *AER*, March 1964, pp. 47-63; B.F. Massell, 'Export instability and economic structure', *AER* September 1970, pp. 618-630.

5 Neuberger (1964), pp. 287-293.

TABLE 3.11 STABILITY INDEXES FOR CZECHOSLOVAK TRADE LEVELS AND TRADE INTENSITIES, FOR TRADE WITH 41 DEVELOPING COUNTRIES 1960-1975

Country	imports	exports	deltaim	deltaex
Argentina	54.63	67.66	50.58	55.80
Bolivia	133.33	45.37	103.86	39.31
Brazil	50.44	38.24	26.12	21.09
Chile	107.38	52.10	109.62	54.29
Colombia	37.06	21.40	35.84	19.00
Ecuador	39.73	45.70	50.48	39.63
Mexico	103.67	20.51	111.11	15.04
Peru	55.84	41.25	51.01	29.74
Uruguay	40.35	38.58	34.59	47.41
Venezuela	79.62	39.19	90.91	16.97
Afghanistan	50.82	50.43	44.55	51.96
Burma	86.97	36.79	100.00	41.59
Cambodia	76.07	70.81	85.74	64.89
Ceylon	25.64	43.00	24.39	50.11
India	18.74	19.33	24.20	24.78
Indonesia	52.02	76.55	34.05	71.88
Malaysia	48.32	63.72	44.24	69.09
Pakistan	50.19	81.91	48.52	81.47
Thailand	38.06	11.44	41.46	10.27
Cyprus	48.45	42.21	40.92	26.17
Iran	26.85	33.46	27.37	25.63
Iraq	137.45	43.77	18.01	66.88
Jordan	..	32.71	..	26.24
Kuwait	..	35.42	..	23.19
Lebanon	29.54	30.85	54.53	16.61
Saudi Arabia	..	49.35	..	41.94
Syria	81.41	28.51	66.03	47.65
Turkey	26.72	15.70	33.04	26.41
Algeria	40.56	54.73	41.29	58.02
Egypt	37.09	25.83	29.18	44.00
Libya	..	111.77	..	42.03
Morocco	39.77	53.94	27.77	50.40
Sudan	33.36	37.91	36.51	31.39
Tunisia	68.77	35.66	42.98	28.93
Ethiopia	82.23	23.35	72.85	20.06
Ghana	63.46	80.19	74.86	70.34
Guinea	41.89	75.47	..	..
Kenya	45.81	28.53	44.94	27.70
Nigeria	88.78	29.53	79.14	33.58
Sierra Leone	..	15.50	..	20.48
Zambia	..	39.27	..	42.62

Sources: *Data Bank* and U.N. *Yearbook of International Trade Statistics*.

Lower values of the stability index indicate a higher degree of stability.

that there was little substance to these claims for the period 1955-1961 but that the Soviet market was indeed growing faster than markets in the West. Staller[1] compared the stability of trade within two economic groupings, the OECD and CMEA, and found that trade within the former was probably more stable than intra-CMEA flows. His attempts at explaining stability patterns for the two blocs in terms of variables such as the volume of exports and imports, the rate of growth of exports and imports, and the level, stability, and growth of income in the importing country, were a failure (by his own admission). Hanson[2] was concerned only with Soviet imports of cocoa beans from 1955-1967, comparing them with those of Britain and the USA. More recently, the stability of the trade of the CMEA countries has been examined by Lawson[3] who found that their trade relations were less stable than those of market economies, particularly in trade with developing countries.

Table 3.10 above showed clearly that the stability of exports (in value terms) was greater than that of imports. This was true not only of total Czechoslovak trade flows but also of trade with the various country groupings. As expected trade was most stable with planned economies, primarily CMEA. 'Other Socialist' countries - Albania, Cuba, Yugoslavia, China, North Vietnam, North Korea - exhibited greater stability in trade relations with Czechoslovakia than did market LDC's in the face of potentially large politically-inspired fluctuations. The best explanation for this is probably that ideological postures had gelled by the early sixties and did not therefore affect trade stability for the bulk of the 1960-1975 period. Moreover trade with market LDC's has also been the subject of politically-inspired fluctuations which may have influenced relative trade stabilities. That the stability in aggregate trade is greater for 'Other Socialist' than for 'Capitalist' countries (while the reverse is true when weighted means or medians are used) probably reflects the fact that Cuba and Yugoslavia replaced China as an important trade partner at almost the same time as trade with

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1 Staller (1967), pp. 879-888.
2 Hanson (1971), pp. 59-77.
3 Lawson (1974a.).

the latter declined. Obvious regional variations in the values of trade flows with LDC's made it desirable to investigate the stability of trade with developing countries on a more disaggregated level, particularly to enable identification of some of the determinants of stability in bilateral relationships.

Bilateral trade flows with individual LDC's (Table 3.11) were also generally more stable for exports than they were for imports, a tendency confirmed at the 5% (one-tailed) level by a Wilcoxon test ($z = -1.949$) comparing import and export stability indexes for a group of 34 LDC's. The same was true of bilateral trade intensities: deltaim was generally less stable than deltaex (Wilcoxon test: $z = -1.830$). Stability indexes were calculated for deltaim and deltaex for each of Czechoslovakia's trade partners because they incorporate both demand and supply factors. Apparently unstable imports from an LDC into Czechoslovakia might conceal the fact that the LDC's exports to the rest of the world were also generally unstable. If an LDC's harvests for example, fluctuate, it may be an unstable exporter on world markets, and this - rather than Czechsolovak impo·t policy - could be said to be the reason for unstable Czechoslovak imports from that LDC.

The explanation for different stability levels for bilateral import and export values is probably similar to that offered by Lawson (section 3.6.2) for total exports and imports. If planners allocate a similar (physical) amount for exports to an LDC each year, and the prices they charge are relatively stable (i.e. increase by relatively constant amounts), or if prices are set to obtain a 'target' total revenue bilaterally then the (bilateral) value of annual exports will be fairly stable over time. On the other hand if imports are used to fill gaps in domestic or regular overseas supplies, or if prices fluctuate substantially, the stability of import values can reasonably be expected to be less than that of export values. Even if identical physical amounts were involved in both imports and exports from

year to year, there may be good reason to expect higher stability for export values. Firstly, Czechoslovak planners are able to exert a greater degree of control over export prices than over import prices; and secondly, prices of primary or processed commodities of the type imported from LDC's have historically (1960-75) exhibited a lower degree of stability than world prices of manufactures, which form the bulk of Czechoslovak exports to these countries.

By analogy with results of cross-country studies for total LDC exports, there is a case for thinking that Czechoslovak trade will be most stable with the more developed of its LDC partners. Erb and Schiavo-Campo (1969) found that larger countries, as measured by GDP, exhibited lower export instability for the period 1954-66 (but not 1946-58); but Massell (1970) did not consider per capita income to be an important determinant of the degree of instability. It could be readily argued however that Czechoslovak planners would prefer for purely administrative purposes to buy from, and sell to, economically larger units; a contention supported by the concentration of trade on countries such as Brazil, Egypt and India. Planners would tend to buy and sell first with these large markets and then fulfill plans by trading with smaller countries to fill residuals. For ease of planning, trade with the larger countries would tend to take precedence and to be more established and thus more stable. The empirical results however showed no significant relationship between the stability of either trade levels or intensities, and the size of developing countries (measured by GDP).

Stability was found to be greater in trade with planned economies than it was with LDC's (Table 3.10), suggesting that politics, bilateral payments arrangements, or long-term trade agreements, might be factors in determining stability in trade. For instance, Czechoslovak sources often point to the stabilizing effect of long-term trade agreements:

> "Trade relations are marked with increasing tendencies towards long-term stabilization through long-term trade agreements, the first being concluded with former Egypt back in 1955".[1]

This is intuitively readily acceptable: knowledge by planners that a partner is prepared to buy or sell specific quantities over a five-year period would lead to preference for trade with that country and the establishment of steady trade relations. Ideally, it would have been desirable to compare the stability of trade of countries with long-term agreements with that group of countries without them. However for the period 1960-75 long-term agreements were not in force for identical periods of time for countries which had signed them. It was therefore decided to include in the test sample only countries which at some time during 1960-75 had a long-term trade agreement with Czechoslovakia, and to test the hypothesis that the greater the proportion of the period 1960-75 covered by such agreements, the greater would be the degree of stability in trade relations.

Stability index values of countries with long-term trade agreements were therefore correlated (Spearman's method) with the length of time for which an agreement had been operational.[2] No statistically significant relationship was found to exist between duration of agreements and stability indexes for each of deltaim, deltaex, exports. A very strong ($r = -0.706$, $n = 14$, $t = -3.453$) relationship was however found to exist with import stability in bilateral trade. It can therefore be concluded that amongst countries with long-term trade agreements, those countries whose agreements ran for longer periods of time (between 1960-75) showed greater stability in their exports to Czechoslovakia. It seems therefore that long-term trade agreements do introduce a degree of stability into at least one

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[1] J. Kohout, 'Czechoslovak economic relations with developing countries', *CFT*, no. 6, 1965, p. 4; Zeman (1972): and *Facts*, 1967, p. 206. These five-year (long-term) agreements are subject to specific annual negotiations.

[2] In years: Brazil (16), Afghanistan (5), India (6), Cyprus (3), Iran (7), Iraq (16), Syria (16), Algeria (9), Egypt (14?), Morocco (6?) Tunisia (10), Ghana (9), Kenya (4), Nigeria (10).

direction of trade relations. The statistical insignificance of the relationship between export stability for Czechoslovakia and long-term agreements is also interesting, because it shows that such agreements probably do not automatically guarantee Czechoslovak planners stable markets abroad; while helping ensure a steady source of supply.

It was seen in section 3.6.1 that one explanation of the greater stability of total Czechoslovak exports than of total imports might be due to the need by planners to generate a steady inflow of foreign exchange. It is also shown below (section 3.9.1) that in many instances Czechoslovakia's balance of trade surpluses in clearing accounts led to the 'forced' running down of such balances, a phenomenon which might be used to argue that imports could be expected to exhibit less stability than exports because of the need to balance accounts.[1] To test the effect of bilateralism on stability, the proportion of the period 1960-75 during which each LDC had a bilateral payments agreement with Czechoslovakia was correlated with the stability indexes given in Table 3.11. Significant relationships were found to exist only between 'bilateralism' and import stability ($r = -0.500$, $n = 35$, $t = -3.317$) and with the stability of deltaim ($r = -0.489$, $n = 34$, $t = -3.171$) showing that high levels of import stability (low values of the stability index) were closely associated with the length of time for which a bilateral payments agreement existed.

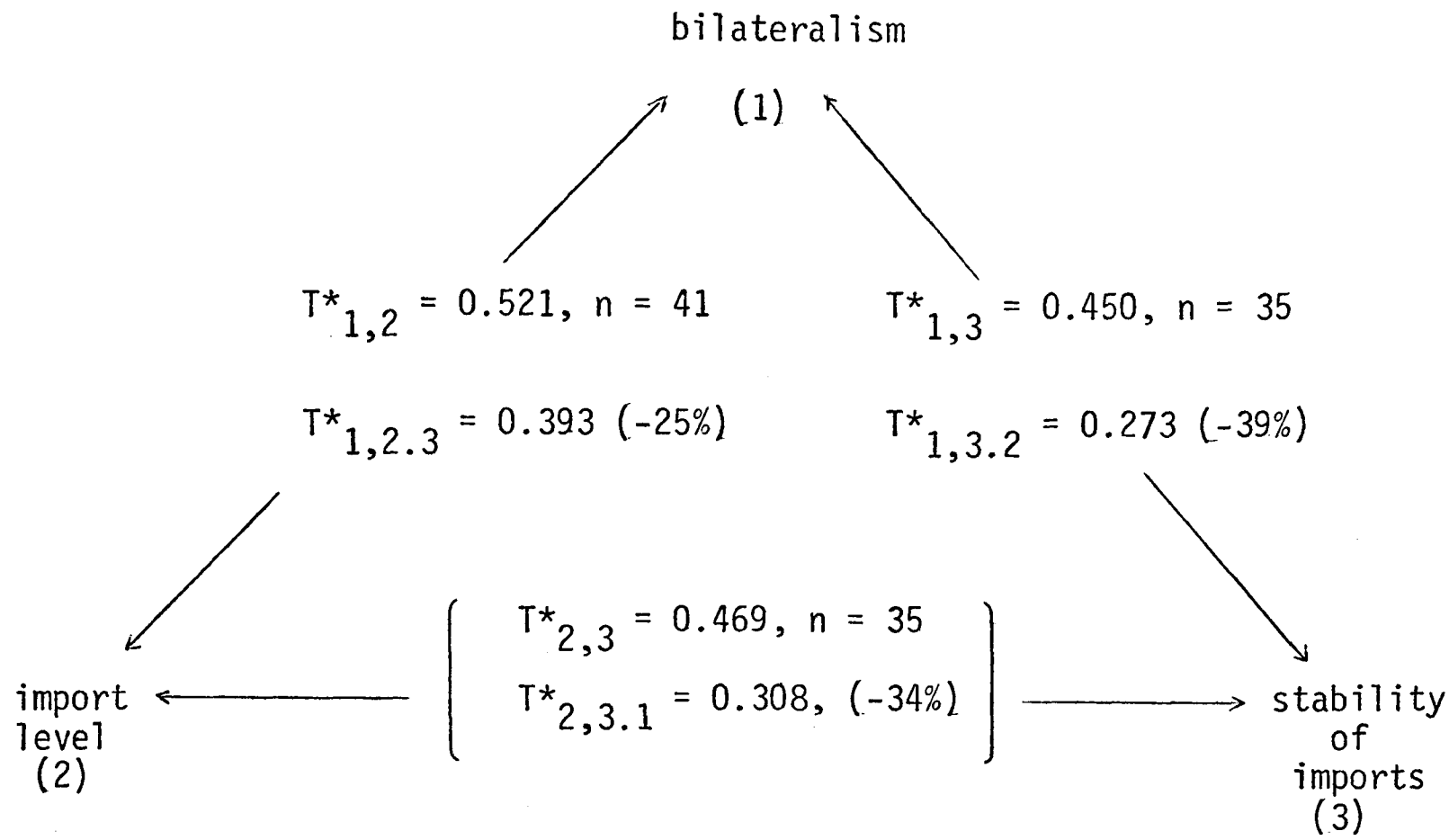
The relationship between bilateralism and the stability of imports however, is complicated by the association of both of these with the level of imports.[2] (There was no such trilateral relationship involving the stability of deltaim). This three-cornered relationship is shown in figure 3.1 which shows that when the effect of variable (3) (import stability) was partialled out, the degree of association between variable (1) (bilateralism)

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[1] e.g. R.L. Allen, *Soviet Economic Warfare,* Public Affairs Press, Washington, D.C., 1960, pp. 101-102, suggests that clearing agreements contribute to instability in bilateral trade.

[2] Lawson (1974b.), also found, but could not satisfactorily explain, evidence that in the sixties lower export instability was experienced by LDC's with higher levels of total (not bilateral) export earnings.

FIGURE 3.1 THE RELATIONSHIP BETWEEN IMPORTS, BILATERALISM, AND THE STABILITY OF IMPORTS



1. Kendall correlation coefficients ($T^*_{i,j}$) and partial correlation coefficients ($T^*_{i,j.k}$) are shown, together with the number of observations (n). Percentages in brackets after partial coefficient values are percentage decreases of 'partial' correlation coefficients over 'direct' ones.

2. 'stability' of imports refers to stability per se; not to the stability index, which is ranked in inverse order to actual stability.

3. 'import level' refers to median imports, 1960-75.

4. 'bilateralism' given by number of months during 1960-75 for which a payments agreement was operative (Table 3.14).

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and variable (2) (import level) did not fall by as much as when variable (1) or (2) were partialled out in the other two direct relationships. Unfortunately it is not possible to test the significance of the differences in 'partial' and 'direct' Kendall correlation coefficients;[1] but the differences indicate that the relationship between bilateralism and import levels may be a more

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[1] Siegel (1956), p. 228.

direct one, than those between import stability and bilateralism, and between import stability and import levels. They are all interconnected but it seems that imports are higher where a bilateral payments agreement exists, and that the stability of imports depends in some way on both these factors.

One explanation for these observed relationships is that Czechoslovakia is willing to import more from LDC's when it does not need to use scarce hard currency. Where a country such as Malaysia is willing to sell rubber only for hard currency, Czechoslovakia has a choice of buying direct or through London, with relative prices (c.i.f.) being the only relevant consideration. Another reason for the apparently greater values of imports from LDC's with bilateral payments agreements may be the higher prices which may occur in such trade. Imports may also be more stable from LDC's with which a payments agreement is operating (and which exhibit higher import levels) because the respective central banks will attempt to dampen fluctuations to ensure that end-of-year residual balances are minimal. A second, and related, point is that under a bilateral payments mechanism, trade volumes are limited by the potential (or willingness to trade) of the weaker (smaller) partner: in this case invariably the LDC. If the smaller partner is trading at maximum potential, then trade stability will depend on the stability of LDC potential. That this may be valid for Czechoslovak bilateral trade is indicated by the strong relationship between the stability of deltaim and 'bilateralism'.

On the other hand, if imports are relatively more stable because of a bilateral payments agreement, then export stability might also be expected to show some relationship to bilateral payments agreements (bearing in mind too that exports were generally the more stable of the two flows anyway), but no such relationship was found. A relationship was found between the stability of deltaex and political affinity (section 3.7) but not with export stability. (Furthermore no relationship was found between import and export stability, or between the stability indexes for deltaim and deltaex).

That is, LDC's politically close to Czechoslovakia were found to accept Czechoslovak goods on their import markets in a more stable manner ($r = -0.355$, $n = 40$, $t = -2.341$) than politically more distant developing countries. It seems therefore that there is no single, entirely adequate, or simple explanation, for any of the observed relationships between bilateral trade stability and other variables.

3.7 POLITICAL BIAS IN BILATERAL TRADE RELATIONS

Stalin's ideological precepts appear to have influenced trade and political relations of the Soviet Union and Eastern Europe with the LDC's during the Cold War period,[1] but relations since then have been regulated by less rigid policies[2] although politics have probably continued to broadly influence trade relations (see also section 1.1.3). There are often references in the Czechoslovak literature to political changes in developing countries which have created conditions conducive to trade. Examples are the deposition in 1952 of King Farouk of Egypt;[3] the anti-Peron coup of 1955 in Argentina;[4] and Peron's return from exile[5] in 1973. All of these were seen by commentators as leading to increased trade, but in fact neither the events of 1952 nor of 1955 led to more than a temporary increase. Wacker *et. al.*, express fairly explicitly attitudes on the importance of politics in trade with developing countries:

> "The possibilities of Czechoslovak economic potential and the desire for achieving optimal economic effect, lead to the conclusion that, in developing relations, attention should mainly be concentrated on a relatively small number of developing countries, which on the one hand stand in the forefront of our political interests and on the other hand provide sufficient preconditions for long-term mutually beneficial economic cooperation. Of primary concern are countries which engage in progressive politics and in which the national democratic regime is sufficiently stabilized; of further concern are key states which hold a strong influence over other developing countries, and also states attempting to lessen their dependence on imperialist countries. With other developing countries, including those with reactionary or colonialist regimes, it is possible to develop trade to an extent commensurate with Czechoslovak economic requirements."[6]

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1 Ye. Zhukov, 'Problems of the national-colonial struggle since the Second World War', *VE*,no. 9, 1949, pp. 54-61 (translated in *CDSP*, no. 49, 1949, pp. 3-6). Also various readings in A. Rubinstein, (ed), *The Foreign Policy of the Soviet Union*, Random House, N.Y., 1966 (2nd edition).

2 R. Kanet and D. Bahry (eds), *Soviet Economic and Political Relations with the Developing World*, Praeger, 1975. Also J. Sedivy, 'CSSR a hospodarsky malo vyvinute zeme', *NM*, July 1961, pp. 797-807.

3 J. Urban, 'Economic relations between the Czechoslovak Socialist Republic and the United Arab Republic', *CFT*, no. 2, 1962, p. 6.

4 K. Kulisek, 'Zahranicni obchod Argentiny', *ZO*, no. 12, 1956, p. 491.

5 P. Lukas, 'Ceskoslovensko-argentinske hospodarske vztahy', *ZO*, no. 11, 1975, p. 12.

6 Wacker (1968), p. 196. The author of this passage was F. Korbel.

Little rigorous analysis of the political aspects of trade with LDC's appears to have been published in the West. Moskoff and Benz in their article on politics and export prices[1] (section 3.8) constructed their 'political index' by subjectively assigning countries to categories meant to reflect political affinity as seen from the Soviet perspective. Another study[2] which attempted to correlate socio-economic variables limited its non-economic variables to legal, military and cultural interaction between socialist countries and LDC's. Heldman's more systematic study[3] employed United Nations voting data but was limited to African states and the Soviet Union. Moreover his data were limited to plenary roll calls between 9 November 1960 and 28 June 1962, and the index of association used was a simple sum of the differences in vote values between the Soviet Union and each African country. A new index of political affinity was therefore constructed to represent Czechoslovak relations with LDC's over the period 1960-75.

Use was made of the Stokman index of normalized distance between two vote vectors $\vec{a}$ and $\vec{b}$, designated below by D. (It was preferred to the more commonly used Lipjhart index[4] which is shown by Stokman to be formally identical to his own,[5] but which is mathematically less elegant and intuitively harder to grasp).

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1 W. Moskoff and G. Benz, 'The USSR and developing countries: politics and export prices, 1955-1969', *SS*, January 1973, pp. 348-363.

2 M. Simon, 'Communist system interaction with developing Afro-Asian states 1954-62: a preliminary analysis', ch. 8 in J. Triska (ed), *Communist Party-states: Comparative and International Studies*, Bobbs-Merrill Company, N.Y., 1969.

3 D. Heldman, 'Soviet relations with the developing states: an application of correlation analysis', ch. 13 in R.E. Kanet (ed), *The Behavioural Revolution and Communist Studies*, The Free Press, N.Y., 1971.

4 A. Lipjhart, 'The analysis of bloc voting in the General Assembly: a critique and a proposal', *APSR*, December 1963, pp. 902-917.

5 F. Stokman, *Third World Group Formation in the United Nations. A Methodological Analysis.* Doctoral thesis published by the University of Amsterdam, 1977, p. 92.

$$D = \frac{\sum_{i=1}^{n} | a_i - b_i |}{2n} \qquad \text{(Stokman Index)}$$

where n = number of General Assembly plenary roll calls, where Czechoslovakia and the United States voted in opposite directions (yes/no or no/yes).
a_i = value of Czechoslovak vote, (1 = yes, 2 = abstain, 3 = no).
b_i = value of relevant developing country vote.
$|a_i - b_i|$ = absolute (modular) difference between a_i and b_i.

The denominator (2n) normalizes values of the index between years and countries since it represents the maximum possible distance between two countries A and B on a set of n issues, given the vote values used. That is, the denominator gives the maximum possible value of the numerator so that the theoretical upper bound to the index is 1.000, representing diametrically opposed voting positions. Perfect agreement in voting behaviour would lead to a value of zero, the lower limit of the index. Absences from roll calls have been treated as missing data because the imputation of voting intention to a delegation in such circumstances would have been too subjective. Abstentions have been treated in the index by assuming that a delegation which abstains from voting occupies a policy position midway between those casting either affirmative or negative votes.

The basic voting data were compiled by Charles Wrigley, Inter-University Consortium for Political Science Research, Michigan, USA; and supplied on tape by the SSRC Survey Archive at the University of Essex. Unfortunately the available data terminated at 1974 and there was no voting in 1964 because of the dispute on financial contributions towards the U.N. peacekeeping forces in the Middle East and the Congo. Median values were used throughout the analysis for the sake of consistency with other variables and because of the properties of that measure of central tendency.

The inclusion solely of votes where the United States and Czechoslovakia voted in opposite directions (a voting distance of 2.000), irrespective of

the issue, was deliberate; to capture so far as possible an LDC's political affinity to either 'bloc'[1] in a situation of conflict. This was necessary to eliminate, as far as possible, vote-trading on non-contentious issues which would have distorted the relative political stance of an LDC to each bloc. It is also assumed that contentious issues include votes cast primarily as a result of government policy; it is less likely that delegations would have open instructions on voting in such cases. A value of 1.000 in Table 3.12 would thus show perfect concordance with voting by the United States, while 0.000 would show perfect identity of voting with Czechoslovakia. A value of 0.500 may indicate continuous abstention, perfect (in our sample) non-alignment between blocs, or a mixture of both; assuming a symmetrical distribution. Since the distribution was in fact highly skewed for most countries - index values generally declined from 1960 to 1974 - the median values shown are approximate summaries of each LDC's voting position for the period as a whole. Nevertheless, the values obtained seem to agree with expectations. Latin American countries, usually considered to be within the American sphere of influence, all have median values greater than 0.500; while Syria, with a value close to zero, reflects its close alignment to the Soviet bloc. The coefficients of variation (standard deviation divided by the mean) provide an indication of the consistency of voting patterns for the period.[2]

The index is limited however because it assumes that it is the LDC's which are voting with or against Czechoslovakia. In fact Czechoslovakia or the Soviet bloc would not always sponsor resolutions in the General Assembly, so that the index may sometimes be more a measure of Czechoslovak support

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[1] The index values for all the Comecon countries with minor exceptions were identical (zero or close to it); the Soviet and Czechoslovak index values did not differ. An alternative measure of political affinity may have been the number of diplomatic personnel exchanged, although such numbers often also reflect non-political interest. Unfortunately, efforts by the British Embassy in Prague were unsuccessful in eliciting the required information and there was no other ready source for such information.

[2] Median values of the Stokman index were strongly correlated ($r = -0.814$, $n = 41$, $t = -8.751$) with coefficients of variation. (Table 3.12).

TABLE 3.12 VALUES OF THE STOKMAN NORMALIZED VOTING DISTANCE INDEX BETWEEN CZECHOSLOVAKIA AND THE LDC's, 1960-74, IN CONFLICT SITUATIONS[1]

Country	Median value	Coefficient of variation	Country	Median value	Coefficient of variation
Argentina	0.669	0.369	Iraq	0.126	0.603
Bolivia	0.714	0.194	Jordan	0.286	0.380
Brazil	0.727	0.237	Kuwait	0.127	0.870
Chile	0.569	0.434	Lebanon	0.298	0.417
Colombia	0.677	0.288	Saudia Arabia	0.235	0.424
Ecuador	0.545	0.400	Syria	0.081	0.820
Mexico	0.578	0.328	Turkey	0.555	0.352
Peru	0.570	0.477	Algeria	0.074	0.970
Uruguay	0.711	0.178	Egypt	0.126	0.590
Venezuela	0.583	0.258	Libya	0.239	0.525
Afghanistan	0.225	0.440	Morocco	0.192	0.457
Burma	0.249	0.361	Sudan	0.165	0.707
Cambodia	0.323	0.768	Tunisia	0.332	0.403
Ceylon	0.251	0.494	Ethiopia	0.263	0.373
India	0.246	0.454	Ghana	0.298	0.493
Indonesia	0.213	0.492	Guinea	0.118	0.714
Malaysia	0.508	0.385	Kenya	0.184	0.861
Pakistan	0.261	0.657	Nigeria	0.220	0.435
Thailand	0.637	0.332	Sierra Leone	0.335	0.560
Cyprus	0.399	0.465	Zambia	0.082	1.000
Iran	0.474	0.341			

Source: United Nations Roll Call Data, Inter-University Consortium for Political Science Research, study number 5512. ICPSR, Box 1248, Ann Arbor, Michigan 48106, USA. The data were originally collected by Charles Wrigley of Michigan State University. Neither the original collector of the data nor the Consortium bear any responsibility for the analyses or interpretations presented here. A copy of the data was supplied by the SSRC Survey Archive, University of Essex, Wivenhoe Park, Colchester, U.K.

[1] See text for explanation of methodology and construction of index.

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for Third World positions rather than vice versa. In such cases the index is misleading because it may simply reflect a general Czechoslovak policy of voting in support of the Third World, without in fact being politically close to LDC's voting in the same direction. One remedy would have been to limit the sample of roll calls to resolutions sponsored by the Soviet bloc, but manual examination and calculation of almost 1500 votes for each country would have been too time-consuming.

There is no a priori way of determining which aspects of Czechoslovakia's economic relations with LDC's are associated with political affinity, but it seems reasonable to believe that the level of trade and its (bilateral) intensity and stability would be influenced by political factors. Wiles considered that the Soviet Union offered stable markets to countries " ... in a stable state of alliance or neutrality",[1] and it has been said of Czechoslovak (importing) fto's that for them:

> "Of great importance in the choice of supplying firms and countries is also the guarantee of dependability of the partner with whom it will be possible to establish business contacts ensuring steady deliveries over a long period of time, and where there is no danger of discrimination or even political interference with trade."[2]

And indeed, this appears to be borne out by low levels of trade with such countries as Ivory Coast, Paraguay or the Philippines; the latter two of which were relatively important developing country trading partners between 1918 and 1937. However no statistically significant relationship was found to exist between median levels of political affinity and stability indexes for imports or deltaim for the 41 LDC's shown in Table 3.12. Nor was there any apparent relationship between import levels or import intensity and the degree of stability in the 'political affinity' index, so that Wiles' 'stable state of alliance' does not appear to be an important determinant of bilateral trade flows either. (Section 3.6.3 did however, show that bilateral payments agreements may be a relevant factor.)

On the other hand, LDC's politically close to Czechoslovakia appear to have afforded Czechoslovakia greater shares of their import markets because deltaex was found to be strongly associated with the political affinity index ($r = -0.378$, $n = 41$, $t = -2.550$). Furthermore, the stability index for deltaex was found to be significantly correlated to both the index of

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1 Wiles (1968), p. 416.

2 *Facts*, 1962, pp. 53-54.

political affinity ($r = -0.355$, $n = 40$, $t = -2.341$) and to the coefficient of variation of the political affinity index ($r = 0.427$, $n = 40$, $t = 2.911$). It seems therefore that Czechoslovak market penetration in LDC's and the stability of these export markets may be highly dependent on the closeness of political relations. What is not clear though is why political ties do not also affect imports from LDC's; and whether political ties apparently favour Czechoslovak exports because of biases in determining bilateral trade flows on the part of Czechoslovak planners (who may want to ensure steady foreign exchange earnings - see sections 3.6.2 and 3.6.3) or because of import preferences of LDC's (for example because 'soft' currencies can be used - see section 3.9, where bilateralism is shown to be associated with deltaex).

Wiles has also suggested that it is the very dependence by the Soviet Union on allies for imports which sows the seeds of instability, because "as countries become, or cease to be, Soviet allies ... rather suddenly and rather often, this political motive is, in fact, an important destabilizer".[1] To test this proposition, 'political affinity' was correlated - separately for each of the 41 LDC's in Table 3.12 - with four variables: imports, exports, deltaim, and deltaex. To capture the effect, if any, of short-term changes in political relations on trade, lags of one and two years were also used in the political affinity index. No clear pattern emerged however, and results were invariably found to be contradictory. It was therefore not possible on the evidence available to either support or refute Wiles' implied hypothesis that political relations are important enough in the short-term to destabilize bilateral trade flows or to affect their levels.

It is nevertheless true that there have occasionally been large politically-inspired trade deals between LDC's and Soviet bloc countries, although most of them seem to have occurred in the late fifties and early sixties and may have given rise to an exaggerated mythology. Sekou Toure's

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[1] Wiles (1968), p. 416.

successful approach to the Soviet bloc for economic assistance after de Gaulle sabotaged French administrative services following Guinea's rejection of membership of the proposed franc zone; the purchase of surplus Burmese rice (1955) or Icelandic fish (1956); and so on, would have led to instability in trade flows but such considerations do not appear to have significantly affected Czechoslovak trade in the period 1960-75, mainly because of its far smaller absorptive capacity (compared with the Soviet Union) for sudden large unplanned imports or exports.

3.8 THE 'TERMS OF TRADE'

3.8.1 The Analytical Problems and Czechoslovak Policy

It requires stressing at the outset that the terms of trade cannot be determined even approximately without a great deal of research and a large number of simplifying assumptions about the homogeneity of the commodities involved, particularly so in the case of machinery. Even such apparently homogenous commodities as jute or cocoa beans are sufficiently heterogenous to result in substantial price differentials. For Czechoslovakia, such considerations are anyway all but irrelevant because trade data are limited only to the broadest of commodity classifications and actual prices paid are not published. Most Western observers have therefore been able to draw only very limited conclusions about the terms of trade of East European countries, and the present study is no exception to this.

Comparisons of unit values with world (market) prices are also fraught with pitfalls because of the often imprecise nature of the latter. Firstly, because annual world prices are usually unweighted averages of monthly or weekly prices they do not indicate how much trade is done at particular prices, and so are not particularly useful as measures of the central tendency of prices in a given year. Secondly, they are invariably quoted for specific markets and for specific commodities. For example, prices for rice may be given for 'white, 5-7% broken, government standard, f.o.b., Bangkok'. Comparing even unit values for Burmese or Cambodian rice imports into Czechoslovakia, with such a world price is a rather tenuous exercise, even though prices of rice in different markets are interrelated. A third problem arises in that significant proportions of world commodity trade are transacted under long-term agreements or forward exchange contracts and so are not reflected properly in daily or weekly or monthly prices. Finally, world prices are often ex-European ports, whereas unit values at LDC ports do not include the additional costs of transport to Europe.

Any conclusions arising from the examination of unit values in the present section must therefore be recognised as being extremely tentative.

Moskoff and Benz concluded that the Soviet Union charged well above average prices for its goods to socialist developing countries such as North Korea; roughly average prices to Western LDC's of minimal political importance (e.g. Cuba to 1959); and the lowest, below-average, prices to countries with a greater degree of non-alignment or vacillation in relations with the West.[1] A Spearman correlation test carried out on their results by the present writer showed that their conclusions were indeed statistically significant. Nevertheless, there are several reasons why they should not be accepted without reservations. Despite the professed care taken in constructing the index of political relationships,[2] some degree of arbitrariness was present in the classification procedure and this may have been sufficient to produce statistically significant results. The second and most obvious difficulty is the homogeneity of the export goods. The Soviet Union exported such commodities as sawn timber, asbestos, plywood, diesel fuel etc., in substantial quantities to LDC's. But even these goods can be substantially differentiated; not to speak of pig iron, steel pipe for gas lines and cement, which Moskoff also used. Most important, however, is the qualification that export prices are in themselves insufficient for drawing conclusions on politically motivated price discrimination. Moskoff and Benz do examine four import commodities in the later part of their article but the results are not strictly comparable with export prices, because the criterion used for the latter was prices charged below or above the average for LDC's as a whole. Yet for imports they compare prices paid to LDC's with prices paid by other Western countries. Because it is still possible that the LDC's which paid higher prices for Soviet goods also received

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1 Moskoff and Benz (1973), pp. 348-363.

2 *ibid.*, p. 351.

higher import prices in the Soviet Union, the only conclusion which can be drawn is with respect to export prices, and not the terms of trade in toto.

It is also not insignificant that the countries charged higher prices and politically close to the Soviet Union in the Moskoff and Benz study also tended to be those with bilateral payments relations with socialist countries. As Wiles[1] points out, in multilateral trade discriminatory export prices could very well mean exploitation because the USSR would not be obliged to import from the country discriminated against. But in a bilateral payments relationship, this would merely increase the level of bilateral balances, usable only in the partner country. In such a situation the Soviet Union would be more willing to accept higher import prices to run down balances and the partner countries would be tempted to charge them, to pay off their debts. This actually occurred in the Czechoslovak case, and was one of the reasons given[2] for the Czechoslovak reversion to multilateralism in trade with LDC's from the late sixties onwards. Given the use of bilateralism by socialist countries,findings such as those of Moskoff and Benz cannot prove discrimination or its absence without corresponding import price data. That is, the terms of trade cannot be inferred from the denominator or the numerator alone; the quotient is inseparable in this sense. For similar reasons to those just outlined in the context of Moskoff's work, no reliable terms of trade can be found for Czechoslovak/LDC relations either.

The Czechoslovak stated preference for trade at world prices was referred to in section 1.4.5 above. Brozik (1965) moreover categorically rejected suggestions that because the long-term movement in the terms of trade was against the developing countries (the Prebisch hypothesis), the socialist countries should abandon world prices, and pay above average prices to the LDC's while accepting lower than average export prices, as a form of aid. Calling such thinking "economic romanticism", he pointed

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1 Wiles (1968), pp. 227-229, 238. See also his 4000 zloty dog, two 2000 zloty cats anecdote, p. 210.

2 T. Dubrovay, 'Vyvoj clearingoveho platobneho styku CSSR', *FU*, no. 6, 1974, pp. 404-408 (also section 3.9).

out that Czechoslovakia - unlike the Soviet Union which paid Cuba higher than market prices for sugar - was economically incapable of doing so without danger of collapse, and hence endangering its main international duty: that of ensuring the victory of socialism over capitalism in economic competition.[1]

This policy of trading as far as possible at world prices appears to have received even higher priority than continuing efforts by Czechoslovak fto's to eliminate intermediaries in trade (an effort itself influenced by the desire to obtain lower prices):

> "Only last year there was a slight decline [in the growth of imports] which was caused by the fact that the purchase of certain raw materials was not effected directly in the African producer countries, but through third states. A typical example of this is Zambian copper, which is quoted and sold through London, or Ghanaian cocoa, which may sometimes be bought 10 percent cheaper in Great Britain than in Accra. Czechoslovakia is striving to effect direct purchases in the producer countries, but it is up to them to set up capable export organizations and prevent foreign firms from marketing their products and obtaining undue profits".[2]

Even during the period of apparently 'political' buying of Ghanaian cocoa (until Nkrumah's fall in February 1966), the evidence of Table 3.13a suggests that unit values paid by Czechoslovakia did not differ substantially from world prices. Of the ten years of data available for comparisons, in only three of them did Czechoslovakia pay higher 'prices' for Ghanaian cocoa than it might have done in London.

Before turning to the empirical analysis of import unit values, it is appropriate to mention Czechoslovak export prices. Lack of product homogeneity, and of data, precluded the presentation of reliable unit values of broad categories of machinery and manufactured goods. It is strongly submitted that this is preferable to drawing false or misleading conclusions from what analysis would have been possible. Nevertheless, the work of

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[1] Brozik (1965), p. 5.

[2] Zeman (1972), pp. 12-13.

others suggests that machinery from the socialist countries is sold in India at prices corresponding roughly to those on world markets, after allowance is made for lower quality.[1] Hanson,[2] on the other hand, recounts an anecdote concerning Ghana which suggests the opposite, but a full examination of all prices in bilateral trade in either case would be necessary before drawing firm conclusions about the terms of trade.

3.8.2 Some Empirical Results

Tables 3.13a to 3.13g present world market prices, and calculated unit values for Czechoslovak imports, for seven reasonably homogenous commodities. For cocoa beans (Table 3.13a) average monthly world prices were available showing minimum and maximum values.[3] In only nine cases (five of them with Ghana) were Czechoslovak unit import values below average prices as given by the FAO. Over the period as a whole, Britain, from being a major co-supplier with Brazil, (not shown), became the dominant supplier, despite the fact that hard currency payments were necessary. Ghana's initial rise and subsequent sudden decline as a source of cocoa beans was almost certainly a politically-inspired phenomenon; but the reason why it never 'recaptured' the Czechoslovak market in later years was probably the uncompetitive (in price) nature of the Accra market compared with London (section 3.8.1). Czechoslovak buying from Britain, on the other hand, appears to have regularly been at unit values close to, or below prices ruling in northern European ports (Table 3.13a). Purchases from the Netherlands however were more often well above world prices. Unit values for coffee are difficult to assess - no 'world price' was readily available f.o.b. Bogota or Bombay - with values

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1 Nayyar (1975), pp. 293-294, briefly reviews several such studies.

2 Hanson (1971), p. 69, footnote 17.

3 It is not clear how these are derived, so it is difficult to explain, for the seventies, the higher prices in northern Europe than maximum 'world' prices. The differences are too great to ascribe to c.i.f. charges alone.

for imports from Kenya and Brazil fluctuating around their average 'world prices'. Non-quota buying, if it occurred, may have been one of the reasons why unit values were occasionally below world prices for coffee.[1]

The striking feature about unit values paid for (unspecified type) tea is that they were so high for all four countries, compared with Indian f.o.b. export prices for black tea (Table 3.13c). Even India received roughly double the 'world price' between 1973 and 1975. Several explanations are possible: under-reporting of volume, inappropriate conversion rates for the koruna, unsuccessful speculative buying, and high import prices as a method of running down unwanted bilateral balances. However the problem does not appear on the same scale for other commodities, so that these explanations may be discounted in favour of the simpler hypothesis that the 'world price' is inappropriate. 'Prices' paid for Pakistani jute varied relative to world prices but another study indicated that the socialist countries seemed to pay higher prices for raw jute (compared to world importers as a whole) but lower prices for sacking and hessian, although these results required qualification due to non-specification of the quality of the jute purchased.[2] Rice, rubber and cotton all indicate that Czechoslovakia did not pay unit values significantly in excess of, or below, relevant 'world prices'. A general impression from the small sample of unit import values presented is that they tended to move in identical directions for all countries and with the 'world price', for a given commodity.

One aspect which it would have been desirable to test is the degree of price sensitivity of Czechoslovak fto's. If an fto were price sensitive, then one would expect low import unit values relative to world prices to be

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[1] This was a factor in below average prices paid for Tanzanian Robusta by the socialist countries. M. Bienefeld, 'Special gains from trade with the socialist countries: the case of Tanzania', *WD*, May 1975, pp. 265-266.

[2] A. Khan, 'Bangladesh's trade and economic relations with the socialist countries', *WD*, May 1975, pp. 331-332. Datar (1972), pp. 142-7, suggests that Indian hessian and sacking makers were willing to accept lower prices because of underused capacity and the competition of alternative textile products.

associated with higher import shares (for a particular commodity) to be allocated to the country where the 'bargain' price was available. However the only 'world prices' available (Tables 3.13) were all ex post unweighted annual averages and their comparison with annual import unit values - themselves not necessarily an accurate indication of the actual price paid - would have been highly misleading.[1]

Because annual trade agreements and protocols are normally signed in the year before trade actually occurs, it might be expected that unit values in year t should bear some relationship to average world prices in year (t - 1) when negotiations were instigated. The null hypothesis - that unit values in the current year were unrelated to the previous years' average world price - was rejected at the 5% level (one-tailed test) for Kenyan coffee ($r = 0.617$, $n = 6$), Malaysian rubber ($r = 0.568$, $n = 14$), and Egyptian cotton ($r = 0.917$, $n = 9$). Brazilian coffee ($r = 0.800$, $n = 6$) and Pakistani jute ($r = 0.812$, $n = 6$) showed high degrees of correlation, but fell short of the critical Spearman level of rejection. There might therefore be grounds for claiming tnat in the limited sample used, the previous years' world market prices do influence, in any current year, unit values paid for certain commodities. It should be noted that the test does *not* show unit values and world prices to be identical or even approximately similar; but they are functionally related. That is, there is a direct relationship between them but not an exact coincidence.

It can therefore be concluded - and only very tentatively - that the Czechoslovak unit import value of a relatively homogenous commodity in any year $m_c y$ be related to the average level of the previous years' world price for that commodity. No empirical evidence was found for the proposition that fto's might be price sensitive primarily because tests of this proposition are virtually invalid.

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[1] The statistical relationships between the market share of a commodity for a particular country, and the ratio of the unit value (paid to that country) to the corresponding annual average 'world price', were generally insignificant anyway.

APPENDIX: TABLE 3.13. Average annual world market prices, and Czechoslovak unit import values and market shares, for selected commodities, 1960-75

Sources: (1) Czechoslovak unit import values and market shares: *Facts on Czechoslovak Foreign Trade* and *Statisticka Rocenka*, various years. Koruny converted to U.S. dollars using UN *Yearbook of International Trade Statistics.* Unit values in cents/kilogram unless otherwise stated.

(2) World prices: FAO *Production Yearbook*, various years, except where indicated otherwise. Cents/kilogram used except in Table 3.13a.

TABLE 3.13a. IMPORTS OF COCOA BEANS[3]

	world prices[1] (cents/lb.)			world prices[2] (cents/lb.)		U.K.		Netherlands		Ghana	
	min.	max.	aver.	(1)	(2)	mkt. share	unit value	mkt share	unit value	mkt. share	unit value
1960	23.76	28.76	26.72	..	27.4	24	27.89	..	..	..	..
1961	19.75	25.52	22.00	..	21.9	15	22.42	..	..	13	21.57
1962	19.80	22.43	20.81	..	20.6	23	21.09	..	..	33	23.23
1963	22.64	27.56	25.05	..	25.3	11	28.12	..	..	65	23.68
1964	21.62	25.17	22.85	..	23.1	3	23.68	..	..	83	24.28
1965	11.75	21.32	16.57	13.5	17.2	1	18.87	..	..	91	18.43
1966	21.40	25.99	23.48	20.2	23.9	1	26.15	..	..	94	18.67
1967	26.56	29.35	27.13	24.3	28.7	43	28.29	9	35.86	46	26.14
1968	27.82	46.48	32.70	28.8	33.7	34	32.04	10	40.60	51	28.75
1969	38.61	42.54	40.97	..	43.8	49	45.92	18	52.57	26	41.65
1970	26.68	33.86	30.57	..	32.2	38	35.93	19	37.77	21	..
1971	21.79	27.23	24.43	..	25.2	47	28.52	15	28.44	..	..
1972	24.26	33.37	29.15	..	30.6	57	29.19	18	28.85	..	..
1973	32.47	70.30	51.29	..	65.1	61	45.21	9	58.76	..	..
1974	50.91	82.74	70.77	..	105.1	81	67.61	8	86.77	..	..
1975	44.91	67.86	56.51	..	72.8	53	71.93	13	86.14	5	73.46

1. *Source: Quarterly Bulletin of Cocoa Statistics*, no. 3, 1978, Table 20; no. 3, 1976, Table 20. FAO prices are those "defined in article 28 of the International Cocoa Agreement".

2. *Source:* FAO *Production Yearbook*. (1) Ghana export prices (fob), September-August. (2) Good fermented Ghana landed at northern European ports (cif).

3 All unit values in cents/lb., Tonnes converted to pounds at 1 tonne = 2204.6 pounds.

TABLE 3.13b. IMPORTS OF COFFEE

	World prices[1]				Brazil		Colombia		India		Kenya	
	(1)	(2)	(3)	(4)	mkt share	unit value	mkt share	unit value	mkt share	unit value	mkt share	unit value
1961	150	83	83	..	53	..	20	94.17	..	..	..	..
1962	141	79	83	..	18	.	17	94.22	..	..	..	..
1963	106	77	81	..	32	..	16	102.12	..	..	..	..
1964	109	103	107	..	54	..	3	89.94	..	..	..	..
1965	112	97	102	..	52	..	15	101.42	7	..	..	..
1966	108	91	94	..	60	85.04	11	104.31	7	95.56	7	96.99
1967	106	81	91.0	..	62	81.79	13	90.11	8	86.93	7	83.79
1968	96	83	90.0	..	55	80.28	16	89.07	11	90.12	7	..
1969	89	84	94.6	71.6	61	83.35	14	85.75	16	91.75	3	86.94
1970	105	112	126.4	55.9	67	111.15	10	176.49	9	124.46	3	119.90
1971	118	94	101.7	74.8	65	71.97	5	104.83	15	100.85	3	99.91
1972	112.1	105.7	119.5	93.5	57	97.25	9	112.01	17	113.02	5	106.70
1973	133.0	135.4	146.8	116.6	49	137.09	13	159.24	16	155.90	10	135.93
1974	139.1	142.2	156.6	130.7	52	143.52	5	165.16	12	208.90	7	162.69
1975	139.8	135.7	154.8	134.2	59	126.39	6	148.56	7	138.35	2	139.24

1. World prices:

(1) Kenya export price f.o.b. Mombassa
(2) El Salvador export price f.o.b.
(3) Brazilian Santos, N.Y., no. 2, c.i.f. north German ports
(4) Brazilian export price f.o.b. and wholesale prices.

TABLE 3.13c. IMPORTS OF TEA

	World price[1]	China		Vietnam		USSR		India	
		mkt share	unit value	mkt share	unit value	mkt share	unit value	mkt share	unit value
1966	113	8	..	9	..	38	..	41	135.1
1967	118	37	..	3	..	43	..	14	130.5
1968	104	22	..	21	..	42	..	13	..
1969	96	30	..	13	..	45	..	6	..
1970	100	18	148.3	7	123.0	45	160.0	26	101.7
1971	101	11	87.8	8	123.1	13	381.4	60	113.5
1972	98	0	..	11	141.8	30	238.1	54	120.3
1973	97	8	162.0	3	158.7	8	461.4	22	209.1
1974	123	8	161.2	11	156.9	29	248.3	19	258.9
1975	133	12	162.1	8	165.0	23	209.5	34	211.0

1. World Price: export price f.o.b. Indian black tea.

TABLE 3.13d.

IMPORTS OF JUTE

	World price[1]	Pakistan[2]	
		mkt share	unit value
1964	32.7	50	27.3
1965	32.0	57	28.5
1966	34.7	73	29.5
1967	29.6	53	31.1
1968	31.3	75	25.3
1969	29.6	73	29.0
1970	28.7	75	25.2
1971	..	77	26.9
1972	28.3	43	31.2
1973	29.2	85	34.2
1974	42.1	69	28.9
1975	33.7	64	38.4

1. World price: Pakistan (later Bangladesh) export price f.o.b.
2. Bangladesh from 1972. For 1964 and 1965, values are given in the source for "textile and raw materials products".

TABLE 3.13e. IMPORTS OF RICE[2]

	World Price [1]	Burma		Egypt		Cambodia		China	
		mkt share	unit value	mkt share	unit value	mkt share	unit value	mkt share	unit value
1960	12.5	3	5.8	1	..	24	10.3	..	..
1961	13.7	34	9.1	8	..	5	12.9	..	..
1962	15.3	27	10.1	10	11.0	21	15.2	..	..
1963	14.4	20	11.2	31	12.6	44	13.2	..	..
1964	13.7	42	9.7	33	14.2	27	12.4	..	..
1965	13.7	25	9.7	23	14.2	7	13.3	..	..
1966	16.6	16	12.0	25	15.8	15	15.4	..	..
1967	22.2	..	..	28	19.0	25	19.2	3	..
1968	20.3	..	..	49	21.2	7	18.8	12	15.3
1969	18.7	..	..	47	20.4	3	15.6	14	15.2
1970	14.3	..	..	39	16.3	30	12.3	19	15.2
1971	12.9	..	..	49	..	1	..	35	..
1972	19.3	..	..	49	..	0	..	43	11.8
1973	27.4	..	..	29	35.1	0	..	64	16.9
1974	52.7	..	..	24	125.4	..	..	53	55.6
1975	37.4	..	..	20	61.4	..	..	61	52.6

1. World price: Thailand, white, 5-7% broken, government standard, f.o.b., Bangkok.

2. Source gives values for 1960-66 as 'cereals (including groats yielding)', but seems to refer primarily to rice.

TABLE 3.13f. IMPORTS OF RAW RUBBER

	World price[1]		Malaysia		Indonesia		Ceylon		Thailand	
	(1)	(2)	mkt share	unit value	mkt share	unit value	mkt share	unit value	mkt share	unit value
1960	75.6	60.0	55	..	13	72.7	3	67.7	..	..
1961	58.9	44.7	45	..	11	97.7	8	56.3	..	..
1962	54.6	41.0	37	55.6	30	53.3	11	57.3	..	..
1963	50.8	37.9	53	52.3	25	50.1	6	45.2	..	..
1964	48.4	36.3	39	56.9	28	46.6	9	47.4	..	..
1965	49.4	38.1	37	51.3	30	45.7	9	40.9	..	..
1966	46.0	36.0	41	48.3	23	45.0	7	45.2	..	..
1967	37.0	28.9	58	41.2	21	36.3	7	33.5	..	..
1968	36.9	30.7	47	36.8	13	30.7	9	27.7	..	..
1969	49.4	38.9	48	49.4	12	45.4	10	42.8	..	..
1970	39.0	32.1	51	44.6	8	43.4	2	38.6	12	44.2
1971	30.4	26.4	38	35.9	10	28.4	6	44.7	13	34.4
1972	31.5	28.6	46	33.1	18	28.1	10	30.5	8	27.3
1973	64.7	58.5	59	60.0	13	52.3	9	71.4	7	53.8
1974	68.0	70.1	55	82.1	21	80.0	6	103.9	4	85.7
1975	54.3	83.8	59	55.1	26	49.6	5	56.0	3	41.7

1. World price: (1) baled, no. 3, R.S.S., Singapore, f.o.b.
(2) Thailand, wholesale price Bangkok

TABLE 3.13g. IMPORTS OF COTTON

	World price[1]			USSR		Egypt		Iran		Syria	
	(1)	(2)	(3)	mkt share	unit value	mkt share	unit value	mkt share	unit value	mkt share	unit value
1966	40	89	..	54	..	32	94.6	5	57.6	..	..
1967	46	95	..	53	78.2	23	94.1	6	59.2	3	48.1
1968	51.4	111	..	64	77.9	14	118.9	7	67.5	1	64.4
1969	53.6	112	58.2	57	77.8	17	130.3	10	60.5	4	55.4
1970	57.0	107	52.8	64	77.2	15	136.6	7	53.1	6	55.4
1971	..	110	61.1	57	79.0	20	135.0	9	61.3	4	62.4
1972	74.7	128	74.2	56	84.4	20	153.4	6	36.5	6	91.7
1973	75.6	303	98.4	58	96.5	16	227.4	8	98.2	8	115.1
1974	93.5	271	..	61	95.0	16	452.5	2	165.2	9	185.9
1975	83.9	..	..	56	134.1	21	276.4	5	91.9	10	106.4

1. World price: (1) India, wholesale price Bombay (1968-71 Bengal Deshi export price).
(2) Egyptian Menoufi, wholesale price, Alexandria.
(3) Syria (f.o.b.?)

3.9 PAYMENTS RELATIONS

3.9.1 The Switch from Bilateralism to Convertible Currencies

Czechoslovak bilateral payments arrangements invariably coexist with trade agreements of equal duration. Where no payments agreement exists, trade and payments are normally conducted in convertible currency. Commodity trade forms only one part of the payments covered by a clearing agreement. Transport and freight costs are included where ships of the flag of the two trading partners are used, as are port charges. (Bunkerage is included in the Czechoslovak commodity trade statistics: Table 1.15). Other payments normally included are expenses connected with fairs and exhibitions, maintenance of diplomatic missions, patents, licences, trade marks etc. Specific agreements with individual countries may differ in their particulars, but general provisions are fairly uniform. The determination of financial flows ex ante to ensure at least rough reciprocity therefore means that commodity trade levels are probably influenced by such things as the level of debt repayment and transport costs. Unfortunately there are insufficient data available to examine such relationships closely.

Although the currency of one of the parties may be used exclusively, United States dollars, and sometimes pounds sterling, have been the accounting units preferred.[1] The reason for this initial choice of the dollar was almost certainly for protection against devaluation. (World currency instability in the seventies and consequently the difficulty of protecting agreements against devaluation may also be an important reason[2] for the decline in the use of bilateral arrangements described below.) Several countries have also provided for limited bilateralism. Pakistan and Singapore apparently had such an arrangement for certain (unspecified) payments, according to information received from Barclays Bank. In the late

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[1] Dubrovay (1974a.), p. 801

[2] Dubrovay (1974b.), p. 404.

fifties, the Indo-Czechoslovak agreements, which provided the options of using generally inconvertible rupees for payments, allowed their transfer to third countries subject to agreement between all three parties.[1] The general discouragement by the LDC's of re-exports or of switch trading however meant that where such extraordinary exceptions were not made,the bilateralism was of a fairly orthodox kind. Administration of clearing accounts rests ultimately with the Central Bank (or a bank delegated by it) of each country and drawings in excess of limits are usually covered by temporary swing (or 'technical') credits. Swing credits lead to greater fluidity in trade by avoiding sudden disruptions due to the temporary inability of either partner to balance bilateral trade flows. Where long-term credits are granted (e.g. for the export of Czechoslovak machinery), currency inconvertibility effectively ties purchases to the creditor country. By the same token, repayments can only be made in the goods of the debtor country, so that inconvertible long-term credits are in effect credits of commodities. (In the early seventies priority was given to credits which created positive financial balances which were to be reraid by exports of oil.[2]) Such credits may be granted on either an inter-governmental level, or by the foreign trade organizations concerned, but have in the past been divided approximately equally between the government and fto's; and 95% of all credits granted to capitalist countries by Czechoslovakia have gone to developing countries.[3]

According to Filip the proportion of trade with LDC's carried out under clearing arrangements was 48.5% in 1960, 57.8% in 1965 and 58.3% in 1970, falling from then on until 1974 (with the exception of 1972) but never below 50.1%.[4] Table 3.14 shows that in the second half of the sixties all the

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1 'Indo-Czechoslovak trade agreement', *JIT*, November 1957, p. 2028.

2 V. Brozik, 'Zahranicni uverove vztahy v cs. platebni bilanci', *FU*, no. 2, 1972, p. 95.

3 *ibid.*, pp. 93-94.

4 From data presented by J. Filip 'Czechoslovak trade relations with less developed countries', *SH*, no. 69, 10 June 1975, p. 3. (Translation supplied by a Western embassy in Prague).

Latin American LDC's terminated bilateral payments arrangements with Czechoslovakia, as did Ghana in 1969. Whereas in 1960 India and Egypt accounted for only about one third of 'bilateral payments' trade with LDC's, their share had increased to over half by 1965 and reached levels of about two-thirds in some years thereafter. This proportion has probably increased further since 1975 because increasing numbers of developing countries have preferred to trade in convertible currencies.

From the late sixties onwards there was a trend towards greater flexibility in the method of payments employed in bilateral trade between socialist and developing countries. The major manifestation of this has been a move towards multilateral settlement of trade balances rather than by the balancing of bilateral accounts.[1] Clearing agreements themselves have become generally more flexible, particularly in the regulation of swing credits. Maximum amounts have been increased, imbalances have been allowed for longer periods, and wider use of convertible currencies has been made in settling balances; but there has been no clear-cut tendency because some agreements have gone the other way.[2] It has more recently (1979) been observed that the abandonment of clearing payments systems has not however led to the abandonment of the principle of balancing exports and imports in the short and medium term, and a system of 'multilateral balancing of trade' has begun to develop.[3] In October 1976, IBEC began offering clearing facilities (in transferable roubles) to non-members trading with Comecon countries. [4] (This was a separate development from the granting of

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1 UNCTAD, *Review of the Present State of Payments Between Developing Countries and Socialist Countries of Eastern Europe*, TD/B/AC.22/2, 4 October 1977; reprinted in UNCTAD, *Multilateralization of Payments in Trade Between Socialist Countries of Eastern Europe and the Developing Countries. Selected documents*, TD/B/703, 1978, pp. 11-20.

2 UNCTAD, *Summary of Replies Received from Governments to the Questionnaire Addressed to them by the Secretary-General of UNCTAD*, TD/B/AC.22/3, 4 October 1977, (reprinted in TD/B/703), p. 22.

3 UNCTAD, *Trade Relations Among Countries Having Different Economic and Social Systems and All Trade Flows Resulting Therefrom*, TD/B/754, 30 August 1979, p. 15.

4 *Annual Register 1976*, Longmans, London, 1977 (article by M. Kaser), p. 349.

transferable-rouble credit to developing countries from 1972). The extent to which use has been made of this facility is, however, unclear.

In the Czechoslovak case,[1] the reversion to multilateral forms of trade appears to have been primarily due to perceived disadvantages to Czechoslovakia.[2] After the Second World War and in the early fifties, trade with LDC's was often conducted in convertible currencies, particularly in United States dollars. The adoption of bilateralism during the fifties, especially after 1953,[3] seems to have been mutually advantageous to both Czechoslovakia and to these countries.[4] On the one hand, Czechoslovakia required raw materials and foodstuffs, but lacked substantial hard currency reserves. On the other, the LDC's, which themselves often lacked the financial resources necessary for the import of required machinery, were able to obtain such goods on credit on advantageous terms, as well as diversifying their import sources. Such terms may initially have been offered for ideological or political reasons, but by the later fifties, credit had become indispensible to the successful sale of Czechoslovak machinery on Western markets.[5] (In 1964 for example, 32% of machinery exports to the developing countries were sold on credit of more than one year's duration.[6])

The growing trend to multilateral forms of trade with the LDC's from the late sixties onwards was due to several factors. In the first place it had been recognized at an early stage that bilateralism limited the extent

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1 There is some evidence that Czechoslovakia and the Soviet Union, within Eastern Europe, experienced the lowest decline in the proportion of trade with LDC's conducted under clearing agreements between 1965 and 1975. UNCTAD (1977a.), TD/B/AC.22/2, p. 15, Table 1.

2 In the case of Uruguay at least, the payments agreement was terminated at Czechoslovak instigation. Report of a Press Conference, given by I. Peter, deputy Minister for Foreign Trade, 'Uspesna cesta ceskoslovenske mise po Latinske Americe', *NZO*, no. 12, 1970, p. 1.

3 S. Jiranek, 'Malo vyvinute zeme a platebni styk s nimi', *FU*, no. 1, 1954, p. 33.

4 This section relies heavily on Dubrovay (1974b.) pp. 404-408.

5 Brozik (1972), p. 92.

6 Wacker (1968), p. 206.

of trade relations.[1] Possibly the most important perceived disadvantage of bilateralism however, was that it often led to a deterioration in the bilateral terms of trade with individual countries with which there was a trade surplus. Because credit balances on clearing account could not be used elsewhere, debtor countries apparently resorted to asking prices in excess of those on world markets for products exported to Czechoslovakia,[2] to help run down balances. It is possible that this was a prime factor in the termination of bilateral relations with Ghana in 1969: section 3.8.1. A further factor was that general world inflation led to the depreciation of outstanding credit balances,[3] a problem further compounded by the low rate of return obtained under the 'soft' credits granted. The problem of credit was not limited to bilateral payments however. Zeman pointed out that for exports to countries with payments problems (such as Ghana), grace periods of 180 days for hard currency payments were standard. This limited the attractiveness of exporting to such countries, and trade consequently stagnated.[4] Fourthly, LDC's often placed quotas on exports to Czechoslovakia of raw materials and foodstuffs which were in strong demand on world hard currency markets. (It is this development which leads one to suspect that the LDC's would have been equally happy to terminate bilateral payments in many cases). Faced with the choice of buying less desirable goods from them or of limiting its own exports, Czechoslovakia preferred multilateralization. Finally, it was felt that generally lower technical requirements in the 'clearing'

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1 e.g. anon. 'Trileta obchodni a platebni dohoda cs.-argentinska', *ZO*, no. 2, 1955, p. 45; Jiranek (1954a.), pp. 378-381; Kohout (1965a.), p. 2.

2 Dubrovay (1974b.), pp. 404, 406.

3 Dubrovay (1974b.), p. 406; and Filip (1975), p. 3, who says that in practice bilateral balances "... are exposed to strong price risks as a result of rising prices of the imported goods compared with prices during the time of their origin.".

4 Zeman (1971), p. 2. Quoted in section 3.5.1.

TABLE 3.14 BILATERAL PAYMENTS AGREEMENTS WITH DEVELOPING COUNTRIES, 1960-1975[1]

Country	Agreement Signed	Agreement Terminated	Country	Agreement Signed	Agreement Terminated
Afghanistan	13 Oct 58	NT	Indonesia	9 May 58	18 May 64
Algeria	19 Dec 63	1 Aug 75	Iran[5]	2 Aug 57	NT
Bangladesh	15 Dec 72	NT	Lebanon[7]	11 Jan 57	NT
Brazil	24 Jun 60	22 Jan 67	Mali	28 Feb 61	31 Dec 74
Cambodia[2]	6 Oct 56	-	Morocco	22 Dec 59	1 Jul 74
Ceylon[6]	14 Dec 57	1 Jan 75	Pakistan[4]	May 64	NT
Colombia	May 59	1967	Singapore[4]	n/a	-
Cyprus	Feb 62	NT	Sudan	12 May 62	1 Jan 75
Ecuador[3]	1966	-	Syria	7 Feb 59	NT
Egypt	7 Feb 59	NT	Tunisia	14 Oct 59	NT
Ghana	16 Oct 61	1969	Turkey	9 Jul 49	1 Nov 75
Guinea	3 Jul 59	NT	Uruguay	12 Sep 55	1 Nov 69
India[8]	Jan 61	NT			

Sources: Information supplied by *Barclay's Bank* Economic Intelligence Department; *Facts,* 1962-1975; T. Cebisova, 'Ceskoslovenske obchodni smlouvy a dohody', *ZO,* no. 1, 1960, pp. 24-30.

1. Dates of signature prior to 1960 may not refer to the first agreement signed. For example, Indonesia signed an agreement (conducted via a sterling account) in October 1951. Lack of reliable and continuous information for the period 1948-1960 therefore limited the information here to dates close to 1960. NT = Not Terminated by end of 1975.

2. The state of the agreement is unknown. It is mentioned in *Facts,* 1973, p. 179, but not thereafter.

3. Probably never implemented. Not mentioned in *Facts,* 1967, or thereafter.

4. Bilateral relations for certain payments only. An agreement with Singapore existed in June 1978, but earlier information unavailable, according to Barclay's Bank.

5. implemented 1 Jan 58.

6. valid from 14 Jun 58.

7. valid from 1 Mar 58.

8. Trade conducted in rupees since November 1953, with formal settlement in sterling to December 1960. Datar (1972), p. 41.

developing countries had a deleterious effect on innovation and technical progress by Czechoslovak exporters: multilateral relations were a means of forcing them to become more competitive with Western producers.

It is an open question whether similar problems have also been perceived regarding payments relations with India and Egypt although these are probably maintained because of a certain degree of automatism or inertia:

> "With some countries, particularly Egypt and India, it is reckoned that these forms of payments relations will be maintained. The economic and commercial ties with both these states are so extensive and so habituated to the clearing system of payments, that insensitive interference with them by a change in the payments system could seriously harm them".[1]

Should India at least be able to continue exporting to Czechoslovakia without diverting goods from hard currency markets,[2] there seems to be little reason for a change in the system of payments, especially if specialization through industrial cooperation increases significantly. For Egypt, it has been argued,[3] a major attraction of bilateral relations is the aid element involved in the granting of concessional credits by the socialist countries. But Czechoslovakia also seems to have explored other possibilities for overcoming - for itself - the disadvantages of bilateralism experienced by a creditor country:

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1 Dubrovay (1974b.), p. 407.

2 Nayyar (1975), p. 2, concludes that with the exception of oilcakes and to some extent leather, tea, coffee and pepper, India did not need to do so in trade with the socialist countries as a whole. S. Chishti, *Payments Arrangements in India's Trade with the Socialist Countries of Eastern Europe*, UNCTAD document, TD/B/AC.22/4 (reprinted in TD/B/703), p. 44, states that diversion did not take place to 1975, except perhaps to a marginal extent in 1967-69. Datar (1972), p. 156, found, on the other hand, that diversion from hard currency areas *had* occurred to the extent of about 21% of total Indian exports to Eastern Europe in 1965/66; with the cost to India being further compounded by East European re-exports to hard currency areas.

3 Mabro (1975), pp. 299-313.

> "The further expansion of our trade with Egypt is often hampered by the limited variety of goods we can or are willing to import from that country within the framework of the clearing agreement. The favourable trade balance we sometimes have with Egypt must be offset by new trade ventures. The purpose of the visit to Prague by the top executives of the Egyptian firm Arab Constructor Osman Ahmed Osman and Co., who came at the invitation of Strojexport, was to explore the possibility of the firm's participation in construction operations in Czechoslovakia ... What is involved is the construction of hotels, recreation centres, schools, hospitals and administration buildings in the Prague and Bratislava districts."[1]

It is not known to what extent such ventures developed but they were obviously aimed not only at decreasing bilateral surpluses, but also for the simulataneous elimination of bottlenecks in the Czechoslovak construction industry: Swedish firms were also used for similar purposes.

3.9.2 The Hard-Currency Balance of Trade

Most countries officially publish only very general details of their balance of payments but Czechoslovakia publishes only commodity trade statistics and these therefore provide the only indication of what the balance of payments might be. Table 3.15 presents three separate estimates, over the period 1960-1975, of the hard-currency balance of trade with the LDC's. Little substantive comment can be added to the figures shown because there is no way of gauging their accuracy. It is obvious however, that despite disparities in the estimates, the balance was generally positive. The growth of the balance from 1968 reflects in part the switch from bilateral to multilateral forms of trade, but was also inflated in the seventies by rising world prices. The fact that oil was not a major raw material import from the LDC's allowed the balance to increase in 1974 and 1975. Clearing account balances were also generally positive but became suddenly negative in 1973 and 1974, primarily because of negative balances in those years with India and Egypt.

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[1] B. Homola, 'New opportunities for Czechoslovak-Egyptian cooperation', *Prace*, 23 December 1972. (Translated in *Radio Free Europe Research*, Czechoslovak Press Survey, no. 2469 (1), p. 4).

TABLE 3.15 THE HARD-CURRENCY BALANCE OF TRADE WITH DEVELOPING COUNTRIES[a]

(millions of units shown)

Balance	Source	Unit	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Asia	(1)	Kcs	-45	6	17	-47	-16	137	54	75	193	570	310	527	277	280	224	478
Africa	(1)	Kcs	23	42	22	63	9	-33	9	51	64	55	127	171	168	155	198	518
America	(1)	Kcs	19	21	-79	-27	13	-22	-2	-41	-5	-44	-199	-132	-106	-345	-245	-233
Total	(1)	Kcs	-3	69	12	-11	6	82	61	85	252	581	238	566	339	9	277	763
Total	(2)	Kcs	428.0	..	..	..	..	374.5	..	..	..	..	272.7	836.1	583.6	350.6	1018.3	..
Total	(1)	$	-0.4	9.6	1.7	-1.5	0.8	11.4	8.5	11.8	35.0	80.7	33.1	78.6	51.1	14.9	47.3	136.9
Total	(3)	$	-13.9	1.5	2.7	-4.0	0.1	4.5	7.7	8.6	32.7	16.5	-1.8	34.8	..	(58)	(80)	(182)
Total	(2)	$	59.4	..	..	..	..	52.0	..	..	..	..	37.9	116.1	88.0	60.0	174.3	..
Prop. of total LDC bal. trade[b]	(1)	%	..	36.3	3.1	..	1.6	20.9	11.2	19.8	37.4	65.8	28.6	45.7	37.0	2.8	82.0	63.6

Sources: (1) Data Bank and Table 1 (giving bilateral payments relations). Total is for the three regions shown.

(2) J. Filip, 'Czechoslovak trade relations with Less Developed Countries', *Svet Hospodarstvi*, no. 69,10 June 1975, p.3. Translation supplied by a Western embassy in Prague. Method of calculation not revealed but the (translated) heading to the table is: "CSSR foreign trade with the Less Developed Countries from the viewpoint of the payment system (in millions of foreign exchange Kcs"). There is nothing in the text to suggest that the heading refers to anything more than the commodity trade balance.

(3) Joint Economic Committee, U.S. Congress, *Reorientation and Commercial Relations of the Economies of Eastern Europe*, 16 August 1974, p. 698, Table 2. Method of calculation not revealed, but apparently includes arms sales. Figures for 1973-75 taken from J. Zoeter, 'Eastern Europe: the growing hard currency debt', in J.E.C., U.S. Congress, *East European Economies Post-Helsinki*, p. 1361, Table A1. Both sources give the balance of trade, not the balance of payments.

a Conversion to $U.S. by conversion factors given in U.N. *Yearbook of International Trade Statistics*, 1975, p. 307.

b Proportion of hard-currency balance to total LDC balance of trade. The total balance of trade (hard and soft) was always positive in the period 1960-1975 so that years for which the hard currency balance was negative were excluded.

Estimates in Table 3.15 of regional hard-currency commodity trade balances highlight the fact that for post-War Czechoslovakia, Latin America has remained more a source of raw materials than an export market, despite the potential for earning hard currency on such markets. Czechoslovak exporters were at some disadvantage because of North American competition and geographic distance, but the failure to expand exports to the region is also a direct result of the system of planning and the lack of flexibility at the microeconomic level. One writer pointed out (in 1970) that exports of machinery were continually increasing while current methods of market penetration such as capital participation, industrial cooperation, follow-up and services, spare parts supplies and so on - techniques increasingly used by other socialist countries - were being ignored. He continues:

> "The use of methods of market penetration has not been accepted to date and the administrative problems associated with such methods often lead Czechoslovak exporters to prefer markets with lower customer demands even though the currency earned is less valuable. There is an obvious lack of an effective instrument of demand, which would significantly increase the attractiveness of earning convertible currencies rather than 'clearing' ones (for example lower interest rates on credit, material incentives etc.) ... Competitors from socialist and capitalist countries are far more adaptive and establish branches and mixed companies with domestic producers. We have somehow forgotten that the sale of technical expertise and spare parts is of greater value than the export of machinery and equipment."[1]

Even where credit was offered to Latin American importers there were apparently difficulties encountered in convincing them that Czechoslovak interest rates, though ostensibly higher, were actually cheaper because there were no other associated banking service charges.

3.9.3 Some Empirical Relationships

In the light of the trend to more flexible forms of 'clearing' agreements and to multilateral modes of payment in trade between Czechoslovakia and developing countries, two basic questions arise. Firstly,

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[1] J. Kalvoda, 'Platebni otazky cs. vyvozu do Jizni Ameriky', *NZO*, no. 47, 1970, p. 3; no. 48, 1970, p. 3.

what is the effect of a change from bilateralism to multilateralism on reciprocity in trade; and secondly, the effect of the payments system on the level of trade.

In the early sixties, when knowledge of the bilateral payments agreements signed by Eastern European countries was relatively limited, attempts[1] were made to identify bilateralism by the degree of bilateral reciprocity of (visible)[2] commodity trade statistics. Czechoslovak bilateral payments agreements however are known (Table 3.14) and it is not the intention here to examine, except in passing, the feasibility of identifying essentially *ex ante* bilateralism through the use of measures of reciprocity involving *ex post* commodity trade statistics. It is rather the intention to examine the effect on the degree of visible reciprocity of changes in the method of payment in bilateral trade. The 'reciprocity index' used was

$$R = \frac{100\ (X - M)}{(X + M)}$$

where M = imports
X = exports

being a simplified version of the Pryor formula. The deflation of the balance of trade by the level of trade turnover enables comparison between higher and lower levels of trade. While recognizing that reciprocity would probably not be perfect under clearing agreements because perfect annual balance is rarely achieved, and because only visible trade items were included in calculated reciprocity indexes, the degree of reciprocity under two payments mechanisms was compared.

It might be argued that the institution of a bilateral payments agreement should lead to a greater degree of reciprocity because multilateralism allows unlimited scope for trade imbalances whereas bilateralism

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[1] e.g. M. Michaely, 'Multilateral balancing in international trade', *AER*, September 1962, pp. 685-702; F.L. Pryor, *The Communist Foreign Trade System*, MIT Press, 1963, pp. 190-197.

[2] Wiles (1968), ch. X and appendix, discusses the shortcomings of the approach, and also defines (p. 255) reciprocity as the bilateral equality of visible and invisible imports and exports.

does not. On the other hand the termination of a clearing agreement might not necessarily lead to a significant increase in irreciprocity, particularly over a five-year period. Trade flows under bilaterlism may have led to fairly established levels of trade which might, for various reasons, be maintained for some time thereafter. However if the reason for terminating a bilateral payments agreement - and this was often the case in the sixties - is to avoid persistent surpluses by one partner, then irreciprocity may in fact be expected to increase upon termination of the agreement. For the eight countries in Table 3.14 for which this was feasible, a Wilcoxon matched-pairs signed-ranks test was used to compare the mean of the reciprocity index for the five-year period immediately preceding and immediately following the termination or institution of a clearing account.[1] It was possible to reject (W = 4, n = 8) at the 2.5% level the Null hypothesis - that the degree of reciprocity is equal in both periods - in favour of the alternative hypothesis that reciprocity is lower under multilateral forms of trade. However the small size of the sample, and the fact that the critical value of W for eight observations was just equal to that obtained in the test, mean that further testing is required before accepting this conclusion.

One of the reasons given for instituting bilateral payments mechanisms in the fifties, and for terminating many of them in the following decade, was that existing payments relations inhibited trade. It might therefore be expected that a change in the payments system would have stimulated trade relations. In the fifties, bilateral relations presumably overcame the hurdle of a shortage of hard currency and enabled trade to take place. In the sixties on the other hand, where either partner felt constrainted by the absorptive capacity of the other, the introduction of a system of multilateral payments might have allowed the larger partner to accept an

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[1] Brazil, Colombia, India, Indonesia, Tunisia and Uruguay all involved five-year periods of comparison, while for Cyprus and Sudan only three-year averages were used.

increase in imports while keeping exports at the previous ('bilateral') level. UNCTAD reported that the switch from bilateralism to convertible currencies in trade between LDC's and socialist countries " ... did not create obstacles to trade" and may have actually increased it; and that, in general, the form of payments adopted had only a relatively small impact on trade flows.[1]

Little statistical evidence was found, in fact, for the proposition that a change in the method of payments resulted in *increased* trade levels or intensities between Czechoslovakia and developing countries. Nevertheless, strong evidence was found to suggest that the form of payments was related to the *level* of trade relations. When the number of months, during 1960-75, for which a bilateral payments agreement existed between Czechoslovakia and each LDC was correlated (Spearman's method) with trade variables, strong positive relationships were found to exist with median imports ($r = 0.489$, $n = 41$, $t = 3.501$); median exports ($r = 0.281$, $n = 41$, $t = 1.829$): not significant at the 5% level; median deltaim ($r = 0.808$, $n = 41$, $t = 8.564$); and median deltaex ($r = 0.465$, $n = 41$, $t = 3.230$). That is, countries which over the period 1960-1975 had bilateral payments relations with Czechoslovakia for longer periods, also tended to have higher median imports into Czechoslovakia, as well as higher median values for deltaim and deltaex. Why this should be so is not entirely clear, but it is possible that only those LDC's which (possibly for non-economic reasons) wished to maintain strong trading relationships with Czechoslovakia were prepared to trade under clearing agreements; while Czechoslovak planners probably preferred to buy most from countries which could be repaid in kind rather than in convertible currency. For whatever reason, it appears fairly definite that in the Czechoslovak case the form of payments adopted in trade with LDC's was a significant factor in the level of that trade.

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[1] TD/B/AC.22/3, p. 23.

CHAPTER 4

THE ARMS TRADE

4.1 INTRODUCTION

Czechoslovakia has a long-standing reputation as an exporter of armaments. Several spectacular sales in the post-war period (e.g. Israel 1948, Egypt 1955) to developing countries have enhanced this reputation, primarily because the political effects of such sales have been out of all proportion to their quantitative levels. Because guns, like butter, are commodities, and because they are traded, it is necessary to examine this aspect of Czechoslovak foreign trade. Nevertheless, it can justifiably be argued that armaments are a special case, both because of their relationship to politics and because of the secrecy involved in sales; and for this reason they are examined in a separate chapter. A clear distinction has also been made as far as possible between sales of small arms and major weapons. Not only is knowledge of exports of the two types of armaments different - thelatter are harder to conceal - but they are clearly distinguishable on technological (and hence production or supply) grounds, as well as for historical reasons. The secretiveness adopted by importers and exporters alike precluded systematic collection of data, and hence complicated the analysis. The invariably fragmentary nature of the information available led to the adoption of a methodology often more suited to jigsaw puzzles (with missing pieces) than to economic analysis. From a purely technical point of view, even quantification of known sales is difficult, not only because of unavailability of data but also because of pricing problems on the conceptual level. Known sales of major weapons, for example, assume differing levels of importance depending on the method of valuation adopted; which in turn depends on the purpose of the valuation. However the most serious problem of all is the virtual impossibility of verifying sources: either anecdotal or statistical. For this reason all data presented here should be treated with a healthy degree of scepticism. It follows that any conclusions drawn

must similarly be accepted with caution. The major contribution of this chapter lies in its examination of a little-known area of Czechoslovak trade. Not only are all major sources surveyed but an examination of the feasibility of identifying armaments sales from trade statistics is also carried out. Furthermore, the results of other chapters are used to place the arms trade in the perspective of Czechoslovak economic relations with developing countries. The primary aim of the present chapter is therefore to investigate three things: the importance of the arms trade in Czechoslovak foreign trade, the importance of Czechoslovakia in the international trade in armaments, and the feasibility of identifying arms sales from official trade statistics.

4.2 THE INTERWAR PERIOD

As with other industries, the nascent armaments industry of the twenties owed much to the fact that Czechoslovakia had been part of the Habsburg Empire. The Turkish siege of Vienna in 1683 and the War of the Spanish Succession in 1701 and 1703 highlighted the weaknesses of the Austro-Hungarian army; until then composed (like so many other contemporary European armies) of feudal lords and their retinue, all armed according to the taste of each lord. In an attempt at military reorganization, Prince Eugene of Savoy issued an edict in 1705 ordering the standardization of all weapons and equipment in the army. Although an arms industry already existed in the Czech lands at this time, the edict created the need for rationalisation, leading to attempts at mass (serial) production of firearms,[1] and by 1918 Skoda had become the dominant producer within the Dual Monarchy.

4.2.1 The Arms Industry

It was the cessation of hostilities in 1918 which gave the Czechoslovak armaments industry its greatest boost through the elimination of some of its pre-War competitors. Putilov of Russia could not export, and the German firms of Krupp and Erhardt were forbidden production under the Treaty of Versailles. Only Vickers-Armstrong (U.K.) and Schneider et Cie-Creusot (France) remained among the major producers. A further factor which encouraged the development of a strong indigenous arms industry was the decision by the Czechoslovak Ministry of Defence that Czechoslovakia should be self-sufficient in its major defence needs.[2] (This decision was a direct result of the supply by Italy and France of worn, unreliable, or

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1 M. Mudra, 'Pokusy o zavedeni hromadne vyroby pusek v Cechach', *Historie a Vojenstvi*, no. 2, 1964, pp. 192-219.

2 M. Hauner, 'Military budgets and the armaments Industry',*PEEE*, no. 36, October 1973, p. 28. Much of the present section relies heavily on this paper and on helpful discussions with its author.

obsolete equipment, at the time of the 1919 invasion of Slovakia by the Hungarian Red Army.[1]). Both the elimination of major competition and the decision to produce weapons domestically, were only factors encouraging growth however. The growth itself was possible because of the existence of expertise (particularly within Skoda) in arms production and because of the relatively developed nature of the Czechoslovak economy. Domestic production of arms began to be important from about 1923 onwards and led to a steady decline in the total value of imported arms from 1925 onwards (Table 4.2) until rearmament in the middle thirties. However Czechoslovakia was dependent throughout the interwar period on the import of explosives despite some domestic production.[2]

Armaments production in the interwar period was broadly delineated between firms specialising in heavy weapons, and those producing mainly small arms. Skoda, the major Czechoslovak armaments producer, concentrated on heavy weapons although it was also an important exporter of other products, particularly railway equipment.[3] The other major producer of heavy weapons and engineering goods - Ceskoslovenska Kolben-Danek (CKD) - is not discussed here although it provided strong competition for Skoda and even entered into a short-lived cartel agreement with it in 1935: CKD accepted a monopoly in tank production while guns were left to Skoda.[4] During the First World War, Skoda had been the main supplier of guns to the Austro-Hungarian navy but all such production was transferred in 1919 to Schneider et Cie-Creusot which obtained a controlling interest in Skoda in that year. The acquisition of Skoda shares by the French firm was due in part at least to Benes' desire for French influence as a counterweight to Germany and Russia.[5] It was not

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1 *ibid.*, pp. 24-26.

2 *ibid.*, p. 27.

3 Teichova (1974), pp. 221, 242-243.

4 Hauner (1973), p. 34.

5 Teichova (1974), p. 197. "Until 1925 the Czechoslovak Ministry of Defence was run by the French Military Mission and provided a direct connection with the Schneider interests" (p. 205).

however entirely compatible with the insistence by the Czechoslovak army on domestic production of major defence needs, and led ultimately to a compromise in 1922 with the signature of the fifteen-year Artillery Agreement (Entente d'Artillerie) between Skoda and Schneider. This cartel arrangement divided the world market into two spheres of interest: China and the Soviet Union were left to future negotiations, but Skoda was allocated Austria, Bulgaria, Czechoslovakia, Latvia, Lithuania, Mexico, Rumania, Sweden, Switzerland, Yugoslavia, Colombia, Uruguay, Turkey and Iran.[1] Of significant advantage to Skoda in the twenties[2] and thirties[3] was the provision of loans from Schneider for the transition to peace-time production and for sales abroad as well as the transfer of technology. On the other hand, provision of export finance " ... was the exception rather than the rule"[4] and potential sales were lost to Bofors among ex-Krupp customers; so that much of Skoda's growth in the twenties was due to diversification and expansion of non-military production.[5] An agreement was also signed in 1925 between Skoda and Ceskoslovenska Zbrojovka Brno (hereafter Zbrojovka) whereby Zbrojovka could make use of Skoda's agents throughout the world for its own exports;[6] an agreement hardly necessary after the beginning of world rearmament (after about 1934), by which time Zbrojovka had become a major world exporter of small arms in its own right.

Skoda seems to have reacted to the Depression and to the degeneration of world trade into bilateralism (section 2.3.1) in two ways. One way was through direct investment. Table 4.1 shows only direct investment in developing countries, but similar investment took place in other countries

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1 The latter four countries are specified by Teichova (p. 213) but not by Hauner (p. 33a).

2 Hauner (1973), p. 33a.

3 Teichova (1974), pp. 214-215.

4 *ibid.*, pp. 214-215.

5 Hauner (1973), p. 34.

6 Although Skoda did eventually acquire some munitions and small arms plants, its production of heavy weapons was on the whole complementary to those of Zbrojovka which concentrated on the manufacture of small arms.

(for example in Poland[1]); though this was probably more a method of market penetration than an attempt at solving payments problems. A method of circumventing payments problems was the establishment in 1934 of a subsidiary company named Omnipol which acted in much the same way in which present-day intermediaries dispose of unwanted goods obtained by Western companies which export to East European countries with inconvertible currencies and insufficient hard currency reserves. While Skoda was prepared to barter guns for raw materials it used in its own production, it had little direct use for commodities such as cotton, tobacco Persian carpets and so on. Omnipol was therefore created as a direct result of bilateralism in trade with developing countries,[2] eventually becoming one of the largest general import/export companies in Czechoslovakia. It presently holds the monopoly within Czechoslovak foreign trade over the export of armaments, including sporting weapons.

Experiments in tank production were carried out in 1931 by both Skoda and its heavy engineering rival Ceskoslovenska Kolben-Danek, but it was not until the middle thirties that production of these vehicles began in earnest.[3] After March 1939, tank production was controlled by the Germans and Czechoslovak-manufactured tanks, slightly modified, formed a large proportion of the Wehrmacht tank force. Aircraft production began in the early twenties and was concentrated on four main factories: Letov, Aero, Avia (owned by Skoda), and CKD-Praga. Other firms such as Bata also produced aircraft but these were primarily of a commercial and sporting type although Zbrojovka and Jawa also began in 1933 and 1936 respectively, the production of aero-engines. However aircraft production was less advanced than other armaments, and exports were therefore of lesser significance.

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1 Hauner (1973), p. 34.

2 V. Jisa, A. Vanek, *Skodovy Zavody 1918-1938, Prispevek k Dejinam Zavodu V.I. Lenina v Plzni*, Nakladatelstvi Prace, Prague, 1962, p. 221.

3 Information on tank and aircraft production taken from Hauner (1973), pp. 39-43.

TABLE 4.1 SKODA BRANCHES IN DEVELOPING COUNTRIES 1918-1938

Name of Branch	Establ.	Ownership (%)
Skoda-India Ltd., Calcutta	1930	100
Skodawerks of South Africa, Johannesburg	1934	100
Societe Iranienne Skoda, Tehran	1934	100
Omnipol T.A.S., Istanbul	1937	100
Skoda Platense S.A., Buenos Aires	1937	100
Skoda-Brasileira S.A., Rio de Janiero	1937	100
Abag. Afganische Baugellschaft A.G., Kabul (50% ownership Afghanistan National Bank)	1938	50
Skoda Malaya, Singapore	1938	100

Source: V. Jisa and A. Vanek, *Skodovy Zavody 1918-1938. Prispevek k Dejinam Zavodu V.I. Lenina v Plzni,* Nakladatelstvi Prace, Prague, 1962, Table 2, p. 486.

It was in the field of small arms however that the Czechoslovak armaments industry was most developed and successful in the interwar period. The major producer over this period was Zbrojovka which had been founded as a branch of the Vienna arsenal in 1916, taken over by the Czechoslovak State in 1919, and reorganised in 1923 as a joint-stock company in which the government continued to hold 75 percent of the shares. (The remaining capital was held mainly by Skoda and by Schneider.) Although its production was predominantly in armaments, Zbrojovka also manufactured and exported cars, machine tools, etc. particularly in the thirties.[1] Its reputation was founded mainly on the production of a modified version of the 1898 Mauser infantry rifle, and the light machine-gun (from 1924) which became the standard weapon of the Little Entente and was later co-produced with Britain as the Bren gun. In contrast to Skoda, whose sales were heavily concentrated in European markets. Zbrojovka also tended to sell significant amounts in other parts of the world; possibly because European armies - until the

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[1] O. Franek, *Zbrane pro Cely Svet. Zahranicni Obchod Zbranemi a Munici Koncernu Brnenske Zbrojovky mezi Dvema Valkami,* volume 2, Nakladatelstvi Blok, Brno, 1970, p. 6.

second half of the thirties - were already sufficiently equipped with small arms, while strife in countries like China created a continuous demand for arms. For example, sales of rifles, light machine guns, and ammunition to developing countries formed 51%, 57% and 66% respectively (by quantity) of total Zbrojovka exports for the years 1927-1939.[1] Not only was Zbrojovka important within Czechoslovakia - other manufacturers such as F. Janecek (later Zbrojovka Jawa); Ceska Zbrojovka; and Sellier and Bellot; never seriously challenged its position - but it was also significant in total world arms sales. In 1927 it signed a cartel agreement with the leading Belgian armaments producer, Fabrique Nationale d'Herstal. Mutual suspicion however prevented the renewal of this agreement upon its expiration in 1929.[2] Like Skoda, Zbrojovka also made direct investments abroad. One example was the construction in Iran of " ... equipment for national defence. Some engineering units of this kind are still in operation in Iran today".[3]

With the German occupation of March 1939, both Skoda and Zbrojovka were incorporated into the Hermann Goering works, and production during the Second World War was geared to the needs of the German army. After the war, small arms manufacture by Zbrojovka declined in importance,[4] and the rifle-producing plant was converted to production of typewriters and tractors.[5] Sporting arms were still produced in the fifties however, and it is highly probable that armaments production also continued (or was recommenced) in the Brno works.[6] The Skoda works in Plzen (Pilsen),

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1 Calculated from Franek (1970), Table 1, pp. 167-169.

2 *ibid.*, p. 35.

3 M. Kalous, 'The development of economic relations between Czechoslovakia and Iran', *CFT*, March 1972, p. 5.

4 Hauner (1973), p. 31.

5 'Tovarna ktera mladne. 40 let Cs. zbrojovky - Zavodu Jana Svermy', *RP*, 30 November 1958, p. 4.

6 *ibid.*, p. 4. While the article stresses the production of complete industrial plants, typewriters etc, it refers several times to "zbrani" (armaments) while it uses the term "sportovni pusky" for sporting arms: for example " ... Zbrojovka - it has long ceased to be a factory merely for armaments" ("to uz davno neni tovarna jen na zbrane").

damaged by Allied bombing were repaired after the war and together with other arms producers were nationalised under the provisions resulting from the Kosice Programme.

4.2.2 The Trade in Armaments

There are two sources of statistics on the Czechoslovak interwar arms trade: those published by the League of Nations in its annual *Statistical Yearbook of the Trade in Arms and Ammunition;* and the entries provided in the foreign trade returns themselves (*Zahranicni Obchod Republiky Ceskoslovenske*) particularly items 1372-1375 and 1997. Although the League of Nations data are based on the foreign trade statistics they are a little fuller and probably more reliable since they also rely on information provided directly by the Czechoslovak government.[1] Trade statistics reveal the total trade in arms from 1921 to 1937 (data for 1920 were not readily available) but there are gaps in coverage of the constituent parts of this trade. For example, in 1925, 'ammunition' is given only for a combined total covering items 1995-2002 and thus includes sporting ammunition and other pyrotechnical material.[2] However, League data also suffer from this deficiency of occasional inclusion of sporting goods in arms statistics for 1925 and for other years.[3] There is therefore close conformity between League data and Czechoslovak foreign trade returns. The former are usually slightly higher (in the order of about 5%) for exports however and may thus reflect adjustments made to data after publication of trade statistics. Only for the years 1936 and 1937 is there a large - approximately fifty percent - difference in the total export figures given by the two

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1 Hauner (1973), p. 6, states that the League circulated questionnaires to its members from 1922 onwards.

2 *Zahranicni Obchod Republiky Ceskeslovenske*, 1925, p. 272.

3 League of Nations *Statistical Yearbook of the Trade in Arms and Ammunition*, 1933, p. 146. See also footnotes to tables in all issues. League data also include fuses etc.

TABLE 4.2

CZECHOSLOVAK IMPORTS AND EXPORTS OF ARMAMENTS, 1920-1937

(percent of current values)[1]

Year	Imports				Exports			
	small arms side arms[2]	artillary material	ammu-nition[4]	total[3] (mill. Kc)	small arms side arms[2]	artillary material	ammu-nition[4]	total[3] (mill. Kc)
1920	73	1	26	128.3(0.5)	22	-	78	26.2(0.1)
1921	77	-	23	25.9(0.1)	43	1	56	46.9(0.2)
1922	59	-	40	29.8(0.2)	46	-	54	55.2(0.3)
1923	30	52	18	23.9(0.2)	3	10	88	47.5(0.3)
1924	45	7	48	24.0(0.2)	30	10	60	86.0(0.5)
1925	31	1	67	27.7(0.2)	7	19	74	30.3(0.2)
1926	31	50	19	16.6(0.1)	38	3	59	280.2(1.6)
1927	36	49	15	18.4(0.1)	30	34	36	128.3(0.6)
1928	78	3	20	11.1(0.1)	46	5	49	72.9(0.3)
1929	41	1	59	18.7(0.1)	18	40	43	108.0(0.5)
1930	35	28	37	21.6(0.1)	56	13	30	177.8(1.0)
1931	55	4	41	13.8(0.1)	78	4	18	132.4(1.0)
1932	60	5	35	8.2(0.1)	30	33	36	48.5(0.7)
1933	42	19	39	7.4(0.1)	33	37	29	107.5(1.8)
1934	26	5	69	14.8(0.2)	70	15	15	345.5(4.7)
1935	28	12	60	23.4(0.4)	54	25	21	425.8(5.4)
1936	..	..	51	110.3(1.4)	..	..	34	326.2(4.1)
1937	..	..	60	98.8(0.9)	..	..	30	347.1(2.9)

Source: League of Nations, *Statistical Yearbook of the Trade in Arms and Ammunition*, Geneva, various years.

1. Totals may not add due to rounding.
2. 'side arms' - of relatively low levels in trade values - are presented separately by the source. Side arms refers to weapons such as bayonets, swords etc.
3 Figures in parentheses show proportion of total arms imports/exports to total Czechoslovak imports or exports (percent).
4 includes fuses and other pyrotechnic material.

sources.[1] A breakdown is not given in the trade statistics, so it must be assumed that large items, perhaps tanks or military aircraft - which were then being produced - are included in League (but not Czechoslovak) data. On the other hand, Czechoslovak trade statistics are more detailed in their country classification, showing many individual LDC's which the League data combine into 'other' countries. For these reasons, overall data presented in Table 4.2 are taken from League statistics, while ensuing tables giving a country breakdown are taken from trade returns; although both sets are compatible to 1935.

Hauner suggests that the League of Nations (and by implication the Czechoslovak) data are "grossly underestimated since in 1937 and 1938 the Zbrojovka alone exported arms for 585.4 and 815 mln. Kc respectively".[2] However, it is strongly submitted that these higher estimates (Zbrojovka alone) - which are taken by Hauner from a Czechoslovak source[3] published in 1970 and relying on the archives of the Ministry of Defence and of Zbrojovka - can at most only throw doubt on the League's data; but cannot supplant them because there is no way of choosing objectively between them. Firstly, Hauner points out that:

> "Since all arms sales in Czechoslovakia were subject to the approval of the MOD [Ministry of Defence] , the main manufacturers, Skoda and Zbrojovka, received large government grants in order to make up their losses and to make their terms more attractive than foreign competitors."[4]

It is therefore possible that the Franek data for Zbrojovka show the amount received by that company. But part of this could have come in the form of a

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1 c.f. Hauner (1973), p. 10, who implies that the Czechoslovak trade returns are less reliable than those of the League.

2 *ibid.*, p. 10, Table 10 (3), footnote (a). Hauner does not specify the source here, but it is presumably Franek (1970).

3 Franek (1970). Hauner gives the main reference as *Zbrane do Celeho Sveta*, pp. 127, 167-178.

4 Hauner (1973), pp. 14-15.

subsidy from the government, with export prices being much lower than the price of the arms at the factory gate. It is thus not inconceivable that the League's data are, after all, correct, although this does not preclude underestimation. Further information is required, because it is not clear from the Hauner statement whether the subsidies applied only to Little Entente countries. It was not possible to check physical quantities because both the League and the Czechoslovak trade data are given in kilograms (i.e. by weight) whereas Franek presents only the number of items (e.g. rifles) sold.[1] Secondly, it seems odd that undeclared (at Customs) sales could occur when firms were subject to Ministry of Defence control. Either firms had to evade both Customs and Defence control, or the Ministry of Defence condoned illicit sales which were not declared at Customs. It is quite possible that this may have occurred, but independent evidence is required. One can only conclude that the data presented in Tables 4.2 to 4.5 may be underestimated, but that this has not been proved conclusively.

A further, possibly related, point of confusion arises from Hauner's estimates of the share of the arms trade in total Czechoslovak trade. For 1934 for example, he gives the shares of arms exports as 5.4 percent, of total exports and ammunition sales as 6.5 percent.[2] Yet according to the League of Nations, the *total* value of armaments (arms and ammunition) exports in 1934 was 345,463 thousand koruny,[3] while total Czechoslovak exports in that year were 7,287,549 thousand Kc.[4] This then gives a value closer to 4.7 percent of exports (Table 4.2), for all armaments combined. The reason for this large discrepancy cannot be readily found, for Hauner

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1 Franek (1970), Table 1, pp. 167-169.

2 Hauner (1973), p. 10.

3 *SYTAA*, 1938, p. 183.

4 *ZORC*, 1934, Table 4, p. 13*.

cites League of Nations data as his source[1] - and not Franek's figures - although he may have resorted to different sources for his figures on total Czechoslovak exports. Whatever the explanation, it is clear that official statistics indicate that the armaments trade was far less important to Czechoslovakia than might be supposed from the Hauner estimates. Table 4.2 clearly shows that the share of armaments in exports became relatively important only in the period of rearmament in the thirties which followed the abortive attempts at world disarmament at the 1932 and 1933 international conferences. On League of Nations figures[2] Czechoslovakia was fairly important in the world trade in arms and ammunition. Exports of these two commodities ran at a mean of 8.4% of the world total over the years 1920-1936. Sales were erratic however - the median share was 5.6 percent - rising from a low of 0.3 percent in 1920 to a maximum of 24.5 percent in 1935. These shares might well have been higher, particularly in the late thirties, had tanks and aircraft been included. The possibility of underreporting in Czechoslovak statistics, mentioned above, may have also led to underestimation of that country's relative importance. On the other hand, the Czechoslovak figures include sporting arms and ammunition and therefore exaggerate the percentages. Imports were more consistent, but with high values in 1920 and 1936. The mean share was 2.2 percent, while the median was 1.4 percent with the 1936 maximum at 9.7 percent and the lowest level (0.5%) occurring in 1928. That imports were therefore also important in Czechoslovak trade is shown by the fact that the ratio of exports to imports (of both the mean and the median) was approximately four to one.

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[1] Hauner (1973), p. 10, footnote 1. There is also some apparent confusion within the footnote, which seems to refer to index figures given in Table 10 (3), rather than to the shares in trade.

[2] *SYTAA*, part II, various years.

There are several characteristics of the Czechoslovak trade in armaments which are worth pointing out for the sake of comparison with the post-Second World War period. Firstly,Czechoslovakia was by no means self-sufficient in arms. Imports of arms as a share of total imports were highest in periods of crisis: the early twenties (and possibly 1918-1919) and after 1934. On the one hand, this may have been due to inability to produce the required weapons (e.g. the early twenties). On the other hand, production capacity may have been insufficient: in 1938 for example, Skoda and CKD were forced to reduce exports of heavy ordnance and tanks to enable fulfillment of orders placed by the Czechoslovak Ministry of Defence.[1] Moreover, Czechoslovakia was dependent on imports of explosives throughout the interwar period.[2] Unfortunately the data available are insufficiently detailed to show whether the types of weapons imported differed from those exported, or whether imports were indeed used to fill shortfalls in domestic production. Secondly, the commodity composition or structure of imports and exports changed over the interwar period. In the early twenties small arms formed the highest proportion of imports but the lowest share of exports. By the middle thirties, this pattern had been reversed. A similar reversal occurred in the trade in ammunition: while its relative importance in exports decreased, it increased its share of imports. Artillery imports and exports are not as clearly defined but there seems to have been an increase in their share of exports from the late twenties onwards, probably as a result of increasing expertise in their production. Overall therefore, Czechoslovakia appears to have gradually increased sales abroad of small arms and artillery at the relative expense of ammunition, reflecting increasing productive sophistication. This undoubtedly created its reputation and established a clientele for the postwar export of small arms: in particular popular items such as the modified Mauser rifle.

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1 Hauner (1973), p. 36.

2 *ibid.*, p. 27.

Tables 4.3 to 4.5 show that European countries were the major buyers of Czechoslovak ammunition and artillery until the thirties, while firearms (small arms) were sold predominantly to developing countries throughout the interwar period. It is not entirely clear why this should have been so, but it is possible that small arms exports created a good reputation which led to the buying of other arms as well. Ammunition exports seem to have been conditioned both by conflicts (e.g. China) and possibly by rearmament in the early thirties. On the other hand, increasing self-sufficiency in arms production in Eastern Europe, as well as German competition, may have simply forced Czechsolovak exporters to find new markets abroad in the same way manufacturers of other products were forced to do when the system of international trade degenerated into bilateralism. Nevertheless, assuming that the data sources are reliable, it is clear that arms exports are analogous to exports in general in that traditional European markets were replaced in the thirties by sales to developing countries. Whatever the reason for this change, it obviously created favourable marketing preconditions for exports in the postwar period.

TABLE 4.3 CZECHOSLOVAK EXPORTS OF LIVE AMMUNITION, 1924-1935

(million koruny)

Country	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Total[1]	51.1	..	84.9	3.1	24.5	39.5	31.5	20.4	14.9	28.4	..	..
Europe	51.0		81.0	3.1	23.7	4.3	26.4	3.5	3.1	1.3		
North America								-	0.1			
China	-		-				3.7	7.8	6.6	4.4		
Thailand									-			
Arabia	-											
Egypt							-	0.1		-		
Palestine									-			
Persia							-					
Syria								0.1	0.1			
Turkey	-		-	-			0.4			5.3		
Argentina									2.9			
Brazil								6.6	2.0			
Colombia										9.6		
Peru							-			7.1		
Venezuela							0.5					
Other South America						1.2				0.5		
Other[2]	-		3.9	-	0.8	34.0	0.5	2.3	-	0.2		

Source: *Zahranicni Obchod Republiky Ceskoslovenske*, relevant years. Data refer to item 1997 in the trade classification used in the source.

1 Items rounded to nearest decimal place.
2 Includes Hamburg, Triest, and British possessions in South Africa.
3 A dash (-) signifies sales of less than 50,000 Kc.

TABLE 4.4

CZECHOSLOVAK EXPORTS OF FIREARMS (INCLUDING AUTOMATICS), 1924-1935

(million koruny)

Country	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Total[1]	25.4	3.1	90.9	33.8	33.4	11.2	107.1	103.0	13.8	35.2	240.6	222.1
Europe	25.4	1.1	54.6	3.3	7.2	1.0	63.6	1.2	1.4	0.6	34.3	190.0
North America		-	-	-			-					
China	-		-		5.5	7.2		12.0	8.0	13.8	36.0	5.4
Thailand								3.9				
British India									-			
Argentina		1.0										
Brazil				-				15.3	0.8		0.3	
Chile				-								
Mexico		1.0										-
Other South America					20.0	1.5	1.6		-	12.2	55.3	4.8
Colombia					0.8		4.4	0.2			5.2	
Peru							0.7		-	3.3	6.2	
Uruguay										-		
Venezuela							0.1					
Arabia												4.4
Iran & Afghanistan							35.3	69.9	3.5		100.4	10.9
Egypt		-						-				
Turkey		35.9	-		1.4		-				3.0	5.1
British East Africa								-				
Other Equat. Africa										5.1		
Ethiopia											-	1.1
Other[2]	-	-	0.4	30.5	-	-	1.2	0.2	0.1	0.2	-	0.3

Source: *Zahranicni Obchod Republiky Ceskoslovenske*, relevant years. Data refer to items 1374 and 1375 in the trade classification used in the source.

1 Items rounded to nearest decimal place.

2 Includes Hamburg.

3 A dash (-) signifies sales of less than 50,000 Kc.

TABLE 4.5

CZECHOSLOVAK EXPORTS OF ARTILLERY AND PARTS THEREOF, 1924-1935

(million koruny)

Country	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Total[1]	8.3	5.8	8.9	43.4	4.0	42.7	24.0	4.8	16.2	40.1	51.1	106.5
Europe	8.3	5.8	8.9	43.4	3.6	42.6	23.9	4.8	6.1	7.0	0.4	79.0
China										2.3		
Thailand									-			
Afghanistan & Iran												16.8
Turkey					0.3	0.1				15.5	50.6	-
Argentina									7.2			
Brazil									1.8			
Chile					-				0.1			
Colombia	-									13.6		10.7
Peru									1.0	1.1		
Other South America										0.6		
Other[2]					0.1	-						

Source: *Zahranicni Obchod Republiky Ceskoslovenske*, relevant years. Data refer to item 1373 in the trade classification used in the source.

1 Items rounded to nearest decimal place.
2 Includes Hamburg and the U.S.A.
3 A dash (-) signifies sales of less than 50,000 Kc.

TABLE 4.6

MILITARY EXPENDITURES AND SIZE OF ARMED FORCES IN DEVELOPING COUNTRIES, 1966-1975

(stated units)

Year	military expend. (billion $ U.S.) current	military expend. (billion $ U.S.) constant	military expend. as % of GNP	armed forces[b] (thousand)	military expend. as ratio to armed forces (constant $ per man)[a]	arms[c] imports millions (constant $)
1966	27.41	41.60	5.81	11633	3576	4810
1967	29.57	43.56	5.89	12095	3601	4980
1968	33.02	46.61	6.00	12463	3740	5110
1969	37.58	50.48	6.00	13012	3879	5210
1970	43.60	55.51	6.09	13368	4152	5260
1971	48.71	59.01	6.08	14125	4178	5670
1972	51.40	59.84	5.83	14674	4078	7710
1973	57.68	63.42	5.69	15082	4205	8870
1974	70.31	70.31	5.95	16313	4310	6670
1975	81.67	74.72	6.10	15520	4814	6510

Source: United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers*, 1966-1975, Washington, D.C., Table 1, p. 14; and Table 3, p. 56 (for arms imports).

[a] constant 1974 prices calculated according to index on p. 10 of the source.
[b] active-duty military personnel.
[c] includes both small arms and major weapons.

4.3 THE POST SECOND WORLD WAR PERIOD

This section examines several important but disparate issues in the Czechoslovak arms trade with (Western) developing countries. As a background to the Czechoslovak capacity or willingness to supply arms, factors affecting demand are also briefly examined.

4.3.1 The Demand for Arms

There are several major factors which affect demand at any one time or which have contributed to the growth in demand for arms since the Second World War. Of those factors responsible for the growth in demand, the most obvious is the increase in the number of sovereign states since the War. Most Asian and Middle Eastern countries achieved independence by the middle fifties and African countries did so primarily in the early sixties. Some of these states continued to rely on their former metropolitan masters for defence needs, but many established independent armed forces, which required armaments. Because the newly-independent countries came into being at approximately the period when Czechoslovakia was re-equipping its army with weapons of Soviet design, and thus probably possessed an arms surplus, and because it was from 1955 onwards (sales to Egypt) that the Soviet Union appears to have begun the sale of major weapons; Czechoslovakia was opportunely faced with a growing potential arms market. Willingness and ability to supply were thus matched by demand. On the other hand, the aftermath of the Cold War, as well as old colonial ties, limited the growth of such demand for Czechoslovak weapons.

A further factor influencing demand is the size and growth of military expenditure and the armed forces. A long-term statistical series for these variables was unavailable, but Table 4.6 presents data for the decade from 1966 to 1975. Clearly, the rapid real growth of military

expenditures which occurred in developing countries in this period must have increased the demand for arms (unless real salaries or other costs increased), because real expenditure per serviceman also increased. That this was so, is indicated by the right-hand column of Table 4.6, although increased imports (in value terms) may simply reflect the fact that weapons purchased by the developing countries have become increasingly sophisticated.[1] Nevertheless, the absorptive capacity for modern weapons as well as their high cost, is probably a limiting factor in demand. Escalating costs will also limit demand in the future unless foreign exchange earnings of the developing countries keep pace. The level of foreign exchange earned or of valuable raw materials available for export is also a general income constraint on any form of arms expenditure.

Indigenous production capability also limits developing country demand for arms from all sources. Many developing countries now produce their own small arms munitions and armaments requirements,[2] invariably under licence from one of the major world producers. In recent years Israel, South Korea, Brazil, India and Argentina have even exported major weapons predominantly of their own manufacture.[3] In the Middle East - a major arms importing area since the War - Egypt, Qatar, Saudi Arabia and the United Arab Emirates, established in April 1975 the Arab Military Industries Organization.[4] Progress has been slow however, particularly because of differences in defence requirements. The increasing production of small arms - Czechoslovakia's traditional export - and even major weapons by developing countries, must inevitably diminish demand for arms imports; a factor probably operating since the late fifties but now increasing in importance.

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1 Stockholm International Peace Research Institute (SIPRI), *World Armaments and Disarmament. SIPRI Yearbook 1978*, Taylor and Francis, London, 1978, pp. 237-252.

2 See for example appendix III, pp. 287-289, in R. Sellers (ed.), *Armed Forces of the World. A Reference Handbook*, Praeger, N.Y., 1971 (3rd edition).

3 *SIPRI Yearbook 1978,* Table 8.2, p. 229.

4 D. Price, 'Arab arms production', *Middle East International*, no. 80, February 1978, p. 16. Kuwait, which originally considered membership, declined to join in late 1977.

A further factor which may have limited demand for Czechoslovak arms is the strong degree of competition since the early sixties.[1] From Western European arms producers - particularly Italian, French and German - who have joined American and British manufacturers in the export of arms. The arms trade was recently described as a 'buyer's' market.[2] A similar trend in increased competitiveness from the Warsaw Pact countries, which have developed arms industries, would have been an important factor in limiting demand for Czechoslovak arms. Their similarity or even equivalence made them close substitutes; a situation which might have been expected to lead to price and other forms of competition, although no concrete evidence of this was found. In the attempt at estimating the trade in small arms from partner country statistics (section 4.4) it was frequently and strikingly obvious that many developing countries were reporting imports of small arms and sporting guns from Poland, the DDR, the Soviet Union, Hungary, and even Bulgaria (for example to Argentina in the early sixties). In many cases imports were reported from these countries but not from Czechoslovakia which suggests that it was not secrecy which prevented publication of arms imports from Czechoslovakia, but rather the competition engendered by other East European countries.

Prestige associated with the possession of sophisticated military equipment - often incapable of being absorbed within the armed forces - is another factor increasing demand.[3] However, the income constraint limits this source of demand. Up to 1964 for example, only a handful of African countries had received equipment which might have been described as lavish and beyond the requirements of normal defence and internal security.[4]

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1 *SIPRI Yearbook 1978*, p. 225. The increasing technological gap between Czechoslovak and Western industry generally has probably been a contributory factor.

2 *ibid.*, p. 227.

3 H. Coward, 'Military technology in developing countries', *Centre for International Studies,* Massachusetts Institute of Technology, C/64-5, 15 April 1964, p. 32.

4 M. Bell, 'Military Assistance to Independent African States,', *Adelphi Papers,* no. 15, December 1964, appendix (Military assistance chart), pp. 18-19.

Moreover the prestige effect in demand for Czechoslovak arms was probably limited because sales of major weapons were almost certainly subject to Soviet control and because of the gradual retardation during the sixties in the sophistication of the major weapons produced by Czechoslovakia (section 4.5). Purchases for purposes of prestige usually involve buying the technologically most advanced models of weapons.

Finally, brief reference must be made to the importance of the 'superpowers' - the Soviet Union and the United States - as well as military alliances, as factors which decrease demand for arms from specific areas. The influence of the 'superpowers' is of greatest importance in sales of major weapons where 'moral suasion' can dissuade third countries from exporting 'proscribed' weapons and in the Czechoslovak case, the influence of the Soviet Union was probably crucial. Military alliances limit demand in the sense that a member of an alliance which is dominated by a large developed Western country is unlikely to purchase arms from other suppliers. Thus the demand for Czechoslovak arms from members of SEATO, the Five-Power agreement countries, NATO (especially Turkey - an important buyer in the interwar period), RIO (most of Latin America), Taiwan, Philippines or South Korea (linked to the United States) would have been limited automatically. Moreover, even upon the dissolution of such treaties, former members may find it financially intolerable to re-equip their armed forces with weapons from other sources, particularly where the ammunition used in various weapons (e.g. SLR rifles and M60 light machine-guns) is standardized. It was estimated for example, in 1975 by the United States Department of Defence, that the cost of re-equipping Egypt's armed forces with American materials would be $7 billion and would take ten years.[1] Such prohibitive costs are primarily the result of modern defence requirements. Whereas in the interwar period and even in the early post

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[1] Price (1978), p. 16.

War period, defence was relatively simple in terms of weapons, the modern trend is towards integrated (between branches of the armed services) weapons systems.[1] Such systems, apart from their inherent cost, also require training and other additional investment. This trend is therefore an important factor in limiting demand for weapons from minor or small arms producers, except in the role of sub-contractor or where production is under licence (and exports are permitted).

4.3.2 Czechoslovak Arms Production

From March 1939, Czechoslovak armaments firms were incorporated into and expanded as part of the Hermann Goering works (Waffen-Union Skoda-Brunn from 1942). Tank production became very important with Czechoslovak models forming a significant part of German armoured strength.[2] Bren gun production by Zbrojovka on the other hand, was discontinued in favour of the German MG.34 machine-gun.[3] After the War, all armaments producing firms with more than fifty employees were nationalised, and wartime production levels were severely curtailed. Zbrojovka resumed its production of prewar products like sewing machines and typewriters, and also began, in 1945, the production of complete industrial plants;[4] while Skoda also diversified its output.

Production of wartime models of small arms, tanks and aircraft - the latter of predominantly German design - continued after 1945 both for export and for the Czechoslovak army.[5] In 1948 the proportion of German equipment in use with the Czechoslovak army was 51 percent (infantry

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1 *SIPRI Yearbook 1978*, p. 235.

2 Hauner (1973), p. 42.

3 *ibid.*, p. 31.

4 'Tovarna ktera mladne', p. 4.

5 Hauner (1973), pp. 41, 43.

weapons were 73 percent German-designed and aircraft material 78 percent), while 21 percent was of Soviet origin; and only 2% of Czechoslovak design.[1] The aircraft sold to Israel in 1948 for example were mainly Messerschmitt 109G fighters.[2] The production of wartime and prewar models continued despite early Czechoslovak expectations of re-equiping the armed forces with Soviet weapons. On the 5 June 1945 a meeting of military leaders decided that:

> "... the production of the entire defence industry will be reoriented towards peacetime output. Only the essential minimum will be conserved for military purposes. The Soviet Union will initially supply us with weapons."[3]

Gottwald predicted that the Red Army would have sufficient surplus weapons to supply the Czechoslovak forces.[4] Nevertheless, it was not until the spring of 1950 that any serious attempt at standardization with the Red Army was made: and it was only implemented then on an accelerated level because of the "international tension" at the time.[5] There were probably several reasons[6] for the delay in reorienting production from German to Soviet models. A major factor was the cost involved in retooling and the loss of valuable and successful exports. Secondly, there was no foreseeable threat of war until the intensification of the Cold War, and priority was given to economic reconstruction. Thirdly, there was little, if any, cooperation with the Soviet Union in military research - until 1950 Czechoslovak efforts were directed towards the development of indigenous weapons.

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1 M. Lichnovsky, 'O nekterych otazkach zmeny v tempu budovani cs. lidove armady v letech prvni petiletky', *Historie a Vojenstvi*, no. 2, 1966, p. 164 and p. 181. One percent was from 'other' sources. Much of the present section relies on Lichnovsky.

2 'Israeli troops in Egypt', *The Times*, 7 January 1949, p. 4.

3 Lichnovsky (1966), p. 181.

4 *ibid.*, p. 181, footnote 27.

5 *ibid.*, p. 183.

6 see *ibid.*, pp. 181-183.

From 1950 onwards the Soviet Union accelerated the transfer of production licences, and provided technical experts. Planned arms production doubled in value between 1950 and 1951, and again by 1952.[1] Nevertheless, despite the associated curtailment of expenditure in agriculture and consumer goods - as well as the use of special supervision to prevent 'sabotage' or insufficient production in arms factories - the plan for armaments production in 1951 and 1952 was not fulfilled. However by the early sixties military production had contributed to some of the problems plaguing the economy generally. Wiles focused on the balance of payments problem and reported a purported speech by Novotny to the Central Committee on 12 April 1962 blaming economic problems on the fact that it had not been expected " ... that the new military technology would be so expensive as to become a burden on the whole national economy".[2] The sudden large visible export surplus to the Soviet Union in the early sixties is contrasted by Wiles with low increases in national defence expenditure. Because small arms were primarily produced domestically, he argues, the export surplus probably represented payment for 'new technology' arms imports. It is submitted however that this may not be a correct interpretation of Novotny's statement.

Firstly, if arms embodying a 'new technology' had been imported, then this should have appeared in the balance of trade because if arms are included in trade statistics,[3] they would have produced a balance of trade deficit with the Soviet Union. Wiles does refer in fact to the large deficit in 1957, but ascribes it to " ... the back payment for uranium that was the reward for good Czechoslovak behaviour during the Hungarian Revolution in 1956".[4] If one accepts that Czechoslovak imports of arms *are*

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1 *ibid.*, p. 189.

2 Wiles (1968), pp. 114-115.

3 Wiles (1968), pp. 350-351, is inclined to think that arms are normally included, but hidden, in a country's commodity trade statistics. No evidence of this in the Czechoslovak case was found in section 4.5 however.

4 Wiles (1968), p. 115.

included in the commodity trade statistics, then the 1957 deficit on balance of trade is probably better explained as arms imports rather than retrospective repayment of Czechoslovak uranium exports. If arms imports are *not* included in commodity trade statistics, Wiles' explanation of the large balance of trade surplus in the early sixties may be correct, but it would be necessary to assume - further to his assumption of few (net) mutual transit services[1] - that Czechoslovakia was paying for few maritime transport services. But Czechoslovakia relies heavily on CMEA port and transport facilities and must normally run a trade surplus to cover such costs (section 1.4.4).

Secondly, the term 'new technology' is probably incongruous with developments at that time. New Soviet weapons produced in the late fifties and early sixties included aeroplanes (An-12, 1958; I1-18, 1959; Tu-124, 1960; MiG-21, 1956); helicopters (Mi-6, 1957; Mi-8, 1958); armour (BTR 60, 1961; T-55, 1961; T-62, 1963); and missiles (AS-1 'Kennel', 1961; SAM-2, 1957; SAM-3 ?; SSIC 'Scud', early 1960's).[2] Except for missiles (and perhaps helicopters), none of these involved, strictly speaking, 'new' technology; they were certainly advances on existing tecnology, and would have therefore been more appropriately described as 'advanced' technology.[3] It is moreover unlikely that Czechoslovakia acquired substantial quantities of missiles. According to the Stockholm International Peace Research Institute (SIPRI), Czechoslovakia did not export any missiles (or helicopters) to the Third World between 1950 and 1973 (Table 4.12).[4]

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1 *ibid.*, p. 115.

2 SIPRI, *Arms Trade Registers, The Arms Trade with the Third World.* Almqvist & Wiksell, Stockholm, 1975, appendix I, pp. 131-148.

3 Unfortunately Wiles gives neither the source nor the Czech original for the term.

4 L. Heiman, 'Moscow's export arsenal. The Soviet Bloc and the Middle Eastern Arms race', *EE*, May 1964, p. 5, however refers to Egyptian imports of " ... a Czechoslovak-made version of the Soviet 'Katiusha' multiple rocket *launcher*." (emphasis added)

It is also likely that missiles were not produced domestically,[1] because the Soviet Union seems to prefer to control the manufacture of missiles - particularly strategic ones - for imperialistic reasons. Military intervention (e.g. GDR 1953, Hungary 1956, Czechoslovakia 1968) would have been far more problematic if a rebellious Warsaw Pact army had possessed such weapons.

A better explanation of Novotny's statement is suggested by the Lichnovsky article which ascribes some of the problems of the Czechoslovak economy in the late fifties to the accelerated growth of the fragmented and highly inefficient domestic arms industry.[2] Not only was much research already in final stages of development abandoned, and existing production lines altered, but the arms industry was forced to produce a very wide assortment of new weapons even where expertise was low: for example tanks and aircraft. (There is some parallel here with overall industrial production in the fifties, when Czechoslovakia was exporting a very diverse range of goods to the CMEA countries, instead of specializing in products where it held a comparative advantage). Thus the Novotny 'new technology' quote probably refers to the import of ('new' in relation to existing Czechoslovak techniques) Soviet military technology. The positive balance of trade in the early sixties is then explained easily as repayment for 'invisibles' in the form of production licences, and use of technical experts which were supplied by the Soviet Union in the early sixties at least,[3] as well as for commercial maritime transport services. (It should

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1 A table showing production of major weapons in Eastern Europe in the International Institute for Strategic Studies, *The Military Balance*, 1971-72, p. 74, indicates that missiles were not produced in Czechoslovakia, the GDR, or Poland. However the table itself may be unreliable because none of these countries is shown as producing aircraft, even under licence. Czechoslovakia certainly produced the MiG-21 under licence. Poland also produced military aircraft: Z. Pelczynski, 'The downfall of Gomulka', *CSP*, no. 1-2, 1973, p. 20; confirmed by L. Colitt, 'Poland's aircraft industry comes of age', *FT*, 10 August 1979, p. 2.

2 Lichnovsky (1966), pp. 189-190.

3 *ibid.*, p. 189.

be noted that this explanation remains valid whether or not arms are included in commodity trade statistics.)

Little other information on the production of major weapons in Czechoslovakia is available but there have been reports of Czechoslovak sales of torpedo boats to Egypt.[1] Despite the existence of a small boat-building industry in Bratislava, this seems unlikely. A SIPRI report of what is apparently the same transaction, identifies the seller as the Soviet Union.[2] Finally, the L-29 Delfin jet trainer, first produced in 1963 and apparently capable of being modified for combat,[3] was superseded by production of the L-39 trainer in 1972[4] or possibly even earlier.[5]

Information on the production of small arms in the postwar period is even more difficult to find than information on major weapons. The Zbrojovka plant in Brno was renamed the 'Jan Sverma Enterprise' sometime between 1948 and 1958.[6] From 1945 onwards, production there was increasingly reoriented towards typewriters, complete industrial plants (Zetor) tractors, ball bearings etc.[7] Whether the plant continued producing military small arms is

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1 'Czech torpedo boats delivered', *The Times*, 20 April 1956, p. 10. Also 'Mr Hammarskjold in Cairo', *The Times*, 30 April, 1956, p. 8.

2 SIPRI, *Arms Trade Registers,* Register 24, p. 45.

3 G. Thayer, *The War Business: the International Trade in Arms*, Weidenfeld and Nicholson, U.K., 1969, p. 161, claims that the two L-29 trainers sold to the Federal Nigerian government in 1967 " ... were equipped to carry rockets and bombs".

4 SIPRI *Arms Trade Registers*, p. 139. It is not stated whether production of the L-29 was discontinued.

5 L. Frank, *The Arms Trade in International Relations,* Praeger, N.Y., 1969, p. 56, refers to the L-39 as an armed version of the L-29. Because the publication date of the Frank book is 1969, there may be some doubt about the SIPRI date of 1972 as the first date of production.

6 ('Zavody Jana Svermy'). The official title in 1948 was still 'Zbrojovka Brno, a.s.'; *Uredni List*, part I, no. 72, 17 January 1948, p. 65. Also 'Tovarna ktera mladne', p. 4.

7 'Tovarna ktera mladne', p. 4.

difficult to judge. Up to 1958 at least it did manufacture sporting arms[1] and it seems unlikely that an established and successful arms plant would discontinue production. On the other hand, it may have been found convenient to build new arms plants, separate from Zbrojvka Brno, in 1950 when production of Soviet models began. Moreover, a report in 1958 of the award to Zbrojovka of the 'Order of Work' (Rad Prace) mentions among the awarding committee present at the ceremony - apart from the Party and government officials - only E. Zupka (President, Central Committee of the Trade Unions) and the Minister for general engineering, K. Polacek.[2] Unless reporting security was strict, one might have expected the attendance of the Minister for Defence, or at least a representative of the army, if arms were indeed being produced in large quantities. But the fact that Mausers were still available for export in 1960[3] suggests that some production lines of older model small arms had been retained, and because Zbrojovka had been a major producer, it is possible that such production occurred in Brno. It is logical to expect plants equipped to produce arms to continue in such production where they are 'profitable' in terms of foreign exchange earned. Another producer of sporting arms and ammunition is Blanicke Strojirny[4]; and Zbrojovka Vsetin advertised 'pyrotechnic products' in 1968.[5] A munitions factory also exists in Horovice, near Prague.[6] However, little other information on small arms production is readily available.

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1 *ibid.*, p. 4.

2 'Rad prace zavodum J. Svermy v Brne', *RP*, 30 November 1958, p. 1.

3 Thayer (1969), p. 80, who claims that in 1960, Sam Cummings, President of Interarmco, imported Mausers from Omnipol in an (unsuccessful) effort at obtaining a U.S. State Department import licence.

4 Radio Free Europe, *Czechoslovak Situation Report/15*, 16 April 1975, p. 10. The source is given as *Hospodarsko-politicka rukovet*, Ceteka, Prague, 1967.

5 *Facts on Czechoslovak Foreign Trade*, 1968, advertising section.

6 *EE*, December 1962, p. 44. Source is given as *Sunday Telegraph*, 4 November 1962.

Apart from missiles (above), further brief mention must be made here of the fact that Czechoslovak arms production is probably influenced by membership of the Warsaw Treaty Organisation (WTO) - established in May 1955 - and which apparently includes a Committee for Coordination of Weapons and Technology,[1] although little is known of this latter body. An example of possible specialization in arms production among WTO members is the equipping of Czechoslovak-made howitzers with optical sights manufactured in the GDR.[2] The pattern of exports of major weapons to the developing countries[3] also suggests that Czechoslovakia specialised in tank and aircraft production and that Poland produced naval vessels and helicopters. (Poland did produce aircraft for the WTO however: p. 268, fn. 1. One reason forthe division of labour within WTO may be to ensure that no one East European country, except the Soviet Union, is capable of supplying all its defence requirements. It is also obvious from Table 4.12 and from SIPRI Arms Trade Registers that missiles - the actual firepower as distinct from delivery systems - were supplied to LDC's only by the Soviet Union.[4] Although the reason is probably the desire on the part of the Soviet Union to control the aggressive potential of arms recipients[5] for reasons of foreign policy, the effect on Czechoslovakia seems to have been to make unavailable for export the advanced weapons systems demanded by many developing countries. Apart from the L-39 Delfin, neither Czechoslovakia nor Poland delivered any major

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1 L.T. Caldwell, 'The Warsaw Pact: Directions of Change', *Problems of Communism,* September-October 1975, figure 1, p. 8.

2 Heiman (1964), p. 10. Caption beneath photograph.

3 SIPRI, *Arms Trade Registers,* 1975.

4 Heiman (1964), p. 10, is in agreement with this observation: "Ammunition for naval guns came from Poland, but naval rockets and guided missiles are being sent directly from the USSR".

5 For example, A. el-Sadat, *In Search of Identity,* Collins, London, 1978. India was also forbidden in 1971 to supply Egypt with Mig-21 aircraft parts manufactured under licence (Sadat, p. 212). Also 'Sadat shops', *The Economist*, 17 April 1976, p. 43.

weapon of post-1963 design to the developing countries. It is this factor which has probably been the main reason for the decline in importance of Czechoslovakia as a major weapons exporter (section 4.6).

Finally, though apparently not in possession of nuclear weapons itself, Czechoslovakia may have (probably unwittingly) helped at least one country - India - in the development of such arms. In this case a transfer of technology rather than of physical goods would have been involved - unless uranium was also sold - so that estimates of the value of such aid or trade cannot easily be made. As far as is known, only one article appeared in the Czechoslovak Press: a report of the visit by President Novotny to the Trombay plant near Bombay on his tour of India in 1966. The author of the article admits that " ... from an inspection of the plant and from information obtained there is a clear possibility of its rapid conversion to the production of atomic energy for purposes of war ... "[1]. It is stressed however that it is only the peaceful uses of atomic enegy which Czechoslovakia supports, as is emphasized by the " ... Czechoslovak-Indian agreement on cooperation in the peaceful use of atomic energy and President Novotny's visit on Saturday ... had no other aim than to confirm this".[2]

4.3.3 Foreign Policy and Arms Sales

Three broad periods in Soviet strategic policy are distinguished by the Stockholm International Peace Research Institute (SIPRI):

> "First, during an initial phase the Soviet Union's dominant concern was to weaken the military alliances which the West was forming round its borders. Secondly, Soviet arms supplies were provided to other countries where the Soviet Union considered it had some strategic interest. Finally in recent years the Soviet Union has negotiated arms agreements more generally, as part of its apparent readiness to compete for influence on a worldwide basis". [3]

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1 B. Homola, 'V indickem atomovem stredisku',*RP*, 20 November 1966, p. 3.

2 *ibid.*, p. 3.

3 SIPRI, *The Arms Trade with the Third World,* Almqvist and Wiksell, Stockholm, 1971, p. 196.

Czechoslovak foreign policy has conformed closely to that of the Soviet Union and this conformity is reflected in a similar geographic pattern of major weapons exports,[1] despite the lower Czechoslovak levels of such sales. Moreover, it is significant that no major weapons were sold by any other East European government to any developing country which was not also supplied by the Soviet Union at some time in the postwar period. It might reasonably be argued therefore that the sale of major weapons - which were of strategic importance and hence important in Soviet foreign policy - were probably subject to Soviet approval. Czechoslovakia has also acted as an intermediary for the Soviet Union: the 1955 sale of arms to Egypt is the best known case. Not only were some developing countries probably more willing to purchase Czechoslovak arms rather than (Superpower) Soviet ones to avoid compromising their non-aligned status; but such sales were also a method of testing Western reactions without directly involving the Soviet Union. Such mediation in arms sales is probably of little significance now because the Soviet Union is accepted as a supplier of arms. Moreover, because weapons such as missiles are probably not available for independent sale by Czechoslovakia, there is little reason for it to be used as an intermediary.

Only in two instances does there seem to have been any espousal of an independent policy by Czechoslovakia. On the 26 April 1968, the Czechoslovak Press Agency CTK released the following statement:

> "The Ministry of Foreign Affairs has made known ... that the Czechoslovak ambassador in Lagos has been instructed to explain to the Nigerian Federal military government the Czechoslovak position on supplies of military equipment. The Ministry's spokesman explained that, apart from the six L-29 trainer aircraft sent to Nigeria in the summer of last year, the supply of military material from Czechoslovakia has not and will not be continued ..."[2]

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1 SIPRI, *Arms Trade Registers*, 1975, Table 2A.4, p. 154; and Table 2A.9, p. 157.

2 'Jiz zadna cs. letadla do Nigerie', *RP*, 27 April 1968, p. 1. No further explanation was given at the time.

The second occasion of a break with Soviet policy apparently occurred three months later:

> "In October [1968] Czechoslovakian arms were again supplied to the UAR as a result of Soviet pressure. Such supplies were stopped in June by Czechoslovakia, because of the inability of the Egyptians to pay their debts. Officially, the Czechs claimed that they wanted to reduce their arms industry, as part of the planned changes in their economy ... the renewal of such supplies was a sign of 'normalisation' of relations between the Soviet Union and Czechoslovakia."[1]

That both departures from established policy occurred between March and September 1968 shows that they were merely aberrations and the general principle put forward above remains true. As a corollary to this, there is an interesting anecdote which shows that the Soviets, even in 1968 still retained some power of veto[2] over proposed sales, even though they could not force sales Prague was unwilling to make:

> "As 1967 gave way to 1968, Soviet attempts to drive a wedge between Bakalar [a Syrian agent's codename] and myself escalated. At that time Syria was interested in getting a large delivery of Czech anti-aircraft guns ... and were prepared to pay hard dollars for them. The deal had nearly gone through when suddenly the Soviets stepped in and said 'nyet': the delivery of the guns would weaken the Warsaw Pact's defensive capability. Assad immediately sent Bakalar to Prague to obtain my help in the matter. Naturally, Bakalar said, the continuation of our relationship depended on the delivery. I took the matter up with the State Secretary of the Ministry of Defence ... but the next day he informed me that ... the Russian Embassy in Prague had once again vetoed the shipment. But the General's look showed me just how threadbare he thought the Soviet excuse".[3]

There is some evidence that major weapons are sold primarily to developing countries politically close to the Soviet Union, a not unexpected

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1 A. Yodfat, 'Arms and influence in Egypt: the record of Soviet military assistance since June 1967', *The New Middle East*, no. 10, July 1969, p. 28.

2 The effectiveness of the veto was probably due to a large extent to the fact that the Czechoslovak government, despite the reforms, was still eager to prove that it did not intend to weaken the Warsaw Pact or to repudiate it. H. Skilling, *Czechoslovakia's Interrupted Revolution*, Princeton University Press, 1976, pp. 634-642.

3 J. Frolik, *The Frolik Defection*, Leo Cooper Ltd., London, 1975, p. 129.

phenomenon. A statistical test was used to determine whether LDC recipients of major weapons supplied by Warsaw Treaty countries in the years 1960-1973, showed higher levels (as a group) of United Nations voting affinity[1] with the Soviet Union than that group of countries which had not received major weapons from either Eastern Europe or the Soviet Union. Of the 41 LDC's included in the sample 20 (n_1) had received such arms and 21 (n_2) had not. The value obtained for the Mann-Whitney U was 64, which yielded a z-value of 2.105, a result (as large or larger) likely to occur in only sixteen cases out of a thousand (on a one-tailed test).[2] The Null hypothesis - that the political affinity of the 'arms recipients' group did not differ from that of the 'non-recipients' - was therefore rejected in favour of the alternative hypothesis that arms recipients were more likely to have higher voting affinities with the Soviet bloc,[3] although the test itself cannot establish the direction of causation in this relationship.

Exports of small arms have probably been more independent of Soviet foreign policy. Such weapons are not of strategic value and are also easily available from Western suppliers. It thus seems natural to expect that commercial considerations would be of greater importance, because a Soviet veto on sales of such arms would not significantly hamper a developing country in acquiring them. One example of the sale of small arms without (apparently) prior Soviet knowledge was the 1966 Czechoslovak arms agreement with Cyprus,[4] although a threat by Turkey to recall its

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1 Data taken from Table 3.12 and classified according to receipt of non-receipt of arms in Table 4.12.

2 Where n_2 is larger than 20, the sampling distribution of U approaches the normal distribution. Siegel (1956), pp. 120-121.

3 W. Joshua and S. Gibert, *Arms for the Third World. Soviet Military Aid Diplomacy*, Johns Hopkins Press, USA, 1969, pp. 140-145 report similar discrepancies in voting affinity between LDC's receiving military aid from the Soviet Union and those not receiving such aid, for the period 1958-1964.

4 *The Times*, 5 December 1966, p. 1; 7 December 1966, p. 7.

ambassador from Prague[1] and protests by Greece to President Makarios seem to have stopped all but the first shipment. "Soviet Premier Kosygin, then in Ankara, professed ignorance of the transaction and said he would have disapproved".[2] Assuming his prior ignorance of the sale to be true - and there is no reason why every senior Soviet leader should be aware of every arms sale, even sensitive ones - his disapproval may not have carried much weight because Cyprus imported Czechoslovak arms again in 1972.[3] On the other hand, Soviet policy may have changed by then, so that a firm conclusion is not possible; although Soviet interests in the area, particularly with Turkey, suggest that such sales are carried out only with Soviet approval.

But there are other cases of small arms sales by Czechoslovakia of which the Soviet Union was apparently unaware. A sale of " ... machine guns and other items to the Lebanese Phalangists for use against Palestinian terrorists ..."[4] by Omnipol (through a French intermediary) apparently led to a rebuke from the Soviet government to the Czechoslovak government. Omnipol seems to have become more careful after this, but the result of its precautionary enquiry to Moscow before concluding an almost completed sale of Czechoslovak copies of NATO weapons to the Chilean military junta in 1975, was the insistence by the Soviet Union upon Omnipol in future obtaining prior approval for all sensitive sales from both the Czechoslovak Ministry of Foreign Affairs and the Czechoslovak Communist Party.[5]

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1 *The Times*, 15 December 1966, p. 10.

2 *EE*, February 1967, p. 45. Sources quoted are *Die Presse*, 16 December 1966, and *Neue Zurcher Zeitung*, 17 December 1966.

3 *The Economist*, 19 February 1972, pp. 38-39.

4 A. Terry, 'Czechoslovak arms for Chile blocked', *The Sunday Times*, 11 May 1975, p. 11. No reply was received to a request for further information.

5 *ibid.*, p. 11.

Further evidence of Omnipol's arms sales before 1975 comes from G. Thayer's interview with the head of the London arms firm Cogswell and Harrison, which often deals with Omnipol (according to Thayer):

> "Omnipol, he went on, is only an arms agency, but it can operate quite independently of the Czech political authorities because it is one of the country's major sources of foreign currency".[1]

A further piece of evidence of possible independence from the Soviet Union in East European arms sales is the report that:

> "As for the Bulgarian company Sintex, it supplied Monsieur Pinochet with Russian T54 and T55 tanks for $674,750 (contract number 1199K/S/S of 11 January 1975)".[2]

Citation of a contract number suggests authenticity, but the sale of major weapons, particularly in circumstances of potential embarrassment to the Soviet Union, must throw some doubt on this report. Nevertheless, it is still possible - though unlikely in view of the control of even Czechoslovak small arms sales - that such a sale did occur, especially if ammunition was not supplied. Control over ammunition and spare parts supplies effectively subjects weapons such as tanks to a high degree of control by the supplier.

Firm conclusions are obviously difficult, but it seems that Czechoslovak sales of major weapons have always been subject to Soviet foreign policy considerations, while up to about 1975 small arms exports were probably relatively uncontrolled and hence motivated primarily by commercial considerations.

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1 Thayer (1969), p. 112. The interview was conducted in 1969 or before.

2 M. Denuziere, 'Armes en tous genres - des negociants tres speciaux', *Le Monde*, 6 January 1977, p. 5. The article goes on to claim that Bulgaria also supplied arms to the Lebanese Phalangists so that it is possible that it is an inaccurate version of the article in footnote 4 page 276 (or vice versa). However the different types of arms reportedly involved and the citation of a contract number suggest authenticity. Denuziere did not respond to requests for further information.

4.4 THE POSTWAR TRADE IN SMALL ARMS

Small arms are defined by SIPRI as all arms excluding major weapons which are defined to include ships, aircraft, armoured fighting vehicles and missiles.[1] This is also the definition used in the present chapter in preference to the perhaps more common usage of small handguns - as distinct from rifles, ammunition etc. - which, for example, is employed by the United States Arms Control and Disarmament Agency (ACDA).[2]

4.4.1 Estimation of Exports from Trade Statistics

Official Czechoslovak sources do not publish separate data on the trade in small arms and estimates do not appear to have been made by any major research institute.[3] Table 4.7 presents the results of an attempt at estimating the export of Czechoslovak small arms from partner country import data. The figures are by no means complete and should be treated with the utmost caution for they are limited to foreign trade statistics available primarily in Rhodes House (Oxford), the Oxford Institut. of Economics and Statistics, and the Department of Trade (Ludgate Hill, London) libraries, in August 1977. (The disposal by the latter of its holding of pre-1962 publications limited the data period.) Furthermore, many countries - such as Egypt - which might have been expected to be important importers of Czechoslovak small arms did not publish relevant data, particularly in the case of military small arms. This is the major explanation for the apparently greater value of exports by Czechoslovakia of non-military arms.

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1 SIPRI *Arms Trade Registers*, 1975, p. 270.

2 United States Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers 1966-1975*, p. 8.

3 None of the following were able to satisfy requests for systematic data on the trade in small arms: SIPRI, MIT Centre for International Studies, Rand Corporation, United States Arms Control and Disarmament Agency, International Institute for Strategic Studies (London).

TABLE 4.7

OFFICIALLY REPORTED DEVELOPING COUNTRY IMPORTS OF CZECHOSLOVAK SMALL ARMS AND AMMUNITION 1962-1975: BY AREAS

(thousand U.S. dollars)[1]

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Non-military ammunition														
Asia	8	49	98	6	24	35	41	9	41	147	35	199	61	33
Middle East	168	92	104	78	212	198	204	169	77	120	284	220	44	248
South America	2	1	31	5	56	169	45	1	..	..	..	6	..	..
Africa	35	21	96	48	3	48	14	64	6	2	7	1	..	-
Total	212	163	330	137	294	449	304	243	123	269	326	426	105	280
Non-military firearms														
Asia	54	51	47	28	89	496	260	152	67	161	118	77	187	114
Middle East	30	10	9	10	15	39	98	33	5	12	284	220	44	248
South America	22	3	12	34	16	18	20	7	4	..	9	15	..	..
Africa	31	26	15	10	1	7	35	919	66	38	55	47	72	40
Total	137	90	83	82	122	560	413	1111	141	211	190	153	260	163
Military small arms														
Asia	-	1	..	..	..	..	..	-	..	..	..	..	..	..
Middle East	-	..	..	3	..	1	..	..	..	..	4	..	2	-
South America	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Africa	..	37	78	282	1	48	26	..	425	-	25	220	-	71
Total	-	38	78	285	1	49	26	-	425	-	30	220	3	71

Source: Aggregation of all data available in foreign trade statistics published by individual countries and available in August 1977 in libraries at Rhodes House, Oxford; Oxford Institute of Economics and Statistics; Bodleian; Department of Trade and Industry (Ludgate Hill, London). Countries included (for varying numbers of years): Afhanistan, Algeria, Angola, Argentina, Brazil, Burma, Cameroon, Chile, Colombia, Ecuador, Ethiopia, Gambia, Ghana, Guatemala, India, Iran, Iraq, Ivory Coast, Kenya, Kuwait, Lebanon, Libya, Malawi, Malaysia, Mexico, Morocco, Mozambique, Nigeria, Pakistan, Peru, Fed. Rhodesia and Nyasaland, Southern Rhodesia, Senegal, Sierra Leone, South Africa, Sudan, Syria, Tanzania, Thailand, Tunisia, Turkey, Uganda, Venezuela, South Yemen, Zambia.

1. Converted through rates in U.N. *Yearbook of International Trade Statistics*, various years.
2. A dash (-) signifies a value of less than $500.
3. Totals may not add due to rounding.

Despite the fact that the accuracy and reliability of the data in Table 4.7 must be subject to serious doubt for these reasons, the high level of exports of non-military arms and ammunition to the Middle East and Africa suggests that either many military arms are declared as sporting weapons, or that combatants in these two areas (e.g. in Lebanon) use hunting rifles as substitutes for military weapons of equivalent calibre and efficiency. A fact not evident from Table 4.7 itself is that the trade returns of LDC's frequently showed imports of both military and non-military arms and ammunition from Poland, the GDR and the Soviet Union, but nothing at all from Czechoslovakia. It is therefore possible that the competitiveness of other East European countries has limited Czechoslovak exports of small arms. Alternatively, the fact that Czechoslovak weapons are modelled on Soviet ones, may lead to confusion in the recording of imports by customs authorities. Misclassification may also occur where arms are transported in Soviet ships, or pass through Soviet depots. Another possibility is that during the late sixties and the seventies Czechoslovak production was destined mainly for Vietnam or Cuba. Bicycles specially constructed for the transport of ammunition and equipment were supplied to the former,[1] and arms may have therefore also been supplied as a general programme of military aid. There have also been reports of sales of military arms to Cuba on a commercial basis by the GDR and Czechoslovakia.[2] Equipment captured by Israel in June 1967 and subsequently sold on world markets,[3] may have further limited demand for Czechoslovak arms and ammunition.

Small arms are probably sold on a strictly commercial basis, although prices may be lower than those of comparable Western weapons:

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1 E. Ctiborova-Dostalova, 'Czech bicycles in the jungles of Vietnam'. Radio Free Europe Research, *Czechoslovak Press Survey*, no. 2383 (138, 139, 141), pp. 3-5. (Full translation of article in *Zemedelske Noviny*, 8 June 1971.)

2 A. Sylvester, 'East Europeans in Cuba', *EE*, October 1965, p. 7.

3 J. Stanley and M. Pearton, *The International Trade in Arms*, Chatto and Windus, London, 1972, p. 185, footnote 7.

> "As in economic aid, East European arms supply practices are, in general, commercially oriented. Reputedly, prices are usually as competitive as Moscow's, but credit terms less liberal and grants rare."[1]

But:

> "We may hear assertions to the effect ... that arms should not be sold to the developing countries like merchandise but should be supplied to them free of charge and in the amount required for their fight against the 'common enemy', etc."[2]

Arms are traditionally sold for hard currency; even the Soviet Union supplied arms and other military exports to Egypt for hard currency, although not all sales were made in this way.[3] There are therefore good grounds for believing that Czechoslovak arms exports are treated primarily as commercial deals, and should logically be expected to have been included - though possibly 'masked' - in foreign trade statistics.[4] Had there been an intention of excluding them, such sales would probably have been handled by a separate government agency - possibly using a variant of the 'note-pass' system[5] - because official Czechoslovak trade statistics are based on customs declarations made by foreign trade enterprises engaged in export.

An attempt was therefore made to identify arms sales from official trade statistics. Table 4.8 presents the data available. Unfortunately 'explosives and pyrotechnic products' (SITC 571) obviously includes industrial explosives

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1 United States Department of State, *Communist States and Developing Countries: Aid and Trade in 1973*, research study, INR RS-20, 10 October 1974, p. 14. Sadat (1978), p. 144, refers to Soviet credits for military supplies extended at 2½% interest.

2 J. Sedivy, 'Our foreign policies', Radio Free Europe Research, *Czechoslovak Press Survey*, no. 1703 (280), pp. 19-20. Translation of article in *Veda a Zivot*, no. 9, 1965: the original source could not be verified because it was not readily available.

3 M. Heikal, *The Road to Ramadan*, Collins, London, 1975, pp. 65, 161-2, 167.

4 Marer (1972), p. 357, also argues that military hardware is included in foreign trade statistics.

5 Used by the Indian Government to avoid the recording by Customs of arms imports. Datar (1972), p. 103.

TABLE 4.8 EXPORTS OF SELECTED SITC CLASSIFICATIONS

(million koruny)[2]

SITC classification.[1]	Row	Area	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
571	(1)	total	35	44	47	50	56	37	44	75	100	121
	(2)	socialist	10	14	14	12	20	16	22	26	26	30
	(3)	other	26	30	33	38	36	22	23	49	74	91
9	(4)	total	25	101	118	158	259	84	147	37	67	100
	(5)	socialist	4	65	73	53	178	53	34	3	34	54
	(6)	other	21	36	46	104	81	31	113	35	33	47
9-931-941	(7)	total	0	0	0	0	7	49	1	2	2	1
	(8)	socialist	0	0	0	0	7	49	0	0	0	0
	(9)	other	0	0	0	0	0	0	1	1	1	1

Source: Rows (1) to (9). *Facts on Czechoslovak Foreign Trade*, various years.

[1] 571 : explosives and pyrotechnic products.
9 : SITC section 9, commodities and transactions not classified according to kind.
931 : special transactions not classified according to kind.
941 : animals n.e.s. (including zoo animals, dogs and cats)
9-931-941 : section 9 minus groups 931 and 941.

[2] Totals may not add due to rounding.

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and is anyway not given for LDC's separately. If this section does indeed include ammunition exports, it is not possible to separate them out. Military weapons are classified in the SITC scheme in division 95 of section 9. Because data were available for the total (section 9) and for groups 931 and 941 in official Czechoslovak data, residuals were calculated. Group 931 is unspecified in *Facts on Czechoslovak Foreign Trade*, but may include complete industrial plants.[1] Group 941 on the other hand, consists of unspecified live animal exports. The residual of section 9 - after groups 931 and 941 have been netted out - should presumably consist only of exports

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[1] A four-digit breakdown of trade with LDC's for 1966-1967 classified all section 9 exports into group 931. Ministerstvo Zahranicniho Obchodu (1968). *SR*, 1972, p. 443, on the other hand, used other groups (e.g. 901 to 907) for complete industrial plants.

of arms (division 95), and other items (relatively unimportant in exports to the West) such as 'postal packages not classified according to kind' (division 91) and 'coin other than gold, not being legal tender' (division 96). Rows (7) and (9) in Table 4.8 give the results of these calculations. Data there are given in million koruny, but even at a greater level of detail (thousand koruny) residuals for 1966-1969 were zero. Because it is unlikely that arms exports were zero in this period (Vietnam, Egypt, Syria), it is reasonably certain that this method of identifying exports of military arms is unreliable. It is thus possible that arms are included in trade statistics among other manufactured goods but it is an inescapable conclusion that the identification of Czechoslovak arms exports to LDC's directly from SITC section 9 and group 571 is not feasible.

4.4.2 Arms Imports - a Division of Labour ?

Table 4.9 shows that Czechoslovakia also imported arms of a military nature from at least one developing country: India. Unfortunately, the only classification given for these exports in Indian trade statistics is the SITC classification 9510400 and the accompanying title showing that the weapons are composed of side arms and parts. It is thus not possible to tell whether they are complete weapons or only parts. In either case this trade does represent some form of international division of labour in an industry which might have been expected to be limited to Eastern Europe. (India also produced Czechoslovak-designed OT-62A armoured personnel carriers during 1969-1972 under licence.[1] It is possible that to achieve economies of scale, there is some form of 'buy-back' agreement on small arms or even for major weapons. There were reports in 1978 that the successful European tenderer for the supply of aircraft to India would be required not only to produce them in India, but also to purchase some of the items produced.[2]

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1 SIPRI *Arms Trade Registers*, 1975, p. 37.

2 'India wants warplanes to be built at home', *The Times* 10 February 1978, p. 9.

TABLE 4.9 INDIAN EXPORTS OF AMMUNITION AND FIREARMS TO CZECHOSLOVAKIA

(U.S. dollars)[5]

Year[4]	hunting & sporting ammunition[1]	non-military firearms (hunting & sporting)[2]	military firearms. Sidearms and parts.[3]
1961-62	-	-	-
1962-63	-	-	-
1963-64	-	-	-
1964-65	-	-	-
1965-66	-	-	-
1966-67	-	-	-
1967-68	-	-	-
1968-69	-	..	14,436
1969-70	-	..	2,946
1970-71	..	-	-
1971-72	-	-	12,458
1972-73	..	391	51,728
1973-74	-	-	47,442
1974-75	-	-	49,741
1975-76	-	-	35,225

Source: *Monthly Statistics of Foreign Trade of India.* (Department of Commercial Intelligence and Statistics, Calcutta.)

1. SITC classification: group 591 and 574 SITC (revised).
2. Group 691 SITC and 894 SITC (revised).
3. All entries refer to item 951040.
4. Year ending March.
5. Using conversion factors given in U.N. *Yearbook of International Trade Statistics* for 1961-75 and *Monthly Bulletin of Statistics* for 1975-76.

A similar report has also appeared suggesting that India approached the Soviet Union to buy back certain MiG parts produced under licence.[1] It is difficult to believe on the one hand that Czechoslovakia would allow its defence requirements to be dependent on such a distant country. On the other hand, however, the amounts involved are relatively small, and may be logistically insignificant.[2] Nevertheless, such imports may be further evidence of the declining importance of Czechoslovak arms production and exports (section 4.6).

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[1] Intelligence Report, *FEER*, 21 April 1978, p. 5.

[2] Private sources have suggested that some of these imports may have consisted of webbing equipment as well as small arms.

4.5 MAJOR WEAPONS EXPORTS IN THE POSTWAR PERIOD

Attempts have been made in the past to discern or to estimate the value of Soviet arms sales from general trade figures. Ra'anan points, as other writers have, to significant increases in imports of Egyptian cotton by both Czechoslovakia and the Soviet Union, after the 1955 'arms for cotton and rice' deal.[1] Nove and Matko, suggested in an article written in 1962, that incompletely specified Soviet commodity trade classifications for some items were far greater for exports than for imports and could possibly reflect arms sales.[2] Nove later also pointed out that when Soviet imports from LDC's were aggregated they were compatible with totals given separately in the foreign trade statistics, but aggregate exports showed extremely large differences to totals.[3] It was implied that the residual was due to arms exports to developing countries; and in a more systematic study of Soviet trade statistics, Marer reached a similar conclusion.[4]

Datar attempted to identify Soviet bloc arms sales to India by comparing Indian and Soviet bloc trade returns. The significant discrepancies remaining after adjustments, she attributed to sales of arms, especially for the period after 1962 when Indian imports of weapons became significant.[5] But she found trade reporting by all East European countries other than the Soviet Union to be compatible with Indian returns, implying

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1 U. Ra'anan, *The USSR Arms the Third World: Case Studies in Soviet Foreign Policy*, M.I.T. Press, Massachusetts, 1969, p. 149.

2 A Nove and D. Matko, 'The pattern of Soviet trade', *Three Banks Review*, no. 53, March 1962, p. 19.

3 Nove (1968), pp. 350-351; and Nove (1978), p. 17. However, in his *The Soviet Economic System*, Allen and Unwin, London, 1977, Nove appears to omit any reference to unexplained residuals as a means of identifying arms exports.

4 Marer (1972), pp. 360-368.

5 Datar (1972), pp. 92-103.

that there had been imports of arms from the Soviet Union alone.[1] This conflicts with SIPRI reports[2] (published after Datar) of the import by India of 225 tanks in 1968-1971, but these sales were at the very end of the Datar statistical period, and actual prices paid may have been far lower than SIPRI values so that discrepancies in trade returns may have been relatively small.

Datar also tried an alternative method of detecting arms sales. The existence of the 'Note Pass System' in India means that a government department may import goods and bypass customs inspection. Comparison with separate Indian financial statistics revealed that the undervaluation of imports due to use of the Note Pass System was greatest for the Soviet Union, but:

> "There were three main suppliers of defence equipment ... Yugoslavia, Czechoslovakia and the USSR. India imported mainly non-combatant defence equipment from Czechoslovakia, which is recorded in the Customs statistics."[3]

Unfortunately, this latter method of detection of arms sales relies on the vagaries of the Indian system, and is therefore not applicable to the developing countries as a whole.

Five different attempts are made below at identifying exports of major weapons by Czechoslovakia to developing countries. Some of the methods discussed above are utilised. but there is an added advantage gained by the introduction into the analysis of independent SIPRI reports of sales of major weapons. It is assumed throughout that major weapons - defined here identically to SIPRI practice as ships, aircraft, armoured fighting vehicles and missiles - are 'lumpy' compared with small arms, because they tend to come in spurts rather than continuously and because of their greater unit values. For this reason too, Czechoslovakia provides a better

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1 *ibid.*, pp. 92-93.

2 SIPRI *Arms Trade Registers*, 1975, p. 37.

3 Datar (1972), p. 96.

case study than the Soviet Union. The former's sales of major weapons have been less frequent and have occurred over shorter periods of time so that discrepancies or sudden large aberrations in export or import data are more easily identifiable.

4.5.1 Machinery Exports and Armaments

An unsuccessful attempt was made in section 4.4.1 to identify arms exports in section 9 of the SITC classification, but it is possible that arms are exported under the guise of 'machinery' for reasons of secrecy. A breakdown of imports and exports to many LDC's is available for 1966 onwards. By comparing export data broken down by SITC sections with sales reported by SIPRI, an attempt was made at testing the 'arms as machinery' hypothesis. It should be noted that this method is entirely distinct from that adopted by Nove and Matko in 1962 and by Marer in 1972, who compared the sum of the components of a given trade classification with the total value given.[1] Their method is not entirely reliable because unspecified residuals may sometimes consist of commodities other than arms; Polish imports of tobacco from Bulgaria in 1967, for example, were not reported, leading to a doubling of unreported trade on the previous year.[2] Czechoslovak statistics for each SITC (single digit) section for developing countries are invariably incompletely specified, so that use of this method would be so inaccurate as to be almost useless because the degree of error could not realistically be estimated.[3]

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1 A data bank produced by Professor J. Vanous (University of British Columbia) also estimates residuals in machinery exports. Unpublished *Data Bank of Project CMEA - Fortram.*

2 Hewett (1974), p. 67, footnote 3.

3 A general impression gained during the collection and collation of Czechoslovak trade statistics was that trade was often unpublished or unspecified unless it was obviously 'permanent' and so warranted inclusion. Occasional exports or imports were often unpublished in relevant yearbooks. Only in later editions, when it had become apparent that the trade was not an aberrant or a minor phenomenon, were such figures retrospectively published in time series.

According to SIPRI, exports of Czechoslovak major weapons occurred between 1966 and 1975 for only seven LDC's: Egypt, India, Morocco, Nigeria, Sudan, Syria and Uganda. Because suitable trade data were unavailable for the latter, however, it was excluded from the analysis. Table 4.10 provides export data in million current koruny - which were preferred to $U.S. because changes are more easily observable - and dates[1] of major weapons exports, some of which are not certain. Syria provides the clearest example of the application of our methodology. It received (probably) 20 L-29 Delfin trainers in (probably) 1972 according to SIPRI. Uncertainty about the date means that a delivery in 1971 may have been possible, which would coincide well with a sudden increase in exports due primarily to an increase within section 7. Unfortunately, only 17 million koruny of exports are specified for section 7 for 1971.[2] The remainder must simply be treated as an 'unspecified residual', although there is no direct evidence of this residual being of a military nature. Nigeria reportedly received 10 MiG-17 aircraft (supplied jointly with the Soviet Union); and 12 L-29 Delfin aircraft (cost $205,000 each)[3] from Czechoslovakia alone, in 1967. However exports show no increase until 1969, although it is reasonably certain that the aircraft were in fact delivered in 1967. Moreover the increase in 1969 is not commensurate with the cost of the aircraft and represents a permanent increase in trade. Thus the methodology adopted here is patently unsuccessful in identifying arms sales to Nigeria, although the Czechoslovak reluctance to supply the aircraft (section 4.3.3) may have led to secrecy through exclusion from trade returns. Sudan received (probably) 60 OT-64 armoured

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1 Dates in the discussion are all taken from SIPRI *Arms Trade Registers*, 1975, and privately communicated information for India 1974-75.

2 *Facts*, 1973, p. 144.

3 This price is given in SIPRI *Arms Trade Registers*, 1975, p. 82. It is approximately confirmed by an earlier source which gives the unit cost as $238,000: Thayer (1969), p. 161.

TABLE 4.10

SITC SECTION 6 AND 7 EXPORTS FROM CZECHOSLOVAKIA TO SIX RECIPIENTS OF MAJOR WEAPONS

(million koruny)

Country	SITC sect.	Row No	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
India	total	(1)	324	253	281	276	270	406	349	273	342	337
	6	(2)	62	45	34	25	25	40	40	41	68	117
	7	(3)	245	189	231	232	208	345	295	219	262	192
Egypt	total	(4)	270	192	207	391	554	391	587	393	621	430
	6	(5)	43	38	33	14	103	85	68	49	217	148
	7	(6)	203	133	157	324	422	270	490	320	347	216
Syria	total	(7)	62	113	171	147	191	265	199	164	241	307
	6	(8)	13	10	30	69	73	39	57	34	105	103
	7	(9)	46	98	136	68	112	219	134	125	129	196
Morocco	total	(10)	30	31	16	23	20	75	23	28	43	66
	6	(11)	21	18	10	12	11	10	7	9	15	30
	7	(12)	4	10	3	9	5	56	5	7	12	13
Nigeria	total	(13)	29	25	23	49	49	41	36	34	40	77
	6	(14)	11	15	11	13	25	15	7	9	11	23
	7	(15)	2	3	6	29	18	10	14	6	9	24
Sudan	total	(16)	24	15	15	22	26	49	33	27	21	33
	6	(17)	6	7	7	5	6	17	10	13	7	6
	7	(18)	10	3	3	8	17	28	18	13	11	26

Sources: *Facts on Czechoslovak Foreign Trade*, various years; and Ministerstvo Zahranicniho Obchodu (1968).

[ ] indicates a period of delivery of major weapons from Czechoslovakia to the relevant LDC. Information taken from SIPRI *Arms Trade Registers*, 1975, and information supplied privately by SIPRI. Some dates not certain: see text.

total : refers to total exports to the relevant LDC by Czechoslovakia
section 6: manufactured goods, classified chiefly by material
section 7: machinery and transport goods.

personnel carriers in (probably) 1970, according to SIPRI. Exports almost doubled in 1971 and were higher in 1972, but whether this is due to arms exports is unclear, for they also increased in 1975 though no arms sales are reported by SIPRI for that year (but this may simply be lack of information). Similarly, Morocco, which received 80 T-54 tanks in 1967-68 and 94 OT-64 APC's in (probably) 1968-70, shows no increase in exports until after this period. The Egyptian and Indian cases are equally unencouraging although both show some increase in exports towards the end of the period when arms were apparently delivered. The Egyptian case is further complicated by the apparent delivery in 1970 and 1972 of (probably) non-combatant equipment designated as 'military aid' (section 5.4 below) for the building up of Egyptian defence potential.

It is necessary therefore to conclude that deliveries of major weapons do not in general coincide with an increase in exports, and such increases which do occur may anyway be insufficient to reflect the prices of major weapons. Nevertheless, there does seem to be some associated increase of exports in or after periods when arms have been delivered. Though merely conjecture, it is possible that supporting equipment - perhaps transports, maintenance equipment, shelters etc. - is exported together with arms, and that such equipment is recorded in export statistics while arms are not.

4.5.2 Arms Repaid in Commodities (Barter)

An analogous method to that in section 4.5.1, but one which proceeds from a diametrically opposed assumption is that arms are *not* shown in export statistics, but that Czechoslovak imports rise after the period of sales as a reflection of repayment. It is implicitly assumed - despite some evidence to the contrary[1] - that major weapons, unlike small arms sold in smaller

[1] Heikal (1975), pp. 65, 161-162, 167; states specifically that Egypt repaid Soviet exports in hard currency. But Sadat (1978), makes no mention of the method of repayment except on p. 144 where he states that 2½ percent interest was charged on loans for arms sales by the Soviet Union. This suggests a 'soft' loan, analogous to those used in economic aid, repayable in commodity exports. Moreover the capacity to pay of many LDC's would be insufficient for cash repayment.

quantities, are not paid for in cash. Because only total imports need be examined, the data period available is longer than that for Table 4.10. Table 4.11 presents ratios of Czechoslovak imports to exports for countries to which it sold major weapons in the period 1955-1975. The ratio of imports to exports (M/X ratio) was preferred to balance of trade data both for reasons of clearer tabulation and because it approximately eliminates increases due to inflation, or to general growth in trade.

Theoretically, repayment for large deliveries of weapons would appear as M/X ratios with values above 'normal' levels in the years immediately following a sale. However the results of Table 4.11 are not very encouraging in this respect: arms sales could not be easily and accurately identified without extraneous information such as SIPRI reports. It is possible that payment is cometimes in cash, so that uniform effects should not be expected in the M/X ratio. Not even Egypt shows clear signs of repayment after the 1955 'arms for cotton and rice' sale. Moreover, general instability in annual imports and exports may lead to random fluctuations in the M/X ratio, magnified as a result of fluctuations in opposite directions of the two components of that ratio. The Indonesian case, particularly for 1966 onwards also leads to uncertainty because the increase in the M/X ratio is due to a sudden falling-off of exports rather than an increase in imports. Furthermore, repayment of economic credits (concessional loans: chapter 5) will obviously affect M/X ratios. In the Nigerian case, there was a sudden large increase in imports in 1966, the year before the sale of aircraft was made. It must therefore be concluded that arms sales cannot be reliably identified from apparent repayments in commodities.

4.5.3 Three Other Methods of Identifying Arms Sales

Three other methods of identifying arms sales were examined. One of these - an attempt at identification from defence expenditure per man in the armed forces in recipient countries - was hampered by data

TABLE 4.11

CZECHOSLOVAK IMPORT TO EXPORT RATIOS[1] IN TRADE WITH RECIPIENTS OF ITS MAJOR WEAPONS

Recipient	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Egypt	1.18	1.39	1.82	3.36	1.14	1.10	1.82	1.09	2.48	1.02	1.18	1.10	0.92	1.32	1.49	1.34	0.68	0.50	0.75	0.63	1.08	1.34	1.29
Guinea	..	..	..	..	..	..	0.52	0.63	0.50	0.79	4.67	5.00	7.20	2.38	2.67	4.25	..	..	4.20	1.25	2.57	1.67	0.29
India	1.48	1.16	0.62	0.37	0.76	0.79	0.80	0.62	0.70	0.64	0.90	0.64	0.73	0.87	1.19	1.10	1.13	0.97	0.65	1.12	1.47	1.49	0.98
Indonesia	0.75	0.75	1.88	0.18	0.27	0.71	0.64	0.83	0.51	0.55	0.67	0.96	0.45	2.15	8.00	4.33	2.00	2.17	2.75	4.40	1.20	9.57	4.43
Iraq	0	0	0	..	..	..	..	0.28	..	..	..	..	0.06	0.07	0	0.04	0.01	0.02	0.01	0.00	0.47	0.31	0.17
Morocco	0.60	0.09	0	..	..	..	0.93	1.33	1.00	0.89	0.68	1.64	1.27	1.63	1.45	3.13	2.17	2.60	0.64	1.96	1.11	2.00	1.88
Nigeria	..	..	..	..	..	..	..	0.54	0.41	1.19	0.63	1.52	1.61	2.24	0.88	0.43	0.10	0.12	0.10	0.19	0.12	0.25	0.05
Sudan	0.07	0.11	0.94	..	..	..	1.31	1.76	1.00	1.00	1.37	1.08	2.06	1.33	1.47	1.47	0.45	1.00	0.27	0.85	0.67	1.62	0.43
Syria	0.57	0.55	0.89	..	1.88	0.40	1.59	1.79	..	0.81	0.93	0.55	0.56	0.15	0.12	0.04	0.11	0.16	0.07	0.22	0.33	0.55	0.26

Source: *Facts on Czechoslovak Foreign Trade* and B. Körner, *Zachranicni Obchod s Rozvojovymi Zememi 1943-1955*, VSE, Prague, May 1969.

1 The figure 0 indicates no or negligible imports but non-zero exports.

[ ] Represents perjod of known sales of major weapons according to SIPRI: privately communicated for 1974-75 and in *Arms Trade Registers*, 1975.

limitations.[1] However even where sufficient time series data were available, the results were not particularly useful: it is obvious that there are too many factors other than Czechoslovak arms sales which affect defence expenditure per man. A second method involved the comparison of Czechoslovak export statistics (f.o.b.) with import statistics (c.i.f.) of partner countries minus 10% for adjustment to f.o.b. values. Not surprisingly - the limitations of such an approach are apparent from the discussion on mirror estimates in section 1.5.5 - this method also failed to produce reliable results.

Finally, there is the 'unexplained residual' which occurs when independently given total exports to LDC's are compared with aggregate exports summed over individual LDC's. Because the same is not true for imports, and because the 'unexplained residual' does not occur for exports to the developed West or to Comecon countries, it has been suggested that the residual represents arms exports. It was concluded in section 1.5.4 however, that such an explanation was not entirely satisfactory and that the problem could not easily be resolved. The possibility remains that 'unexplained residuals' do reflect sales of arms, but further evidence would be required before drawing definite conclusions in the Czechoslovak case.[2]

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[1] Data were available primarily in the United States Arms Control and Disarmament Agency annual publication *World Military Expenditures and Arms Transfers*. Other sources of information include the International Institute of Strategic Studies (London), *The Military Balance* (annual); G. Weeks, 'The armies of Africa', *Africa* (London), January 1964, pp. 4-21; and Coward (1964), appendix II.

[2] It is generally accepted by both academic and by non-academic sources that the 'unexplained residual' in Soviet exports does in fact reflect arms sales.

4.6 ARMS AND TRADE

It is clear from the results of section 4.5 that the estimation of arms exports from Czechoslovak trade data is unreliable. It is therefore preferable - and indeed necessary - to utilise information collated by specialized research bodies; in particular SIPRI and ACDA. Data published by the former are the more detailed because individual sales are recorded, whereas ACDA publishes only final value estimates. On the other hand, SIPRI data are limited to major weapons (Table 4.12). However this is probably an advantage from the point of view of accuracy, because little information is available on small arms sales and the ACDA figures - which ostensibly include all arms sales - do not reveal either the method of estimation or of valuation and must therefore be taken at face value or not at all.

A major problem concerns the valuation of known arms sales. The point is an academic one where (unknown) small arms sales are concerned, but is important in the case of major weapons sales published by SIPRI. It is not proposed to discuss here all the various problems associated with pricing known arms sales: there is neither sufficient statistical information available to make use of any conclusions, nor is there an ideal solution to the pricing problem. Nevertheless, a few brief comments are in order, because of the importance of the form of pricing to conclusions drawn on the basis of value figures for arms sales. Some of the characteristics of the trade in major weapons are similar to trade in machinery and thus also to associated pricing problems. Firstly, for political and military reasons, there is often a very narrow world market for sophisticated weapons. On the other hand, weapons are produced by or on behalf of the government sector; they are not even freely traded domestically in the way that computers might be in the United States. Prices are therefore even less 'market determined', and hence less 'objective' because of hidden subsidies in research and

development etc. Secondly, technological progress is an important determining factor of price, particularly in the case of superseded weapons. Thirdly, the high degree of product differentiation influences relative prices. Even two substantially identical weapons may command different prices, for example, if one of them has been 'blooded' in a war.[1]

Two broad methods of valuing arms are conceptually possible: military values and monetary values.[2] The first of these is a non-monetary measure which gives the value of a weapon in a military situation, that is, its destructive power or supportive role in conjunction with other weapons. However estimation of such values would suffer not only from subjectivity - many major weapons have never actually been used in real wars - but would need to take into account all the possible situations in which a specific weapon might be used. Monetary values are probably easier to calculate, but the purpose for which such estimates are to be used is a major determining factor. If, for example, the purpose of estimation of weapons prices is to obtain 'comparable prices' - adjusted for speed, weight, role, etc. - for comparisons of the relative international importance of arms suppliers, prices will differ from those intended merely to represent the domestic economic burden of arms production and sales to any one country. In the case of the socialist economies, even the estimation of the domestic economic burden is difficult because of the methods used in determining domestic prices.[3] Finally, even where actual sale prices are known, the relative economic value of a sale to either the recipient or the supplier may be difficult to calculate because of the wide use made of barter transactions, concessional credit terms, and so on.

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1 SIPRI *Yearbook*, 1978, p. 227.

2 SIPRI, *Arms Trade Registers*, p. 173.

3 See for example the discussion on pricing problems in G. Ofer, 'The Economic Burden of Soviet Involvement in the Middle East,' *SS*, January 1973, pp. 329-347.

TABLE 4.12 THE SUPPLY OF SOVIET-BLOC MAJOR WEAPONS TO DEVELOPING COUNTRIES, 1950-1973

Country/Year of Czech delivery	Weapons delivered by Czechoslovakia	Dates of delivery of weapons by USSR	Other E. European deliveries (excl. Yugoslavia)
Burma	–	1963	–
Indonesia			
1958-60	(30) Mig-15 UTI	1958-65	
	(30) Mig-17		4 ex-Soviet dest-
1959	28 Il-14		royers. Poland,
1960	40 Il-28		1959.
1964	12 L-29 Delfin[a]		2 submarines 1959 (ex-Soviet). Poland
Cambodia	–	1964-67	–
Afghanistan	–	1956-72	6 Mi-1 helicopters Poland, 1957
Bangladesh	–	1973	–
India			
1968-71	225 T-54 tanks	1955-72	–
1969-72	(120) OT-62A APC's prod. under lic.		
1971	(30) OT-64 APC's		
Nepal	–	1963	–
Pakistan	–	1968-71	–
Sri Lanka	–	1971	–
Egypt			
1955-56	86 Mig-15 & Mig-15 UTI	1955-73	–
	39 Il-28; (10) Il-14		
(1955-56)	(5) Sokol Falcon M-1-D		
	6 Zlin Bohatir		
1956	25 Yak-11; 150 T-54 tanks		
(1957-59)	30 Yak-18: USSR/ Czechoslovakia		
(1962-63)	(130) T-54 tanks: USSR/ Czechoslovakia		
(1968)	(200) OT-62 APC's		
1969-70	(200) OT-64 APC's		
Iraq			
(1968)	(5) L-29 Delfin	1958-73	–
1973-	... L-39 Delfin		
Iran	–	1967-68	–
Lebanon	–	1972	–
Southern Yemen	–	1967-73	–

TABLE 4.12 (Cont'd)

Country/Year of Czech delivery	Weapons delivered by Czechoslovakia	Dates of delivery of weapons by USSR	Other E. European deliveries (excl. Yugoslavia)
Algeria	-	1962-73	-
Libya	-	1970-74	-
Syria			
1956	50 reconditioned German tanks	1955-73	-
(1965)	(7) L-29 Delfin		
(1972)	(20) L-29 Delfin		
Yemen			
1957	4 Yak-11 USSR/Czech/ Egypt	1957-72	-
	12 I1-10 USSR/Czech/ Egypt		
	30 T-34 USSR/Czech/ Egypt		
(1957)	(35) BTR152 APC's USSR/Czech/Egypt		
1958	24 I1-10 USSR/Czech/ Egypt		
	3 Mi-1 USSR/Czech/ Egypt		
	26 Yak-11 USSR/Czech/ Egypt		
(1961)	50 Su-100 USSR/Czech/ Egypt		
	35 BTR 40 USSR/Czech/ Egypt		
(1957)	(5) Mig-15 UTI		
Morocco			
1967-68	80 T-54 tanks	1961-62	-
(1968-70)	95 OT-64 APC's		
Congo (People's Rep)	-	1968-71	-
Ethiopia	-	1965	-
Ghana	-	1961-63	-
Guinea			
1959	12 T-34 tanks	1960-72	-
	10 BTR 152 APC's		
Mali	-	1961-71	(3) Yak-12M,Poland (1963)
Mauretania	-	1969	-

TABLE 4.12 (Cont'd)

Country/Year of Czech delivery	Weapons delivered by Czechoslovakia	Dates of delivery of weapons by USSR	Other E. European deliveries (excl. Yugoslavia)
Nigeria 1967	10 Mig-17 USSR/Czech 12 L-29 Delfin. $205,000 each	1968-69	6 Mig-15 UTI, Poland, 1967
Somalia	-	1963	-
Sudan (1970)	(60) OT-64 APC's	1960-70	-
Tanzania	-	1964-67	-
Uganda 1966 1967-68	5 Mig-17 USSR/Czech 2 Mig-15 UTI USSR/ Czech 9 L-29 Delfin USSR/ Czech 36 OT-64 APC's.	1966-73	-

Source: Stockholm Peace Research Institute, *Arms Trade Registers, The Arms Trade with the Third World*, Almqvist & Wiksell, Stockholm, 1975.

a Estimated at 60 aircraft by other (private) sources.

Glossary of weapons and abbreviations used*in Table 4.12

... information not available; refers only to items on order.
( ) a greater degree of uncertainty about, for example, the date of an order of delivery, the number of items supplied or the identity of a supplier.
UTI trainer version
APC armoured personnel carrier
MBT main battle tank

* For description of weapons and date and country of production, see page 299.

TABLE 4.12 Glossary (Cont'd)

Designation	Description	Date of first production	Country
Aircraft:			
L-29 Delfin	trainer	1963	Czechoslovakia
L-39 Delfin	trainer	1972	Czechoslovakia
Zlin Bohatir	trainer	1955	Czechoslovakia
Mi-1	helicopter	1950	USSR
MiG-15	fighter	circa 1950	USSR
MiG-17	interceptor/fighter	1953	USSR
Yak-11	trainer	1950	USSR
Yak-12M	monoplane	late 1940's	USSR
Yak-18	trainer	1946	USSR
I1-10	monoplane	1945	USSR
I1-14	transport	circa 1950	USSR
I1-28	bomber	1950	USSR
Armoured Fighting Vehicles:			
T-34	MBT	W.W.II	USSR
T-53	MBT, 32 ton	1955	USSR
T-54	MBT, 36 ton	1961	USSR
OT-62	APC, 13 ton	1963	Czechoslovakia
OT-64	APC, 12.5 ton	1964 (1st deliv.)	Czechoslovakia
BTR-40	APC, 5.3-10 ton	1948	USSR
BTR-152	APC, 7 ton	1946	USSR
SU-100	tank destroyer, 32 ton	1945	USSR

Source: SIPRI *Arms Trade Registers* (1975), appendix 1.

One of the aims of the present chapter was the estimation of the importance in total Czechoslovak exports of arms sales. Because this aim requires a knowledge of actual prices paid - or at least a reliable estimate of total values - it is clearly not possible to achieve it. However, if Czechoslovakia's importance as a world supplier of arms continues to decline (Table 4.13) at a time when most LDC's are acquiring increasingly sophisticated weapons systems, the importance of arms in foreign exchange earnings will also decline in the future.

It was seen in section 4.3.3 that developing country arms recipients were more likely to have higher voting affinities with Soviet bloc countries, including Czechoslovakia. Although the results of section 3.7 indicated that political factors were relatively unimportant in Czechoslovak trade relations with LDC's - except that a greater proportion of the market was captured in LDC's with higher political affinities - it is still a reasonable presumption that recipients of Czechoslovak arms would also tend to be among the more important LDC trade partners. Not only do higher trade levels suggest an enhanced absorptive capacity for major weapons, but it seems logical that planners or politicians would sell major weapons primarily to more important trading partners. A Mann-Whitney test confirmed that both imports ($n_1 = 8$, $n_2 = 33$, $U = 196$) and exports ($n_1 = 8$, $n_2 = 33$, $U = 212$) were significantly higher[1] in trade with the group of LDC's which received major weapons from Czechoslovakia, than in trade with non-recipients. However this result must be approached with caution because the possibility remains (*pace* section 4.5) that sales of major weapons are included in trade statistics, and that their inclusion directly increases apparent trade levels.

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[1] n_1 represents recipients of Czechoslovak major weapons in the period 1960-1975 (according to SIPRI) and n_2 represents non-recipients. z-values (normal distribution) were 2.105 for imports and 2.632 for exports.

A second basic aim of the present chapter was to ascertain Czechoslovakia's importance as a global supplier of arms. Once again, it was necessary to rely on SIPRI and ACDA for estimates. These are presented in Table 4.13 but must be interpreted in the light of the methods used for their calculation. The SIPRI data refer only to major weapons and were valued by adjusting actual prices for role, speed, weight etc. to give 'comparable prices' for each world supplier. For this reason, the data probably reflect fairly realistically Czechoslovakia's relative importance as a world supplier of major weapons, but overstate its importance in value terms with regard to realised foreign exchange earnings.[1] It is not clear how the Czechoslovak share of the total arms trade would have been affected had small arms been included in the SIPRI figures. The Soviet share of world weapons exports would have been smaller in the SIPRI estimates had small arms been included,[2] but this need not necessarily have been the case for Czechoslovakia. The ACDA data on the other hand, include sales of all conventional weapons as well as such items as uniforms and transfers of equipment for defence related industries. It is not clear how these estimates were made (i e. the method of gathering information used), but conversion to $U.S. of value estimates was by means of "estimated purchasing power parities, rather than official exchange rates".[3] The ACDA and the SIPRI estimates of the Czechoslovak share of world arms sales are thus quite distinct and not comparable.

Nevertheless, both sources indicate that Czechoslovakia is becoming gradually less important internationally as a source of arms, while the ACDA estimates show that there may be a tendency in the future for it to be as important an importer of arms as it is an exporter. There are probably three major reasons for this trend. Firstly, modern weapons systems require

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1 SIPRI *Arms Trade Registers*, 1975, p. 174.

2 *ibid.*, p. 174.

3 ACDA, *World Military Expenditures and Arms Transfers, 1966-75*, p. 11.

TABLE 4.13 THE CZECHOSLOVAK SHARE OF THE WORLD ARMS TRADE[3]

(per cent)

Year	Exports		Imports
	SIPRI[1]	ACDA[2]	ACDA[2]
1955	5.62	..	..
1956	6.06	..	..
1957	0.65	..	..
1958	1.57	..	..
1959	6.30	..	..
1960	3.88	..	..
1961	0.52	1.78	3.28
1962	0.38	1.54	2.18
1963	1.13	2.16	2.59
1964	0.77	3.98	4.30
1965	0.25	4.33	3.31
1966	0.39	3.69	2.15
1967	0.48	3.96	1.90
1968	1.46	1.45	1.54
1969	0.80	1.86	1.40
1970	1.07	1.86	1.40
1971	0.39	1.92	1.29
1972	0.37	1.39	1.49
1973	0.03	1.11	0.78
1974	0.27	0.82	2.96
1975	0.10	1.21	2.01

Sources: (1) Stockholm International Peace Research Institute *World Armaments and Disarmament. SIPRI Yearbook,* 1976, Almqvist & Wiksell, Stockholm, 1976, Table 6F.2, pp. 252-253.

(2) United States Arms Control and Disarmament Agency (ACDA), *World Military Expenditures and Arms Transfers, 1966-1975;* Data for 1961-65 taken from *Report to the Congress from the United States Arms Control and Disarmament Agency,* 12 April 1974, Appendix A, pp. 3 and 7.

1. SIPRI data refer to major weapons only.

2. ACDA data refer to all conventional arms transfers, including items such as uniforms, transfers of equipment for defence related industries.

3 See text for meaning of the data.

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increasing'y advanced technology which is probably beyond Czechoslovak capacities, and which appears to be controlled by the Soviet Union. As the demand among LDC's for greater technological sophistication in weapons increases, the Czechoslovak ability to satisfy this demand will diminish. It must therefore be expected that for major weapons at least, Czechoslovakia's importance as a world supplier will continue to diminish. Secondly, while

the Soviet Union in recent years accounted for 94 percent of arms exports by socialist countries. the remaining 6 percent is being increasingly filled by Yugoslavia, Poland and Romania; particularly with sales of light aircraft.[1] In 1975 for example, India purchased Polish TS-11 Iskra jet trainers "instead of the Czech trainer".[2] It was noted above that an examination of partner country trade statistics revealed a similar trend in small arms, with other Comecon countries providing apparently stiff competition for Czechoslovak small arms in Third World markets. Unfortunately, reliable data are not readily available, and the extent of this effect cannot be measured. Finally, there is almost certainly a falling-off of demand for small arms and even some major weapons, as LDC's develop indigenous production capabilities.

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1 SIPRI *Yearbook*, 1978, p. 228.

2 SIPRI *Yearbook*, 1976, p. 264.

CHAPTER 5

DEVELOPMENT ASSISTANCE

5.1 INTRODUCTION

Flows of goods and services occur between Czechoslovakia and LDC's which, while closely related to trade, are intended to be of developmental assistance, and are therefore provided on concessional terms. Both the motive and the grant element involved distinguish these flows from those examined in chapter 3 so that they are discussed separately here. (Although assistance for military purposes is also touched upon, its relatively smaller extent and our insufficient knowledge of the area, have severaly curtailed its examination in the present chapter). Aid is provided on both a bilateral and a multi-lateral basis, and generally takes the form of either lending at concessional rates - and thus not to be confused with export credits granted by fto's - or of technical assistance. Comparisons have not been made with the period 1918-1938, as they were in the case of trade (chapter 2) or armaments (chapter 4), because the international transfer of resources in the form of aid is basically a post Second World War phenomenon. Within the Soviet bloc Czechoslovakia has traditionally been, until recent years,second only to the Soviet Union as a donor of aid; probably as a result of the industrial nature of its economy. The first aid agreement involving an East European country was signed in 1954 between Czechoslovakia and Afghanistan.[1]

Apart from the examination of the donor's motives and the forms in which aid is provided, the basic aim of the present chapter is to estimate the proportion of Czechoslovak Net Material Product (NMP) allocated to the transfer of resources to developing countries. The aid requirements of the recipient countries are not of direct concern here, and nor is it the intention to assess the consequences of Czechoslovak aid; issues which would require a degree of detail far beyond the scope and requirements of this thesis. The approach adopted - that of examining aid solely from the donor's point

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[1] For a comparative analysis, see OECD, Development Co-operation Directorate, *The Aid Programmes of the East European Countries,* DD-573, 12 December 1977; and *The Aid Programme of the USSR*, DD-520, 20 January 1977.

of view - is therefore an important determinant of factors such as the choice of discount rate used in calculating the grant equivalent of loans, and hence of the proportion of NMP devoted to aid.

An important point to be made is that it would be misleading to judge Czechoslovak aid to LDC's by OECD standards, if only because of the difficulties in reconciling points of view and motives extant in different social systems. Further problems arise in statistical definition. Czechoslovak concessional lending (development loans in OECD usage) for example, might be classified as Official Development Assistance (ODA) because it meets the requirement of a 25 percent grant element (section 5.5.2), and because it is extended with the motive of promoting development. On the other hand, it could be argued that such lending should be classified as Other Official Flows, an OECD category including bilateral transactions, which, though possessing concessional elements, are primarily export-facilitating in purpose. However these definitions were tailor-made for countries with large private sectors. Czechoslovak concessional loans, available only in inconvertible (deviza) koruny, cannot be anything but export-facilitating because they are automatically procurement tied, irrespective of their grant content. But loans of this type are extended on an inter-governmental basis,not commercially by fto's, and the ostensibly humanitarian motive involved - though always deliberately consistent with Czechoslovak economic interests - argues for their classification as ODA in cross-country comparisons. Such comparisons have been made only in passing in this chapter (section 5.5.3) but it remains important to be aware of the inappropriateness of using a classificatory system developed specifically for Western donors in the analysis of aid provided by a country with different perceptions of developmental problems and solutions.

5.2 ATTITUDES TO AID AND DEVELOPMENT

Ideological thinking in Eastern Europe prior to 1954 was not conducive to either trade or aid in relations with developing countries, and little detailed information is available on actual disbursements to developing countries after this date, but this section broadly summarizes attitudes to aid in Czechoslovakia and highlights the most important features of the aid programme.

5.2.1 Perceptions of Development Problems

Several strands - influenced by both ideological attitudes to the West, and by Soviet and Czechoslovak approaches to their own economic development - run through early Czechoslovak (and other East European) attitudes to the cause of and remedies for, underdevelopment.[1] The root cause of the economic problems of LDC's was seen to be direct exploitation by metropolitan colonial countries, and the subsequent 'neo-colonial' economic bondage imposed by Western monopolies;[2] for which the socialist countries bore no responsibility. Rapid industrialization was seen as the solution to the problems caused by excessive specialization on primary production, and consequential dependence on the West.[3] To achieve the requisite level of (industrial) development, the LDC's were advised to rely on their own resources because socialist countries opposed external financial aid (except as a supplement to domestic resources) while favouring greater non-discriminatory trading opportunities as a means of helping the developing countries.[4]

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1 Sedivy (1961), p. 801.

2 Sedivy (1961), pp. 798-799; Wacker (1968), p. 210.

3 On the other hand, a 1950 article stated that aid should be " ... aimed at the development of the whole economy, though primarily the development of industry." mal (author's initials), 'Rozvoj zemi hospodarsky nevyvinutych *ZO*, 3 February 1950, p. 71.

4 e.g. *Yearbook of the United Nations*, 1953, p. 298. Also K. Svec, 'Hospodarsky rozvoj nevyvinutych zemi a technicka pomoc OSN', *ZO* no. 7-8, 1955, p. 29; and Jung (1972), p. 15.

During the sixties and seventies attitudes to under-development changed significantly, particularly with the gradual recognition that developing countries are in fact highly diversified politically, economically and socially; and could not therefore be treated identically or as a single unit.[1] Reference has even been made to cultural, ethnic, religious, and anthropoligical factors in development.[2] Moreover it has on occasion been admitted that Western private capital may be beneficial to economic development,[3] and that developing countries require help from both capitalist and socialist countries because their own resources are limited.[4] Perhaps the greatest change however has been the increased emphasis on the efficiency[5] of economic projects and on sectors other than industry. As early as 1962 an important article stressed the need to avoid creating:

> " ... production capacities without paying an (sic) attention whether such capacities will fall in with other manufacturing branches of the national industry ... without making appropriate investments into the infrastructure, without considering the technical level of domestic experts, and the international division of labour."[6]

Earlier objections to direct investment by Czechoslovakia in developing countries are being gradually overcome (section 3.7.1). However the trade-oriented approach to aid and the general lack of a unified policy or

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1 R. Wagner, 'Hospodarske vztahy Ceskoslovenska s rozvojovymi zememi', *MV*, no. 1, 1966, p. 35. Also M. Churanek, 'Nove aspekty v hospodarske spolupraci a pomoci rozvojovym zemim', *PH*, no. 10, 1975, p. 53.

2 J. Kohout, 'Problemy jejich a nase', *MP*, no. 6, 1968, p. 38.

3 Z. Krejci, 'Ucast podniku pri realizaci programu hospodarskeho rustu v rozvojovych zemich', *NZO*, no. 8, 1970, p. 2.

4 J. Putnik, 'Dluhovy problem rozvojovych zemi a navrhy na jeho reseni', *ZO*, no. 9, 1976, p. 15.

5 Even Cuba was castigated for allegedly uneconomic utilisation of Soviet and East European aid. 'Soviet showdown with Cuba - Comecon ultimatum given in Prague', *FT*, 10 October 1963, p. 7.

6 J. Kohout (Deputy Minister for Foreign Trade) and R. Wagner, 'Present problems of Czechoslovak economic relations with economically developing countries,' *CFT*, no. 2, 1963, p. 6.

organization is perhaps best highlighted by the fact that in 1967 there was " ... only one specialist on the theory of economic backwardness and development"[1] in Czechoslovakia.

5.2.2 Lending Under the Bilateral 'Aid' Programme

Two points need to be stressed in relation to the Czechoslovak aid programme. Firstly it is strongly related to trade, and secondly, it is not aid perceived in the Western sense of a grant, but consists essentially of concessional lending and technical aid.

Aid in the form of concessional loans is automatically tied to the donor (procurement tied) when inconvertible currency such as the koruna is used, so that 'aid' automatically leads to trade. Moreover the aid programme itself is consistent with Czechoslovak economic requirements. Apologists for aid often point this out in answer to domestic criticism that Czechoslovakia cannot affort to give aid to LDC's.[2] Wacker, in the context of concessional lending, writes:

> "Extensions of credit to developing countries are made in keeping with the possibilities and needs of our economy, that is, they also take into account our long-term requirements."[3]

A grant element is embodied in the concessional component of Czechoslovak lending, but outright grants or gifts are rare, in line with the stress placed on the use by developing countries of their endogenous resources for development.[4] Exceptions to the policy of not giving grants are probably made occasionally when this is politically expedient or where repayment of loans is clearly impossible and debts must be written off.

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1 A. Holub, 'Uvod k cyklu konzultaci o teoriich ekonomickeho rozvoje a zaostalosti HMVZ', *PE*, no. 1, 1967, p. 53, footnote 10.

2 See translation of *Pruboj* article 'The truth about exports' in *EE*, April 1963, p. 31. Also V. Houdek, 'Povinnost i zajem', *Mir*, no. 12, 1965, p. 8; and Brozik (1965), p. 5.

3 Wacker (1968), p. 205.

4 Kohout and Wagner (1962), p. 5.

Debt relief has been extended to Indonesia and Pakistan. A grant element of 85.5% in 1971 was involved in the case of the former, and in 1973 all debt incurred by East Pakistan (Bangladesh) was written off; but these cases appear to have been exceptions.[1] It seems that the only other major grants made by Czechoslovakia was to India. Its donation to that country of the Bangalore Machine Tool Institute was valued by Loskot at about $1.25 million.[2] (Datar refers to an unspecified and exceptional cash grant to India by Czechoslovakia of Rs. 6 million,[3] which is substantially below this sum both at pre and post June 1966 rupee devaluation rates, but may also refer to something other than the Machine Tool Institute.)

The exceptional nature of grants is stated specifically by Brozik in his 1965 article on Czechoslovak relations with LDC's:

> "Because aid to developing countries in the form of gifts has been given only in isolated cases, the primary method of aid-giving can be considered to be the extension of credit."[4]

He continues by considering the proposal that the socialist countries should ensure favourable terms of trade for the LDC's by paying them higher than world prices for imports and charging relatively lower export prices. This idea is dismissed by him as 'economic romanticism' and he emphasises the economic inability of the socialist countries to do so; and further points

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1 OECD (1977), DD-573, p. 12.

2 V. Loskot, 'Czechoslovak participation in the development of industrial plants in India', *CFT*, no. 2, 1972, p. 8. Loskot does not specify the method of valuation.

3 Datar(1972), p. 61.

4 Brozik (1965), p. 5. 'Ojedinele' in the context of the article, might, on a narrow interpretation, also be translated as 'solitary': "... forma daru byla praktikovana jen zcela ojedinele ...". On the other hand, Kohout (1968), p. 40, in comparing Western policy of aid-giving in the form of grants, states: "Just like other developed countries we have from time to time - for example after natural disasters - extended smaller amounts of free humanitarian and technical aid".

out that their share in total LDC trade is only 5 percent, making any such policy of only marginal importance in aid terms.

The Czechoslovak policy of not giving outright grants might be justified on the ground that developing countries prefer to maintain their 'self-esteem' by accepting loans rather than grants. An acceptable economic justification might also be that external aid in the form of grants or artificially favourable terms of trade distorts the domestic opportunity costs of an LDC and may lead to economically unwarranted patterns of development. The argument however presupposes long-term aid flows to specific economic activities and is probably irrelevant to the provision of aid in the service sectors, for example in the form of hospitals. It would hold true of course for artificially favourable terms of trade in commodity exchange.

Czechoslovakia extends loans to developing countries in two ways. Foreign trade enterprises grant medium or short-term credit facilities for exports; and long-term concessional loans are made at governmental level. Commercial credits are normally extended for machinery exports only by larger foreign trade enterprises; especially by Skodaexport, Technoexport, Pragoinvest, Strojimport, Kovo, Motokov and Investa.[1] Rates of interest depend upon " ... currently used market conditions",[2] and have been specified as 6% to 7% for commercial credits extended by CMEA trade enterprises (in individual CMEA countries) to developing countries.[3] The period of these credits:

> " ... depends primarily on the category of a complete industrial plant, on its size, and/or financial costs and last but not least on the time necessary for its amortization. In some deliveries, when equipment of smaller extent practically consists of a certain number of series products, medium- and short-term credits for 3-5 years are granted, while in large complete industrial plants the time of payment is 10-12 years."[4]

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1 E. Hradecky, 'Czechoslovak trade and economic relations with developing countries', *CFT*, October 1971, p. 10

2 *ibid.*, p. 10.

3 M. Virius, 'Ekonomicka spoluprace zemi RVHP s rozvojovymi zememi', *ZO*, no. 11, 1977, p. 8.

4 Hradecky (1971), p. 10. This is confirmed by Virius (1977) who gives the period as 3 to 8 years with 'exceptional' loans of 10 to 12 years.

Concessional loans on the other hand are extended by the Czechoslovak government usually for periods of 10-12 years under an Agreement on Economic Cooperation negotiated with the recipient government. Such loans have probably always been granted only at interest rates between 2.5 and 3 percent.[1] However the similarity of the period of concessional loans to long-term commercial credits probably explains some of the confusion extant in the Western literature.[2] On the other hand, a Ceylonese White Paper[3] refers to a four-year credit, at 3% interest, for fifty percent of the value of supplies of capital goods purchased from Czechoslovakia, as aid. Because the rate of interest is similar to that normally asked on concessional loans, there may also have been some confusion here; although it is also possible that there is some coordination between official loans and credit extended by fto's.[4] Knowledge of the lender's identity - government or fto - is thus vital to the identification of 'aid' loans, but is not always readily available.

Repayment of concessional loans is always in the products of the recipient country,[5] but Czechoslovak sources appear to be rather reticent about the number of instalments required. It is generally assumed that Soviet concessional loans are repaid in equal annual instalments over the

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1 Sedivy (1961), p. 801, quotes a minimum rate of 2 to 2½%; and other authors specify similar rates. Hradecky (1971), pp. 10-11, gives government loan rates as 2.5% to 3%.

2 e.g. R. and E. Bass, 'Eastern Europe', ch. 3, p. 96, in Z. Brzezinski (ed), *Africa and the Communist World,* Stanford University Press, 1963, who cite 3 to 5 year credits at 2% to 4% as being part of the Czechoslovak aid programme in 1958.

3 Ministry of Planning and Economic Affairs of Ceylon White Paper, *Foreign Aid,* 2 August 1968, p. 13.

4 'The Czech credit', *The Eastern Economist* (New Delhi), 14 July 1961, p.57, reports that Technoexport extended a credit of Rs. 17 crores in addition to the Rs. 23 crores already lent by the Czechoslovak Government (for Ranchi projects) because of the shortage of foreign exchange for India's Third Plan period.

5 J. Kohout, 'Economic relations of the Czechoslovak Socialist Republic with the countries of Asia, Africa, and Latin America', *CFT*, no. 1, 1962, p. 4.

twelve-year period of the loan.[1] It may well be that Czechoslovak concessional lending does not have such rigid or consistent repayment requirements but it has been assumed - for want of better information - that twelve equal annual repayments are in fact the norm.

Vassilev implies that no grace period in East European loans is allowed between the time a project comes into operation and the first instalment in repayment.[2] McAuley and Matko are in agreement with this[3] and lack of information on Czechoslovak loans forced the adoption of a similar assumption in section 5.5.2. It was also assumed there that during the period between drawing on a loan and project completion (i.e. initial reimbursement of the capital sum) the loan is capitalized: that is, interest only is paid on the sum drawn. McAuley and Matko assumed a capitalization period of three years after the date of drawing;[4] while Stokke presents evidence that five to seven years is appropriate for Africa;[5] and Hradecky gives it as between five and ten years for complete industrial plants from the date of signing the (commercial) contract.[6] Obviously the capitalization period must vary between projects, but it was necessary to arbitrarily choose a uniform period of five years in section 5.5.2, in the absence of more specific information.

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1 e.g. A. McAuley and D. Matko, 'Soviet foreign aid', *BOXES*, vol. 28, no. 4, 1966, p. 268.

2 V. Vassilev, *Policy in the Soviet Bloc on Aid to Developing Countries*, OECD, Development Centre Studies, Paris, 1969, p. 76.

3 McAuley and Matko (1966), p. 268.

4 *ibid.*, p. 268.

5 B. Stokke, *Soviet and Eastern European Trade and Aid in Africa*, Praeger, N.Y., 1967, p. 264, Table 35.

6 Hradecky (1971), p. 12.

5.2.3 Bilateral Technical Assistance

Apart from concessional lending, the other form of Czechoslovak bilateral aid provided to developing countries is in the field of technical assistance. Technical assistance is also provided multilaterally (section 5.6) but most of it is bilateral.[1] As with concessional lending the grant element of bilateral technical assistance depends on whether it is given through Scientific-Technical agreements on a governmental level, or in its more frequent[2] form, as part of commercial exports of machinery and equipment.

A minor form of technical assistance by socialist countries is the transfer to LDC's of production licences and patents, although this is done primarily on a commercial basis.[3] Czechoslovakia appears to have sold[4] production rights only to Mexico and India[5] up to 1975; partially because the demand for technology is limited to the more advanced developing countries. Lack of coordination and cooperation between Czechoslovak producers and foreign trade enterprises has also limited potential sales to interested LDC's.[6] Another form of technology transfer is the provision of consultative services, either commercially, or within the framework of long-term loans (or multilaterally at United Nations' request).[7] The extent of the provision of such services is difficult to judge but Czechoslovak fto's in the fifties were unwilling to provide them without a guarantee of associated export sales, despite competition from Western firms which often provided them as a matter of course.[8]

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1 S. Musil, 'O nasi technicke pomoci rozvojovym zemim', *NZO*, no. 17, 1965, p. 3.

2 I. Sronek, 'Vztahy mezi clenskymi staty RVHP s rozvojovymi zememi v oblasti vedy a techniky', *ZO*, no. 6, 1976, p. 8.

3 *ibid.*, p. 8.

4 I. Sronek, 'Poskytovani licenci do rozvojovych zemi', *NZO*, no. 36, 1965, p.2.

5 *ibid.*, p. 2, and Sronek (1976), p. 8.

6 Sronek (1965), p. 3.

7 Sronek (1976), pp. 8-9.

8 V. Miskovsky, 'Formy technicke pomoci vyvojovym zemim', *ZO*, no. 5, 1958, p. 20.

The third and major[1] form of technical assistance occurs through the education of workers or students in Czechoslovakia, or through Czechoslovak experts being sent abroad. Commercially-related exchanges of experts or the training of workers are usually of a short-term nature (three months as a rule),[2] while schemes under official bilateral aid agreements last for periods of approximately two years.[3] (Periods of study for students in Czechoslovakia obviously vary, but normally include language study). The first group of Czechoslovak experts was sent out in 1954,[4] but no systematic coordinated programme was ever established (to 1975 at least) as far as is known. As facilities have grown in the developing countries for domestic training of workers, there has been an increasing tendency among the socialist countries to limit the training within the donor countries themselves to advanced trainees;and because East European technical training has been given primarily to workers engaged on projects conducted under concessional loans, the majority of trainees have come from countries " ... where major aid projects are undertaken."[5] Finally as with concessional lending and trade requirements, Czechoslovak technical assistance is also required to be consonant with the "... concrete possibilities and needs of the Czechoslovak economy".[6]

5.2.4 Institutional Aspects of the 'Aid' Programme

Both technical assistance, and economic aid in the form of concessional loans, are distributed bilaterally under government Technical-Scientific and Economic Cooperation Agreements, but there is no single central coordinating agency for the Czechoslovak aid programme, so that activities

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1 Sronek (1976), p. 9.

2 Wacker (1968), p. 207.

3 Z. Filip, 'Jeste o technicke pomoci rozvojovym zemim', *NZO*, no. 8, 1965, p. 4.

4 V. Libich, 'Czechoslovakia's technical cooperation with developing countries', *CFT*, no. 11, 1966, p. 13.

5 OECD, *Flow of Resources to Developing Countries*, 1973, p. 420.

6 Sronek (1976), p. 10.

are fragmented between various organizations. Of these, the major one is the foreign trade enterprise Polytechna, which, until the middle sixties at least, was responsible for all official technical assistance which did not accompany deliveries of machinery or complete industrial plants.[1] It was responsible for such diverse activities as the much-vaunted training course for financial and banking personnel from LDC's[2] on the one hand, and geological exploration on the other.[3] (More recently, consulting services have been devolved onto specialised fto's such as Hydrokonsult.[4]) Polytechna is also responsible for the national recruitment of Czechoslovak experts to be employed on United Nations projects, and it " ... also takes the initiative in offering Czechoslovak nominees to U.N. agencies ... "[5]. Technical assistance accompanying deliveries of equipment and machinery is, logically, provided by the relevant foreign trade organization (in particular Technoexport). Other organizations also provide specialized training. In 1961 a training institution for trade unionists from LDC's was established by the Czechoslovak Revolutionary Trade Union Movement (Revolucni Odborove Hnuti) in Prague.[6] An analogue to Moscow's Friendship University, the University of November the 17th was founded in 1961 to provide language training for foreign students in Czechoslovakia, and to prepare Czechoslovak experts being sent abroad.[7] This was probably necessary because of the rapid increase in the late fifties and early sixties of overseas students, although foreign students had been accepted by Czechoslovakia as early as 1949.[8]

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1 Musil (1965), p. 3; J. Bula, 'Czechoslovakia's economic relations with African countries', *CFT* no. 12, 1967, p. 12.

2 M. Svoboda, 'Pomoc pri priprave financnich a bankovnich pracovniku z rozvojovych zemi', *FU*, no. 12, 1962, p. 744.

3 Musil (1965), p. 3.

4 Sronek (1976), p. 9.

5 C. Kotland, 'Czechoslovakia's technical assistance to developing countries', *CFT*, no. 3, 1976, p. 18.

6 R. and E. Bass (1963), p. 106. The ROH was ultimately under Party, and hence government, control.

7 *Sbirka Zakonu*, no. 108/1961, p. 384.

8 Caption beneath photograph taken from *Czechoslovak Life* and reproduced in F. Uhlir, 'Red sky over Africa', *EE*, October 1960, p. 32.

It is not clear why, in a planned centralized economy, there exists no single aid agency with responsibility for the aid programme as a whole, given the political importance[1] attached to it. One reason may be that the lack of a clear long-term conception or formulation of aims[2] by the government has led to the present ad hoc and relatively decentralised system. Another reason may be micro-rationality gained by the devolution of activities onto specialised agencies. Moreover, the highly centralised and detailed system of data collection within the economy may mean that requisite statistics on aid are available to planners despite the apparently decentralised system of disbursement. However developing country criticism of the lack of coordination involved in the sending abroad of Czechoslovak technicians,[3] makes this an unlikely explanation.

A better explanation may be that the government prefers fragmentation of ihe aid effort to mask its true extent from the domestic population. In the early sixties there were frequent reports of hostility towards foreign students.[4] Popular indignation over trade relations - in particular, that exports to LDC's diminish domestic consumption possibilities - as well as the popular belief that too much was being 'given away' have been strongly attacked in the past by official sources.[5] Indeed, one dissident author stated explicitly in 1968 that aid should no longer be disbursed solely by the authorities acting on the basis of secret information on aid levels, but should be distributed from a central fund whose size should be democratically determined.[6] The fact that governments in other countries (e.g. Britain) also tend to disguise the extent of their aid programme from their citizens by

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1 Sronek (1976), p. 9, quoting a May 1974 Central Committee meeting.

2 Wagner (1966), pp. 37-38; Filip (1965), p. 4.

3 Filip (1965), p. 4.

4 *EE*, June 1963, p. 42; and January 1964, p. 36 and pp. 23-24.

5 Brozik (1965), p. 5; Kohout (1968), p. 40; *EE*, April 1963, p. 31.

6 J. Texler, 'Budoucnost rozvojove pomoci a Ceskoslovensko', *Reporter*, no. 16, 1968, pp. 19-20.

distributing it through several government departments or agencies, rather than through central budgetary allocation, adds plausibility to the hypothesis that the Czechoslovak government's motives in maintaining a decentralized aid organization are similar.

5.3 THE DEFINITION AND MEASUREMENT OF AID

Central to the measurement or estimation of aid is its definition. Western literature has generally adopted the Pincus method of measuring aid transfers as being:

> " ... the combined nominal (or market) value of all forms of aid less the discounted present value of loan repayments, discounted at a rate of interest reflecting the alternative employment of long-term capital."[1]

It is used by Little and Clifford who accept it subject to qualifications which preclude commercial advantage to the donor; for example by the restriction of aid tied to purchases from excess capacity industries.[2] Wiles includes as forms of aid " ... all transactions that benefit the borrower ... "[3]. His approach has the advantage of avoiding emotive definitions based on motives imputed to, or stated by, the donor or lender. However, in practice such a definition is unworkable. For example, if Czechoslovakia, by dint of faulty speculation in a purely commercial operation, pays an LDC above average import prices (assuming no change in its own export prices), it is, by a narrow interpretation of the Wiles definition, providing aid. On a broader scale still, trade itself (assuming all the appropriate neo-classicial assumptions), by increasing welfare in both trading nations, would constitute aid and therefore be indistinguishable from it. Moreover, even a grant for a project which turned out to be uneconomic, leading to a wastage of resources greater than the value of the grant itself, would not qualify under this definition although a net transfer of resource had occurred. Thus, while there are merits in using the Wiles definition when

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1 J. Pincus, 'The cost of foreign aid', *RES*, 1963, p. 361.

2 I. Little and J. Clifford, *International Aid. A Discussion of the Flow of Public Resources from Rich to Poor Countries with Particular Reference to British Policy.* George Allen & Unwin, London, 1965, p. 82.

3 Wiles (1968), p. 392, footnote 1.

comparing aid provided by socialist and capitalist countries, the aim of this chapter - to attempt to measure Czechoslovak aid to LDC's - suggests that it may be preferable to adopt a definition which recognizes aid as a deliberate act of policy on the part of the donor and which is intended to assist the recipient.

Hawkins provides a useful principle for distinguishing aid as the flow of goods and services which would:

> " ... not otherwise take place without the intervention of special machinery and procedures. In other words, they are to be sharply distinguished from the flows of goods and services that move under normal trade agreements, or as a result of private activities in search of profit. The second characteristic concerns the terms and conditions under which such flows take place. If they are to be counted as aid then they should be extended on terms and conditions which differ from those which would normally apply to flows of trade and capital between nations."[1]

This principle is similar to that adopted by the OECD's Development Assistance Committee which includes under Official Development Assistance only those transactions having as an objective the promotion of economic development and welfare in developing countries, and which contain a grant element of at least 25 percent.[2] In the present chapter therefore, 'aid' has included only government grants, the grant equivalent of concessional government loans, and the transfer of resources involved in such activities as the education of foreign students in Czechoslovakia.

Unless opportunity costs at the margin of the transfer of goods and services intended as aid are equal in the donor country and in the recipient country, the value of aid calculated under the Pincus definition must differ according to whether aid flows are seen from the donor's or the recipient's point of view: sometimes referred to as the 'relativity of aid'. The present chapter seeks to examine aid flows entirely from the point of view of the donor, an approach also adopted by McAuley and Matko,[3] Carter,[4]

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1 E.K. Hawkins, *The Principles of Development Aid*, Penguin, 1970, p. 28.

2 OECD, Development Assistance Committee, *Statistical Reporting Directives*, DAC (78)1, 31 January 1978; and addenda, especially those of 29 January 1979.

3 McAuley and Matko (1966), pp. 261-271.

4 J.R. Carter, *'The Net Cost of Soviet Foreign Aid*, Praeger, N.Y., 1971.

Vassilev,[1] Muller,[2] Stokke,[3] and others. The latter three, in their separate works, all accepted loans *per se* as 'aid', without calculating grant equivalents, although Muller is paradoxically concerned not to include " ... trade and purchase credits that were clearly in the nature of export loans".[4] Tansky,[5] in an attempt at evading data problems, estimated disbursement levels of concessional loans by examining Soviet exports of complete industrial plants and assuming that such exports occur primarily under concessional lending. Because such an approach would be patently wrong for the Czechoslovak case - exports of complete plants also take place through commercial loans - it was not used in this thesis.

Because Czechoslovak concessional loans are made in inconvertible currency, they are automatically tied to Czechoslovak exports.[6] It is difficult to calculate the benefit to the donor of sales tied to domestic production - particularly in excess capacity industries - to allow adjustment of the calculated opportunity cost of resource transfers in the form of aid. However where prices of goods tied to the donor differ from world prices, adjustments are theoretically possible.[7] There is some evidence of higher prices being charged by Czechoslovakia to India for equipment supplied under

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1 Vassilev (1969).

2 K. Muller, *The Foreign Aid Programs of the Soviet Bloc and Communist China*, Walker and Company, N.Y., 1964.

3 Stokke (1967).

4 Muller (1964), p. 252.

5 L. Tansky, *U.S. and U.S.S.R. Aid to Developing Countries. A Comparative Study of India, Turkey and the U.A.R.*, Praeger, N.Y., 1967.

6 Technical training is also tied but this is necessary in the absence of a world market for technical and other educational services, which are usually provided by governments. The possibility exists of financing LDC students studying in third countries, but if facilities are domestically available it may be equally efficient to tie such aid. See Little and Clifford (1965), pp. 174-175.

7 For example, S. Paine, 'China's economic relations with the developing countries 1950-1976', in D. Nayyar (ed), *Economic Relations Between Socialist Countries and the Third World*, Macmillan, London, 1977, p. 206.

concessional loans,[1] but the data were insufficient to allow for adjustments suggested in section 5.5. (Adjustment would of course need to take into account the terms of trade, not just prices of tied exports or prices of commodities used in repayment of loans).

Like other East European countries, Czechoslovakia accepts 'reverse tying' of aid in the form of repayment of loans in commodities produced domestically by the recipient of the loan. (But 'reverse tying' is also advantageous to the donor where goods obtained in loan repayment would otherwise have been purchased for hard currency.) Pincus treated loans repayable in local currency as 80 percent grant and 20 percent loan,[2] While Little and Clifford considered them to be wholly grants.[3] The reasoning involved in this approach is that repayment in the recipient's own currency eases foreign exchange problems[4] and may lead to benefits from increased economies of scale in domestic production. As Datar points out however, repayment in local rather than convertible currency is less burdensome only in a relative sense, and only if it is assumed that alternative hard currency markets do not exist:

> "Repayment in kind is not less burdensome in the sense that the East European countries accept goods which have no opportunity cost in India or that the quality of a particular good exported to an East European country is worse than that exported to other markets."[5]

Moreover, Pincus, and Little and Clifford, dealt with Western lenders who provide convertible currency loans repaid in kind, while inconvertible

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1 Datar (1972), pp. 250-251. Carter (1971), pp. 39, 41, adjusted for assumed favourable Soviet terms of trade involved in concessional loans and their repayment.

2 Pincus (1963), p. 362.

3 Little and Clifford (1965), p. 73.

4 On the other hand East European aid agreements are reported to contain a gold clause as a guarantee against devaluation. OECD (1977), DD-573, p. 13.

5 Datar (1972), p. 127.

Czechoslovak lending - which by definition can only be repaid in commodities - increases Czechoslovak exports and also precludes the use of loans for the financing of local costs in aid projects. To treat Czechoslovak concessional loans as pure grants would further be illogical because commercial credit extended in bilateral forms of trade could also qualify as grants. (McAuley and Matko[1] consider Soviet credits to be devoid of any grant element.) From the Czechoslovak point of view the two cases differ both in the motive and in the concessional element involved in the loan, and section 5.5 adopts this approach.

It has been pointed out that the very act of socialist countries giving aid or concessional loans probably induced the West to increase its own aid to developing countries.[2] No account is taken here of this notional contribution to aid flows because no increase in cost to Czechoslovakia (over and above aid actually extended) was involved, and because there may have also been a reverse effect with East/West rivalry inducing socialist countries to also provide more aid than they would otherwise have done. Neither's influence over the other can be identified with sufficient accuracy to be quantified. Trade with socialist countries *per se* has also been put forward as a form of aid, because, for example, increased markets for LDC's may lead to economies of scale.[3] The effect of trade on welfare is complex and differs in individual LDC's because of their highly differentiated nature, but some general points can be made. Firstly, economies of scale will occur only where excess capacity exists in an LDC so that exports are not merely diverted from one market to another. (On the other hand, diversion of commodities with a low price elasticity to socialist

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1 McAuley and Matko (1966), pp. 268-269.

2 Kohout (1962), p. 4. Also Datar (1972), p. 74; and Little and Clifford (1965), pp. 18-20.

3 Wagner (1966), p. 48.

markets may raise their unit prices in non-socialist markets. An LDC's total foreign exchange receipts may thus actually increase, although the volume of its exports to non-socialist markets decreases.[1]) Moreover, LDC's tend to suffer most from limited markets for industrial products, but Czechoslovak imports from these countries are predominantly non-manufactures (Table 3.4). Secondly, Czechoslovak exports may represent a form of aid to an LDC with a foreign exchange constraint preventing the import of capital equipment. But there may still be a serious savings gap [2] which makes repayment onerous where insufficient income is generated domestically (or consumption is inadequately controlled) to repay - in kind - imports from Czechoslovakia. Thirdly, even where trade stimulates the development process by acting as an 'engine of growth', its effectiveness still depends on socio-economic conditions in an LDC, as does the usefulness of grant aid. Finally, if trade is a form of aid, then any decrease in trade is the antithesis of aid.

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1 Datar (1972), p. 127.

2 V. Joshi, 'Two-gap analysis', pp. 336-344, in G. Meier, *Leading Issues in Economic Development,* O.U.P., 1976 (3rd edition), shows that in a single two-good model the distinction between the foreign exchange gap and the savings gap requires special conditions and assumptions.

5.4 MILITARY AID

For obvious reasons little is published in Czechoslovak sources on military aid extended to LDC's. It should nevertheless be examined briefly because it too can constitute a form of economic aid - it is excluded from the OECD definition of Official Development Assistance - if it releases domestic resources which the recipient would have spent on military expenditure anyway. Technicians and military advisors, in so far as they transfer technological knowledge or raise educational standards, also promote development, because military and management skills imparted to pilots, truck drivers, radio operators etc., may also be utilised in other sectors of the economy.[1] Another reason for examining military aid is because in 1973 it was estimated that:

> "More than 85 percent of Communist military assistance to less developed countries since 1955 has come from the USSR; the second biggest supplier is Czechoslovakia, followed by the PRC."[2]

It is not know whether Czechoslovak military aid is normally extended in grant form or as concessional loans. Indian imports of non-combatant defence equipment from 1961/62 to 1965/66 were either wholly or partially credit financed,[3] but these may have been commercial sales rather than aid.

Table 5.1 is an attempt at estimating Czechoslovak military aid given to Egypt. Because it was probably the major recipient of Czechoslovak military aid,[4] the estimates probably represent the approximate order of

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1 Ho Kwon Ping, 'The men on white horses now ride a tiger', *FEER*, 11 April 1980, pp. 34-48, argues that a powerful military sector has been indispensible to economic development in the more successful Asian countries.

2 United States Department of State, *Communist States and Developing Countries: Aid and Trade in 1973,* INR RS-20, 10 October 1974, p. 13. The State Department was unwilling to release separate data for Czechoslovakia. Private sources believe that the proportion of Soviet aid in the late seventies has been closer to 90%.

3 Datar (1972), p. 91.

4 It is not clear whether the Rs. 125 million figure given in Datar (1972), p. 96, relates to military aid or commercially-based defence exports.

TABLE 5.1

APPARENT CZECHOSLOVAK MILITARY AID TO EGYPT

(millions of stated units)

Source	unit	1950	1955	1960	1965	1970	1971	1972	1973	1974	1975
M (1)	Kcs	79	151	158	208	279	295	372	423	830	556
M (2)	Kcs	86.8	150.5	158.5	209.9	278.6	295.0	371.6	423.2	829.5	556.0
X (1)	Kcs	49	83	145	226	554	391	587	393	621	430
X (2)	Kcs	53.3	83.3	161.7	249.5	345.8	346.4	323.1	290.3	554.7	456.2
res.(X)*1*	$	-0.6	0.0	-2.3	-3.3	28.9	6.2	39.8	17.5	11.3	-4.7

Sources: (1) published statistics: *Facts*, various years.

(2) Ministry of Trade: R. Macek, 'Obchodni a hospodarske styky mezi CSSR a Egyptskou Arabskou Republikou', *ZO*, no. 11-12, 1976, upper table, p. 29. Macek gives the sources as the Federal Ministry of Foreign Trade and states explicitly that the data " ... do not include aid given for the creation of Egyptian defence potential ...".

1. residual = difference between sources (1) and (2) converted at the rates given by the United Nations *Yearbook of International Trade Statistics*, 1975, p. 307.

M = imports
X = exports

magnitude of all such aid. The estimate was obtained by contrasting data published in *Facts on Czechoslovak Foreign Trade*,[1] with those used by Macek - but supplied to him by the Ministry for Foreign Trade - which excluded " ... aid given during the building-up of Egyptian defence potential ..."[2]. The difference obtained should represent military aid actually disbursed. From Table 5.1 it is clear that published import data and those provided by Macek are consistent. Export data clearly are not: in 1970 and 1972-74 there seems to have been a net transfer of military aid to Egypt. Unfortunately it is not clear why some years show negative differences, and given the information available, it is only possible to assume that statistical treatment of data differed somehow or that aid equipment was returned at a later date. Such returns would appear in Ministry data but not in sources already published (e.g. *Facts*) before equipment was returned. In 1971 therefore, there may have also been aid delivered greater than the amount estimated from the differences, because returns have depressed its actual value; but this is only speculation.

The findings seem plausible given the June 1967 and October 1973 wars in the Middle East. Nevertheless it is puzzling that Czechoslovak aid should have been so high in 1972. It suggests that Egypt was already preparing its armed forces for the October 1973 war as early as that year, although President Sadat claims to have effectively begun combat preparations only in November 1972.[3] If the aid agreement was concluded before 1972 - the date of actual delivery - then planning would need to have begun even before 1972, unless the equipment delivered was of a general nature and not required directly for combat preparations from November. It is more likely that the

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1 *Facts* is published by the Chamber of Commerce of Czechoslovakia from data supplied by the Ministry for Foreign Trade.

2 R. Macek, 'Obchodni a hospodarske styky mezi CSSR a Egyptskou Arabskou Republikou', *ZO*, no. 11-12, 1976, p. 29. " ... udaje ... nezahrnuji pomoc pri budovani obrany Egypta ...".

3 Sadat (1978), pp. 236-237. The basic outline of an offensive was completed only in January 1973.

high levels of aid delivered by Czechoslovakia in 1970 and 1972-74 are the results of Nasser's (and later Sadat's) reconstruction efforts begun immediately after the 1967 war.[1] Moreover intermitent fighting occurred between 1967 and 1973 in the so-called 'War of Attrition'. It is therefore plausible that military aid was given to Egypt over the whole period, particularly because any missile site construction would have required large amounts of material, especially cement.

Also of interest is the composition of this aid. Exports to Egypt by SITC section (0-9) for 1970 were published in both *Statisticka Rocenka*, 1977, (p. 475) and *Facts on Czechoslovak Foreign Trade*, 1971 (p. 151). A comparison of the two revealed that there was a discrepancy in section 7 (machinery and transport equipment) of $34.2 million.[2] Since military armaments should properly be classified under section 9 SITC this suggests that the aid consisted of military equipment other than arms and ammunition. (It is also possible that arms are disguised as exports of machinery in the statistics: section 4.5.1.) Nevertheless, it was not possible to determine the specific nature of the deliveries. The composition of section 7 exports for 1970 is only partially published in both *Statisticka Rocenka*, 1971, p. 456, and *Facts on Czechoslovak Foreign Trade*, 1971, p. 152. No discrepancy in these two major sources of trade statistics was found for any of the other years or countries in the period 1967-1975 - when SITC data were published - so that further investigation proved fruitless. It is thus not possible to provide information on military aid behond the points already mentioned.

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1 Heikal (1975), p. 51, puts the number of Soviet military advisers in Egypt at 1500 by the end of November 1967.

2 The discrepancy between this figure and the residual in Table 5.1 is probably due to differences of valuation or returns.

TABLE 5.2

NUMBER OF STUDENTS FROM 41 SELECTED DEVELOPING COUNTRIES STUDYING IN CZECHOSLOVAKIA, 1962-1975

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Argentina	8	11	7	9	7	2	3	2	4	2	3	3	2	2
Bolivia	52	63	71	65	55	61	52	55	48	43	35	36	23	15
Brazil	34	32	25	22	15	9	10	11	13	16	14	14	7	3
Chile	1	8	8	15	20	21	19	17	17	13	9	9	5	3
Colombia	19	14	13	18	17	17	16	19	16	13	11	12	6	4
Ecuador	11	8	7	8	8	5	6	6	8	11	9	8	10	6
Mexico	33	30	23	17	13	9	9	7	6	9	8	9	3	3
Peru	11	7	10	7	5	2	6	7	13	20	16	17	16	12
Uruguay	10	11	9	10	9	5	6	6	7	6	4	5	3	4
Venezuela	3	6	26	6	10	9	11	8	9	6	4	4	4	5
Afghanistan	18	36	21	22	26	21	21	19	21	29	24	23	11	15
Burma	10	14		29	12	14	13	11	8	10	4	4	4	3
Cambodia	13	14	14	17	21	17	14	12	10	8	11	11	2	
Ceylon	13	16	21	26	24	30	28	22	22	17	7	7	2	2
Cyprus	21	23	38	43	46	62	80	129	110	168	178	180	157	129
India	4	7	9	16	11	19	8	9	11	19	19	20	10	42
Indonesia	178	204	162	157	139	95	88	57	47	44	11	10	5	1
Iran	26	13	7	12	8	8	11	11	16	19	24	23	22	43
Iraq	291	253	221	222	191	148	108	103	102	130	127	130	99	72
Jordan	45	38	26	30	27	49	49	97	110	153	160	171	137	140
Kuwait				2	5	6	1	5		1				
Lebanon	44	43	40	47	46	51	55	72	77	114	134	136	122	148
Malaysia											2			
Pakistan	2			3			3	1	3	6	4	4	3	3
Saudi Arabia			10				4	5	3		3	5	2	

TABLE 5.2 (Cont'd)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Syria	153	155	126	143	195	287	348	411	417	503	412	430	363	312
Thailand		1	1	1	1		1							
Turkey		2	2	2	2	3	3	2	1	5	4	4	3	2
Algeria	56	61	37	34	23	29	28	31	55	62	84	91	89	74
Egypt		3	20	17	2	28	5	4	7	23	18	16	7	2
Ethiopia	31	33	29	29	30	28	21	27	31	29	23	23	20	23
Ghana	34	49	46	60	58	54	56	41	37	37	17	15	10	14
Guinea	28	31		45	27	18	28	16	7	5	9	9	6	8
Kenya	38	49	59	63	46	51	47	42	33	25	8	8	5	3
Libya			1		1			1						
Morocco	13	19	15	25	20	25	21	19	24	20	9	12	10	7
Nigeria	28	22	20	32	36	45	74	44	58	78	70	71	65	58
Sierra Leone	8	7	7	6	10	11	18	11	13	9	6	6	3	2
Sudan	79	82	84	102	120	132	206	226	242	249	166	169	121	69
Tunisia	8	15	18	17	22	25	31	30	30	29	32	32	24	22
Zambia	1	26	4	1	1	2		1	5	4	6	6	3	2

Sources:
1. UNESCO *Statistics of Students Abroad 1962-1968*, Statistical reports and studies, no. 18, Paris, 1971.
2. UNESCO *Statistics of Students Abroad 1969-1973*, Statistical reports and studies, no. 21, Paris, 1976.
3. Data for 1974-1975 communicated privately by Statistical Section of UNESCO.

TABLE 5.3

TOTAL NUMBER OF DEVELOPING COUNTRY STUDENTS STUDYING IN CZECHOSLOVAKIA BY AREA[1]

Area[2]	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Asia	892	906	772	844	831	879	947	1060	1063	1347	1260	1292	1065	1038
Africa	623	741	584	652	638	697	722	656	713	719	543	555	423	363
America	200	210	219	198	179	157	154	162	164	162	132	137	94	75
Total	1715	1857	1575	1694	1648	1733	1823	1878	1940	2228	1935	1984	1582	1476
Total as % of all foreign students	51.7	58.2	50.3	51.3	49.7	50.0	53.6	54.8	53.6	55.2	51.4	50.0	46.5	43.8
Total as % of all tertiary students	1.34	1.31	1.09	1.17	1.16	1.26	1.32	1.41	1.48	1.74	1.51	1.46	1.10	0.95

Sources: (1) Total number of foreign students by area: as for Table 5.2
(2) Total number of tertiary students in Czechoslovakia: *Statisticka Rocenka,* 1965, p. 441; 1977, p. 552. Given for academic years 1962/63 to 1975/76.

1. Including Israel and Palestinian refugees, but excluding South Africa and Cuba.
2. Data were unavailable for some years for some countries, leading to (relatively small) fluctuations in area totals between years.

5.5 THE EXTENT OF BILATERAL ASSISTANCE

This section seeks to overcome shortcomings in Czechoslovak data on bilateral forms of aid by estimating the approximate order of magnitude of the transfer of resources involved. The two major forms of bilateral aid are the provision of technical expertise and education, and the element of subsidy involved in the provision of concessional loans.

5.5.1 Technical Assistance and Education

A paucity of systematic data complicates analysis involving the number of Czechoslovak technicians sent abroad. However, by combining a series of index numbers given in one source,[1] with actual numbers given in another,[2] it is possible to estimate[3] the number of Czechoslovak technical experts abroad in each of the years 1959-1962 as approximately 259, 337, 762 and 856 respectively. After this rapid increase the numbers seem to have stabilised at between 700-800 for each year [4] by 1965, although an extended series of figures was not readily available. Approximately the same number (700-800) of technicians working on commercially related projects were sent abroad during the middle sixties.[5] It is not clear what numbers were involved after this. Virius, writing in 1977, gives the numbers as 700-800 annually,[6] without making clear whether they were sent as part of a bilateral aid programme or to install machinery sold commercially. The number was probably

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1 E. Bartak, 'Czechoslovak scientific and technical cooperation and Czechoslovak experts abroad', *CFT*, no. 5, 1962, p. 8.

2 Kohout and Wagner (1963), p. 5.

3 The data in the two sources were reasonably consistent. The U.S. Department of State was not able to supply more extensive data although it publishes aggregated data for all socialist countries in the series *Communist States and Developing Countries: Aid and Trade in (year)*.

4 J. Kohout, 'Nase hospodarske styky s. rozvojovymi zememi', *NZO* no. 32, 1965, p. 2.

5 *ibid.*, p. 2.

6 Virius (1977), p. 10.

a composite one, because Jakubec, a deputy Minister for Foreign Trade, gives the totals for the end of 1974 as 500 working on projects related to sales of industrial plants and machinery, and 300 experts sent under bilateral aid agreements.[1] Even less information is available about non-academic trainees placed in Czechoslovakia but there was also a very rapid (fourfold) increase in numbers between 1959 and 1962[2], with the figure in 1961 given as 719 by one source.[3] Because foreign workers are also trained in Czechoslovakia in connection with machinery exports,[4] it is not possible to tell how many were trained solely under aid programmes.

Detailed figures - supplied by UNESCO - on the number of students from developing countries studying in Czechoslovakia in the years 1962-1975, by country of origin, are presented in Table 5.2. Aggregated values, shown in Table 5.3 reveal that the greatest number of students came from Asia, Africa and Latin America (excluding Cuba) in that order. The recent (1974-75) decline in both absolute numbers, and in the proportion of LDC students to all foreign students, may be due to the reported[5] tendency of the socialist countries to ease the pressure on their own institutions by increasingly concentrating training in the developing countries themselves. On the other hand, the relative constancy of total numbers over the period as a whole, suggests that there was, to some extent, a 'target' level, or allocation of places for LDC students in Czechoslovak educational institutions.

Despite geographic concentration, students were accepted from most LDC's at some stage over the period 1962-1975; Table 5.2 shows numbers only for the major countries of residence of students. This spread is not surprising since students are also accepted for political reasons:-

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1 J. Jakubec, 'Zahranicni obchod s rozvojovymi zememi', *RP*, 10 November, 1975, p. 4.

2 Bartak (1962), p. 8.

3 Kohout and Wagner (1963), p. 5.

4 Wacker (1968), p. 207.

5 OECD *Flow of Resources to Developing Countries*, 1973, p. 419.

> "We want our foreign guests to return to their countries not only as outstanding experts, but also as Czechoslovakia's dedicated friends and adherants of socialist ideas. To attain this object it is necessary to create an adequate milieu and atmosphere ... and gain influence over the foreign student."[1]

Because education in the past has included Marxist-Leninist theory[2] this objective seems to have been a real one, although in recent years the emphasis on political education may have been reduced. In this sense aid was probably designed to serve foreign policy interests, as it does for other countries (Sekou Toure of Guinea is said to have studied in Czechoslovakia)[3] but the criteria for choosing students are not known. UNESCO does not collect such information,[4] and the Czechoslovak Ministry of Education did not reply to queries. However cases have occurred where students have been expelled because the Czechoslovak government has differed politically, or has severed relations, with the students' country of origin. On the other hand students are accepted from countries considered to be politically hostile by Czechoslovakia, such as Israel.

Given student numbers, it is possible to estimate approximately the cost to Czechoslovakia of its educational programme for LDC's. Table 5.4 gives the official figures for the recurring cost per student for the years 1962-1971. The total cost to the government is calculated by adding 800 koruny[5] per student for the clothing allowance granted. It is not

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1 Article by Dr L. Holubek (of the Czechoslovak Ministry of Education) in *Vysoka Skola*, January 1959. Excerpt translated in 'A one-way street: Czechoslovak cultural relations',*EE* April 1959, p. 33. Many Western nations have similar, but possibly less overt aims. Nevertheless, the point here is that students are accepted from a far greater number of LDC's than one might expect from trade, aid or political relations in general.

2 *EE,* March 1963, p. 41.

3 *Zemedelske Noviny*, 11 April 1959. (Source given, but not quoted, by Beck (1963), p. 411).

4 Privately communicated by UNESCO Director of the Office of Statistics.

5 The amount was apparently 250 Kcs in 1962 or 1963 (*EE*, March 1963, p. 40) but a student who studied in Czechoslovakia in the late sixties claims that it was later increased to 800 Kcs. For the sake of uniformity the latter figure has been used. Even if it is excessive for earlier years it does partially compensate for other unknown costs such as air fares or book allowances. It is recognized that inclusion of this item also leads to double-counting if it is already included under 'recurring expenditure', and, to a smaller extent, if the allowance is given to students only at the beginning of their course but overestimation was accepted as an (arbitrary)method of compensating for probable omissions in other areas.

TABLE 5.4 ESTIMATED COST OF EDUCATION PROGRAMME FOR STUDENTS FROM DEVELOPING COUNTRIES STUDYING IN CZECHOSLOVAKIA

(domestic koruny)

Year column no.	Recurring public expenditure per tertiary student (1)	clothing allowance per student (2)	number of LDC students (3)	total cost (thous. Kcs) (4)	cost as % of NMP produced (5)
1962	10706	800	1715	19733	0.0113
1963	11487	800	1857	22817	0.0132
1964	12715	800	1575	21286	0.0126
1965	13352	800	1694	23973	0.0138
1966	14614	800	1648	25402	0.0132
1967	16027	800	1733	29161	0.0125
1968	16870	800	1823	32212	0.0125
1969	19272	800	1878	37695	0.0128
1970	19438	800	1940	39262	0.0126
1971	20833	800	2228	48198	0.0147
1972	..		1935		
1973	..		1984		
1974	..		1582		
1975	..		1476		

Sources: column (1): *UNESCO Statistical Yearbook*, various years.
column (2): see text
column (3): Table 5.3. Total number of LDC students in Czechoslovakia
column (4): sum of columns (1) and (2) multiplied by column (3).
column (5): NMP (Net Material Product) data from *Statisticka Rocenka*, various years.

known whether the living allowance of 700 koruny per month[1] is included in the data in column (1), but it was assumed that this was in fact the case because UNESCO figures refer specifically to recurring expenditure. It would also have been desirable to include return air fares from country of residence, had annual passenger air fare data been available. But it might also be argued that, despite an administrative cost, the opportunity cost to Czechoslovakia is close to zero for air fares, if the national carrier, CSA, is used, and if seats are not reserved for students at the expense of commercial sales of tickets. Thus the exclusion of such costs may not be quite as critical to the calculations carried out in Table 5.4 as might be expected.

5.5.2 Concessional Lending

Data on concessional loans are not systematically published in official Czechoslovak sources, but the publicity surrounding such loans, particularly in recipient countries, makes possible the collection of information from newspaper reports. Table 5.5 presents data of this type collected by the Centrally Planned Economies Section of the United Nations.[2] The figures are expressed in dollars to allow for comparison with other donors, but the loans themselves were made in inconvertible (deviza) koruny. It is difficult to estimate the accuracy of the figures, but one Czechoslovak source stated in 1965 that total credit possibilities offered to LDC's (presumably to the end of 1964) was roughly double the annual value of exports to all developing countries.[3] This means that to the end of 1964

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1 *EE*, March 1963, p. 40. This figure was unchanged in the late sixties.

2 The U.S. State Department was not in a position to supply separate data for Czechoslovakia although it publishes aggregate aid commitments for Eastern Europe. Information on loans extended to LDC's by East European countries (1970-1977) is also available in OECD (1977), DD-573. Differences exist between the OECD and the UN data, but the latter were preferred if only because of the longer time span available. World Bank data on external borrowing by members are compiled in a way which does not allow for identification of Czechoslovak lending (privately communicated).

3 Brozik (1965), p. 5.

TABLE 5.5 KNOWN CZECHOSLOVAK GROSS COMMITMENTS OF CONCESSIONAL (DEVELOPMENT) LOANS TO DEVELOPING COUNTRIES.

(million United States dollars)

Country	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Argentina		4																				
Bolivia																		3				
Brazil								60														
Chile																				20		
Ecuador																		5				
Peru																5		6				
Uruguay																	5					
Venezuela																	10					
Afghanistan	5																			20		
Bangladesh																				35		
Ceylon			4																			
Iran										20		15			200		40					
Iraq							34									32			50			
India						50			1		84		130							100		
Indonesia					43	14	30	12														
Pakistan											14		28									
Syria							28				5		34							108	100	
Yemen					16																	
Yemen (Aden)																				5		
Algeria											15			50					50			
Egypt	1		57				23					14								102		
Ethiopia						12																
Ghana								14														
Guinea								10														
Mali								10														
Morocco														19								
Nigeria												14										
Somalia								30														
Sudan														19						20		
Tanzania																					4	
Tunisia								10														

Source: Privately communicated information from Centrally Planned Economies Section, United Nations, New York. Basic data not comprehensive because they are based on scanning of open press reports.

Czechoslovakia had made available about 4000 million koruny in loans because exports in the middle sixties were approximately 2000 million Kcs annually. Converted at the official exchange rate of 0.13889 dollars per koruna, this represents $556 million. Table 5.5 shows that for the period 1954-1964 the total value of loans extended was $612 million. Given the approximate nature of the comparison made by the source, the agreement between the two figures is quite good, and confirms at least the order of magnitude involved. However this cannot be taken as incontrovertible confirmation of the United Nations data because the Czechsolovak source may itself have been relying on Western sources or even on the United Nations data. (Czechoslovak authors do use Western data on Czechoslovakia where such data are not widely available inside Czechoslovakia itself). Nevertheless, the geographic distribution of loans - and their relative size - accord with general expectations based on trade and political relations with the relevant countries.

It is probably a tenable assumption that the extension of such 'aid' is of public relations benefit to Czechoslovakia so that the size of major loans is publicized, even if the details are not. On the other hand, the cancellation of such loans (for political or other reasons) is less likely to be publicized,[1] so that Table 5.5 provides, to an approximate extent, the maximum total value of concessional loan commitments to developing countries. Because it is the basic aim of this section to estimate the maximum amount of aid donated, it is assumed that none of the loans were cancelled. However actual drawings on such loans differs between countries and may be very low for two major reasons. Firstly, the LDC concerned may feel unable to bridge its 'savings' gap to repay the loan and may therefore prefer not to borrow the full amount. Secondly, because loans are tied to the donor, the LDC may not be able to obtain the goods it desires, particularly where the Czechoslovak capacity to supply them is insufficient.[2] To estimate the grant

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[1] McAuley and Matko (1966), p. 262.

[2] Section 3.5.1.

element involved, it is therefore necessary to first estimate the rate of actual disbursement of loans extended. Wiles shows that the rate of utilization of credits offered varies widely for developing countries[1] and that it is not possible to accurately determine the proportion of drawings. Stokke estimated that by 1965-66, Czechoslovakia had disbursed about 40 percent of its total commitments to African countries.[2] McAuley and Matko, on the other hand, estimated drawings to have formed about a third of Soviet credit commitments.[3] It has been assumed here that drawings were 50 percent of all loans offered. This is purely arbitrary and cannot be justified, but it is believed that it probably significantly overstates actual drawings and is thus consistent with the general aim of estimating the maximum amount of resources transferred by Czechoslovakia, as well as allowing for loans which may not have been identified in Table 5.5.

The calculation of grant equivalents of loan commitments requires several further assumptions. It was assumed that a general grace period of five years[4] was given during which loans were capitalized; and that interest was at 2.5% per annum with repayment of principal in twelve equal annual instalments. Choice of an appropriate discount rate was more difficult. Because we are measuring the cost to Czechoslovakia of concessional loans, the discount rate should represent the opportunity cost to Czechoslovakia of foregoing the use of capital. Due to the absence of a money or capital market, there exists no easily observable value for alternative uses of capital. McAuley and Matko used 6% and 15% for the Soviet Union,[5] while Carter uses 15% to represent the return on long-term capital in the Soviet Union.[6] In the seventies 6% was the interest rate charged by the

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1 Wiles (1968), pp. 389-390.

2 Stokke (1967), p. 272.

3 McAuley and Matko (1966), p. 267.

4 Grace periods have similar effects to extending maturity periods of loans and thus increase the grant equivalent of a given loan.

5 McAuley and Matko (1966), p. 269.

6 Carter (1971), p. 31.

TABLE 5.6 ESTIMATED RESOURCE TRANSFERS EMBODIED IN OFFICIAL CZECHOSLOVAK CONCESSIONAL LOANS TO DEVELOPING COUNTRIES

(stated unit)

Year	$ million	mill. deviza Koruny	mill. dom. Koruny	as % of NMP produced
column no.	(1)	(2)	(3)	(4)
1954	1.2	8.6		
1955	1.2	8.6	14.3	0.0107
1956	1.0	7.2		
1957	13.9	100.1		
1958	14.3	103.0		
1959	18.5	133.2		
1960	28.0	201.6	377.0	0.2314
1961	35.5	255.6		
1962	0.2	1.4		
1963	4.9	35.3		
1964	28.7	206.6		
1965	10.5	75.6	148.2	0.0854
1966	46.7	336.2		
1967	21.4	154.1		
1968	48.6	349.9	979.7	0.3800
1969	9.0	64.8	207.4	0.0706
1970	13.4	96.5	297.2	0.0952
1971	3.4	22.5	69.8	0.0213
1972	24.3	161.1	497.8	0.1437
1973	73.6	430.7	1339.5	0.3688
1974	26.2	153.1	489.9	0.1255
1975	25.3	141.2		

Sources:

Column (1): Table 5.5 and text. Assumption of drawings of 50 percent of face value of all loans, and grant equivalent of 48.6%

Column (2): Conversion to koruny using rates given in *Yearbook of International Trade Statistics*, 1975, p. 307.

Column (3): Conversion to domestic koruny using export purchasing power parities: Table 1.12.

Column (4): column (3) as % of Net Material Product (NMP) from *Statisticka Rocenka*, various years.

Czechoslovak State Bank to private consumers borrowing the full value of specified purchases.[1] However the mutual inconvertibility of domestic and foreign trade (deviza) koruny makes the domestic interest rate an inappropriate one for discounting loans in the foreign trade sector. Unfortunately no estimate of a long-term rate of return on deviza koruny was available so an arbitrary, but conventional[2] rate of 10% was used.

On the assumptions stated so far, the 10% discount rate represents a grant equivalent of 48.6% on the face value of the loan[3]. (A grant equivalent of 48.6% means that Czechoslovakia would have been indifferent between giving the recipient a grant of $486; or extending a loan of $1,000 on the terms stated above). It must be strongly emphasised however that the assumptions and their uniform application to all loans was a highly arbitrary factor in the calculation of grant equivalents; and the results cannot be accepted without serious reservation.

5.5.3 The Total Cost of Bilateral Assistance

The major aim of this section has been the estimation of the maximum probable cost to Czechoslovakia of bilateral aid (calculated as grant equivalents) provided to LDC's. Assumptions made have necessarily been rather arbitary (though generally feasible) and have erred on the side of overstatement as far as possible to help identify the maximum likely

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1 *SR*, 1972, p. 174. It had been 4% in the sixties: *SR*, 1965, p. 500. Such loans were also available to the (relatively insignificant) private sector: *SR*, 1958, p. 415 (and later years).

2 It has become conventional to use 10% as the normal rate of return on capital in lending countries for the purpose of calculating grant equivalents. A. Kamarck, 'The allocation of aid by the World Bank Group', *Finance and Development*, September 1972, p. 23, footnote 2. M. Kaser, 'East European development aid: comparative record and prospects', *WT*, November 1970, p. 477, footnote 26, also uses 10% as a long-term rate of return.

3 OECD calculations place the Czechoslovak grant element in concessional lending in the range of 12-47%. OECD (1977), DD-573, Table 4, p. 12.

extent of the aid programme. Because multilateral aid is probably of negligible net economic cost to Czechoslovakia (section 5.6) the estimated cost of educating LDC students in Czechoslovakia (Table 5.4); the grant equivalent of concessional loans to LDC's (Table 5.6); and the cost of bilateral technical assistance, probably reflect fairly closely the 'true' total cost of all resources transferred.

A final heroic assumption might be that the cost of bilateral technical assistance is approximately of the same order as that of training students in Czechoslovakia; even though the annual number of students is about 2,000, while the number of technicians abroad is probably no greater than 800, and associated increases in exports reduce their net economic cost. The percentage of NMP devoted to both students and technicians then would be double that shown in Table 5.4; that is, a cost of about 0.03% of NMP at the most for each of the years 1962-1971.

Choosing a representative value for annual resource transfers arising from concessional lending (Table 5.6) is more difficult because of fluctuations in the time series and gaps in years for which data were available. For the ten years for which percentages were calculated (column (4), Table 4.6), the median value is 0.11% of NMP. If only the continuous series of years 1968-1974 are taken, the median value is closer to 0.13% of NMP.

A combined total would then show the net cost to Czechoslovakia of bilateral assistance given to developing countries as being of the order of 0.16% of NMP at the very most. Without allowing for the fact that the use of GNP rather than NMP would have decreased this figure, the very favourable (to Czechoslovakia) assumptions made throughout lead to an estimate approximately double the 0.07% of GNP estimated by Kaser[1] for 1968. Even so, Kaser's basic conclusion - that the proportion of Czechoslovak and other East European national product devoted to aid is significantly below that of Western nations[2] - remains true, because Czechoslovakia's aid to

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1 Kaser (1970), p. 473, Table 2.
2 *ibid.*, p. 471.

NMP ratio is still only half the median 1968 aid to GNP ratio of the members of the Development Assistance Committee of the OECD.[1] The 0.16% of NMP estimate is, however, below Wiles' approximate figure of 0.2% of "national income"[2], but his estimate includes 'terms of trade' subsidies.

Czechoslovak sources have referred to an aid figure of $2.3 per head in 1965. For example, Kohout writes:

> "According to the 1966 United Nations Statistical Yearbook, the net transfer of credit and other resources to developing countries (that is after subtraction of repayments) represented for us, in 1965 for example, about $2.3 per capita, for Austria $5.6, for Sweden $7.9, for Switzerland $15.1, and for France even in excess of $24."[3]

This figure of $2.3 per head is repeated by Krejci[4] in an article a year later. Table 194, p. 684, of the United Nations *Statistical Yearbook*, 1966, specifies the bilateral commitment of capital by Czechoslovakia to LDC's in 1965 as $43 million (as in Table 5.5 above). Thus Kohout by implication provides a figure of about $10 million in repayments of concessional loans by LDC's in 1965. But he also implies that the U.N. data - which form the basis of calculations in the present chapter (Table 5.5) - refer to disbursements, whereas they are only estimates of gross commitments. His figure of $2.3 per head is therefore a considerable overestimate. Furthermore, the comparative figures for Austria, Sweden, Switzerland and France appear to be based on net disbursements of ODA: which are not strictly comparable with gross capital commitments by Czechoslovakia.

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1 *ibid.*, p. 472, Table 1.

2 Wiles (1968), p. 399.

3 Kohout (1968), p. 40.

4 e.g. Z. Krejci, 'Rozvojove zeme a pluralita financnich zdroju', *NZO*, no. 4, 1969, p. 3.

5.6 MULTILATERAL FORMS OF AID

Czechoslovakia provides mulitlateral aid to developing countries through two organizations: the United Nations, and the Council for Mutual Economic Assistance. Both form relatively minor components of the Czechoslovak aid programme but are examined briefly nevertheless.

5.6.1 Assistance Provided Through the United Nations

The United Nations established the Expanded Programme of Technical Assistance (EPTA) in 1949, as well as a Special Fund (UNSF) in 1959 as part of its development programme. EPTA and UNSF were amalgamated in November 1965 as the United Nations Development Programme (UNDP) which is responsible for administering and coordinating the great majority of the technical assistance provided to developing countries through the United Nations system. Most of the projects funded by the primarily voluntarily-funded UNDP are executed by UN agencies and organizations such as FAO, ILO, UNIDO, WHO and UNESCO. Soviet bloc participation in United Nations development activities effectively began in July 1953 when the Soviet delegate announced a reversal in his government's attitude to EPTA,[1] and in September of that year Czechoslovak Foreign Minister Vaclav David pledged a contribution to EPTA of half a million koruny[2] in New York. Czechoslovak involvement in UNDP activities has also included membership of its Governing Council during 1969-71, and 1978-80.

Czechoslovakia contributes directly to the United Nations Industrial Development Organization (UNIDO) which was established in November 1966 as a semi-autonomous organization within the United Nations, to promote industrial development and to assist in accelerating industrialization in developing countries, with particular emphasis on the manufacturing sector.

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1 Rubinstein (1964), p. 3.

2 Svec (1955), p. 292.

The voluntary nature of this contribution - UNIDO is funded directly by UNDP and through the UN's regular budget and many developed Western countries do not contribute directly to UNIDO funds - probably reflects the Czechoslovak and East European conviction that development assistance should be directed primarily to the industrial sector. (Czechoslovakia does not normally contribute to other U.N. aid activities, with the exception of UNICEF.) Table 5.7 reinforces this supposition because the amount pledged as a proportion of pledges by all contributors is substantially higher for UNIDO than it is for EPTA or UNSF, the component funds of UNDP, or for UNICEF. It must be stressed however that all Czechoslovak pledges to U.N. funds are made in inconvertible koruny and may not always be fully drawn upon, so that the amounts shown in Table 5.7 almost certainly do not represent actual transfers of resources to LDC's via the United Nations. Even in the early years of contributions, there were complaints that the pledge amounts were not being fully utilised.[1] Furthermore, Czechoslovakia itself received assistance worth $28,800 in 1971, and $27,133 in 1973, among other years, from UNIDO.[2]

In terms of the Czechoslovak bilateral aid programme, the transfer of resources through the United Nations is relatively small. In the middle sixties the ratio of Czechoslovak bilateral technical assistance to developing countries to that provided multilaterally was 9:1;[3] an insignificant amount of assistance in terms of Net Material Product (compare Tables 5.6 and 5.7). It is not uncommon for donors, for reasons of effective control over disbursement, to prefer bilateral programmes; and this is probably also true of Czechoslovakia.

Table 5.8 shows technical aid in the form of experts and fellowships

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1 *ibid.*, p. 293.

2 *Yearbook of the United Nations*, 1971, p. 289; 1973, p. 378.

3 Bula (1967), p. 12; Kohout (1962), p. 6, also states that bilateral technical assistance is "... the more extensive form ...".

TABLE 5.7 CZECHOSLOVAK PLEDGED CONTRIBUTIONS TO UNITED NATIONS DEVELOPMENT ASSISTANCE PROGRAMMES

(thousands of dollar equivalents, and per cent of contributions by all countries)

Year	Expanded Programme		UNICEF[2]		Special Fund[1]		UNIDO[3]	
	amount	%	amount	%	amount	%	amount	%
1955	69	0.25	..	..				
1956	69	0.24	35	0.20				
1957	69	0.22	35	0.19				
1958	69	0.21	35	0.17				
1959	104	0.45	35	0.17	69	0.27		
1960	69	0.21	35	0.16	69	0.18		
1961	69	0.17	35	0.15	69	0.15		
1962	69	0.16	52	0.22	69	0.12		
1963	104	0.21	52	0.21	69	0.10		
1964	104	0.20	52	0.20	69	0.08		
1965	104	0.19	69	0.27	69	0.08		
1966	104	0.19	69	0.26	69	0.07		
1967	104	0.17	69	0.24	104	0.09		
1968	554	0.30	69	0.24				
1969	..	..	104	0.31			139	5.08
1970	623	0.28	104	0.31			139	9.01
1971	693	0.29	104	0.27			173	7.85
1972	762	0.28	104	0.23			173	8.42
1973	1010	0.49	104	0.20			191	8.53
1974	1134	0.33	64	0.11			222	8.77
1975	1289	0.31	65	0.10			211	6.18

Source: Yearbook of the United Nations, Department of Public Information, United Nations, New York, various years. Also UNICEF, *Report of the Executive Board*, various years.

1. The Expanded Programme and the Special Fund were combined by General Assembly resolution 2029 (XX) of 22 November 1965 into the United Nations Development Programme (UNDP) with effect from 1 January 1966, but the special purposes of these two funds were maintained within UNDP until 1 January 1971.

2. General purpose contributions only. No contributions have been made to the 'local costs' or 'specific purpose' components of the UNICEF budget. Non-government contributions have been made in the seventies but are insignificant.

3. UNIDO activities are funded by UNDP and through the UN's regular budget. Amounts shown are additional (direct) contributions to UNIDO for technical assistance.

TABLE 5.8

TECHNICAL AID RECEIVED FROM, AND PROVIDED TO CZECHOSLOVAKIA, THROUGH UNITED NATIONS TECHNICAL ASSISTANCE PROGRAMMES[1]

Year	Experts provided to Czechoslovakia		Fellowships awarded to Czechoslovakia		Experts recruited from Czechoslovakia		Fellows placed in Czechoslovakia	
	Expanded progr.	Regular progr.	Expanded progr.	Regular progr.	Expanded progr.	Regular progr.	Expanded progr.	Regular progr.
1959					3		33	2
1960		2		62	8		15	94
1961			1	42	9	3	14	37
1962				64	11	5	78	57
1963		1		47	12	10	20	52
1964		1	4	53	18	14	29	40
1965			3	45	32	20		49
1966				52	46	37	85	68
1967			1	49	50	35	19	88
1968			5	50	80	48	83	85
1969	4		58	66	213	54	123	75
1970	16		41	44	221	39	77	83
1971	9		28	37	153	38	80	84
1972	17	3	78	33	131	26	31	76
1973	15	1	45	22	68	22	30	118
1974	23		49	21	78	29	17	54
1975	34		99	20	91	26	22	65

Source: *Yearbook of the United Nations*, Department of Public Information, United Nations, New York, various years.

1. Expanded Programme incorporated into United Nations Development Programme, 1 January 1966.

both received from, and channeled to developing countries through, the United Nations. While experts received from the U.N. represent a transfer of resources to Czechoslovakia, the experts shown in Table 5.8 as being recruited for service in LDC's were financed directly by UNDP, and are not supplemental to the Czechoslovak contributions to UNDP funds,[1] shown in Table 5.7. The provision of United Nations experts to Czechoslovakia means that the net costs to the economy of contributing to UNDP are therefore not as great as indicated in Table 5.7. Moreover training courses organised on behalf of UNIDO were not only financed by that body, but it has also been recognised that:

> "The UNIDO training courses are also of practical importance to the CSSR, especially for foreign trade. They create permanent ties between our industry and the foremost experts from developing countries ..."[2]

It is therefore submitted that the tied nature of multilateral aid, the incomplete drawings of pledged amounts, the reverse transfer of U.N. resources to Czechoslovakia, and the foreign trade benefits accruing from technical assistance provided, mean that the even nomirally low ratio of multilateral aid bilateral assistance is in fact probably insignificant. The net economic cost to Czechoslovakia of multilateral aid given through the U.N. has therefore been assumed to be very close, if not equal, to zero.

5.6.2 The Council for Mutual Economic Assistance

Until 1973 it was probably the case[3] that:

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1 'Experts on technical assistance of UNO and Czechoslovakia', *CFT*, no. 2, 1972, p. 19.

2 M. Sigl, 'Ceskoslovenska pomoc rozvojovym zemim', *NZO*, no. 37, 1971, p. 3.

3 A.J. Smith, 'The Council of Mutual Economic Assistance in 1977: new economic power, new political perspectives and some old and new problems', p. 165, in United States Congress Joint Economic Committee, *East-European Economies post-Helsinki*, Washington, 1977, refers to a joint CMEA fund providing scholarships and grants for LDC students studying in CMEA countries, but no evidence was found in Czechoslovak sources for either the existence of such a fund or of a Czechoslovak contribution to it.

> "No coordination committee for development aid seems to exist within the framework of Comecon, but the G.K.E.S. [State Committee of the USSR Council of Ministers for Foreign Economic Relations] has a special desk for the coordination of its assistance with East European aid, and by 1969 about 40 projects in 12 non-communist developing countries were carried out jointly by two or three communist donors. The most important among these projects is the second industrial complex in the Helwan area (Egypt) which is being set up by the Soviet Union in cooperation with the G.D.R., Romania and Czechoslovakia ..." [1]

Virius also cites the signature by both Iraq and Mexico of agreements on multilateral cooperation with CMEA[2] but it is not clear whether projects are to be multilaterally financed by a consolidated CMEA fund or whether each CMEA country gives money bilaterally to the LDC concerned, but in multilateral cooperation with other CMEA countries.

Both the International Bank for Economic Cooperation (IBEC) and the International Investment Bank (IIB) possess facilities for multilateral assistance to developing countries through subsidised financing arrangements:

> "IBEC has been authorized since October 1972 to offer credit at 1.5% a year for developing countries (and possibly others) which opt to make settlements between them and the foreign trade organizations of IBEC member countries in transferable roubles. In April 1973, the IIB Board decided to establish a Special Credit Fund for economic and technical assistance to the developing countries; once it is in operation (from 1 January 1974), the Special Fund will offer development loans of up to 15 years for the construction of capital projects in developing countries; interest rates will certainly be aligned to the concessional terms hitherto offered in bilateral deals by Comecon members."[3]

Five percent of the IIB Special Fund is composed of convertible currency and the remainder is in transferable roubles, with contributions according to 'export quotas' in intra (European)[4] CMEA trade.[5] Loans may even be extended, in exceptional circumstances, to the private sector in developing countries, and the fund may be used for providing technical assistance, as

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1 OECD, *Flow of Resources to Developing Countries*, 1973, p. 412.

2 Virius (1977), p. 11.

3 Kaser (1973), p. 19.

4 Virius (1977), p. 9. Cuba and Vietnam presumably do not contribute.

5 Sronek (1976), p. 9.

well as loans, although this is not specifically provided for in the articles of agreement.[1] However the conditions for use of the IIB fund had not been finalised by 1977,[2] and as far as is known no drawings had been made by that date on either the IBEC or IIB credit facilities. It is therefore probable that until 1975 at least the cost to Czechoslovakia, if any, was limited to the opportunity cost of foregoing the use of finance earmarked for the IIB and IBEC aid funds.

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1 *ibid.*, p. 9.

2 Virius (1977), p. 9.

5.7 AID, TRADE, POLITICS: SOME EMPIRICAL RESULTS

The relationship between politics and trade was discussed in Section 3.7, where it was found that there was some association between the two.

Section 5.2 highlighted the relationship between trade and aid: aid in the form of concessional loans is given in inconvertible currency and is thus automatically tied to Czechoslovak exports. The extension of a concessional loan also implies a potential willingness by planners to increase trade with the recipient on a long-term basis. One can therefore hypothesise that the recipient of a concessional loan is of long-term interest to foreign trade planners - for whatever reason - and that loan recipients should reveal closer trading relations with Czechoslovakia over the period 1960-1975 than non-recipients. Because concessional loans are always repaid in commodity exports by the recipient, rather than on a multilateral basis in convertible currency, the hypothesis applies equally to imports and exports. To test this, 41 selected LDC's (Table 3.2) were divided into two groups. One group (n_2 = 23) was composed of LDC's which had received loan commitments (Table 5.5) during the period 1958-1973,[1] on the arbitrary but feasible assumption that two years were necessary for actual disbursement (i.e. exports) after signature of a loan agreement. The other group (n_1 = 18) consisted of non-recipients of such loan commitments. A Mann-Whitney test[2] was then carried out to ascertain if the two groups differed either in trade levels or in relative market shares (delta ratios).

No significant differences were found in trade relations with Czechoslovakia between the group of loan recipients and the group of non-recipients, a result consistent with Holzman's findings for an earlier period.[3] One explanation is that the dichotomy relied on loan commitments

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1 The results did not differ significantly when 1960-75 data were used.

2 Uncertainty of the completeness of loan data and (probably) different but unknown drawing ratios for each country meant that a non-parametric test was preferable.

3 Holzman (1976) Table 5.4, p. 202, found that for the period 1955-64, Czechoslovak trade with aid recipients grew at 4.5% per annum, while trade with all LDC's grew at 4.6%. The differences were greater for other East European countries.

and not disbursements, for which data were unavailable; but this should have had only a marginal effect on the results even if some countries had made no drawings and were consequently placed in the wrong group. A second explanation is that the low level of some of the loans (e.g. Bolivia 1971) means that it would be unrealistic to expect levels of trade significantly higher than those with non-recipients over the whole sample period. Thirdly, the use of the median as a summary measure for trade levels would have led to understatement where trade creation had occurred for only a very short period; for example, where the loan was made towards the end of the period 1958-1973. A firm conclusion cannot therefore be made beyond saying that the commitment of concessional loans did not result in trade levels with 'recipients' which were significantly higher than those with 'non-recipients'. Whatever the reason for this, it would therefore appear that concessional loans are unlikely to be substantially used by planners to increase trade with selected LDC's, or that the commitment of such loans implies a greater interest in long-term trade relations with the recipient. However the possibility remains that such loans are extended for either political or charitable reasons.

Table 5.5 gives the prima facie impression that political affinity is an important factor in the Czechoslovak commitment of concessional lending to LDC's. Indeed it has been said of long-term government loans to LDC's, that "... in the final analysis the political factor plays a very important role."[1] However this statement does not clarify the aim of the political factor; that is, whether loans are given predominantly to politically friendly LDC's or whether precedence in lending is given to countries with less friendly political and trade relations, in order to move closer to them. The null hypothesis that concessional loans are offered without

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[1] J. Petrivalsky, 'Teoreticke aspekty poskytovani dlouhodobych zahranicnich uveru', *FU*, no. 2, 1970, p. 81.

discrimination to both LDC's with a high degree of political affinity to Czechoslovakia as well as to those with a low level (Table 3.12), was examined using the Mann-Whitney test. LDC's were divided into two groups: recipients of loan commitments (n_2 = 22) in the period 1960-75, and non-recipients (n_1 = 19). The null hypothesis could not be rejected (U = 180, z = -1.516), probably because loans were extended for both the reasons stated above. On the one hand, countries like India and Egypt received loans, but on the other hand the trade drive in Latin America in the late sixties and early seventies obviously led to loan commitments, even though these countries were among the politically more distant from Czechoslovakia. A further complicating factor which is not accounted for in the test is the possibility of changes in political affinity. Ghana for example was classed as a loan recipient because of a commitment in 1961, even though Nkrumah's fall from power in 1966 greatly altered Ghanaian foreign policy.

An alternative approach was therefore to hypothesise that the politically closer LDC's received a greater *amount* in loar commitmeıts from Czechoslovakia. Countries were therefore ranked by the total value of loan commitments made to them by Czechoslovakia between 1960 and 1975. Spearman's method was used to correlate these ordered values with countries' ranks according to the Stokman index of political affinity (Table 3.12), but the result (r = -0.280, n = 41, t = -1.821) could not jusify the rejection of the null hypothesis that the size of loan commitments made during 1960-1975 did not depend on political affinity. Once again, trade policies (e.g. with respect to Iran: Table 5.5) may have upset apparent lending patterns, or loans might be given to both politically close *and* distant LDC's. We must therefore conclude that no direct empirical relationship was found between political affinity and loan commitments. This is not to say of course that political factors are not relevant - loans may still be given for political purposes to both friendly and unfriendly LDC's - only that it cannot be proved or disproved statistically.

In the absence of firm data on actual aid flows to individual LDC's, it was postulated that the *duration* of bilateral scientific, technical or economic cooperation agreements - necessary preconditions to aid disbursement - could be considered indicative of Czechoslovak aid intentions.[1] The Stokman index of political affinity (Table 3.12) was therefore correlated with the number of months for which an 'aid' agreement existed in the period 1960-1975. Spearman's rank correlation coefficient ($r = -0.510$, $n = 41$, $t = -3.703$) indicated strong positive correlation between the level of political affinity (high levels of the Stokman index indicate low political affinity) and the duration of aid agreements. It is therefore reasonable to conclude that Czechoslovak willingness to extend economic assistance is primarily directed towards politically friendly LDC's.

It was seen in section 3.7 that politics and trade (deltaex) are probably interrelated. Moreover there exists a positive relationship between the *duration* of bilateral aid agreements and median deltaim and deltaex values.[2] The trilateral relationship between politics, deltaex and duration of aid agreements is shown in figure 5.1. using Kendall's tau values. The results there show that when partial correlation coefficients were calculated, the direct relationship between political affinity and deltaex weakened considerably, while the decline was not as great for the other two sides of the triangle. This suggests that the relationship between deltaex and political affinity is not as important in the triangular context as the other two sets of relationships.[3]

Thus it can be stated as a general rule for the period 1960-1975 that LDC's which were politically close to Czechoslovakia, and which offered Czechoslovakia a relatively important part of their import markets, also had aid agreements with Czechoslovakia for much of the time. Unfortunately

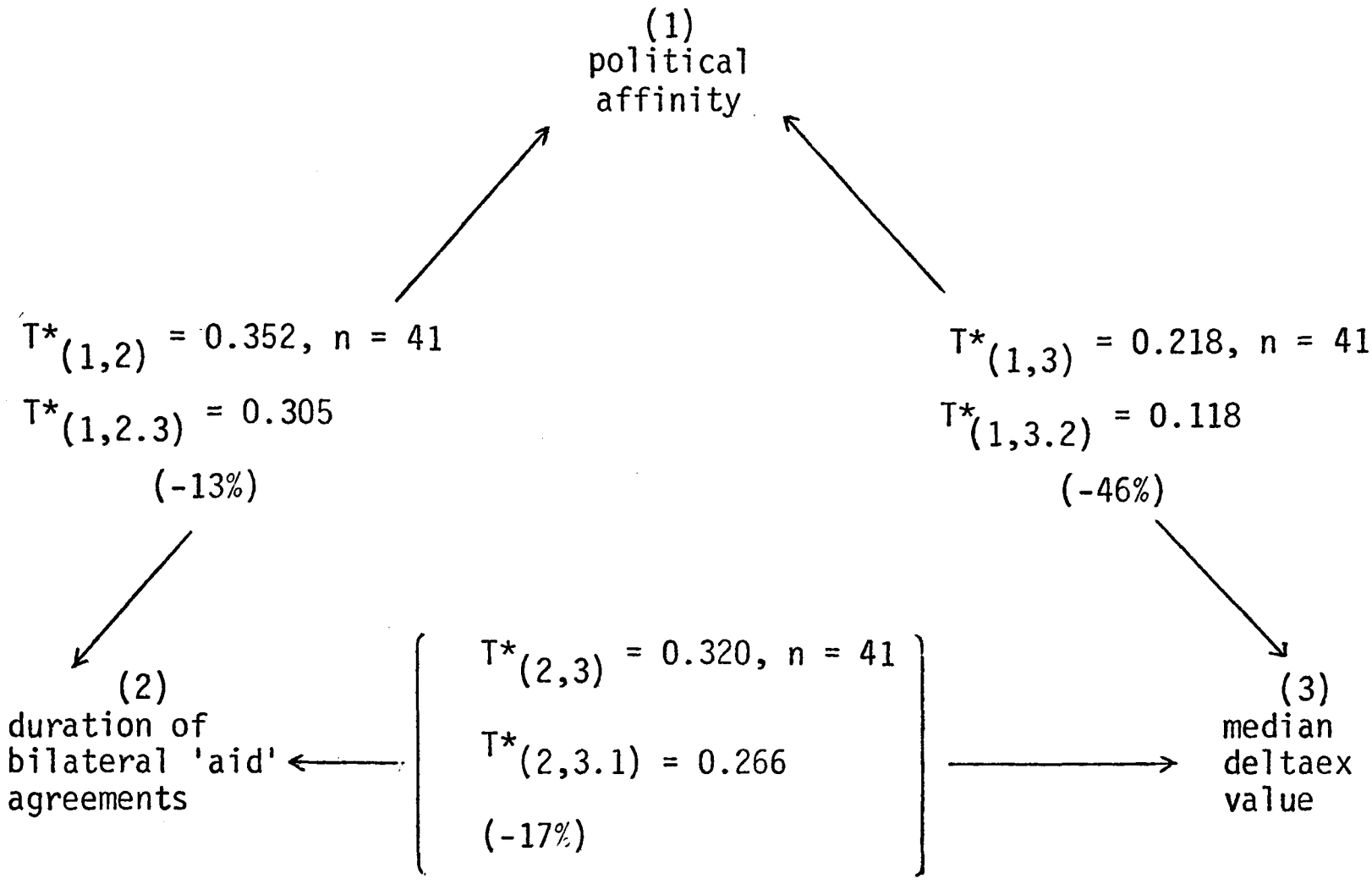
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1 That this was a reasonable assumption is indicated by the Spearman correlation between the duration of bilateral aid agreements, and the median number of students, for the period 1960-75. ($r = 0.521$, $n = 39$, $t = 3.713$).

2 For deltaim: Spearman's $r = 0.452$, $n = 41$, $t = 3.164$. For deltaex: Sp. $r = 0.406$, $n = 41$, $t = 2.774$.

3 Siegel (1956), pp. 226-229.

FIGURE 5.1 KENDALL's TAU VALUES FOR THE TRILATERAL RELATIONSHIP BETWEEN THE DURATION OF 'AID' AGREEMENTS, TRADE INTENSITY, AND POLITICAL AFFINITY, FOR 41 DEVELOPING COUNTRIES



1. Solid lines with arrowheads intercept relevant Kendall correlation (T*) and partial correlation coefficients and n = number of observations. Percentages in parenthesis refer to decrease in value of partial correlation coefficient over the direct correlation coeffficient.

2. Variable (1): political affinity here refers to closeness of relations for 1960-1974 *per se*; not the political affinity index which is ranked in inverse order to actual affinity, since low values of the index show high degrees of affinity. *Source*: Table 3.12

3. Variable (2): number of months during 1960-1975 during which there existed an agreement on economic, scientific or technical cooperation. Where two types of agreement ran concurrently, only one was counted. *Source*: *Facts on Czechoslovak Foreign Trade,* various years.

4. Variable (3): median value of deltaex 1960-1975 (Table 3.2).

correlation methods cannot definitely tell us which variable is the major determinant in this relationship. Intuitively, it could be argued that it is more likely that strong political affinity probably leads to higher levels of deltaex and more lasting arrangements for the provision of development assistance.

Despite relatively low numbers of students accepted from India and Egypt, there is still an apparent tendency in Table 5.2 for student numbers to be concentrated on politically friendly LDC's. This was confirmed by the relatively strong degree of association between the median number of students accepted and the median level of the Stokman index of political affinity (Spearman's $r = -0.347$, $n = 39$, $t = -2.251$). It is therefore possible to conclude that LDC students in Czechoslovakia tend to come from politically proximate countries.

Fluctuations in numbers (e.g. Indonesia 1966, Chile 1971) in Table 5.2 indicate the entirely probable possibility that political relations even in the very short run can affect student numbers. For this reason tests were done individually for all 41 LDC's, correlating student numbers with political affinity. Because selection procedures which determine numbers may be more influenced by political ties in the year preceding the student's arrival in Czechoslovakia, one and two-year lags in the political index were also used. The results were inconclusive because no clear pattern emerged. It must therefore be concluded that LDC students tend to come from countries with long-term friendly political ties with Czechoslovakia, and that changes in such relations do not appear in the short term to affect acceptances.

CHAPTER 6

REVIEW AND CONCLUSIONS

CHAPTER 6 REVIEW AND CONCLUSIONS

Work on relations between developing countries (LDC's) and the socialist countries has tended to concentrate on the Soviet Union because of its dominant role within Eastern Europe and its superpower status. The present thesis adopts an alternative approach by examining relations between LDC's and a smaller - but still important - country, because the absence of 'superpower' attitudes, constraints, and concerns, lends itself to a less exclusive representation of the political and economic factors involved in bilateral relations between an LDC and a planned socialist economy. The immediate post-Stalinist era in Eastern Europe coincided fairly closely with the post-colonial era in the Third World, and both East and South manifested an appreciation of the potential advantages of mutual cooperation: for the former a means of obtaining raw materials and extending its geopolitical influence, and for the latter a means of establishing economic as well as political independence. Western literature in the late fifties and early sixties often imputed sinister motives to the actions of the socialist countries, and it is well to examine the nature of the relationships which actually evolved, with the benefit of two decades of historical hindsight. Czechoslovakia is not a 'typical' East European country in this regard because of its relatively highly industrialized nature at the beginning of the main data period used (1960-1975) and its more extensive (except perhaps for some firms in the GDR) historical connections with the Third World. On the other hand, none of the countries of Eastern Europe is truly 'typical', and Czechoslovak economic relations with LDC's have been relatively significant throughout the postwar period.

Because no other major work has sought to examine the whole range of Czechoslovak/LDC relations, an integrated approach was adopted and a wide spectrum of bilateral economic activity has been examined to the extent that it has been possible to overcome data limitations. This approach has

contributed much to helping place specific aspects of the relationship in a broader and hence enhanced perspective. To the extent that there has existed an underlying theme or line of enquiry, it has been the desire to determine the relative importance of politics or economics in bilateral economic relations between a socialist country and a relatively distinct set of trading partners. There can be no simple or unique answer to such a question: either may predominate in certain situations, and it may not always be obvious which is the determining factor, because they are mutually interrelated. Also implicit in the present thesis was the notion that although trade with LDC's is relatively minor in total Czechoslovak trade and is therefore generally examined only as a subsidiary issue, its very disparity warranted separate study. Lack of knowledge of planners' preferences and the absence of an appropriate general equilibrium model also determined the integrated approach adopted. As a means of achieving an understanding of Czechoslovak/LDC economic relations, a number of selected but interrelated aspects were examined: direction, composition and stability of trade; mutual trade intensity; politics; payments; historical antecedents; the terms of trade; barriers to trade; and development assistance.

Rather than rely solely on statements by politicians and officials for the importance of political factors, this study developed an index of 'political affinity' (section 3.7) which was correlated where approriate with other variables which were quantifiable (in at least an ordinal sense). While it cannot be claimed that U.N. voting patterns are an entirely accurate indicator of political factors in specific economic decisions, results were generally encouraging and served at least to confirm more qualitative analysis. A further innovation, apart from the adoption of an integrated overview of economic relations, was the use of delta coefficients to calculate the (visible) relative intensity of bilateral economic relations. These were very useful in the examination of the importance of mutual trade

relations with individual countries in a fairly (economically) distinct group of trading partners which might have been expected ceteris paribus to reveal approximately identical levels of importance.

The results of the present thesis are to some extent limited by the lack of comparison with other planned (socialist) economies. There was no examination for example of the marked growth in LDC trade shares in Romanian trade (and Bulgarian exports) from the early seventies. Moreover in recent years even the absolute trade levels with LDC's of Poland, Romania, and Bulgaria, have tended to equal and even surpass those of Czechoslovakia. While this phenomenon probably bears no direct relationship to Czechoslovak/LDC economic relations, it may be that a comparative analysis could have revealed the influence (if any) of intra-CMEA patterns of specialization or cooperation in the sixties and seventies on the trade with LDC's of each of the European CMEA countries. Czechoslovakia's relatively highly industrialized status within CMEA, and differing foreign policies within Eastern Europe (for example Romania's identification with the Group of 77 from 1976), might also have produced interesting insights from a comparative analysis.

Chapter 1 pointed out that the planned nature of foreign trade and the fact that market mechanisms generally played little or no part in determining either the volume of postwar Czechsolovak trade, or its direction, allowed both commodity and financial flows to be determined by central planners unconstrained by market parameters. This was not to say that planners were able to effect their choices which could be presumed to select an equality of all binary combinations of trade partnersin world trade; that equality in the real world is destroyed by biases in, and resistances to, specific trade paths between any country and its trading partners. Historical influences on Czechoslovak trade relations with developing countries were therefore examined in chapter 2; and a variety of specific factors affecting trade flows (payments, tariffs, geographical distance, etc) were dealt with in chapter 3. The trade in armaments is always a special case

because of the inherent political element, data problems, and because of the special nature of the market, and was examined separately in chapter 4. Development was assessed in chapter 5 with the aim of determining the proportion of Net National Product devoted to technical assistance and official concessional lending to LDC's.

Papers written in the late fifties and early sixties emphasised (or perhaps imputed) the ideological nature of Soviet and East European interest in the developing world from 1953-54. While it is true that the socialist countries significantly and rapidly expanded their political, cultural and commercial relations with the Third World during the early years of the post-Stalinist era, this may not have been entirely due to ideological considerations, or a desire to 'penetrate' (in some invidious manner) these countries. In the Czechoslovak case at least,the termination of autarkic Stalinist policies in many ways simply ended an aberration in the interwar evolution of trading patterns. In this sense there are good grounds for treating closer Czechoslovak/LDC relations as much a manifestation of 'catching up' with previous trends (Tables 1.6 and 2.9), as an ideologically motivated development, although the latter undoubtedly also played a part in the process of establishing more intensive direct links.

Czechoslovakia was never a colonial power - indeed, none of the East European countries were, with the partial exception of the GDR - but it did establish, during the twenties and thirties, important commercial links with what were later to become independent developing countries. The disintegration of the dual Monarchy in 1918 left the new Czechoslovak state with a significant proportion of the industrial capacity of the old customs union, but the markets to which this industry had become accustomed became increasingly protectionist as the Successor States themselves strove to industrialize. Difficulties of export to this region were further compounded during the Depression years. Agricultural protectionism in Czechoslovakia -

the result of the political power of the Agrarian Party - promoted self-sufficiency in food, and hence limited Czechoslovak demand for the exports of the South-East European agrarian economies. This was of little consequence in the multilateral system of world trade and payments in the twenties because it was not necessary for trade flows to be bilaterally balanced. But increasing agricultural protectionism on the part of industrialized countries such as Germany, and global financial problems from 1931, forced the Danubian states to adopt bilateral payments policies in trade. Because there was little demand by Czechoslovakia for imports from these countries, exports to the region diminished markedly because payment for them would have been blocked. German protectionist policies also limited Czechoslovak agricultural exports to that country.

Because many of Czechoslovakia's essential raw materials came from developing countries (the term is used to include colonies) which traded within the currency 'blocs' which evolved in the thirties, it was necessary for Czechoslovakia to develop an export trade with these regions in order to gain the foreign exchange required for imports of raw materials. Direct trade contacts were facilitated by the Agreement of the Trilateral Commission of 1929, whereby Czechoslovak entrepreneurs gained information on the export markets and import sources of Hamburg middlemen. Limited export finance facilities, protectionism, an overvalued currency, competition from Japan, Germany, the U.K. and some of the Asian countries in light industrial exports however, hindered efforts at diversifying export markets. The period after 1929-1931 was nevertheless a turning point in the direction of Czechoslovak trade flows. By 1937 trade with LDC's accounted for over 18% of Czechoslovak imports, and over 13% of total exports. Despite the almost total absence of such trade during the war years, and despite the difficulties of the immediate postwar years, by 1947 trade with LDC's again represented about 13%-14% of total Czechoslovak trade. The results of the

Cold War and East European autarky severely depressed these trade shares until the middle fifties. It is therefore clear that the 'trade drive' and 'penetration' of LDC's with its overtones of innate subversion - perceived by so many Western observers in the fifties and sixties - may not be as interesting an issue historically as the subsequent evolution of economic relations and their major determinants.

The relative importance of political and economic factors was a recurring theme throughout the present thesis. Despite the expressed preference by East European economists and officials for trade at world market prices, and claims that foreign trade organizations (fto's) act primarily on economic criteria; there remains the (intuitively attractive) possibility in a centrally planned economy of politically-motivated influence on trade decisions. Credence is lent to this line of thinking by the concentration of Soviet and East European (including Czechoslovak) trade on such countries as India and Afghanistan, and, prior to political differences, China and Egypt. Conversely, little relative trade appears to have been directed towards countries such as Singapore, South Korea, or Mexico, although these have in the last decade acquired substantial export capacity in a range of products. A partial explanation may be that trade relations are influenced by institutional factors such as market knowledge on the part of central planners or fto's and closer bilateral political or cultural relations could be expected to at least marginally affect trade relations.

It was seen in section 1.1.3 that on a more general level, foreign policy has often been put forward as an influential factor in the determination of the broad geographical composition of trade flows, if only to secure sources of supply and guard against discrimination or political interference in trade. On the individual country level, no evidence was found to suggest that political factors might influence the level of Czechoslovak trade (imports or exports) with developing countries. There

was however some evidence (section 3.7) which indicated that LDC's politically close to Czechoslovakia afforded it greater shares of their (import) markets, and that this share tended to be more stable in politically more proximate LDC's. Section 5.7 further indicated that the proportion of time over the period 1960-75 for which a bilateral aid agreement between Czechoslovakia and an LDC existed (itself a reflection of the closeness of bilateral relations) was related to both these market shares and to political affinity; but it was not possible to definitively conclude which relationship was the dominant one. It might therefore be concluded, from the evidence available, that (a) foreign trade organizations are not significantly restricted by political considerations in their choice of trading partners; that (b) their sales efforts meet with greater relative success on the markets of LDC's closer to Czechoslovakia either 'politically' or in some less defined way; and that politics were important only at the strategic level as a determinant of trade flows. Because 'political' factors appear to be relatively unimportant in determining bilateral trade flows between Czechoslovakia and LDC's, it is necessary to examine other determinants of such flows.

Market mechanisms play little or no part in determining either the volume of trade or its direction: overall trade requirements are determined by central planners although fto's probably do - within parameters set by the availability of foreign exchange, and the need to balance bilateral payments accounts - determine to some degree the direction and value of trade according to external market criteria. Because information on planners' preferences and motives, or on criteria used by fto's was not available, the thesis sought to identify such factors by imputation through the use of ex post empirical data. It was considered appropriate to employ the intensity approach to trade flows, which assumes that in the absence of any biases or resistances to trade, all bilateral trade flows should theoretically be equal. According to this model it could be expected that Czechoslovak bilateral trade relations with each developing country

should be roughly identical. In actual fact they are not; and it was the aim of the present work to examine the various facets of the Czechoslovak foreign trade system in an attempt to specify the influences and biases making for unequal bilateral flows with a set of economically relatively homogenous countries.

Brief mention has already been made of the probability that fto's operate on a commercial basis within general parameters set by planners. That is, specific bilateral trade flows are determined by both fto's and planners; in some cases it is clear at which level decisions are taken, but other aspects of trade cannot be indubitably attributed to either. Central planners play the dominant role in the choice of products to be imported or exported. Restricted imports of 'luxury' consumer goods such as bananas are one example (section 3.4.3). This creates a certain resistance to trade with e.g. banana-producing countries, especially where bilateralism in payments exists. The fto in this case has little or no decision-making capacity. It is not entirely clear on the other hand whose decision (and why) it has been to limit the import of LDC manufactures primarily to Egypt and India (section 3.5.3). While these two countries *may* have been the cheapest sources of supply and thus ostensibly attractive to fto's, it is equally likely that bilateral payments constraints or centrally-determined trade agreements (with commodity lists) were major factors in this apparently discriminatory pattern of trade.

It is argued above that tariffs, while of no intrinsic consequence on the macroeconomic level, may yet affect the direction of trade through their effect at the operational level. An fto dependent on financial results for wages or bonuses will *ceteris paribus* tend to buy from countries with which Czechoslovakia has an MFN agreement in preference to other sources. Bilateral trade flows may therefore be directly affected by tariffs. Similarly, an fto would find MFN markets, *ceteris paribus* more accessible

in terms of competitiveness and would thus tend to sell more on them. (The export advantage gained may be the major reason for the apparent Czechoslovak preoccupation with the signature of MFN agreements). One can conclude however that while there are strong *a priori* reasons for believing that tariffs act in a restrictive way in bilateral trade flows between LDC's and Czechoslovakia, no conclusive or significant empirical evidence was found to support this proposition.

Geographic distance is also an important potential resistance factor in bilateral trade flows, not only because of its direct relationship to costs, but also because knowledge of more distant markets is less extensive, and because regional political, trade, and currency patterns may favour more proximate competitors. In the Czechoslovak case, the geographic distance of LDC's was found to be strongly but inversely associated with median values (1960-75) of both exports and deltaex, but not with import values or with deltaim. It is possible that export performance is sensitive partially to freight costs but primarily to market knowledge. Political factors and currency areas (e.g. the 'restrictive' nature of hard-currency export credits: section 3.5.1) may also play a part. Imports on the other hand may be less sensitive to distance factors if major European entrepots can be utilised at little extra cost over direct imports. Nevertheless, a satisfactory explanation of the statistical results would require a greater degree of intensive study, as well as more detailed information on freight and other transport-related costs of relevance to foreign trade organizations.

The problem of inadequate information extends also to actual prices obtained or paid for exports and imports; and analysis was necessarily limited primarily to unit values for the latter. The limited evidence available suggests that Czechoslovak fto's probably trade with LDC's at prices related to those set on world markets, and that they are probably price-sensitive. Even professed desires by the political authorities for

more direct trade relations with LDC's have apparently taken second place to considerations of cost, although adequate empirical evidence to support this proposition was not available from trade statistics. Because of the secrecy which surrounds the balance of payments in most East European countries, even less information was available on payments relations, particularly for individual bilateral agreements. It is known however that many such agreements with LDC's were discontinued from the late sixties onwards. Although bilateralism was used in the fifties and early sixties to facilitate trade with LDC's which were not in a position to trade in convertible currency, its limitations - particularly for creditor nations forced to provide involuntary credit - have led partners towards greater flexibility in its application (e.g. through extended periods for swing credits) but more frequently to its termination. (India and Egypt accounted for over half of all LDC trade under bilateral payments agreements between 1965 and 1975). Nevertheless it was not only bilateralism which limited trade: the accepted need of granting grace periods of up to 180 days in exports to LDC's in hard currercy markets also limited the incentive for fto's to export. Similarly, LDC's trading multilaterally were faced with a greater choice of import sources. However, it was found that over the period 1960-1975, countries which had bilateral payments arrangements with Czechoslovakia for a longer period also tended to have stronger trade relations, probably reflecting planners' preferences and a perennial shortage of convertible currency. Thus the form of bilateral payments adopted has also been a factor in the determination of bilateral trade flows.

The export of armaments - important already before the Second World War - to developing countries was treated as a special case, partially because of the secrecy surrounding it, but mainly because it is more likely to be influenced by non-commercial factors. Most significantly, it was

found that known arms sales could not be accurately identified from trade statistics, underlining the fact that most of the conclusions drawn in chapter 4 relied upon incomplete information and could not be accepted without reservation.

It was argued that small arms are probably sold for hard currency on a commercial basis and were (until 1975 at least) probably relatively unaffected by foreign policy considerations. Major weapons sales on the other hand have almost certainly been subject to Soviet oversight. There also seem to be good grounds for believing that the importance of Czechoslovakia as a world supplier of armaments (particularly to developing countries) is on the wane and will probably continue to diminish. A major reason for this is the clear break provided by the Second World War. Whilst small arms (and artillery) were important in the interwar period, the postwar period has seen a massive growth in technology. Czechcslovakia participated in this process to the extent that it produced tanks and aircraft but, possibly for reasons of Soviet foreign (and strategic) policy, never produced for export the missiles or other technologically advan ed weapons systems increasingly demanded by developing countries.

A further reason for Czechoslovakia's diminishing importance has been increasing competition in what has been a buyer's market since the early fifties. Not only have other CMEA countries developed export potential in armaments, but the developing countries themselves have gradually established indigenous small arms production, the traditional mainstay of Czechoslovak arms exports. Finally, Czechoslovakia is also a significant importer of armaments. With the exception of the Soviet Union, it is probable that no Warsaw Pact member is self-sufficient in arms production (particularly in advanced weapons systems). There is even evidence of a

very limited and probably strategically insignificant import of weapons or equipment from India.

Czechoslovakia's primary motive for extending development assistance to Third World countries is almost certainly similar to that of the West in that its roots lie basically in foreign policy. Nevertheless the underlying philosophical (or ideological) perception of development problems and solutions precludes mechanistic comparisons between levels of assistance provided by Czechoslovakia and those of OECD countries. The inconvertible nature of the koruna itself disqualifies by definition Czechoslovak aid flows from treatment as Official Development Assistance because such aid is automatically procurement tied; and development is seen as a direct result of 'colonial exploitation' which should be overcome primarily by the efforts of the developing countries themselves, ideally on the model of the Soviet experience of industrialization.

Development assistance is predominantly extended bilaterally, and is generally consistent with domestic economic interests. Grants are rare, and bilateral assistance takes the form of concessional lending, technical assistance, and the provision of educational services within Czechoslovakia. Multilateral assistance is provided through both the United Nations system and CMEA, but mainly through the former. Voluntary contributions are given to UNDP, UNESCO and UNIDO. The relatively high contribution to UNIDO (compared to other donors) probably reflects the belief that industrialization is the most desirable process for achieving development. It was estimated that the transfer of resources involved in all bilateral and multilateral assistance extended by Czechoslovakia to developing countries probably represented an annual long-term value (over the years 1954-75) of no more than 0.16% of Net Material Product. Assistance of a military nature could not be adequately analysed because of lack of sufficient information, although an estimate was made in section 5.4 of such aid provided to Egypt.

An auxiliary question which arose was whether developing countries had also benefitted from favourable terms of trade, the existence and stability of markets for their products, and the use of non-convertible currencies in bilateral trade. Although it was not possible to accurately determine the terms of trade between Czechoslovakia and LDC's (individually or overall), the often expressed preference for trade at world prices would seem to have precluded the granting of artificially favourable terms of trade. Indeed, no evidence to the contrary was found, and middlemen continue to be used where commercial advantage to Czechoslovakia is gained. While bilateral payments arrangements may have initially assisted LDC's in increasing imports normally available only for hard currency, the reversion to multilateral trade from the late sixties onwards - in the face of the risks and uncertainties this entails - offers ample evidence of the perceived preferences of the developing countries. Even India - following an improvement in its hard currency reserve position - has recently (1980) taken a decision to divert importers from inconvertible currency trade with Eastern Europe. It was also shown that with the major (and ostensibly discriminatory) exceptions of India and Egypt, Czechoslovakia did not offer much scope for the export by newly industrialising countries of manufactured products other than processed raw materials.

Czechoslovak sources often point out the advantages to LDC's of the stable markets available for their products in a planned economy. Developing countries too, have in the past been (and still are) concerned with the stability of export earnings. However it was found that Czechoslovak planners are (quite naturally from their point of view) concerned more with obtaining a stable supply (in physical volume) of major raw materials and commodities, than they are with buying these commodities from LDC's in a stable manner to ensure stable markets (in physical terms) for these countries. But, it might be argued, it is of greater importance

for LDC's to ensure stable earnings than stable volumes of export. While it was not possible - due to lack of accurate price data - to examine the stability of purchases in value terms for individual commodities and LDC's, it was found that the total value of Czechoslovak exports to individual LDC's tended to be more stable than corresponding import values. Thus in terms of stability in earning foreign exchange (or bilateral credit balances), Czechoslovakia appears to do better than its LDC partners. On the other hand, LDC's with long-term trade agreements with Czechoslovakia tended to realize more stable bilateral export proceeds than those LDC's which did not maintain such agreements over a long period of time.

Finally, while Czechoslovak trade with developing countries increased in absolute value from the late fifties to the middle seventies, it has declined as a proportion of total Czechoslovak trade; although this decline has occurred in a very gradual and stable way. Imports have declined to a greater extent (from 10% in 1960 to 6% in 1975) than exports (11% in 1960, to 9% in 1975). There appears to have been no single reason for this phenomenon. One reason may be that the increased interest in LDC's throughout Eastern Europe following the death of Stalin led to an artificial increase in trade which was difficult to sustain, and later allowed to gradually fall back to more acceptable or desirable levels. A more likely explanation is that this upsurge in relations was accompanied by attempts to forge more direct trade links and to exclude entrepots; both in the interests of cheaper imports for Czechoslovakia, and as a method of providing alternative (non-Western markets for LDC's. The subsequent decline in direct trade is then explainable by the fact that middlemen were probably found to provide useful services and that LDC's may have attempted to extract higher prices from socialist countries in the (mistaken) belief that these countries would be willing to pay higher than world prices.

Another possible factor, but one whose effects cannot accurately measured, is that the use of bilateral payments arrangements - useful in the fifties and early sixties when many LDC's suffered from a shortage of hard currency - led to an initial increase in trade, which later dissipated as developing countries preferred to trade multilaterally. In a multilateral system an LDC would, ceteris paribus, be indifferent between selling to Czechoslovakia or any other country. Similarly, Czechoslovakia would be indifferent, ceteris paribus, between import sources (LDC or entrepot). Other reasons may also be advanced for the decline in trading relations. Increasing industrialization in developing countries has almost certainly led to some degree of import substitution for products previously imported from Czechoslovakia. Furthermore, Czechoslovakia's relative (to the West) inefficiency and lack of technological progress has meant, in a multilateral system, that its products have become relatively less attractive to LDC's. A reluctance to engage in direct investment and production sharing schemes until the mid-seventies has no doubt exacerbated the difficulties of exporting directly to LDC's. Difficulties - in the face of perennial hard currency shortages - of providing export credits have probably also contributed to the problems. An important aspect of trade in the interwar period - the sale of armaments - is also unlikely to play a significant part in future trade relations because of Czechoslovakia's inability to supply the sophisticated weapons systems increasingly demanded by the Third World.

It is difficult if not misleading to attempt to sum up in one paragraph Czechoslovak economic relations with developing countries, but certain features do stand out. Trade with these countries has been concentrated historically on a small number of the more advanced economies and has consisted of an exchange of Czechoslovak manufactures for raw materials or semi-processed products. After an initial growth in trade

in the middle fifties, the share of LDC's in total Czechoslovak trade has declined slowly but steadily since the early sixties. Although generalizations are always dangerous, it would appear that relations in the period 1960-75 have been based primarily upon commercial considerations. World prices are allegedly preferred in trade, entrepots are used, development assistance is extended with domestic interests in mind, and so on. Political biases are apparent only on the broader level: for example, the preponderance of India and Egypt in LDC trade. Prognosis is even more dangerous and was not attempted in the body of the thesis. However the opinion might be ventured that in the absence of any new forces encouraging increased trade relations, the relative level of Czechoslovak/LDC trade may well diminish yet further in the future.

BIBLIOGRAPHY:

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Abbreviations

A list of abbreviations used for periodicals and newspapers has been included at the beginning of the thesis.

Citation

Works referred to have been cited fully only at their first occurrence. Reference to them thereafter has generally been abbreviated to the surname of the author and the date of publication. For example, A. Basch, *The Danube Basin and the German Economic Sphere*, Kegan Paul, London (1944), with page or chapter number specified as appropriate. Where the author has published more than one work in any particular year, a letter is added after the date - for example: Kaser (1967 b.) - to distinguish the works. Anonymous works have been referred to solely by their title following their first occurrence. They are therefore listed alphabetically below on the same principle; that is, by the first word of the title (excluding the articles 'The', 'A','An', or foreign equivalents).

Selection

In general the works listed below are those which have been cited more than once, with their subsequent appearance being in a separate section from that of their first occurrence.

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