Online Appendix

for

Manufacturing Revolutions: Industrial Policy and Industrialization in South Korea

by

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A. History Appendix

A.1 Troop Withdrawal Threat and the Nixon Shock

In 1969, President Richard Nixon declared that the United States would no longer provide direct military support to its allies in the Asia-Pacific region, creating the risk of a complete American troop withdrawal from the Korean Peninsula (Nixon 1970; Kim 1970; Kwak 2003). Panel B of Appendix Figure A.1 shows American press coverage of the troop withdrawal, measured by the share of *New York Times* articles containing "South Korea" and "troop withdrawal." The first peak appeared around 1970 when the

Table VII
Linkage Exposure and Value Added, Before and After 1973

	Outcome: Value Added (log)			
	A) Five-Digit Panel (1970-1986)		B) Four-Digit Panel (1967-1986)	
	Full Sample	*Non-HCI Sample*	*Full Sample*	*Non-HCI Sample*
	(1)	(2)	(3)	(4)
Post × Forward Linkage	2.832***	4.405***	2.095**	2.906**
	(0.914)	(1.504)	(0.802)	(1.174)
Post × Backward Linkage	-0.0167	0.176	-0.693	-2.163*
	(0.334)	(0.375)	(0.559)	(1.279)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
Targeted × Year	Yes	No	Yes	No
R^2	0.776	0.763	0.847	0.819
Observations	4720	2986	1750	1096
Clusters	278	176	88	55

Notes. Average differences-in-differences estimates, before and after 1973. Estimates correspond to equation (7). Regressions interact linkage measures with a Post indicator. The outcome is real log value added. Both linkage interactions (forward and backward) are shown. Analysis is performed for the sample of i) only non-treated industries and ii) the full sample of industries. Estimates for the full sample separately control for the Targeted × Year effects to account for the main impact of policy. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE VIII
LINKAGE EXPOSURE AND OUTPUT PRICES, BEFORE AND AFTER 1973

	Outcome: Output Prices (log)			
	A) Five-Digit Panel (1970-1986)		B) Four-Digit Panel (1967-1986)	
	Full Sample	*Non-HCI Sample*	*Full Sample*	*Non-HCI Sample*
	(1)	(2)	(3)	(4)
Post × Forward Linkage	-0.359***	-0.459***	-0.483**	-0.510***
	(0.128)	(0.144)	(0.184)	(0.176)
Post × Backward Linkage	0.103***	0.0880***	0.251	0.673***
	(0.0213)	(0.0142)	(0.154)	(0.226)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
Targeted × Year	Yes	No	Yes	No
R^2	0.957	0.942	0.962	0.956
Observations	4721	2987	1751	1097
Clusters	278	176	88	55

Notes. Average differences-in-differences estimates, before and after 1973. Regressions interact linkage measures with a Post indicator. Estimates correspond to equation (7). The outcome variable is log output price. Both linkage interactions (forward and backward) are shown. Analysis is performed for the sample of i) only non-treated industries and ii) the full sample of industries. Estimates for the full sample separately control for the Targeted × Year effects to account for the main impact of policy. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

United States confirmed its withdrawal from the Peninsula. Coverage increased during the 1971 pullout of 24,000 troops and three air force battalions.

This confirmation "shocked" the South Korean leadership, who had expected exemptions from Nixon's doctrine (Kwak 2003; Rogers 1970; Trager 1972, p.34). The second jump coincided with the 1976 U.S. presidential contest and Jimmy Carter's election, which further committed to an American pullout (Han 1978; Taylor, Smith, and Mazarr 1990). This goal was later complicated by the fall of the Park regime during President Carter's administration. See Online Supplemental History Appendix H for further details.

The United States' pivot coincided with growing antagonism from North Korea. Panel A of Appendix Figure A.1 illustrates North Korea's increasing hostility during the U.S. policy shift, using the full-text archives of two major Korean newspapers, *Dong-A Ilbo* and *Kyunghyang Shinmun*. The Online Supplemental Data Appendix I.1 describes the data construction. The data shows the number of articles covering military antagonism, counted using a dictionary of Korean-language keywords related to military hostility. Panel A traces a series of high-profile security emergencies that tipped the Park regime into crisis (Scobell and Sanford 2007; Kim and Im 2001). Additionally, Online Supplemental Data Appendix I.1 demonstrates that these patterns are robust to alternative data sources.

A.2 Commercial Banks and Heavy-Chemical Drive Lending

Appendix Figure A.2 illustrates commercial bank loans during the heavy-chemical drive period. Although technically private, the commercial banking sector was deeply intertwined with the state throughout the Park era. Commercial deposit banks played a significant role in this period, distributing 60% of policy loans during the 1970s (Cho and Kim 1995; World Bank 1993).

Panel A of Appendix Figure A.2 reveals that before the heavy industry drive, the value of new loans from commercial deposit banks was similar across sectors. However, it rose sharply for targeted sectors after 1973. After 1979, new total heavy industry lending declined. In contrast to the Korean Development Bank (in the main paper), total private lending continued. These post-1979 policy loans were qualitatively different; liberalization removed preferential rates and equalized borrowing costs across industries (Lee 1991; Woo 1991, pp.443-444). For more information about the liberalization of the banking sector, refer to Online Supplemental Appendix 6.

B. Direct Impact Appendix

B.1 Labor Productivity and Prices

An initial interpretation of the event study estimates in the main paper might suggest that prices declined for targeted versus non-targeted industries and that pre-1973 pre-trends indicate a literal downward trend in prices for targeted industries. However, the top row of Appendix Figure B.2 Panel A (five-digit panel) reveals that the trends between the two industries are similar throughout the mid-1970s and diverge over the policy period.

Labor productivity rises through the HCI period, which is notable in the five-digit data and less precisely estimated in the four-digit data. The top row of Appendix Figure B.2 also demonstrates that the effects stem from increased labor productivity for treated industries rather than a decline in non-treated industries.

Appendix Figure B.2 (Panel B) shows that average prices increased during the inflationary 1970s. However, HCI prices diverged from the control industry averages and did not increase as sharply over this inflationary period. These price effects, shown in Appendix Figure B.2, contrast with industrial policy experiences elsewhere, where inefficient industrial policy has typically increased the prices for targeted outputs.

A positive relationship between prices and industrial policy may be the norm rather than the exception. For example, heavy industrial policy in Egypt, India, and Turkey may have effectively increased the relative price of capital and intermediate goods (Schmitz Jr 2001). For a case study on steel, see (Blonigen 2016), which shows how heavy industrial policies can raise output prices to the detriment of downstream exporters.

B.2 Robustness: Direct Impacts

1 Robustness: Industry-Level TFP. This section explores the relationship between the heavy-chemical industrial policy package and estimated total factor productiv-

ity (TFP) using the more granular (five-digit) industry-level panel (1970–1986).[14] Although I estimate industry-level TFP over the study period, I emphasize caution. Modern best practices for estimating TFP focus on micro-econometric estimation strategies and corrections modeled by micro-level behavior (Beveren 2012). For this reason and more, the following industry-level estimates may have limitations.

Practically, aggregate data can limit the power to estimate production function parameters and may exacerbate measurement issues that confound TFP estimation (e.g., Diewert 2000). Market imperfections may further complicate TFP estimation, especially in distorted miracle economies (Felipe 1999; Fernald and Neiman 2011). Aggregate data precludes some micro-level corrections. Nevertheless, I estimate industry-level TFP using standard micro-econometric estimators.

I estimate (log-linearized value added) production function parameters at approximately the two-digit level. To improve power, I combine sectors with sparse observations to properly estimate production function parameters when additional power is required.[15] Following the empirical TFP literature, I Winsorize estimates for extreme values.

Figure B.3 estimates HCI's impact on industry-level TFP using five common measures. To be conservative, I use 1970 as the baseline for regression estimates of total factor productivity. Figure B.3 demonstrates that 1972 was a particularly low year for heavy-chemical industry TFP. Hence, using 1972 as the baseline can overstate post-1972 TFP differences.

Figure B.3 reveals a slow upward trend in TFP for targeted industries relative to non-targeted industries over the study period. Although estimates are noisy and vary across TFP outcomes, they show a slight increase in TFP for heavy-chemical industries. For the (limited) pre-1973 period, TFP in the targeted industries seemed stagnant, perhaps even declining. After 1973, this trend reversed, and estimates gained momentum through the later 1970s. TFP measures became significant post-1979 across the board.

Earlier studies stress that treated industries experienced low productivity (Dollar and Sokoloff 1990), yet early work did not consider the *relative* trends in TFP before and after the intervention.[16] Limited relative growth (in TFP) over the period matched an earlier analysis (Felipe 1999). Moreover, a subtle upward trajectory seems compatible with a story of industrial learning taking time.

2 Robustness: Dynamic Double Robust Results. For robustness, I demonstrate that the patterns observed in *dynamic* (or event study) two-way fixed effects (TWFE) difference-in-differences (DD) estimates are robust to using the doubly robust estimator of Sant'Anna and Zhao (2020) and Callaway and Sant'Anna (2021). I use the same log outcomes and controls as in the standard TWFE estimates for equation (1). The adjustments performed by the doubly robust estimator rely on pre-treatment controls,

14. The short, five-digit data contains capital stock data and is subject to less harmonization/aggregation. See the Data Section in the main paper. For aggregation and harmonization of the four-digit data, refer to Online Supplemental Data Appendix I.
15. For example, some mining and minerals processing sectors contain limited five-digit industries, so a broader two-digit category is used.
16. The issues of cross-sectional variation versus panel variation appear in Harrison (1994) and Lucas (1984).

so only specifications with controls are used.[17] I provide bootstrap confidence intervals (95%), which allows for clustering at the industry level.

Appendix Figures B.4–B.6 present estimates from the doubly robust estimator. Figure B.6 reports estimates for export development outcomes aggregated to the four-digit industry level. The patterns in Appendix Figures B.4–B.6 are qualitatively similar to the linear TWFE estimates.

Consider first the relationship between the industrial policy drive and industrial development given by Appendix Figures B.4 (four-digit panels) and B.5 (five-digit panels). Although the doubly robust DD relaxes some assumptions related to the traditional TWFE DD, the general dynamic pattern is robust. This finding is particularly important because this estimator re-weights the treatment and control groups. In other words, the same dynamics shown in the OLS TWFE estimates are present in the semi-parametric DD estimates in the main paper. See the main paper for comparisons between the average estimates.

C. Direct Impact on Trade Appendix

In Table C.1, I examine the probability of achieving a comparative advantage in heavy-chemical goods using cross-country data. To do so, I compare Korea to control countries. I restrict the data to the post-1972 period and focus on HCI products only, using the following regression:

$$Y_{ict} = \alpha_{kt} + \beta_1 \text{Korea}_i + \beta_2 \ln(\text{Income}_{i1972}) + \epsilon_{ict}. \tag{9}$$

For completeness, I present both PPML and linear probability estimates. The linear probability estimates in columns (1)–(4) provide a more straightforward interpretation.

For 1972–1986, the average country had a comparative advantage in 7.8 percent of HCI products, as shown by the mean in column (1). Estimates in Appendix Table C.1 show that, across samples and estimates, Korea had a significantly higher probability of achieving comparative advantage in heavy-chemical industry goods. The effect of the Korea indicator is highly significant across specifications, including after controlling for 1972 income per capita, PPP adjusted in 2010 dollars, in columns (2) and (6).

Additional estimates in Appendix Table C.1 demonstrate that Korea had a significantly higher probability of achieving comparative advantage when we limit estimates to specific subsets. This holds for sample countries in the same pre-treatment income decile, as shown in columns (4) and (8). It also applies to countries in similar income deciles, defined as those in the same decile *and* those in the immediate deciles above and below Korea's 1972 income group, as presented in columns (3) and (7).

D. Policy and Mechanisms Appendix

D.1 Investment and Industrial Policy Discussion

Is it obvious that we would observe responses to investment or production incentives from industrial policy? Based on the history of industrial policy, the answer is no.

17. Note that without controls, the estimator package defaults to a standard TWFE method.

If financial policies are redundant, they may not create new investments (or outlays)—investments that would have occurred without policy shifts. In many contexts, *de jure* investment policy may not bind.

Work by Lazzarini, Musacchio, Bandeira-De-Mello, and Marcon (2015) shows that in Brazil, capital from a major national development bank did not translate into increased investment and was allocated to politically connected firms where investments would otherwise have occurred. For East Asia, Yang (1993) argues that investment subsidies in Taiwan did not contribute to capital formation, echoing a common criticism that investment would have occurred without industrial investment schemes.

D.2 Policy Mechanisms: The Impact of Directed Credit and Marginal Revenue Product of Capital (MRPK)

I explore the relationship between high-MRPK and low-MRPK industries and input use. Specifically, I test (i) whether input use increases differentially for industries with a high marginal revenue product of capital and (ii) whether this increase occurs specifically for treated industries.

The MRPK calculation is constrained by industry-level (as opposed to micro) data and is calculated for the most disaggregated five-digit panel. The marginal revenue product of capital for industry i is $\text{MRPK}_i = \alpha_i^k \times (\text{Revenue}_i / K_i)$. I calculate a version of the measure proposed by Bau and Matray (2022), using total sales (real shipments) divided by total tangible capital stock. I estimate capital coefficients α_i^k at the two-digit level. Capital shares are calculated using pre-policy drive shares. Industries are then split into high-MRPK or low-MRPK groups based on whether they are above or below the median level of MRPK.

I consider the following regression equation:

$$\ln\left(\text{input}_{it}\right) = \alpha_i + \alpha_t + \sum_{j \neq 1972} \beta_j \left(\text{High-MRPK}_i \times \text{Year}_t^j\right) + \epsilon_{it}, \tag{10}$$

where the outcome $\ln\left(\text{input}_{it}\right)$ is investment or intermediate input use for industry i at year t. I estimate equation (10) separately for targeted and non-targeted industries. The set of coefficients β_j conveys differences in input use between high-MRPK and low-MRPK industries relative to 1972. In other words, the estimates in (10) reveal whether inputs respond for those sectors most exposed to HCI credit policies (see the History Section of the main text). Specifically, I assess whether this relationship is observed for targeted industries during the drive period.

Appendix Figure D.2 illustrates the relationship between MRPK and the increase in input use. I estimate regressions separately for targeted and non-targeted industries. Panels A–B show estimates for (log) total material outlays and real total investment. Panels A–B demonstrate that inputs increased in high-MRPK industries relative to low-MRPK industries after 1973, but only for targeted industries. Similarly, high-MRPK industries show increases in (log) labor (Panel C) and, consequently, output, which is measured as the log real output shipped (Panel D).

Thus, the estimates in Figure D.2 suggest that policy differentially relaxed constraints for high-MRPK industries, increasing input use. Note that these results do not imply MRPK convergence or reduced misallocation due to the policy. Instead, they

provide indirect evidence that credit expansion operated differentially for targeted industries.

The expansion of credit to targeted industries during the policy drive shares similarities with the directed credit literature and the macroeconomics literature on credit booms and instability (Gorton and Ordoñez 2020; Mendoza and Terrones 2008). While this literature has emphasized the aggregate correlates of credit booms, the sectors receiving credit may also have significant implications for the impact of credit booms on industrializing economies.

D.3 Robustness: Testing Investment Crowding Out

To explore crowding out, I compare investment patterns in targeted and non-targeted sectors using a simple regression analysis. Specifically, I first regress (log) investment outcomes on year effects, controlling for five-digit industry fixed effects:

$$\ln(\text{investment}_{it}) = \alpha_i + \sum_{j \neq 1972} \beta_j \cdot \text{Year}_t^j + \epsilon_{it}. \tag{11}$$

I report the estimates for equation (11) separately in Panel A, Appendix Figure D.3. Panel A shows investment patterns for each sector relative to 1972, revealing no evidence of crowding out during the drive. Instead, it illustrates a relative increase in investment for both manufacturing sectors, with targeted heavy industry experiencing a more substantial increase.

To examine potential crowding out in capital-intensive, non-targeted industries, Panel B of Appendix Figure D.3 illustrates the impact of pre-treatment capital intensity on investment during the HCI period. It plots coefficients from the interaction $\text{Year}_t \times \ln(\text{Capital Intensity})_{i0}$, where capital intensity is measured using pre-treatment capital stock per employee. Like Panel A, estimates in Panel B are presented separately for targeted and non-targeted samples.

Panel B of Appendix Figure D.3 shows no relative decline in investment for capital-intensive, non-treated sectors during the drive. The relationship between capital intensity and investment is noisy across the treatment period and slightly positive for non-treated capital-intensive industries (i.e., not crowded out). However, the relationship between capital intensity and investment is neutral in targeted heavy-chemical sectors, which typically have higher capital intensity. Hence, treated industry capital is not necessarily higher for (ex-ante) capital-intensive industries. Additionally, recall that Panel B of Figure D.2 demonstrated that investment did not differentially change for non-targeted (high-MRPK versus low-MRPK) industries during the drive.

D.4 HCI, Trade Policy, and Nominal Protectionism

The following analysis considers evidence of overt nominal protectionism of targeted heavy industry. Before considering quantitative evidence, I first turn to the conceptual and historical context for South Korean trade policy over the period.

1 Historical Context: HCI As ISI?. Although the HCI period has been associated with rising protectionism and import substitution-style industrialization (ISI) policies (Kim 1990; Yoo 1990; Lee 1992), the qualitative pattern of policymaking is more complex. Since the 1960s, South Korea has undergone a "continuous process

of tariff reform" under Park Chung-hee (General Agreement on Tariffs and Trade Secretariat 1992, p.52), including multiple rounds of tariff cuts during the HCI period (General Agreement on Tariffs and Trade: Balance-of-Payments Committee 1978; Young 1988).[18] Average import liberalization ratios gradually increased from 1973 to 1979.[19] Exemptions from trade policy were widely used in the 1960s and during the heavy industry drive. Consequently, reported tariffs and quantitative restrictions may represent a theoretical upper bound for an industry's effective protection (Yoo 1993).[20]

2 Trade Policy Analysis. Having established the qualitative patterns above, I now study the role of trade policy during the heavy industry drive period quantitatively.

Before conducting a regression analysis, however, it is worth considering the aggregate data presented in Appendix Figure D.1. Panels C and D of Appendix Figure D.1 show two simple aggregate measures of market protection across targeted and non-targeted industries for five periods: 1968, 1974, 1978, 1980, and 1982.[21] Panel D reports the average tariff rates (percent), and Panel C presents measures of quantitative restriction (QR) coverage. These panels demonstrate that output protection, measured in terms of tariffs and QR coverage, is lower in targeted sectors compared to non-targeted sectors. Panel D shows that average measures of nominal tariff protection fell continually throughout the period. QRs in Panel C rose slightly in the 1970s but fell by 1982.

Next, consider the distribution of trade policy by sector. Figure D.4 plots the (kernel density) distribution of protection by treatment status for the same period. The histograms in Figure D.4 show a steady convergence in the distribution of nominal (output) protection between targeted and non-targeted sectors from 1968 to 1982. Liberalization will proceed fully after 1982. For details of liberalization, refer to the History Section of the main text and Online Supplemental Appendix 6. Additionally, Appendix Figure D.4 shows a mass of low tariff and QR protection for targeted industries.

Next, I turn to regression analysis and consider the following specification,

$$Y_{it} = \alpha + \beta \cdot \left(\text{Targeted}_i\right) + \tau_t + X_i'\Omega + \epsilon_{it}, \tag{12}$$

where i represents industries and t represents the five periods. Specification (12) controls for period effects, τ_t, and includes baseline controls (log avg. wages, material outlays, avg. plant size, and labor productivity). I estimate this relationship in terms of levels *and* differences, Y_{it} and ΔY_{it}. The coefficient of interest, β, provides the difference in the average level—or change—in policy between heavy and non-heavy industries from 1968 to 1982.

Appendix Table D.3 Panel A first considers differences in output protection between treated and non-treated sectors. Panel A reports that the *level* of output protection

18. The 1978 GATT Consultation reports tariff reductions in 1973, 1974, July 1975, December 1976, January 1977, January–November 1977, and April–July 1978 (General Agreement on Tariffs and Trade: Balance-of-Payments Committee 1978, p.6).

19. Economic instability in 1979–1980 postponed further import liberalization, planned in 1978, until the post-HCI era (Kim 1988). See Online Supplemental Appendix 6 for more information.

20. For example, income from customs duties accounted for less than 14 percent of total tax revenue in 1975.

21. Trade policy data is limited to these periods. Refer to the Data Section of the main text.

is, on average, significantly lower for targeted heavy industries: columns (1–4) show this for log tariffs, and columns (5–8) for QR coverage. Estimates (cols. 3–4) imply that the level of tariffs is significantly lower for targeted industries, even during HCI. Quantitative restrictions are also lower (cols. 7–8). Panel A, columns (9–12) of Table D.3 report estimated changes in output protection between 1968 and 1982. Estimates are positive, though imprecisely estimated. However, the level of output protection is significantly lower for the targeted industry.

imported inputs (see History Section). Appendix Table D.3 Panel B shows differential exposure to input protection using industry-level measures of input protection built from input-output tables. These measures account for potential exemptions afforded to targeted industries during the drive. Panel B shows that the targeted industry has significantly lower levels of input protection (cols. 1–8) than the non-targeted industry. Likewise, the targeted industry sees significant *reductions* in input exposure for tariffs (cols. 9–10) and QRs (cols. 11–12).

In sum, the analysis above does not provide strong evidence that the heavy-chemical industry drive means an appreciable rise in conventional means of market protection. The findings comport with general trends in liberalization and South Korea's incorporation into multilateral institutions during the Park era.

E. Linkage Appendix

E.1 Linkage Measurement

The linkage measures in this study capture exposure to HCI industrial policy through backward and forward linkages. Note that the measures below do not model the causal relations. Rather, they are proxies capturing the extent to which an industry is exposed to policy indirectly through inter-industry linkages. A long literature in input-output economics has considered far more complicated means of measuring and decomposing linkage effects. The following is a simple baseline implementation of backward and forward linkage measures.

1 Direct Linkages. First, consider exposure to industrial policy through backward linkages: this is when the impact of industrial policy propagates to upstream suppliers (through the backward linkages with treated sectors). Let i be a non-targeted industry that sells its output to a treated industry j. Industry i's exposure to the industrial policy through backward linkages is equal to

$$\text{Backward Linkage}_i = \sum_{j \in \text{HCI}} \alpha_{ij} \quad \text{with} \quad \alpha_{ij} = \frac{\mathbf{x}_{ij}}{\mathbf{x}_j}, \tag{13}$$

where α_{ij} represents the share of i's sales to treated heavy-chemical industries j ($j \in$ HCI). Specifically, α_{ij} is the proportion of i used to produce one unit of output

j, calculated as the value of i's sales to industry j, x_{ij}, divided by the value of j's total output: $x_j = \sum_{i=1}^{n} x_{ij}$.[22] The coefficients α_{ij} come from technical matrix:[23]

$$A = \begin{bmatrix} \alpha_{11} & \alpha_{12} & \cdots & \alpha_{1n} \\ \alpha_{21} & \alpha_{22} & \cdots & \alpha_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \alpha_{n1} & \alpha_{n2} & \cdots & \alpha_{nn} \end{bmatrix}. \tag{14}$$

Practically, to calculate the backward linkage measure (13), I take the row-wise sum of elements from the technical coefficient table (14). This means that for each row i, I add the coefficients across columns j that correspond to HCI sectors.

Second, consider exposure to industrial policy through forward linkages. In this case, industrial policy propagates *downstream* to purchasers (through *forward linkages* from HCI sectors). In this case, let i be an untreated sector that purchases inputs from a treated sector j. The forward linkage analog of equation (13) is the following:

$$\text{Forward Linkage}_i = \sum_{j \in \text{HCI}} \alpha_{ji} \quad \text{with} \quad \alpha_{ji} = \frac{\mathbf{x}_{ji}}{\mathbf{x}_i}, \tag{15}$$

where α_{ji} denotes the sales from treated industry j to downstream industry i (x_{ji}), per unit of i's total output (x_i). Practically, to calculate the exposure to policy through forward linkages (13), I take the column-wise sum of elements from table (14). That is, for each column i, I add coefficients across rows j corresponding to HCI sectors. As with backward linkages, I exclude diagonal elements.

2 Total Linkages. In addition, I also calculate the exposure of non-treated industries to HCI policy through total—direct and indirect—links with treated industries. Equations (13)-(15) above capture the extent to which HCI policy propagates through *direct*, or first-degree, connections. I now consider the total n-degree effects; I calculate Total Backward Linkages and Total Forward Linkage Measures using a method analogous to the direct linkages described above. Instead of using coefficients α_{ij} from the coefficient matrix A, I use coefficients ℓ_{ij} from the Leontief matrix:

22. The denominator x_j includes j's output sold to all sectors, including manufacturing, services, and final output. I follow the literature and do not count i's sales to itself and exclude diagonal elements α_{ii} in the input-output matrix (e.g., $\alpha_{11} = 0$).

23. I calculate the matrix A manually for 1970 from the table of inter-industry flows $X = [x_{ij}]_{n \times n}$. The vector x is a vector of the total output sold by each sector. I compute $A = X\,[\text{diag}(x)]^{-1}$, and each element is $\alpha_{ij} = x_{ij}/x_j$.

$$L = \begin{bmatrix} \ell_{11} & \ell_{12} & \cdots & \ell_{1n} \\ \ell_{21} & \ell_{22} & \cdots & \ell_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \ell_{n1} & \ell_{n2} & \cdots & \ell_{nn} \end{bmatrix}. \tag{16}$$

The Leontief inverse matrix in equation (16) is calculated from the technical coefficient matrix A (eq. 14). More precisely, $L = (I - A)^{-1}$, where I is the identity of matrix A. The matrix L, or the Leontief inverse, captures the full chain of inter-industry relationships between sectors.

I calculate the total exposure between treated HCI industry j and non-treated industry i using elements from table L. Formally, the two measures are

$$\text{Total Backward Linkages}_i = \sum_{j \in \text{HCI}} \ell_{ij} \tag{17a}$$

$$\text{Total Forward Linkages}_i = \sum_{j \in \text{HCI}} \ell_{ji}. \tag{17b}$$

Industry i's total exposure to policy through backward linkages is given by equation (17a), which equals the sum of coefficients between supplier i to each HCI purchaser j. To compute (17a), I perform row-wise calculations over matrix L: for each row i, I sum across columns j that correspond to HCI industries. Similarly, i's total exposure to policy through forward linkages is given by (17b), which equals the sum of coefficients between HCI supplier j and the purchasing industry i. To compute (17b), I perform column-wise calculations over elements of matrix L: for each column i, I sum across rows j that correspond to HCI industries.

E.2 Forward Linkage Appendix: Developmental Effects

i Total Forward Linkages, Output, and Prices.. This section considers the total linkage effects of policy in more detail. Appendix Table E.1 reports pre-post estimates for total forward linkages, those accounting for n-degree linkages between downstream industries and HCI suppliers. Like the direct linkages, Appendix Table E.1 reports a robust relationship between total forward linkage exposure and the change in downstream value added. These total effects are strongest in the non-HCI sample. Likewise, Appendix Table E.2 shows the average pre-post impact of total linkages on output prices. The estimates for total forward linkages are negative across specifications in Appendix Table E.2.

ii Forward Linkages and Other Development Outcomes.. I now consider the impact of forward linkages on outcomes besides log output (value added) and log prices. These results are provided in Appendix Figure E.1. Beyond these core outcomes, I observe similar patterns across outcomes, such as entry into and higher employment in downstream sectors with stronger connections. Likewise, I find a weak relationship between forward linkages and productivity outcomes. Appendix Tables E.3 and E.4 show pre-post estimates for direct and total linkages, respectively.

E.3 Forward Linkage Appendix: Mechanisms and Intermediate Input Use

Appendix Figure E.3 examines input use and investment among industries with more versus less exposure to HCI suppliers. Pre-1973, differences in (log) total intermediate outlays and (log) investment were closing for sectors with differential forward links to HCI suppliers. After 1973, the trend reversed; Appendix Figure E.3, Panel A shows a jump in material outlays (Panel A, top row) and total investment (Panel A, bottom row). The post-1973 divergence is seen in both non-HCI and full samples, as well as across data sets. Likewise, these estimates are strong when limited to non-targeted industries. Joint F-tests reject pre-trends across most specifications, shown in the Online Supplemental Appendix E.5, except four-digit panels, where inputs trended upward and converged before 1973.

Additionally, Panel B of Appendix Figure E.3 shows qualitatively similar effects for the total forward linkage exposure. However, the effects are less precisely estimated for the total linkage effects (see Online Supplemental Table E.5 for the full regression table). Thus, during the HCI period, direct downstream users of HCI inputs expanded outlays and inputs during the drive.

F. Backward Linkage Results

Although estimates for forward linkages correspond with the industrial development of downstream industries, backward linkages do not. Broadly, the effects are weak and quite limited. This is seen in estimates for direct linkages exposure in the main text and Appendix Table E.1 for total linkage exposure. The impact of forward linkage exposure is consistently stronger than noisy backward linkage effects.

In the case of output, the higher backward linkage exposure—direct or total (Appendix Table E.1)—is negatively related to log value added in an upstream industry. Yet, estimates are mostly imprecise. The indeterminate impact of backward linkages is also seen in Appendix Figures F.1-F.2, which show dynamic estimates for output. The figures show the ambiguous, weak relationship between backward linkage exposure and upstream output—both for direct and total backward linkage exposure.

G. SUTVA and Linkage Appendix

G.1 Main Effects, Restricting Estimates to Low-Linkage Control Industries

Appendix Figure G.1 shows the TWFE event study estimates (eq. 1) for output and labor productivity, but with alternative control groups. Specifically, I restrict the control groups to *only* industries with low downstream linkages (triangles) or low upstream linkages (squares). To do so, I split non-targeted industries into those with low and high linkage exposure to HCI sectors. Specifically, I base these categories on whether they are below or above Forward Linkage$_i$ (Backward Linkage$_i$). I then re-run baseline DD specifications with these truncated control groups.

For both output and labor productivity, estimates using a "low forward linkage" control group increase slightly, and the baseline pattern is preserved. Intuitively, it would make sense that the main effects of HCI increase after I remove the control industries most likely to benefit from positive policy spillovers (e.g., those with high

forward linkage exposure). Standard errors increase, which is not surprising given the truncated sample.

Across outcomes, Figure G.1 shows that limiting control industries to those with low upstream connections has a minimal impact on point estimates for the main, direct impact of HCI (e.g. $\text{Targeted}_i \times \text{Year}_t$). This is expected, as the upstream linkage effects of the policy were more muted than the downstream effects (and slightly negative). In sum, limiting the impact of the strongest first-order linkage effects on the control group is insufficient to overcome the main direct impact of HCI.

G.2 Main Effects, Controlling for Linkages

I now test whether the main DD estimates survive after including these effects. I do so by re-running the main regression equation (1), now saturated with linkage controls. That is, I specifically control for linkage exposure for non-treated industries. Linkages are multiplied by an indicator equal to one for non-treated industries and zero for treated industries.

Appendix Figure G.2 Panel A shows baseline results for the main effect, $\text{Targeted}_i \times \text{Year}_t$, versus estimates that include varieties of linkage controls. These results are given for both direct linkages (left) and total (Leontief) linkages (right). The baseline estimates are in red, and those controlling for linkages are in dark gray. I control for linkages using the interaction $\text{Forward Linkage}_i \times \text{Post}_t$, which controls for the linkages more parsimoniously. (Controlling flexibly for linkages, $\text{Forward Backward Linkage}_i \times \text{Year}_t$, significantly increases the number of parameters.)

Once I control for the positive downstream spillovers in non-treated industries, Panel A (Fig. G.2) shows that the main direct effect $\text{Targeted}_i \times \text{Year}_t$ becomes larger. Furthermore, estimates are more prominent after controlling for the total linkage effects. This is intuitive, as positive spillovers may also benefit the control group and thus bias baseline estimates downward. Recall that I have demonstrated in the main text that there may have been weak negative spillovers into backward-linked industries (direct linkages). This is seen specifically for five-digit panel estimates, which more precisely capture the linkage effects.

Panel B in Appendix Figure G.2 builds off the regressions in Panel A but now includes controls for *both* backward and forward linkage exposure. Panel B shows that including both linkages maintains the main pattern while increasing the standard errors. The main effect estimates are now less positive than those in Panel A. Including backward linkages means we now control for the negative upstream spillovers. The main pattern is preserved in Appendix Figure G.2 Panels A and B, although slightly increased (along with standard errors), once we control for the most prominent linkage effects.

G.3 SUTVA: Investment Crowding Out and Linkages

The crowding out of investment is another way the SUTVA assumption is violated. The policy estimates in the main paper demonstrated that investment, however higher in targeted industries, was not diminishing in non-targeted sectors, nor was this the case in capital-intensive non-HCI sectors. I now consider whether crowding out may occur after controlling for linkage intensity. Appendix Figure G.3 shows the relationship between investment and capital intensity (log, pre-1973 capital stock divided by employment) controlling for linkages. Estimates are shown separately for HCI and

non-HCI industry samples. The left panel plots the estimates with controls for linkages using Forward or Backward Linkage$_i$ $\times$ Post$_t$. The right panel plots the estimates using the more intensive Forward or Backward Linkage$_i$ $\times$ Year$_t$ control.

After controlling for linkages, I do not identify a negative relationship between measures of capital intensity and investment. Broadly, the relationship between capital intensity and investment in non-treated sectors is similar to the robustness estimates that did not account for linkages in Appendix Figure D.3. The relationship between capital intensity and investment—now controlling for linkages—is similar in both industries during the drive. There is a positive relationship between capital intensity and investment after 1973 for both industries, although the relationship is zero during the HCI period. After capital market liberalization (see Online Supplemental Appendix H), the relationship becomes more pronounced in both industries, with a stronger relationship among non-treated industries.

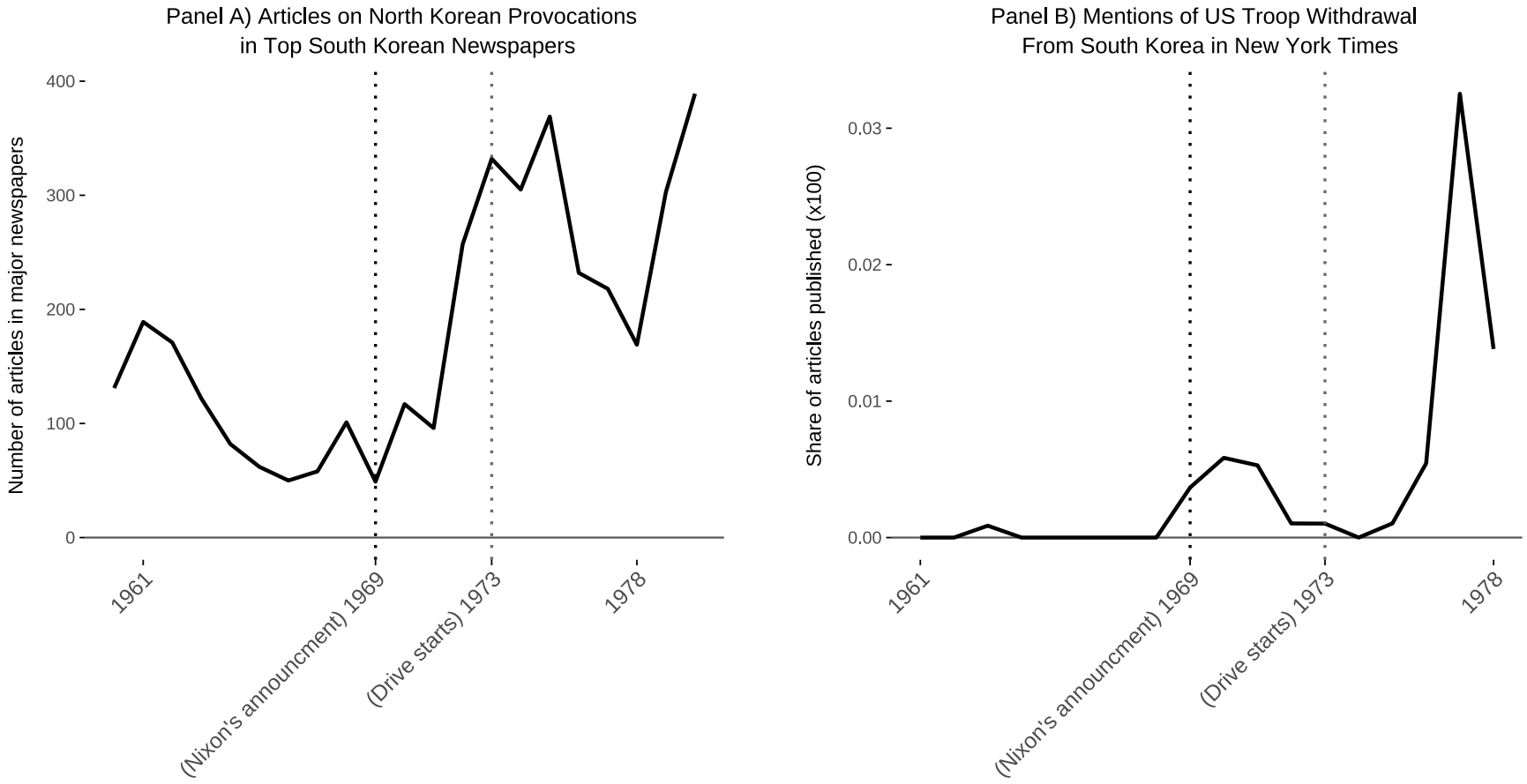

FIGURE A.1
Political Events Surrounding Heavy and Chemical Industry Drive

This figure shows the political crisis facing South Korea via U.S. and South Korean media. Panel A (left) shows the number of articles (count) in Dong-a and Kyunghyang newspapers matching a Korean-language dictionary of 'provocation' keywords. See details in Supplemental Data Appendix; count includes articles matching dictionary terms appearing on the first five pages. Panel B (right) shows the share of New York Times news stories referring to troop withdrawal. Share is measured as the total number of full-text article hits ('South Korea+Troop Withdrawal') divided by the number of stories published.

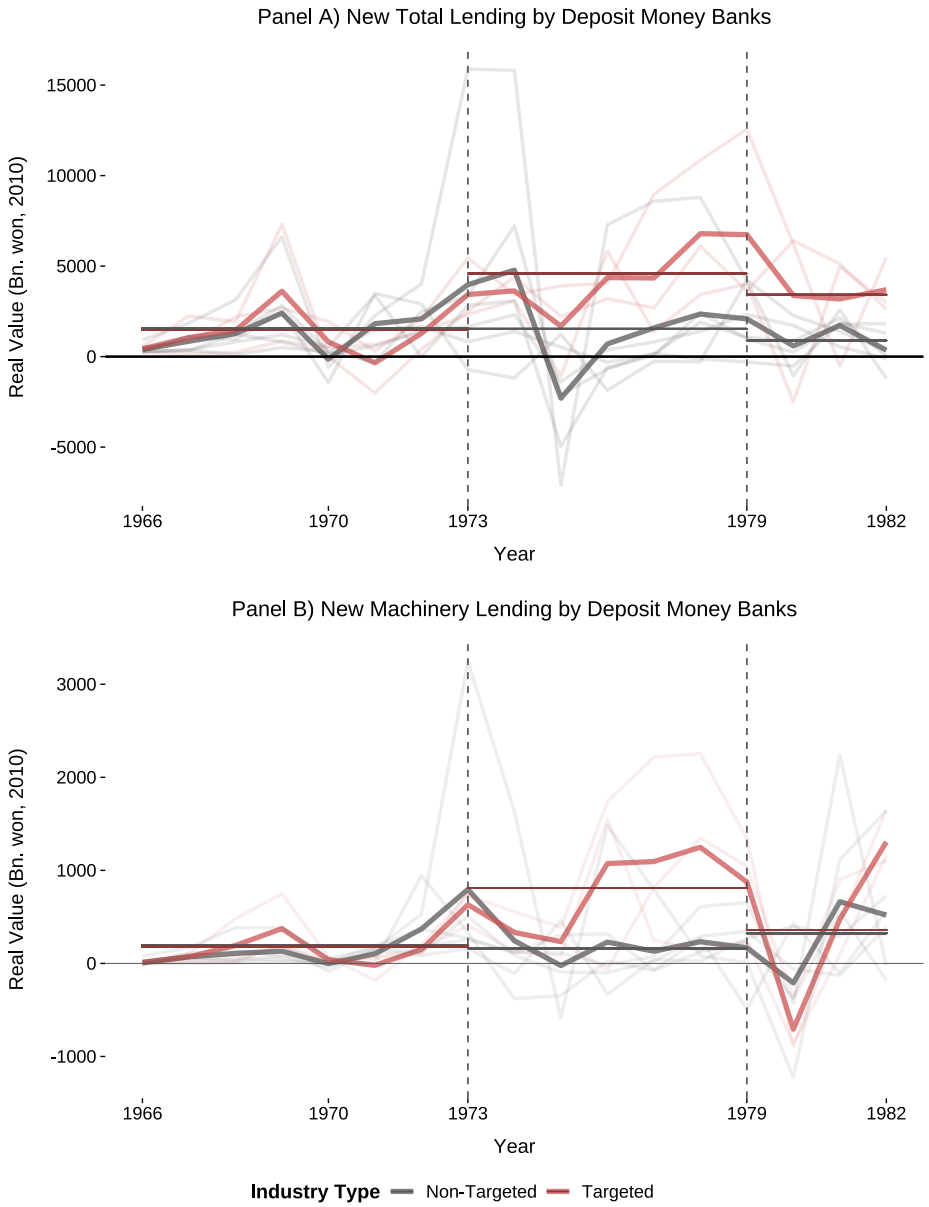

FIGURE A.2
New Loans Issued By Commercial Deposit Money Banks

This figure shows the change in the real value of loans issued by South Korean commercial banks (traditional deposit money banks). The top panel plots changes in total new lending. The bottom panel plots new lending for machinery loans only. Units are real won (2010 base). Gray lines correspond to non-targeted (non-HCI) sectors, red corresponds to targeted (HCI) sectors. Thick lines are averages by treatment status. Subsidized policy loans were lent through the commercial banking sector. After 1979, the banking sector was liberalized, and the differences in policy interest rates were eliminated. See text for details. Source: Korean Yearbooks.

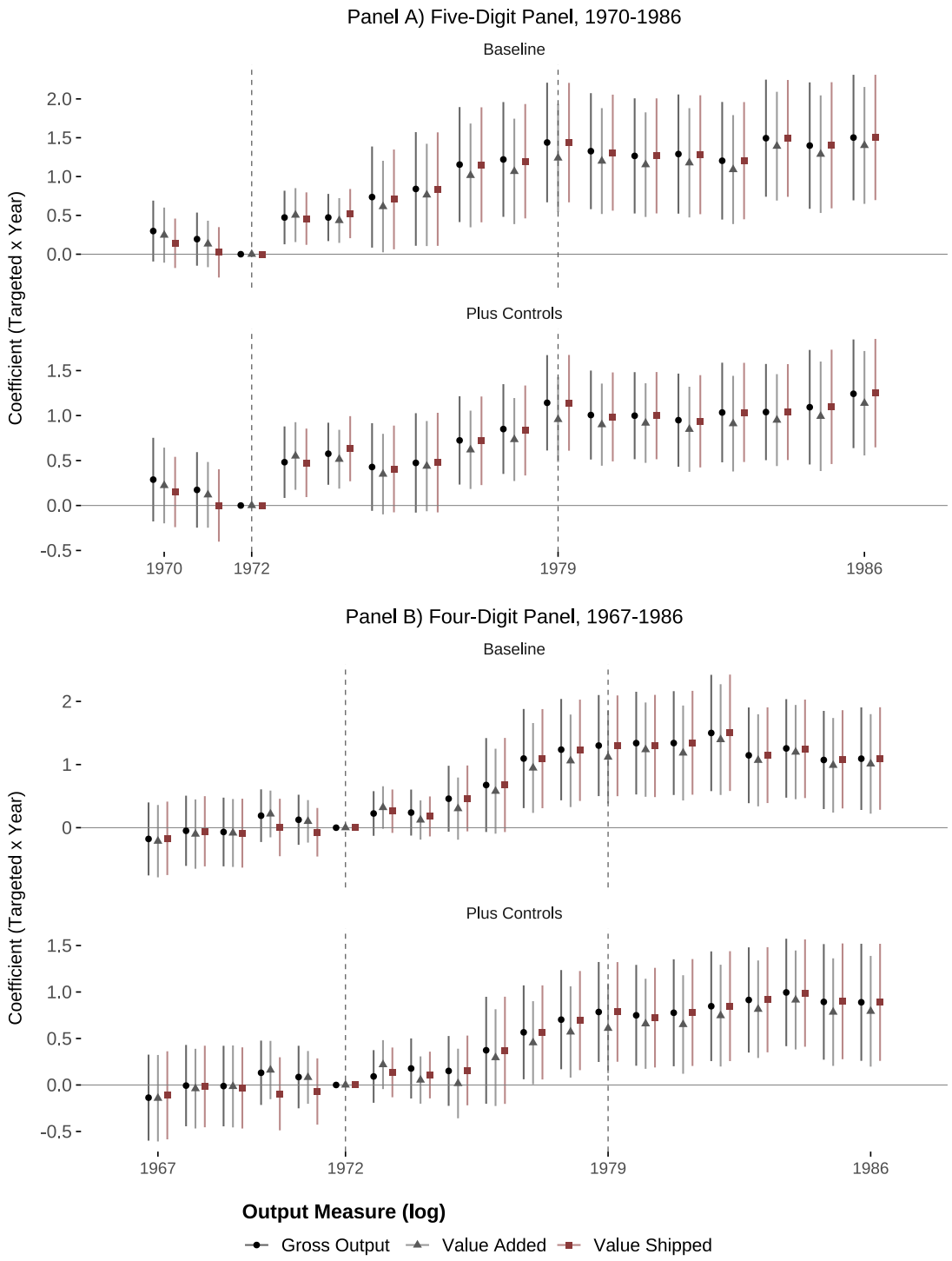

FIGURE B.1
Robustness: Industrial Policy and Measures of Output

This figure shows dynamic differences-in-differences estimates for the relationship between HCI and industrial output outcomes. Plots show regression coefficients from equation (1) for three measures of log output: gross output, value added, and value of gross output shipped. Panel A shows results for 4- and 5-digit panels. Each column of the panels corresponds to a specification: the baseline two-way fixed effect specification and specifications adding additional controls. Controls are log pre-1973 industry averages: avg. industry wages, avg. industry plant size, labor productivity, and intermediate outlays, interacted with time effects. All estimates are relative to 1972, the year before the HCI policy. The line at 1979 demarcates the end of the Park regime. Standard errors are clustered at the industry-level. 95 percent confidence bands are in gray.

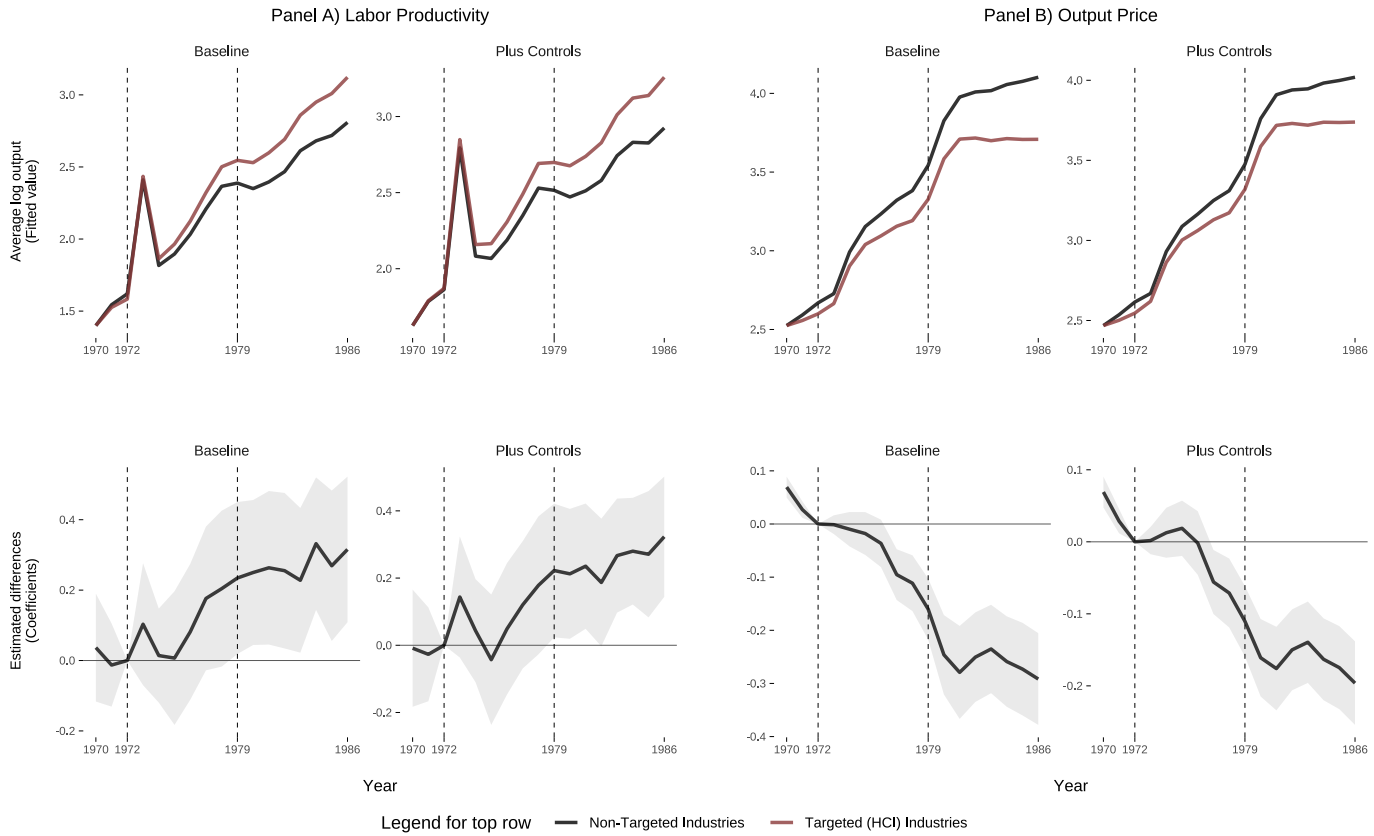

FIGURE B.2
Differences in Value Added Per Worker and Output Prices

This figure plots dynamic differences-in-differences estimates for the relationship between HCI and labor productivity (value added per worker) in Panel A and output prices in Panel B. Estimates come from equation (1) The top row shows the average outcomes for targeted (red) and non-targeted industries (black) using the fitted model. For specifications with controls, the model is evaluated using means of the controls. The bottom row plots the differences-in-differences estimates. All estimates are relative to 1972, the year before the HCI policy. The line at 1979 demarcates the end of the Park regime. Standard errors are clustered at the industry level. 95 percent confidence intervals are shown in gray.

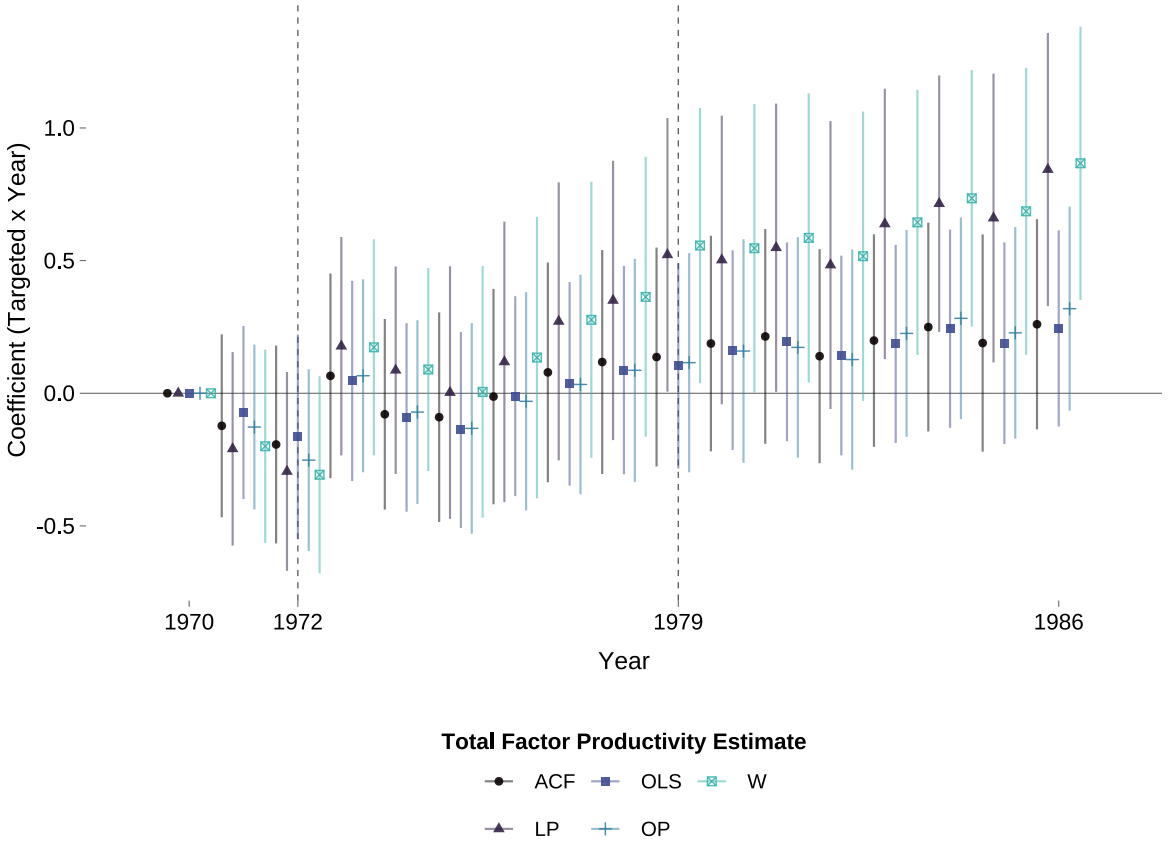

FIGURE B.3
Robustness: Industry Policy and Industry-Level Total Factor Productivity

This figure shows the relationship between HCI and total factor productivity. The coefficients in the figure are estimated from equation (1). TFP outcomes are estimated using Ackerberg-Caves-Frazer (ACF), Levinsohn-Petrin (LP), Olley-Pakes (OP), Wooldridge (W) methods, as well as baseline OLS using the Solow residual. Data are estimated using the 5-digit (long) panel, where capital stocks are available; log-transformed production functions are structurally estimated at the 2-digit level. Event study estimates are performed relative to the start year of the panel, 1970, as opposed to 1972, due to the significant dip in TFP in 1972. This is done for transparency; using 1972 as the omitted category may overstate event study estimates. Standard errors are clustered at the industry level. Bars show 95 percent confidence intervals.

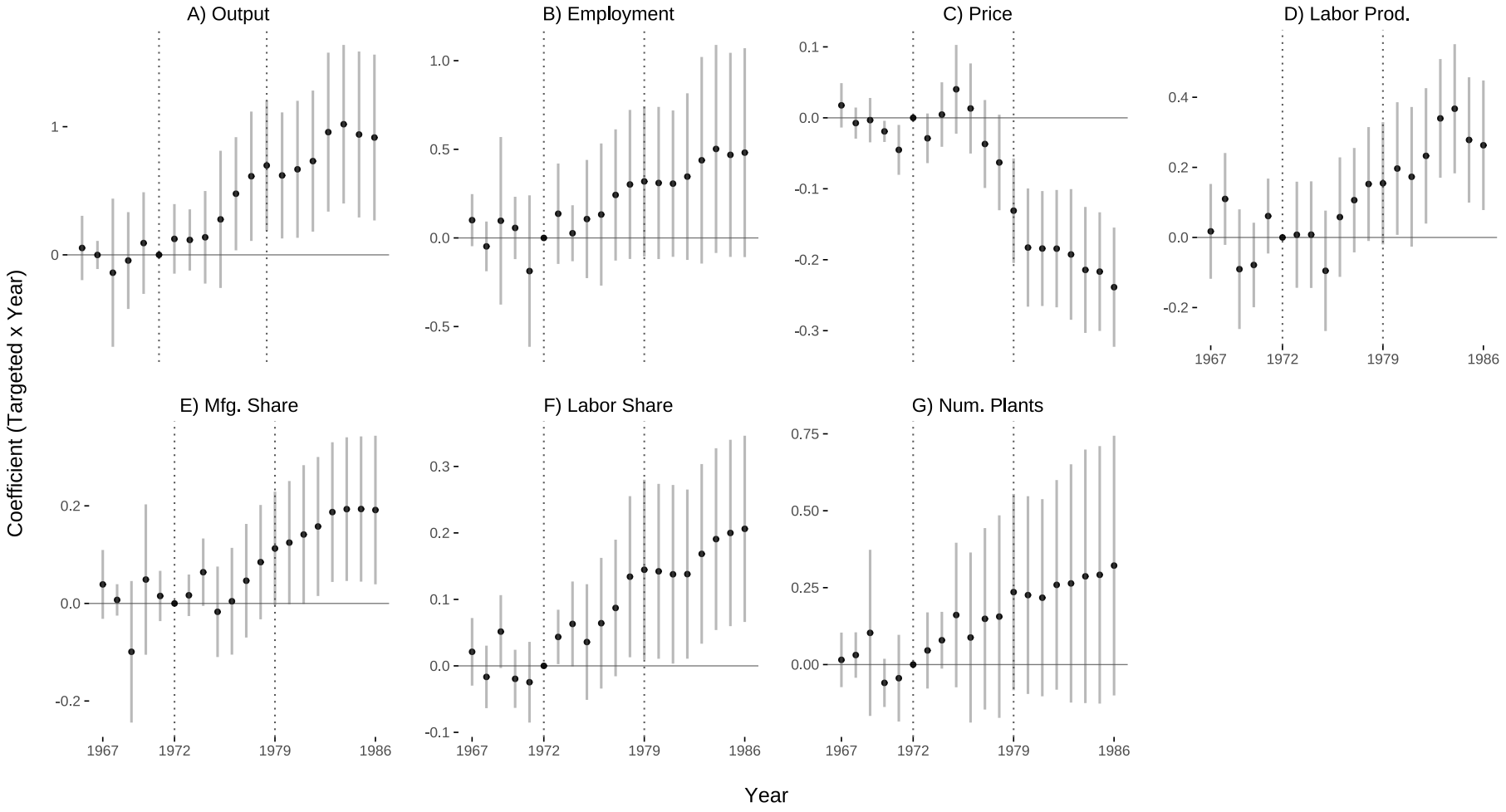

FIGURE B.4
Double Robust Estimates: Industrial Policy and Industrial Development, Four-Digit Panel

This figure plots semiparametric (doubly-robust) differences-in-differences estimates for the impact of HCI on core (log) industrial development outcomes. Log outcomes include real value of shipments, employment, output prices, labor productivity (value added per worker), mfg. share (manufacturing share of output), lab. share (manufacturing share of employment), and number of plants. This figure reports estimates for the aggregate 4-digit panel (1967-1986). Black lines are coefficient estimates from equation (3). All point estimates are relative to the 1972 baseline level (coefficients normalized to 0). 95

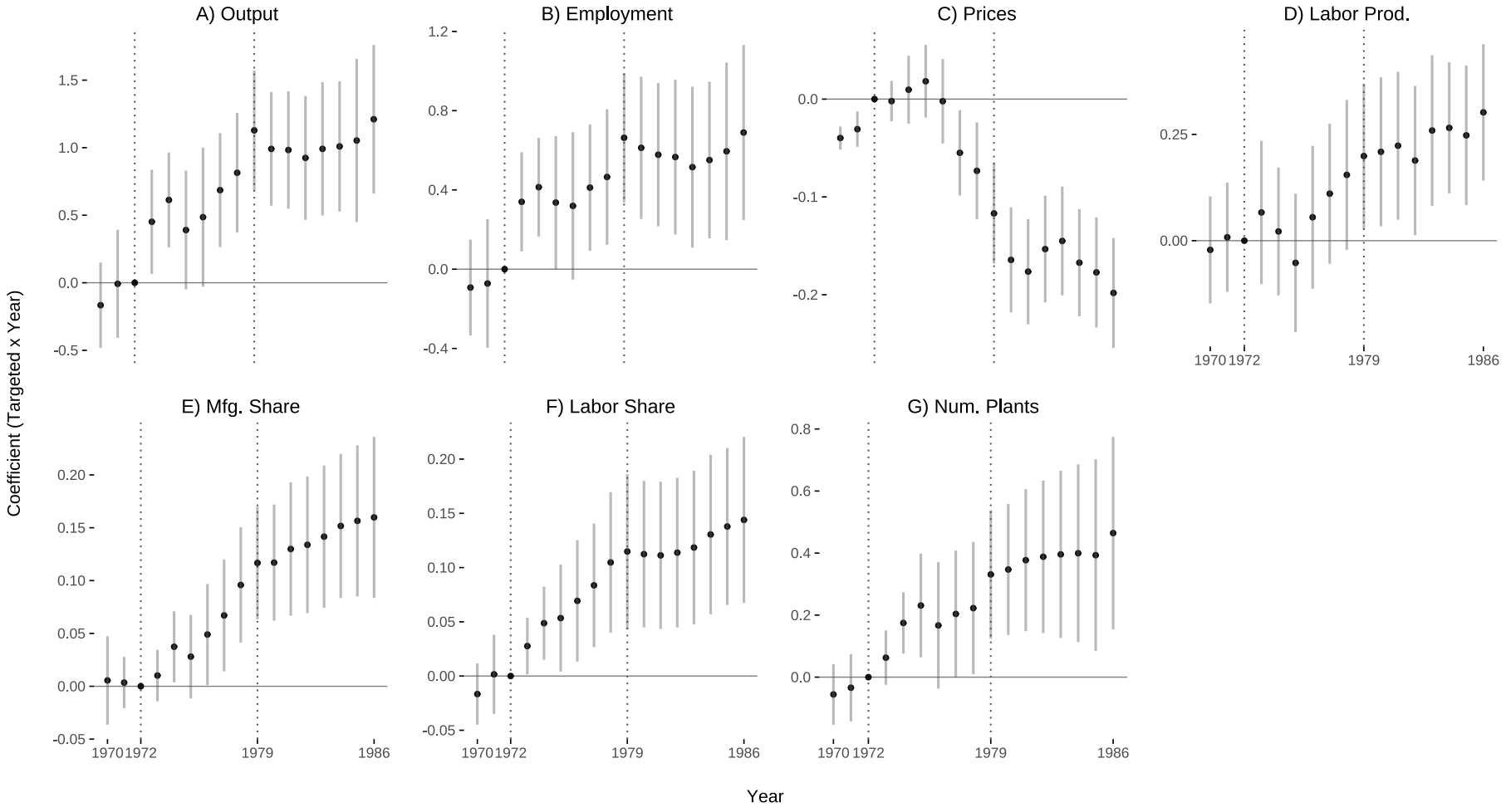

FIGURE B.5

Double Robust Estimates: Industrial Policy on Industrial Development, Five-Digit Panel

This figure plots semiparametric (doubly-robust) differences-in-differences estimates for the impact of HCI on core (log) industrial development outcomes. Log outcomes include: real value of shipments, employment, output prices, labor productivity (value added per worker), mfg. share (manufacturing share of output), lab. share (manufacturing share of employment), and number of plants. This figure reports estimates for the more detailed 5-digit panel (1970-1986). Black lines are coefficient estimates from equation (3). All point estimates are relative to the 1972 baseline level (coefficients normalized to 0). 95

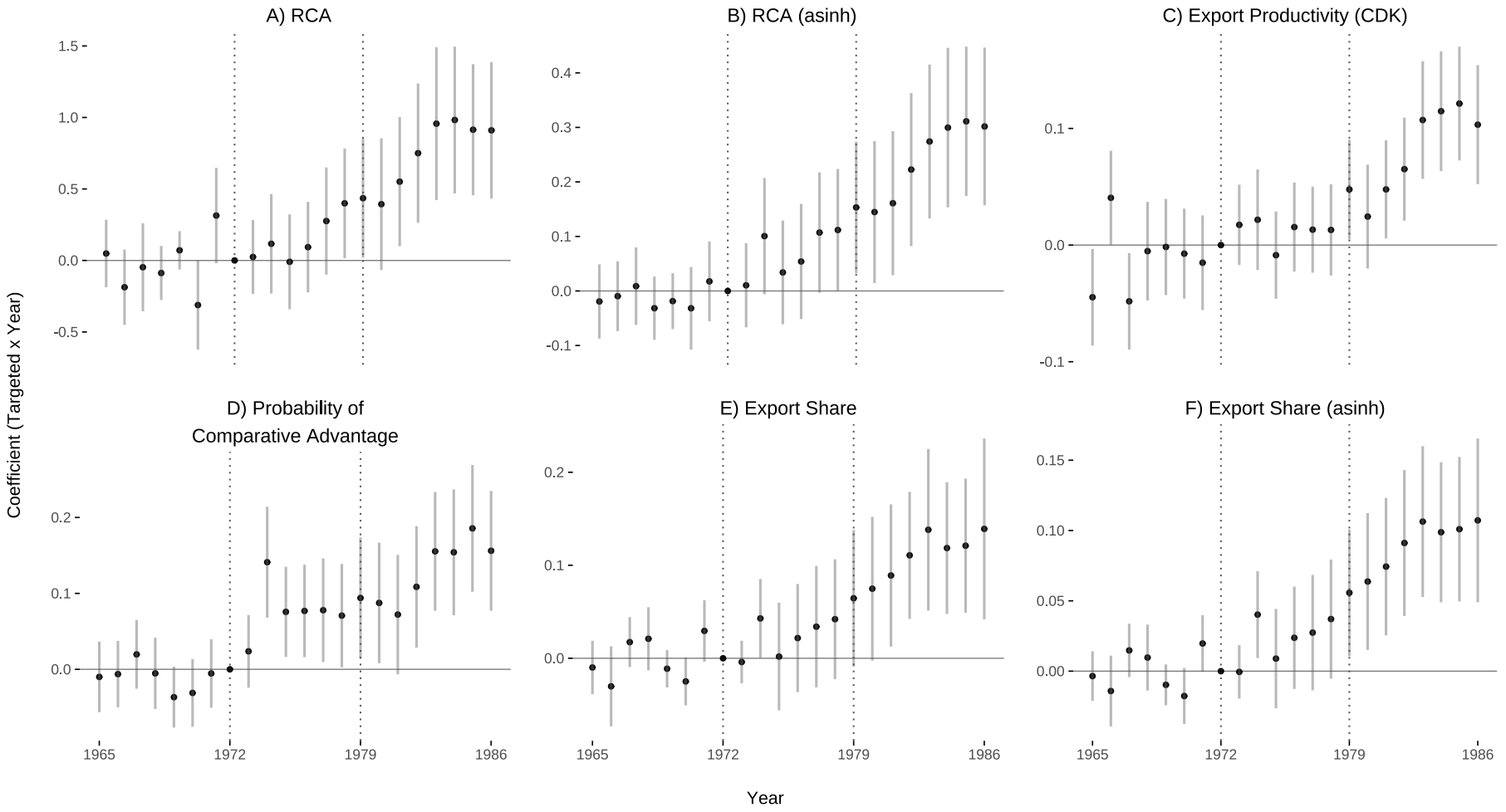

FIGURE B.6
Double Robust Estimates: Industrial Policy and Export Development

This figure plots semiparametric (doubly-robust) differences-in-differences estimates for the impact of HCI on export development. For RCA measures, I show the normal raw (Balassa) index alongside log and asinh-transformed RCA. Relative export productivity is estimated using CDK. This figure reports estimates from 4-digit SITC panel data (1965-1986). Black lines are coefficient estimates from equation (3). All point estimates are relative to the 1972 baseline level (coefficients normalized to 0). 95

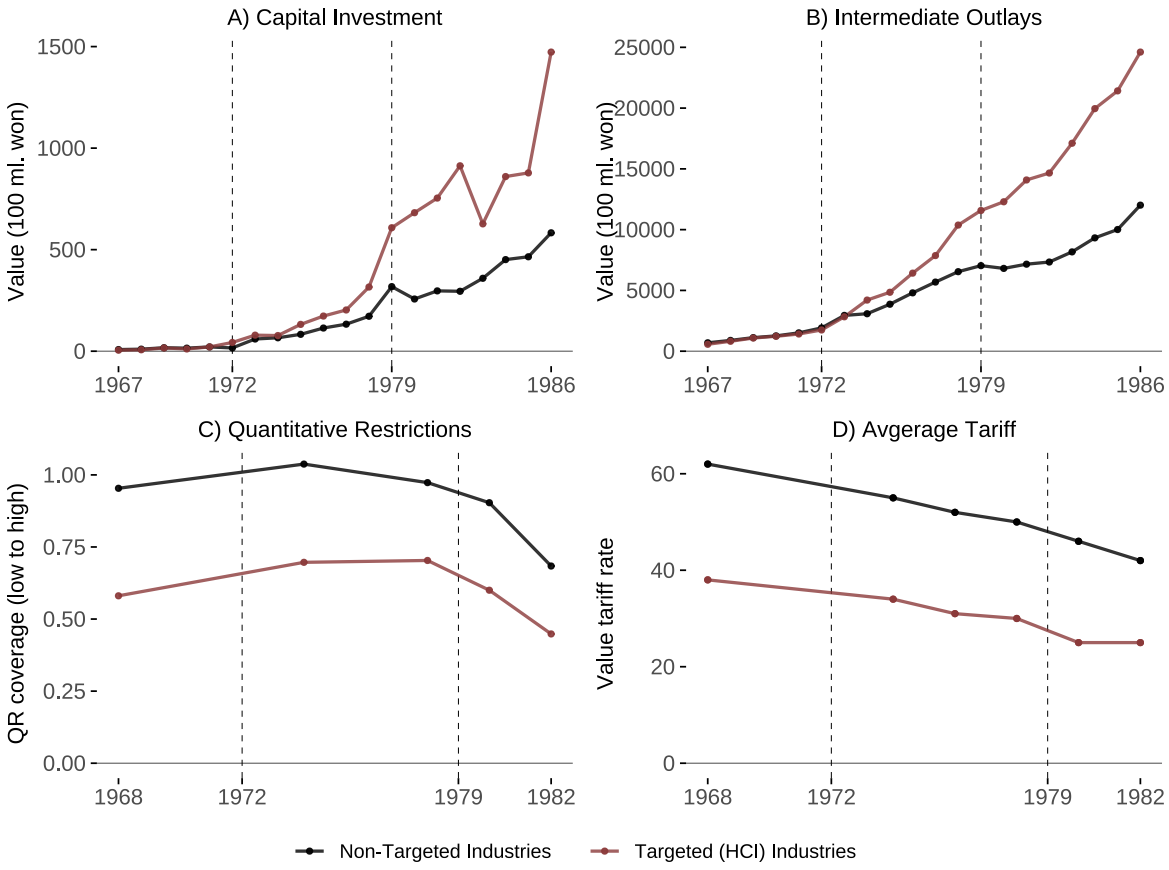

FIGURE D.1
Average Aggregate Investment and Trade Policy

Each panel plots outcomes related to investment and protection. Points are averages across targeted (HCI) and non-targeted (non-HCI) industries. The top row, Panels A-C, shows outcomes related to investment incentives. Panel A reports mean real total capital formation across targeted and non-targeted industries. Panel B shows real total material costs. Note: average intermediate material outlays can exceed investment. Panels C and D show outcomes for trade policy: C reports average ad valorem tariff rates (percent), and D shows quantitative restriction measures (QR). QR is a qualitative ranking of coverage on products within an industry, 0 being minimal coverage and 3 being high coverage.

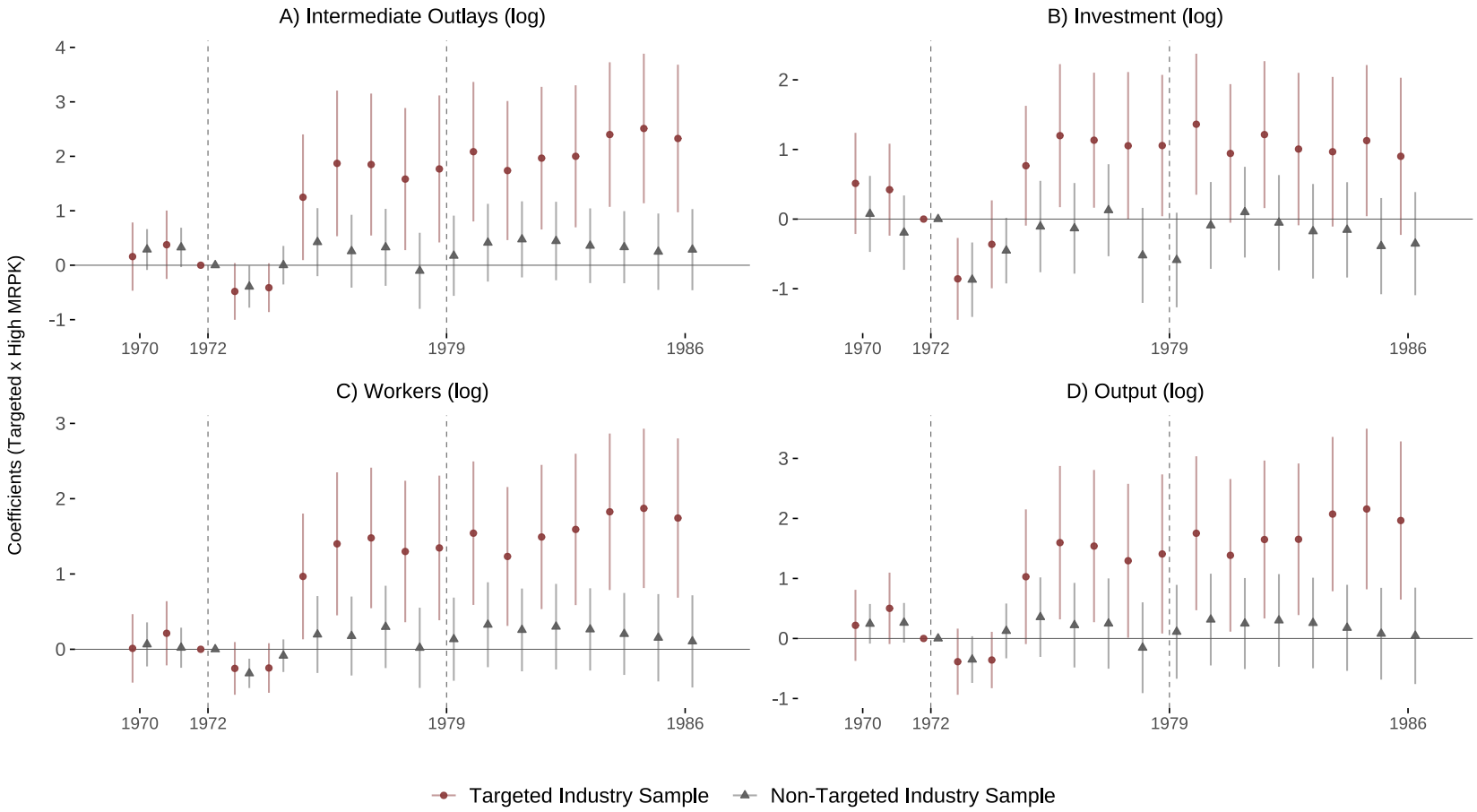

FIGURE D.2
Input Use and Marginal Revenue Product of Capital

This figure shows dynamic differences-in-differences estimates for the relationship between HCI and responses to in input use by high versus low marginal revenue product of capital (MRPK) industries. The figure plots coefficient estimates from equation (9), estimated separately for (red) targeted and (gray) non-targeted industries. These coefficients convey the differences in input use between high-MRPK and low-MRPK industries, relative to 1972. See Appendix D for MRPK calculation. Outcomes are log values: real material outlays, real investment, employment, and real gross output shipped. Error bars show the 95 percent confidence interval.

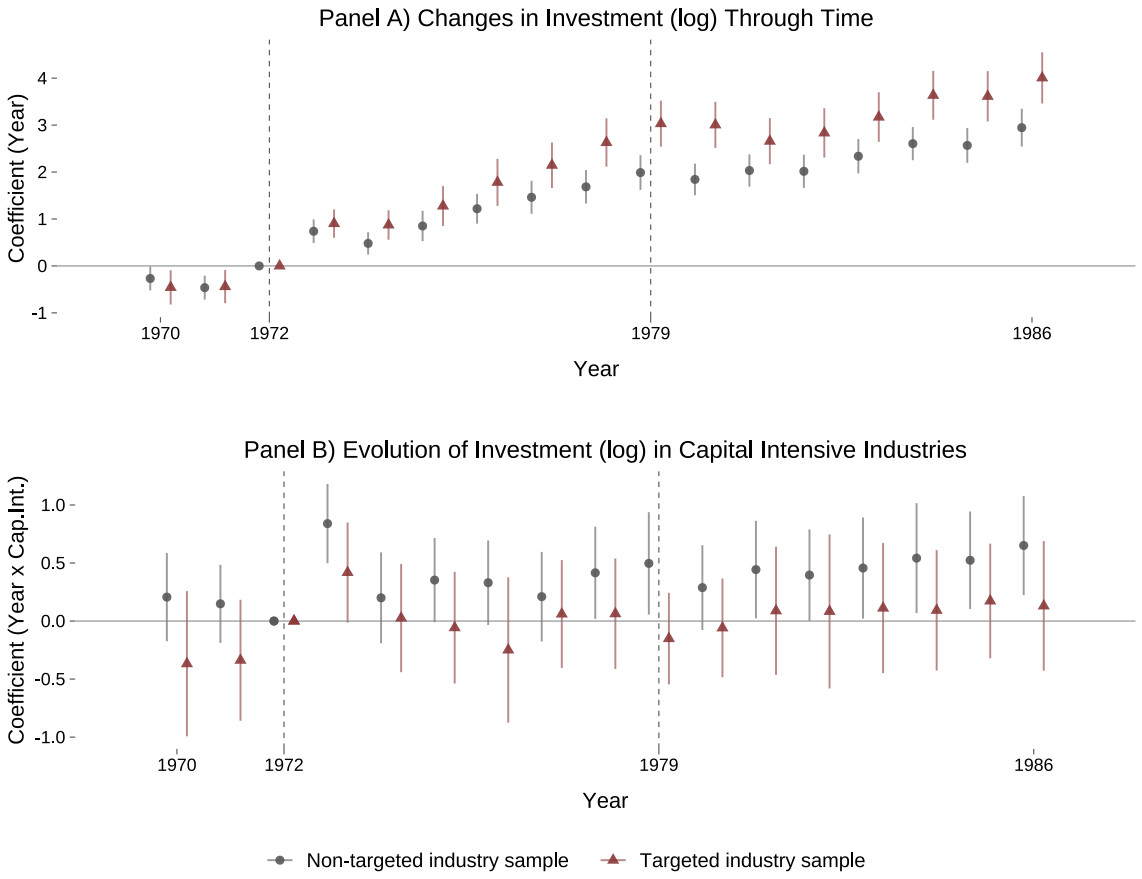

FIGURE D.3
Crowding Out and Investment by Treatment Status

This figure shows dynamic differences-in-differences estimates for the relationship between HCI and responses to investment incentives. Panel A shows the changes in (log, real) investment for targeted and non-targeted industries, relative to 1972. Panel A plots the coefficients from equation (10), estimated separately by treatment status. Panel B assesses the degree to which non-treated, capital-intensive industries may have been squeezed by HCI drive credit policy. Panel (B) shows the evolution of investment in high versus low capital-intensive industries, estimated separately by treatment status. Coefficients are from the interaction Year × log Capital Intensity, with 1972 as the omitted category. Pre-treatment capital intensity is the pre-1973 real capital stock per worker.

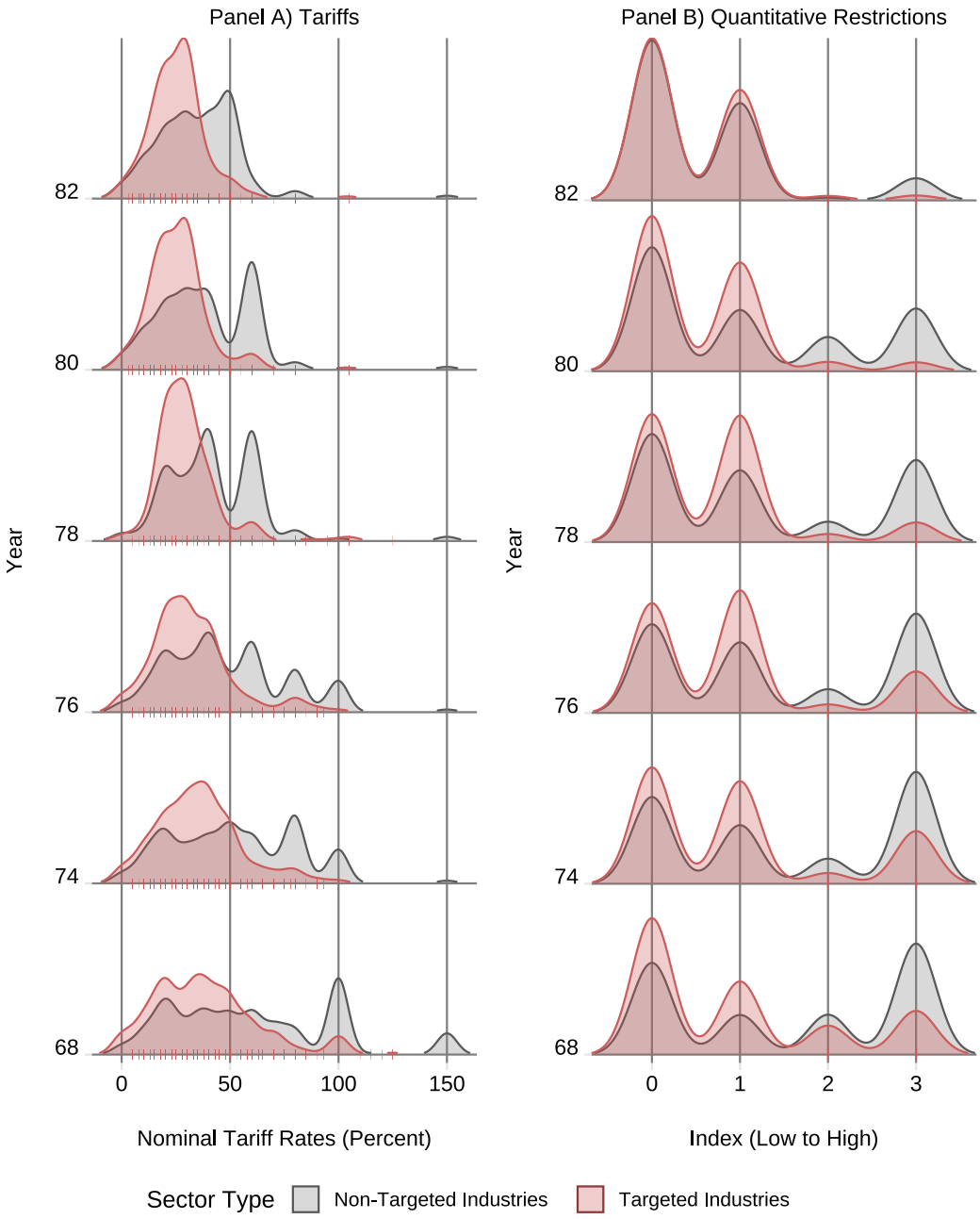

FIGURE D.4
Changes in Distribution of Trade Policies, 1968-1982

This figure shows the decline and convergence in (A) nominal tariff rates (percent) and (B) quantitative restrictions (severity scores 0-3). The kernel density distribution for targeted products is in red; non-targeted products are in gray. Distributions are estimated over annual product-level data (unweighted, CCCN code, 4-digit level) for years 1968, 1974, 1978, 1980, and 1982. The severity of quantitative restrictions within 4-digit products is measured using a qualitative 0-3 scale, from (0) no restrictions to (3) high restrictions.

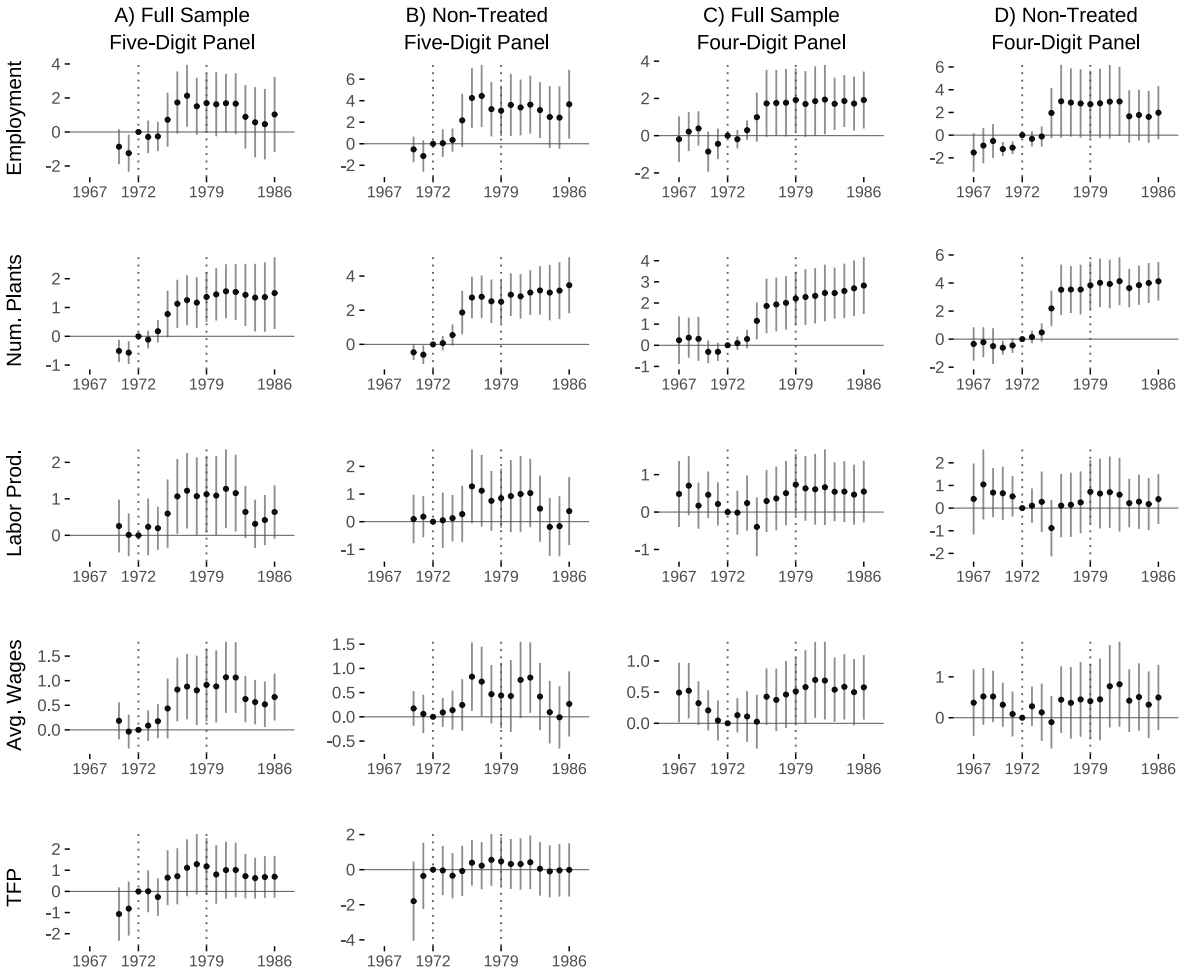

FIGURE E.1
Direct Forward Linkages and Development Outcomes

This figure plots dynamic differences-in-differences estimates for the relationship between direct forward linkage exposure and outcomes: (log) employment, number of plants (plant entry), labor productivity, average wages, and TFP. Coefficients are estimated relative to, 1972, the year before HCI. The year 1979 corresponds to collapse of Park regime. Years are on the x-axis. Estimates for the effect of direct forward (Linkage × Year) linkages are on y-axis. Full sample regressions control for the main HCI × Year effect. All regressions include controls for direct backward linkage connections, interacted with time. 95 percent confidence intervals are shown in gray.

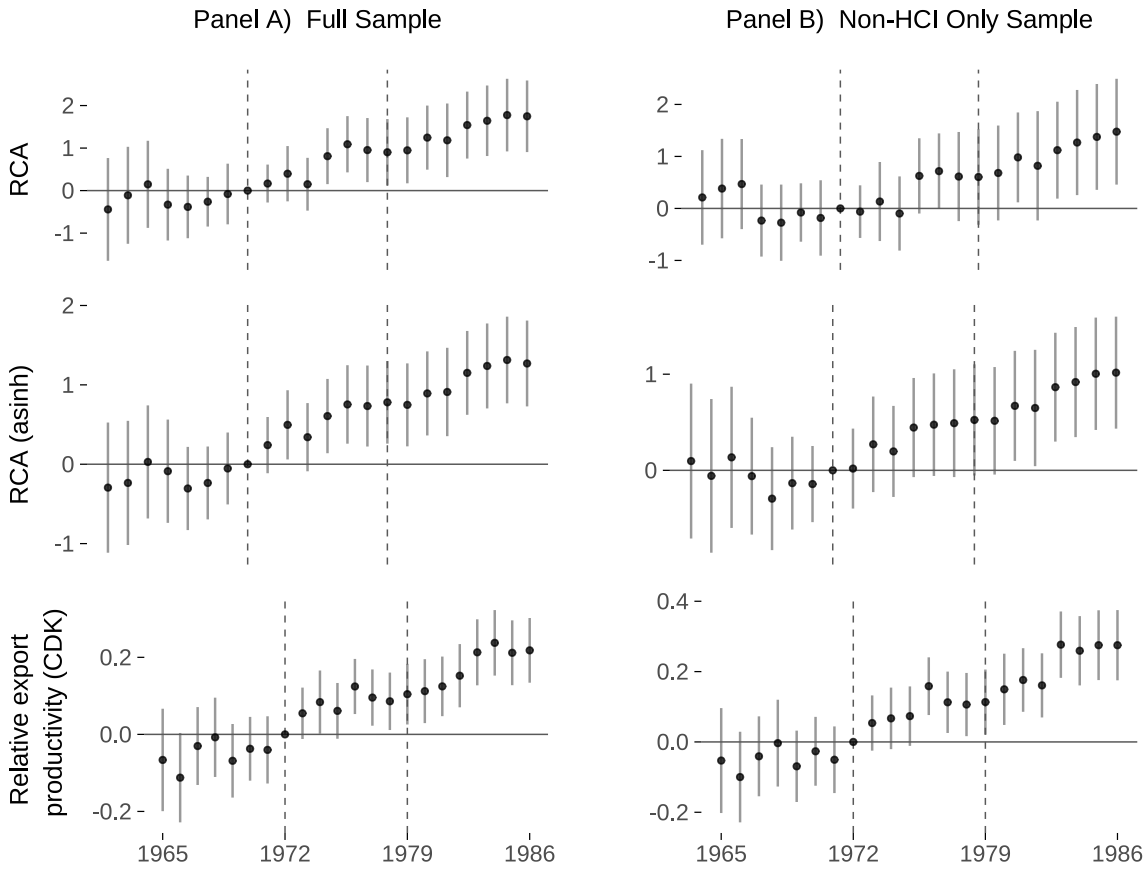

FIGURE E.2
Total Forward Linkages and Export Development

The figure plots dynamic differences-in-differences estimates for the relationship between total (Leontief) forward linkage exposure and export development. The coefficients in the plot are estimated from the main DD linkage specification. For the raw RCA (Balassa) index, regressions are estimated using PPML. RCA (asinh) and relative export productivity (CDK) are estimated using OLS. Linkage measures are calculated from the 1970 input-output tables. All estimates are relative to 1972, the year before HCI. The year 1979 corresponds to the collapse of the Park regime. Years are on the x-axis. Estimates for the main linkage interaction (total (Leontief) forward) are on the y-axis: e.g., Linkage × Year. These estimates come from the DD specification that includes the impact of both measures. Full sample regressions control for the main HCI × Year effect. 95 percent confidence intervals are shown in gray.

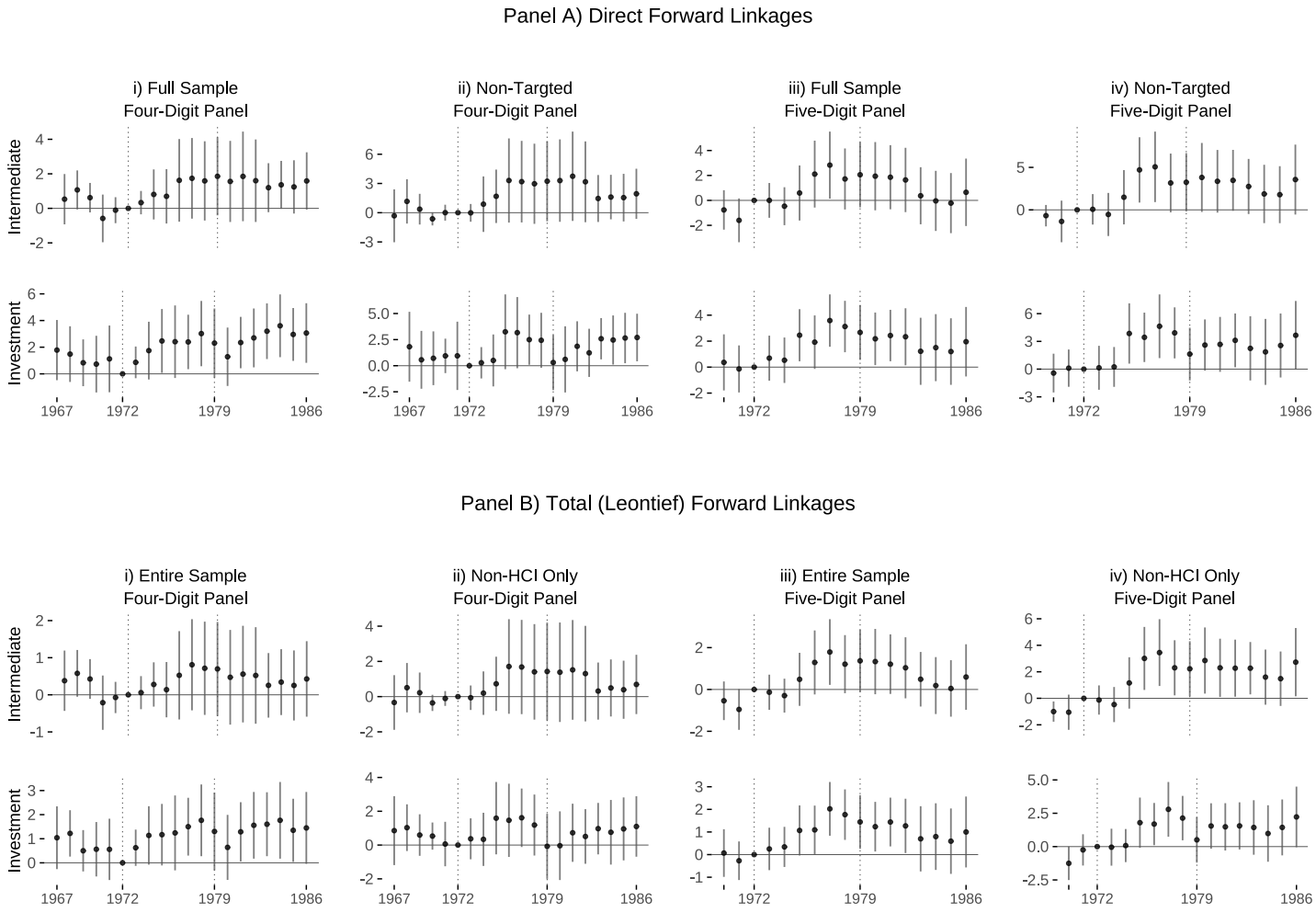

FIGURE E.3
Linkage Mechanisms - Direct Forward Linkages, Intermediate Outlays, and Investment

This figure plots dynamic differences-in-differences estimates for the relationship between direct forward linkage exposure and outcomes: log real intermediate input outlays, and log real total investment. Estimates are relative to, 1972, the year before HCI. The year 1979 corresponds to collapse of Park regime. Years are on the x-axis. Estimates for the effect of direct forward (Linkage × Year) linkages are on y-axis. Full sample regressions control for the main HCI × Year effect. All regressions include controls for direct backward linkage connections, interacted with time. 95 percent confidence intervals are shown in gray.

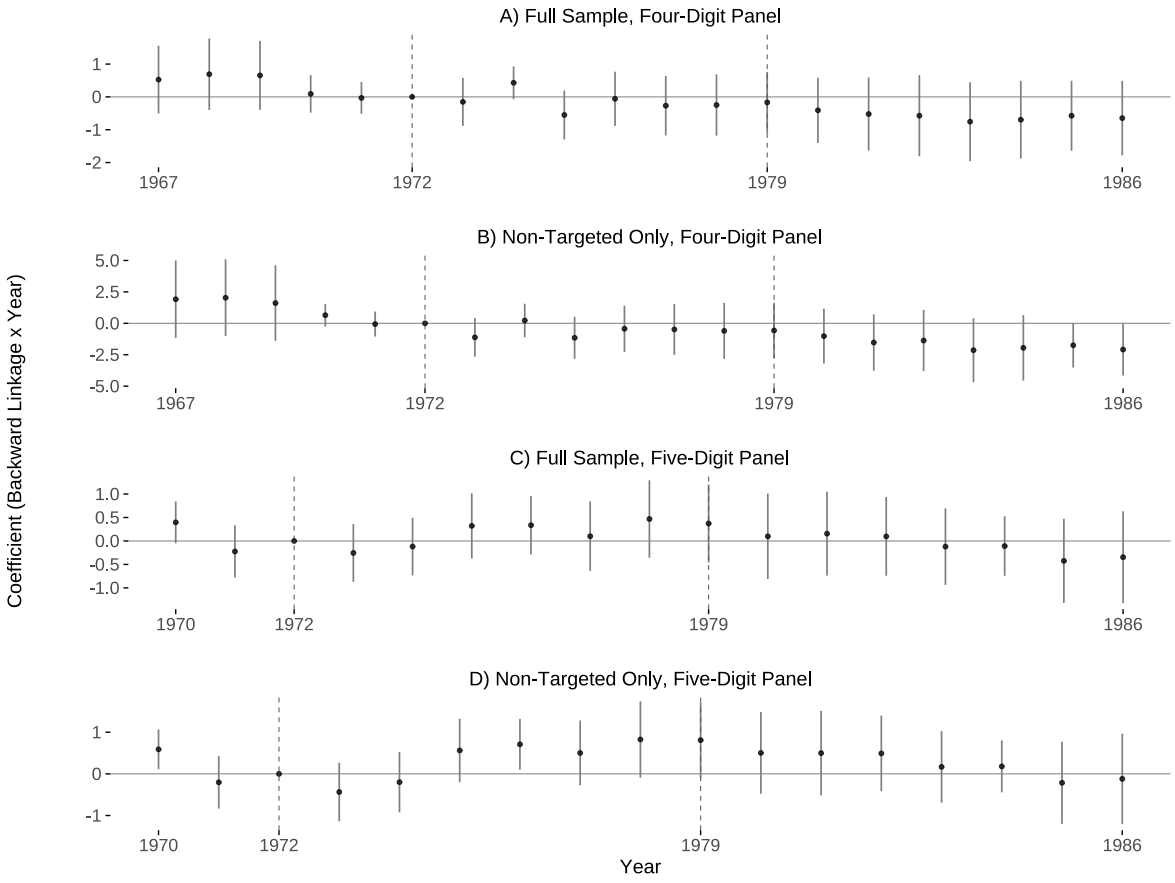

FIGURE F.1
Relationship Between Direct Backward Linkages on Upstream Output

This figure plots dynamic differences-in-differences estimates for the relationship between direct backward linkage exposure and outcomes: log real value added. Estimates are relative to, 1972, the year before HCI. The year 1979 corresponds to collapse of Park regime. Years are on the x-axis. Estimates for the effect of direct backward (Linkage × Year) linkages are on y-axis. Full sample regressions control for the main HCI × Year effect. All regressions include controls for direct forward linkage connections, interacted with time. 95 percent confidence intervals are shown in gray.

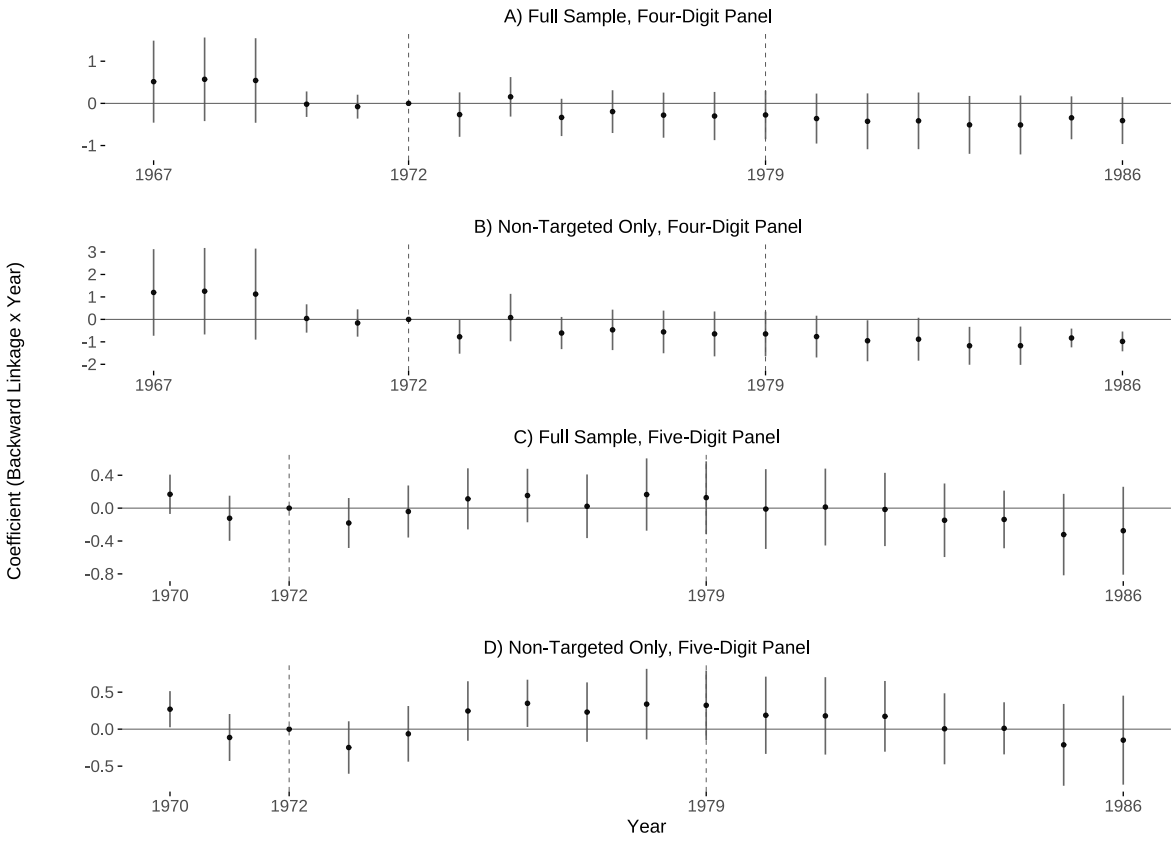

FIGURE F.2
Relationship Between Total Backward Linkages and Upstream Output

This figure plots dynamic differences-in-differences estimates for the relationship between total backward linkage exposure and outcomes: log real value added. Estimates are relative to, 1972, the year before HCI. The year 1979 corresponds to collapse of Park regime. Years are on the x-axis. Estimates for the effect of total backward (Linkage × Year) linkages are on y-axis. Full sample regressions control for the main HCI × Year effect. All regressions include controls for total forward linkage connections, interacted with time. 95 percent confidence intervals are shown in gray.

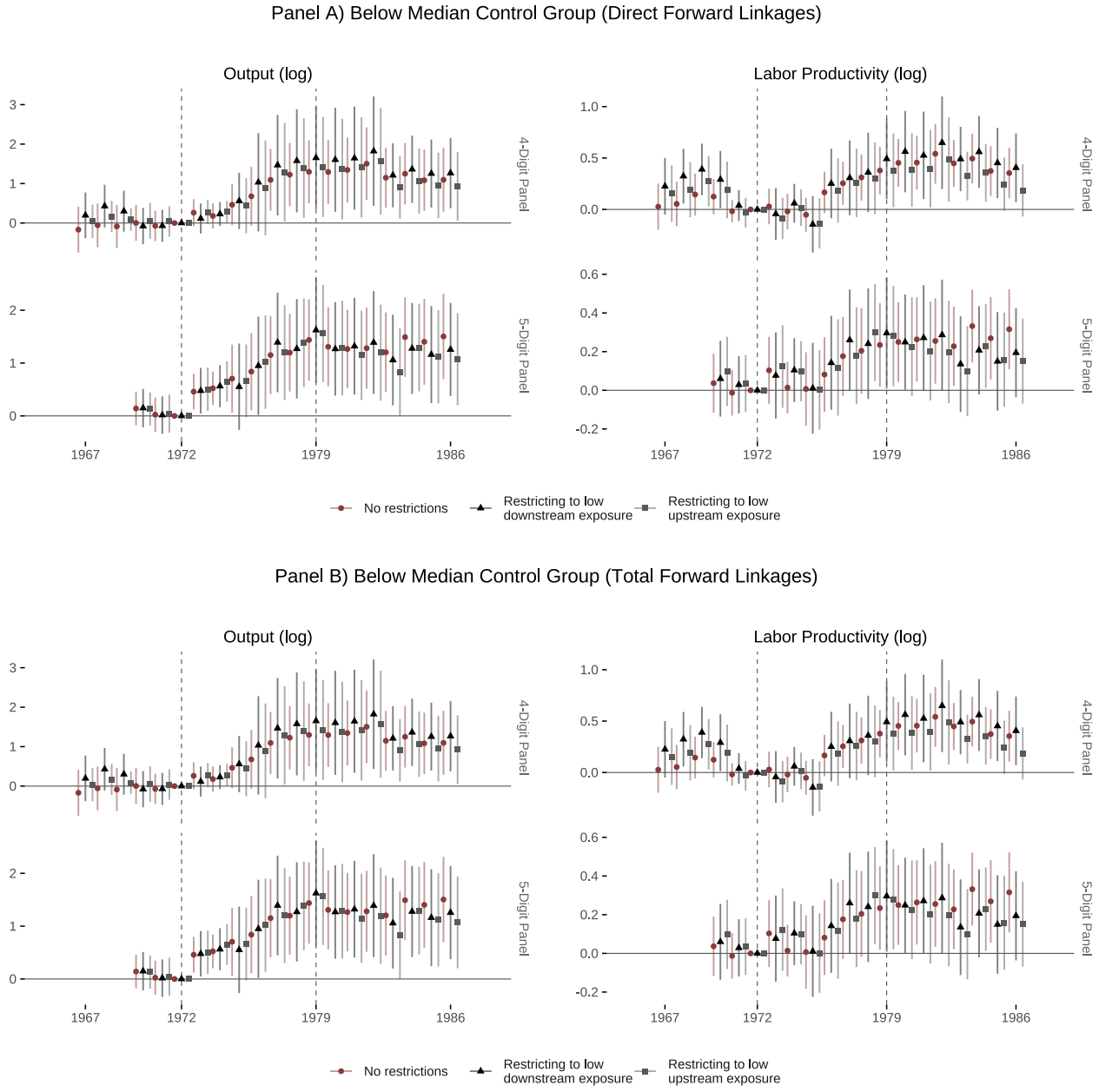

FIGURE G.1
Robustness: Impact of Industrial Policy on Development, Restricting to Control Industries with Low Linkages

This figure shows dynamic differences-in-differences estimates for the relationship between HCI and responses to industrial development outcomes. It shows estimates with and without controlling for linkage effects. Panel A limits the control group to industries with below median forward linkage exposure. Panel B limits the control group to industries below median exposure to total forward linkages.

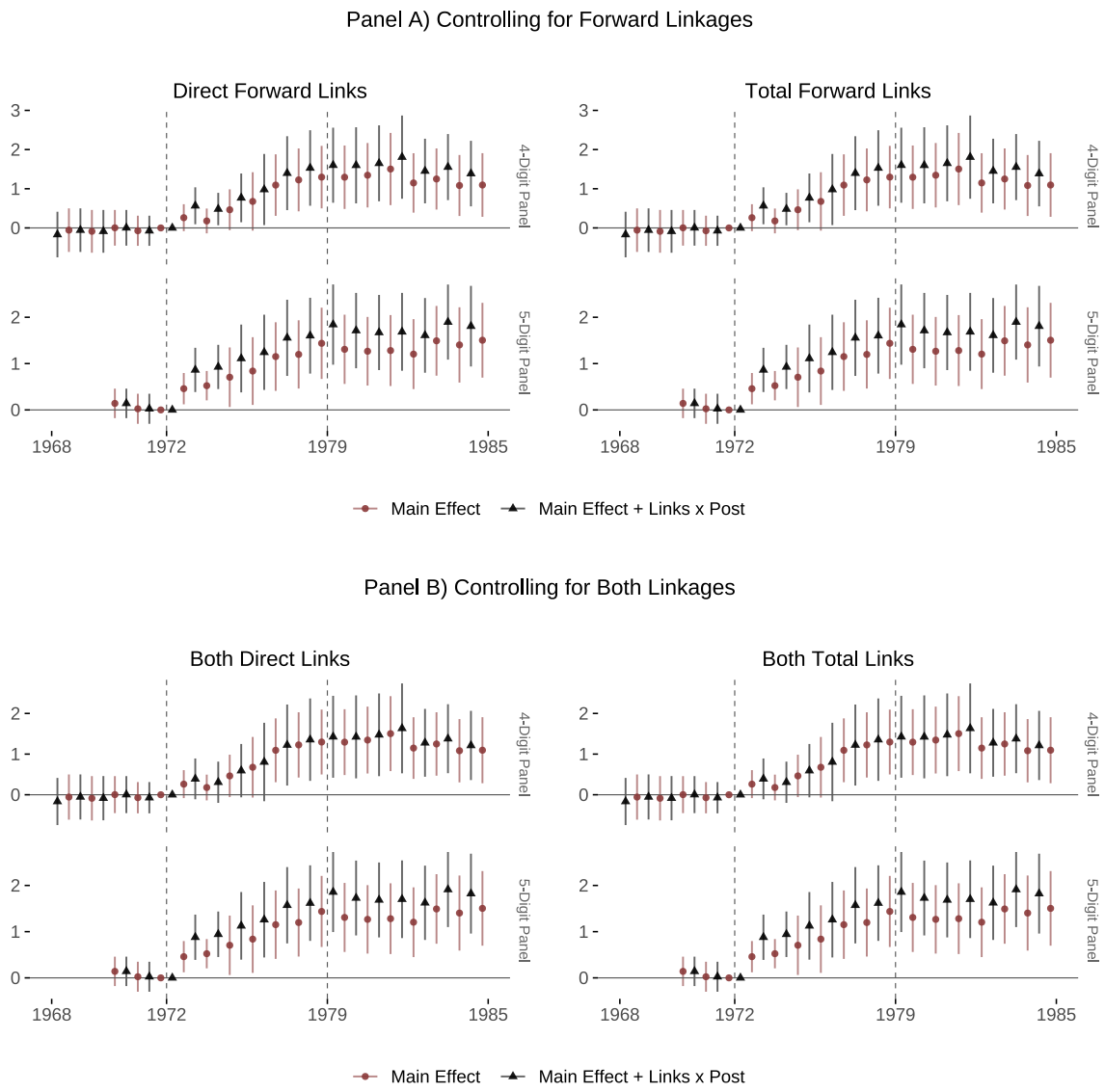

FIGURE G.2
Robustness: Impact of Industrial Policy on Development, Controlling for Non-Treated Linkages

responses to industrial development outcomes. Estimates with and without controls for linkage effects in non-treated sectors (linkage effects only for non-treated industry). Panels A compares baseline estimates from equation (1) to estimates that control for forward linkage exposure.Panel B compares baseline estimates from equation (1) to estimates controlling for both measures of linkage exposure.

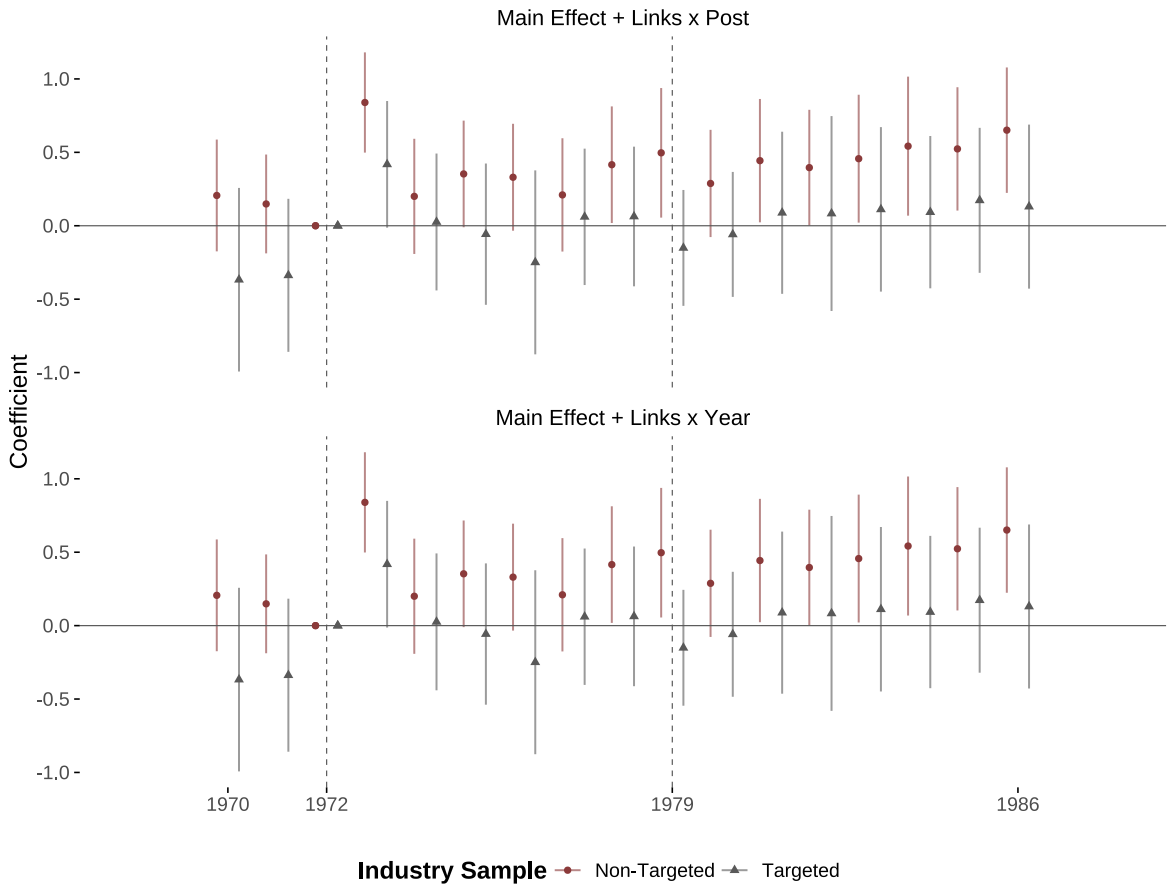

FIGURE G.3
Robustness: Relationship Between Investment and Capital Intensity, HCI Versus Non-HCI Industry

responses to investment incentives. Panels show the changes in investment for targeted and non-targeted, relative to 1972, controlling for IO linkages. Regressions are performed on either the targeted-only or non-targeted samples. Coefficients are from the interaction Year × Log Capital Intensity, with 1972 as the omitted category. Pre-treatment capital intensity is measured as the pre-1973 levels of capital stock per worker. Left panel plots the Year × Capital Intensity (main effects), controlling for forward and backard linkages (interacted with Post). Right panel plots the Year × Capital Intensity (main effects), controlling for forward and backard linkages (interacted with Year).

TABLE A.1
PRE-HCI DRIVE STATISTICS BY TREATMENT STATUS

		A) Four-Digit Panel (1967-1972)		B) Five-Digit Panel (1970-1972)	
Variable	Industry	Mean	N	Mean	N
i) Industrial Statistics					
	Non-HCI	74.17	330	69.33	528
Average Size	HCI	64.68	198	70.20	306
	Non-HCI	406.48	330	106.35	528
Establishments	HCI	162.23	198	50.22	306
	Non-HCI	184316.31	330	75962.19	528
Gross Output	HCI	154481.13	198	61968.10	306
	Non-HCI	1434.22	330	1759.05	528
Investment	HCI	1741.88	198	2673.48	306
	Non-HCI	7.50	330	7.20	528
Labor Productivity	HCI	8.97	198	7.47	306
	Non-HCI	1.39	330	0.42	528
Labor Share	HCI	0.72	198	0.24	306
	Non-HCI	9.70	330	10.97	528
Prices	HCI	29.20	198	29.13	306
	Non-HCI	86472.29	330	31513.33	528
Value Added	HCI	52987.78	198	22038.69	306
	Non-HCI	1.36	330	0.42	528
Value Added Share	HCI	0.81	198	0.26	306
	Non-HCI	12983.87	330	4117.89	528
Workers	HCI	6775.03	198	2351.84	306
ii) Linkage Exposure to HCI Sectors					
	Non-HCI	0.09	330	0.15	528
Backward Linkage	HCI	0.16	198	0.20	306
	Non-HCI	0.11	330	0.10	528
Forward Linkage	HCI	0.31	198	0.34	306
iii) Trade Statistics (SITC trade data, 1965-1972)					
	Non-HCI	1.27	3464		
RCA (Balassa)	HCI	0.40	1448		
	Non-HCI	0.14	3464		
Export Share	HCI	0.09	1448		
	Non-HCI	0.13	3464		
Import Share	HCI	0.24	1448		

Notes. Table reports pre-1973 statistics for a selection of core industrial variables. Panel A shows statistics for aggregated ('long') 4-digit industrial panel, 1967 to 1972. Panel B shows statistics for disaggregated ('short') 5-digit industrial panel, 1970 to 1972. Part i) of table reports Mining and Manufacturing Survey/Census (MMS) outcomes, with the exception of prices, which come from the Bank of Korea publications. Part ii) shows data from the 1970 input-output tables published by the Bank of Korea (1970), harmonized and matched to industry-level data. Part iii) shows trade variables (from UN-Comtrade). All values are deflated using 2010 baseline won, except for real USD trade values.

TABLE C.1
PROBABILITY OF ATTAINING COMPARATIVE ADVANTAGE IN TARGETED INDUSTRY, SOUTH KOREA V. OTHER COUNTRIES, POST-1972

	Outcomes: Probability of Comparative Advantage							
	Estimates with OLS				Estimates with PPML			
	Full Sample		Similar GDP	Same GDP	Full Sample		Similar GDP	Same GDP
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Korea	0.131	0.110***	0.137	0.119	1.002***	1.145***	1.085***	0.853***
	(.)	(0.011)	(.)	(.)	(0.141)	(0.094)	(0.143)	(0.212)
GDP per capita		0.047***				0.664***		
		(0.008)				(0.074)		
Industry X Year Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.025	0.089	0.065	0.053	0.052	0.162	0.082	0.064
Observations	251160	251160	76440	24570	246652	246652	55720	13824
Mean of Dependent Variable	0.078	0.078	0.075	0.102	0.079	0.079	0.103	0.180
Clusters (Country-Industry)	92 x 182	92 x 182	28 x 182	9 x 182	92 x 182	92 x 182	28 x 178	9 x 160

Notes. The probability of attaining RCA (RCA>1) in HCI products for Korea versus other countries in the post-1972 period. Regressions include industry-by-year effects. Data is restricted to treated industries. Two-way standard errors are clustered at the industry and country levels.

TABLE D.1
ROBUSTNESS: LEARNING IN INDUSTRIAL-LEVEL DATA, BY TREATMENT STATUS

	Outcomes													
	Price (log)		Unit Cost (log)		Unit Cost (revenue, log)		TFP (OP)		TFP (ACF)		TFP (LP)		TFP (W)	
\textit{Alternative measures:}	Experience per worker (1)	Experience (alternative) (2)	Experience per worker (3)	Experience (alternative) (4)	Experience per worker (5)	Experience (alternative) (6)	Experience per worker (7)	Experience (alternative) (8)	Experience per worker (9)	Experience (alternative) (10)	Experience per worker (11)	Experience (alternative) (12)	Experience per worker (13)	Experience (alternative) (14)
Experience	-0.197***	-0.155***	-0.101***	-0.110***	-0.101***	-0.115***	0.355***	0.409***	0.403***	0.456***	0.439***	0.459***	0.428***	0.444***
	(0.029)	(0.027)	(0.015)	(0.014)	(0.015)	(0.015)	(0.060)	(0.055)	(0.060)	(0.061)	(0.059)	(0.058)	(0.065)	(0.062)
Targeted × Experience	-0.058***	-0.061***	-0.045***	-0.042***	-0.043***	-0.039***	0.039	0.050**	0.036	0.039	0.087***	0.138***	0.092***	0.144***
	(0.014)	(0.014)	(0.010)	(0.010)	(0.011)	(0.010)	(0.031)	(0.025)	(0.031)	(0.024)	(0.032)	(0.026)	(0.033)	(0.026)
Controls														
Controls for Size	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls for Capital Intensity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls for Intermediates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls for Investment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.961	0.960	0.899	0.901	0.903	0.905	0.981	0.981	0.878	0.882	0.986	0.986	0.990	0.990
Observations	3427	3429	3427	3429	3426	3428	3426	3428	3426	3428	3426	3428	3426	3428
Clusters	263	263	263	263	263	263	263	263	263	263	263	263	263	263
Combined Effects														
Linear Combination	-0.255	-0.216	-0.146	-0.152	-0.145	-0.154	0.394	0.459	0.439	0.495	0.526	0.597	0.519	0.588
(St.Err.)	(0.029)	(0.026)	(0.016)	(0.016)	(0.016)	(0.016)	(0.051)	(0.056)	(0.051)	(0.059)	(0.054)	(0.061)	(0.057)	(0.064)

Notes. This table shows the robustness of industry-level estimates from equation (5) for alternative outcomes. Unit Cost is the baseline unit cost measure: (log) total real intermediate cost per real gross output; Unit Cost (revenue) is measured using total real intermediate costs per unit of real revenue. TFP outcomes are estimated using Ackerberg-Caves-Frazer (ACF), Levinsohn-Petrin (LP), Olley-Pakes (OP), and Wooldridge (W) methods. Table shows estimates for each outcome using two alternative Experience measures: (log) Experience per worker, and Experience (alternative), which is experience calculated using cumulative value added units. All equations control for size and scale: (log) average plant size and total industry employment. Additional controls include (log): capital intensity, skill ratio, investment per worker, and intermediate input intensity per worker. Linear Combination, at the bottom, gives the combined effects for Experience for targeted industries. All specifications are estimated using industry and year fixed effects. Standard errors are clustered at the industry level.

TABLE D.2
ROBUSTNESS: PLANT AND INDUSTRY-LEVEL LEARNING, BY TREATMENT STATUS

	Panel A) Experience					Panel B) Experience (per worker)				
		TFP					TFP			
	Unit cost (revenue)	(ACF)	(LP)	(W)	(OP)	Unit cost (revenue)	(ACF)	(LP)	(W)	(OP)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Plant Experience	-0.072***	0.485***	0.484***	0.484***	0.486***	-0.076***	0.493***	0.491***	0.497***	0.492***
	(0.002)	(0.011)	(0.011)	(0.011)	(0.011)	(0.003)	(0.012)	(0.013)	(0.012)	(0.012)
Targeted x Plant Experience	-0.007***	0.014*	0.024***	0.030***	0.020***	-0.005**	0.004	0.013	0.005	0.012
	(0.002)	(0.008)	(0.008)	(0.008)	(0.007)	(0.002)	(0.010)	(0.011)	(0.011)	(0.011)
Industry Experience	-0.011***	0.022	0.037**	0.037**	0.030*	0.000	-0.006	0.001	-0.001	-0.004
	(0.003)	(0.014)	(0.016)	(0.017)	(0.016)	(0.003)	(0.012)	(0.015)	(0.016)	(0.015)
Targeted x Industry Experience	-0.004**	0.030***	0.018**	0.016**	0.021***	-0.010***	0.070***	0.062***	0.070***	0.061***
	(0.001)	(0.009)	(0.007)	(0.007)	(0.007)	(0.003)	(0.012)	(0.011)	(0.011)	(0.011)
Controls										
Control for Plant Size	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Capital	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Skill Ratio	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Investment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Intermediates	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Polynomial Controls	No	No	No	No	No	No	No	No	No	No
Plant Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.890	0.691	0.682	0.678	0.600	0.890	0.689	0.680	0.675	0.597
Observations	250853	235940	235940	235940	235940	250853	235940	235940	235940	235940
Clusters (Industry and Plant)	489 x 59978	489 x 57942	489 x 57942	489 x 57942	489 x 57942	489 x 59978	489 x 57942	489 x 57942	489 x 57942	489 x 57942
Combined Effects										
Linear Combination (Plant-Level)	-0.078	0.499	0.508	0.514	0.506	-0.081	0.497	0.504	0.502	0.504
(St.Err.)	(0.003)	(0.013)	(0.013)	(0.013)	(0.012)	(0.003)	(0.014)	(0.014)	(0.015)	(0.014)
Linear Combination (Industry-Level)	-0.014	0.052	0.056	0.053	0.051	-0.010	0.064	0.063	0.069	0.058
(St.Err.)	(0.003)	(0.014)	(0.017)	(0.018)	(0.017)	(0.003)	(0.016)	(0.018)	(0.018)	(0.018)

Notes. This table shows the robustness of plant-level estimates from equation (5) for alternative outcomes. Unit Cost is measured using total real intermediate costs per unit of (real) revenue. TFP outcomes are estimated using Ackerberg-Caves-Frazer (ACF), Levinsohn-Petrin (LP), Olley-Pakes (OP), and Wooldridge (W) methods. Panel A shows estimates for log Experience, and Panel B shows log Experience per worker. 'Plant Experience' refers to plant-level cumulative learning, and 'Industry Experience' refers to industry-level learning, calculated at the 4-digit industry level. All equations control for log plant size (workers). Additional controls include (log): capital intensity, skill ratio, investment per worker, and intermediate input intensity per worker. Linear Combination, at the bottom, gives the combined effects for Plant and Industry Experience for HCI establishments. All specifications are estimated using plant, industry, and year fixed effects. Two-way standard errors are clustered at the industry and plant levels.

TABLE D.3
DIFFERENCES IN TRADE POLICY BY TREATMENT STATUS, 1968-1982

	Outcomes: Levels								Outcomes: Changes			
	Tariff Rate (log)				Quantitative Restrictions (log)				Tariff Rate (log)		Quantitative Restrictions (log)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A) Output Protection												
Targeted	-0.438***	-0.492***	-0.430***	-0.483***	-0.146**	-0.190***	-0.138**	-0.182***	0.012	0.012	0.028	0.022
	(0.123)	(0.104)	(0.123)	(0.104)	(0.057)	(0.052)	(0.058)	(0.053)	(0.022)	(0.024)	(0.017)	(0.014)
Year Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls		Yes		Yes		Yes		Yes		Yes		Yes
Sample	Full	Full	Post-1973	Post-1973	Full	Full	Post-1973	Post-1973	Full	Full	Full	Full
R^2	0.149	0.527	0.131	0.533	0.088	0.265	0.097	0.291	0.160	0.203	0.062	0.250
Observations	522	516	435	430	435	430	348	344	261	258	435	430
Clusters	87	86	87	86	87	86	87	86	87	86	87	86
Panel B) Exposure to Input Protection												
Targeted	-0.199**	-0.314***	-0.234**	-0.356***	-0.044*	-0.070***	-0.051*	-0.076***	-0.042***	-0.052***	-0.021**	-0.015
	(0.098)	(0.076)	(0.102)	(0.079)	(0.026)	(0.024)	(0.026)	(0.023)	(0.012)	(0.014)	(0.009)	(0.011)
Year Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls		Yes		Yes		Yes		Yes		Yes		Yes
Sample	Full	Full	Post-1973	Post-1973	Full	Full	Post-1973	Post-1973	Full	Full	Full	Full
R^2	0.123	0.256	0.091	0.243	0.158	0.252	0.169	0.265	0.184	0.297	0.198	0.263
Observations	522	516	435	430	435	430	348	344	435	430	261	258
Clusters	87	86	87	86	87	86	87	86	87	86	87	86

Notes. Table shows trade policy by treatment status (targeted vs. non-targeted), using nominal trade policy data for 1968-1982 (intermittent). Columns (1-8) show estimates in levels and columns (9-12) show changes. All regressions are at the 4-digit industry level. Columns (1-4) report estimates for log tariffs. Columns (5-8) report estimates for log quantitative restriction coverage. Columns (9-10) show estimates for changes in log tariff rates. Columns (11-12) show estimates for changes in log quantitative restrictions. Panel A presents tariff and quantitative restriction outcomes for output market protection (industry-level): the average level or change in tariff or quantitative restriction coverage. Panel B shows outcomes for input protection. Exposure to input protection is calculated using the weighted sum of tariffs or QRs for an industry's input basket, with weights taken from the 1970 input-output accounts. See text for calculation. Sample refers to whether all five periods are used, or whether only post-HCI (1973) observations are used.

TABLE E.1
TOTAL LINKAGE EXPOSURE AND OUTPUT

	Outcome: Value Added (log)			
	A) Five-Digit Panel (1970-1986)		B) Four-Digit Panel (1967-1986)	
	Full Sample	*Non-HCI Sample*	*Full Sample*	*Non-HCI Sample*
	(1)	(2)	(3)	(4)
Post × Forward Linkage	1.909***	3.388***	0.988**	1.512*
	(0.516)	(0.857)	(0.485)	(0.853)
Post × Backward Linkage	-0.0536	0.0452	-0.574	-1.316**
	(0.175)	(0.197)	(0.393)	(0.511)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
Targeted X Year	Yes	No	Yes	No
R^2	0.777	0.765	0.849	0.828
Observations	4720	2986	1750	1096
Clusters	278	176	88	55

Notes. This table shows average differences-in-differences estimates , before and after 1973. Estimates come from the main DD linkage specification. Both linkage interactions (forward and backward) are shown. Note that dynamic figures present only estimates for the linkage of interest.

TABLE E.2
TOTAL LINKAGE EXPOSURE AND OUTPUT PRICES

	Outcome: Prices (log)			
	A) Five-Digit Panel (1970-1986)		B) Four-Digit Panel (1967-1986)	
	Full Sample	*Non-HCI Sample*	*Full Sample*	*Non-HCI Sample*
	(1)	(2)	(3)	(4)
Post × Forward Linkage	-0.289***	-0.406***	-0.344***	-0.421***
	(0.0726)	(0.0883)	(0.111)	(0.158)
Post × Backward Linkage	0.0500***	0.0463***	0.103	0.241***
	(0.0127)	(0.0100)	(0.0651)	(0.0318)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
Targeted X Year	Yes	No	Yes	No
R^2	0.958	0.943	0.963	0.959
Observations	4721	2987	1751	1097
Clusters	278	176	88	55

Notes. This table shows average differences-in-differences estimates, before and after 1973. Estimates come from the main DD linkage specification. Both linkage interactions (forward and backward) are shown. Note that dynamic figures present only estimates for the linkage of interest.

TABLE E.3
DIRECT LINKAGE EXPOSURE AND INDUSTRIAL DEVELOPMENT OUTCOMES

	Panel A) Five-Digit Panel (1970-1986)										Panel B) Four-Digit Panel (1967-1986)							
	Outcomes (log)										Outcomes (log)							
	Employment		Num. Plants		Labor Prod.		TFP (ACF)		Avg. Wage.		Employment		Num. Plants		Labor Prod.		Avg. Wage.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Forward Linkage	1.788***	3.403***	1.499***	2.828***	0.699**	0.473	1.353***	0.869	0.629***	0.330	1.645**	2.925**	1.897***	3.564***	0.0722	-0.283	0.182	0.107
	(0.685)	(1.108)	(0.393)	(0.562)	(0.325)	(0.390)	(0.499)	(0.588)	(0.220)	(0.233)	(0.777)	(1.143)	(0.639)	(0.677)	(0.297)	(0.424)	(0.173)	(0.219)
Post × Backward Linkage	-0.0917	0.116	0.105	0.177	0.116	0.104	0.0542	0.00243	0.0424	0.0307	-0.373	-1.084	0.279	0.0609	-0.137	-0.890	-0.140	-0.702**
	(0.258)	(0.279)	(0.104)	(0.115)	(0.105)	(0.123)	(0.0926)	(0.0680)	(0.0736)	(0.0866)	(0.323)	(0.727)	(0.210)	(0.397)	(0.287)	(0.539)	(0.193)	(0.319)
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Targeted × Year	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
R^2	0.797	0.807	0.867	0.873	0.750	0.687	0.706	0.674	0.774	0.714	0.853	0.848	0.892	0.895	0.847	0.777	0.853	0.791
Observations	4726	2992	4726	2992	4714	2981	4214	2682	4721	2987	1760	1100	1760	1100	1750	1096	1751	1097
Clusters	278	176	278	176	278	176	264	167	278	176	88	55	88	55	88	55	88	55
Sample	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI

Notes. This table shows average differences-in-differences estimates, before and after 1973. Estimates come from the main DD linkage specification. Both linkage interactions (forward and backward) are shown. Note that dynamic figures present only estimates for the linkage of interest.

TABLE E.4
TOTAL LINKAGE EXPOSURE AND INDUSTRIAL DEVELOPMENT

	Panel A) Five-Digit Panel (1970-1986)										Panel B) Four-Digit Panel (1967-1986)							
	Outcomes (log)										Outcomes (log)							
	Employment		Num. Plants		Labor Prod.		TFP (ACF)		Avg. Wage.		Employment		Num. Plants		Labor Prod.		Avg. Wage.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post × Forward Linkage	1.139***	2.449***	0.882***	1.868***	0.534***	0.550**	0.821***	0.737**	0.432***	0.382***	0.632	1.404*	0.747**	1.919***	0.0721	-0.172	0.107	0.0401
	(0.386)	(0.637)	(0.227)	(0.338)	(0.182)	(0.227)	(0.252)	(0.300)	(0.124)	(0.138)	(0.421)	(0.779)	(0.371)	(0.571)	(0.175)	(0.298)	(0.104)	(0.162)
Post × Backward Linkage	-0.0856	0.0311	0.0287	0.0803	0.0482	0.0289	-0.0119	-0.0194	0.0148	0.000387	-0.352	-0.731**	-0.0472	-0.188	-0.151	-0.508***	-0.120	-0.366***
	(0.136)	(0.143)	(0.0552)	(0.0573)	(0.0567)	(0.0682)	(0.0460)	(0.0453)	(0.0390)	(0.0468)	(0.229)	(0.347)	(0.117)	(0.212)	(0.168)	(0.176)	(0.112)	(0.117)
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Targeted × Year	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
R^2	0.798	0.808	0.867	0.874	0.750	0.687	0.706	0.675	0.775	0.715	0.855	0.852	0.890	0.894	0.849	0.786	0.855	0.803
Observations	4726	2992	4726	2992	4714	2981	4214	2682	4721	2987	1760	1100	1760	1100	1750	1096	1751	1097
Clusters	278	176	278	176	278	176	264	167	278	176	88	55	88	55	88	55	88	55
Sample	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI

Notes. This table shows average differences-in-differences estimates, before and after 1973. Estimates come from the main DD linkage specification. Both linkage interactions (forward and backward) are shown. Note that dynamic figures present only estimates for the linkage of interest.

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Online Supplemental Appendix

H. Online Supplemental History Appendix

H.1 Defense Status of South Korea and the Nixonian Shock

This section provides further context for the defense status of South Korea around the Nixon Shock. Historian James Palais emphasizes the surprise related to U.S. troop withdrawal among those in the Park regime: "Park was so shocked by what he perceived as the American failure from the late 1960s to the mid-1970s to respond to North Korean provocations, to stay the course in Vietnam, and to maintain a solid commitment to the defense of South Korea that he decided to institute a more determined policy to achieve the next phase of the industrial revolution by creating a heavy and chemical industrial sector" (Kim 2004, p.xiv). The U.S. Committee on Foreign Relations (CFR) captured the military implications for South Korea: the "consequence of the troop withdrawal was the need for South Korea to improve its defense production capability" and needed to play "catch-up ball" against the DPRK (U.S. Senate. Committee on Foreign Relations 1978, p.4).

Without U.S. troops, the North likely held an advantage over their foe throughout the 1970s (Cushman 1979; Choi 1985; Eberstadt 1999).[24] The U.S. Senate Committee on Foreign Relations reported on the nature of the balance: "[t]he principal advantages for the North today lie in ground weapons (tanks, artillery, mortars), quantity of fighter aircraft, and quantity of naval combat vessels" (U.S. Senate. Committee on Foreign Relations 1978, p.2). Lt. Gen. John Cushman concluded that the Second Infantry would be "essential" in stopping North Korea’s "superior forces in a surprise, Blitzkrieg-style drive to capture or threaten Seoul" (Cushman 1979, p.361).

Hence, at the time of Nixon’s first withdrawal, the South was ill-equipped to stave off a Northern invasion. South Korean forces relied on outdated equipment, such as vintage American artillery and M-1 rifles (Stern, Kim, Perkins, and Yoo 1995, pp.21–22). In the event of a DPRK blitz, officials estimated that domestic military stocks would last for only three days.

H.2 Policy History

1 Sectoral Acts And Industry Treatment. After the Nixon shock, which marked a significant shift in US foreign policy, South Korea found itself with a consolidated autocracy and new avenues for alternative lending. Under Park Chung-hee, the nation could finally pursue its long-held ambition for a heavy industrial push. Despite facing various constraints, the Park regime established a legal framework that facilitated the development of heavy and chemical industries.

24. Eberstadt echoes that by 1979 the DPRK "probably still enjoyed a military advantage over ROK [South Korea]" (Eberstadt 1999, p.34).

Six pivotal industry acts formed the foundation of the HCI drive. For this paper, I derive treated industries from the annexes of these acts, decrees, and their updates. These sectoral acts, amended throughout the 1970s, include the *Petrochemical Industry Promotion Act*, the *Machine Industry Promotion Act*, the *Shipbuilding Industry Promotion Act*, the *Electronics Industry Promotion Act*, and the *Iron and Steel Industry Promotion Act*. Many of these acts were enacted during Park's earlier five-year development plans, notably the Electronics Industry Promotion Act of 1969. Others were established later, likely in anticipation of the aborted Third Five-Year Plan, which was set to begin in 1972. Thus, the 1973 HCI drive utilized legislative acts that predated the policy drive, as this legislation was not fully implemented (Kim 1981; Castley 1997); see Kim (1981, p.82).

Table A.1 lists sectoral acts and industries associated with HCI incentive programs. The large cells represent the original six sector acts that underpinned the HCI plan, while treated industries are defined as those markets covered by the acts. Minor additions were made to subsequent enforcement decrees defined after the original acts, ensuring completeness. In a few cases, additional products were incorporated into the lists. Nonetheless, most industries and sectors remained stable over the study period.

This study departs from earlier qualitative analyses of HCI, some of which have adopted more expansive definitions (e.g., including footwear or textiles) or excluded the electronics industry.

2 Parallel Between Japanese And South Korean Targeting. Historians have long described the influence of Japanese industrial policy on South Korean strategy, particularly during the HCI drive. Supplemental Appendix Table A.2 details sectors in the Korean HCI drive compared to Japanese industrial policy and examines major sectoral legislation and industrial policy actions from HCI alongside the tables and legislation presented by Okazaki (1998) and Yoshioka and Kawasaki (2016). Japanese sectoral targeting corresponds to the Japanese Five-Year Plan for Economic Self-Support and Industrial Policy. See also the early empirical work by Zeile (1993).

Supplemental Appendix Table A.2 tracks historical accounts from Korean scholars. Kim Hyung-A encapsulates the attention that HCI planners paid to Japanese comparative advantage, stating: "[Korea's] confidence was based largely on the experience of Japan and calculated risk, rather than on unfounded speculation" (Kim 2011c, pp.171–173). HCI planners closely followed the export records of Japanese industry (Kim and Leipziger 1993).[25] Along with steel and metals, Woo 1991 notes that Korea's "strategy to promote shipbuilding was very simply a carbon copy of Japan's" (*ibid*, p. 137).

3 HCI Skepticism And Pre-1973 Constraints. Skepticism surrounding heavy industry projects defined Park's early excursions into this sector. Rejection by international lenders was continuous. Following Nixon's announcement, lenders declined proto-HCI projects. For instance, Japan rejected funding for a four-factory precursor to the drive and issued critical feasibility studies. European and U.S. lenders later declined as well (Man 2019; Kim 2011c). By 1974, the International Bank of Reconstruc-

25. See (Kim and Leipziger 1993, pp.18–19). The triumvirate HCI planning committee was acutely aware of the respective economic records of Japan and Korea, especially concerning each country's historical export performance before attempting heavy and chemical industry development" (Kim 2011c, p.172).

tion and Development's Economic Mission expressed "serious reservations about the practicability of many of the export goals set for individual heavy industries," arguing that Korea should pursue its current comparative advantage in light manufacturing (International Bank for Reconstruction and Development 1974, p.8).

This uncertainty surrounding Korea's heavy industries, in part, explains why Park could not implement the drive *before* 1973. Before the HCI drive launch, under both U.S. and internal pressure from planners, Park had "no choice" but to abandon early heavy industry projects. Korea's own Economic Planning Board was reluctant to pursue the targeting that Park envisioned under HCI, which partly inspired him to use his own planning apparatus (Choue 1988). Without U.S. support, South Korea had little "chance of getting the seed money to finance HCI projects" (Rhyu and Lew 2011, p.329). Thus, the political and economic conditions of the early 1970s were necessary to ultimately realize HCI, which was announced in January 1973.

4 South Korean Planning And HCI Drive. This section provides a brief note on South Korean planning, an idea often conflated with Soviet planning. Despite using similar planning strategies to many postwar economies, South Korea adopted the concept within the context of liberal capitalist economies, drawing inspiration from Western European practices, such as those in Germany and France. Historically, South Korea's five-year development plans have encompassed diverse development strategies. They should not be conflated with communist central planning; instead, they reflect the "indicative planning" norms of many Western and developing economies in the postwar era.

Earlier plans under Park Chung-hee emphasized broad industrial strategies, macro objectives, and projects in service of aggregate goals (Cho 1989, p.93). To this end, the HCI plan's "engineering approach" to sectoral development was somewhat new compared to earlier practices (e.g., those mentioned in the History Section of the main text). This approach refers to much more interventionist and explicit sectoral targeting versus broader policies of the earlier era. Moreover, the 1973 drive effectively stalled and then subsumed an earlier Third Five-Year Plan (1972–1976), fully articulating heavy industrial goals with a new, ambitious, and sector-specific planning administration. See (Kim 2011c) for an overview of HCI planning, specifically.

In contrast, later planning articulated liberalization objectives. For example, those under Chun Doo-hwan (1982–1986) were antithetical to the earlier HCI approach and emphasized certain forms of economic liberalization, a retrenchment of interventionism, and more horizontal policies. Thus, the use of "plans" by South Korea is distinct from the HCI era, which was particularly unique in its degree of *dirigisme*.

5 Pre-1973 Trade Policy. Before 1973, treated industries were not specifically targeted by earlier policy regimes. The following shows that output market protection was substantially lower among HCI sectors. Supplemental Appendix Table A.3 illustrates the differences in output market protection for 1968 for both quantitative restrictions and tariff rates. Note that 1968 is the only available pre-treatment year for trade policy data. The level of output protection for targeted industries is significantly lower than that of other manufacturers.

6 Post-1979 Withdrawal And Liberalization. I use 1979 as the *de facto* end date for the big push; that year, on October 26, President Park was assassinated by Korean Central Intelligence Agency (KCIA) director Kim Jae-kyu.[26] The event marked the end of Park's *Yushin* dictatorship and the garrison state's core economic agenda (Cho and Kim 1995; Lee 2011).[27]

Following Park's assassination in 1979, Park-era technocrats were removed, some even purged from the Korean technocracy. Further, the state's policy orientation changed fundamentally in the early 1980s, as EPB-led economic stabilization and liberalization proponents replaced bureaucrats in key decision-making positions (Lee 2011, p.318). Famously, Oh Won-chol, the lead HCI planner, was arrested and banned from government work (Kim 2004, pp.8–9).

Between 1981 and 1983, the commercial banking system—a weapon of HCI capital allocation (see History Section in the main text)—was liberalized by the post-Park regime. The share of total government loans to manufacturing shrank, and interest rates between strategic and non-strategic sectors converged (Cho and Cole 1992; Nam 1992). Similarly, in 1981, public finance reforms limited the scope of earlier targeting by reforming the *special tax treatment for key industries* (see History Section in the main text). By 1982, the gap in effective corporate tax rates between strategic and non-strategic industries closed (Kwack and Lee 1992; Nam 1992). Between 1979 and 1980, the post-Park government implemented multiple rounds of "investment adjustment" for targeted sectors (Kim 1994, p.349) as trade liberalization progressed in earnest (Kim 1988; Kim and Leipziger 1993).

Though average import liberalization ratios gradually climbed through the HCI period (1973–1979), full import liberalization was only seriously discussed in 1978. However, economic instability in 1979–1980 postponed it until the post-Yushin era (Kim 1988, pp.1–2). The import liberalization ratio, calculated by Korea's Ministry of Trade and Industry, climbed from 68.6 in 1979 to 76.6 by 1982. During liberalization, preferential trade policy exemptions were reduced in 1982 and 1984.

I. Online Supplemental Data Appendix

I.1 Korean News Data and Korean Newspaper Text Mining

I capture the rising tensions that coincide with the Nixon Doctrine (also referred to as the Guam Doctrine) using a simple textual analysis of the South Korean *Naver* news archive; I describe this analysis further in this annex.[28]

I create a count-based metric for the number of related newspaper articles to measure threats. To do so, this paper uses the South Korean *Naver* News Library, a full-text newspaper database covering the period of interest: 1960–1979. The service offers articles from four major newspaper publishers in Korea. The two major newspapers with full-text material covering the 1960–1979 period are *Donga* and *Kyunghyang*. For

26. For a contemporaneous overview of the Park assassination and its implications, see (Lee 1980).
27. Earlier that year, the government announced their Comprehensive Stabilization Program in efforts to address the apparent macroeconomic instability brought on by turbulent world economic conditions and HCI's imbalances. Nonetheless, Park's death finally opened the door for wide-scale liberalization, both economic and political.
28. I thank Kim Chan for his amazing assistance.

each source, we scrape metadata and textual data related to provocations. We describe the matching and data collection next.

I use a "dictionary" (vector) set of keywords to record the extent of military actions against the armistice. North Korea's military actions against the post-Korean War armistice entailed many types of confrontations—from high-profile commando-style attacks to more benign demonstrations of military force that violated the treaty. Hence, our dictionary captures a wide variety of events.

First, to construct our military action dictionary, I start with an initial list of "seed words" (or keywords) derived from articles related to North Korea's armed provocations against South Korea (e.g., Korean-language Wikipedia entries). From these articles, I extract frequently used words related to military events. Using this method, I populate a vector of seed terms:

> 도발(provocation), 교전(engagement), 남침(invasion of the South), 침투(infiltration), 폭파(explosion), 포격(shelling), 전투(battle), 공습(air raid), 싸움(fight), 대피(evacuation), 적대(hostility), 습격(raid), 부상(injury), 피랍(hijacking), 피격(being fired), 격침(sink), 보복(retaliation), 무력(force), 동원(mobilize), 침범(invasion), 위협(threat), 납치(kidnapping), 나포(seizure), 납북(kidnapped to North Korea), 교란(confusion tactics), 발사(launch), 사격(fire), 미수(attempted), 첩보(intelligence) ,공작(maneuvering), 대남(against South Korea), 테러(terror), 화전양면(stick-and-carrot strategy), 전술(tactics), 전략(strategy)

Second, using a Korean-language word vector model, I extract the ten most similar words related to each of the keywords above. We collect the relevant terms from each set of similar words. Of course, terms in the ten most similar word vectors may be unrelated to military attacks, and I discard these unrelated topic terms. Finally, I de-duplicate the core lists since I construct multiple-word vectors from related seed terms.

After combining and text pre-processing our word similarity vectors, I have the following dictionary term list for military incursions:

> 침범(invasion), 초토화(burned to the ground), 불바다(sea of flame), 군사력(military power), 휴전선(the Military Demarcation Line), 공격(attack), 억류(detainment), 심리전(psychological warfare), 비무장지대(DMZ: demilitarized zone), 사이버테러(cyber terror), 탄도미사일(ballistic missile), 인민군(the NK People's Army), 군사(military), 재래식(conventional type), 위력(power), 과시(showing off), 요격(interception), 잠입(infiltrate), 무장(armament), 기관총(machine gun), 피습(being attacked), 배치(arrangement), 전개(deployment), 진압(repression), 반격(counter attack), 공세(military offensive), 화학무기(chemical weapon), 응징(retribution), 건재(be alive and well), 대원(trooper)

I use this master list to demarcate (label) articles in the *Naver* News Archives into two classes: "about a military event" or "not about a military event." I then count the main articles (those in the general part of the articles) that match our keywords.

I.2 Data Harmonization

This appendix details the harmonization of the industrial panel data. The paper relies on industry-level data from the Mining and Manufacturing Survey (MMS), which is enumerated at the establishment level. I focus on the central industrial panels used in my analysis to broadly describe the dozen other crosswalks required to attach separate data to the main industrial-level panels.

At a high level, the analysis requires two types of data harmonization:

1. Harmonizing through time, within data: creating industrial definitions that are consistent through time.
2. Harmonizing across industrial data sets: mapping industrial definitions consistently across data sets (in different industrial code nomenclatures).

I.3 Data Harmonizing: Korean Industrial Panels

i Code Changes and Crosswalk Schemas. First, consider industry harmonization. This study relies heavily on data from the *Mining and Manufacturing Census / Survey* (MMS), published by the Economic Planning Board (EPB). MMS data uses a local Korean coding scheme (KSIC) largely based on the International Standard Industrial Classification (ISIC) nomenclature.

Harmonizing panels requires creating multiple cross-walked schemas, algorithms for harmonizing across many industrial codes, to map industry codes through time. This is necessary because between 1967 and 1986, our study period, the KSIC code system had multiple updates: in 1970, 1975, and 1984. These crosswalks allow the mapping of sector definition "splits" to time-consistent industry identifiers.

I digitized primary source Economic Planning Board publications to build these schemas, which were then hand-cleaned to correct typos and discrepancies. Errors in code scheme documents are omnipresent in historical harmonization projects. Hence, this is not a remark on the high-quality MMS publications. Common errors in this project stem from (a) orphan codes or (b) typos in official typesetting. The former includes cases where official code manuals diverge from actual use in later statistical documents.

ii Mapping Code Changes for Industry Panels. The clean crosswalk schemas were used for the main MMS industrial census data set to map sector "splits" back to their original baseline code boundary. For five-digit industry panels (1970–1986), I map splits to their 1970 KSIC code boundaries, the initial baseline coding scheme.

For example, consider the non-metallic minerals industry and harmonizing the five-digit industrial panel (starting in 1970). In 1975, the industries (36994) *Manufacture of Asbestos Products* and (36995) *Manufacture of Mineral Wools* split from the original 1970 industry (36996) *Manufacture of Stone Texture*. My schema crosswalk aggregates the two 1975 sector codes back to their original 1970 code.

Similarly, some Korean industry codes merged over time. For example, the 1975 sector (32163) *Manufacture of Man-made Fiber Fabrics* merged from two distinct 1970 industry codes: (32172) *Manufacture of Silk Fabrics* and (32176) *Manufacture of Fabrics of Man-made Fibers*. In the case of aggregating sectors over time, the two 1970 industries aggregate into a larger synthetic sector instead of splitting the 1975 industry into two separate industries.

Although I use 1970 code boundaries, the code labels (or alphanumeric index) in the harmonized data are not literal 1970 codes. Harmonized code *values* differ due to aggregation, splits, etc. While newer codes map back to their 1970 code definitions, adjusted code values are used in the data to accommodate harmonization. For example, codes may map back to the 1970 code 32111, which takes the value 3211A to reflect the aggregation of multiple codes.

For four-digit industry panels, I harmonize codes back to the original 1968 KSIC code levels (1968–1986). The four-digit data spans a major code change between the

1960s codes and the 1970 KSIC code revision. Hence, the four-digit data requires much more harmonization (thus, aggregation) than the five-digit panel, which starts in 1970.

Before 1970, the 1960s disaggregated KSIC codes were shorter (around four characters long). The 1968 codes were also based on a slightly different coding nomenclature, where "levels" are distinct from 1970s levels. To be precise, three-digit 1960s codes correspond to 1970s four-digit codes. Similarly, the 1960s four-digit level is equivalent to the five-digit level in the 1970s data. "Four-digit" and "five-digit" always refer to post-1970s usage. This distinction is mostly cosmetic; for industries that were not merged or split during this period, a five-digit code in post-1970 KSIC is roughly equivalent to four-digit KSIC codes. Harmonization codes between the pre-1970 and post-1970 periods require a more extensive aggregation of industries to account for this structural change in industrial codes.

I.4 Data Harmonization: Other Code Schemes

Though this study relies heavily on MMS data, the analysis requires combining the core MMS panels with IO tables, price data, policy measures, and trade data. Thus, further crosswalk schemas are used to harmonize data across coding schemes. South Korean data from different agencies often use their own distinct coding systems that include mapping between the Korean Standard Industrial Classifications, current (as of 2015) Bank of Korea industry classifications, historical Bank of Korea schemes for IO tables, and historical SITC trade nomenclatures, among others.

Thus, I also consider the following cross-data set harmonization:

- Trade data to industry panels: four-digit SITC Rev. 1 to harmonized (four/five-digit) KSIC data. *(Ex: for trade policy regressions).*
- Industry data to SITCs trade panels: harmonized KSIC data to four-digit SITC Rev. 1 . *(Ex: for DDD export development regressions).*
- IO to industry panel: Bank of Korea Codes (*vintage, 1970s*) to harmonized KSIC data. *(Ex: For indirect / network analysis).*
- Price data to industry panel: Bank of Korea Codes (*contemporary*) to harmonized KSIC data. *(Ex: for development outcome regressions).*
- Trade policy to industry panel: CCCN to SITC Rev. 1, four-digit level.

Significantly, for this project, annual price statistics and 1970 input-output accounts use the Bank of Korea's own industrial coding system (referred to as "BOK codes" throughout). Like harmonization across multiple KSIC revisions, BOK data also requires harmonization *within* BOK code revisions. I constructed these crosswalk schemas from appendices of the bank's input-output table publications. They cover splits for the years 1975, 1980, 1983, and 1985. This list is not exhaustive.

I.5 Policy Data: Effective Average Marginal Tax Rate Calculation

I now describe the effective marginal tax rate data presented in the paper. (Kwack 1984) estimated these rates, and the following is based on their documentation and white paper. I digitized and translated this manuscript and data from Korean.[29] Although the data is not disaggregated, the authors' process is comprehensive and accounts for many institutional specifics related to nominal public finance policies and subsidies from 1960 through the late 1980s.

29. The (Kwack 1984) data is used in (Stern, Kim, Perkins, and Yoo 1995).

The (Kwack 1984) calculations assume corporate users of capital fully use state incentives. All general economic indicators used in their calculation, detailed below (e.g., interest rates, export ratios), are in real values. The **effective marginal tax rate**—inclusive of tax policies—is equal to the following equation [translated from (Kwack 1984)]:

$$\text{EMTR} = 1 - \frac{(1-\tau^*)r}{Z-\delta} \tag{18a}$$

for each period, where,

$$Z \equiv \frac{(r^* + \delta - \pi)\left[1 - \{k + B + (\tau z)^*\}\left(1 - f'\right) - uzf'\right]}{(1-u^*) + 0.02(1-\theta)\varepsilon\pi^*(1-f')M \cdot p/p^*} \tag{18b}$$

The authors define the terms in the following way.[30]

Above, r represents the real rate of return, and π indicates expected inflation. The term τ^* comprises the nominal tax rate (τ), the local administrative tax rate (l), and the defense tax rate (f). The term f' reflects changes in the defense tax rate.[31] The term u^* denotes the tax rate per unit of taxable corporate income, with u being the effective tax rate, reflecting direct reductions or exemptions such as tax breaks in a given period.

The present value of the tax reduction or exemption effect from the accelerated depreciation system is τz^*. This applies when a tax reduction or exemption system is in place for a given period. The term z represents the present value of depreciation per unit of investment under a basic depreciation system.

(Kwack 1984) defines k as the investment tax credit, B as the present value of the tax reduction effect from the "investment reserve," and θ as the average (net) indirect tax rate. ϵ denotes the export ratio for an industry, and M is the present value of the reduction in the tax base due to a one-unit increase in export-related reserves. Finally, p/p^* is the reciprocal of the value-added tax.

The calculations apply to each industry for the periods 1969–1983. Effective marginal rate calculations account for period-specific incentive programs and general tax policies during the study period. These policies include the corporate tax rate, investment tax credit rate, depreciation rates under the tax law, special depreciation rates, and period-specific tax reductions and exemptions.

The authors assume that the private loan interest rate equals the marginal interest rate of the capital market. This is a strong assumption. During the Park regime, interest rates in the unofficial private, or curbside, capital market were quite high due to the risks associated with operating outside the authorized market. Depreciation rates

30. Additionally, they note:

$$r^* = r(1-\tau) + \pi,$$
$$\tau^* = \tau(1 + l + f),$$
$$u^* = u(1 + l + f) + (\tau - u)f'.$$

31. For 1979 and earlier, $f' = f$; for years after 1980, $f' = 1.5 \times f$.

for the calculation are estimated using (Hulten and Wykoff 1981), while the discount rate is derived from a cost-of-capital calculation.[32]

J. Supplemental Appendix: Direct Results

J.1 Robustness: Continuous Treatment

For robustness, I examine the patterns of industrial development using a continuous industry-level measure of "exposure" to HCI, calculated from MMS data. For each four-digit industry, supplemental MMS tables report the value of plant output across eight-digit products. These eight-digit products may fall inside or outside a plant's primary (four-digit) industry.

I use this feature of the 1970 MMS data to construct a continuous industry-level measure that captures the share of product-level output (value shipped) directed to either HCI or non-HCI markets. For example, consider an arbitrary four-digit manufacturing industry. For plants operating primarily in a four-digit market, the MMS reports the value of output across other eight-digit product markets. For multi-product plants, although most output falls within a "home" industry, output may spill over into products in other four-digit markets. I calculate an industry's product-level exposure to HCI (or non-HCI) markets as the total value of products shipped to only HCI (or non-HCI) markets, divided by the total output produced by firms in the four-digit industry.

I replace the binary treatment variable with this continuous measure in the core DD regressions. Supplemental Appendix Figure B.2 shows results from the main specification (Eq. 1) using the continuous HCI measure calculated at the four-digit level. The results mirror the pattern of the binary measures for the main development outcomes and output. Supplemental Appendix Figure B.2 presents continuous estimates for shipments, labor productivity, prices, employment, and the share of manufacturing output. Binary and continuous treatment variables track one another closely, showing strong overlap.

These results suggest limited horizontal spillovers among plants, with HCI plants likely producing most of their output in HCI markets. Thus, this variable may not be adequate as a continuous measure of treatment intensity. Nevertheless, it indicates that horizontal spillovers to non-HCI industries through multi-product plants may be limited.

K. Supplemental Appendix: Triple Difference with Industry Data

The primary triple difference analysis in the paper focuses on granular (SITC level) trade data. This section conducts a similar analysis, but uses alternative industry data, specifically UNIDO two-digit (ISIC) industry data. It is important to note that UNIDO

32. The expected inflation rate is also estimated using an adaptive expectation model and applied to a deflator for each asset class (e.g., building and plant capital, machinery and equipment, and transportation machinery).

cross-country industrial data are far less comprehensive and represent imperfect historical data. In addition to being substantially more aggregated, UNIDO data are incomplete for many countries and contain numerous missing observations. Therefore, I require countries to meet a minimum number of observations. Supplemental Appendix Figure C.1 presents DDD estimates for industrial outcomes recorded at the two-digit level.[33]

Supplemental Appendix Figure C.1 highlights a notable effect for value-added (top) and workers (middle). Labor productivity (bottom), the ratio of the two panels above, is much noisier. Despite the limitations of historical, aggregate industry data, differences in labor productivity narrowed during the HCI period after the post-1974 bump, and this trend continued after the crisis of the 1970s. Given the limitations of UNIDO data, I present this as a robustness exercise that complements more complete trade-based analyses.

33. HCI sectors must be (re)coded at the two-digit level. For this reason, the mapping to the HCI industry is less refined than four-digit and five-digit coding.

L. Supplemental Appendix Figures

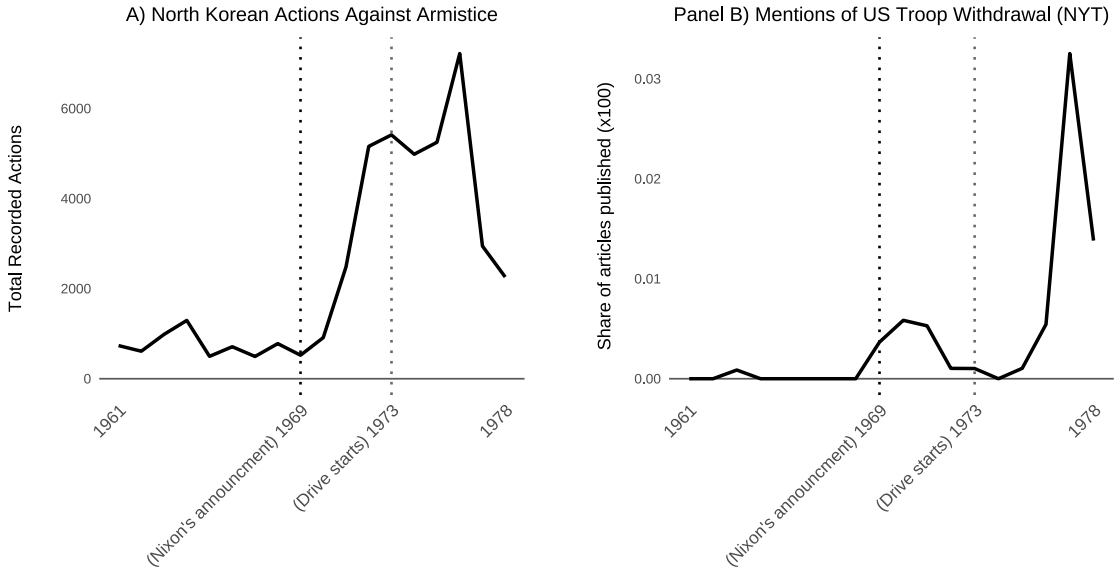

Figure A.1
New Loans Issued By Traditional Commercial Deposit Money Banks

The figure shows political events around the heavy and chemical industry drive. This plot shows alternative data to the plots in the main appendix. Panel A (left) recorded North Korean military actions that violate armistice; see Online Appendix. Panel B (right) shows the share of New York Times news stories referring to troop withdrawal. Share is measured as the total number of full-text article hits ('South Korea+Troop Withdrawal') divided by the number of stories published, via New York Times.

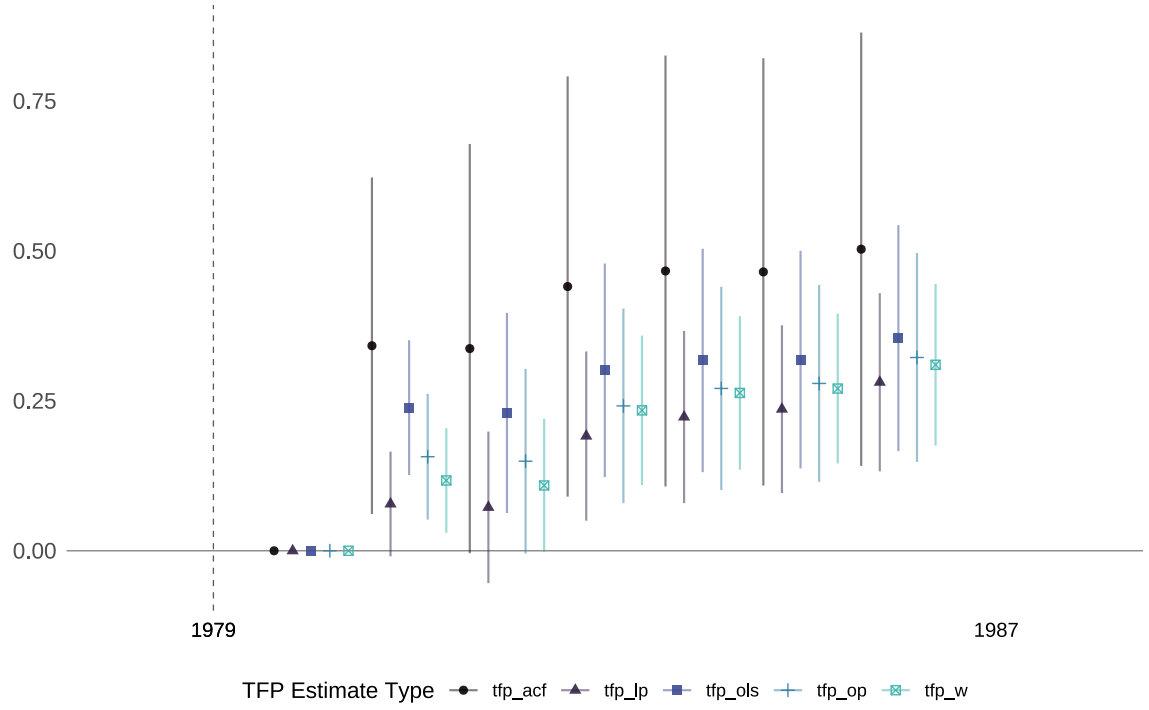

FIGURE B.1
Robustness - Relative Growth in TFP Post 1979, Micro-Estimates

This figure shows the relationship between HCI and total factor productivity using plant-level data for the post-1979 period. The coefficients in the figure are estimated from the plant-level DD regressions, with 1980 as the omitted year. TFP outcomes are estimated using Ackerberg-Caves-Frazer (ACF), Levinsohn-Petrin (LP), Olley-Pakes (OP), Wooldridge (W) methods, as well as baseline OLS using the Solow residual. Log-transformed production functions are structurally estimated for 4-digit industry. Two-way standard errors are clustered at the industry and plant level. Bars show 95 percent confidence intervals.

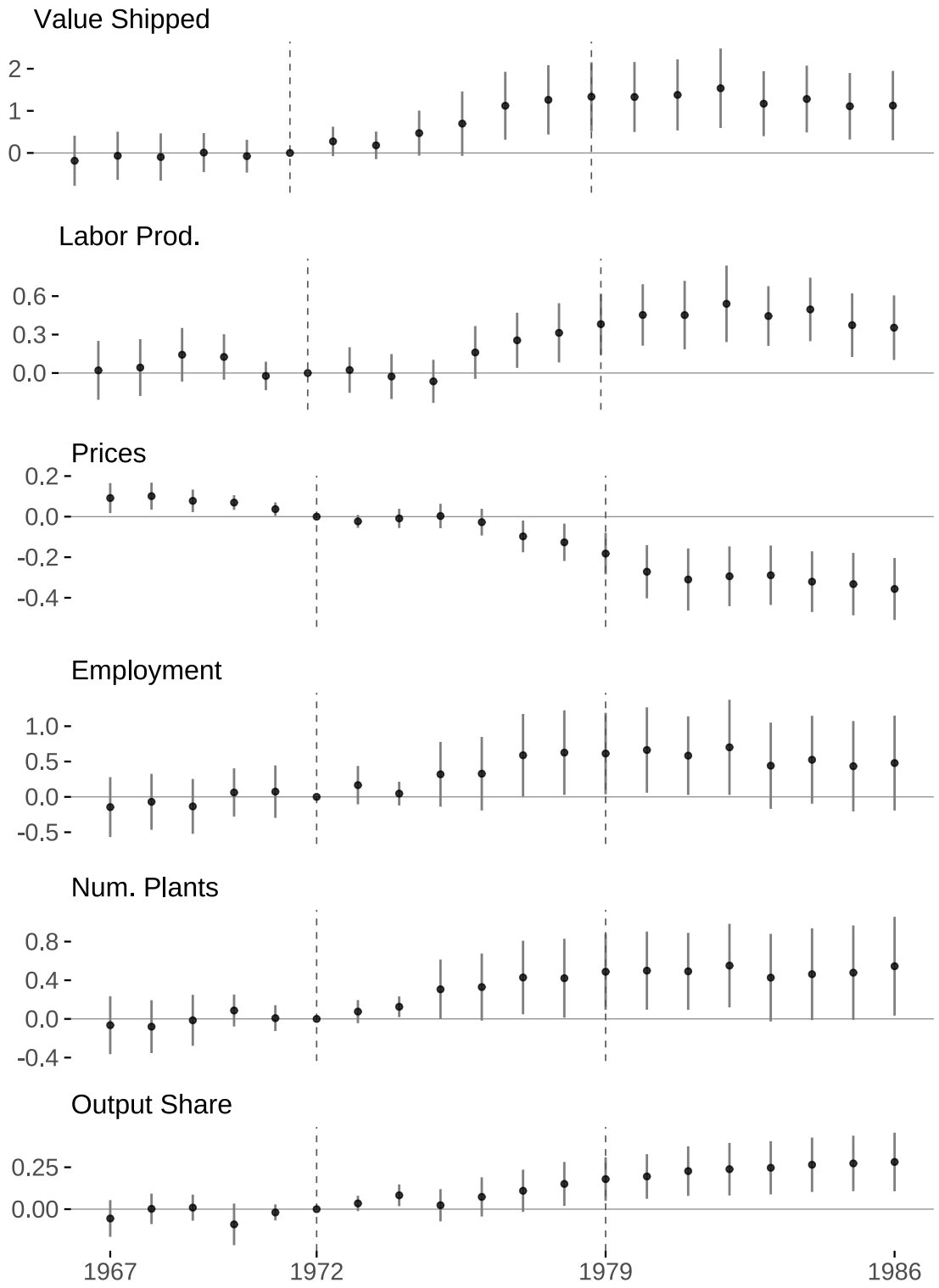

FIGURE B.2
Robustness - Impact of Industrial Policy (Continuous Measure) on Industrial Development

This figure shows dynamic differences-in-differences (DD) estimates for the relationship between HCI and industrial development outcomes (all log). HCI is now a continuous measure, measured as the share of HCI products shipped by each 4-digit industry; see Appendix for details. All outcomes are log: Shipments are the real value shipped. Labor productivity is real value added over number of workers. Employment is the number of workers. Output share is the manufacturing share of industry output. Prices are industry-level output prices. Num. Plants are the number of establishments operating in a given industry. Standard errors are clustered at the industry level. Estimates are relative to 1972, the year before the HCI policy. 1979 demarcates the end of the Park regime. Standard errors are clustered at the industry level. 95 percent confidence bars are shown.

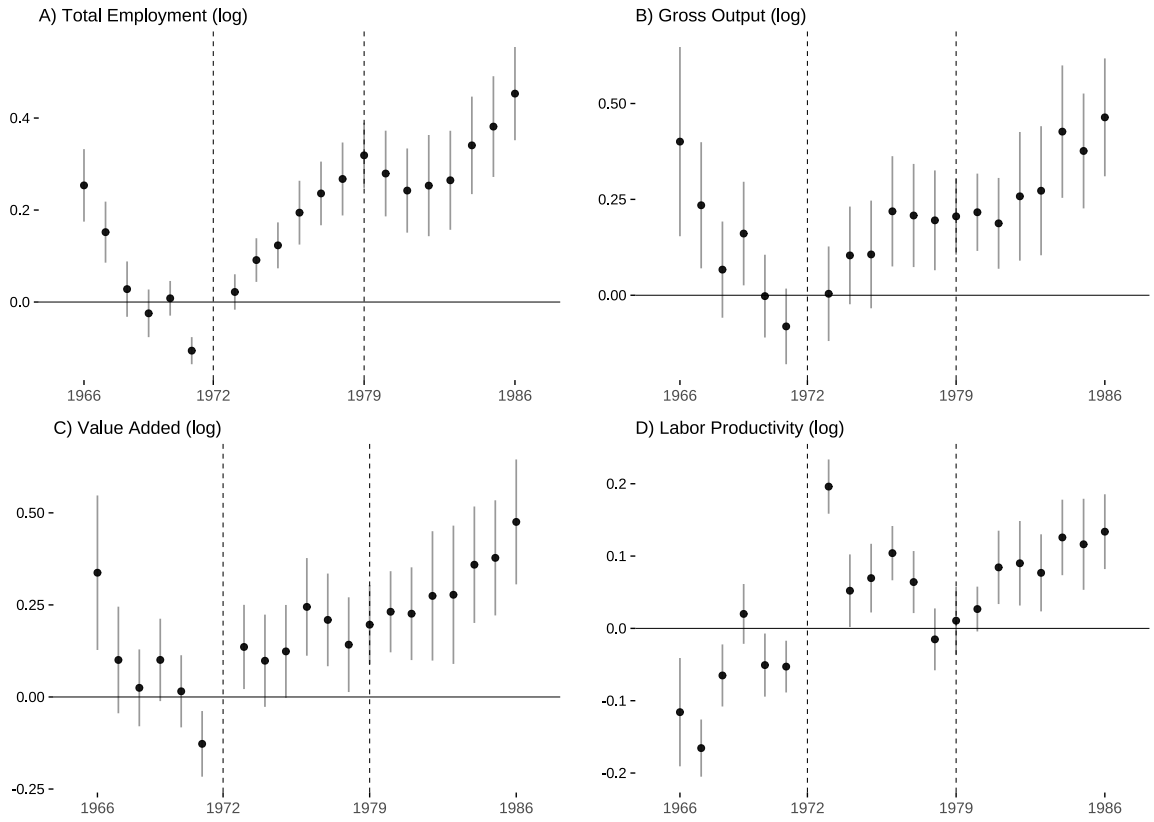

FIGURE C.1
Robustness - Cross-Country (Triple Differences) Export Development and Industrial Policy With Industrial Data

This figure shows dynamic triple difference (DDD) estimates using alternative data. The figure plots the main triple difference interaction (Treated Industry x Korea x Year) for the impact of HCI on ISIC 2-digit level UNIDO data. All specifications include Country-Industry, Country-Year, and Industry-Year effects. Estimates are relative to 1972, the year before the HCI policy intervention. All specifications use two-way clustering at the country and industry level. 95 percent confidence intervals are shown in light gray. Note that UNIDO data is very incomplete, expecially for earlier years, and should be interpreted with caution; this is strictly a robustness check.

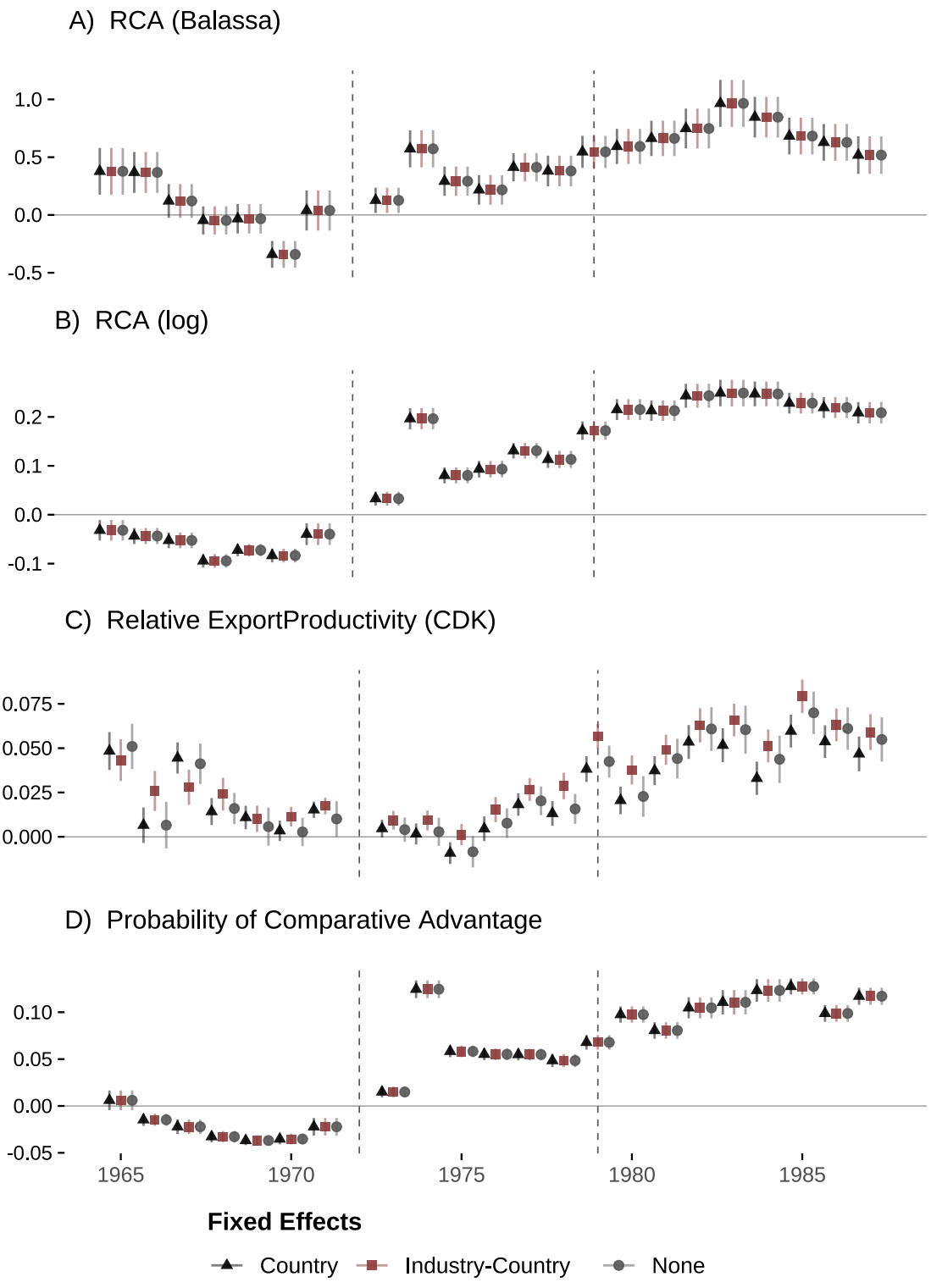

FIGURE C.2
Robustness - Cross-Country (Differences-in-Differences) Export Development and Industrial Policy

This figure shows difference-in-differences estimates for the impact of Korean HCI compared to world HCI sectors, using SITC-level trade data. This is a slightly modified version of the baseline specification with additional country fixed effects. Fixed effects for each specification are shown in the legend. Estimates are relative to 1972, the year before the HCI policy intervention. The line at 1979 demarcates the fall of the Park regime. All specifications cluster standard errors at the country level. 95 percent confidence intervals are shown in gray.

TABLE A.1
SECTORAL LEGISLATION AND HEAVY-CHEMICAL INDUSTRIES (TREATED INDUSTRIES)

Act	Korean	Translation
Steel Industry	제선	Iron making
Steel Industry	제강	Steel making
Steel Industry	압연	Rolling
Steel Industry	주물용 선철 생산	Production of pig iron for casting
Steel Industry	합금철 생산	Ferro alloy production
Steel Industry	강괴 생산	Steel ingot production
Steel Industry	압연재(제품 포함) 생산	Production of rolled materials (including products)
Steel Industry	주물 생산	Casting production
Steel Industry	주단강품 생산	Casting and forging production
Steel Industry	스텐레스강판 생산	Production of stainless steel plates
Steel Industry	스텐레스봉강 생산	Production of stainless steel bars
Steel Industry	고탄소강 생산	High carbon steel production
Steel Industry	합금강(소재 포함) 생산	Production of alloy steel (including material)
Steel Industry	전자연철판 생산	Electronic wrought iron plate production
Nonferrous Metal Industry	동광	Copper ore
Nonferrous Metal Industry	연광	Lead ore
Nonferrous Metal Industry	아연광	Zinc ore
Nonferrous Metal Industry	금광	Gold ore
Nonferrous Metal Industry	은광	Silver ore
Shipbuilding Industry	선박 건조	Shipbuilding
Shipbuilding Industry	선박 개조	Ship renovation
Shipbuilding Industry	선박 수리	Ship repair
Shipbuilding Industry	선박 부분품 제조	mfg. parts for ships
Shipbuilding Industry	선박 부분품 수리	Repairing parts of the ship
Shipbuilding Industry	구명기구	Life equipment
Shipbuilding Industry	항해기구	Navigation equipment
Shipbuilding Industry	갑판기계	Deck machinery
Chemical Industry	나프타 분해공업	Naphtha decomposition industry
Chemical Industry	폴리에틸렌 제조공업	Polyethylene mfg. industry
Chemical Industry	V.C.M. 제조공업	Vinyl Chloride Monomer mfg. industry

(Continued ...)

TABLE A.1
SECTORAL LEGISLATION AND HEAVY-CHEMICAL INDUSTRIES (TREATED INDUSTRIES) *(continued)*

Act	Korean	Translation
Chemical Industry	스틸렌보노바 제조공업	Styrenebonova mfg. industry
Chemical Industry	에탄올(합성) 제조공업	Ethanol (synthetic) mfg. industry
Chemical Industry	아세트 알데히트 제조공업	Acetaldehyde mfg. industry
Chemical Industry	부탄올 제조공업	Butanol mfg. industry
Chemical Industry	옥탄올 제조공업	Octanol mfg. industry
Chemical Industry	빙초산 제조공업	Glacial acetic acid mfg. industry
Chemical Industry	아크릴로니트릴 제조공업	Acrylonitrile mfg. industry
Chemical Industry	알킬벤젠 제조공업	Alkylbenzene mfg. industry
Chemical Industry	폴리푸로필렌 제조공업	Polypropylene mfg. industry
Chemical Industry	합성고무(S.B.R.) 제조공업	Styrene Butadiene Rubber mfg. industry
Chemical Industry	씨크로헥산 제조공업	Cyclohexane mfg. industry
Chemical Industry	훼놀 제조공업	Phenol mfg. industry
Chemical Industry	아니린 제조공업	Aniline mfg. industry
Chemical Industry	무수푸탈산 제조공업	Phthalic anhydride mfg. industry
Chemical Industry	메탄올 제조공업	Methanol mfg. industry
Chemical Industry	카본불랙 제조공업	Carbon black mfg. Industry
Chemical Industry	포리스틸랜 제조공업	Polystyrene mfg. industry
Chemical Industry	카프로락탐 제조공업	Caprolactam mfg. industry
Chemical Industry	암모니아 제조공업(석유화학공업연료로 공급하는 것에 한함)	Ammonia mfg. industry (limited to supply as petrochemical fuel)
Chemical Industry	D.M.T. 제조공업	Dimethyl Terephthalate mfg. industry
Chemical Industry	에틸렌그리클 제조공업	Ethylene glycol mfg. industry
Chemical Industry	폴리푸로필렌그리콜 제조공업	Polypropylene glycol mfg. industry
Chemical Industry	테레프탈산(T.P.A.) 제조공업	Terephthalic Acid mfg. industry
Chemical Industry	무수마레인산 제조공업	Maleic anhydride mfg. industry
Chemical Industry	큐멘 제조공업	Cumene mfg. industry
Chemical Industry	아세톤 제조공업	Acetone mfg. industry
Chemical Industry	2염화 에틸렌(E.D.C.) 제조공업	Ethylene Dichloride mfg. industry
Chemical Industry	펜타에리스리틀 제조공업	Pentaerythrityl mfg. industry
Chemical Industry	키시렌분유공업	Xylene milk powder industry
Chemical Industry	산화푸로필렌제조공업	Propylene oxide mfg. industry

(Continued ...)

TABLE A.1
SECTORAL LEGISLATION AND HEAVY-CHEMICAL INDUSTRIES (TREATED INDUSTRIES) *(continued)*

Act	Korean	Translation
Chemical Industry	산화에틸렌제조공업	Ethylene oxide mfg. industry
Chemical Industry	염소제조공업(석유화학 원료로 공급하는 것에 한한다)	Chlorine mfg. industry (limited to supply as petrochemical fuel)
Chemical Industry	톨루엔 디 이소시아네이트제조공업	Toluene diisocyanate mfg. industry
Chemical Industry	메틸메타 아그레이트모노 마제조공업(중간체인 시안화합물을 포함한다)	Methyl methacrylate monomer mfg. industry (including intermediate cyanide compound)
Chemical Industry	합성고무(폴리부타디엔 고무에 한한다) 제조공업	Synthetic rubber (limited to polybutadiene rubber) mfg. industry
Chemical Industry	초산비닐모노마제조공업	Vinyl acetate monomer mfg. industry
Chemical Industry	염화비니리딘수지제조공업	Viniridine chloride resin mfg. industry
Chemical Industry	석유수지제조공업	Petroleum resin mfg. industry
Chemical Industry	정파라핀(노루말 파라핀에 한한다)제조공업	Regular paraffin (limited to normal paraffin) mfg. industry
Chemical Industry	폴리비닐 알콜제조공업	Polyvinyl alcohol mfg. industry
Chemical Industry	초산에틸제조공업	Ethyl acetate mfg. industry
Machine Industry	보일러 및 원자로	Boiler and reactor
Machine Industry	내연기관 및 터빈	Internal combustion engine and turbine
Machine Industry	축수	Bearing
Machine Industry	동력전달장치	Power transmission device
Machine Industry	볼트 및 너트	Bolt and nut
Machine Industry	금속공작기계	Metal machine tools
Machine Industry	금속1차제품제조기	Metal primary product mfg. machine
Machine Industry	제2차금속가공기계	Secondary metal processing machine
Machine Industry	용접기계	Welding machine
Machine Industry	금형	Mold
Machine Industry	공구	Tool
Machine Industry	전구	Electric bulb
Machine Industry	펌프, 송풍기, 압축기	Pump, blower, compressor
Machine Industry	유압기계	Hydraulic machine
Machine Industry	냉동기 및 공기조절장치	Refrigerator and air conditioner
Machine Industry	화학기계	Chemical instruments
Machine Industry	하역운반기계	Unloading machine
Machine Industry	광산기계	Mining machine

(Continued ...)

TABLE A.1
SECTORAL LEGISLATION AND HEAVY-CHEMICAL INDUSTRIES (TREATED INDUSTRIES) *(continued)*

Act	Korean	Translation
Machine Industry	토목건설기계	Civil construction machine
Machine Industry	플라스틱 성형가공기계	Plastic molding machine
Machine Industry	섬유기계	Textile machine
Machine Industry	팔프 제지 지공기계	Pulp paper making machine
Machine Industry	포장 하조기계	Packaging machine
Machine Industry	인쇄제본기계	Machine for printing and binding
Machine Industry	목공기계	Woodworking machine
Machine Industry	식료 및 음료가공기계	Food and beverage processing machine
Machine Industry	농업용기계	Agricultural machine
Machine Industry	공업용 로 및 발열기기	Industrial furnaces and heating device
Machine Industry	주조장치	Casting machine
Machine Industry	밸브 및 관이음쇠	Valve and pipe joints
Machine Industry	계측기계	Measuring machine
Machine Industry	시계	Clock
Machine Industry	광학기계	Optical machine
Machine Industry	사무용기계	Office machine
Machine Industry	재봉기	Sewing machine
Machine Industry	제약 및 의료용기기	Pharmaceutical and medical device
Machine Industry	중전기 장치	Heavy electric device
Machine Industry	가정용 전기기기	Home appliance
Machine Industry	조명기기	Lighting equipment
Machine Industry	전지 및 축전기	Battery and capacitor
Machine Industry	유무선 통신장치	Wired and wireless communication device
Machine Industry	방송 및 수신장치	Broadcasting and receiving device
Machine Industry	전자응용장치	Electronic application device
Machine Industry	전선 및 케이블	Wires and cables
Machine Industry	자동차	Car
Machine Industry	자전차	Bicycle
Machine Industry	산업차량	Industrial vehicle
Machine Industry	철도차량	Railway vehicle

(Continued ...)

TABLE A.1
SECTORAL LEGISLATION AND HEAVY-CHEMICAL INDUSTRIES (TREATED INDUSTRIES) *(continued)*

Act	Korean	Translation
Machine Industry	선박	Vessel
Machine Industry	항공기	Aircraft
Machine Industry	교통 신호보안 관제장치	Traffic signal security control system
Machine Industry	민수용 총기	Civil gun
Machine Industry	주물	Casting
Machine Industry	기계기구용 비철금속 단조품과 프레스제품	Nonferrous metal forging and press products for machinery
Machine Industry	방위산업용기기 및 장비	Equipment for the defense industry
Machine Industry	특수강제품	Special steel product
Electronics Industry	라디오수신기	Radio receiver
Electronics Industry	텔레비죤수상기	Television
Electronics Industry	음성주파장치	Voice frequency device
Electronics Industry	통신기계기구	Communication equipment
Electronics Industry	무선응용장치	Wireless application device
Electronics Industry	전자응용장치	Electronic application device
Electronics Industry	전기계측기	Electrical measuring instrument
Electronics Industry	전자관	Electronic tube
Electronics Industry	반도체소자	Semiconductor device
Electronics Industry	직접회로	Integrated crcuit
Electronics Industry	회로부품	Circuit parts
Electronics Industry	음향부품	Sound components
Electronics Industry	기구부품	Equipment parts
Electronics Industry	집합부품	Assembly parts
Electronics Industry	기타 기계·금속·화공계열부품	Other mechanical, metal, and chemical parts
Electronics Industry	자기재료	Magnetic material
Electronics Industry	절연재료	Insulating material
Electronics Industry	도전재료	Conductive material
Electronics Industry	반도체재료	Semiconductor material

Electronics Industry	특수재료	Special material

Notes. This table shows South Korean industries matched to industries listed in government legislation. Official industry lists come from legislative documents and their annexes: Gigyegong [Enforcement Decree of the Machinery Industry Promotion Act], amended by Presidential Decree No. 7850, Oct. 27, 1975 (S. Kor.). Cheolganggong-eopyukseongbeop [Steel Industry Promotion Act], amended by Act. No. 3011, Dec. 16, 1977 (S. Kor.). Cheolganggong-eopyukseongbeopsihaengryung [Enforcement Decree of the Steel Industry Promotion Act], amended by Presidential Decree No. 8885, Mar. 9, 1978 (S. Kor.). Bicheolgeumsokjeryeonsa-eopbeop [Nonferrous Metal Industry Promotion Act], amended by Act. No. 3011, Dec. 16, 1977 (S. Kor.). Bicheolgeumsokjeryeonsa-eopbeopsihaengryung [Enforcement Decree of the Nonferrous Metal Industry Promotion Act], amended by Presidential Decree No. 7743, Aug. 20, 1975 (S. Kor.). Jeonjagong-eopjinheungbeopsihaengryung [Enforcement Decree of the Electronics Industry Promotion Act], amended by Presidential Decree No. 8272, Nov. 5, 1976 (S. Kor.). Joseon-gong-eopjinheungbeop [Shipbuilding Industry Promotion Act], amended by Act. No. 3339, Dec. 31, 1980 (S. Kor.). Joseon-gong-eopjinheungbeopsihaenggyuchik, amended by Decree by the Ministry of Commerce No. 411, Dec. 8, 1975 (S. Kor.). Seokyuhwahakgong-eopyukseongbeopsihaengryung [Enforcement Decree of the Petrochemical Industry Promotion Act], amended by Presidential Decree No. 10331, June 5, 1981 (S. Kor.).

TABLE A.2
JAPANESE TARGETING (1950S) V. SOUTH KOREAN HEAVY-CHEMICAL INDUSTRY TARGETING (1970S)

Sector	Korea 1970s	Japan 1950s	Japan Industrial Policy
Electric Power		X	1956.1 "Electric Power Six-Year Plan" Electric Power Development Coordination Council
Steel	X	X	1956.5 "Long-Term Twenty-Year Plan of Supply and Demand of Steel" Ministry of International Trade and Industry
Petrochemistry	X	X	1955.7 "Support Measures to Petrochemistry" Ministry of International Trade and Industry
			1956.2 "Handling on Petrochemical Corporatization Plan" Ministry of International Trade and Industry
Synthetic Fabric	X	X	1955.6 "Support Measures to Synthetic Resin Industry" Ministry of International Trade and Industry 1955.8 Foundation of Fiber Industry Council 1955.9 "Fiber Six-Year Plan" Fiber Industry Council
			1956.2 "Report on Support to Synthetic Fiber" Fiber Industry Council
Machinery	X	X	1955.11 Foundation of Machinery Committee at Industrial Rationalization Council 1956.5 Act on Temporary Measures concerning the Promotion of Machinery Industry

Notes. This table shows a comparison of broad sectors targeted by South Korea's HCI and the sectors targeted by earlier Japanese industrial policies. Table compares major sectoral legislation and industrial policy action from HCI to the tables and legislation presented by Ozaki (1998) and Yoshioka and Kawasaki (2016). Japanese sectoral targeting corresponds to Japanese Five-Year Plan for Economic Self-Support and Industrial Policy.

TABLE A.3
DIFFERENCES IN TRADE POLICY BY TREATMENT STATUS, 1968 ONLY

	Outcomes: (log) Levels of Output Protection			
	Tariff Rate		QRs Coverage	
	(1)	(2)	(3)	(4)
Targeted	-0.466***	-0.482***	-0.179**	-0.179**
	(0.128)	(0.133)	(0.068)	(0.068)
Sample	1968 Only	1968 Only	1968 Only	1968 Only
Weighted	Regular	Weighted	Regular	Weighted
R^2	0.133	0.134	0.063	0.062
Observations	87	87	87	87

Notes.
This table shows the cross-sectional relationship between trade policy and HCI targeting for the year 1968, the period of trade policy before the intervention. All regressions are at the 4-digit SITC level. The first set of columns report results for regressions in levels. The second set of columns reports differences outcomes. Columns (1-2) report estimates for tariffs. Columns (3-4) reports estimates for quantitative restriction coverage (QR). * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE B.1
ROBUSTNESS: INDUSTRIAL POLICY AND INDUSTRIAL OUTPUT BY TREATMENT STATUS

	Panel A) Five-Digit Panel (1970 - 1986)						Panel B) Four-Digit Panel (1967 - 1986)					
	Value Shipped		Gross Output		Value Added		Value Shipped		Gross Output		Value Added	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Targeted × 1967							-0.169	-0.111	-0.178	-0.136	-0.213	-0.143
							(0.293)	(0.238)	(0.291)	(0.233)	(0.288)	(0.234)
Targeted × 1968							-0.057	-0.016	-0.049	-0.007	-0.101	-0.039
							(0.280)	(0.221)	(0.280)	(0.220)	(0.276)	(0.216)
Targeted × 1969							-0.087	-0.032	-0.068	-0.012	-0.084	-0.016
							(0.275)	(0.220)	(0.274)	(0.218)	(0.271)	(0.222)
Targeted × 1970	0.141	0.150	0.298	0.288	0.246	0.223	0.003	-0.095	0.190	0.131	0.217	0.161
	(0.162)	(0.198)	(0.199)	(0.236)	(0.180)	(0.214)	(0.229)	(0.198)	(0.210)	(0.174)	(0.186)	(0.158)
Targeted × 1971	0.024	0.001	0.194	0.174	0.132	0.119	-0.072	-0.070	0.125	0.085	0.100	0.082
	(0.165)	(0.204)	(0.174)	(0.213)	(0.152)	(0.185)	(0.193)	(0.179)	(0.200)	(0.169)	(0.169)	(0.143)
Targeted × 1973	0.459***	0.474**	0.473***	0.482**	0.504***	0.550***	0.261	0.135	0.225	0.092	0.319*	0.219
	(0.172)	(0.193)	(0.175)	(0.202)	(0.176)	(0.191)	(0.173)	(0.135)	(0.178)	(0.142)	(0.169)	(0.132)
Targeted × 1974	0.523***	0.632***	0.473***	0.576***	0.434***	0.515***	0.178	0.107	0.239	0.178	0.122	0.053
	(0.161)	(0.184)	(0.154)	(0.175)	(0.146)	(0.166)	(0.159)	(0.126)	(0.183)	(0.163)	(0.156)	(0.128)
Targeted × 1975	0.706**	0.406*	0.736**	0.428*	0.614**	0.349	0.464*	0.156	0.459*	0.151	0.302	0.016
	(0.326)	(0.245)	(0.331)	(0.247)	(0.299)	(0.227)	(0.262)	(0.189)	(0.263)	(0.189)	(0.248)	(0.188)
Targeted × 1976	0.839**	0.477*	0.840**	0.474*	0.764**	0.438*	0.676*	0.373	0.676*	0.373	0.578*	0.294
	(0.371)	(0.281)	(0.372)	(0.281)	(0.335)	(0.255)	(0.375)	(0.290)	(0.374)	(0.289)	(0.338)	(0.262)
Targeted × 1977	1.151***	0.720***	1.154***	0.724***	1.015***	0.619***	1.093***	0.565**	1.095***	0.566**	0.946***	0.454**
	(0.376)	(0.250)	(0.376)	(0.249)	(0.339)	(0.221)	(0.395)	(0.255)	(0.395)	(0.254)	(0.358)	(0.225)
Targeted × 1978	1.198***	0.834***	1.220***	0.850***	1.066***	0.734***	1.226***	0.692**	1.236***	0.703**	1.059***	0.570**
	(0.374)	(0.254)	(0.375)	(0.253)	(0.345)	(0.234)	(0.404)	(0.268)	(0.404)	(0.268)	(0.369)	(0.247)
Targeted × 1979	1.437***	1.142***	1.439***	1.142***	1.239***	0.957***	1.297***	0.786***	1.301***	0.785***	1.118***	0.610**
	(0.391)	(0.270)	(0.391)	(0.269)	(0.354)	(0.240)	(0.401)	(0.270)	(0.403)	(0.270)	(0.369)	(0.242)
Targeted × 1980	1.308***	0.985***	1.327***	1.006***	1.199***	0.899***	1.294***	0.724***	1.339***	0.749***	1.236***	0.658***
	(0.380)	(0.251)	(0.380)	(0.251)	(0.346)	(0.232)	(0.407)	(0.269)	(0.409)	(0.273)	(0.376)	(0.244)
Targeted × 1981	1.266***	0.999***	1.266***	0.999***	1.153***	0.917***	1.345***	0.779***	1.340***	0.777***	1.183***	0.650**
	(0.376)	(0.246)	(0.377)	(0.246)	(0.342)	(0.225)	(0.414)	(0.289)	(0.414)	(0.289)	(0.378)	(0.266)
Targeted × 1982	1.281***	0.936***	1.290***	0.949***	1.177***	0.848***	1.503***	0.848***	1.500***	0.847***	1.395***	0.746***
	(0.389)	(0.260)	(0.390)	(0.263)	(0.357)	(0.240)	(0.464)	(0.297)	(0.463)	(0.297)	(0.441)	(0.275)
Targeted × 1983	1.204***	1.035***	1.203***	1.034***	1.090***	0.910***	1.148***	0.917***	1.146***	0.914***	1.068***	0.815***
	(0.383)	(0.280)	(0.385)	(0.281)	(0.356)	(0.270)	(0.381)	(0.284)	(0.381)	(0.285)	(0.367)	(0.264)
Targeted × 1984	1.491***	1.039***	1.494***	1.039***	1.391***	0.950***	1.249***	0.989***	1.256***	0.995***	1.197***	0.914***
	(0.382)	(0.271)	(0.383)	(0.271)	(0.356)	(0.259)	(0.392)	(0.290)	(0.393)	(0.291)	(0.376)	(0.268)
Targeted × 1985	1.403***	1.097***	1.399***	1.093***	1.288***	0.992***	1.083***	0.900***	1.072***	0.894***	0.988**	0.784***
	(0.413)	(0.323)	(0.414)	(0.323)	(0.385)	(0.309)	(0.391)	(0.313)	(0.391)	(0.313)	(0.377)	(0.291)
Targeted × 1986	1.504***	1.250***	1.502***	1.242***	1.401***	1.137***	1.096***	0.889***	1.093***	0.889***	1.010**	0.793***
	(0.410)	(0.306)	(0.411)	(0.307)	(0.382)	(0.295)	(0.408)	(0.317)	(0.409)	(0.317)	(0.397)	(0.299)
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
R^2	0.272	0.313	0.274	0.314	0.272	0.326	0.432	0.525	0.429	0.523	0.448	0.552
Observations	4721	4046	4721	4046	4720	4045	1751	1711	1751	1711	1750	1710
Clusters	278	238	278	238	278	238	88	86	88	86	88	86
Joint Test of Pre-Trend (F-Test)	0.759	0.575	2.248	1.492	1.867	1.089	0.124	0.028	0.441	0.289	0.656	0.401
Joint Test of Pre-Trend (p-values)	0.384	0.449	0.135	0.223	0.173	0.298	0.726	0.868	0.509	0.592	0.420	0.528

Notes. The table reports dynamic differences-in-differences estimates for the relationship between heavy and chemical industry drive and log industrial output. This robustnesss table reports estimates for three different measures of output: real value shipped, real gross output, and real value added.. Estimates are relative to 1972, the year before HCI. Specifications with controls include pre-1973 industry (log) averages: avg. wages, avg. plant size, intermediate input costs, and labor productivity, interacted with time. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE B.2
ROBUSTNESS: INDUSTRIAL POLICY AND INDUSTRIAL DEVELOPMENT BY TREATMENT STATUS, MULTIPLE MEASURES OF OUTPUT

	Panel A) 5-Digit Panel, 1970 - 1986							Panel B) 4-Digit Panel, 1967 - 1986						
	Output Share	Prices	Labor Product.	Average Size	Plants	Employment	Employment Share	Output Share	Prices	Labor Product.	Average Size	Plants	Employment	Employment Share
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Targeted × 1967								-0.038	0.044	0.007	0.012	-0.057	-0.052	-0.020
								(0.049)	(0.035)	(0.114)	(0.140)	(0.131)	(0.186)	(0.043)
Targeted × 1968								0.014	0.056*	0.031	0.085	-0.046	0.037	0.000
								(0.038)	(0.029)	(0.087)	(0.136)	(0.114)	(0.171)	(0.037)
Targeted × 1969								0.026	0.045*	0.149	-0.011	-0.022	-0.036	-0.016
								(0.033)	(0.024)	(0.093)	(0.129)	(0.110)	(0.170)	(0.035)
Targeted × 1970	-0.017	0.069***	-0.009	0.063	0.085	0.150	0.013	-0.113	0.060***	0.061	0.045	0.086	0.122	0.032
	(0.028)	(0.011)	(0.089)	(0.124)	(0.064)	(0.157)	(0.017)	(0.072)	(0.018)	(0.082)	(0.095)	(0.072)	(0.147)	(0.034)
Targeted × 1971	-0.006	0.029***	-0.027	0.026	0.027	0.049	-0.002	-0.015	0.039**	-0.025	0.142	0.031	0.167	0.015
	(0.013)	(0.009)	(0.071)	(0.119)	(0.055)	(0.155)	(0.018)	(0.026)	(0.016)	(0.056)	(0.127)	(0.058)	(0.163)	(0.030)
Targeted × 1973	0.011	0.002	0.144	0.294***	0.071	0.347***	0.026**	0.022	-0.019	0.061	0.087	0.048	0.133	0.036*
	(0.014)	(0.010)	(0.091)	(0.100)	(0.046)	(0.123)	(0.012)	(0.023)	(0.016)	(0.073)	(0.092)	(0.057)	(0.121)	(0.020)
Targeted × 1974	0.040**	0.013	0.043	0.238**	0.183***	0.425***	0.045***	0.071*	0.007	0.022	-0.071	0.069	0.011	0.046*
	(0.017)	(0.018)	(0.078)	(0.094)	(0.052)	(0.120)	(0.015)	(0.037)	(0.023)	(0.085)	(0.074)	(0.047)	(0.075)	(0.025)
Targeted × 1975	0.032	0.019	-0.043	0.105	0.242***	0.350**	0.051**	-0.003	0.035	-0.079	-0.060	0.175	0.114	0.025
	(0.020)	(0.019)	(0.099)	(0.121)	(0.093)	(0.177)	(0.022)	(0.050)	(0.027)	(0.087)	(0.097)	(0.132)	(0.180)	(0.038)
Targeted × 1976	0.055**	-0.002	0.049	0.137	0.184*	0.317	0.064***	0.022	0.007	0.116	0.035	0.138	0.163	0.043
	(0.023)	(0.022)	(0.099)	(0.128)	(0.106)	(0.196)	(0.024)	(0.058)	(0.030)	(0.081)	(0.112)	(0.162)	(0.212)	(0.043)
Targeted × 1977	0.071***	-0.056**	0.120	0.213*	0.226**	0.433**	0.077***	0.057	-0.043	0.155*	0.079	0.197	0.269	0.064
	(0.025)	(0.023)	(0.096)	(0.122)	(0.109)	(0.173)	(0.025)	(0.061)	(0.032)	(0.078)	(0.110)	(0.172)	(0.194)	(0.046)
Targeted × 1978	0.100***	-0.071***	0.178*	0.228**	0.243**	0.478***	0.097***	0.092	-0.062*	0.207**	0.117	0.200	0.319	0.104*
	(0.027)	(0.024)	(0.104)	(0.115)	(0.117)	(0.176)	(0.028)	(0.061)	(0.036)	(0.084)	(0.115)	(0.190)	(0.224)	(0.053)
Targeted × 1979	0.121***	-0.110***	0.222**	0.311**	0.344***	0.670***	0.105***	0.122**	-0.113***	0.215***	0.074	0.277	0.347	0.111*
	(0.027)	(0.025)	(0.101)	(0.124)	(0.116)	(0.181)	(0.029)	(0.061)	(0.037)	(0.080)	(0.132)	(0.188)	(0.213)	(0.057)
Targeted × 1980	0.123***	-0.161***	0.213**	0.222*	0.360***	0.603***	0.103***	0.142**	-0.165***	0.280***	0.080	0.265	0.336	0.111**
	(0.029)	(0.027)	(0.098)	(0.120)	(0.120)	(0.186)	(0.029)	(0.066)	(0.040)	(0.086)	(0.108)	(0.190)	(0.218)	(0.054)
Targeted × 1981	0.136***	-0.176***	0.235**	0.169	0.395***	0.586***	0.102***	0.164**	-0.173***	0.257***	0.078	0.263	0.336	0.109*
	(0.032)	(0.029)	(0.095)	(0.113)	(0.121)	(0.179)	(0.029)	(0.076)	(0.041)	(0.093)	(0.121)	(0.192)	(0.215)	(0.056)
Targeted × 1982	0.139***	-0.150***	0.187*	0.136	0.405***	0.573***	0.105***	0.177**	-0.168***	0.310***	0.080	0.295	0.374	0.111*
	(0.034)	(0.029)	(0.096)	(0.117)	(0.128)	(0.193)	(0.029)	(0.081)	(0.041)	(0.094)	(0.127)	(0.202)	(0.246)	(0.058)
Targeted × 1983	0.144***	-0.139***	0.267***	0.101	0.422***	0.542**	0.108***	0.194**	-0.171***	0.370***	0.131	0.243	0.372	0.136**
	(0.035)	(0.029)	(0.086)	(0.127)	(0.146)	(0.227)	(0.031)	(0.082)	(0.043)	(0.087)	(0.131)	(0.206)	(0.260)	(0.058)
Targeted × 1984	0.154***	-0.163***	0.280***	0.121	0.427***	0.566**	0.120***	0.201**	-0.194***	0.403***	0.178	0.261	0.436*	0.154**
	(0.036)	(0.029)	(0.081)	(0.127)	(0.151)	(0.219)	(0.032)	(0.082)	(0.042)	(0.097)	(0.137)	(0.216)	(0.259)	(0.059)
Targeted × 1985	0.160***	-0.175***	0.271***	0.163	0.422***	0.620**	0.127***	0.205**	-0.199***	0.316***	0.130	0.272	0.398	0.162***
	(0.038)	(0.029)	(0.095)	(0.135)	(0.161)	(0.246)	(0.032)	(0.082)	(0.042)	(0.091)	(0.122)	(0.219)	(0.274)	(0.059)
Targeted × 1986	0.162***	-0.196***	0.323***	0.194	0.495***	0.713***	0.132***	0.201**	-0.223***	0.303***	0.120	0.305	0.422	0.170***
	(0.039)	(0.029)	(0.091)	(0.130)	(0.162)	(0.241)	(0.033)	(0.082)	(0.043)	(0.091)	(0.125)	(0.223)	(0.283)	(0.059)
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.896	0.975	0.773	0.742	0.879	0.805	0.901	0.897	0.984	0.872	0.826	0.887	0.830	0.928
Observations	4046	4046	4041	4046	4046	4046	4046	1711	1711	1711	1720	1720	1720	1720
Clusters	238	238	238	238	238	238	238	86	86	86	86	86	86	86
Joint Test of Pre-Trend (F-Test)	0.224	25.463	0.090	0.143	1.016	0.583	0.759	1.253	2.795	1.283	1.151	0.496	1.000	1.000
Joint Test of Pre-Trend (p-values)	0.799	0.000	0.914	0.867	0.364	0.559	0.469	0.292	0.022	0.279	0.340	0.778	0.423	0.423

Notes. The table reports dynamic differences-in-differences estimates for the relationship between heavy and chemical industry drive and (log) industrial outcomes. Output share is the industry share of manufacturing output. Prices are output prices. Labor Productivity is value added per worker. Number of Plants is the count of establishments. Employment is total number of industry workers. Labor (output) Share is the industry's share of manufacturing employment (output). Estimates are relative to 1972, the year before HCI. Specifications with controls include pre-1973 industry (log) averages: avg. wages, avg. plant size, intermediate input costs, and labor productivity, interacted with time. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE C.1
INDUSTRIAL POLICY AND EXPORT DEVELOPMENT BY TREATMENT STATUS

	Outcomes: Export development				
	RCA (Balassa)	RCA (log)	Relative Export Prod. (CDK)	Prob. of Comp. Adv.	Export Share (log)
	(1)	(2)	(3)	(4)	(5)
Targeted × 1965	0.033	0.088	0.064**	0.080**	0.000
	(0.355)	(0.061)	(0.030)	(0.035)	(0.020)
Targeted × 1966	0.096	0.060	0.039	0.063*	-0.004
	(0.321)	(0.057)	(0.029)	(0.033)	(0.018)
Targeted × 1967	-0.135	0.047	0.050*	0.054	-0.013
	(0.291)	(0.054)	(0.028)	(0.034)	(0.017)
Targeted × 1968	-0.045	0.060	0.044	0.073**	-0.004
	(0.278)	(0.050)	(0.027)	(0.030)	(0.014)
Targeted × 1969	-0.259	0.035	0.029	0.071***	0.005
	(0.209)	(0.041)	(0.024)	(0.026)	(0.012)
Targeted × 1970	-0.193	0.017	0.029	0.036	-0.002
	(0.191)	(0.036)	(0.021)	(0.027)	(0.009)
Targeted × 1971	-0.181	-0.003	0.015	0.011	-0.014**
	(0.220)	(0.038)	(0.021)	(0.023)	(0.007)
Targeted × 1973	0.202	-0.001	0.011	0.018	-0.001
	(0.179)	(0.035)	(0.017)	(0.024)	(0.007)
Targeted × 1974	0.519***	0.080	0.036*	0.129***	0.032***
	(0.199)	(0.050)	(0.020)	(0.035)	(0.012)
Targeted × 1975	0.316	0.011	-0.003	0.062**	0.008
	(0.211)	(0.048)	(0.019)	(0.031)	(0.014)
Targeted × 1976	0.366*	0.038	0.014	0.065**	0.020
	(0.213)	(0.051)	(0.019)	(0.031)	(0.014)
Targeted × 1977	0.650***	0.095	0.024	0.075**	0.025
	(0.251)	(0.059)	(0.019)	(0.034)	(0.017)
Targeted × 1978	0.724***	0.099*	0.025	0.068*	0.032*
	(0.259)	(0.056)	(0.020)	(0.035)	(0.016)
Targeted × 1979	0.804***	0.135**	0.060***	0.087**	0.045***
	(0.255)	(0.061)	(0.021)	(0.039)	(0.016)
Targeted × 1980	0.825***	0.129**	0.037*	0.079**	0.052***
	(0.258)	(0.064)	(0.022)	(0.039)	(0.017)
Targeted × 1981	0.934***	0.146**	0.062***	0.062	0.060***
	(0.266)	(0.065)	(0.021)	(0.040)	(0.018)
Targeted × 1982	1.134***	0.216***	0.076***	0.098**	0.074***
	(0.271)	(0.070)	(0.021)	(0.042)	(0.019)
Targeted × 1983	1.291***	0.259***	0.104***	0.148***	0.085***
	(0.283)	(0.072)	(0.025)	(0.041)	(0.022)
Targeted × 1984	1.314***	0.287***	0.100***	0.146***	0.078***
	(0.270)	(0.071)	(0.024)	(0.042)	(0.019)
Targeted × 1985	1.278***	0.303***	0.106***	0.177***	0.082***
	(0.271)	(0.068)	(0.024)	(0.043)	(0.020)
Targeted × 1986	1.260***	0.287***	0.101***	0.144***	0.085***
	(0.275)	(0.070)	(0.023)	(0.043)	(0.022)
Industry Effects	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
R2	0.605	0.684	0.639	0.563	0.726
Observations	11352	11374	7796	11396	11396
Clusters	516	517	464	518	518
Joint Test of Pre-Trend (F-Test)	4.737	0.439	0.795	1.596	1.633
Joint Test of Pre-Trend (p-values)	0.692	0.878	0.591	0.134	0.124

Notes. The table reports dynamic differences-in-differences estimates for the relationship between heavy and chemical industry drive and trade development outcomes. Revealed export productivity are the CDK measure. RCA is revealed comparative advantage; the classic Balassa index is shown alongside log and asinh-transformed RCA measures. Log export shares also shown. 'Dummy' is an indicator equal to one if an industry has realized RCA (RCA>1). Trade values reflect real values (2010 base). PPML used to for RCA estimates, OLS used for all others.. Estimates are relative to 1972, the year before HCI. Specifications with controls include pre-1973 industry (log) averages: avg. wages, avg. plant size, intermediate input costs, and labor productivity, interacted with time. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE C.2
CROSS-COUNTRY ESTIMATES (TRIPLE DIFFERENCES): INDUSTRIAL POLICY AND EXPORT DEVELOPMENT

	Outcomes: Export Development											
	Relative Export Productivity (CDK)			Probability of Comparative Advantage			RCA (Balassa)			RCA (log)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Targ. X 1965 X Korea	0.015	0.016	0.032***	0.041***	0.041***	0.041***	0.170**	0.170**	0.298**	0.024**	0.024**	0.024**
	(0.010)	(0.011)	(0.011)	(0.005)	(0.005)	(0.005)	(0.082)	(0.074)	(0.120)	(0.010)	(0.010)	(0.010)
Targ. X 1966 X Korea	-0.062***	-0.064***	-0.006	0.016***	0.016***	0.016***	0.192**	0.192***	0.398***	0.006	0.006	0.006
	(0.009)	(0.011)	(0.011)	(0.006)	(0.005)	(0.005)	(0.075)	(0.072)	(0.113)	(0.010)	(0.009)	(0.009)
Targ. X 1967 X Korea	0.023***	0.020**	0.028***	0.006	0.006	0.006	0.060	0.060	0.262***	0.014	0.014*	0.014*
	(0.008)	(0.009)	(0.010)	(0.006)	(0.004)	(0.004)	(0.081)	(0.060)	(0.095)	(0.010)	(0.008)	(0.008)
Targ. X 1968 X Korea	-0.006	-0.010	0.019**	0.040***	0.040***	0.040***	0.060	0.060	0.133	0.014	0.014*	0.014*
	(0.007)	(0.008)	(0.008)	(0.004)	(0.004)	(0.004)	(0.078)	(0.051)	(0.087)	(0.009)	(0.007)	(0.007)
Targ. X 1969 X Korea	-0.024***	-0.028***	0.005	0.018***	0.018***	0.018***	-0.018	-0.018	0.139*	0.001	0.001	0.001
	(0.007)	(0.008)	(0.008)	(0.006)	(0.004)	(0.004)	(0.079)	(0.051)	(0.081)	(0.010)	(0.008)	(0.008)
Targ. X 1970 X Korea	-0.022***	-0.027***	0.011*	0.004	0.004	0.004	-0.105*	-0.105***	-0.073	0.006	0.006	0.006
	(0.006)	(0.008)	(0.006)	(0.005)	(0.004)	(0.004)	(0.061)	(0.037)	(0.061)	(0.008)	(0.006)	(0.006)
Targ. X 1971 X Korea	-0.004	-0.009	0.008	-0.009**	-0.009**	-0.009**	0.026	0.026	0.084	-0.006	-0.006	-0.006
	(0.008)	(0.008)	(0.006)	(0.004)	(0.004)	(0.004)	(0.069)	(0.050)	(0.062)	(0.010)	(0.008)	(0.008)
Targ. X 1973 X Korea	0.022***	0.021***	0.012**	-0.005	-0.005	-0.005	0.055	0.055	0.038	-0.025***	-0.025***	-0.025***
	(0.008)	(0.007)	(0.005)	(0.005)	(0.003)	(0.003)	(0.049)	(0.037)	(0.049)	(0.007)	(0.006)	(0.006)
Targ. X 1974 X Korea	0.046***	0.046***	0.030***	0.097***	0.097***	0.097***	0.422***	0.422***	0.348***	0.079***	0.079***	0.079***
	(0.008)	(0.008)	(0.007)	(0.006)	(0.005)	(0.005)	(0.057)	(0.047)	(0.066)	(0.009)	(0.008)	(0.008)
Targ. X 1975 X Korea	0.017**	0.013*	0.001	0.029***	0.029***	0.029***	0.129**	0.129**	0.051	-0.007	-0.007	-0.007
	(0.007)	(0.007)	(0.006)	(0.005)	(0.004)	(0.004)	(0.054)	(0.051)	(0.069)	(0.009)	(0.008)	(0.008)
Targ. X 1976 X Korea	0.027***	0.029***	0.022***	0.046***	0.046***	0.046***	0.289***	0.289***	0.176**	0.063***	0.063***	0.063***
	(0.007)	(0.006)	(0.006)	(0.007)	(0.004)	(0.004)	(0.057)	(0.041)	(0.077)	(0.009)	(0.007)	(0.007)
Targ. X 1977 X Korea	0.056***	0.058***	0.022***	0.047***	0.047***	0.047***	0.442***	0.442***	0.400***	0.089***	0.089***	0.089***
	(0.007)	(0.007)	(0.006)	(0.005)	(0.004)	(0.004)	(0.064)	(0.047)	(0.090)	(0.009)	(0.008)	(0.008)
Targ. X 1978 X Korea	0.033***	0.032***	0.018***	0.051***	0.051***	0.051***	0.495***	0.495***	0.392***	0.093***	0.093***	0.093***
	(0.004)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.076)	(0.053)	(0.104)	(0.010)	(0.009)	(0.009)
Targ. X 1979 X Korea	0.069***	0.068***	0.055***	0.059***	0.059***	0.059***	0.649***	0.649***	0.471***	0.149***	0.149***	0.149***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.059)	(0.054)	(0.099)	(0.011)	(0.009)	(0.009)
Targ. X 1980 X Korea	0.066***	0.065***	0.049***	0.078***	0.078***	0.078***	0.646***	0.646***	0.505***	0.160***	0.160***	0.160***
	(0.006)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.066)	(0.057)	(0.104)	(0.011)	(0.010)	(0.010)
Targ. X 1981 X Korea	0.091***	0.095***	0.071***	0.071***	0.071***	0.071***	0.817***	0.817***	0.619***	0.182***	0.182***	0.182***
	(0.006)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.065)	(0.062)	(0.114)	(0.010)	(0.010)	(0.010)
Targ. X 1982 X Korea	0.090***	0.093***	0.078***	0.091***	0.091***	0.091***	0.850***	0.850***	0.644***	0.209***	0.209***	0.209***
	(0.008)	(0.008)	(0.007)	(0.006)	(0.006)	(0.006)	(0.072)	(0.063)	(0.113)	(0.011)	(0.010)	(0.010)
Targ. X 1983 X Korea	0.120***	0.123***	0.097***	0.105***	0.105***	0.105***	0.878***	0.878***	0.679***	0.222***	0.222***	0.222***
	(0.010)	(0.010)	(0.008)	(0.008)	(0.006)	(0.006)	(0.092)	(0.081)	(0.118)	(0.014)	(0.011)	(0.011)
Targ. X 1984 X Korea	0.100***	0.104***	0.083***	0.127***	0.127***	0.127***	0.991***	0.991***	0.784***	0.262***	0.262***	0.262***
	(0.008)	(0.009)	(0.008)	(0.007)	(0.006)	(0.006)	(0.080)	(0.070)	(0.121)	(0.012)	(0.011)	(0.011)
Targ. X 1985 X Korea	0.123***	0.124***	0.103***	0.149***	0.149***	0.149***	0.942***	0.942***	0.769***	0.272***	0.272***	0.272***
	(0.007)	(0.008)	(0.008)	(0.007)	(0.006)	(0.006)	(0.077)	(0.068)	(0.118)	(0.011)	(0.011)	(0.011)
Targ. X 1986 X Korea	0.128***	0.129***	0.100***	0.123***	0.123***	0.123***	0.883***	0.883***	0.697***	0.255***	0.255***	0.255***
	(0.007)	(0.008)	(0.007)	(0.006)	(0.006)	(0.006)	(0.082)	(0.067)	(0.115)	(0.011)	(0.011)	(0.011)
Targ. X 1987 X Korea	0.138***	0.139***	0.103***	0.142***	0.142***	0.142***	0.861***	0.861***	0.686***	0.253***	0.253***	0.253***
	(0.008)	(0.008)	(0.007)	(0.007)	(0.006)	(0.006)	(0.075)	(0.061)	(0.113)	(0.011)	(0.010)	(0.010)
R^2	0.130	0.124	0.730	0.120	0.138	0.567	0.196	0.173	0.664	0.143	0.169	0.648
Observations	466790	466721	460881	1897500	1897500	1897500	1868750	1254404	964334	1897500	1897500	1897500
Clusters (Country-Product)	130 x 625	130 x 625	128 x 623	132 x 625	132 x 625	132 x 625	130 x 625	130 x 625	129 x 625	132 x 625	132 x 625	132 x 625

Notes. This table reports triple difference estimates (DDD) for the impact of Korean HCI drive using SITC-level trade data. Estimates are relative to 1972, the year before the HCI policy intervention. RCA (Balassa) specifications are estimated using PPML. Alternatively, transformed RCAs and relative export productivity (CDK) specifications are estimated using OLS. For each outcome, the first regression column includes Industry, Country, and Year fixed effects. The second column for each outcome includes Country-Year and Industry-Year fixed effects. The third column for each outcome includes Country-Year, Industry-Year, and Industry-Country fixed effects. Standard errors are clustered at the industry and country level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE C.3
CROSS-COUNTRY ESTIMATES (DIFFERENCES-IN-DIFFERENCES): INDUSTRIAL POLICY ON EXPORT DEVELOPMENT

	Outcomes: Export Development											
	Relative Export Productivity (CDK)			Probability of Comparative Advantage			RCA (Balassa)			RCA (log)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1965 X Korea	0.051***	0.048***	0.043***	0.006	0.006	0.006	0.378***	0.378***	0.378***	-0.032***	-0.032***	-0.032***
	(0.006)	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.103)	(0.103)	(0.103)	(0.011)	(0.011)	(0.011)
1966 X Korea	0.007	0.007	0.026***	-0.015***	-0.015***	-0.015***	0.368***	0.368***	0.368***	-0.044***	-0.044***	-0.044***
	(0.007)	(0.005)	(0.006)	(0.003)	(0.003)	(0.003)	(0.090)	(0.090)	(0.090)	(0.008)	(0.008)	(0.008)
1967 X Korea	0.041***	0.044***	0.028***	-0.022***	-0.022***	-0.022***	0.121	0.121	0.121	-0.053***	-0.053***	-0.053***
	(0.006)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.074)	(0.074)	(0.074)	(0.008)	(0.008)	(0.008)
1968 X Korea	0.016***	0.014***	0.024***	-0.033***	-0.033***	-0.033***	-0.047	-0.047	-0.047	-0.094***	-0.094***	-0.094***
	(0.004)	(0.004)	(0.005)	(0.003)	(0.003)	(0.003)	(0.062)	(0.062)	(0.062)	(0.007)	(0.007)	(0.007)
1969 X Korea	0.006	0.011***	0.010***	-0.037***	-0.037***	-0.037***	-0.033	-0.033	-0.033	-0.072***	-0.072***	-0.072***
	(0.005)	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)	(0.065)	(0.065)	(0.065)	(0.006)	(0.006)	(0.006)
1970 X Korea	0.003	0.003	0.011***	-0.035***	-0.035***	-0.035***	-0.341***	-0.341***	-0.341***	-0.083***	-0.083***	-0.083***
	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.059)	(0.059)	(0.059)	(0.007)	(0.007)	(0.007)
1971 X Korea	0.010**	0.015***	0.017***	-0.022***	-0.022***	-0.022***	0.039	0.039	0.039	-0.040***	-0.040***	-0.040***
	(0.005)	(0.002)	(0.002)	(0.005)	(0.005)	(0.005)	(0.088)	(0.088)	(0.088)	(0.011)	(0.011)	(0.011)
1973 X Korea	0.004	0.005*	0.009***	0.015***	0.015***	0.015***	0.127**	0.127**	0.127**	0.033***	0.033***	0.033***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.056)	(0.056)	(0.056)	(0.007)	(0.007)	(0.007)
1974 X Korea	0.003	0.002	0.009***	0.125***	0.125***	0.125***	0.572***	0.572***	0.572***	0.196***	0.196***	0.196***
	(0.004)	(0.003)	(0.003)	(0.005)	(0.005)	(0.005)	(0.082)	(0.082)	(0.082)	(0.011)	(0.011)	(0.011)
1975 X Korea	-0.008*	-0.009***	0.001	0.058***	0.058***	0.058***	0.292***	0.292***	0.292***	0.080***	0.080***	0.080***
	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.065)	(0.065)	(0.065)	(0.008)	(0.008)	(0.008)
1976 X Korea	0.008*	0.005	0.015***	0.055***	0.055***	0.055***	0.217***	0.217***	0.217***	0.093***	0.093***	0.093***
	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.065)	(0.065)	(0.065)	(0.009)	(0.009)	(0.009)
1977 X Korea	0.020***	0.018***	0.027***	0.055***	0.055***	0.055***	0.412***	0.412***	0.412***	0.131***	0.131***	0.131***
	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.062)	(0.062)	(0.062)	(0.008)	(0.008)	(0.008)
1978 X Korea	0.016***	0.013***	0.029***	0.048***	0.048***	0.048***	0.380***	0.380***	0.380***	0.113***	0.113***	0.113***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.068)	(0.068)	(0.068)	(0.009)	(0.009)	(0.009)
1979 X Korea	0.042***	0.038***	0.057***	0.068***	0.068***	0.068***	0.546***	0.546***	0.546***	0.172***	0.172***	0.172***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.071)	(0.071)	(0.071)	(0.009)	(0.009)	(0.009)
1980 X Korea	0.023***	0.021***	0.038***	0.098***	0.098***	0.098***	0.593***	0.593***	0.593***	0.215***	0.215***	0.215***
	(0.006)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.078)	(0.078)	(0.078)	(0.011)	(0.011)	(0.011)
1981 X Korea	0.044***	0.037***	0.049***	0.081***	0.081***	0.081***	0.663***	0.663***	0.663***	0.213***	0.213***	0.213***
1982 X Korea	0.061***	0.054***	0.063***	0.105***	0.105***	0.105***	0.748***	0.748***	0.748***	0.243***	0.243***	0.243***
	(0.006)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.088)	(0.088)	(0.088)	(0.012)	(0.012)	(0.012)
1983 X Korea	0.060***	0.052***	0.066***	0.111***	0.111***	0.111***	0.965***	0.965***	0.965***	0.249***	0.249***	0.249***
	(0.007)	(0.005)	(0.005)	(0.007)	(0.007)	(0.007)	(0.104)	(0.104)	(0.104)	(0.014)	(0.014)	(0.014)
1984 X Korea	0.044***	0.033***	0.051***	0.123***	0.123***	0.123***	0.846***	0.846***	0.846***	0.247***	0.247***	0.247***
	(0.007)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.090)	(0.090)	(0.090)	(0.013)	(0.013)	(0.013)
1985 X Korea	0.070***	0.060***	0.079***	0.128***	0.128***	0.128***	0.683***	0.683***	0.683***	0.228***	0.228***	0.228***
	(0.006)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)	(0.081)	(0.081)	(0.081)	(0.011)	(0.011)	(0.011)
1986 X Korea	0.061***	0.054***	0.063***	0.099***	0.099***	0.099***	0.628***	0.628***	0.628***	0.219***	0.219***	0.219***
	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.081)	(0.081)	(0.081)	(0.011)	(0.011)	(0.011)
1987 X Korea	0.055***	0.047***	0.059***	0.117***	0.117***	0.117***	0.518***	0.518***	0.518***	0.208***	0.208***	0.208***
	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.083)	(0.083)	(0.083)	(0.011)	(0.011)	(0.011)
R^2	0.001	0.050	0.702	0.004	0.146	0.539	0.010	0.166	0.588	0.006	0.163	0.608
Observations	137112	137111	135392	552552	552552	552552	552552	539994	381754	552552	552552	552552
Clusters (Product)	129	128	124	132	132	132	132	129	129	132	132	132
Joint Test of Pre-Trend (F-Test)	23.501	55.615	13.527	47.170	47.170	47.170	138.330	138.306	138.306	38.536	38.536	38.536
Joint Test of Pre-Trend (p-values)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Notes. This table reports difference-in-difference estimates for the impact of Korean HCI as compared to world HCI industries using SITC-level trade data. Estimates are relative to 1972, the year before the HCI policy intervention. The RCA (Balassa) specifications are estimated using PPML. Alternatively, transformed RCAs and relative export productivity (CDK) specifications are estimated using OLS. Estimates are relative to 1972, the year before the HCI policy intervention. For each outcome, the first regression column does not include any fixed effects in the specification. The second column for each outcome includes Country fixed effects. The third column for each outcome includes Industry-Country fixed effects. Standard errors are clustered at the country-level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE D.1
INDUSTRIAL POLICY AND INPUT USE: INVESTMENT AND INTERMEDIATES

	Outcomes: Investment and Outlays (log)				
	Input Outlays	Investment	Capital Stock		
	(1)	(2)	(3)	(4)	(5)
Targeted × 1970	0.202	0.040	-0.190	-0.093	-0.112
	(0.178)	(0.091)	(0.224)	(0.065)	(0.137)
Targeted × 1971	0.067	-0.019	0.023	-0.052	-0.029
	(0.181)	(0.088)	(0.220)	(0.047)	(0.103)
Targeted × 1973	0.476***	0.124	0.164	0.041	0.031
	(0.169)	(0.077)	(0.198)	(0.058)	(0.024)
Targeted × 1974	0.462***	0.069	0.393**	0.011	0.106**
	(0.149)	(0.076)	(0.198)	(0.061)	(0.051)
Targeted × 1975	0.788**	0.189*	0.425	0.018	0.071
	(0.328)	(0.113)	(0.269)	(0.067)	(0.087)
Targeted × 1976	0.928**	0.266**	0.563*	0.119	0.163
	(0.381)	(0.131)	(0.299)	(0.077)	(0.099)
Targeted × 1977	1.198***	0.381***	0.682**	0.063	0.191*
	(0.379)	(0.129)	(0.302)	(0.084)	(0.109)
Targeted × 1978	1.282***	0.448***	0.944***	0.209***	0.283**
	(0.371)	(0.123)	(0.316)	(0.075)	(0.118)
Targeted × 1979	1.448***	0.460***	1.043***	0.187**	0.446***
	(0.390)	(0.131)	(0.309)	(0.081)	(0.123)
Targeted × 1980	1.230***	0.331***	1.163***	0.302***	0.432**
	(0.375)	(0.119)	(0.300)	(0.088)	(0.182)
Targeted × 1981	1.135***	0.316**	0.624**	0.067	0.379**
	(0.371)	(0.129)	(0.302)	(0.075)	(0.183)
Targeted × 1982	1.177***	0.322**	0.818**	0.153*	0.485***
	(0.383)	(0.127)	(0.319)	(0.081)	(0.140)
Targeted × 1983	1.136***	0.339***	0.834**	0.098	0.436**
	(0.382)	(0.121)	(0.323)	(0.079)	(0.185)
Targeted × 1984	1.364***	0.378***	1.029***	0.140	0.574***
	(0.386)	(0.115)	(0.317)	(0.087)	(0.149)
Targeted × 1985	1.282***	0.335***	1.046***	0.124*	0.630***
	(0.411)	(0.125)	(0.328)	(0.075)	(0.152)
Targeted × 1986	1.367***	0.361***	1.060***	0.178**	0.646***
	(0.409)	(0.121)	(0.341)	(0.088)	(0.161)
Industry Effects	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes
R^2	0.783	0.751	0.792	0.596	0.896
Observations	4726	4719	4713	4696	4220
Clusters	278	278	278	278	264
Joint Test of Pre-Trend (F-Test)	0.712	0.309	0.517	1.089	0.338
Joint Test of Pre-Trend (p-values)	0.491	0.734	0.597	0.338	0.713

Notes.
The table reports dynamic differences-in-differences estimates for the relationship between heavy and chemical industry drive and investment outcomes. All outcomes are logged. Investment is real gross investment. Intermediate outlays are real value of intermediate input costs. Capital stock is also shown. Estimates are relative to 1972, the year before HCI. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE D.2
INDUSTRIAL POLICY AND INVESTMENT BY ASSET CLASS, HCI VS. NON-HCI INDUSTRY

	Outcome: Investment by asset class			
	Machinery	Transport Equipment	Buildings and Structures	Land
	(1)	(2)	(3)	(4)
Targeted × 1970	-0.056	-0.124	-0.290	-0.363
	(0.224)	(0.190)	(0.272)	(0.373)
Targeted × 1971	-0.074	-0.037	-0.260	-0.081
	(0.205)	(0.168)	(0.295)	(0.341)
Targeted × 1973	0.130	0.210	-0.132	0.031
	(0.195)	(0.179)	(0.272)	(0.327)
Targeted × 1974	0.368*	0.284	0.035	0.508
	(0.193)	(0.196)	(0.247)	(0.340)
Targeted × 1975	0.276	0.245	0.210	0.216
	(0.240)	(0.204)	(0.286)	(0.383)
Targeted × 1976	0.436	0.300	0.409	0.526
	(0.277)	(0.235)	(0.318)	(0.391)
Targeted × 1977	0.703***	0.585***	0.713**	0.798**
	(0.268)	(0.225)	(0.313)	(0.396)
Targeted × 1978	1.085***	0.553**	0.829***	0.998***
	(0.288)	(0.243)	(0.319)	(0.382)
Targeted × 1979	1.047***	0.669***	0.993***	1.326***
	(0.297)	(0.244)	(0.347)	(0.381)
Targeted × 1980	1.057***	0.497**	0.894***	1.015***
	(0.276)	(0.245)	(0.328)	(0.372)
Targeted × 1981	0.539*	0.416*	0.490	0.976**
	(0.276)	(0.241)	(0.318)	(0.379)
Targeted × 1982	0.774***	0.410*	0.446	0.791**
	(0.290)	(0.246)	(0.331)	(0.395)
Year EF	Yes	Yes	Yes	Yes
Industry EF	Yes	Yes	Yes	Yes
R^2	0.797	0.787	0.746	0.667
Observations	3590	3590	3590	3590
Clusters	278	278	278	278

Notes. The table reports dynamic differences-in-differences estimates for the relationship between heavy and chemical industry drive and (log) investment across asset class. All outcomes are logged. Machine equipment is investment in equipment and machinery. Transportation equipment is value of investment in vehicles and transportation equipment. Structures are value investment in building and structures. Land investment is also shown. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE E.1
DIRECT FORWARD LINKAGE EXPOSURE AND DOWNSTREAM OUTPUT

	Outcome - Real value added (log)			
	Panel A) Five-Digit Panel (1970-1986)		**Panel B) Four-Digit Panel (1967-1986)**	
	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only
	(1)	(2)	(3)	(4)
1967 x Forward Link			-0.0636	-1.163
			(0.858)	(1.526)
1968 x Forward Link			0.643	0.251
			(0.703)	(1.360)
1969 x Forward Link			0.108	-0.0504
			(0.557)	(1.040)
1970 x Forward Link	-1.175	-1.594	-0.306	-0.422
	(0.821)	(1.025)	(0.606)	(0.780)
1971 x Forward Link	-1.102	-0.866	-0.0856	-0.260
	(0.738)	(0.865)	(0.412)	(0.477)
1973 x Forward Link	0.150	0.326	0.0787	0.139
	(0.835)	(1.171)	(0.285)	(0.430)
1974 x Forward Link	-0.00795	0.460	0.680	0.444
	(0.637)	(0.846)	(0.489)	(0.882)
1975 x Forward Link	1.592	2.649	0.703	1.256
	(1.157)	(1.734)	(0.805)	(1.358)
1976 x Forward Link	2.929**	5.660***	2.130*	3.289
	(1.306)	(1.941)	(1.129)	(2.047)
1977 x Forward Link	3.546***	5.655***	2.337**	3.262
	(1.309)	(2.012)	(1.133)	(1.970)
1978 x Forward Link	2.826**	4.168**	2.520**	3.345*
	(1.284)	(1.835)	(1.146)	(1.926)
1979 x Forward Link	3.051**	4.052**	2.911**	3.777*
	(1.301)	(1.705)	(1.127)	(1.921)
1980 x Forward Link	2.944**	4.719**	2.577**	3.766*
	(1.371)	(2.020)	(1.109)	(1.905)
1981 x Forward Link	3.169**	4.539**	2.716**	3.986*
	(1.282)	(1.863)	(1.225)	(2.048)
1982 x Forward Link	3.005**	4.849***	2.860**	3.895*
	(1.309)	(1.861)	(1.241)	(1.992)
1983 x Forward Link	1.729	3.795**	2.546***	2.251*
	(1.189)	(1.818)	(0.844)	(1.135)
1984 x Forward Link	1.099	2.520	2.700***	2.435**
	(1.250)	(1.888)	(0.819)	(1.021)
1985 x Forward Link	1.101	2.489	2.478***	2.181**
	(1.263)	(1.899)	(0.871)	(1.051)
1986 x Forward Link	1.894	4.310**	2.772***	2.791**
	(1.377)	(2.131)	(0.983)	(1.204)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
Targeted X Year	Yes	No	Yes	No
R^2	0.778	0.768	0.848	0.822
Observations	4720	2986	1750	1096
Clusters	278	176	88	55
1st Joint Test of Pre-Trend (F-Test)	1.405	1.358	1.010	3.446
1st Joint Test of Pre-Trend (p-values)	0.247	0.260	0.417	0.009
2nd Joint Test of Pre-Trend (F-Test)	1.670	6.845	0.531	0.992
2nd Joint Test of Pre-Trend (p-values)	0.190	0.001	0.752	0.431

Notes. This table reports dynamic differences-in-differences estimates for the relationship between forward linkage exposure and real value added . Estimates are relative to 1972, the year before HCI. All specifications include industry and year effects. Panel A shows estimates using detailed 5-digit level industrial data (1970-1986). Panel B shows estimates using longer, aggregate 4-digit level industrial data (1967-1986). 'Full sample' refers to estimates for full sample of all manufacturing industries; full-sample regressions include controls for HCI sectors (Targeted x Year). 'Non-HCI Sample' refers to sample excluding treated industry. All regressions include controls for both linkage types. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE E.2
DIRECT FORWARD LINKAGE EXPOSURE AND DOWNSTREAM PRICES

	Outcome: Output price (log)			
	Panel A) Five-Digit Panel (1970-1986)		Panel B) Four-Digit Panel (1967-1986)	
	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only
	(1)	(2)	(3)	(4)
1967 × Forward Link			0.208	0.574**
			(0.162)	(0.267)
1968 × Forward Link			0.117	0.258
			(0.112)	(0.184)
1969 × Forward Link			0.0777	0.131
			(0.0747)	(0.119)
1970 × Forward Link	0.103**	0.129*	0.0831	0.0705
	(0.0410)	(0.0754)	(0.0507)	(0.0923)
1971 × Forward Link	0.0237	0.0356	0.0884**	0.0723
	(0.0299)	(0.0538)	(0.0440)	(0.0732)
1973 × Forward Link	0.110***	0.0698	-0.0127	0.00929
	(0.0385)	(0.0629)	(0.0483)	(0.0713)
1974 × Forward Link	0.00531	-0.0953	0.0280	0.119
	(0.0695)	(0.109)	(0.0977)	(0.155)
1975 × Forward Link	-0.137	-0.271**	-0.116	-0.0205
	(0.0899)	(0.135)	(0.136)	(0.208)
1976 × Forward Link	-0.301***	-0.418***	-0.254*	-0.154
	(0.102)	(0.139)	(0.149)	(0.210)
1977 × Forward Link	-0.384***	-0.542***	-0.363**	-0.291
	(0.102)	(0.145)	(0.158)	(0.211)
1978 × Forward Link	-0.412***	-0.596***	-0.452**	-0.368*
	(0.112)	(0.140)	(0.172)	(0.206)
1979 × Forward Link	-0.273**	-0.358***	-0.342*	-0.194
	(0.126)	(0.134)	(0.192)	(0.198)
1980 × Forward Link	-0.345**	-0.422**	-0.431*	-0.315
	(0.163)	(0.180)	(0.245)	(0.252)
1981 × Forward Link	-0.511***	-0.585***	-0.550*	-0.510*
	(0.183)	(0.204)	(0.279)	(0.275)
1982 × Forward Link	-0.486**	-0.527***	-0.577**	-0.516*
	(0.188)	(0.201)	(0.282)	(0.284)
1983 × Forward Link	-0.449**	-0.522***	-0.603**	-0.535*
	(0.187)	(0.193)	(0.282)	(0.295)
1984 × Forward Link	-0.423**	-0.494**	-0.606**	-0.597**
	(0.186)	(0.191)	(0.277)	(0.283)
1985 × Forward Link	-0.408**	-0.427**	-0.589**	-0.577**
	(0.189)	(0.195)	(0.279)	(0.277)
1986 × Forward Link	-0.426**	-0.470**	-0.587**	-0.609**
	(0.183)	(0.189)	(0.279)	(0.276)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
Targeted X Year	Yes	No	Yes	No
R^2	0.960	0.947	0.965	0.964
Observations	4721	2987	1751	1097
Clusters	278	176	88	55
1st Joint Test of Pre-Trend (F-Test)	5.806	2.900	0.976	1.995
1st Joint Test of Pre-Trend (p-values)	0.003	0.058	0.437	0.094
2nd Joint Test of Pre-Trend (F-Test)	43.815	47.119	11.597	4.173
2nd Joint Test of Pre-Trend (p-values)	0.000	0.000	0.000	0.003

Notes. This table reports dynamic differences-in-differences estimates for the relationship between forward linkage exposure and output prices . Estimates are relative to 1972, the year before HCI. All specifications include industry and year effects. Panel A shows estimates using detailed 5-digit level industrial data (1970-1986). Panel B shows estimates using longer, aggregate 4-digit level industrial data (1967-1986). 'Full sample' refers to estimates for full sample of all manufacturing industries; full-sample regressions include controls for HCI sectors (Targeted x Year). 'Non-HCI Sample' refers to sample excluding treated industry. All regressions include controls for both linkage types. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE E.3
DIRECT FORWARD LINKAGE EXPOSURE AND DOWNSTREAM INDUSTRIAL DEVELOPMENT

	Panel A) Five-Digit Panel (1970-1986)										Panel B) Four-Digit Panel (1967-1986)							
	Employment		Num. Plants		Labor Prod.		TFP		Avg. Wages		Employment		Num. Plants		Labor Prod.		Avg. Wages	
	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1967 × Fwd Link											-0.189	-1.530*	0.240	-0.347	0.483	0.406	0.493**	0.368
											(0.615)	(0.844)	(0.567)	(0.595)	(0.444)	(0.783)	(0.240)	(0.405)
1968 × Fwd Link											0.217	-0.917	0.360	-0.222	0.705*	1.045	0.523**	0.521
											(0.526)	(0.777)	(0.478)	(0.535)	(0.397)	(0.771)	(0.224)	(0.347)
1969 × Fwd Link											0.387	-0.516	0.305	-0.500	0.172	0.685	0.322*	0.519
											(0.466)	(0.742)	(0.523)	(0.637)	(0.311)	(0.542)	(0.177)	(0.314)
1970 × Fwd Link	-0.866*	-0.521	-0.510**	-0.468**	0.255	0.0969	-1.070*	-1.794	0.184	0.173	-0.856	-1.226***	-0.312	-0.613**	0.461	0.655	0.207	0.318
	(0.524)	(0.606)	(0.199)	(0.233)	(0.368)	(0.445)	(0.643)	(1.145)	(0.190)	(0.182)	(0.544)	(0.315)	(0.270)	(0.246)	(0.314)	(0.587)	(0.162)	(0.270)
1971 × Fwd Link	-1.245**	-1.141	-0.568***	-0.608**	0.0125	0.180	-0.814	-0.355	-0.0345	0.0605	-0.440	-1.102***	-0.312	-0.450*	0.216	0.516	0.0453	0.0912
	(0.556)	(0.739)	(0.201)	(0.276)	(0.298)	(0.377)	(0.649)	(0.956)	(0.175)	(0.201)	(0.413)	(0.281)	(0.215)	(0.266)	(0.291)	(0.447)	(0.161)	(0.274)
1973 × Fwd Link	-0.291	0.0576	-0.116	0.0700	0.232	0.0506	0.00494	-0.0451	0.0875	0.0914	-0.190	-0.325	0.0994	0.150	-0.0158	0.108	0.129	0.280
	(0.490)	(0.654)	(0.156)	(0.217)	(0.396)	(0.507)	(0.503)	(0.710)	(0.158)	(0.152)	(0.248)	(0.329)	(0.160)	(0.224)	(0.296)	(0.378)	(0.138)	(0.240)
1974 × Fwd Link	-0.259	0.349	0.176	0.548*	0.194	0.126	-0.267	-0.342	0.177	0.137	0.292	-0.118	0.297	0.475	0.240	0.277	0.110	0.131
	(0.442)	(0.545)	(0.196)	(0.314)	(0.300)	(0.427)	(0.450)	(0.654)	(0.175)	(0.205)	(0.266)	(0.441)	(0.222)	(0.325)	(0.371)	(0.669)	(0.205)	(0.350)
1975 × Fwd Link	0.722	2.174*	0.772*	1.865***	0.596	0.274	0.647	-0.0771	0.435	0.244	0.992	1.954*	1.155**	2.189***	-0.397	-0.881	0.0258	-0.109
	(0.806)	(1.254)	(0.412)	(0.650)	(0.476)	(0.516)	(0.659)	(0.723)	(0.309)	(0.270)	(0.664)	(1.104)	(0.443)	(0.637)	(0.395)	(0.622)	(0.217)	(0.322)
1976 × Fwd Link	1.733*	4.255***	1.129***	2.744***	1.067**	1.277*	0.715	0.396	0.819**	0.828**	1.731*	2.981*	1.859***	3.518***	0.295	0.110	0.426*	0.441
	(0.928)	(1.404)	(0.425)	(0.615)	(0.522)	(0.678)	(0.673)	(0.663)	(0.330)	(0.357)	(0.904)	(1.598)	(0.650)	(0.897)	(0.418)	(0.698)	(0.228)	(0.407)
1977 × Fwd Link	2.129**	4.441***	1.254***	2.785***	1.222**	1.120*	1.115	0.228	0.880***	0.726**	1.754*	2.868*	1.931***	3.536***	0.364	0.146	0.375	0.364
	(0.922)	(1.462)	(0.441)	(0.632)	(0.526)	(0.657)	(0.684)	(0.682)	(0.338)	(0.365)	(0.892)	(1.502)	(0.640)	(0.838)	(0.428)	(0.708)	(0.252)	(0.437)
1978 × Fwd Link	1.510*	3.214**	1.168***	2.518***	1.072**	0.754	1.286*	0.558	0.804**	0.467	1.768*	2.790*	2.005***	3.535***	0.505	0.252	0.461*	0.448
	(0.849)	(1.281)	(0.448)	(0.647)	(0.541)	(0.549)	(0.725)	(0.748)	(0.358)	(0.306)	(0.911)	(1.504)	(0.636)	(0.884)	(0.432)	(0.683)	(0.270)	(0.456)
1979 × Fwd Link	1.698*	3.070**	1.366***	2.493***	1.126**	0.850	1.180*	0.474	0.915**	0.440	1.918**	2.724*	2.213***	3.835***	0.735*	0.720	0.511*	0.405
	(0.872)	(1.181)	(0.440)	(0.629)	(0.533)	(0.542)	(0.682)	(0.698)	(0.376)	(0.344)	(0.849)	(1.475)	(0.635)	(0.843)	(0.415)	(0.703)	(0.274)	(0.456)
1980 × Fwd Link	1.629*	3.605**	1.456***	2.908***	1.089**	0.925	0.801	0.325	0.883**	0.429	1.701*	2.804*	2.282***	4.014***	0.632	0.644	0.580*	0.450
	(0.958)	(1.462)	(0.462)	(0.635)	(0.550)	(0.662)	(0.703)	(0.722)	(0.373)	(0.377)	(0.889)	(1.520)	(0.664)	(0.866)	(0.436)	(0.770)	(0.298)	(0.499)
1981 × Fwd Link	1.691*	3.370**	1.564***	2.811***	1.274**	1.001	1.006	0.323	1.069***	0.763*	1.855*	2.947*	2.338***	3.934***	0.608	0.702	0.695**	0.770
	(0.879)	(1.312)	(0.477)	(0.663)	(0.548)	(0.699)	(0.684)	(0.742)	(0.367)	(0.399)	(0.939)	(1.614)	(0.658)	(0.866)	(0.476)	(0.787)	(0.306)	(0.503)
1982 × Fwd Link	1.663*	3.633***	1.540***	3.033***	1.156**	1.035	1.011	0.422	1.064***	0.810**	1.938**	2.964*	2.475***	4.130***	0.663	0.592	0.685**	0.819
	(0.912)	(1.363)	(0.496)	(0.664)	(0.535)	(0.628)	(0.657)	(0.774)	(0.366)	(0.369)	(0.937)	(1.523)	(0.673)	(0.855)	(0.508)	(0.814)	(0.314)	(0.520)
1983 × Fwd Link	0.889	3.128**	1.439***	3.158***	0.641*	0.472	0.720	0.0518	0.626***	0.419	1.712**	1.655	2.471***	3.637***	0.543	0.221	0.539**	0.418
	(0.950)	(1.315)	(0.550)	(0.719)	(0.363)	(0.605)	(0.533)	(0.774)	(0.240)	(0.352)	(0.706)	(1.151)	(0.606)	(0.682)	(0.396)	(0.535)	(0.259)	(0.382)
1984 × Fwd Link	0.568	2.488*	1.342**	3.031***	0.313	-0.190	0.628	-0.0960	0.565**	0.0958	1.861***	1.772	2.568***	3.845***	0.546	0.283	0.584**	0.508
	(1.050)	(1.457)	(0.598)	(0.823)	(0.336)	(0.533)	(0.490)	(0.753)	(0.230)	(0.327)	(0.701)	(1.116)	(0.651)	(0.699)	(0.410)	(0.600)	(0.264)	(0.411)
1985 × Fwd Link	0.460	2.429*	1.363**	3.146***	0.418	-0.164	0.678	-0.0390	0.519**	-0.0108	1.723**	1.610	2.695***	4.000***	0.465	0.179	0.499*	0.320
	(1.054)	(1.466)	(0.613)	(0.844)	(0.349)	(0.551)	(0.502)	(0.758)	(0.235)	(0.327)	(0.730)	(1.140)	(0.662)	(0.712)	(0.404)	(0.573)	(0.268)	(0.407)
1986 × Fwd Link	1.033	3.669**	1.501**	3.464***	0.639*	0.382	0.692	-0.0101	0.668***	0.266	1.914**	1.976*	2.824***	4.124***	0.547	0.396	0.576**	0.496
	(1.123)	(1.624)	(0.634)	(0.832)	(0.371)	(0.623)	(0.504)	(0.769)	(0.242)	(0.341)	(0.770)	(1.166)	(0.676)	(0.686)	(0.415)	(0.548)	(0.260)	(0.398)
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Targeted × Year	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
R^2	0.799	0.811	0.869	0.877	0.753	0.693	0.709	0.677	0.778	0.720	0.855	0.851	0.895	0.900	0.850	0.783	0.856	0.800
Observations	4726	2992	4726	2992	4714	2981	4214	2682	4721	2987	1760	1100	1760	1100	1750	1096	1751	1097
Clusters	278	176	278	176	278	176	264	167	278	176	88	55	88	55	88	55	88	55

Notes. This table reports dynamic differences-in-differences estimates for the relationship between forward linkage exposure and development outcomes . Estimates are relative to 1972, the year before HCI. All specifications include industry and year effects. Panel A shows estimates using detailed 5-digit level industrial data (1970-1986). Panel B shows estimates using longer, aggregate 4-digit level industrial data (1967-1986). 'Full sample' refers to estimates for full sample of all manufacturing industries; full-sample regressions include controls for HCI sectors (Targeted x Year). 'Non-HCI Sample' refers to sample excluding treated industry. All regressions include controls for both linkage types. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE E.4
FORWARD LINKAGE EXPOSURE ON DOWNSTREAM EXPORT PERFORMANCE

	Export outcomes (1965-1986)					
	RCA (Balassa)		RCA (log)		Relative Export Product. (CDK)	
	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only
	(1)	(2)	(3)	(4)	(5)	(6)
1965 × Forward Link	0.826	1.629**	0.00370	0.596	-0.0134	0.0224
	(0.919)	(0.811)	(0.666)	(0.661)	(0.117)	(0.131)
1966 × Forward Link	0.801	1.307*	-0.135	-0.00206	-0.103	-0.106
	(0.850)	(0.776)	(0.632)	(0.659)	(0.100)	(0.113)
1967 × Forward Link	0.535	0.779	-0.0236	0.0132	0.00354	-0.0241
	(0.816)	(0.781)	(0.599)	(0.637)	(0.0902)	(0.101)
1968 × Forward Link	-0.447	-0.497	-0.219	-0.327	0.0240	0.0277
	(0.722)	(0.691)	(0.541)	(0.539)	(0.0909)	(0.110)
1969 × Forward Link	-0.672	-0.674	-0.634	-0.771	-0.0832	-0.121
	(0.688)	(0.730)	(0.457)	(0.487)	(0.0839)	(0.0908)
1970 × Forward Link	-0.371	-0.253	-0.420	-0.400	-0.0466	-0.0332
	(0.546)	(0.573)	(0.389)	(0.419)	(0.0779)	(0.0917)
1971 × Forward Link	-0.169	-0.396	-0.243	-0.478	-0.0644	-0.0947
	(0.581)	(0.592)	(0.369)	(0.321)	(0.0764)	(0.0857)
1973 × Forward Link	0.261	0.0162	0.261	-0.0472	0.0598	0.0515
	(0.398)	(0.453)	(0.291)	(0.338)	(0.0602)	(0.0705)
1974 × Forward Link	0.286	-0.0535	0.591	0.298	0.111	0.0620
	(0.640)	(0.727)	(0.362)	(0.405)	(0.0750)	(0.0776)
1975 × Forward Link	0.0901	-0.0602	0.337	0.249	0.0906	0.106
	(0.657)	(0.728)	(0.367)	(0.390)	(0.0646)	(0.0738)
1976 × Forward Link	1.259*	1.058	0.884**	0.730	0.214***	0.266***
	(0.678)	(0.737)	(0.413)	(0.446)	(0.0676)	(0.0763)
1977 × Forward Link	1.543**	1.119	0.952**	0.674	0.136**	0.162**
	(0.732)	(0.805)	(0.435)	(0.461)	(0.0646)	(0.0754)
1978 × Forward Link	1.344*	1.053	0.919**	0.726	0.0980	0.136*
	(0.741)	(0.812)	(0.440)	(0.471)	(0.0683)	(0.0805)
1979 × Forward Link	1.305*	1.132	1.053**	0.880*	0.142**	0.160*
	(0.762)	(0.850)	(0.450)	(0.490)	(0.0709)	(0.0819)
1980 × Forward Link	1.415*	1.341	1.041**	0.937*	0.128*	0.193**
	(0.776)	(0.865)	(0.454)	(0.485)	(0.0757)	(0.0906)
1981 × Forward Link	1.919**	1.718**	1.328***	1.172**	0.141**	0.231***
	(0.780)	(0.870)	(0.464)	(0.497)	(0.0713)	(0.0846)
1982 × Forward Link	1.818**	1.456	1.329***	1.097**	0.200***	0.216**
	(0.827)	(0.954)	(0.479)	(0.519)	(0.0746)	(0.0851)
1983 × Forward Link	2.075**	1.559	1.544***	1.266**	0.307***	0.428***
	(0.833)	(0.965)	(0.469)	(0.507)	(0.0780)	(0.0891)
1984 × Forward Link	2.350***	1.894**	1.703***	1.376***	0.350***	0.406***
	(0.827)	(0.962)	(0.477)	(0.518)	(0.0770)	(0.0920)
1985 × Forward Link	2.632***	2.070**	1.841***	1.504***	0.318***	0.445***
	(0.847)	(0.967)	(0.489)	(0.528)	(0.0758)	(0.0931)
1986 × Forward Link	2.608***	2.309**	1.777***	1.572***	0.318***	0.433***
	(0.833)	(0.964)	(0.481)	(0.523)	(0.0778)	(0.0951)
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Targeted × Year	Yes	No	Yes	No	Yes	No
R^2	0.599	0.627	0.404	0.424	0.635	0.670
Observations	11418	7612	11418	7612	7858	5173
Clusters	519	346	519	346	467	310

Notes. This table reports shows dynamic differences-in-differences estimates for the relationship between forward linkage exposure and export development. RCA is the conventional Balassa measure of comparative advantage; asinh-transformed RCA is also shown. CDK is a relative export productivity measure. . Estimates are relative to 1972, the year before HCI. All specifications include industry and year effects. 'Full sample' refers to estimates for full sample of all manufacturing industries; full-sample regressions include controls for HCI sectors (Targeted x Year). 'Non-HCI Sample' refers to sample excluding treated industry. All regressions include controls for both linkage types. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE E.5
DIRECT FORWARD LINKAGE EXPOSURE AND DOWNSTREAM INPUT USE

	Panel A) Four-digit Panel (1967-1986)				Panel B) Five-digit Panel (1970-1986)			
	Investment (log)		Intermediate outlays (log)		Investment (log)		Intermediate outlays (log)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1967 × Forward Link	1.782	1.816	0.531	-0.318				
	(1.136)	(1.670)	(0.733)	(1.354)				
1968 × Forward Link	1.480	0.565	1.068*	1.160				
	(1.051)	(1.383)	(0.568)	(1.135)				
1969 × Forward Link	0.830	0.713	0.619	0.361				
	(0.883)	(1.285)	(0.429)	(0.786)				
1970 × Forward Link	0.730	0.941	-0.583	-0.634*	0.364	-0.428	-0.765	-0.685
	(1.070)	(0.823)	(0.695)	(0.335)	(1.097)	(1.062)	(0.804)	(0.639)
1971 × Forward Link	1.122	0.945	-0.106	0.00253	-0.140	0.105	-1.600*	-1.364
	(1.259)	(1.632)	(0.379)	(0.407)	(0.920)	(1.022)	(0.893)	(1.241)
1973 × Forward Link	0.862	0.280	0.331	-0.0152	0.690	0.145	0.000253	0.0619
	(0.598)	(0.749)	(0.341)	(0.454)	(0.881)	(1.204)	(0.709)	(0.908)
1974 × Forward Link	1.743	0.504	0.807	0.875	0.530	0.237	-0.467	-0.545
	(1.090)	(1.242)	(0.729)	(1.421)	(0.889)	(1.091)	(0.773)	(1.285)
1975 × Forward Link	2.467**	3.247*	0.698	1.683	2.457**	3.853**	0.593	1.483
	(1.206)	(1.787)	(0.793)	(1.367)	(1.019)	(1.652)	(1.122)	(1.619)
1976 × Forward Link	2.410*	3.168*	1.622	3.305	1.921*	3.438**	2.108	4.703**
	(1.369)	(1.701)	(1.204)	(2.154)	(1.046)	(1.354)	(1.363)	(1.948)
1977 × Forward Link	2.393**	2.494**	1.739	3.185	3.585***	4.635***	2.828**	5.063**
	(1.028)	(1.199)	(1.175)	(2.088)	(1.023)	(1.745)	(1.366)	(2.102)
1978 × Forward Link	3.021**	2.434*	1.590	2.969	3.126***	3.920***	1.717	3.167*
	(1.232)	(1.314)	(1.155)	(2.052)	(1.005)	(1.398)	(1.244)	(1.753)
1979 × Forward Link	2.307*	0.307	1.857	3.229	2.672**	1.625	2.057	3.246*
	(1.306)	(1.318)	(1.138)	(2.050)	(1.072)	(1.442)	(1.327)	(1.738)
1980 × Forward Link	1.282	0.606	1.559	3.296	2.179**	2.602*	1.941	3.813*
	(1.102)	(1.581)	(1.182)	(2.110)	(1.029)	(1.404)	(1.390)	(2.058)
1981 × Forward Link	2.348**	1.858	1.851	3.740	2.433**	2.676*	1.857	3.362*
	(0.970)	(1.196)	(1.306)	(2.286)	(1.005)	(1.504)	(1.306)	(1.869)
1982 × Forward Link	2.696**	1.232	1.601	3.171	2.337**	3.110**	1.638	3.471*
	(1.111)	(1.151)	(1.203)	(2.068)	(1.115)	(1.474)	(1.311)	(1.819)
1983 × Forward Link	3.198***	2.585**	1.197*	1.458	1.218	2.244	0.371	2.753*
	(1.050)	(0.986)	(0.714)	(1.202)	(1.312)	(1.759)	(1.163)	(1.643)
1984 × Forward Link	3.605***	2.462**	1.362*	1.604	1.500	1.863	-0.0403	1.872
	(1.184)	(1.173)	(0.698)	(1.139)	(1.311)	(1.808)	(1.225)	(1.740)
1985 × Forward Link	2.956***	2.652**	1.242	1.547	1.198	2.556	-0.218	1.788
	(0.997)	(1.204)	(0.777)	(1.218)	(1.302)	(1.754)	(1.225)	(1.700)
1986 × Forward Link	3.063***	2.701**	1.588*	1.941	1.956	3.658*	0.648	3.564*
	(1.124)	(1.136)	(0.835)	(1.283)	(1.360)	(1.881)	(1.374)	(2.086)
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Targeted × Year	Yes	No	Yes	No	Yes	No	Yes	No
R^2	0.878	0.870	0.853	0.837	0.794	0.794	0.785	0.786
Observations	1754	1100	1760	1100	4713	2988	4726	2992
Clusters	88	55	88	55	278	176	278	176
1st Joint Test of Pre-Trend (F-Test)	0.732	0.573	1.329	2.252	0.172	0.133	1.623	0.712
1st Joint Test of Pre-Trend (p-values)	0.601	0.720	0.260	0.062	0.842	0.876	0.199	0.492
2nd Joint Test of Pre-Trend (F-Test)	0.417	4.166	0.916	3.084	0.111	2.777	0.872	1.681
2nd Joint Test of Pre-Trend (p-values)	0.836	0.003	0.475	0.016	0.895	0.065	0.419	0.189
Sample	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI	Full	Non-HCI

Notes. This table reports dynamic differences-in-differences estimates for the relationship between forward linkage exposure and input use and investment. (log) Intermediate input outlays are real total input material costs. (log) Investment is real total gross fixed capital investment. . Estimates are relative to 1972, the year before HCI. All specifications include industry and year effects. Panel A shows estimates using detailed 5-digit level industrial data (1970-1986). Panel B shows estimates using longer, aggregate 4-digit level industrial data (1967-1986). 'Full sample' refers to estimates for full sample of all manufacturing industries; full-sample regressions include controls for HCI sectors (Targeted x Year). 'Non-HCI Sample' refers to sample excluding treated industry. All regressions include controls for both linkage types. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE F.1
DIRECT BACKWARD LINKAGE EXPOSURE AND UPSTREAM OUTPUT

	Outcome: Real value added (log)			
	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only
	(1)	(2)	(3)	(4)
1967 × Backward Link			0.527	1.915
			(0.519)	(1.540)
1968 × Backward Link			0.692	2.036
			(0.549)	(1.522)
1969 × Backward Link			0.655	1.610
			(0.529)	(1.501)
1970 × Backward Link	0.397*	0.588**	0.0913	0.645
	(0.226)	(0.241)	(0.287)	(0.448)
1971 × Backward Link	-0.224	-0.203	-0.0308	-0.0627
	(0.283)	(0.319)	(0.245)	(0.496)
1973 × Backward Link	-0.256	-0.435	-0.152	-1.120
	(0.313)	(0.355)	(0.368)	(0.766)
1974 × Backward Link	-0.120	-0.199	0.430*	0.223
	(0.312)	(0.366)	(0.251)	(0.666)
1975 × Backward Link	0.321	0.561	-0.551	-1.154
	(0.353)	(0.385)	(0.375)	(0.834)
1976 × Backward Link	0.336	0.709**	-0.0591	-0.435
	(0.317)	(0.308)	(0.415)	(0.917)
1977 × Backward Link	0.101	0.502	-0.267	-0.487
	(0.376)	(0.394)	(0.456)	(1.009)
1978 × Backward Link	0.468	0.825*	-0.247	-0.602
	(0.419)	(0.464)	(0.470)	(1.110)
1979 × Backward Link	0.372	0.809*	-0.168	-0.573
	(0.422)	(0.458)	(0.467)	(1.098)
1980 × Backward Link	0.0986	0.502	-0.409	-1.019
	(0.462)	(0.497)	(0.500)	(1.088)
1981 × Backward Link	0.155	0.498	-0.522	-1.528
	(0.454)	(0.514)	(0.561)	(1.116)
1982 × Backward Link	0.0970	0.490	-0.573	-1.371
	(0.426)	(0.460)	(0.622)	(1.212)
1983 × Backward Link	-0.120	0.167	-0.756	-2.140*
	(0.414)	(0.436)	(0.605)	(1.267)
1984 × Backward Link	-0.109	0.178	-0.696	-1.951
	(0.322)	(0.316)	(0.596)	(1.299)
1985 × Backward Link	-0.424	-0.215	-0.574	-1.747*
	(0.456)	(0.499)	(0.537)	(0.884)
1986 × Backward Link	-0.346	-0.120	-0.647	-2.088**
	(0.497)	(0.550)	(0.570)	(1.030)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
Targeted X Year	Yes	No	Yes	No
R^2	0.778	0.768	0.848	0.822
Observations	4720	2986	1750	1096
Clusters	278	176	88	55
1st Joint Test of Pre-Trend (F-Test)	1.405	1.358	1.010	3.446
1st Joint Test of Pre-Trend (p-values)	0.247	0.260	0.417	0.009
2nd Joint Test of Pre-Trend (F-Test)	1.670	6.845	0.531	0.992
2nd Joint Test of Pre-Trend (p-values)	0.190	0.001	0.752	0.431

Notes. This table reports dynamic differences-in-differences estimates for the relationship between backward linkage exposure and output: real value added . Estimates are relative to 1972, the year before HCI. All specifications include industry and year effects. Panel A shows estimates using detailed 5-digit level industrial data (1970-1986). Panel B shows estimates using longer, aggregate 4-digit level industrial data (1967-1986). 'Full sample' refers to estimates for full sample of all manufacturing industries; full-sample regressions include controls for HCI sectors (Targeted x Year). 'Non-HCI Sample' refers to sample excluding treated industry. All regressions include controls for both linkage types. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE F.2
DIRECT BACKWARD LINKAGE EXPOSURE AND UPSTREAM PRICES

	Outcome: Output prices (log)			
	Full Sample	Non-HCI Only	Full Sample	Non-HCI Only
	(1)	(2)	(3)	(4)
1967 × Backward Link			-0.100	-0.385***
			(0.0779)	(0.125)
1968 × Backward Link			-0.170**	-0.475***
			(0.0786)	(0.140)
1969 × Backward Link			-0.0910**	-0.238***
			(0.0437)	(0.0813)
1970 × Backward Link	-0.0158**	-0.0279***	-0.00535	-0.114**
	(0.00739)	(0.00501)	(0.0382)	(0.0496)
1971 × Backward Link	0.0315***	0.0351***	0.0538**	0.108***
	(0.00491)	(0.00569)	(0.0223)	(0.0321)
1973 × Backward Link	-0.0310***	-0.0499***	-0.0390	-0.150***
	(0.00785)	(0.00587)	(0.0367)	(0.0382)
1974 × Backward Link	0.00734	-0.0276**	0.0182	-0.0389
	(0.0221)	(0.0117)	(0.0604)	(0.0896)
1975 × Backward Link	0.0191	0.00640	0.0246	0.0821
	(0.0165)	(0.0125)	(0.0585)	(0.0928)
1976 × Backward Link	0.0309*	0.0276**	0.0106	0.157
	(0.0161)	(0.0133)	(0.0657)	(0.105)
1977 × Backward Link	0.0513***	0.0446***	0.0624	0.269**
	(0.0170)	(0.0128)	(0.0971)	(0.127)
1978 × Backward Link	0.0219	0.00282	0.0667	0.164
	(0.0184)	(0.0119)	(0.0963)	(0.135)
1979 × Backward Link	0.0335	0.00449	0.126	0.205
	(0.0221)	(0.0130)	(0.103)	(0.159)
1980 × Backward Link	0.182***	0.149***	0.361*	0.725***
	(0.0329)	(0.0223)	(0.188)	(0.250)
1981 × Backward Link	0.277***	0.266***	0.477*	1.120***
	(0.0336)	(0.0289)	(0.245)	(0.333)
1982 × Backward Link	0.188***	0.170***	0.343*	0.849***
	(0.0301)	(0.0221)	(0.203)	(0.291)
1983 × Backward Link	0.139***	0.108***	0.282	0.676**
	(0.0314)	(0.0219)	(0.184)	(0.261)
1984 × Backward Link	0.174***	0.153***	0.323	0.829***
	(0.0305)	(0.0231)	(0.202)	(0.289)
1985 × Backward Link	0.208***	0.200***	0.372*	0.961***
	(0.0296)	(0.0244)	(0.222)	(0.314)
1986 × Backward Link	0.212***	0.212***	0.360*	1.011***
	(0.0278)	(0.0242)	(0.213)	(0.325)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
Targeted X Year	Yes	No	Yes	No
R^2	0.960	0.947	0.965	0.964
Observations	4721	2987	1751	1097
Clusters	278	176	88	55
1st Joint Test of Pre-Trend (F-Test)	5.806	2.900	0.976	1.995
1st Joint Test of Pre-Trend (p-values)	0.003	0.058	0.437	0.094
2nd Joint Test of Pre-Trend (F-Test)	43.815	47.119	11.597	4.173
2nd Joint Test of Pre-Trend (p-values)	0.000	0.000	0.000	0.003

Notes. This table reports dynamic differences-in-differences estimates for the relationship between backward linkage exposure and output or real value added . Estimates are relative to 1972, the year before HCI. All specifications include industry and year effects. Panel A shows estimates using detailed 5-digit level industrial data (1970-1986). Panel B shows estimates using longer, aggregate 4-digit level industrial data (1967-1986). 'Full sample' refers to estimates for full sample of all manufacturing industries; full-sample regressions include controls for HCI sectors (Targeted x Year). 'Non-HCI Sample' refers to sample excluding treated industry. All regressions include controls for both linkage types. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

TABLE F.3
TOTAL BACKWARD LINKAGE EXPOSURE AND UPSTREAM OUTPUT

	Outcome: Value added (log)			
	Full sample	Non-HCI only	Full sample	Non-HCI only
	(1)	(2)	(3)	(4)
1967 × Backward Link			0.515	1.199
			(0.489)	(0.962)
1968 × Backward Link			0.571	1.255
			(0.499)	(0.961)
1969 × Backward Link			0.543	1.126
			(0.504)	(1.011)
1970 × Backward Link	0.168	0.270**	-0.0195	0.0405
	(0.121)	(0.124)	(0.152)	(0.314)
1971 × Backward Link	-0.123	-0.113	-0.0780	-0.161
	(0.139)	(0.161)	(0.143)	(0.303)
1973 × Backward Link	-0.181	-0.248	-0.266	-0.775**
	(0.154)	(0.180)	(0.265)	(0.375)
1974 × Backward Link	-0.0411	-0.0635	0.155	0.0810
	(0.161)	(0.191)	(0.236)	(0.527)
1975 × Backward Link	0.113	0.245	-0.333	-0.608*
	(0.189)	(0.204)	(0.223)	(0.357)
1976 × Backward Link	0.153	0.349**	-0.196	-0.467
	(0.165)	(0.162)	(0.255)	(0.449)
1977 × Backward Link	0.0225	0.230	-0.280	-0.558
	(0.197)	(0.204)	(0.269)	(0.474)
1978 × Backward Link	0.165	0.338	-0.300	-0.647
	(0.223)	(0.242)	(0.288)	(0.499)
1979 × Backward Link	0.128	0.322	-0.275	-0.648
	(0.224)	(0.238)	(0.289)	(0.495)
1980 × Backward Link	-0.0112	0.188	-0.360	-0.766
	(0.247)	(0.265)	(0.298)	(0.464)
1981 × Backward Link	0.0132	0.179	-0.426	-0.952**
	(0.238)	(0.265)	(0.333)	(0.455)
1982 × Backward Link	-0.0163	0.173	-0.414	-0.883*
	(0.226)	(0.242)	(0.338)	(0.477)
1983 × Backward Link	-0.148	0.00481	-0.510	-1.175***
	(0.227)	(0.243)	(0.345)	(0.421)
1984 × Backward Link	-0.138	0.0112	-0.512	-1.172***
	(0.178)	(0.178)	(0.352)	(0.425)
1985 × Backward Link	-0.322	-0.212	-0.343	-0.828***
	(0.252)	(0.280)	(0.256)	(0.208)
1986 × Backward Link	-0.275	-0.149	-0.410	-0.981***
	(0.272)	(0.305)	(0.279)	(0.220)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
Targeted X Year	Yes	No	Yes	No
R^2	0.779	0.770	0.852	0.835
Observations	4720	2986	1750	1096
Clusters	278	176	88	55
1st Joint Test of Pre-Trend (F-Test)	1.479	3.048	0.666	1.887
1st Joint Test of Pre-Trend (p-values)	0.230	0.050	0.651	0.112
2nd Joint Test of Pre-Trend (F-Test)	0.964	3.685	0.673	3.864
2nd Joint Test of Pre-Trend (p-values)	0.383	0.027	0.645	0.005

Notes. This table reports dynamic differences-in-differences estimates for the relationship between backward linkage exposure and output or real value added . Estimates are relative to 1972, the year before HCI. All specifications include industry and year effects. Panel A shows estimates using detailed 5-digit level industrial data (1970-1986). Panel B shows estimates using longer, aggregate 4-digit level industrial data (1967-1986). 'Full sample' refers to estimates for full sample of all manufacturing industries; full-sample regressions include controls for HCI sectors (Targeted x Year). 'Non-HCI Sample' refers to sample excluding treated industry. Standard errors are clustered at the industry level. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

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