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**Article**

## East Asian mysteries: Past and present

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tant role in aggregate (that is, industry) productivity growth. My recent work with Lucia Foster and C. J. Krizan suggests that reallocation plays a significant role in the changes in productivity growth at the industry level.<sup>7</sup> While measurement-error problems cloud the results somewhat, two aspects of the results clearly point in this direction. First, our results show a large contribution from the replacement of less productive exiting plants with more productive entering plants when productivity changes are measured over five- or ten-year horizons. Second, the contribution of net entry is disproportionate—that is, the contribution of net entry to productivity growth exceeds that which would be predicted by simply examining the share of activity accounted for by entering and exiting plants. These results are particularly striking for selected service-sector industries that we investigate. There is tremendous reallocation of activity across service

establishments, with much of this reallocation generated by entry and exit. The productivity growth in the selected service industries we examine is dominated by entry and exit effects. For example, the primary source of productivity growth between 1987 and 1992 for the automobile repair shop industry is accounted for by the exit of very low productivity plants.

<sup>1</sup> For an overview of this work, see S. J. Davis and J. C. Haltiwanger, "Gross Job Flows," in *Handbook of Labor Economics*, O. Ashenfelter and D. Card, eds., Amsterdam: North Holland, forthcoming; and S. J. Davis, J. C. Haltiwanger, and S. Schuh, *Job Creation and Destruction*, Cambridge: MIT Press, 1996.

<sup>2</sup> See, for example, R. J. Caballero and M. Hammour, "On the Timing and Efficiency of Creative Destruction," NBER Working Paper No. 4768, June 1994; published in *Quarterly Journal of Economics*, 111 (August 1996), pp. 805–52; and D. Mortensen and C. Pissarides, "New Developments in Models of Search in the Labor Market," in *Handbook of Labor Economics*, O. Ashenfelter and D. Card,

eds. Amsterdam: North Holland, forthcoming.

<sup>3</sup> See, for example, S. J. Davis and J. C. Haltiwanger, "Driving Forces and Employment Fluctuations: New Evidence and Alternative Explanations," NBER Working Paper No. 5775, September 1996.

<sup>4</sup> R. J. Caballero, E. M. Engel, and J. C. Haltiwanger, "Aggregate Employment Dynamics: Building from Microeconomic Evidence," NBER Working Paper No. 5042, February 1995; published in *American Economic Review*, 87 (March 1997), pp. 115–37.

<sup>5</sup> R. Cooper, J. C. Haltiwanger, and L. Power, "Machine Replacement and the Business Cycle: Lumps and Bumps," NBER Working Paper No. 5260, September 1995; forthcoming in *American Economic Review*.

<sup>6</sup> R. J. Caballero, E. M. Engel, and J. C. Haltiwanger, "Plant-Level Adjustment and Aggregate Investment Dynamics," *Brookings Papers on Economic Activity*, 2 (1995), pp. 1–39.

<sup>7</sup> L. Foster, J. C. Haltiwanger, and C. J. Krizan, "Aggregate Productivity Growth: Lessons from Microeconomic Evidence," NBER Working Paper No. 6803, November 1998.

## East Asian Mysteries: Past and Present

Dani Rodrik\*

East Asia has long served as a Rorschach test for economists. The region's spectacular growth from the 1960s until the crash of 1997 spawned diverse interpretations that had as much to do with the preoccupations of the analyst as with the realities on the ground.

Observers with a favorable take on industrial policy saw in East Asia a

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confirmation of their theories on the importance of state intervention. Advocates of free markets saw instead the triumph of small government and unfettered private initiative. Trade economists viewed it as a miracle based on outward orientation, labor economists stressed the early emphasis on education, and macroeconomists pointed to the region's fiscal conservatism. Growth theorists debated the respective contributions of human capital, physical capital, and technology adoption.<sup>1</sup>

Interpretations of the recent crisis have had a similar quality. Critics of state-led industrialization have blamed East Asian governments for encouraging excessive investments with low marginal returns. Those

who worry about moral hazard have focused on "crony capitalism." Economists skeptical of the rationality of international capital markets have viewed the crisis as yet another episode in the boom-and-bust saga of financial markets.

One reason that East Asia has something to offer to all persuasions is the region's diversity. The attitude toward economic policy ranges from the almost laissez-faire (Hong Kong) to the highly interventionist (South Korea, until recently). In terms of the rule of law, the region spans almost the entire feasible range, from Indonesia at one end to Singapore at the other. Japan and Korea are homogeneous societies, while the populations of Indonesia and Malaysia are

ethnically diverse. Nor has growth performance been uniform: between 1960 and 1994, output per worker expanded at an average annual rate of 5.2 percent in Taiwan, compared with 2.9 percent in Indonesia.<sup>2</sup> Whether it is the miracle or the recent crisis that we are trying to explain, these facts suggest that there is no single East Asian story.

## Growth in South Korea and Taiwan

In 1960 South Korea and Taiwan were as poor as many African countries are today. Their remarkable transformation in the three decades that followed is often portrayed as an example of what export-led growth can achieve in countries that chose to open themselves to international trade. That these two countries, along with others in the region, produced sustained export booms is not controversial. Yet there is much more to their story than outward orientation.

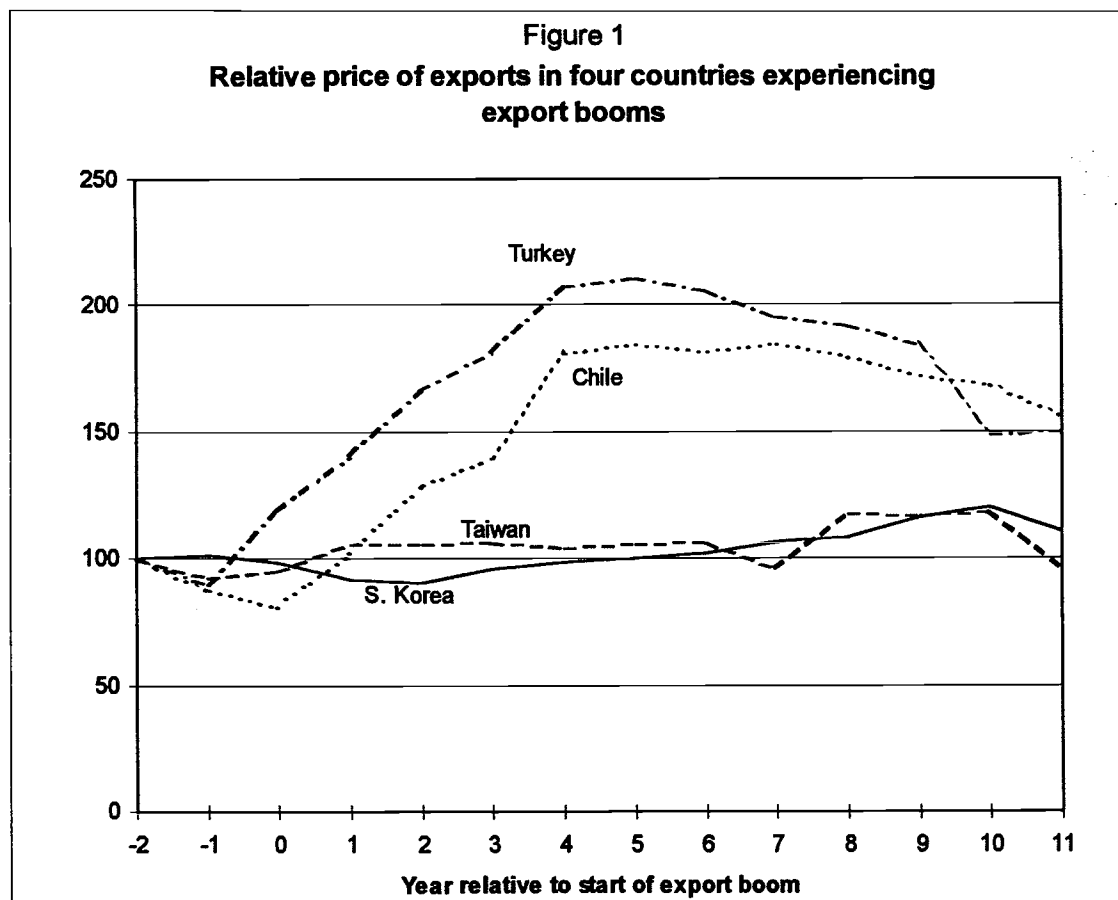
Figure 1 shows the relative price of exportable goods in four countries that experienced export booms: South Korea, Taiwan, Turkey, and Chile.<sup>3</sup> Because the timing of the booms differ (early 1960s in Korea and Taiwan, early 1980s in Turkey, and late 1980s in Chile), I have aligned each country's series relative to the start of their respective booms. As the figure reveals, in Turkey and Chile the export booms were accompanied by

an increase in the relative profitability of exports of 50 percent or more. By contrast, the Korean and Taiwanese export booms took place despite the absence of a significant change in relative prices. This evidence makes it hard to ascribe East Asian export performance to export incentives, whether in the form of trade liberalization, exchange-rate depreciation, or export subsidies.<sup>4</sup> Moreover, since export/GDP ratios were exceptionally low in both countries early on—below 5 percent in South Korea in 1960 and barely above 10 percent in Taiwan—it is difficult to imagine how exports could account for the takeoff that these economies experienced in the early 1960s.

I interpret the growth experience of the two countries differently, as the result of a coherent investment

strategy that was put in place by their governments in the late 1950s (Taiwan) and early 1960s (Korea). We start by noting that both economies benefited from initial levels of schooling that were high relative to the capital stock. The “latent” return to capital, we can presume, was therefore high. For reasons having to do with market failures—among which coordination failures strike me as particularly plausible—private investment needed a push before the latent returns would be realized.<sup>5</sup>

Both governments gave investment a big push. By the end of the 1950s in Taiwan and the early 1960s in Korea, economic growth had become a top priority for the leadership of the two countries. In Taiwan an important turning point was the Nineteen-Point Reform Program instituted in 1960, which contained a



wide range of tax subsidies for investment and signaled a major shift in government attitudes toward investment. In Korea the chief form of investment subsidy was the extension of credit to large business groups at negative real interest rates. In addition to providing subsidies, the Korean and Taiwanese governments also played a much more direct, hands-on role by organizing private entrepreneurs into investments that they may not have otherwise made. Finally, public enterprises played a very important role in enhancing the profitability of private investment in both countries by ensuring that key inputs were available locally for private producers downstream. Not only did public enterprises account for a large share of manufacturing output and investment in each country, but their importance actually increased during the critical takeoff years of the 1960s.

The result was a discrete jump in the profitability of private investment, and an investment boom that lasted three decades. The rise in exports was a counterpart to the increased demand for capital goods, most of which had to be imported.<sup>6</sup>

## The Hong Kong "Exception"

The story of Singapore's development is not unlike that of Korea and Taiwan. There, too, a government strongly committed to economic growth greatly subsidized private investment—and foreign investment in particular—after 1968. But what about Hong Kong? Doesn't Hong Kong's experience with *laissez-faire* invalidate claims about the importance of government policies in support of industrialization?

Hong Kong's experience is distinctive in the region for another reason as well: Hong Kong is the region's only country that has not had a sus-

tained increase in investment (as a share of GDP) since 1960. In the early 1960s Hong Kong's investment rate fluctuated between 20 and 25 percent (according to Penn World Tables data), well above the levels for Singapore, South Korea, and Taiwan. By the late 1970s all of these countries had surpassed Hong Kong's investment rate, which had not changed at all. The cost (or perhaps the benefit) of not having an industrial policy was a flat investment ratio.

The evidence can therefore be read in one of two ways. One interpretation is that the pro-investment industrial policies of the interventionist countries (South Korea, Taiwan, and Singapore) were on balance harmful, and resulted in large-scale inefficiencies in resource allocation and in marginal investments with low return. These consequences, according to this line of reasoning, in turn show up in comparatively low levels of total factor productivity growth.<sup>7</sup> Another interpretation is that Hong Kong was already a rich country in 1960—with a per capita GDP of 2,200 in 1985 purchasing power parity (PPP) dollars, a level that South Korea and Taiwan would not reach for at least a decade—and therefore much less in need of big-push policies of the type needed in the region's poorer countries. Hong Kong's transition to high investment appears to have taken place during the 1950s, when the island was a haven of stability in the region and a source of attraction for capital flight from China. Under this interpretation, the catch-up process would have been greatly delayed if the other governments of the region—*not* facing similar advantages—had emulated Hong Kong's *laissez-faire* policies nonetheless.<sup>8</sup>

Of course a third possibility is that both of these hypotheses are partially right. Perhaps an initial big push was

required to override coordination and other market failures, but it was taken too far. Perhaps activist policies were maintained even though they had outlived their usefulness. The Asian financial crisis of 1997 lends some surface plausibility to this story. But we note that most countries of the region, including South Korea, had been liberalizing their economies at least since the 1980s. As I later suggest, it is equally plausible that the crisis was the product of the liberalization of these economies.

## Varieties of Crises

In 1979–80 an already-overheated Korean economy was hit by several shocks: an oil price hike, a domestic harvest failure, and a political crisis stemming from the assassination of President Chung Hee Park. The current account deficit stood at 6.8 percent of GDP in 1979 and was to grow to 8.8 percent in 1980. The government was forced to go to the International Monetary Fund for a stand-by loan, and it implemented a major stabilization package in January 1980. The package had three components: a devaluation of the won by 17 percent, tightening of monetary and fiscal policies (which, however, was reversed later in the year as the magnitude of the recession became clearer), and a program aimed at improving energy efficiency in the economy. In 1980 the Korean economy contracted by 5 percent, but growth resumed thereafter, reaching 7 percent in 1981 and staying high throughout the 1980s and 1990s.

The 1980 stabilization was so successful that when the Korean economy was hit by the Asian financial crisis few observers reflected back on this earlier brush with balance-of-payments crisis. By many objective measures the situation had been more difficult in 1979–80: the current account deficit was larger and the

domestic economic and political shocks more severe. Yet the consequences of the current crisis have been more momentous: Korea's GDP has fallen by 7 percent in 1998, and the slide is expected to continue (albeit at a slower pace) in 1999.

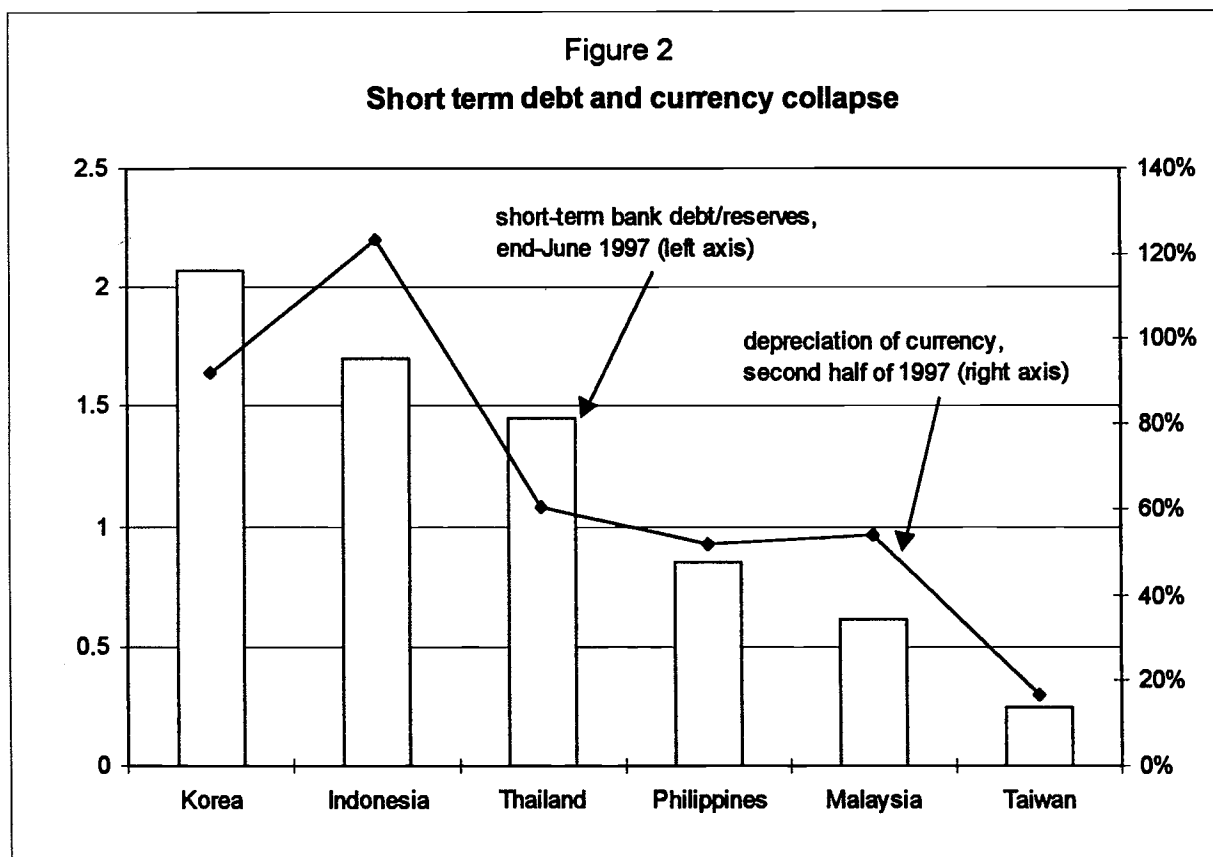
One major difference appears to be the role played by short-term capital flows. In 1979 Korea's short-term debt was around a quarter of its total external debt and fell short of the stock of foreign reserves. In 1997 short-term debt dominated its external liabilities to foreign banks, and the ratio of short-term debt to reserves stood well above 2. What is special about short-term debt in this context is its reversibility and therefore its potential to create panic. As Roberto Chang and Andres Velasco emphasize, the Asian crisis followed the now-typical pattern whereby financial liberalization results in a maturity mismatch between foreign

assets and liabilities, eventually giving way to creditor panic.<sup>9</sup> The buildup of short-term debt that financial and capital-account liberalization engendered during the 1990s left the region vulnerable to a reversal in market sentiment and the possibility of stampede. It is perhaps this mistake—more than any other single cause—that accounts for the Asian financial crisis.

This is well illustrated by Figure 2. The figure shows the exposure to short-term debt of six East Asian countries just prior to the crisis (in mid-1997) and the cumulative depreciation of their currencies in the six months following the devaluation of the Thai baht (that is, during the second half of 1997). The three countries worst affected by the crisis (Thailand, Indonesia, and Korea) all had short-term bank debt exceeding their reserves. None was so exposed to short-term bank debt. Moreover,

there is a close correlation between the extent of currency collapse experienced by each country and its short-term debt/reserves ratio. The more short-term debt a country had, the greater the penalty it received from currency markets.

There is another interesting regularity revealed by Figure 2. Indonesia and Malaysia have fared worse (not only in terms of currency collapse but also in terms of economic decline) than would have been predicted on the basis of their short-term debt exposure alone. These two countries are the least democratic of the six in the figure. Thus a lesson from the crisis is that democratic societies tend to be better at dealing with the consequences of external shocks. The case of Indonesia, where policy-making was paralyzed by riots, anarchy, and the ultimate downfall of the Suharto regime, illustrates the point in extremis.



## The Virtues of Democracy

While democratic institutions are relatively recent in Thailand and Korea, they helped these two countries adjust to the crisis in a number of ways. First, they facilitated a smooth transfer of power from a discredited set of politicians to a new group of government leaders. Second, democracy imposed mechanisms of participation, consultation, and bargaining, enabling policymakers to fashion the consensus needed to undertake the necessary policy adjustments decisively. Third, because democracy provides for institutionalized mechanisms of "voice," in particular by giving labor a seat at the table, the Korean and Thai institutions obviated the need for riots, protests, and other kinds of disruptive actions by affected groups. Finally, democracy lowered popular support for noncooperative behavior by the society's disenchanted groups.

Systematic evidence from an earlier period of external turbulence—the late 1970s and early 1980s—confirms the importance of democracy in fostering economic adjustment. Contrary to conventional wisdom, countries with closed political systems and autonomous executives proved worse at managing the consequences of the

oil shocks of the 1970s than countries in which non-elites had access to political institutions.<sup>10</sup> These findings, along with evidence from the recent Asian crisis, underscore the importance of having sound domestic institutions of conflict management in an era of global economic turmoil.

<sup>1</sup> For a critique of some of the prevailing interpretations, see D. Rodrik, "King Kong Meets Godzilla: The World Bank and the East Asian Miracle," in *Miracle or Design? Lessons from the East Asian Experience*, A. Fishlow et al., eds. Washington, D.C.: Overseas Development Council, Policy Essay No. 11, 1994.

<sup>2</sup> See D. Rodrik, "TFPG Controversies, Institutions, and Economic Performance in East Asia," NBER Working Paper No. 5914, February 1997; published in *The Institutional Foundation of Economic Development in East Asia*, Y. Hayami and M. Aoki, eds. London: Macmillan, 1998. Here I show that the variation in economic performance within the region is well explained by three "exogenous" determinants: initial income, initial education, and quality of institutions (itself a function of ethnic fragmentation and income inequality).

<sup>3</sup> The figure is taken from D. Rodrik, "The 'Paradoxes' of the Successful State" (Alfred Marshall Lecture), *European Economic Review* 41 (April 1997), pp. 411–42.

<sup>4</sup> For a more extensive discussion and a reconciliation with the standard account, see D. Rodrik, "Getting Interventions Right: How South Korea and Taiwan

Grew Rich," NBER Working Paper No. 4964, December 1994; published in *Economic Policy*, 20 (1995).

<sup>5</sup> D. Rodrik, "Getting Interventions Right," D. Rodrik, "Coordination Failures and Government Policy: A Model with Applications to East Asia and Eastern Europe," *Journal of International Economics* 40 (February 1996), pp. 1–22 (revised version of "Do Low-Income Countries Have a High Wage Option?," NBER Working Paper 4451, December 1994).

<sup>6</sup> I discuss the conditions under which this process can generate an export boom without a corresponding change in relative prices in favor of exportable goods in D. Rodrik, "Trade Strategy, Exports, and Investment: Another Look at East Asia," NBER Working Paper No. 5339, November 1995; published in *Pacific Economic Review* 2 (February 1997), pp. 1–24.

<sup>7</sup> An interpretation of Singapore along these lines is provided in A. Young, "A Tale of Two Cities: Factor Accumulation and Technical Change in Hong Kong and Singapore," in *NBER Macroeconomics Annual*, 7, O. Blanchard and S. Fischer, eds., Cambridge, Mass.: MIT Press, 1992.

<sup>8</sup> D. Rodrik, "TFPG Controversies, Institutions, and Economic Performance in East Asia."

<sup>9</sup> R. Chang and A. Velasco, "The Asian Liquidity Crisis," NBER Working Paper No. 6796, November 1998.

<sup>10</sup> D. Rodrik, "Where Did All the Growth Go? External Shocks, Social Conflict and Growth Collapses," NBER Working Paper No. 6350, January 1998.

