

Does Openness Generate Growth? Reconciling the Experiences of Mexico and China

Timothy J. Kehoe

University of Minnesota,
Federal Reserve Bank of Minneapolis,
and National Bureau of Economic Research

Kim J. Ruhl

Stern School of Business, New York University

11 November 2011

Should economists encourage outward-oriented reforms by promising economic growth? Following ambitious reforms during 1985–1995, Mexican growth has been modest, at best. In contrast, after opening to trade and foreign investment, China has had spectacular growth. We argue that there is no clear relationship—in the data or the theory—between openness policies and growth. We find that some of the frictions linked to slow growth in Mexico—notably, an inefficient financial sector—are also present in China. Why have these frictions inhibited growth in Mexico but not in China? We argue that openness can promote growth but that, as a country develops, frictions like financial inefficiencies have a larger impact. As China continues to develop, absent reforms, growth will decelerate, perhaps leaving China at a level of development below that of Mexico. In fact, recent signs indicate the danger of a growth slow down in China.

Does opening to international trade and foreign investment generate economic growth? A large empirical literature employs regressions with a country's growth rate as the dependent variable and some measure of openness among the independent variables. Although some researchers find that growth is positively correlated with the share of trade in GDP, Rodríguez and Rodrik (2001) point out that the trade share is not a direct measure of policy. When the dependent variable is a measure of policy, the results are ambiguous and highly sensitive to the exact specification of the regression: Some researchers find large and significantly positive effects of openness on growth; others find no significant effects; still others find that openness is related to growth for countries at some level of development but

not for other countries. Edwards (1989) surveys the early literature; Kehoe and Ruhl (2010) survey more recent research.

Here we compare Mexico and China, large, less-developed countries that pursued openness policies. Following its 1982–1985 crisis, the Mexican government implemented a series of reforms that culminated in the North American Free Trade Agreement in 1994. Starting in the 1990s, China implemented a series of reforms that culminated in accession to the World Trade Organization in 2001. Figure 1 shows that the evolution of the trade shares of Mexico 1990–2000 and of China 1998–2008 have been remarkably similar. Nonetheless, growth in real GDP per working-age person in Mexico averaged only 1.0 percent per year 1990–2000, while that in China averaged 8.3 percent per year 1998–2008. (We use working-age population because it is the appropriate measure of the potential labor force. It may not be appropriate for welfare measurement.)

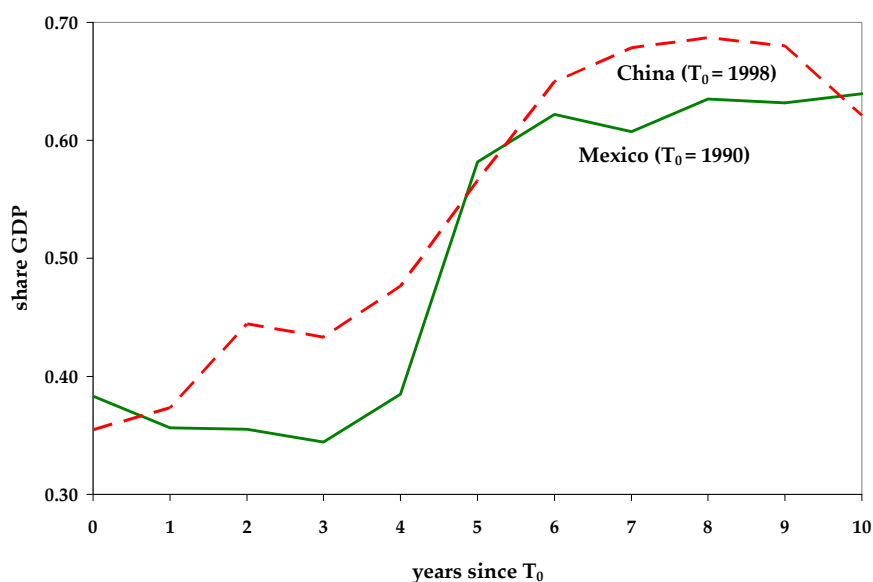


Figure 1: (exports+imports)/GDP. Source: Kehoe and Ruhl (2010); all data available at <http://www.econ.umn.edu/~tkehoe/data.html>

Should we have expected similar growth in China and Mexico following their reforms? The evidence from the empirical literature on trade and growth is mixed. Perhaps more surprisingly, theoretical predictions regarding trade and growth are also ambiguous. The workhorse models of trade — Heckscher-Ohlin models, Ricardian models, and models with imperfect competition — do not yield a clear relationship between openness and real GDP. As Bajona, Gibson, Kehoe, and Ruhl (2011) show, in these models, real GDP can increase, can remain unchanged, and can even decrease after tariffs are

reduced. The ambiguity in measured real GDP does not imply an ambiguous change in welfare, however. Openness increases welfare, and Kehoe and Ruhl (2010) show that welfare has increased in both Mexico and China.

If not trade policy, what?

Researchers commonly conclude that Mexico's slow growth, despite its reforms, is a consequence of its inefficient financial system and lack of contract enforcement. Bergoeing, Kehoe, Kehoe, and Soto (2002) compare the growth trajectories of Chile and Mexico following the financial crises they both suffered in the 1980s; Chile recovered rapidly while Mexico stagnated. They conclude that the crucial differences between policies in Mexico and Chile are those related to the banking system and to bankruptcy proceedings. Krueger and Tornell (1999) also find that the lack of credit, particularly in the nontradable goods sector, was responsible for the poor growth in Mexico.

Identifying an inefficient financial system and lack of contract enforcement as the factors that retard Mexican growth generates a puzzle because China also suffers from these problems. China has been able to grow with a poorly functioning financial and legal system (Rawski 1994, Allen, Qian, and Qian 2005). Studying the Chinese experience, Guariglia and Poncet (2008) go so far as to question whether an efficient financial system is necessary for growth.

What factors have driven growth in China, and are these factors present in Mexico? Studies of China's output growth, such as Brandt and Zhu (2009) and Hsieh and Klenow (2009), conclude that productivity growth arising from the reallocation of resources across firms is key. It would be tempting to hypothesize that the mechanisms that generated productivity growth in manufacturing in China were not present in Mexico, but López-Córdova (2003) finds that trade and foreign investment reforms resulted in large increases in productivity in the manufacturing sector in Mexico, especially in those sectors most exposed to foreign trade. This suggests that the problem in Mexico is not a lack of productivity growth in manufacturing, but in the rest of the economy.

Technology adoption and frictions

If Mexico and China share many of the same factors thought to slow GDP growth, what explains the differences in their recent performances? We hypothesize that the impact of financial frictions and contract enforcement on a country's growth rate depends upon the level of development of the country. A country whose technology is further from the frontier technology will not only be poorer than a country with better technology, but its return from adopting a new technology will be higher. If the

return to adopting the new technology is large, the financial frictions will do little to distort the adoption decision.

In our theory, a growing stock of technologies may be adopted at some cost. As countries implement these technologies, output grows. In the United States — the industrial leader in the twentieth century — continual adoption of improved technology generates a near-constant growth rate: GDP per working-age person grew at an average annual rate of 1.99 percent 1900–2010 as seen in figure 2.

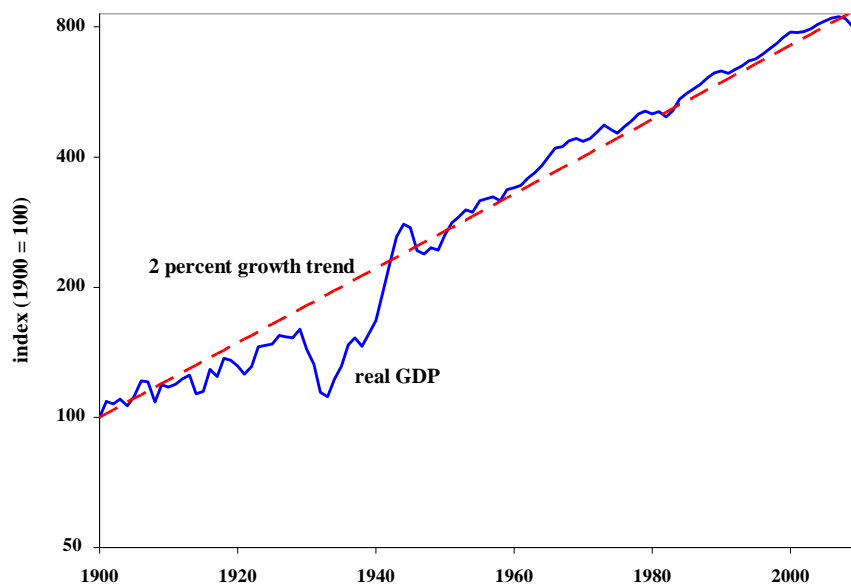


Figure 2: Real GDP per working-age person in the United States, 1900–2010. Source: Kehoe and Ruhl (2010).

Technology adoption gives rise to trend growth rates in the adopting countries close to 2 percent per year after capital and labor have had time to adjust. The absolute level of a particular country compared with the industrial leader depends on its institutions and economic policies. An economy that is far from the frontier can grow rapidly even with an inefficient financial system and a lack of contract enforcement. As the country gets closer to the industrial leader, however, rapid growth stops and the country's growth rate falls to 2 percent per year. This occurred in Western Europe in the 1970s, in Japan in the early 1990s, and in Chile in the late 1990s. How far short of the industrial leader the country levels off depends on its institutions and economic policies. Chile, for example, after spectacular growth following its crisis in the early 1980s, has had levels of real GDP per working-age person and growth rates similar to those in Mexico since about 1998.

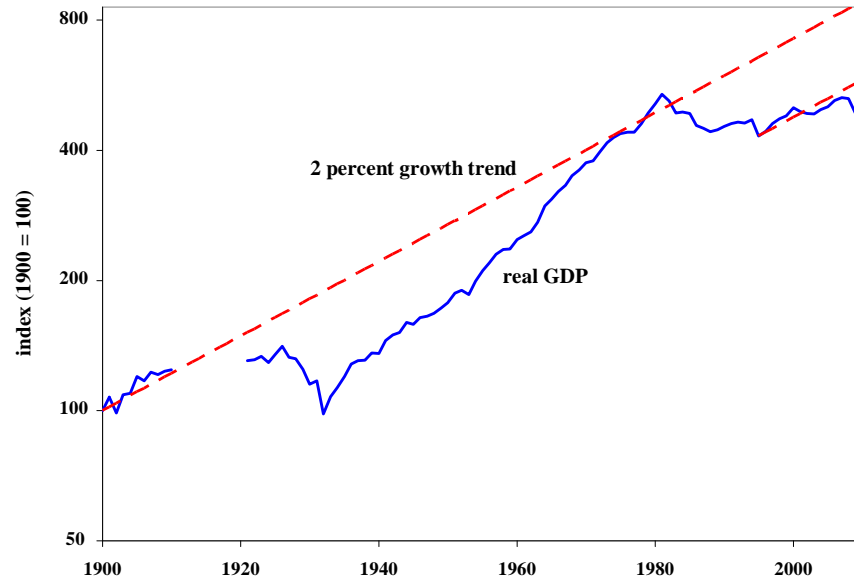


Figure 3: Real GDP per working-age person in Mexico, 1900–2010. Source: Kehoe and Ruhl (2010).

With this theory in mind, we turn to the data. As seen in figure 3, between 1953 and 1981, Mexico grew rapidly: Real GDP per working-age person grew by 3.8 percent per year. Despite the frictions discussed, Mexico grew faster than the industrial leader. During 1981–1995, Mexico suffered a series of crises and contracted by 1.7 percent per year. Over 1995–2007, Mexico grew by 1.9 percent per year, as did the United States, although it fared worse than the United States during the 2007–2009 recession.

We compare China with Mexico in terms of their absolute levels of income using PPP adjusted real GDP from the World Bank. While China has been growing more rapidly than Mexico, it is still substantially poorer, as seen in figure 4: In 2010 China’s GDP per working-age person of 9,410 2005 U.S. dollars was only 48.6 percent of Mexico’s 19,360 dollars. In terms of our framework, Mexico is not experiencing the rapid catch-up growth that China is experiencing now because it already had this sort of catch-up during the period 1953–1981.



Figure 4: Purchasing power parity GDP per working-age person, 1985–2010. Source: Kehoe and Ruhl (2010).

Absent serious reforms in China in such areas as the financial system and contract enforcement, we expect economic growth there to slow down sharply at some point. It is an open question whether or not this slowdown will occur when China is still behind Mexico in terms of real GDP per working-age person. In fact, in the 22 October 2011 edition of the *Economist*, one article points out the fragility in the Chinese financial system, while another asks whether China can avoid a hard landing when its economy starts to slow down. It is worth reflecting on the 1981–1995 crisis period in Mexico that followed its rapid growth 1952–1981.

References

- Allen, Franklin, Jun Qian, and Meijun Qian (2005), "Law, Finance, and Economic Growth in China," *Journal of Financial Economics*, 77(1): 57–116.
- Bajona, Claustre, Mark J. Gibson, Timothy J. Kehoe, and Kim J. Ruhl (2011), "Trade Liberalization, Growth, and Productivity," <http://www.econ.umn.edu/~tkehoe>.
- Bergoing, Raphael, Patrick J. Kehoe, Timothy J. Kehoe, and Raimundo Soto (2002), "A Decade Lost and Found: Mexico and Chile in the 1980s," *Review of Economic Dynamics*, 5(1): 166–205.
- Brandt, Loren, and Xiaodong Zhu (2009), "Accounting for China's Growth," IZA Discussion Paper 4764.
- Edwards, Sebastian (1989), "Openness, Outward Orientation, Trade Liberalization and Economic Performance in Developing Countries," NBER Working Paper 2908.
- Guariglia, Alessandra, and Sandra Poncet (2008), "Could Financial Distortions Be No Impediment to Growth After All? Evidence from China," *Journal of Comparative Economics*, 36(4): 633–57.
- Hsieh, Chang-Tai, and Peter J. Klenow (2009), "Misallocation and Manufacturing TFP in China and India," *Quarterly Journal of Economics*, 124(4): 1403–48.
- Kehoe, Timothy J., and Kim J. Ruhl (2010), "Why Have Economic Reforms in Mexico Not Generated Growth?" *Journal of Economic Literature*, 48(4): 1005–27.
- Krueger, Anne, and Aaron Tornell (1999), "The Role of Bank Restructuring in Recovering from Crises: Mexico 1995–98," NBER Working Paper 7042.
- López-Córdova, Ernesto (2003), "NAFTA and Manufacturing Productivity in Mexico," *Economía*, 4(1): 55–98.
- Rawski, Thomas G. (1994), "Chinese Industrial Reform: Accomplishments, Prospects, and Implications," *American Economic Review*, 84(2): 271–75.
- Rodríguez, Francisco, and Dani Rodrik (2001), "Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence," In *NBER Macroeconomics Annual 2000*, vol. 15, ed. Ben S. Bernanke and Kenneth Rogoff, 261–338. Cambridge, MA: MIT Press.