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"US-México trade relationship in the age of NAFTA"

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1. Introduction

I would like to start by thanking Mission Foods Texas-México Center at SMU for having invited me as a keynote speaker at this First Annual Texas-México Conference. It is a real honor and privilege for me. This event provides a timely opportunity to discuss the significance and benefits that efforts for regional integration have had for México and the United States.

In my remarks tonight I will pay special attention to providing an overview of the benefits that NAFTA and trade in general have brought to the region. In particular, I will argue that NAFTA has allowed member countries to boost growth and to attain important productivity and efficiency gains that have led to welfare improvements for both producers and consumers across the whole region. Furthermore, to the extent that we live in a very competitive global economy, NAFTA has meant that the North American region is better prepared to compete with the rest of the world.

This is important, because recently NAFTA has fallen out of favor among notable sectors of the US population. NAFTA is twenty three years old, and as such, it safely can be said that it needs some fine-tuning. In particular, it is key to bring it up to date to incorporate progress and developments that have taken place in all the member countries since its signing. But such needed, and even desired, adjustments should not threaten the essence, nor the existence, of the agreement. I consider NAFTA – and I say this with full conviction –as one of the main milestones in the effort of bringing México and the US closer together, for our mutual benefit.

It is worth recalling that México had sequential financial and fiscal crises in the 70s, 80s and the first years of the 90s, with severe consequences for the wellbeing of the population. Therefore México realized that if it wanted to be considered as a trustworthy and reliable partner in the agreement, it needed to bring its house in order, and persevere in transforming the Mexican economy into a resilient, dynamic one. To achieve this, México has enacted several reforms that seek to strengthen its macroeconomic framework and improve its microeconomic structure. These efforts should leave no doubt that México is fully committed to take all the necessary steps to make the economic integration within the region a lasting success. So before delving deeper into the benefits that NAFTA has produced, let me highlight some of these reforms that México has implemented through the years.

2. México as a trusted partner

México has developed a solid macroeconomic framework over the years through a prolonged effort of reform that has been key to cope with the many challenges that the international environment has posed. These measures have contributed to the macroeconomic stability that México has enjoyed during the last years.

In terms of the monetary policy framework, since 1994 Banco de México has been autonomous and, by law, it is mandated to keep a low and stable inflation. In 2001 we adopted an inflation targeting scheme to conduct our monetary policy. Indeed, a credible commitment by the Central Bank to attain its inflation target, along with an absence of fiscal dominance, has brought about a significant reduction of the level, volatility and persistence of inflation; the anchoring of inflation expectations, and a lower exchange-rate pass through onto prices. This has helped to keep inflation and its expectations well-behaved, despite the large and persistent depreciation that the peso has registered in the past couple of years. Even though there has recently been a noticeable increase in inflation as a result of the cumulative effect of the depreciation of the peso and the liberalization of gasoline prices, Banco de México has taken the appropriate steps to keep inflation expectations well-anchored and to induce a gradual convergence back to our permanent inflation target.

The fully flexible exchange rate regime that México has followed since the 90s has been a key element of our macroeconomic policy framework, given that the exchange rate has worked as an efficient shock absorber for the Mexican economy. As a result, the room to maneuver and the flexibility of monetary policy to counteract macroeconomic shocks has also increased.

Moreover, México has also strengthened the regulation and supervision of the domestic financial system. In particular, all our financial institutions already comply with Basel III guidelines.

There have also been relevant changes in fiscal policy. In particular, during the last decade México has improved its public finances along two fronts: first, by strengthening the Fiscal Responsibility Law, and second, fiscal reforms that have allowed the Federal Government to increase its revenue from tax sources, reducing the dependency on oil revenues. The important progress in the country´s fiscal framework has allowed for a better implementation of macroeconomic policy and has reduced the risks associated with volatile and uncertain sources of revenue.

While macroeconomic stability is a necessary condition for accelerated and sustainable growth, it is not sufficient. In particular, the underlying microeconomic structure of the economy also matters, since, to a large extent, it determines how productive and efficient a country is. Hence, besides working towards achieving a better macroeconomic management, for a long time México has also pursued policies aimed at reforming the structure of the economy. As part of this agenda, during the past few years México has enacted a series of structural reforms whose aim is to improve human capital, enhance infrastructure, boost competition in domestic input and products markets, and strengthen institutions. Preeminent among these are reforms addressing the labor market, appropriate anti-trust legislation, education, and the financial, telecommunications, oil and electricity sectors. Many of these reforms are now being implemented and are expected to improve México´s competitiveness and productivity, since many of them deal with sectors that provide inputs of generalized use. They are also expected to provide additional efficiency gains via the adequate regulation of sectors that behave like natural monopolies due to their network structure. This reform effort has been and will continue to be of paramount importance to the modernization process of the Mexican economy as it allows México to achieve greater flexibility and efficiency in the allocation of its productive resources, which, in turn, is key to attaining greater economic growth.

México´s solid macroeconomic framework and its ambitious structural reform agenda have worked in tandem to make the Mexican economy resilient to the many external shocks that have afflicted it over the last few years. In particular, the Mexican economy has had to cope with a weak external demand as a result of the slow recovery in global economic activity and the stagnation of global trade that followed the global financial crises of 2008-09; it has also had to deal with the pronounced fall in the price of oil; and it has had to face high volatility in exchange rate markets, that may be attributed to, among other factors, the uncertainty regarding the pace of monetary policy normalization in the US, as well as the US electoral process. It is worth noting that México is one of the few countries among the G-20 and OECD members that has been able to register positive growth rates for 30 consecutive quarters, since mid-2009. So it has been able to contribute continuously to the growth and prosperity of the region.

3. Trade and its benefits

Let me now turn to the benefits that NAFTA has brought for its members, concentrating in México and the United States.

The enactment of NAFTA in 1994 transformed the bilateral relationship between México and the United States. NAFTA has represented much more than a tariff-reduction scheme. It also involved deep regulatory and institutional changes that had the goal of promoting a deeper economic integration among member countries. As such, NAFTA can be more accurately viewed as a set of institutional rules that govern foreign trade and investment between Canada, México, and the United States with the aim of promoting both types of flows across the region in order to attain productivity gains through production sharing. Indeed, NAFTA has given way to a sustained growth of intra-industry trade across countries. In that sense, rather than trade partners, México and the US have become production partners.

Evidence of the development of regional supply chains and of the close-knit economic relationships that have been formed within the North American region can be seen in the considerable growth of Mexican non-oil exports to the US and of México's imports of intermediate goods from the US since NAFTA went into effect. México is currently the second most important source for US imports and the second most important destination for US exports.[1] Furthermore, México is among the top two export destinations for at least thirty US states, including Texas.[2] In some cases, México buys over ninety percent of some states' overall export sales of particular goods.[3]

The integration brought about by NAFTA through the deepening of commercial and production ties has benefited all its members. The channels through which these gains have accrued are diverse, but range from productivity and employment gains on the production side to increased access

[1] Figures for 2016 from US Department of Commerce.
[2] Wilson (2016).
[3] For example, according to Wilson (2016) overall, twenty seven percent of US corn exports are destined for the Mexican market, but in the case of Arizona, Utah, Kansans and Missouri, over ninety percent of their corn exports are bought by México.

to a greater variety of goods at more competitive prices on the consumption side.

If we look at growth rates for different periods of time since the 1980's, the highest annual average corresponds to the years immediately after NAFTA was enacted. This is true for both México and the US (Graphs 1 and 2). Moreover, for both countries, NAFTA can be associated with a period of relatively high growth in total factor productivity (TFP). Indeed, México has shown a lackluster behavior for TFP in general, except for the years immediately after NAFTA was enacted. In the case of the US, although productivity has shown a better performance, the period after 1996 was particularly favorable (Graphs 3 and 4).[4] After 2001 growth rates have diminished in both our countries. That can be attributed to more stringent competition in international markets with China accession to the WTO, and more recently to the aftermath of the global financial crisis of 2008-2009. But without the shared-strength provided by NAFTA, the effect of these two events on the region could have been much worse.

At Banco de México we have carried out some exercises to estimate the effect that a higher degree of trade openness has had on aggregate welfare in both México and the US, and have found that for both countries trade openness has had a positive effect on living standards. This is intuitive since a reduction in the barriers to trade can be associated with better terms of trade, which in turn are usually linked to higher welfare.[5] Under a few standard

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[4] TFP figures computed based on the 2014 Penn World Tables.

[5] Measuring the terms of trade accurately can be a difficult task. However, the methodology developed by Arkolakis et al. (2012) provides a simple way to bypass this measurement issue. The key intuition underlying their result is that an increase in the terms of trade implies an increase in imports (relative to exports), both

assumptions from the international trade literature, we estimate that between 1993 and 2015 trade openness resulted in gains for México that could amount to an 8.2% increase in welfare, while the increase for the US could reach 1.6%. To more easily interpret these percentage increases in welfare associated with trade openness, let us assume that we can use GDP per capita as a proxy for welfare.[6] Using World Bank data, our estimates of the welfare gains from trade would imply that income for the average citizen in 2015 was $682 higher in the case of México and $856 higher in the case of the US than what it would have been without the higher degree of trade openness that these countries achieved between 1993 and 2015.

An additional very important benefit of NAFTA has been that it has allowed its member countries to take advantage of recent trends in the globalization process. The fragmentation of production through global value chains is the most recent manifestation of the process of economic integration that the world has been undergoing over the last couple of centuries. Previously, this process mostly took place through trade in final goods and services. Today, global value chains imply that this process occurs primarily through trade in intermediate goods and joint production arrangements. Global value chains foster specialization, improve efficiency and increase welfare through the same mechanisms that induce gains from international

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because of a substitution effect (imports become relatively cheaper) and an income effect (same amount of exports buy more imports). The increase in imports will imply a reduction in the share of domestic spending in total spending. Therefore, decreases in the share of domestic spending in total spending can be used to infer gains in aggregate welfare associated with trade openness. From the fact that the share of domestic spending in total expenditure has decreased for all NAFTA members, we can infer that all countries have experienced aggregate gains from trade openness. The estimates reported here are found by using a version of the formula of Arkolakis et al, together with an estimate for the trade elasticity and an estimate for the intensity of intermediate goods in production.

[6] Burstein and Cravino (2015) show that to a first approximation, real GDP can be associated with welfare.

trade in final goods. Additionally, the fact that they also improve the allocation of production stages around the globe implies that they may in fact generate larger welfare gains that go beyond those implied by traditional mechanisms. In fact, the World Bank and World Economic Forum estimate that the elimination of non-tariff barriers, such as inefficient logistic systems or transportation and administrative costs that inhibit the international fragmentation of production, could result in an increase in global GDP that would be six times greater than the direct elimination of the remaining tariff barriers in international trade.[7]

It should be noted that in a context in which production takes place along global value chains and trade is dominated by intermediate goods, the fact that a country has a trade deficit against another country, overall or in a given sector, does not necessarily mean that it is losing employment or that it has a lower welfare level. In fact, this deficit may reflect imports of intermediate goods that are necessary for domestic production to take place and which usually contributes to increased domestic employment, consumption and exports. In this regard, the more efficient organization of the production process that has been achieved through trade integration has also resulted in increased employment in the NAFTA region. Studies have shown that in the case of México NAFTA induced an increase in employment, particularly in regions with an outward orientation.[8] For the case of the United States, data from the US Department of Commerce indicates that after NAFTA took effect the number of jobs supported by the export of goods and services

[7] US Chamber of Commerce (2016).
[8] Chiquiar et al. (2017).

increased significantly, from 7.4 million in 1993 to 9.3 million in 1997 (Graph 5). Moreover, while the share of manufacturing employment in total US employment has been declining since the 1970s, the speed of the reduction softened in the years following the enactment of NAFTA (Graph 6).[9] In fact, in the three years after NAFTA was implemented, employment in the US automotive industry grew by 14.1 percent, worker hourly earnings grew by 5.6 percent, and Ford, Chrysler and GM invested $39.1 billion in new manufacturing plants and equipment in the US, while only investing $3 billion in México.[10] Furthermore, it is estimated that trade with México, together with Mexican foreign direct investment in the United States, supports a combined five million American jobs.[11] In the case of Texas, it is estimated that 382 thousand jobs are supported by trade with México.[12]

Contrary to the evidence just discussed, much has been said about the negative effects of trade on employment in the US. However, several studies point toward automation and the adoption of less labor-intensive production processes as the primary causes of the decline in US manufacturing employment and to the declining importance of factory jobs around the world.[13] This assessment is consistent with the upward trend shown by spending on industrial robots in North America over the years, which has been

[9] Estimates obtained from Federal Reserve Bank of St. Louis (FRED).
[10] De Long (2017).
[11] Wilson (2016).
[12] Wilson (2016).
[13] De Long (2017) argues that technological change rather than trade with México and China had a more significant impact on US manufacturing employment. Pierce and Schott (2016) find that at the plant level, the shift towards less labor intensive processes contributed to declining employment in manufacturing. Acemoglu and Restrepo (2017) estimate large and robust negative effects on employment and wages in local labor markets from the exposure of workers to competition from robots. Kenny (2014) argues that automation has decreased the importance of labor as an input in manufacturing production. See also Cocco (2016) and Schrager (2017).

particularly concentrated in the automotive sector.[14] In this respect, economic integration and the possibilities it affords for the organization of production may provide NAFTA members with the required flexibility to capitalize on the new growth and employment opportunities that may arise as a consequence of trends in automation and technological advancement. Thus, trade integration could well be the mechanism that allows industrial economies to boost overall employment in the face of this new challenge.[15]

Last but not least, another important advantage that results from trade openness is that consumers gain access to increased varieties of goods for consumption and that they face lower prices for these goods.[16] Prices decline with trade openness because of increased market competition (or market discipline) and also due to the incentives that trade openness generates for the adoption of new technologies that increase productivity and reduce marginal costs of production. For example, following the enactment of NAFTA the price of vehicles, relative to average prices, showed an important decline, particularly in the US (Graph 7).[17]

In summary, NAFTA has entailed positive gains for both the US and the Mexican economies. In particular, it has boosted growth and productivity by exploiting each country's comparative advantages through a complex web of production sharing arrangements that has led to a more efficient allocation of resources across the region. This has not only allowed the region to remain

[14] Source: Robotics Industries Association.
[15] Schrager (2017).
[16] Feenstra and Weinstein (2017) estimate that between 1992 and 2005, welfare in the United States rose by 0.86% due to increased product variety and the pro-competitive effects of trade on markups.
[17] US is from the Bureau of Labor Statistics.

competitive in the face of fierce global competition, but has also led to a large number of export-related jobs in both countries. It has also meant that consumers have had greater access, and at a lower cost, to a wider array of goods.

4. Concluding remarks

It should be recognized that trade integration does not happen without undesired side-effects. While there seems to be compelling evidence that production sharing arrangements play an important part in enhancing productivity and living standards, this process necessarily entails the reallocation of resources away from less productive tasks and toward more productive ones, which is not frictionless and may lead to an unequal distribution of benefits among different industries and sectors of the population. Just as the new opportunities and gains from global value chains need to be emphasized, the new policy challenges that these negative side-effects entail need to be recognized and addressed to ensure that everyone shares in these gains from trade.

Policy-makers are confronted with the need of designing and implementing policies that mitigate adverse effects on sectors of the population that do not directly benefit from either the process of trade openness or the process of automation and technological change. This could be accomplished through compensatory taxes or, as long as there is fiscal space, an increase in the spending on activities with high social returns, such as education and health. At the same time, some of the implemented policies should aim at minimizing the welfare loss associated with the required reallocation process, for instance, by providing workers with additional training. But one should be weary of policies that would sacrifice the substantial welfare gains from trade, and for that matter from automation. Confronting the redistributive policy challenges is better than simply pushing back trade or technological advancement.

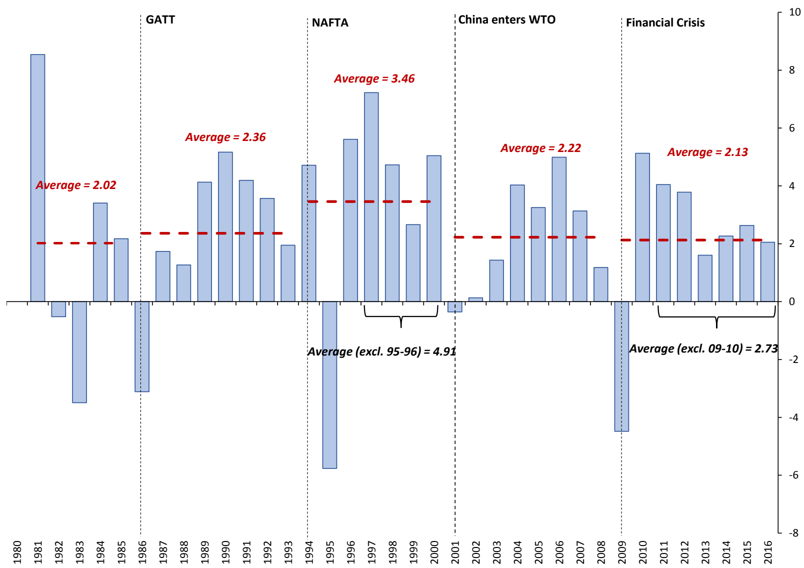
Hence, in my view, instead of trying to revert decades of economic integration, the way to move forward is to tap further into the as yet unexploited gains that can be attained through a deeper economic integration of the region. For example, the recent structural reform efforts in México have opened up certain sectors that were previously closed off to foreign investors, such as the oil and electricity sectors. Strengthening the bilateral relationship between the US and México would mean more investment and employment in projects like the two refineries that are being built in Texas to serve the Mexican market or the wind farms that are being built in Baja California to supply California with electricity. Additional opportunities for gains from deeper integration could be attained if NAFTA rules can be simplified so that more exporters can take advantage of the benefits of belonging to a free-trade area.

México is willing to work with the US and Canada to build on and extend NAFTA to the benefit of all parties involved. In fact, México has been working hard to keep a sound macroeconomic framework and to improve its microeconomic structure in order to become an even more attractive destination for investment and to further promote the economic integration of the region. In this sense, México is committed to proving that it can be a trusted partner in the quest for growth and prosperity for the whole region.

Appendix

Graph 1. Total GDP: México

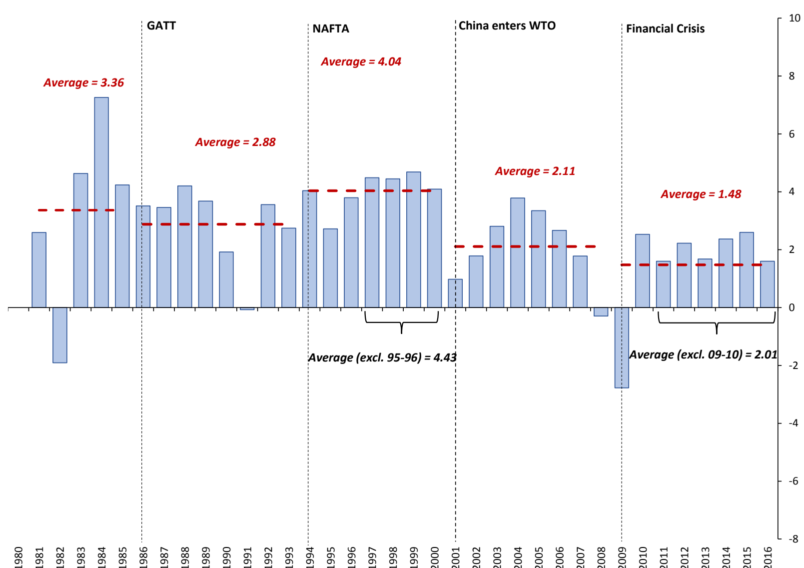
Annual % change, s.a



s. a./ Seasonally adjusted figures.
Note: The red line denotes the simple average over the sample period.
Source: Elaborated by Banco de México with data from INEGI.

Graph 2. Total GDP: USA

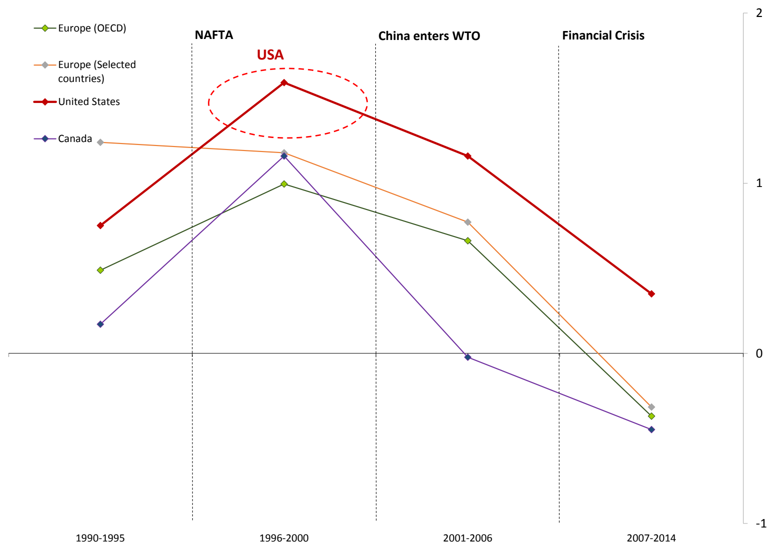
Annual % change, s.a



s. a./ Seasonally adjusted figures.
Note: The red line denotes the simple average over the sample period.
Source: Elaborated by Banco de México with data from Federal Reserve Economic Data, Federal Reserve Bank of St. Louis.

Graph 3. Total Factor Productivity: USA

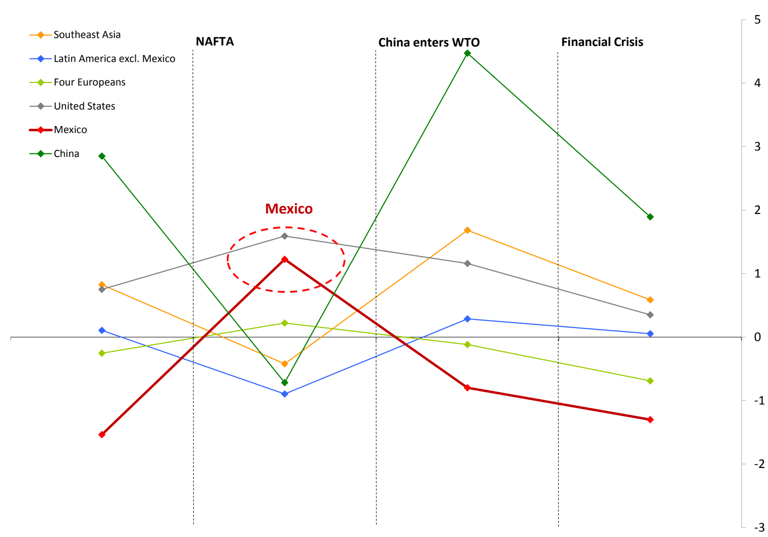
Average annual % change



Note: The regions were estimated as a weighted average according to regional population. Regions are conformed by: 1. Europe (OECD): Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Luxembourg. Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, U.K.; and 2. Europe (Selected countries): Austria, Belgium, Denmark, Finland, France, Germany, Luxembourg, Netherlands, Norway, Sweden, Switzerland, U.K.
Source: Elaborated by Banco de México with data from the Penn World Tables.

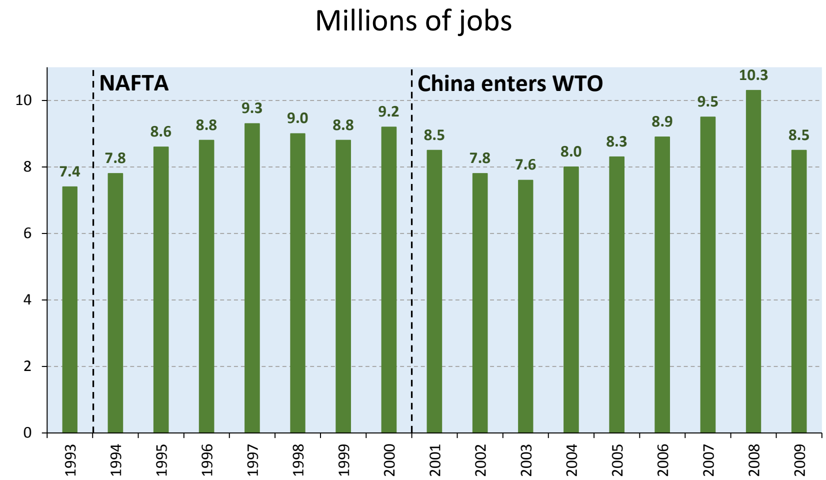
Graph 4. Total Factor Productivity: México

Average annual % change



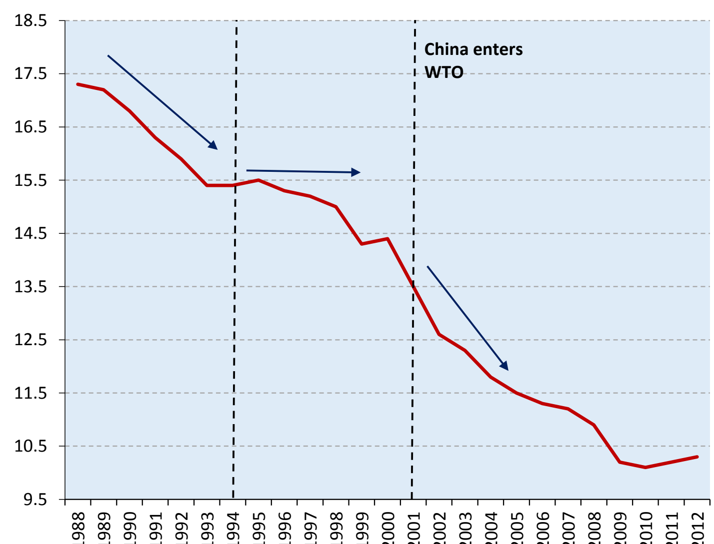
Note: The regions were estimated as a weighted average according to regional population. Regions are conformed by: 1. Southeast Asia: South Korea, Hong Kong, Malaysia, Singapore and Thailand; 2. Four Europeans: Spain, Greece, Ireland and Portugal and 3. Latin America excl. México: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Nicaragua, Uruguay and Venezuela.
Source: Elaborated by Banco de México with data from the Penn World Tables.

Graph 5. Jobs Supported By Exports of Goods and Services, 1993-2009



Source: Department of Commerce International Trade Administration (2010). International Trade Research Report no. 1: Exports Support American Jobs (http://trade.gov/publications/pdfs/exports-support-american-jobs.pdf)

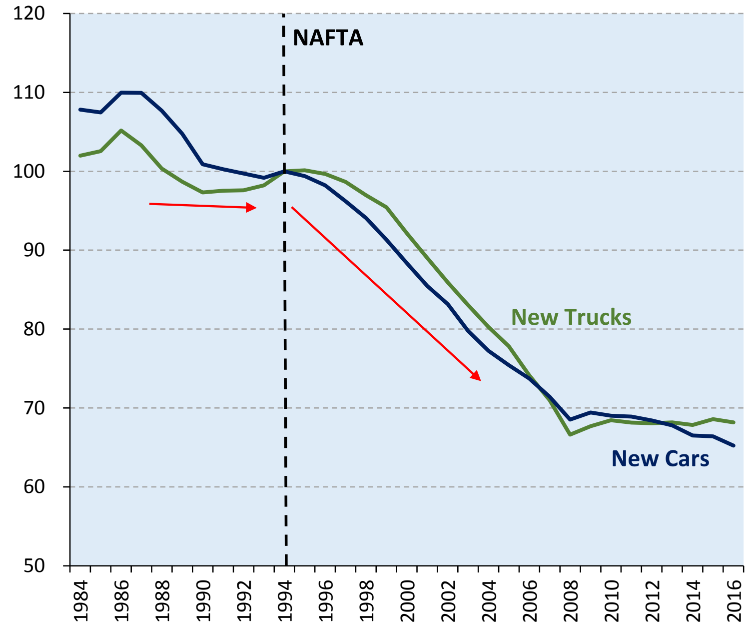
Graph 6. Percent of Employment in Manufacturing in the United States



Source: Estimates from Federal Reserve Bank of St. Louis (FRED).

Graph 7. US: Price of Cars and Trucks relative to General Price Level1/

US city average, Index 1994=100



1/ Price index for new trucks and new cars relative to CPI. Not seasonally adjusted.
Source: US Bureau of Labor Statistics.

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