2006 International Conference

FTA and Structural Changes : Experiences and Implications

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MoonJoong Tcha

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Opening Remarks

by
Jung Taik Hyun
President of KDI

Distinguished guests,
Ladies and gentlemen

It is my great pleasure to welcome all of you to the international conference on "*FTA and Structural Changes*." I would like to express my deep appreciation to all distinguished speakers, who have made the effort to join the conference organized by both KDI and KORUS FTA Industry Alliance, to share their insight and knowledge with us. In particular, I deeply appreciate and welcome those participants who have traveled such a long journey to Seoul despite their busy schedules. I would also like to thank the staffs who have successfully organized this important conference.

The progress in multilateral talks has not met our expectation, and DDA was officially suspended last July. Without any promise of resuming the talks in the near future, many economies are more actively seeking bilateral and regional free-trade talks. As a newcomer in the arena of FTA, Korea has successfully accomplished FTAs with Chile, Singapore, EFTA, and is currently negotiating an FTA with the US. In fact, the third official meeting with the US-FTA delegation just ended last Saturday and we are actively pursuing to bring a successful conclusion. I think that the signing of FTA with the US will be a big leap forward for Korea's economic history.

The most visible effects of FTA with the US are the abolishment of trade barriers and enhanced mobility of commodities and service. Furthermore,

there will be an improvement in the country's credit, providing greater leverage for Korea when promoting investments from the US and other countries. Recent studies show that FDI substantially contributes to higher employment in Korea, as more than 99% of employees in foreign-owned firms are local workers. Inflow of foreign capital is also accompanied by new technology and managerial skills. Economists point out that the spin-off of these technology and managerial skills are substantial contribution to the domestic economy.

The US-Korea FTA offers great opportunities and expectations. However, unless Korea has the underlying foundation to accept these opportunities, what may come in the future might be not what we have been expecting. The "openness" that is accompanied by the FTA will bring much more freedom and convenience in the economy, while at the same time present challenges in adapting to the new environment. Removing barriers to free mobility of goods, services and investment imply that competition among producers will intensify. Each sector will see more competition due to the presence of foreign companies equipped with better efficiency and productivity. However, I believe performance improves with tighter competition.

Stronger and robust competitiveness can be always created through sound competition and innovation. For example, in Korea there were no mega-sized super discount stores in the early 1990s. Severe competition in the sector between mega-sized foreign leading companies and domestic companies was unavoidable. But as of 2005, there are 304 discount stores, where domestic companies like E-Mart and Lotte Mart are dominating. They are now successfully penetrating into foreign markets.

In retrospect, Korea has consistently put efforts in restructuring for the past four decades indeed. During the dramatic economic development process led by labor-intensive industry such as textile and wigs, to semiconductor and information and communications industries, Korea has seen a number of start-up companies as well as collapse of some. Restructuring is a process that must be continued to further strengthen the foundation of the Korean economy and also make it more efficient. We should not fear or "turn a blind eye" on restructuring, but we must wisely use it to build up measures that will maximize the utility of available resources and workforce left behind during the restructuring process. Imagine what the world would be like now, if the Luddite movement of the Industrial Revolution succeeded? Without the restructuring and machinery that the movement rejected, would it be possible for human beings to enjoy such comfort and convenience as we do today?

The FTA can be seen as a promise between countries to work together to create a larger market and pursue economic prosperity. Therefore, the concerted efforts and preparedness will determine how smoothly the Korean economy will deal with the external impacts and sustain its growth through restructuring. The government must put efforts in making the economy more flexible, and at the same time cooperate with both companies and the

workforce so a smooth transition can be made to the new changes. In this vein, more counseling and education must be provided so that workers will not feel alienated during the process of rooting FTA. This is why internal preparedness is as important as external negotiation with the counterpart.

Growing concerns from some parts of the Korean economy are complicatedly entangled with constructive critics, misunderstanding based on incorrect information, and pessimism on future benefits arising from openness. Some opponents claim that the US-Korea FTA will make the Korean economy a subordinate to the US economy, leading to a collapse of Korean manufacturers and worsen the income disparity.

Surely, the signing of FTA with the US will not bring prosperity to every sector of the economy. It is naïve to think that FTA would improve the welfare of everyone in the society—instead, we must accept the fact that in the free market system, particularly in the realm of FTA, there will always be winners and losers. However, in general, it should be understood that FTA will yield more total welfare gain than welfare loss therefore, a thoughtfully designed compensation scheme will improve the overall quality of welfare of everyone.

Globalization has often been criticized as a main culprit in deteriorating the income conditions. Anti-free traders often refer to NAFTA as an example to demonstrate that the FTA with the US will worsen income conditions. However, there are many other studies that show the opposite and that income disparity rose not from free trade alone but also from technology development.

For the conference, we have invited experts from countries with more FTA experiences than Korea. For example, the US already has concluded FTAs with about 16 countries such as Canada, Mexico (NAFTA), Singapore, Chile, Australia, and other Central American countries. Mexico has FTAs with over 30 countries while Chile has FTAs with the US, Mexico, Korea and some European countries and, Peru has the FTA with the US. In the context of far east regions, Singapore is the most active FTA suitor among Asian countries signing agreements with the US, New Zealand, and Australia.

In today's conference, we hope to exchange ideas with experts from abroad on their countries' experiences on implementing FTAs and related programs.

The most difficult process of FTA, I believe, is attaining political support and public understanding. Through this conference, participants can share how their countries have dealt in raising political support and building public consensus so that FTA can be firmly established in their countries. Specifically, countries' know-how on methodologies and measures that were used to create an FTA-friendly environment and some of the comprehensive programs used to bring restructuring in the affected sectors and assistance programs to help those disadvantaged by FTA will be shared. These invaluable knowledge and information will greatly help Korea with its future FTAs.

In closing, I would like to once again thank the participants from overseas for joining us and hope that your stay in Korea is enjoyable. Lastly, this conference will be marked as an important event for Korea and I hope that it will be beneficial and insightful for each and every one of you.

Thank you.

2006 International Conference

FTA and Structural Changes: Experiences and Implications

Conference Schedule

September 14, 2006 (Thursday)

09:00~09:30 **Registration and Networking**

09:30~09:40 **Opening Remarks**: Dr. Jung Taik Hyun
(President, Korea Development Institute)

09:40~09:50 **Welcoming Remarks**: Minister Okyu Kwon
(Deputy Prime Minister & Minister of Finance and Economy)

09:50~10:30 **Key Note Address**:
The Mexican Perspective of NAFTA
Mr. Alejandro de la Peña Navarrete
(Former Executive Director of APEC and Ambassador to WTO, Mexico)

10:30~10:40 **Coffee Break**

10:40~12:30 **Session I: Mexico's Experience as NAFTA Member and Implications**
Moderator : Dr. Oh-Seok Hyun
(President, Korea Trade Research Institute)

Presentations:

- *Industrial Restructuring in Mexico after NAFTA*
  (Prof. Chong-Sup Kim, Seoul National University)
- *The Distributive Effect of NAFTA on the Mexican Economy*
  (Prof. Gerardo H. Esquivel, Center for Economic Studies at El Colegio de México)
- *Mexican Agriculture: 12 years into NAFTA*
  (Prof. George A. Dyer, University of California at Davis, El Colegio de México)

Discussion:

- Dr. Roberto Abusada (Instituto Peruano de Economia)
- Prof. Claudio O. Bravo (University of Chile)
- Dr. Rahul Sen (Institute of Southeast Asian Studies)

12:30~14:00 **Lunch**

14:00~14:40 **Key Note Address**:
The 'Wise' Approach to Bi-Lateral Trade Agreements
Prof. Larry A. Sjaastad
(Prof. Emeritus, The University of Chicago)

14:40~15:00 **Coffee Break**

15:00~16:30 **Session II: Chile's Experience with Globalization and Implications**

Moderator: Dr. Jang-Hee Yoo
(Prof. Emeritus, Former Vice President,
Ewha Womans University)

Presentations:

- *Chilean Trade Liberalization: A Historical Perspective*
  (Prof. Claudio O. Bravo, University of Chile)
- *Chilean Economy in the Era of Globalization*
  (Dr. Alejandro Jara, Central Bank of Chile)

Discussion:

- Ms. Esther L. Aristy(Global Foundation for Democracy and Development)
- Prof. Euysung Kim(Yonsei University)

September 15, 2006 (Friday)

09:00~09:30 **Registration and Networking**

09:30~10:10 **Public Lecture**:
FTA with the USA and Trade Liberalization: The Peruvian Experience
Dr. Roberto Abusada
(Director, Instituto Peruano de Economia)

10:10~10:30 **Coffee Break**

10:30~12:30 **Session III: Signing of FTA with the USA: Country Experiences**
Moderator: Prof. Taeho Bark
(Seoul National University)

Presentations:

- *The DR-CAFTA: Main Goals and Structural Change: The Case of Dominican Republic*
  (Ms. Esther L. Aristy, Fellow, Global Foundation for Democracy and Development)
- *NAFTA and the Canadian Economy*
  (Dr. Junkyu Lee, Fellow, KIEP)
- *The US-Singapore FTA and Its Economic Implications*
  (Dr. Rahul Sen, Fellow, Institute of Southeast Asian Studies)

Discussion:

- Prof. George A. Dyer(University of California at Davis, El Colegio de México)
- Prof. Gerardo H. Esquivel(Center for Economic Studies at El Colegio de México)
- Dr. Won-Ho Kim(KIEP)

12:30~14:00 **Lunch**

14:00~16:00 **Round Table Discussion:**
FTA with the US: Learning from Other Countries' Experiences

Chairperson: Prof. Larry A. Sjaastad
(The University of Chicago)

Discussion:

- Dr. Roberto Abusada (Instituto Peruano de Economia)
- Ms. Esther L. Aristy (Global Foundation for Democracy and Development)

- Prof. Claudio O. Bravo (University of Chile)
- Prof. George A. Dyer (University of California at Davis, El Colegio De México)
- Prof. Gerardo H. Esquivel (Center for Economic Studies at El Colegio de México)
- Dr. Alejandro Jara (Central Bank of Chile)
- Mr. Alejandro de la Peňa (Former Executive Director, APEC)
- Dr. Rahul Sen (Institute of Southeast Asian Studies)
- Prof. Dukgeun Ahn (Seoul National University)
- Dr. Wook Chae (KIEP)
- Dr. Won-Ho Kim (KIEP)
- Dr. Siwook Lee (KDI)
- Dr. MoonJoong Tcha (KDI)

16:00 **Conclusion**

List of Participants

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Keynote Address

A Mexican Perspective of NAFTA

by
Alejandro de la Peña

Abstract

Korea is negotiating a free trade agreement with the US with potentially major effects on their bilateral relations and significant consequences for growth and development in Korea. Hence, it is only normal that Korea is interested in examining other countries' experience with regard to free trade agreements, in particular with the US.

Mexico's performance under NAFTA provides the oldest and most directly relevant experiment from which other countries can learn about the likely contents and potential effects of a free trade agreement with the U.S. However, its experience with NAFTA should be taken with a good dose of caution. What may be valid for some countries is not necessarily valid for other countries. Moreover, each country has its own specificities and objectives.

This paper aims at providing a Mexican perspective of NAFTA without judging what may be good or not for other countries. Part I contains the authors views on why Mexico decided to negotiate a free trade agreement with the US and Canada. It is argued that the exhaustion of its previous import substitution model forced Mexico to implement far-reaching reforms in the domestic and international fronts, including its trade relations with its main partner. In short, that NAFTA was the logical complement to capitalize on, and lock-in, Mexico's new export oriented model of development.

Part II provides an overview of the background, structure, and main provisions of the NAFTA agreement, in particular those concerning goods liberalization, trade facilitation, standards-related measures, government procurement, investment, cross-border trade in services, telecommunications, competition policy, temporary entry for business persons, intellectual

property, dispute settlement, and the so-called side agreements.

Part III includes a warning on the difficulties faced to disentangle the NAFTA effects from other factors that affected the Mexican economy during the period of examination. It also reviews the main effects of NAFTA's implementation over the economy as a whole, economic growth, regional trade, manufacturing (with especial attention on the automotive, electric-electronic and textiles-clothing sectors), and agriculture. Although not all indicators and evidence are always positive, the general assessment is that NAFTA has brought more benefits than costs to Mexico and that in order to increase the benefits of globalization, countries have to make the necessary reforms at home.

Part IV contains some reflections and concluding remarks about free trade agreements in general.

1. Why Mexico negotiated NAFTA

Introduction

The decision to negotiate a free trade agreement with the US was the result of a large serie of political and economic events, which demonstrated that the economic model of development followed by Mexico since the end of the Second World War was not working anymore.

The import substitution model that allowed Mexico to industrialize started collapsing by the mid 70s. At that time, the Mexican economy entered into a vicious circle of devaluations and economic crises that finally forced the Government to liberalize the economy.

Even though the structural reforms undertaken by the Government in the 80s helped Mexico to improve its economy, such reforms were not sufficient to attract the investment flows needed to fuel Mexico's development in a sustainable way.

In this context, NAFTA became a logical instrument not only to lock-in Mexico's pro-market reforms but to increase business opportunities and convince investors that doing business in or with Mexico was a good and safe business.

The post-war years

Mexico's inward-looking development strategy produced sustained economic growth (3 to 4%) and a modest (3%) annual inflation from the 40s until the late 60s. In the years following World War II, a full-scale import-substitution program stimulated output by boosting internal demand. The government raised import controls on consumer goods but relaxed them on capital goods. It progressively undervalued the peso to reduce the costs of imported capital goods and spent heavily on infrastructure.

Mexico's economic performance continued into the 1960s, when GDP growth and inflation averaged 7% and 3% annually respectively. Manufacturing remained the country's dominant growth sector, expanding at 7% and attracting considerable foreign investment. By the beginning of the 70s Mexico had diversified its export base and become largely self-sufficient in food crops, steel, and most consumer goods. Although its imports remained high, most were capital goods used to expand domestic production.

The 1976 peso devaluation

Although the Mexican economy maintained its rapid growth during most of the 70s, it was progressively undermined by fiscal mismanagement and a resulting sharp deterioration of the investment climate. The GDP grew more than 6% annually but economic activity fluctuated wildly during the decade.

Fiscal misconduct combined with the 1973 oil shock to exacerbate inflation. The balance of payments disequilibrium became unmanageable as capital flight intensified, forcing the government to devalue the peso by 45% in 1976. This action ended Mexico's twenty-year fixed exchange rate.

Immediately after the devaluation, significant oil discoveries set in motion a temporary recovery that delayed the necessary adjustments. Rising oil income allowed the government to continue its expansionary fiscal policy, financed by higher foreign borrowing. This new wealth partially explains why Mexico decided not to joint GATT in 1980. According to the then President of Mexico, the Government’s main problem was how to manage Mexico’s new opulence.

The 1982 economic crisis

In fact, the macroeconomic policies of the 70s and the new opulence left Mexico's economy highly vulnerable to external conditions. These turned sharply against Mexico in the early 80s, and caused the worst recession since the Great Depression of the 30s.

By mid-1981, Mexico was beset by falling oil prices, higher world interest rates, rising inflation, a chronically overvalued peso, and a deteriorating balance of payments that encouraged massive capital flight. The collapse of the economy forced the government to devalue the peso three times during 1982 and to declare an involuntary moratorium on debt payments. All imports were subject to import permits and the banking system was nationalized. Mexico became a net importer of foodstuffs.

By late 1982, the Government had to reduce public spending drastically, stimulate exports, and foster economic growth to balance the national accounts. However, the recovery was extremely slow to materialize. The reduction in domestic savings impeded growth, as did the government's

rapid and drastic reductions in public investment and its raising of real domestic interest rates to deter capital flight.

To control persistently high inflation and restore growth and international competitiveness, the government pursued a major policy reorientation in the late 80s. It reduced state involvement in economic production and regulation and integrated Mexico more fully into the world economy. Mexico finally joined GATT in 1986 and an anti-inflation plan was introduced in late 1987 to limit wage and price increases.

The accession to GATT in 1986 locked-in the market opening that Mexico undertook in the previous two years in the context of its stand still agreement with the IMF. All tariffs were bound at a 50% maximum level and most import restrictions were gradually eliminated. During those years Mexico also implemented other economic reforms such as the liberalization of domestic prices, the liberalization of its foreign investment regime, the elimination of most guaranteed agricultural prices and the privatization of important state monopolies and enterprises.

By 1988 the macro-economy was at last under control and the preconditions for recovery in place. But these positive developments were not enough to attract foreign investment and return capital in sufficient quantities for sustained growth. A shift in development strategy became necessary, predicated on the need to further the structural reforms and to generate a net capital inflow.

Initially, the Government of Mexico hoped to attract more foreign investment by expanding trade with the industrialized nations of Europe and if possible Japan. However, reality convinced it that this hope was illusory. Geography, history, infrastructure, investment, financial ties, and other factors pointed to the United States as the preferred and most promising option.

2. NAFTA in a Nutshell

Background

The process to negotiate the North American Free Trade Agreement started on June 12, 1991 and concluded on August 12, 1992. The Agreement was signed in December 1992, and NAFTA finally entered into force on January first, 1994.

NAFTA negotiations concluded during the last part of the Uruguay Round. This allowed the three Parties to incorporate into the NAFTA the latest and more advanced trade related rules agreed -or to be agreed- at the multilateral level. This overlap also facilitated the Parties' commitment to negotiate a free trade agreement fully consistent with the World Trade Organization.

Structure

NAFTA comprises a Preamble, 22 Chapters allocated in eight Parts, as well as two side agreements concerning environment and labor cooperation. In the Preamble, the NAFTA Parties confirm their political, economic and social commitments to each other. The eight Parts of the NAFTA Agreement refers to:

- Objectives and General Definition
- Trade in Goods (National Treatment and Market Access for Goods; Rules of Origin; Customs Procedures; Energy and Basic Petrochemicals; Agriculture and Sanitary and Phytosanitary Measures; Safeguards)
- Technical Barriers to Trade
- Government Procurement
- Cross-Border Trade in Services; Telecommunications; Financial Services; Competition Policy, Monopolies and State Enterprises; Entry of Business Persons
- Intellectual Property
- Administrative and Institutional Provisions (Publication, Notification and Administration of Laws; Review and Dispute Settlement in Antidumping; Arrangements and Dispute Settlement Procedures
- Other Provisions (Exceptions; Final Provisions)

Main provisions

Subject to some specified exceptions, NAFTA main provisions:

- Establish that each Party shall gradually eliminate practically all tariffs, quantitative restrictions, drawback programmes, and other obstacles and administrative formalities for originating goods in accordance with their respective schedules.
- Sets out rules of origin that determine whether goods can be considered "originating in the territory of NAFTA parties" and therefore eligible for preferential tariff treatment.
- Facilitate trade by implementing many uniform customs procedures and regulations to ensure predictability and transparency in the exporting process.
- Requires the Parties to apply standards-related measures (standards, technical regulations and conformity assessment procedures) in a non-discriminatory manner, ensuring that they do not create unnecessary obstacles to trade.

- Opens each country's government procurement market by obligating members to provide national and non-discriminatory treatment to the goods and services produced by the other member countries.
- Gives companies the right to establish firms in another Party or acquire existing firms. NAFTA investors include firms established in a NAFTA country, regardless of the nationality of ownership, and NAFTA-country nationals. Investment covers all forms of ownership and interests in a business enterprise, tangible and intangible property, and certain contractual interests.
- Eliminates investment performance requirements that restrict the trade of goods and services and provides key rights that facilitate business such as: the right to repatriate profits and capital; the right to fair compensation in the event of expropriation; and the right to international arbitration in disputes between investors and governments that involve monetary damages.

  NAFTA investment provisions do not cover maritime, basic telecommunications, government-sponsored technology consortia and R&D programs, and local measures.
- Cover virtually all services with the exception of aviation transport, maritime, and basic telecommunications and include specific rights and obligations for financial services and telecommunications.

  NAFTA does not remove or weaken each Party's licensing and certification requirements, but specify that licensing of professionals, such as lawyers, doctors, and accountants, should be based on objective criteria, not on nationality,
- Guarantee North Americans the ability to purchase public telecommunications transport services on reasonable and non-discriminatory terms and to use them in the production and sale of their own goods and services.
- Provides for a trilateral Working Group on Trade and Competition and includes some provisions regarding competition law, monopolies and state enterprises.
- Reflects the desirability of facilitating temporary entry on a reciprocal basis and of establishing transparent criteria and procedures for temporary entry. Individuals utilizing these provisions must be a citizen of a NAFTA country. These provisions apply to business visitors, traders or investors, intra-company transferees, and professionals.
- Provides high standards of protection for intellectual property rights such as Patents, Copyrights, and Trademarks.
- And finally, NAFTA establishes mechanisms for settling disputes between the Parties over the interpretation and application of the NAFTA

provisions and the application of antidumping and countervailing duties under the Law of each Party. It also allows investors to pursue claims against a host government on grounds that it has breached its obligations under NAFTA's investment provisions.

3. NAFTA's Impact on Mexico Development

Introduction

Since NAFTA was the first FTA involving a developing country and an industrialized economy, it is only normal that many trade experts and scholars look at it to figure out what can be expected from this type of agreement, and to identify policies that can help countries derive the maximum benefits from trade integration.

Mexico's performance under NAFTA provides the most directly relevant experiment from which other developing countries or emerging economies can learn about the likely contents and economic effects of a trade agreement with the U.S. However, attempting to draw lessons from NAFTA for other FTA processes poses several difficulties. First, Mexico initiated important and far-reaching economic and institutional reforms before subscribing NAFTA that continued to affect Mexico after the entry into force of the agreement. Second NAFTA has been in place for a relative short period of time so not all the corresponding adjustments have yet taken place.

Third, Mexico's post-NAFTA years started with the dramatic setback of the so-called Tequila crisis in 1995, making it hard to disentangle the effects of the agreement on the Mexican economy during the next few years. Fourth, other FTAs under consideration might differ from NAFTA, and thus their results could also be different in important dimensions. And last but not least, there is considerable diversity in the initial conditions of countries seeking to negotiate a FTA with the US, and hence the key priorities, necessary preparatory measures and likely effects of such agreements would also differ considerably across countries.

So without trying to judge what would be good or bad for other countries seeking to negotiate a free trade agreement with the US, I will review in this part of my presentation some findings made by the Mexican Government and different institutions on the occasion of the 10th anniversary of NAFTA's entry in to force. I hope these findings would help our discussion in this Conference and facilitate the elaboration of your own conclusions about NAFTA.

Economic performance

Mexico's annual GDP growth averaged 5.4% during the post-NAFTA 1996 to 2000 period, a figure well above the 3.9% average annual growth of

the pre-NAFTA 1990-1994 period. With regard to the first two years of the agreement, most analysts agree that exports were a key factor in accelerating Mexico's recovery from the 1995 financial crisis.

Although these figures are broadly positive, other indicators mitigate any firm conclusion. As can be seen in Table 1, on the positive side, trade and FDI as a share of GDP were higher in the post-NAFTA period than in the previous years. But, on the other side, the performance of the economy in terms of growth of GDP per capita and real wages was not that remarkable after NAFTA.

Table 1. Mexico: Selected Indicators

	1980~85	1985~93	1994~2001
Trade over GDP	28.1%	37.0%	75.7%
FDI net of Privatizations over GDP	1.1%	1.2%	2.9%(1)
FDI over GDP	1.1%	1.2%	3.0%
Real GDP Growth per capita in local currency	-0.2%	1.1%	1.2%
Real Wages in local currency	-4.8%	3.5%	-1.0%
Real Wages in dollars	-9.0%	9.5%	-0.5%
Poverty Rate - SEDESOL*	n/a	22.5%(2)	24.2%(3)
Poverty Rate - ECLAC	n/a	47.8%	41.1%(3)

Notes: * Poverty line #1 – individuals. See Figure 1.
(1) 1994~1999 (2) 1992 (3) 2000 (4) 1989

In addition, the rising trends on trade and FDI were also evident in the period of Mexico's pre-NAFTA trade reforms and both took place when world trade was growing quickly and FDI was rising in many other emerging markets that did not benefit from NAFTA.

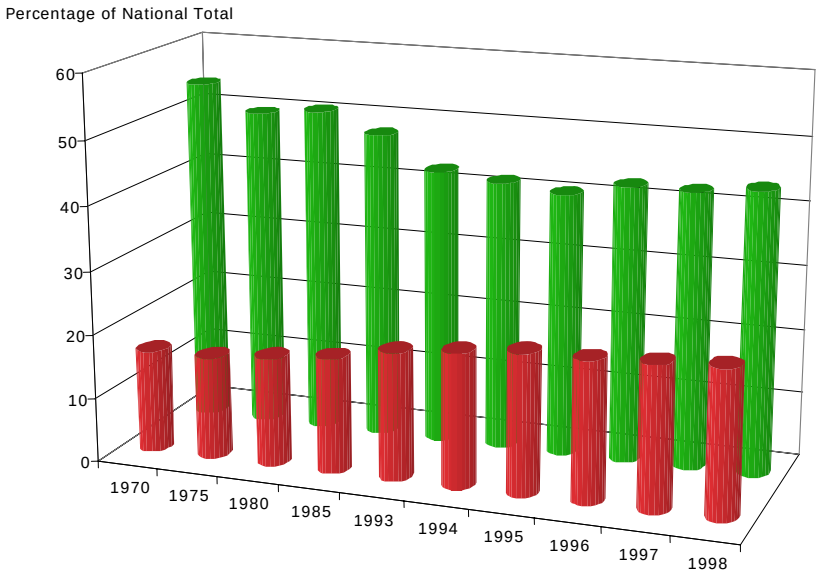
The effect on the poverty rate is even less conclusive. While the UN Economic Commission for Latin America and the Caribbean points to a reduction in the poverty rate, the Mexican authorities (SEDESOL) estimate that this rate increased from 1992 to 2000. Nevertheless, both sources estimates that the national poverty rate seems to closely follow the evolution of real wages.

Geographical impact

NAFTA is having a significant and far reaching impact on the geographical location of economic activity inside Mexico. The inward orientation of the Mexican economy prior to the mid-eighties implied that manufacturing production was located near the biggest domestic populations centers -i.e., Mexico City and central Mexico.

As Mexico shifted to an export-led development strategy, production shifted to states in the North, nearer the U.S. markets. As Figure 1 shows the share of manufacturing employment in Mexican states along the U.S. border has gradually increased. At the same time, manufacturing employment in central Mexico declined from 54 to 44% of the national total. Similarly, from 1993 to 1998, real GDP grew by almost 24% in the border-states, compared to 14% in central Mexico.

Figure 1. Manufacturing GDP Geographical Distribution
(Red: Northern States, Green: Central Mexico)



Trade

Mexico's trade liberalization under NAFTA followed closely the reforms begun in 1986, after the country joined GATT. Thus, it is difficult to separate the effects of NAFTA on Mexico's volume and composition of trade from those of the pre-NAFTA reforms. Notwithstanding these uncertainties, it is clear that during the 90s Mexico became an open economy with a high volume of trade both in absolute terms and relative to its GDP.

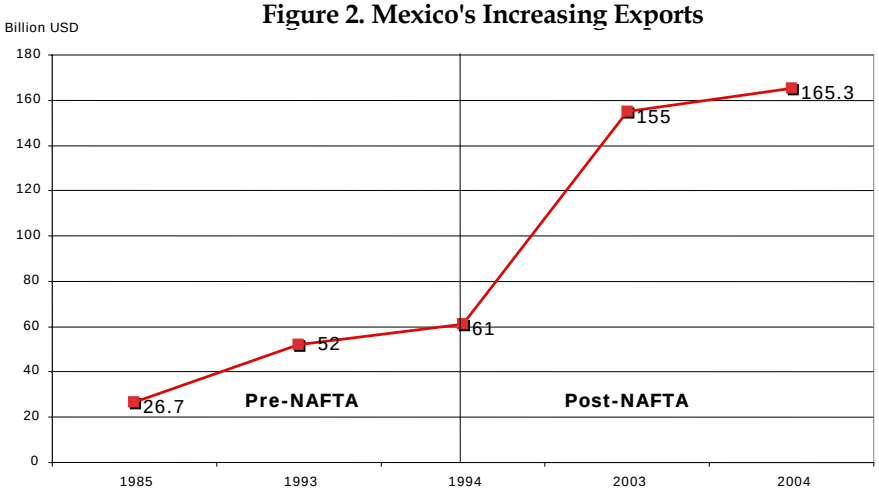
Mexico's exports to all countries grew 80% between 1985 and 1993, and that growth rate has nearly doubled since the inception of NAFTA. Its exports of manufactured products account for nearly 90% of total exports.

Mexico's high rates of growth with non-NAFTA countries may be explained, at least in part, by Mexico's low volume of trade with those countries, the multilateral trade liberalization resulting from the Uruguay Round, and the implementation of Mexico's extensive network of free trade agreements with partners other than the US and Canada.

Of course, Mexican trade performance with its NAFTA partners is certainly more remarkable. Mexico's total trade with the NAFTA region increased from $117 billion in 1993 to $262 billion in 2003, with a clear rise from the entry into force of NAFTA.

During the same period, Mexican imports from the US and Canada increased from $65 billion to $106 billion and Mexico's exports to its NAFTA partners also increased from $52 billion to $155. See Figure 2.

Figure 2. Mexico's Increasing Exports



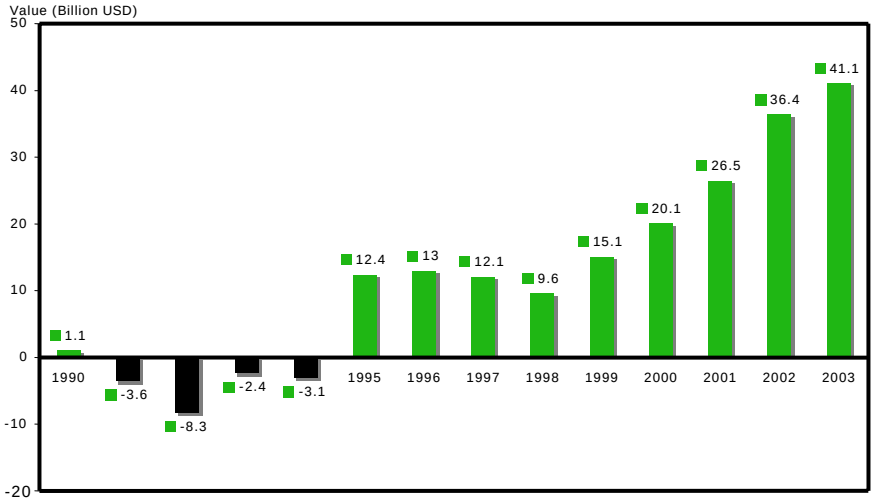
Source: BANCOMEXT.

These trends radically transformed Mexico's $3.7 billion trade deficit in 1993 with its NAFTA partners to an impressive trade superavit of $49 billion in 2003, of which $41.1 billion with the US. See Figure 3.

In 2004 total trade reached $290 billion, with $113 billion in imports and 177 billion in exports, and a superavit of $64.5 billion, of which the US represented $56.5 billion.

Thanks to its trade reforms and NAFTA, the composition of Mexican exports has changed from an oil commodity base to a manufacturing platform. In 1982, for example, oil represented 77% of Mexico's total exports to the US but in 2004 that figure reached a more manageable level of 8%. Meanwhile, the proportion of manufactured products increased from 19 to

Figure 3. MEX-USA Trade Balance

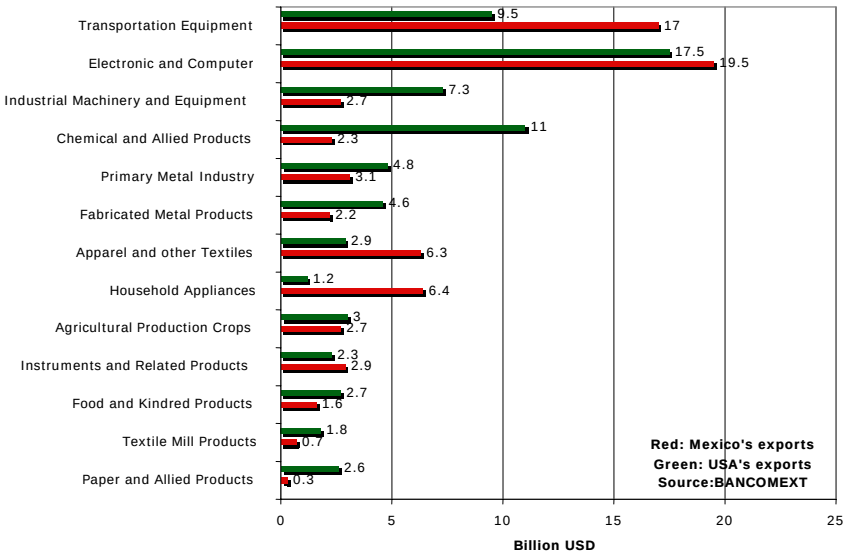


Source: BANXICO.

89%, and those of agriculture decreased from 4 to 3%. Almost 90% of Mexican imports from the US and Canada are intermediate inputs or capital goods.

Chart 1 depicts the sectorial trade balance between Mexico and the US. It shows that Mexico registered trade superavits in transportation equipment, electronic and computer, apparel and other textiles, household appliances, on the one hand, while on the other hand, it registered trade deficits in industrial machinery and equipment, chemical and allied products, primary metal industry, fabricated metal products, agricultural production crops, food and kindred products, textile mill products, and paper and allied products.

Chart 1. Sectorial Trade Balance between Mexico and the USA

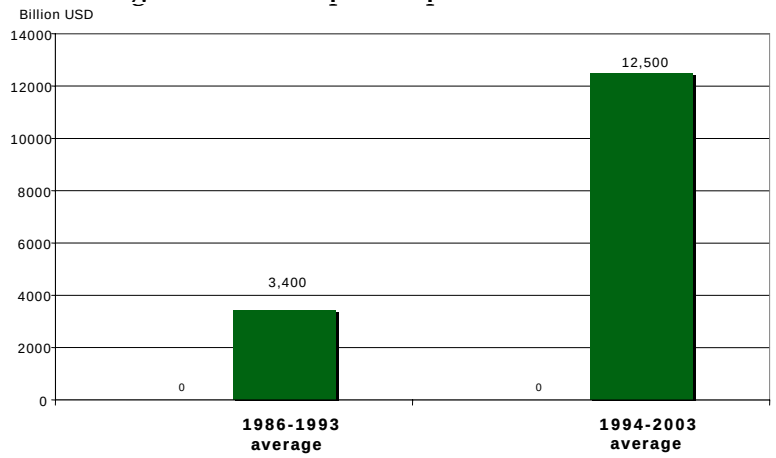


Finally, it is worth mentioning that Mexico's participation in the US market increased from 6.9% in 1993 to 10.7% in 2004, with a peak of 11.5% in 2002.

Investment

The anticipation of higher FDI is probably one of the main benefits that prospective members expect from an upcoming FTA. The experience with NAFTA appears to validate these expectations. As shown in Figure 4, Mexico's FDI inflow jumped from an annual average of $3.4 billion during the 1986-1993 pre-NAFTA period to an annual average of $12.5 billion during the 1994-2003 post-NAFTA era. As a percent of GDP, FDI flows increased from 1 to 3% during the period.

Figure 4. Mexico's pre and post-NAFTA FDI Inflows



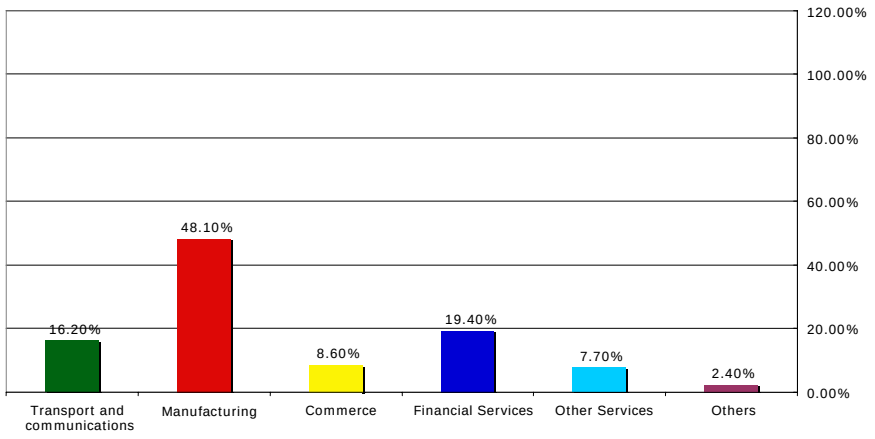
Source: BANCOMEXT.

Of course, there is a number of non-NAFTA factors that may explain FDI inflows, such as the more liberal foreign investment law adopted by Mexico in 1993 and the rising FDI flows to emerging markets that took place prior to the 1998-1999 Asian crises, among others.

Nevertheless, it is clear that NAFTA could have influenced the location of production in Mexico in at least five ways. First, tariff preferences granted to Mexico might have allowed NAFTA producers to exploit Mexico's comparative advantage in labour intensive processes. Second, tariff preferences could have induced producers to locate in Mexico instead of producing in other developing countries. Third, NAFTA's rules of origin would have induced some input suppliers to move to Mexico to enjoy the elimination of tariffs. Fourth, the eventual elimination of duty drawback mechanisms would have increased the incentives to move to Mexico some intermediate good production, and last but not less, the agreement's investment provisions offered more certainty to foreign investors with regard to their Mexican assets.

As can be seen in Chart 2, FDI flows were directed largely to the manufacturing and services sectors of the Mexican economy; and within the services sector, mainly into financial services and transport and communications.

Chart 2. FDI by Economic Sector



Source: BANCOMEXT.

Manufacturing

Manufacturing has been one of the most dynamic sectors in Mexico. During the first 12 years of NAFTA implementation, manufacturing grew by 43.2% in real terms. One of the driving forces behind manufacturing performance has been, undoubtedly, the dynamic growth in exports.

Manufacturing exports grew by almost 190% in real terms over the 1994-1999 period; above total export growth (140 %) and triple the percent increase in agricultural exports. As a result, manufacturing increased its participation in total merchandise exports by 10 percent points, reaching 84% in 1999. As a fraction of GDP, manufacturing exports went from 6 to 12.5% over the period.

Statistical evidence shows that industries within the Mexican manufacturing sector that experienced fast export growth during the years 1997-1999, also exhibited high employment growth. However, no clear conclusion can be reached because studies also point out that although maquiladora employment doubled from 1994 to 1999, non-maquiladora manufacturing employment grew by a mere five percent.

Automotive sector

Mexico's automotive sector suffered a drastic transformation as a consequence of NAFTA. Before NAFTA this sector was strongly protected with high tariffs, non-automatic import licenses, as well as local content and trade balancing requirements.

With NAFTA, the sector has been gradually liberalized and from January 2004 onwards the only remaining restriction concerns used-motor-vehicle imports, which will remain prohibited until 2009; thereon imports will be authorized progressively with full liberalization taking place on 2019.

The liberalization of this important industry has radically changed Mexico's position in the automotive sector. Between the entry into force of NAFTA and the year 2003:

- Mexico's total production of cars increased 42.3% reaching a record of more than one and a half million units in 2003;
- The proportion of automotive exports in relation to total production increased from 52% in 1994 to around 73% after 1997, with a peak of 84% in 1995;
- Mexican exports grew slightly more than 270%;
- Mexico's trade balance shifted from a chronic deficit of about $1.5 billion to a healthy superavit of 6 to $10 billion from 1995 onwards;
- Mexico's participation in total US automotive imports increased from 7.8% to 14.1% in 2003, with a peak of 14.9% in 2001;
- Mexico rose above Germany and became the third US supplier beneath Canada and Japan;
- The value of Mexican exports increased from $9.1 to $32.8 billion in 2003;
- The automotive sector created 200,000 new jobs with an average wage 29% higher than the national wage average.

Electric and electronic industry

The electric-electronic industry has also taken advantage of NAFTA and is nowadays one of the main exporting sectors of Mexico. In 2000, Mexico's exports of these products reached $33.7 billion. Now, Mexico is the second supplier of the US with an 18% share of total US imports in this sector.

Between the entry into force of NAFTA and the year 2003, the electric and electronic industry has created 110,000 new jobs, which represents 12.6% of the total new jobs generated in the manufacturing sector during the same period.

Colour televisions constitute the main Mexican export product to its NAFTA partners in this sector with more than 32 million units sold in 2005. Since 2004, Mexico began producing high-tech televisions (liquid crystal and plasma) and currently is the main supplier of its NAFTA partners in such products with a 60% share of their total imports.

Textiles and clothing

Before NAFTA, Mexico and the US faced significant export trade barriers with each other. NAFTA's elimination of these barriers for textile exports to the United States allowed Mexico to claim increasing shares of the U.S. market.

Since 1994, when NAFTA was first enacted, the textile industries in Mexico gamed open access to the U.S. market, stimulating exports to the United States. The value of Mexican cotton textile and apparel exports to the United States increased from $3 billion in 1995 to almost $10 billion in 2003. At the same time, Mexico's share of U.S. imports in the textiles and clothing sector grew from 4.4% in 1993 to 10.6% in 2003. This sector created 260,000 new jobs since NAFTA entered into force.

The special rules of origin negotiated for this sector forced Mexico to share the U.S. structure of protection. This occurred because the U.S. is NAFTA's low-cost source of textiles used in the manufacture of apparel. Since NAFTA offered substantial preferential treatment to Mexican exports of apparel that use textiles and yarns from NAFTA countries (mainly the U.S.), the decision whether to export to the U.S. apparel market depends only on the U.S. prices as determined by its import barriers.

Agriculture

NAFTA fully liberalized trade between Mexico and the US. Since 2003 practically all agricultural products are freely traded with no tariffs or quotas between the two countries. Mexico's sensitive products with longer transition periods (i.e. maize, dry beans, milk, and sugar) will be totally liberalized in 2008.

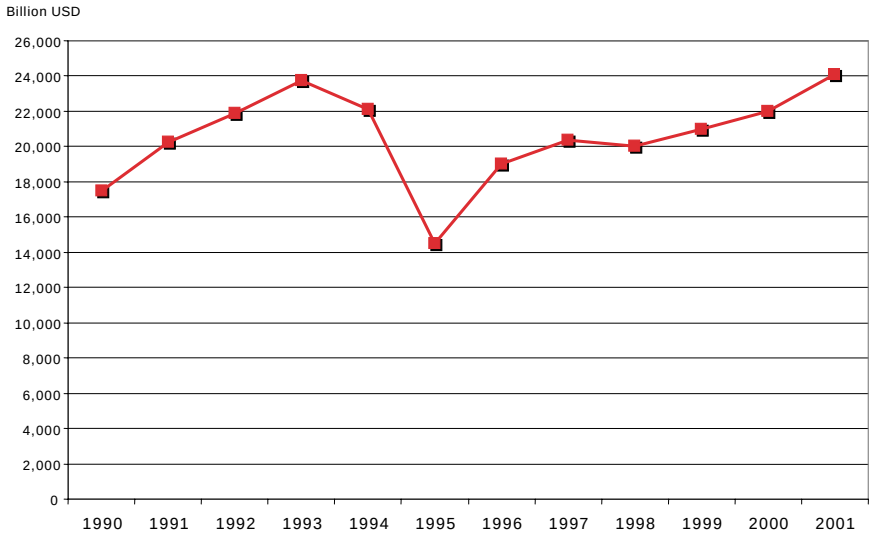
Mexico has two agricultural sectors. One composed by a large number of farmers working small plots of rain-fed land for subsistence; the other by modern and efficient farmers, with large plots, producing for the domestic and international markets. The former produce agricultural commodities where Mexico is not competitive, while the latter has specialized on products where Mexico is highly competitive like, for example, fruits and vegetables.

In 2001, the value of agricultural output amounted to little more than $24 billion; grains and oilseed production accounted for around 17% of the total, followed by fruit (10%) and vegetables (10%). Maize (principally for human consumption) remains the main agricultural commodity in terms of value (10.3% of the total), followed by sugar cane, alfalfa, and tomatoes. Livestock products account for some 51% of the total value of agricultural output: bovine, poultry, and swine meat are the major livestock products, followed by dairy products.

Contrary to some predictions, NAFTA has not had a devastating effect on Mexico's agriculture. In fact, although the contribution of the agricultural

sector to total GDP declined to less than 6% in the year 2000, both domestic production and trade in agricultural goods rose during the NAFTA years. As can be seen in Figure 5, after a sharp drop in 1995 (the year of the Tequila crisis), the value of agricultural production rose from $14.5 billion to about $24 billion. Meanwhile the weight of trade in agricultural production oscillated between 30 and 40% since 1995.

Figure 5. Mexico's Agricultural Production 1990-2001



A breakdown by products shows that production rose in all main Mexican agricultural products except wheat, sesame seeds, soybeans, barley, cocoa beans, coffee beans, apples and bananas (See Table 2). Of course, not all the reductions may be attributed to NAFTA. For instance, it is clear that the US does not normally export cocoa beans, coffee beans or bananas.

Table 2. Average Output of Selected Agricultural Products, Metric tons

Crop	Period		% change
	Pre-NAFTA	Post-NAFTA	
Grains and oil seeds			
Rice	355,709	412,458	16.0
Beans	1,168,008	1,242,024	6.3
Corn	15,985,368	18,145,120	13.5
Wheat	3,798,656	3,557,164	-5.8
Sesame seeds	35,570	26,092	-26.8
Cotton	314,914	613,628	94.9
Safflower seeds	88,119	138,678	57.4
Soybean	597,860	220,651	-63.1
Barley	540,658	452,219	-16.4
Grain sorghum	4,555,062	5,373,383	18.0
Other cyclical crops			
Peppers (Exc. green peppers)	1,066,753	1,412,475	32.4
Strawberries	91,580	112,639	23.0
Tomatoes	1,712,893	1,893,736	10.6
Perennial crops			
Avocados	725,131	813,354	12.2
Alfalfa	18,603,652	20,548,266	10.5
Cocoa beans	48,453	44,387	-4.4
Coffee beans	1,789,057	1,757,307	-1.8
Sugar cane	40,706,775	44,150,529	8.5
Copra	198,097	217,983	10.0
Limes	726,127	1,023,308	40.9
Mangoes	1,104,862	1,325,045	19.9
Apples	529,979	465,431	12.2
Oranges	2,511,251	3,604,461	43.5
Bananas	2,044,484	1,956,794	-4.3

Notes: Pre-NAFTA (1990-1993 average); Post-NAFTA (1994-1998).
Based on figures from Centro de Estadistica Agropecuaria (2001).

A closer look of the relationship between imports and production shows that as a proportion of domestic production, Mexico's in-quota imports from NAFTA partners, remained on average below 5% for milk, eggs, and potatoes, while those of poultry, barley and maize rose to very high levels. See Table 3.

Table 3. Ratio of NAFTA Tariff Quota Imports to Domestic Production, 1988-99 (%)

Product	Average 1988-93	Average 1994-99
Poultry	11.01	17.14
Milk	6.92	4.30
Eggs	0.65	0.58
Potatoes	1.32	2.40
Barley	28.12	60.79
Maize	16.00	22.33
Beans	7.17	8.31

Source: Department of Economy. El TLCAN en el sector agroalimentario mexicano a los seis años de su entrada en vigor.

With regard to the last two products, it is worth noting that the Mexican authorities allowed imports in excess of its NAFTA commitments to avoid a negative impact on expanding food-related industries such as beer, maize's chemical derivates, and foodstuff industries. Most part of the imported maize is "yellow corn" not used for human consumption but for animal feedstuff.

To tackle the adjustment problems caused by the modernization of the sector and the opening of the agricultural market, the Government of Mexico has implemented a set of internal instruments such as PROCAMPO, the Alliance for Agriculture, and ASERCA, together with various development banks, trust funds, and specialized insurance services.

Despite the difficulties generated by the opening of the sector and its structural problems, it is expected that, in the long run, NAFTA should result in Mexico specializing in those crops, such as fruits and vegetables, in which it has a comparative advantage relative to the United States and Canada. The trend is already there. Since the entry into force of NAFTA, Mexico's agricultural exports to its regional partners have tripled to reach an export value of $9.8 billion in 2005. That is $1.8 billion less than the value of its imports from the US and Canada in the same period.

NAFTA has allowed Mexican agricultural products to capture a larger share of the U.S. market –9% in 1993 versus 11% in 1999, only behind Canada- as Mexico's export growth to the United States in the sector during the period exceeded that of traditional agricultural exporters such as

Canada, Australia, New Zealand and Argentina. As of today, Mexico has become the number one supplier to the United States in more than 10% of all agricultural tariff lines, including goods such as avocados, tomatoes, limes and garlic, not to mention some value added products such as beer and chocolates.

While specializing in producing high value-added and more labour intensive crops, such as fruits and vegetables, would be a positive development in Mexico, poor access to credit and insurance, lack of experience in international marketing, deficient irrigation and transportation infrastructure, among other factors, may prevent poorer farmers from benefiting from the agreement. Whether those farmers and their families gain or not depends on removing such structural obstacles or, alternatively, creating opportunities elsewhere for the younger generations.

4. Concluding Remarks

When Mexico negotiated NAFTA no other country, except Canada and Israel, had a free trade agreement with the US. So, one of the main incentives was to obtain a contractual preferential access to Mexico's main trade partner, which also happens to be the biggest market in the world. That would allow Mexico to enjoy a privileged position in the US market vis-à-vis other competitors with no preferences or with limited non-contractual preferences under the US GSP. To be one of the first provided Mexico a temporal premium that has been gradually eroded by the proliferation of additional US free trade agreements with other countries.

Countries negotiating a free trade agreement with the US now will not obtain, at least fully, the privileged position that Mexico enjoyed for several years. However, this fact should not lead to the conclusion that a free trade agreement with the US now is worthless or without interest. In fact, the more FTAs the US negotiate with other countries, the more important and urgent it becomes to have a similar agreement with the US. Otherwise, the reluctance to engage in that kind of agreements would increase the risk of being displaced of the US market, not because of a lack of competitiveness but because other countries enjoy better access conditions. In this case there is no premium but a need to catch-up with other competing countries.

Whether NAFTA will benefit Mexico or not remains to be seen. The performance of the main economic and social indicators has oscillated from a deep crisis in the first year of its implementation, to a period of rapid economic growth during the following five years and to a decline with a small recuperation in the next period. What is going to happen next will depend on Mexico's ability to adapt itself to the new challenges imposed by globalization and the emergence of a growing number of more efficient competitors in international markets.

NAFTA helped Mexico to capitalize the structural reforms taken before and after its implementation, but the positive effects of such reforms and of NAFTA's initial push seem to be over. Further domestic reforms are needed to keep Mexico competitive. Otherwise, with or without NAFTA, Mexico will lag behind other emerging economies even in its own region. China, for instance, has already displaced Mexico as the second supplier of the US market. So, if there were a lesson to learn, that lesson would be that in order to fully benefit from free trade agreements, countries should be ready to take the necessary reforms at home, before or as a part of such agreements.

CHAPTER 1-1

Industrial Restructuring in Mexico after NAFTA

by
Chong-Sup Kim

1. Introduction

More than ten years has passed since NAFTA was established, but nevertheless, the evaluation of its effect on the Mexican economy is not easy. This is because there were so many other changes both within and outside of the Mexican economy that it is very difficult to disentangle the effects of NAFTA from those of the others.

In terms of economic performance after NAFTA, Mexico was very successful in increasing exports to the United States and receiving larger amount of FDI from both the United States and other countries. However, the growth rate did not increase in parallel with the exports and FDI. Moreover, even if there was a significant structural change in exports, there was little structural change in manufacture production. To add concerns about the effectiveness of NAFTA, recently the growth rate of GDP and exports decreased to levels lower than before NAFTA.

The questions we want to answer in this paper are: Why exports and GDP growth slowed down after 2000? Why GDP did not grow as much as exports? Why the structure of GDP did not change as much as that of exports?

2. Evolution of the Mexican Economy after NAFTA

A. Exports, FDI, and GDP

As a result of the establishment of NAFTA and the easier access to the US market, Mexican exports increased 17.7% in 1994, most of these increase being directed to the US market. At the end of 1994, balance of payments crisis broke out in Mexico and the economy submerged in a recession.

However, because of the huge increase in competitiveness brought by the devaluation, exports increased by another 30.6% in 1995. Even after 1995, the exports increased at an annual rate of 16% during the 5 subsequent years.

With NAFTA, FDI in Mexico increased from $4.4 billion in 1993 to $11.0 billion in 1994, and in 2001, it reached a record high of $27.2 billion. After 2001, the FDI in Mexico decreased, but still is maintaining a level several times larger than that before NAFTA. The motives of FDI are various. There is some FDI from US seeking efficiency, that is, the lower wage in Mexico. There is also FDI from non-member countries, locating close to the border with US, and exporting the products to the US market.

Figure 1. Export Growth in Mexico: 1994~2004

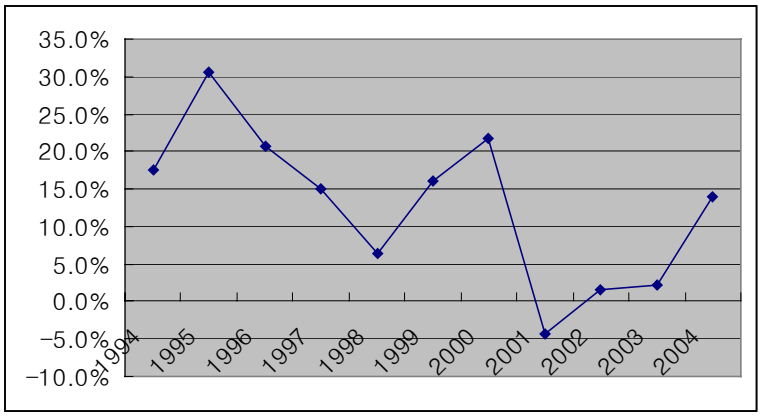
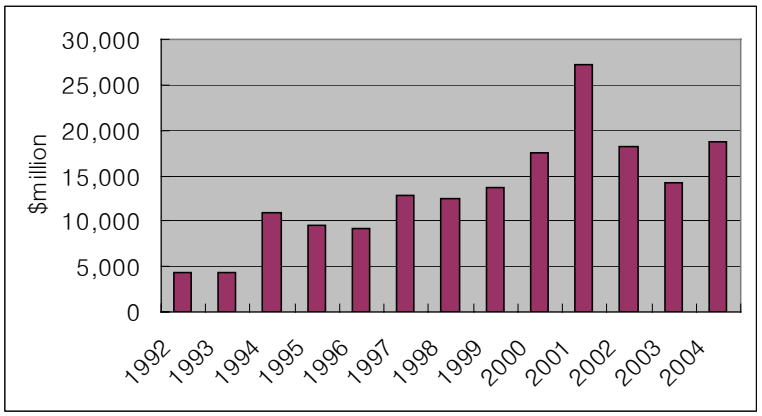


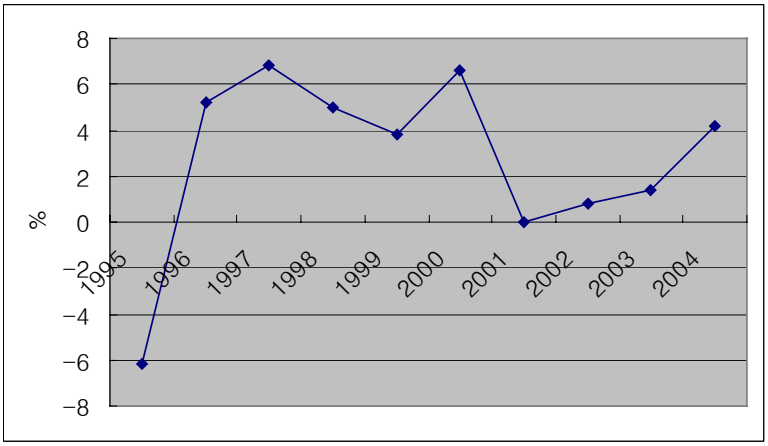
Figure 2. FDI in Mexico: 1992~2004



The FDI in Mexico is expected to have generated technical and technological spill-over effects on the Mexican industries. Researches show that firms with larger participation of foreign capital and larger orientation to the foreign market experienced higher increase in productivity.

In the case of GDP growth, it is very difficult to discern the effects of NAFTA, especially because of the balance of payments crisis in 1994. Due to the crisis, the GDP growth recorded -6.2% in 1995. The growth rate jumped to 5.2% in 1996 and 6.8% in 1997, but a large part of this increase must be considered as a recovery from the large drop in 1995. The fast recovery from the crisis was in part thanks to NAFTA. As Fernández (1997) pointed out, without NAFTA, the dramatic increase in Mexican exports to the US may have led to greater pressure for a protectionist response in the US, and the US may not have provided the financial support to Mexico that enabled it to avert default in early 1995, and perhaps a much worse economic downturn. Anyway, Mexico could maintain a growth rate of approximately 5% until 2000. The problem was that the growth rate drop to less 1% during 2001~2003. Even the growth rate immediately after NAFTA is no so high, if we take into account the very large increase of the exports.

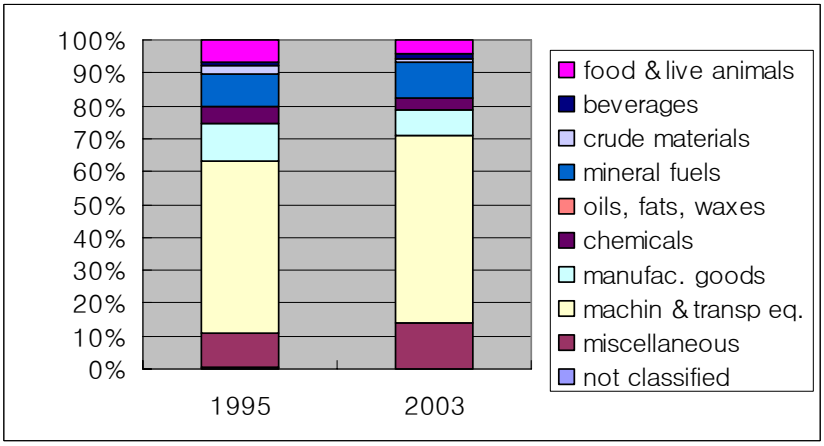
Figure 3. Growth Rate: Mexico 1995~2004



B. Structural change in exports and manufacture

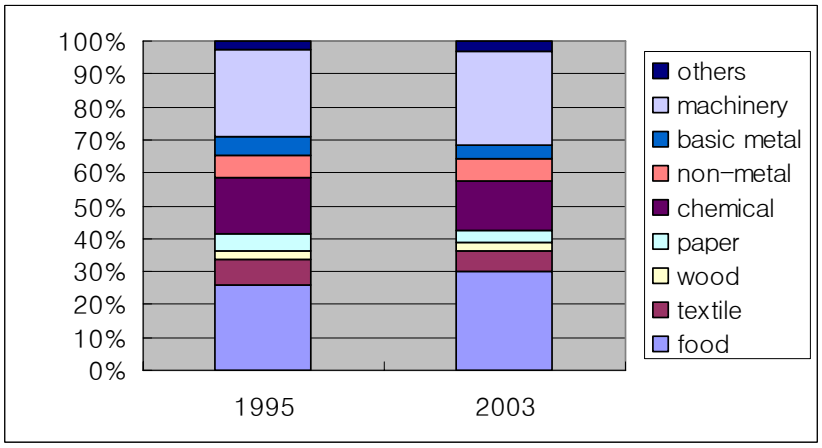
Mexican export not only increased at a high rate; its composition changed rapidly. Electric and electronic products were the most dynamic products, whose share increased from 27.8% in 1995 to 36.9% in 2001. The share of textile and apparel products increased from 6.1% in 1995 to 8.2% in 1999, but decreased thereafter because of the strong competitiveness of Chinese products.

Figure 4. Change in Export Structure: 1995 and 2003



Compared to the structural change of exports, the structure of manufacture production did not change that much. As can be seen from [Figure 5], the manufacture structure in 2003 was very similar to that of 1995.

Figure 5. Change in Manufacture Structure: 1995 and 2003



To measure the structural change of manufacturing production or exported goods, we can use Structural Change Index (SCI). SCI is defined as follows:

$$SCI = \left\{ \sum_i \frac{1}{2} \left| S_{i,t} - S_{i,t-1} \right| \right\} \times 100$$

Structural Change Index (SCI) is 9.37 for the case of exports and 6.59 for the case of manufacturing production.

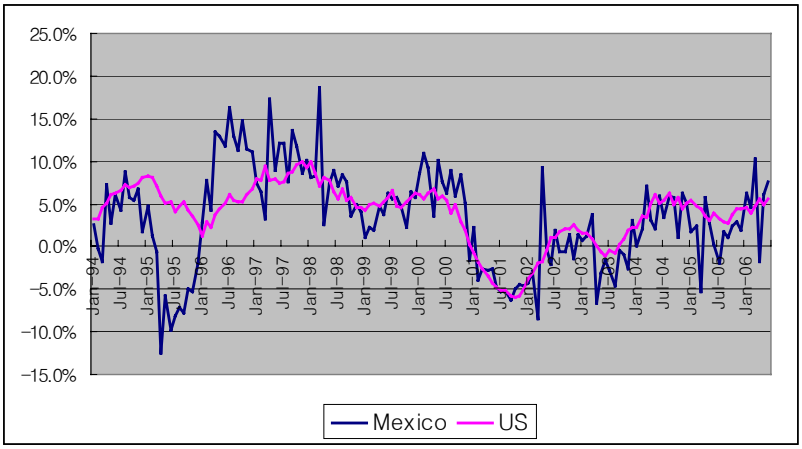
3. Factors Affecting the Economic Performance of Mexico after NAFTA

A. Why exports and GDP growth slowed down after 2000?

The share of US in Mexico's accumulated FDI inflow increased from about 46.7% in 1994 to 65.6% in 2001.[1] The share of US in Mexico's total export increased from 83% in 1993 to 88% in 2001. Because of Mexico's large dependence on the US, the synchronization between the two economies is increasing after NAFTA.

This would be beneficial to Mexico's economy if the US economy is in boom. However, if the US economy goes into recession, the negative impact would be instantaneously reflected in the Mexican economy. As shown in [Figure 6], the growth in US manufacturing production drop in 2001, and this led to a drop in Mexico's manufacturing production.

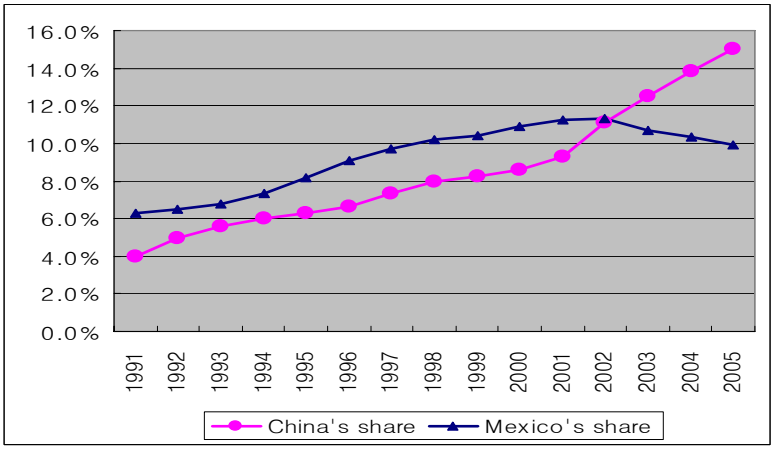
Figure 6. Growth in Manufacturing Production: Mexico and US



Another factor was the strong competitiveness of China products and the increase of the Chinese share in the US market. Due to NAFTA, Mexico's share in US market increased from 6.8% in 1993 to 11.3% in 2001, as shown in [Figure 7]. During the same period, the Chinese share also increased from 5.6% to 9.3%. However, after 2002 China's share continued increasing

1 Ministry of Economy, Mexico

Figure 7. Share of China and Mexico in US Market: 1991~2005



whereas Mexico's began to decline. From 2003, China's share exceeded that of Mexico in the US market, and the gap between the two is increasing.

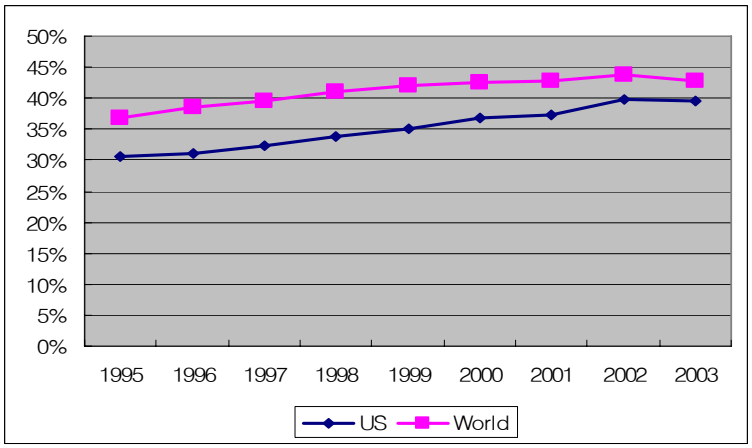
The problem is even more serious if we consider that China and Mexico are exporting increasingly similar products not only to the US market but to the world market as well. Export similarity index (ESI) between China and Mexico in the world market increased from 36.9 in 1995 to 43.8 in 2002.[2] The increase in ESI between Mexico and China in the US market was even larger. The ESI in the US market increased from 30.6 in 1995 to 39.8 in 2002.

2 The export similarity index (ESI), first used by Finger and Kreinin (1979), measures the competition between country a and country b in country c, and is computed as follows:

$$S(ab,c) = \left\{ \sum_i Min\left[X_i(ac), X_i(bc)\right] \right\} \times 100$$

Where $X_i(ac)$ is the share of the product i in the exports of country a to country c, and $X_i(bc)$ is the share of the product i in the exports of country b to country c.

Figure 8. Mexico-China Export Similarity Index in US Market



In summary, the slow down of exports and GDP growth in Mexico was due to the synchronization of the Mexican economy with the US economy, and the recession in the US economy after 2001. Another factor was the increased competition with Chinese products in the world market and especially in the US market.

B. Growth and structure: GDP vs. exports

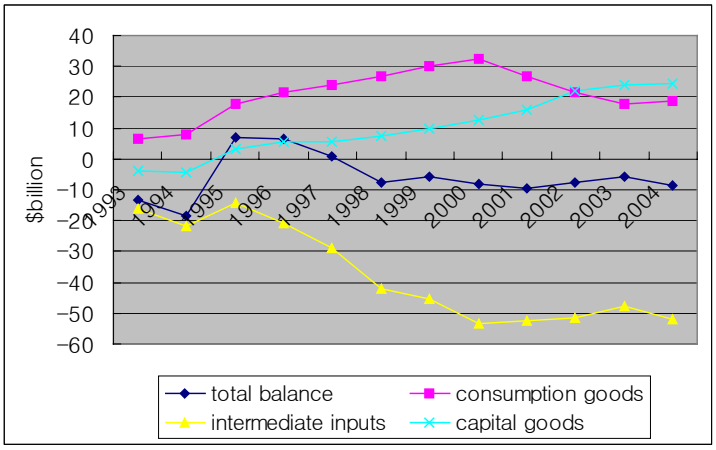
The other questions we have are: Why GDP did not grow as much as exports? Why the structure of GDP did not change, whereas that of exports did?

Even if Mexican exports drastically increased after 1994, this increase did not leave as much of value added in Mexico. This was because a large part of the exports consisted of products assembled in Mexico using imported intermediate inputs. The production of intermediate inputs generates much larger value added than the assembling process, but because of the underdevelopment of the industry of intermediate inputs, Mexico could not increase the value added in manufacture.

As shown in [Figure 9], the deficit in the trade of intermediate inputs kept increasing after 1996, whereas the trade of consumption goods and capital goods is producing surplus.[3] This means that, to export more, Mexico had to import more intermediate inputs.

3 Intermediate inputs include oil, of which the exports increased a lot due to the increase in oil price. If we exclude oil from intermediate inputs, then the deficit in the trade of intermediate inputs would be larger.

Figure 9. Trade Balance of Intermediate Inputs



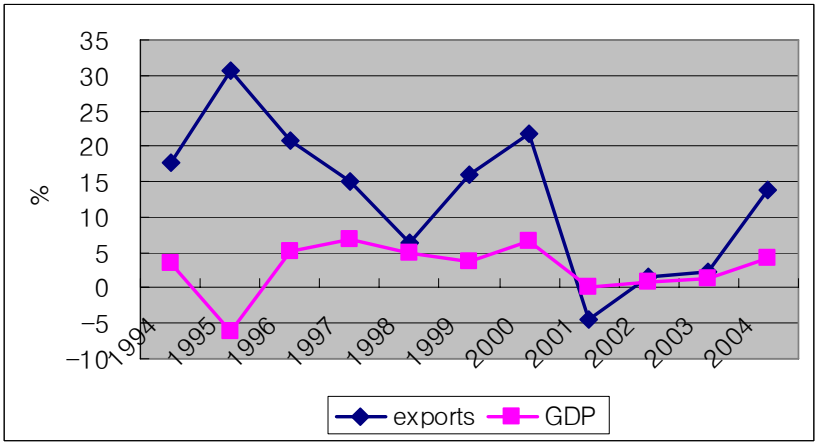
Because of the small value added in the industry of intermediate inputs, the manufacture value added is not increasing in at a similar rate as the exports. The structure of manufacturing production is not changing as the structure of exports for the same reason. One of exported products with the highest increase rate is electronic products. However, as most of the intermediate inputs used in the production of electronic products are imported, the share of electronic products in manufacturing value added is not changing so rapidly.

4. Consequences of the Underdevelopment of the Intermediate Inputs Industry

A. Small increase in GDP despite the large increase in exports

If domestically produced intermediate inputs were used in the production of exported products, value added and GDP would increase keeping pace with the exports. However, as imported intermediate inputs were intensively used, GDP did not growth as much as exports.

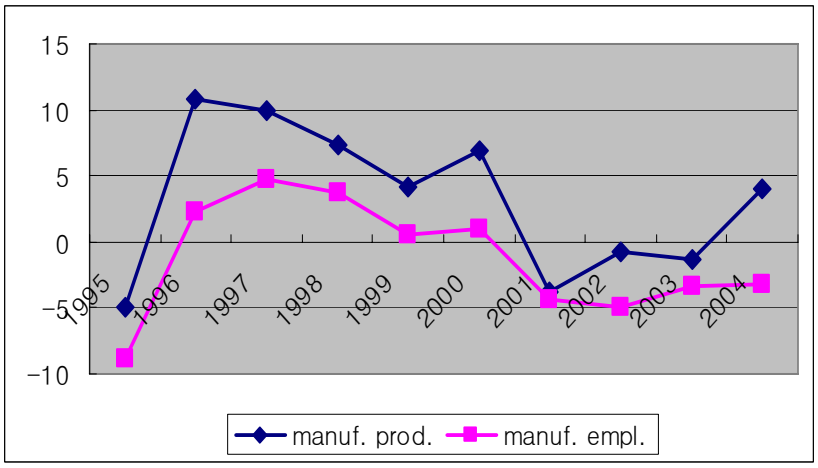
Figure 10. Growth Rate: Exports vs. GDP



B. Small increase in employment compared to the increase in GDP

In the case of Mexico, the assembly process is operated by large companies, and is more capital intensive than the production of intermediate inputs. Therefore, GDP growth based on the assembly process does not generate as much of employment as that based on the production of intermediate inputs.

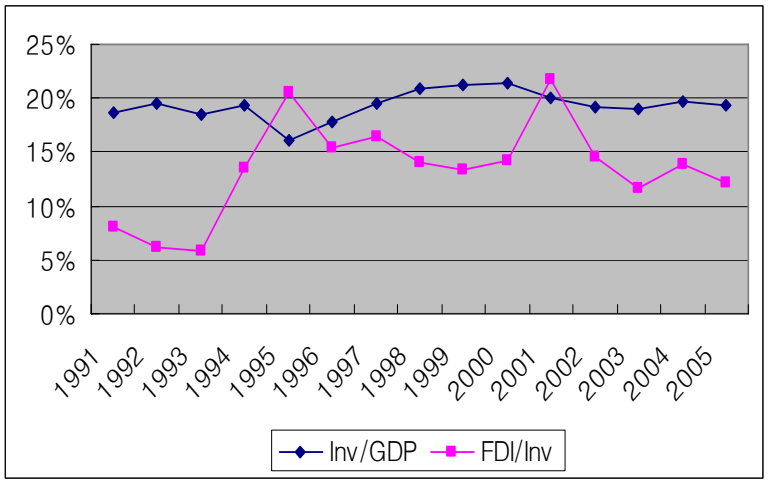
Figure 11. Growth Rate GDP vs. Employment



C. Small increase in investment and large participation of FDI

A large part of assembly process is operated by multinational corporations, whereas the production of intermediate products is accomplished by domestic companies. As the industry of intermediate inputs is underdeveloped, there is no much investment opportunities for domestic investors. Therefore, investment to GDP ratio remains low after NAFTA, whereas FDI to investment ratio increased significantly.

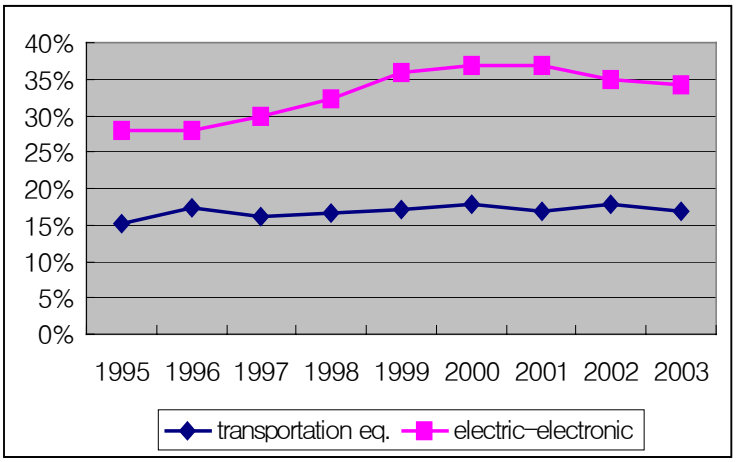
Figure 12. Investment / GDP vs. FDI / Investment



5. Causes of the Underdevelopment of the Industry of Intermediate Inputs: Auto Industry and Electronics Industry

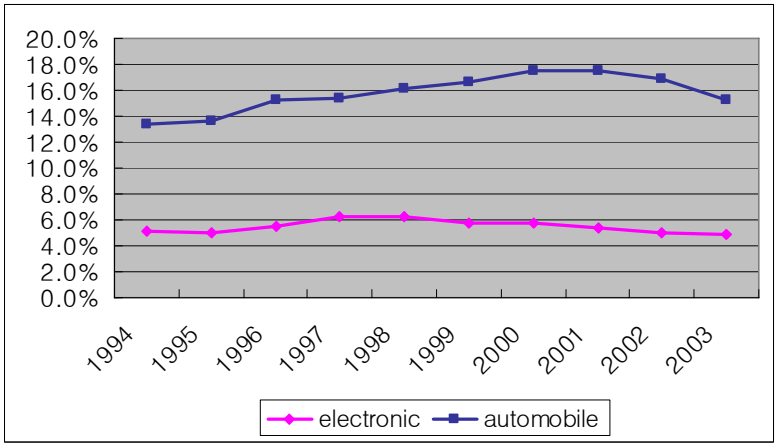
The automobile industry and electronic industry in Mexico make a striking contrast in terms of the performance of exports and production. In terms of exports, electric and electronic products were the most dynamic products, whose share in total exports increased from 27.8% in 1995 to 36.9% in 2001. The automobile industry was not so dynamic and maintained a share around 17% during 1995~2003.

Figure 13. Export Shares of Transportation Equipment and Electric & Electronic Products



However, in terms of value added electronic industry was not at all dynamic, and its share in manufacturing production never exceeded 7%. On the contrary, its share decreased since 1997 reaching 4.9% in 2003.

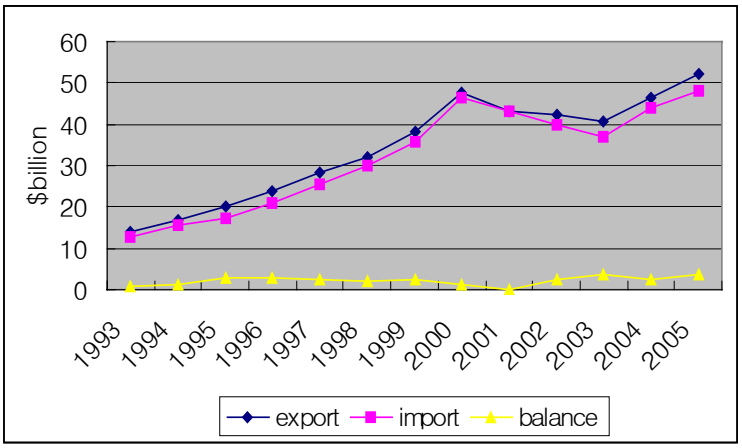
Figure 14. Share of Transportation Equipment and Electric & Electronic Products in Manufacturing Production



The reason of this is because the electronic industry relies too heavily on imported intermediate inputs. In [Figure 15], we can see that the Mexican exports moves on similar path as its imports. This reflects the fact that the

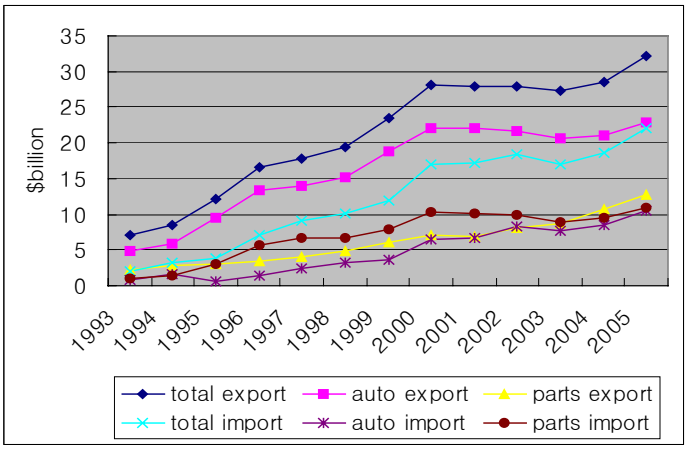
Mexican electronic industry uses most of its intermediate inputs from outside of the country. Because of this, the value added generated in this industry is very low compared to the amount of exports.

Figure 15. Mexico's Trade of Electronics & Electro-Domestics Products



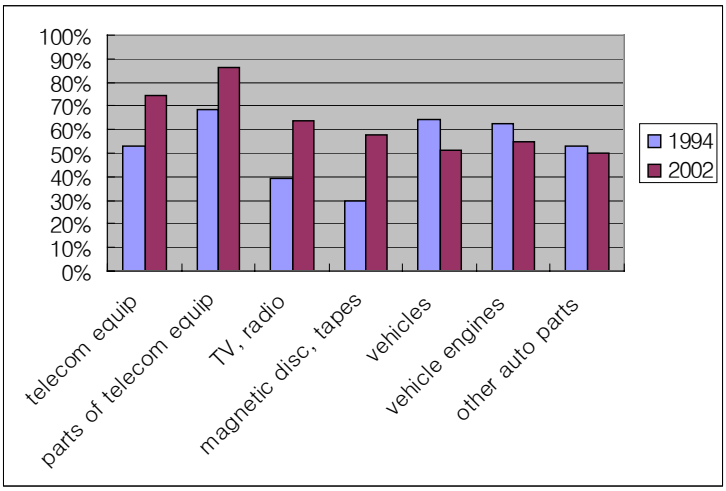
On the contrary, the automobile industry uses a lot of domestic intermediate inputs, and therefore generates a large value added. In [Figure 16], we can see that the import of auto parts is much smaller than the export of finished automobiles, and even the export of auto parts is increasing rapidly.

Figure 16. Mexico's Trade in Automobile Industry



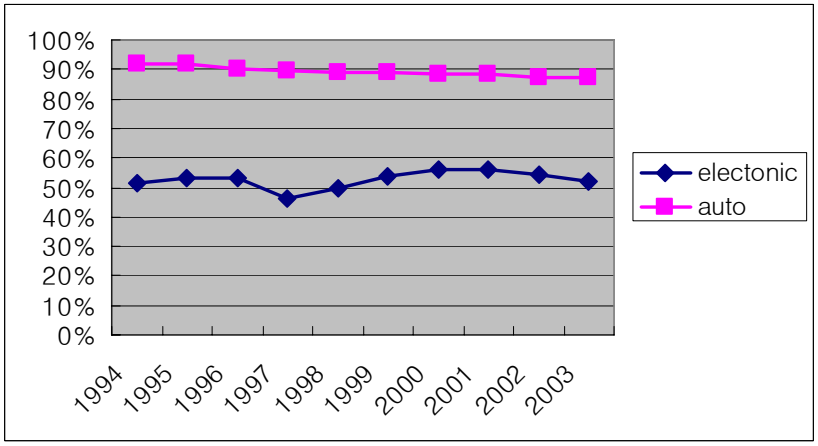
After the establishment of NAFTA, the ratio of imported intermediate inputs increased in electronics industry, but decreased in automobile industry. Because of this increase in the production of auto parts, automobile industry could increase its share in manufacturing production without increasing the share in total exports. On the contrary, electronics industry, which imported a larger amount of parts and components, observed a decrease in its share in the manufacturing production.

Figure 17. Ratio of Imported Intermediate Inputs



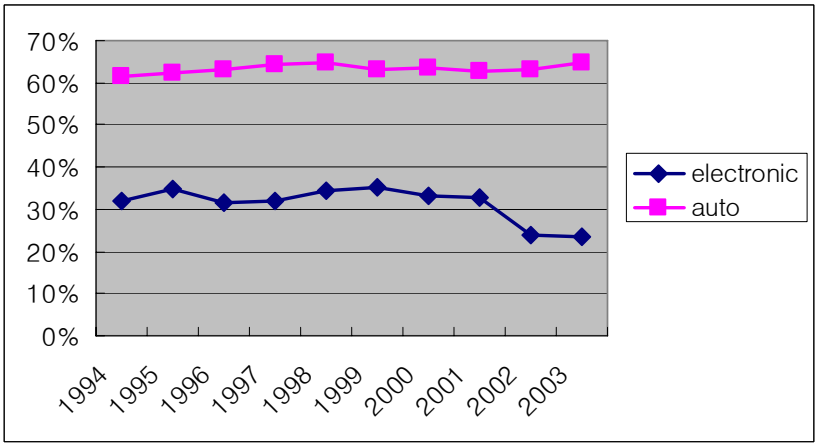
Usually the number of establishments in parts industry is much larger than that in finished products. In the automobile industry, the share of parts industry in total establishments is around 90%, whereas in the electronics industry it is around 50%, as shown in [Figure 18]. This reflects the underdevelopment of the electronics parts industry in Mexico.

Figure 18. Share of Parts Industry in Total Establishments



In the auto industry, even the companies producing auto parts are getting larger, and therefore employing larger number of workers without a large increase in the number of establishments. On the contrary, the firms producing electronics parts are getting smaller creating smaller number of jobs than they are supposed to. As can be seen from [Figure 19], the share of parts industry in total workers employed is decreasing in electronics industry, but increasing in auto industry.

Figure 19. Share of Parts Industry in Total Workers Employed



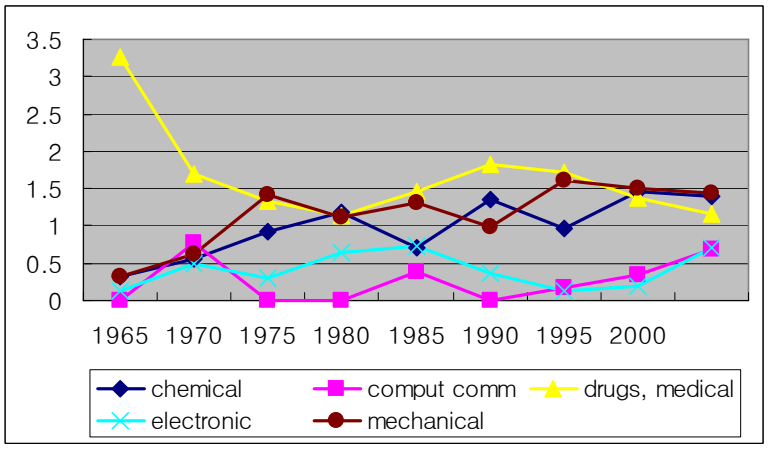
Then, what were the causes of this difference in the reaction of the two industries with respect to NAFTA. First, the situation before NAFTA may have played a very important role. In the case of the auto industry parts industry was already developed before NAFTA. With NAFTA, the already developed parts industry could reach economies of scale and become mere competitive.

In the case of electronics industry, the underdevelopment of parts industry led the government to adopt programs like PROSEC in order to attract assembly companies. PROSEC is a program that allows a tariff free import of some intermediate inputs. This could actually attract assembly companies, but led to the collapse of the weak parts industry.

As a result, the auto industry in Mexico could be integrated into the North American production network, whereas the electronics industry remained as an assembly center of North American and Asian companies.

Another question is why the initial condition of electronics part industry was so weak compared to auto parts industry. More detailed research is required, but one of the reasons may be the R&D activity and technological competitiveness of the two sectors. In [Figure 18], we can see that traditionally Mexico has technological competitiveness in mechanical but not in electronic engineering.

Figure 20. Mexico's RTA



The technological competitiveness is closely related to the R&D activity. In Mexico, R&D spending and R&D personnel is much smaller in electronic industry than in auto industry.

Table 1. R&D Spending and Personnel by Industry

	1999		2006 (projected)	
	R&D spending (million pesos)	R&D personnel	R&D spending (million pesos)	R&D personnel
Office machine	51.9	0	561.0	577
electronic appliances	47.7	3	515.8	531
transportation equip	615.4	108	4988.5	5133

Source: CONACYT.

6. Conclusion

Now we can answer the questions raised at the beginning of the paper. Why exports and GDP growth slowed down after 2000? One reason is the synchronization between the US and the Mexican economies, and the recession of the US economy after the year 2000. Another reason is the strong competitiveness of the Chinese exports and the increased similarity between Chinese and Mexican exports.

Why GDP did not grow as much as exports? Why the structure of GDP did not change as much as that of exports? The reason of these was because a large part of the exports consisted of products assembled in Mexico using imported intermediate inputs. One of the products with the highest export growth rate was electric and electronic products, but because of its poorly developed parts industry, the value added in this industry did not increase so much. On the contrary, the automobile industry was not so dynamic as electronic industry in terms of exports, but its value added increased in a larger scale. This was thanks to a developed auto parts industry.

NAFTA further develop the auto parts industry, which was already developed to some level before NAFTA, but led to the decline of the electronics parts industry, which had a very low level of development before NAFTA. This was in part because the government, in order to attract assembly companies, adopted programs like PROSEC which allows a tariff free import of some intermediate inputs.

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CHAPTER 1-2

Mexican Agriculture: 12 years into NAFTA

by
George A. Dyer and Antonio Yúnez-Naude

1. Agricultural liberalization in Mexico

The Mexican government has pursued the structural reform of agriculture since the early eighties. All areas within the agricultural sector have been reformed. Guaranteed prices disappeared, subsidies to credit and agrochemical inputs were abolished, and public industries were sold or closed, including the state trading company *Compañía Nacional de Subsistencias Populares* (CONASUPO). An ambitious agrarian reform was also implemented in 1992. As regards trade, in 1986, Mexico became a member of the General Agreement on Tariffs and Trade (GATT) and later of the World Trade Organization (WTO). Mexico also negotiated and ratified the North American Free Trade Agreement (NAFTA) in 1993 and countless other bilateral or regional trade agreements. NAFTA is undoubtedly the most important trade agreement for Mexico. This is due to the extent of trade liberalization within NAFTA and to the relative importance of trade with the United States. Between 2000 and 2002, 85% of Mexican agricultural exports went to the United States. Around 87% of Mexican agro-food exports and 79% of its imports occur within NAFTA.

Within NAFTA, trade in most agricultural products was liberalized in 1994. However, products considered vulnerable were subject to gradual trade liberalization through tariff rate quotas (TRQ). Mexico and the United States agreed to use TRQs for some cereals and pulses coming into Mexico and for certain fruits and vegetables coming into the United States. Pork and corn imports into Mexico were subject to gradual liberalization. The pork sector has been completely open to trade since January 2003; the opening of the corn sector will end by January 2008. Until then, corn imports into Mexico are subject to a TRQ (Table 1). There are no references

Table 1. Schedule of Tariff Rate Quotas for Corn Imports from the United States

	Import quota from United States (tons)	Import quota from Canada (tons)	Ad valorem tariff (%)
1994	2,500,000	1,000	206.4
1995	2,625,000	1,050	197.8
1996	2,756,250	1,103	189.2
1997	2,894,063	1,158	180.6
1998	3,038,766	1,216	172.0
1999	3,190,704	1,276	163.4
2000	3,350,239	1,340	145.2
2001	3,517,751	1,407	127.1
2002	3,693,639	1,477	108.9
2003	3,878,321	1,551	90.8
2004	4,072,237	1,629	72.6
2005	4,275,848	1,710	54.5
2006	4,489,641	1,796	36.3
2007	4,714,123	1,886	18.2
2008	4,949,829	1,980	0

Source: SECOFI: 1994.

within NAFTA to white or yellow corn; all corn grain, except for broken grain, is treated the same. This has been a perennial source of conflict between government and farmers.

NAFTA does not impose specific restrictions on export subsidies or on domestic marketing supports for agricultural products.

2. Trends in Mexican Agriculture

Nearly 13 years after the start of NAFTA, two of the forecasts that surrounded the negotiation of the agreement's agricultural chapter have become true: i) agricultural trade between Mexico and the United States has increased dramatically (Figures 1a,b) and ii) domestic cereal prices have dropped (Figure 2). Cereal production in Mexico, including corn, was widely considered to be non-competitive against imports from the United States. Unsurprisingly, cereal imports have increased substantially, generating a sizable trade deficit for this sub-sector (Barceinas *et al.* 2006).

But despite rising imports and falling prices, corn—a staple of the Mexican diet—is still the main crop in Mexico. Moreover, domestic corn output has increased and so has its share of total supply, which increased from an average 63% before 1994 to 69% after this date (Figure 3). Changes in the domestic supply of corn are associated with higher yields in irrigated areas and growth of acreage in rain-fed lands (Figure 4). Lower corn prices have benefited other sectors of the Mexican economy, which have increased its demand for this grain. This is the case of the livestock industry and particularly the pork sector,

Econometric analysis of price trends suggests that trade liberalization and other reforms have had a negligible effect on this variable. Howver, trends in output and trade volumes have been affected. There are signs of structural change in some of these trends during the reform period (see below).

Figure 1a. Mexican Agricultural Exports 1980-2003

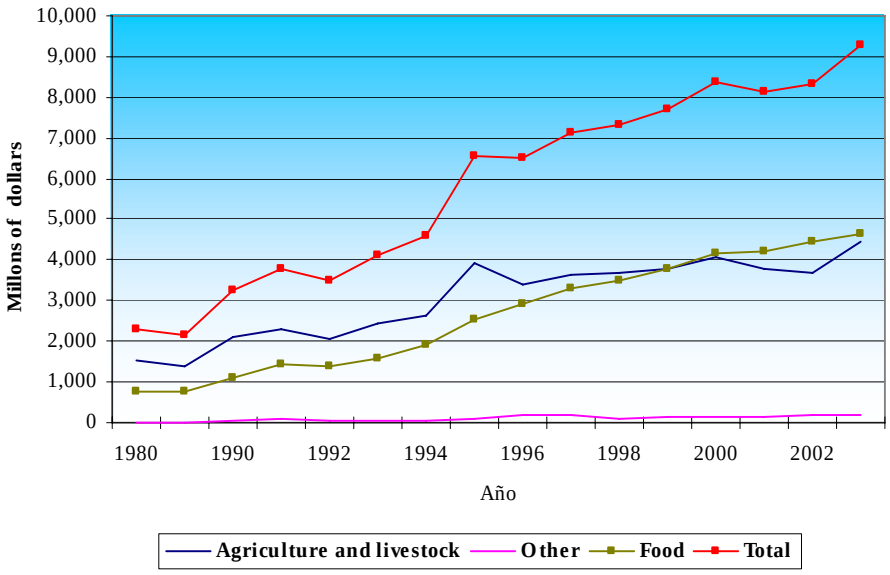


Figure 1b. Mexican Agricultural Imports 1980-2003

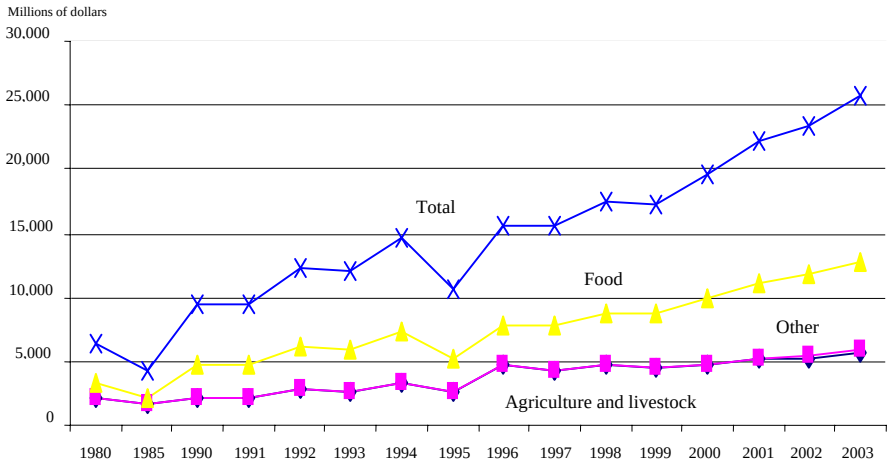
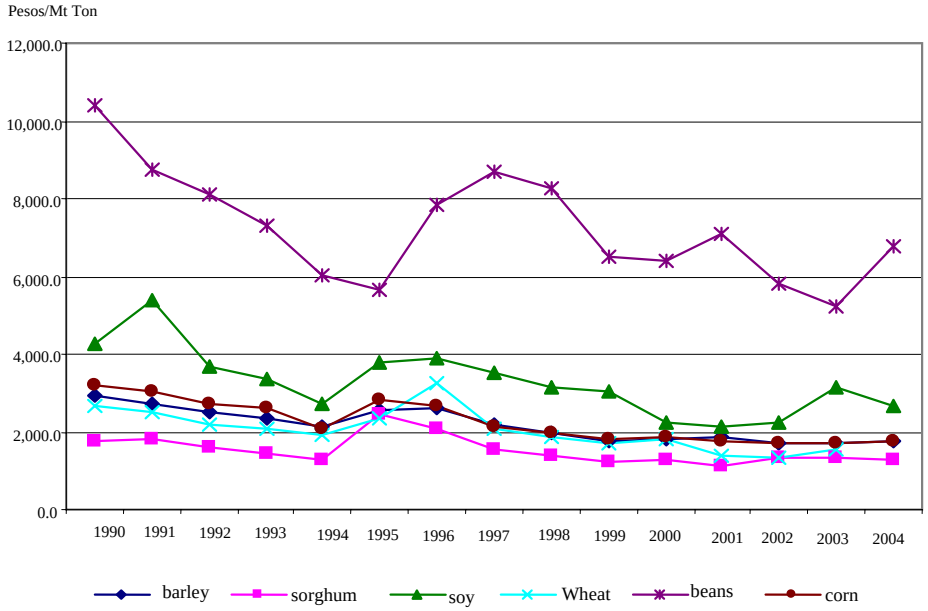
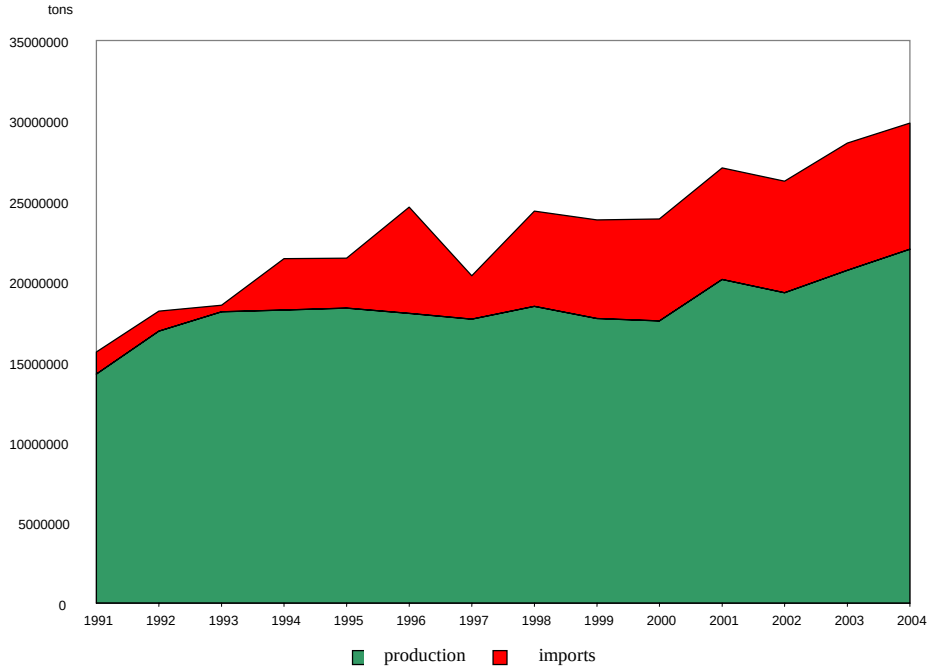


Figure 2. Producer Prices for Cereals and Pulses 1990-2004 (base 2003)



Source: IV Informe de Gobierno; SIACON.

Figure 3. Mexican Domestic Corn Output and Imports: 1991-2004

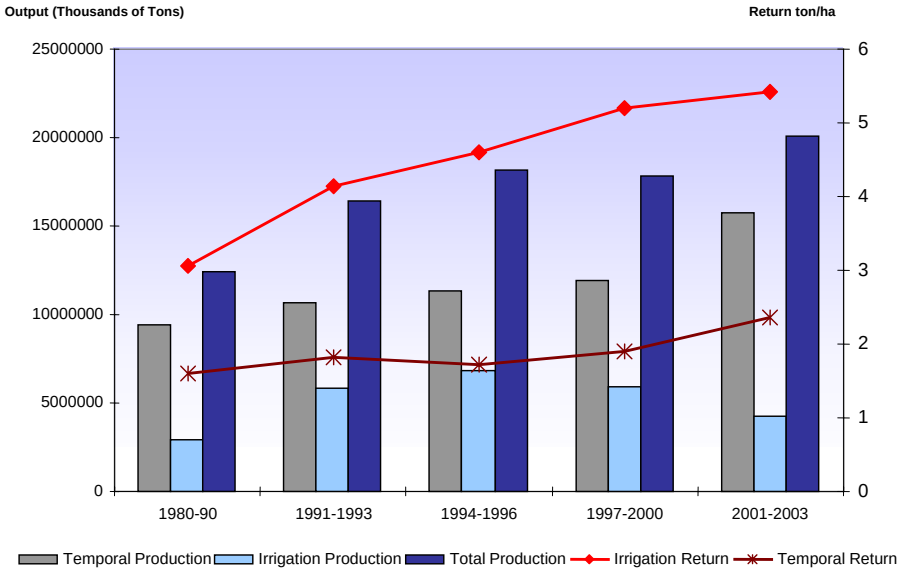


Sources: USDA, Foreign Agricultural Trade of the United States database; SIC-M, SE. 2005.

As regards pork, it is clear that although imports have grown steadily since the start of NAFTA (Figure 5), the price of pork has not followed a clear trend (Figure 6). As a result, pork production has grown slightly, but uninterruptedly, since the late eighties. However, output is still below what it was before a drastic decline at the beginning of that decade (Figure 7).

In summary, although liberalization has had the expected effect on trade, the response of the corn and pork sectors is not entirely as expected. Policy changes and changes in the demand for pork and corn as well as in productivity might explain some aspects of this response, but great heterogeneity within these two sectors is also responsible.

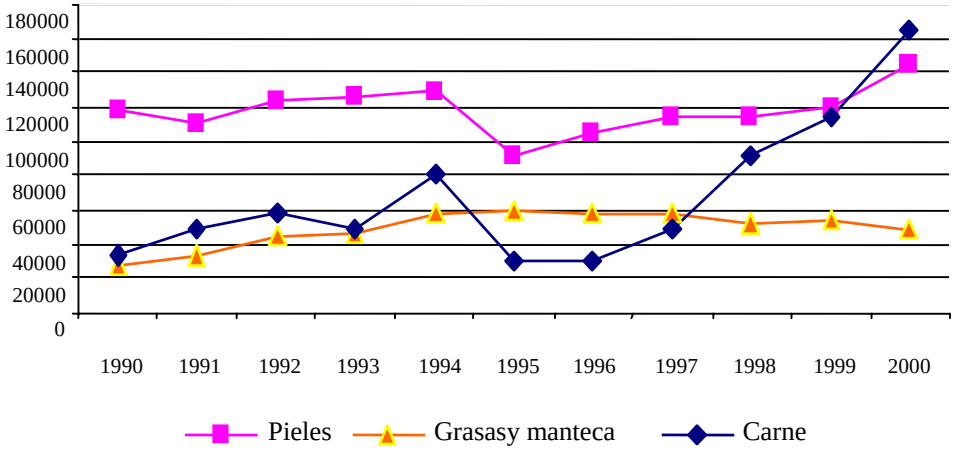
Figure 4. Mexican Corn Output and Productivity: 1980-2003



Source: SAGARPA-SIACON and SIAP.

Figure 5. Mexican Pork Imports

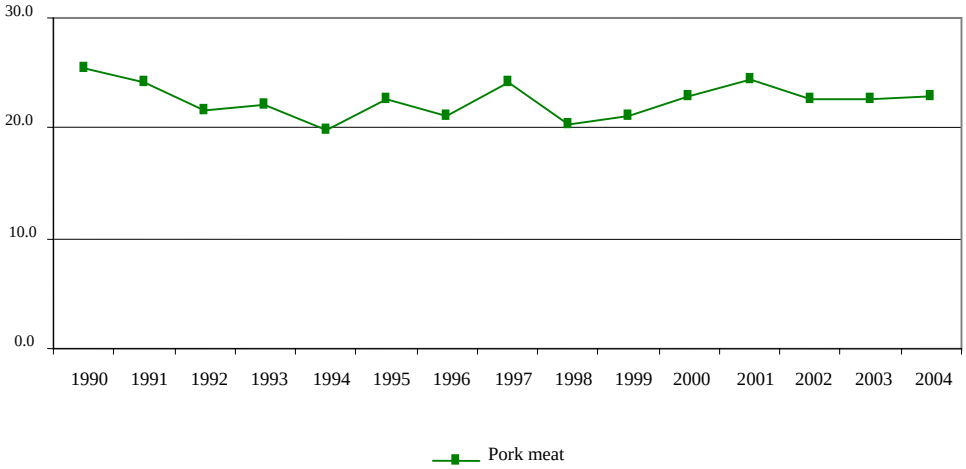
(thousands of dollars)



Fuente: datos de SIAP-SIACON 2004.

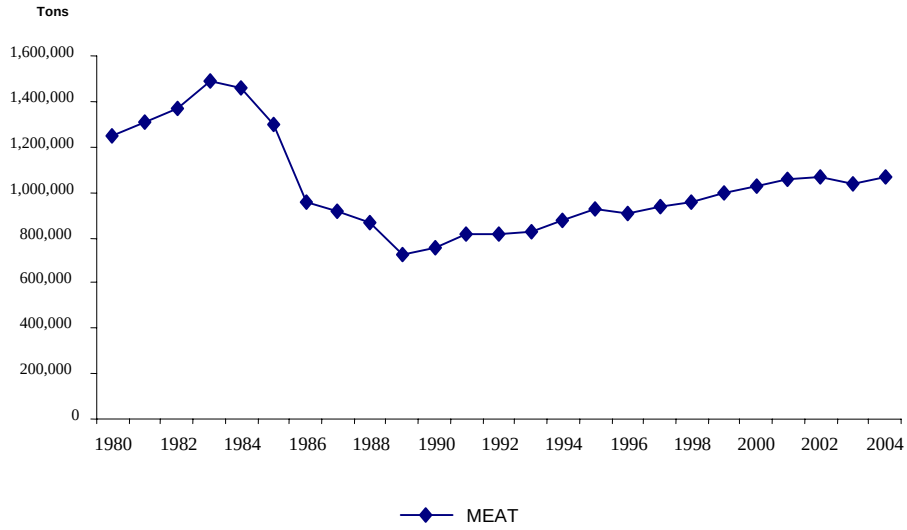
Figure 6. Pork Producer Price Trends in Mexico

(Pesos/kilo, 2003 base)



Source: SIACON 1980-2004.

Figure 7. Mexican Pork Output: 1980-2004



Source: SIAP 2004.

3. Agricultural Policies

In Mexico, trade liberalization was preceded and has been accompanied by changes in agricultural policies, whose purpose has been both to facilitate the opening and to mitigate its adverse effects. In 1991, the federal government created a new agency to operate various marketing support programs: Apoyos y Servicios a la Comercialización Agropecuaria (ASERCA). Marketing supports were originally limited to sorghum and wheat, but have now extended to other crops, including corn, barley, cotton and rice. ASERCA was meant to support marketing of staple crops in surplus-producing regions, but the distribution of subsidies has benefited only some areas.

Another important program is Apoyos Directos al Campo (PROCAMPO), which was originally conceived as a temporary program to compensate farmers for the abolition of guaranteed prices and other subsidies. It was established in 1994 and meant to expire in 2008, when NAFTA came into maturity and trade liberalization were complete. The program consisted of lump-sum per hectare cash supports to owners (or holders) of registered land sown in basic crops: barley, beans, corn, cotton, rice, sorghum, soy, sunflower and wheat. Transfers were thus decoupled from output. Only land that had been sown in these crops between 1991 and 1993 was eligible for registration in the program, but the area registered in PROCAMPO has changed over the years (see below).

The third major agricultural program is Alianza para el Campo (Alianza). Alianza was created in 1995 to promote land conversion into crops considered competitive within the context of NAFTA, basically fruits and vegetables for export. Alianza is a decentralized (federalized) program operated jointly by the federal and state governments. In summary, PROCAMPO, ASERCA and Alianza were designed to help agricultural producers become more competitive and face trade liberalization.

In 2001, the current administration promoted a legal framework to integrate all rural policies under a single objective: promoting income growth for rural households. All federal programs related to rural areas, including PROCAMPO, ASERCA and Alianza, became part of the Programa Especial Concurrente (PEC).

In 2006, PEC's budget was close to $14,916 billion dollars (Table 2). This constitutes a 32% increase in real terms between 2003 and 2006. In 2003, 43% of the budget was destined to support productive activities and 39% to social programs, but by 2005 only 32% went to productive activities.

Table 2. PEC Budget: 2003~2006

(Millions of pesos)

	2003		2004		2005		2006	
	monto	%	monto	%	monto	%	monto	%
Economy	575.9	0.5	965.0	0.8	1,016.4	0.7	888.8	0.6
Agriculture	40,582.7	34.7	43,814.2	36.9	49,221.2	33.5	51,068.0	33.0
Health	6,829.4	5.8	6,827.4	5.7	14,206.4	9.7	12,268.4	7.9
Transportation	1,092.3	0.9	2,947.9	2.5	2,151.1	1.5	2,504.8	1.6
Social	15,573.9	13.3	13,449.1	11.3	17,447.6	11.9	17,222.0	11.1
Environment	8,976.6	7.7	8,004.1	6.7	11,304.8	7.7	9,027.7	5.8
Education	17,554.4	15.0	17,442.7	14.7	23,829.7	16.2	24,732.6	16.0
Treasury	10,310.3	8.8	4,538.8	3.8	6,918.3	4.7	6,527.2	4.2
Agrarian	3,565.5	3.0	3,504.9	2.9	4,856.2	3.3	4,445.3	2.9
Labor	865.9	0.7	126.2	0.1	74.6	0.1	75.9	0.0
Turism	16.4	0.0	75.0	0.1	3.8	0.0	1,600.0	1.0
Other	11,153.3	9.5	17,196.0	14.5	15,734.7	10.7	24,555.0	15.9
Total	117,096.6	100.0	118,891.6	100.0	146,764.4	100.0	154,915.8	100.0
percentage	44.5%		44.5%		43.4%		43.5%	

Source: Presupuesto de Egresos de la Federación (2004-2006); SAGARPA.

Table 3. Mexican Agricultural Program Budgets: 1995~2006

Millions of pesos (2003)

Program	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Alianza para el Campo	0	2,514	2,738	2,870	3,213	3,121	4,470	6,893	6,250	8,758	6,950	5,124
PROCAMPO	16,527	14,261	13,133	12,736	12,057	12,194	12,155	12,979	14,191	15,608	12,671	12,565
marketing supports	2,082	1,096	3,564	2,895	2,024	3,583	2,920	5,867	6,406	6,138	6,289	7,515
Employment	0	0	522	604	834	1,037	1,116	1,154	1,800	465	105	
Sanitation	1,389	229	288	287	300	285	392	361		526	716	189
Other programs	16,483	15,998	13,696	12,666	8,667	8,817	11,740	9,928	11,591	11,465	18,441	21,123
Total	36,480	34,108	33,941	33,941	27,095	29,036	35,794	37,181	41,109	43,814	48,396	51,068

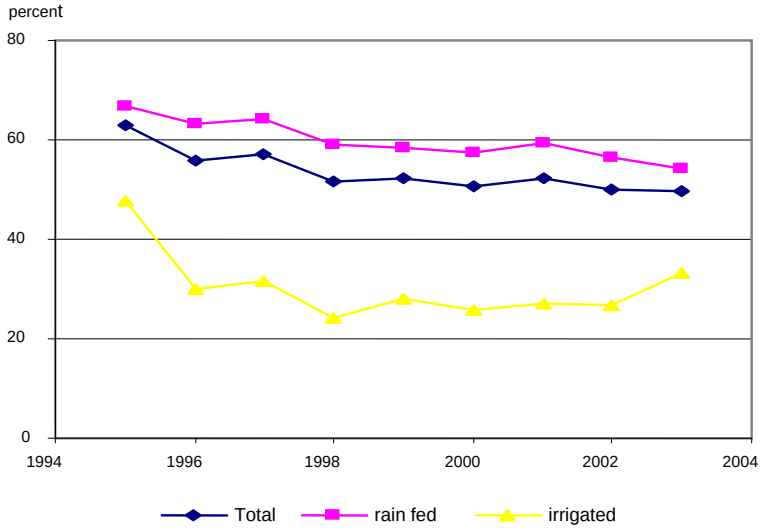
Source: Rosenzweig, 2005 and Presupuesto de Egresos de la Federación 2004-2006.

Other than this administrative reform, the current administration has continued programs tied to structural reform. All three major programs have survived through several federal administrations and their joint budget has increased as a share of the total agricultural budget (Cuadro 3). And this budget has increased continuously in real terms since 1999.

Agricultural policies for corn

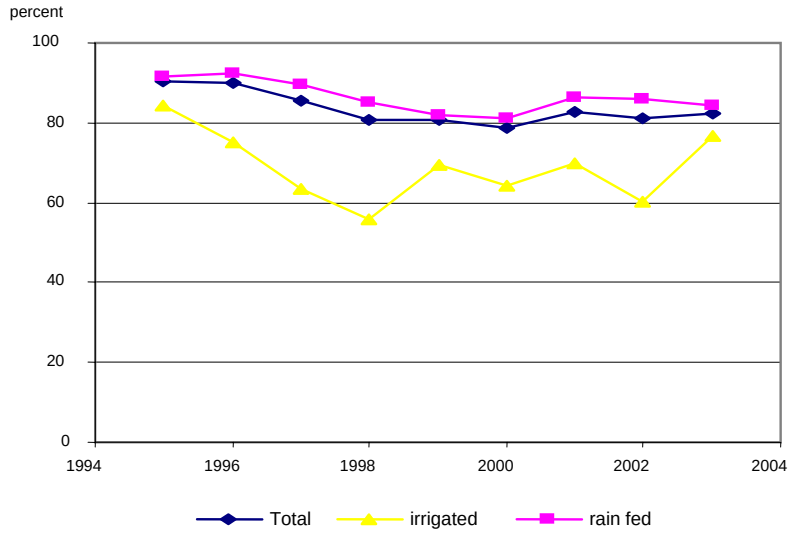
Although corn is the main crop in Mexico, few programs are directly tied to this crop. We have said that registration in PROCAMPO was originally limited to basic crops, including corn. In 1995, close to two thirds of the registered area was sown in corn, and 92% of all corn grown in Mexico was covered by the program (Figures 8a,b). However, beginning that year, land registered in PROCAMPO can be sown in any crop or even converted into pasture. Therefore, the percentage of registered land sown in corn was down to less than 50% in 2003. There are also no specific programs to increase the productivity of corn. Although promoting productivity is the purpose of Alianza, this program is not crop specific.

Figure 8a. PROCAMPO Area in Corn



Sources: SIAP; SAGARPA.

Figure 8b. Corn area in PROCAMPO

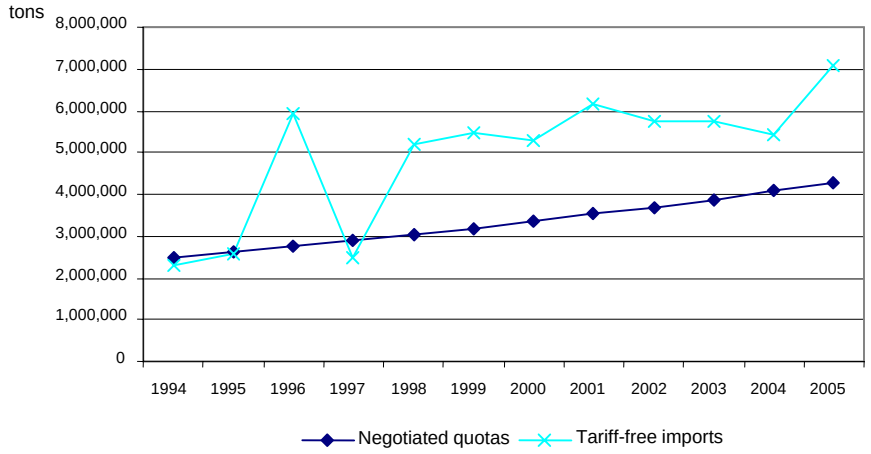


Sources: SIAP; SAGARPA.

Of all major agricultural policies in the last 15 years, only price and marketing supports have been specifically tied to corn. As the guaranteed price for corn was phased out, marketing supports took their place in such a way that subsidies for commercial (i.e., surplus) producers of corn have been continuous. A large proportion of ASERCA's budget has been destined to corn since this crop was included in the program: in 2001 and 2002, 46 and 53% of the total budget went to corn, respectively. In 2005, 50% of the budget was still tied to corn. Geographical distribution of marketing supports is uneven. In 2005, 92.5% of subsidies in the major subprogram (*Ingreso Objetivo*) went to 5 states out of a total 31; 69% went to the state of Sinaloa. The distribution of supports among producers is also uneven. The total number of beneficiaries was 61,000, compared to 3 million benefited by PROCAMPO.

The United States are the main source of corn imports into Mexico. Under NAFTA's tariff rate quota scheme for corn, an amount of corn is allowed free of tariffs and any amount over that is allowed at a given tariff. Every year until 2008, when all tariffs will be removed, the quota grows and the tariff is reduced(Table 1). On the meantime, quotas are assigned directly to applicants from the starch, flour and livestock industries, among others. However, the government has gone beyond its obligations under NAFTA and allowed all import volumes above the quota free of tariffs (Figure 9). Government officials say this policy is intended to guarantee a sufficient

Figure 9. Mexican Corn Imports and Tariff-free Quotas



Source: Secretaría de Economía.

supply of yellow corn to the livestock industry. They also argue that yellow corn imports do not affect the domestic corn industry, which produces mostly white corn.

The Ministry of Economy sets import quotas and allocates individual quotas to applicants through its *Dirección General de Comercio Exterior*. In the case of yellow corn, applicants include the cereal, starch, snacks and livestock industries. In the case of white corn, applicants include the flour and tortilla industries.

White corn imports from the United States decreased after 1999 and especially after 2003. The first date is associated with the closing of the state trading company, CONASUPO; the second date corresponds to the decision of the state retail store chain, DICONSA, not to apply for an import quota. This was the result of a political process through which the federal government agreed with farmer organizations to restrict white corn imports. It was called the *Acuerdo Nacional para el Campo*.

Two unresolved questions surround trade liberalization as regards corn. The first is what has been the effect of imports on the domestic corn industry? The other is what are the prospects for 2008 when all tariffs will be dropped?

4. The Mexican Corn Sector

As we have said, during the past ten years, producer prices for corn have dropped as imports from the United States grow (Figures 2 and 9). This has motivated analysts to suggest that the domestic corn industry has undergone dramatic changes. However, domestic corn output has remained above its pre-NAFTA level (Figure 3, Table 4). This is contrary to all forectasts. A first step in explaining this paradox is to look closely at trends in all aspects of corn production.

Yúnez-Naude and Barceinas (2003b) show that, although real prices for corn in Mexico have fallen continuously, neither NAFTA nor other concurrent reforms produced a structural change in price trends. They conclude that international prices have had an effect on domestic prices since at least ten years before the start of NAFTA.

A more recent study by Yúnez-Naude et al. (2006) finds evidence of structural change in corn output trends in 1990. The change is associated with a small increase in rain-fed acreage and increased productivity in both rain-fed and irrigated lands. Although total corn output was relatively constant between 1993 y 2000, there were in fact important changes in output in both rain-fed and irrigated regions during this period. The changes can be attributed both to policy and to weather, but none of them constitutes a structural change in production. Another increase in production in 2001 coincides with a fortuitous increase in rain-fed output due to weather but also with a statistically significant productivity increase in irrigated lands.

Their analysis also shows an increase in rain-fed output and acreage of corn used for feed beginning in 1997. There was a legal ban on feed corn before this date, which ensured that the supply of corn for human consumption was adequate. However, there is no drastic increase in feed corn in irrigated lands during that period.

Table 4. Mexican Corn Sector Statistics: 1980-2004

(millons of hectares)				*(millons of hectares)*			*(millons of tons)*			*(tons/hectare)*		
	Sown area			**Harvested area**			**Output**			**Yield**		
	irrigated	**rain-fed**	**total**	**irrigated**	**rain-fed**	**total**	**irrigated**	**rain-fed**	**total**	**irrigated**	**rain-fed**	**total**
1980	1.159	6.438	7.597	1.116	5.651	6.766	3.042	9.333	12.374	2.7	1.7	1.8
1981	1.026	7.671	8.697	0.981	6.688	7.669	3.000	10.989	13.988	3.1	1.6	1.8
1982	1.104	7.343	8.446	1.010	4.620	5.630	2.926	7.193	10.120	2.9	1.6	1.8
1983	1.005	7.443	8.448	0.952	6.470	7.422	2.725	10.463	13.188	2.9	1.6	1.8
1984	0.987	6.942	7.929	0.883	6.010	6.893	2.798	9.990	12.789	3.2	1.7	1.9
1985	1.003	7.359	8.362	0.978	6.611	7.590	3.286	10.818	14.103	3.4	1.6	1.9
1986	1.051	7.030	8.080	0.974	5.497	6.471	3.091	8.819	11.910	3.2	1.6	1.8
1987	0.966	7.319	8.285	0.914	5.890	6.804	2.708	8.899	11.607	3.0	1.5	1.7
1988	1.007	7.002	8.009	0.919	5.584	6.503	2.815	7.777	10.592	3.1	1.4	1.6
1989	0.962	6.601	7.564	0.931	5.538	6.470	2.724	8.229	10.953	2.9	1.5	1.7
1990	0.958	6.959	7.917	0.931	6.408	7.339	3.309	11.327	14.635	3.6	1.8	2.0
1991	1.205	6.523	7.728	1.155	5.792	6.947	4.273	9.979	14.252	3.7	1.7	2.1
1992	1.387	6.615	8.002	1.311	5.908	7.219	5.401	11.528	16.929	4.1	2.0	2.3
1993	1.719	6.529	8.247	1.665	5.764	7.429	7.707	10.422	18.129	4.6	1.8	2.4
1994	1.897	7.299	9.196	1.843	6.351	8.194	8.576	9.660	18.236	4.7	1.5	2.2
1995	1.458	7.623	9.080	1.430	6.593	8.022	6.289	12.070	18.359	4.4	1.8	2.3
1996	1.229	7.410	8.639	1.210	6.842	8.052	5.712	12.315	18.027	4.7	1.8	2.2
1997	1.384	7.749	9.133	1.359	6.048	7.406	6.923	10.734	17.657	5.1	1.8	2.4
1998	1.225	7.295	8.521	1.175	6.703	7.877	6.106	12.350	18.456	5.2	1.8	2.3
1999	1.029	7.467	8.495	1.002	6.161	7.163	5.065	12.641	17.706	5.1	2.1	2.5
2000	1.060	7.385	8.445	1.044	6.087	7.131	5.737	11.820	17.558	5.5	1.9	2.5
2001	1.069	7.328	8.397	1.061	6.750	7.811	6.266	13.869	20.135	5.9	2.1	2.6
2002	1.173	7.097	8.270	1.161	5.959	7.119	7.057	12.241	19.298	6.1	2.1	2.7
2003	1.111	7.011	8.122	1.075	6.446	7.521	6.657	14.044	20.702	6.2	2.2	2.8
2004	1.327	7.077	8.404	1.260	6.437	7.696	8.434	13.252	21.686	6.7	2.1	2.8

Source: SIAP

Analysts suggest that PROCAMPO has contributed to sustain the Mexican corn sector by distributing subsidies much widely than the previous guarantee price policy (García Salazar and Williams, 2004). Other analysts explain the resilience of the corn sector by first referring to intrinsic and induced differences between irrigated and rain-fed corn production. Crop conversion is easier in irrigated areas, where agronomic conditions are good and capital or credit is available. This is the case in the Northern Mexico. Public programs have favored precisely these areas, first through guaranteed prices and later through marketing supports (Fritscher Mundt, 1996 and De Ita, 2003). In brief, relative price changes in favor of corn during the early nineties and the gradual decrease in real prices since then explain well the two-fold output increase in irrigated areas, which climaxed in 1994, and the return to historic output levels by 1999. After that, marketing supports have allowed corn producers in prime agricultural areas to face the competition of American corn growers.

If subsidies explain the response of corn producers in irrigated regions, a different explanation must be given to the relative stability of corn ouput in rain-fed areas. Cost analyses show that the return on rain-fed corn production is not altogether positive, particularly among small subsistence farmers. These farmers are the least efficient of all corn growers (Barceinas et al. 2006). There is some evidence that PROCAMPO transfers help farmers face systematic financial losses in corn production. However, farmers' decision to engage on this costly activity must still be explained. Marketing supports cannot explain this decision either. As we have said, the geographical distribution of marketing supports is very uneven and does not correspond well with total output. For instance, while the Northwestern and Central regions produce 19 and 16% of the domestic corn supply, respectively, but they receive 63 and 0.2% of all marketing supports. The distribution of supports is not clearly linked to differences in the market supply of corn. Basically all of the market supply in the North and Northwest is subsidized by the *Ingreso Objetivo* subprogram, but the proportion is much lower elsewhere in the country (Table 5). In the West-Central region—where corn output and market surplus are both substantial—only 10% of output and 20% of market surplus is subsidized. High efficiency explains why producers in this region remain in business, but this is not the case of producers in Central Mexico—the least efficient country-wide. In this region, where only 1.5% of output is sold, many producers lose money systematically in corn (Perales et al., 1998 and Dyer, 2006). Around eighty percent of output in this region is consumed within the farm household. Thus, incentives to keep growing corn must be more closely associated with self-consumption than with sale and marketing supports.

Table 5. Regional Distribution of Price Supports for Corn in Mexico (2002)

Region	Output (thousands of tons)	Output Supported by Ingreso Objetivo (thousands of tons)	Percentage in program	Percentage sold
Southeastern	4,814	491	10.20	32.00
Central	3,540	14	0.40	27.00
West-Central	7,453	939	12.59	80.00
Northwestern	4,118	4,354	100.00	97.00
Northeastern	1,760	1,025	58.20	50.00

Source: ASERCA; ENHRUM.

Multiple cost analyses demonstrate the absence of profits or even financial loses in rain-fed corn production (Calva, 1995). However, these analyses do not take into account that the market price for corn might be lower than its value for self-consumption (i.e., its shadow value). In the economics literature, two different hypotheses are found that try to explain the stability of corn output in Central and Southeastern Mexico; that is, there are two possible explanations to the inelastic supply of corn among poor farmers. First is the "transaction-cost" hypothesis, which suggests that producers are isolated from market prices by lack of transport infrastructure or other transaction costs (De Janvry et al. 1995; Key et al., 2000). The other hypothesis recognizes a high shadow value of corn in self-consumption but disregards the role of transaction costs. Instead, it suggests that factor prices in local markets have dropped in response to a lower price for corn, thus cutting production costs for subsistence corn growers.

The basis for rejecting the "transaction cost" hypothesis is that DICONSA, the public retail store chain, has transmitted the drop in the real price of corn throughout rural regions in Mexico. This undermines growers' supposed isolation from markets-price changes. Thus, the inelastic supply of corn of small farm households requires a different explanation. Several recent papers based on village-wide general equilibrium models (VCGE) have provided such explanation. VCGE have a microeconomic foundation and distinguish commercial and subsistence growers as well as other agents and institutions in rural areas. They also capture different conditions in land and labor markets. Dyer *et al*. (2006) show that surplus producers respond to a price drop in corn lowering their derived demand for land and labor. When markets for either of these production factors are local, the price drop has indirect or general equilibrium effects on the local economy. As demand for land and labor adjusts, wages and rents drop. Subsistence growers do not respond directly to the price drop since they have their own shadow-price. However, they increase land and labor use in response to the

lower wages and rents. The scope of the response depends on each household's position in factor markets; that is, it depends on whether households hire labor out or in. Thus, local land or labor markets buffer the effect of a price change for corn and allow different types of growers to adjust differently. VGCE explain the inelastic supply of corn this way. Although the models do not depend on the presence of transaction costs, they can also take them into account (Taylor et al., 2006).

5. Perspectives

Mexican rural households have a diversified income. The relative importance of on-farm and off-farm activities on their income has changed in the past 15 years. The contribution of on-farm activities has decreased markedly. In contrast, non-agricultural wages, government transfers and remittances have contributed an ever increasing share of their income. These changes reflect the growth of the rural services sector and migration. Although some of these changes have been dramatic, the trends could deepen as the process of urbanization continues. We would still expect that poorer households continue to depend on agricultural income as they do now (World Bank, 2005). This dependence can be either as farmers or as agricultural wage workers. This is the background against which possible changes in agricultural policy must be explored. In the future, one of the main issues in Mexican agricultural policy is the end of scheduled tariff reductions in NAFTA, particularly as regards corn.

Yunez et al. (2006) describe current expectations and explore policy options in Mexican agriculture using a VCGE approach. According to them, a moderate decrease (10%) in the price of corn will generate an important contraction of commercial corn production (12%) but will not have a significant direct effect on subsistence production. The response of commercial producers will nevertheless have an effect on land and labor markets, due to their intensive use of both factors. Wages and rents will drop only slightly but will still have an effect on the rest of agriculture and even on the non-agricultural sector. Domestic and international migration to the United States will increase somewhat. In general, changes will be in the foreseen direction: corn production will contribute a decreasing share of rural incomes, while the contribution of migration and the services sector increases. Landless wage workers and small farmers will not experience a noticeable change in income, but commercial producers will benefit slightly from lower production costs. This describes a "base scenario" where public programs remain as they currently are. That is, the lack of growth of the rural economy, in this scenario, is a result of the fact that corn is largely consumed within the farm household; price changes tend not to matter.

In a second scenario, Yunez et al. explore a return to past policies, that is, a return to price controls substitutes for cash transfers. Assuming that the

price of corn increases (10%) and the PROCAMPO program is cancelled, they expect commercial production of corn to increase (12%) and subsistence production to decrease slightly (ca. -1%). As a result, rents would increase somewhat but wages only slightly. Given this increase in production costs, other agricultural production would contract. Despite higher rents and wages, real income of wage workers and small farmers would not change due to the higher price of corn—a major consumer good. In contrast, larger farmers would experience a decline in income because of the amount of foregone cash subsides. In sum, a return to past policies would increase inflation and harm all groups in rural Mexico.

In a third scenario, the authors explore the consequences of better access to international fruit and vegetable markets and better prices. An increase in the price of agricultural produce other than corn would generate a sizable increase in output among all types of producers. Wages and rents would also increase, extending the benefits to landless households. Also, corn and livestock production would decline as a result of higher production costs but, overall, the effect on income would be positive if markedly regressive. Large farmers would benefit the most; wage workers would receive only small benefits.

6. Conclusions

As described in most forecasts, corn and pork imports into Mexico have increased substantially after domestic policy reforms and NAFTA. However, the producer price of corn alone has decreased and not the price of pork. At the same time, corn output has been maintained and pork output has increased slightly. These differences suggest that factors other than trade liberalization have had an influence on observed trends. One of these factors is domestic policy, which has strongly favored commercial corn producers. Another important factor is changes in the demand of these two products. Demand for corn has increased continuously, while that of pork has gone down. A third factor is the rise in productivity, particularly of corn in irrigated areas, and concentration of pork production.

An additional factor is the heterogeneity of corn and pork production in Mexico. On one side of the picture, there are commercial corn and pork producers; on the other, small household farms producing for home consumption or with a small market surplus. PROCAMPO has benefited both types of producers dedicated to corn production. In contrast, marketing supports have benefited mostly big surplus producers in certain regions. Finally, a relatively small amount of subsidies have supported mainly commercial pork producers through Alianza. Although the distribution of subsidies might explain changes in corn production in irrigated regions, this is not the case of production in rain-fed lands. The relative stability of corn output in rain-fed regions is in sharp contrast to all

expectations regarding NAFTA and domestic reforms, which were that output would decline sharply.

Benefit-cost analyses show that corn production in rain-fed lands is not always financially sound, especially among small and subsistence households—the most inefficient (Barceinas et al., 2006). Although there is evidence that PROCAMPO cash transfers help farmers face systematic financial losses in corn production, farmers' decision to engage on this costly activity must still be explained. Some analysts believe that these decisions cannot be understood outside their local economic context. Village-wide General Equilibrium Models (VCGE) suggest a plausible explanation to an otherwise paradoxical response to trade liberalization in the corn sector.

Various studies using VCGE describe individual and aggregate responses to price and income changes on the part of rural households. A household's diversified income and its participation in local markets both play a role in its individual response to these changes. The scope of the market as well as the composition of households participating in them explains the aggregate response. Altogether, these studies suggest an explanation as to why subsistence corn production has increased after the drop in the real price of corn.

To many sectors of the Mexican society, the possible turn of events after complete liberalization of the corn market, in 2008, is of considerable interest. Yúnez et al. (2006) suggest that a return to pre-NAFTA policies would be harmful to all parts involved. Return to price controls and elimination of PROCAMPO would generate inflation, hurting most sectors of society, without substituting for the loss of income among corn producers after the cease of cash transfers. As opposed, an increase in the price of export crops, associated with better access to a wider market, would generate land conversion out of corn and benefit all producer groups even if the overall outcome would be regressive.

Agricultural trade liberalization has created in rural Mexico a very different economic environment from the one existing only 15 years ago. The cost of returning to pre-liberalization conditions by way of subsidies is excessively high. Thus, the challenge to Mexican agricultural policies is to make the most out of existent conditions. A look at policies in place since the beginning of the nineties reveals that the government has tried to pursue two opposing goals simultaneously. The first is to promote crop conversion out of corn; the other, to preserve the country's self-sufficiency in staple crops. The inconsistency between these two objectives has resulted in high costs and great inefficiency. Thus, as a first step to improve existent conditions, it is necessary to clarify policy goals. Only after this is done can the most appropriate instruments to achieve those goals be considered. If increasing rural incomes is the ultimate goal of policy, studies suggest that promoting conversion into crops other than corn is most promising. Conversion will be a natural result of an increase in the profitability of alternative crops. The increase can be achieved through either better prices

or greater productivity.

Although past administrations have taken action to increase both market integration and productivity, their actions have consistently fallen short of what is needed. The policies involved have often benefited only some producer groups and regions. Research suggests that an efficient policy design must also consider regional differences. This contrasts with the lack of specificity of policies such as PROCAMPO.

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Keynote Address

A "WISE" Approach to Exchange Rate Arrangements Associated with Bi-Lateral Trade Agreements

by
Larry A. Sjaastad

Abstract

Despite long-standing criticisms by economists, bi-lateral and multi-lateral trade agreements are flourishing around the globe. These agreements have diminished the relevance of the World Trade Organization (WTO) and hence its non-discrimination doctrine (the celebrated "most favored nation clause"). Whether these agreements are welfare increasing for all countries involved in those trade agreements, however, is open to question.

It goes without saying that when two or more countries enter into a preferential trade agreement, it is desirable that the exchange rates among the member countries be stable to prevent exchange rate fluctuations from disrupting patterns of trade. But even fixed exchange rates among the member countries are not sufficient to prevent disruptions in the prices of traded goods arising from fluctuations in exchange rates among the major currencies. Suppose that a small country enters into a preferential trading arrangement with the United States and adheres to an announced and well known exchange rate rule (including a fixed exchange rate) against the U.S. dollar. That exchange rate rule notwithstanding, there is ample evidence that when the U.S. dollar appreciates (depreciates) against, say the euro, the U.S. dollar prices of that country's internationally traded goods will decrease (increase) as a result. The recent gyrations of the U.S. dollar/euro exchange rate indicate that major currency exchange rate instability is still with us. These gyrations can generate large fluctuations in real interest rates in the traded-goods sectors of small countries that enter into such agreements.

Those fluctuations in real interest rates in the traded goods sectors can, however, be eliminated or at least greatly attenuated by defining the exchange rate rule on a basket of currencies, rather than a on single major currency such as the U.S. dollar.

1. Introduction

Most economists look askance at bi-lateral or even multi-lateral trade agreements. One of the more important objections to such arrangements is that they violate the WTO's (formerly the GATT's) non-discrimination doctrine (i.e., the celebrated "most favored nation clause"); a second objection is that bi- or multi-lateral trade agreements may be welfare decreasing for at least one of the countries involved.[4]

That bi- or multi-lateral trade agreements discriminate against non-member countries is self evident. Indeed, non-discrimination has been at the heart of the numerous GATT and WTO trade liberalization rounds. Accordingly, bi- and multi-lateral trade agreements weaken the significance of the WTO in the international trade scene. Given the great success of the GATT trade promotion rounds over that past more than 50 years, that is not an idle concern.

The argument that bi- and multi-lateral trade arrangements may reduce welfare also is well known. By reducing tariffs and other barriers to one or a number of sources of imports, importers may well shift from the lowest cost source of those imports to a higher cost source. If Argentina were the lowest cost source for apple imports to Korea, a preferential trade agreement with the U.S. might well cause apple importers in Korea to start importing from the U.S. state of Washington, even though it may be a higher cost source than Argentina. Obviously, Korea would be worse off as a result.

The force of the first argument against bi- and multi-lateral trade agreements has been seriously eroded by the proliferation of such agreements over the past decade or so (which now in effect or being negotiated number over 300). Indeed, a recent column in the Financial Times stated that there already exist 49 such agreements among the south east Asian countries alone. Moreover, the proposal to create a Free Trade Area of the Asia Pacific (FTAAP) would embrace all 21 members of the Asia Pacific Economic Forum (APEC). Clearly, the cat is out of the bag, and a few, or even many, more such agreements can only add to the fact that the GATT and WTO non-discrimination doctrine has largely fallen by the wayside. The apparent failure of the current WTO Doha round only increases the growing irrelevance of the WTO, and hence of the non-discrimination doctrine.

The relevance of the second objection to bi- and multi-lateral trade agreements can, in principle, be mitigated by careful prior analysis of the expected effects of such agreements, but I stress "only in principle". The negotiations leading to such agreements are heavily influenced by lobbyists

4 The GATT rules, however, explicitly permitted such agreements ever though they were in violation of the non-discrimination doctrine.

for the industries that might be adversely affected, but not by consumers who might benefit; for example, the voluminous NAFTA treaty is shot full of special-interest preferential treatments. Indeed, that agreement did not prevent Clinton in the 1996 presidential campaign from mandating a cessation of tomato imports from Mexico in order to benefit the tomato growers in Florida who might vote for him as a result.

But those are not the only issues concerning bi- and multi-lateral trade agreements. The exchange rate arrangements associated with a bi-lateral of multi-lateral trade agreement are crucial. My main point is that free, or preferential, trading arrangements are best undertaken among economies that constitute an optimum currency area. Mundell's analysis (1961), in his seminal article on optimum currency areas in 1961, was in the context of the Bretton Woods international monetary system, in which exchange rates among major (and many minor) currencies were fixed. His conclusion was that an optimum currency area is one in which there was free mobility of factors. Accordingly, the U.S. and Australia are optimum currency areas, but the euro zone may not be, for an obvious reason: a recent study indicates that 98 per cent of the euro zone members of the labor force are employed in the same country as their birth, indicating a lack of labor mobility within the European Union. But would some collection of Asian countries entering into a "free" trade area constitute an "optimum" currency area if they chose to have fixed exchange rates among them or even adopted a common currency? The answer is probably not. Even if the member countries have fixed exchange rates vis à vis one another or adopt a common currency, they can still experience large changes in their purchasing power parity (PPP) real exchange rates vis à vis one another.

The current international monetary "system" that came into being in 1973 has resulted in three major currency areas (the U.S., the euro zone, and Japan) whose floating exchange rates have exhibited a great deal of volatility reflected in day to day fluctuations as well as in sustained real appreciations and depreciations, particularly during the 1973 to 1985 period, but also more recently since the introduction of the euro. Since 1973 the U.S. dollar has been highly unstable vis à vis the yen and the European currencies and, more recently, against the euro. When the euro was introduced in January, 1999, the exchange rate was US$ 1.17 per euro; the euro then depreciated to a rate of US$ 0.82 in late 2001, and has since appreciated to more than US$ 1.30 and, at the time this writing (September, 2006), the rate was US$ 1.27.

Many of the minor currency countries of the world continue to peg their currencies in some fashion to a major currency or, in a number of cases, to an existing currency basket such as the SDR. In the Western hemisphere, the recent interest in "dollarization" may lead to an arrangement with effects similar to those in the euro zone. But in a fundamental sense even the minor currencies that are pegged to a major currency are floating. To attach one currency to another under an exchange rate rule is not the same thing as

when the major currency exchange rates were fixed under the Bretton Woods system. Under the current "system", with the enormous fluctuations in the major currency exchange rates, fixing one's exchange rate with respect to a single currency (or even a currency basket) is to float against the rest.

The main emphasis of this paper will be on the real effects arising from fluctuations in major currency exchange rates; as these effects are manifested in markets for goods and services, even the minor currency countries can experience real shocks as a consequence of fluctuations in the major currency exchange rates, shocks that are transmitted through the prices of traded goods. To the extent that the law of one price holds for internationally traded goods, a change in an exchange rate means that the prices of those goods also must change in at least one currency, and if the major currency countries have significant market power over the international prices of their traded goods, a change in the exchange rate between two major currencies implies that those prices will change in both currencies. The resultant price fluctuations can impart inflationary or deflationary pressures to minor currency countries that have adopted an exchange rate rule, and these pressures can have strong effects over the domestic real interest rates of those countries. As inflationary and deflationary impulses are not necessarily identical for imports and exports, there also can be significant changes in the terms of trade facing the minor currency countries as a result of a real appreciation or depreciation of a major currency.

That a real appreciation (depreciation) of the U.S. dollar tends to depress (increase) dollar prices of internationally traded goods became quite evident during the intense real appreciation of the dollar from 1980 to mid-1985. During that period the IMF commodity price index (a dollar based wholesale price index that does not explicitly include petroleum) fell by 30 per cent and import and export unit values (also dollar based) for the developing countries as a group fell by about 14 per cent. All of this occurred despite a 29 percent rise in the U.S. consumer price index and a 15 per cent rise in the U.S. producer price index. Obviously, had the currency of a small open economy been fixed to the dollar at that time, the traded goods sector of that country would have experienced a deflation rate, on average, of about three per cent per annum. As the average U.S. inflation rate from 1980 to 1985 was over five per cent per annum, the inflation rate differential would have been over eight per cent per annum––and even greater for countries whose exports are heavily dominated by commodities.

This paper examines the manner in which these effects are transmitted across the world economy and the extent to which exchange rate policy can be used to combat them. We assume that there are basically two types of countries: those that are "large" in the sense that they can influence the world prices of traded goods, and the "small" countries that cannot. The large countries will be designated as "major currency" countries, quite independent of the actual status of their currencies, and the small countries will be referred as "minor currency" countries, even though their currencies

may be quite important (e.g., the Swiss franc).

The remainder of the paper consists of five sections. The first section contains the basic pricing model to be used throughout the analysis. In that model, we explore how changes in purchasing power parity (PPP) real exchange rates among the major currencies are reflected in the prices of internationally traded goods. The next section deals with the effects of major currency exchange rate fluctuations on real interest rates in the traded goods sectors of small countries. Section III demonstrates the inability of an exchange rate rule defined on a single currency to mitigate the effects of real appreciations and depreciations of major currencies on real interest rates in the traded goods sectors of small countries. In Section IV we take up the case of an exchange rate rule defined on a basket of currencies, an arrangement which is vastly superior to a rule defined on a single currency. The final section presents a summary and conclusions.[5]

2. How Exchange Rates Affect Prices of Traded Goods

The Appendix contains a derivation of the determinants of the price level of goods traded internationally with up to M-1 other countries by any arbitrarily chosen country X; the key result is the final equation in that Appendix:

$$(1) \qquad PTF_X = \sum_j^M \theta_X^j \cdot PF_j + G(Z_X),$$

where PTF_x and PF_j are, respectively, natural logarithms of price indexes *expressed in a foreign currency* for goods traded internationally by country X and the price level of country j, the θ_X^j are non-negative fractions whose sum is unity and which measure the relative power possessed by country j in the world market over the goods traded internationally by country X; the subscript x indicates that "thetas" are defined for country X. Finally, $G(Z_X)$ is a function of a vector of variables, Z_X that reflect the "global fundamentals" for the set of goods traded internationally by country X.[6] In most of what follows, the variables contained in the vector Z_X are suppressed to focus our attention on the role of the exchange rate variables.

The classic "small country" assumption corresponds to $\theta_X^j = 0$; that is, country j is a price taker in the world market as any changes in its exchange rate and/or its price level will have no effect on the prices of its traded

5 Portions of this paper draw upon Sjaastad, 2004.

6 Upper case Latin letters refer to the natural logarithm of variables whose arithmetic value appears in lower case letters. Exceptions will be obvious.

goods in currencies other than its own. At the other extreme, if $\theta_X^j = 1$, country j is a price maker: any change in its own price level and/or exchange rate will be reflected in an equi-proportionate change in the prices of its traded goods in all other currencies. In short, the θ_X^j summarize the structure of the world market for country X's traded goods; with the appropriate time series data, one readily can estimate those coefficients.

Equation (1) also provides an insight into which country is best suited for a small country such as Korea to engage in a free or preferential trading agreement. Suppose, for simplicity, and the small country also pegs its currency to its preferred trading partner. In that case, the preferred trading partner should be the one with the largest "theta" in equation (1). The reason is that the prices of the small county's traded goods would be closely tied to the price level in the preferred trading partner.

We now turn to how the "external" inflation rate differs from the "reference" country rate of in-flation. As we assume that country X has adopted a credible exchange rate rule vis à vis the currency of country k, both PTF_x and PF_j will be denominated in currency k. In that case, equation (1) is readily manipulated into the following form;

$$(2) \qquad PT_X^k = E_X^k + P_k + \sum_j^M \theta_X^j \cdot R_k^j,$$

where PT_X^k and P_k are, respectively, natural logarithms of price indexes for country X's traded goods in its own currency and the price level of country k, also in its own currency, E_X^k is the natural logarithm of the price of currency k in terms of currency X, and $R_k^j = P_j + E_k^j - P_k$ is the PPP bi-lateral real exchange rate of country k vis à vis country j. The term $G(Z_X)$ has been suppressed. Equation (2) decomposes PT_X^k into three components: E_X^k (its own exchange rate rule), P_k (the price level of country k), and a third component reflecting the behavior of the PPP bi-lateral real exchange rates between reference country k and all other relevant countries.

Assuming now that country X has adopted a credible fixed exchange rate vis à vis the currency of country k, a dynamic version of equation (2) can be written to indicate the inflation rate in country X's traded goods sector:

$$(3) \qquad \prod_X^{T,k} = \prod_k + \sum_j^M \theta_X^j \cdot \dot{R}_k^j,$$

where $\prod_X^{T,k}$ is the rate of inflation in the traded goods sector if country X, $\prod_k$ is the inflation rate in the reference country k and the dot over the R

variable indicates the time rate of change of the PPP real exchange rate of country k vis à vis country j. In the usual treatment of sources of inflation in a small open economy operating under a fixed exchange rate, the second source of "external" inflation in equation (3), $\sum_{j}^{M} \theta_X^j \dot{R}_k^j$, is ignored, even though it may be quite volatile and very important quantitatively. This neglect was unimportant during the period of the Bretton Woods system when PPP real exchange rates between the major currency countries were highly stable, but under the arrangement that has prevailed since 1973, the extreme volatility of those real exchange rates has been an important source of external inflation (and deflation) in countries that have adopted exchange rate rules linking their currencies to major currencies.

The distinction between external inflation being defined as Π_k versus $\Pi_k + \sum_{j}^{M} \theta_X^j \cdot \dot{R}_k^j$ became apparent during 1975-85 period. In the first half of that period, the IMF commodity price index rose by 35 per cent relative to the U.S. Consumer Price Index, only to fall by 42 per cent with respect to that index during the second half of that period despite the intensity of the U.S. inflation in that sub-period. As was noted earlier, the IMF commodity price index actually fell by about 30 per cent from 1980 to 1985. It is no coincidence that the 1975-80 period was one of intense real depreciation of the U.S. dollar (i.e., $\dot{R}_{US}^j > 0$), whereas the 1980-85 period was one of an even more intense real appreciation of the dollar (i.e., $\dot{R}_{US}^j << 0$).

The foregoing analysis can be extended to the overall price level of a country pursuing a credible exchange rate rule against currency k. The price level of country X will be written as a geometrically weighted average of the domestic prices of her non-traded goods and services and traded goods:

$$(4) \qquad \begin{aligned} P_X &= \alpha_X \cdot PNT_X + (1-\alpha_X) \cdot PT_X^k, \\ &= PT_X^k - \alpha_X \cdot (PT_X^k - PNT_X), \end{aligned}$$

where PNT_x is a price index country X's non-traded goods and services, and $(PT_X^k - PNT_X)$ is the true real exchange rate, which is a function of real variables.[7]

7 As is well known, the Salter (1959) effect argues that the equilibrium value of $(PT_x^k - PNT_x)$ depends upon expenditure relative to income, Michaely (1981), for example, finds broad empirical support for the Salter effect, but the magnitude is highly variable, particularly in the

Combining equations (2) and (4) results in an expression for the price level of country X:

$$(5) \qquad P_X = \alpha_X \cdot \left(PNT_X - PT_X^k\right) + \left(E_X^k + P_k\right) + \sum_j^M \theta_X^j \cdot R_k^j,$$

in which the first term reflects that country's internal relative price structure, the second term is a purchasing power parity component $\left(E_X^k + P_k\right)$, and the third term captures the structure of PPP real exchange rates among all relevant countries. A dynamic version of equation (5), in which the term $\alpha_X \cdot \left(PNT_X - PT_X^k\right)$ is ignored but which takes into account the possibility that country X may have some market power over its own traded goods is as follows:

$$\begin{aligned} \Pi_X &= \left(\dot{E}_X^k + \Pi_k\right) + \sum_j^M \theta_X^j \cdot \dot{R}_k^j \\ &= \left(\dot{E}_X^k + \Pi_k\right) + \sum_{j \neq X}^M \theta_X^j \cdot \dot{R}_k^j + \theta_X^X \cdot \left(\Pi_X - \dot{E}_X^k - \Pi_k\right) \\ &= \left(\dot{E}_X^k + \Pi_k\right) + \sum_{j \neq X}^M \Theta_X^j \cdot \dot{R}_k^j, \end{aligned} \qquad (5')$$

where the new "thetas" are defined as $\Theta_X^j \equiv \Theta_X^j / \left(1 - \theta_X^X\right)$; as $\sum_{j \neq X}^M \Theta_X^j = 1$, they measure country j's share of power in the world market for country X's traded goods, excluding country X. The inflation rate in the reference country k is $\Pi_k = \dot{P}_k$, and $\dot{E}_X^k$ is the exchange rate rule of country X. Note that the right hand side of equation (5′) remains the same if we substitute Π_X^T for Π_X on the left hand side. The dot over the E variable indicates the time rate of change of that variable.

As is evident from equation (5′), country X can choose an exchange rate rule to provide any desired rate of inflation. For example, if country X preferred to have the same rate of inflation as country k $(\Pi_X = \Pi_k)$, it could insulate itself from shocks arising from fluctuations in major currency exchange rates by adopting the following rule:

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short run. It is equally well known that an improvement in the external terms of trade also leads, under fairly general conditions, to an increase in PNT_x relative to PT_x. For a treatment that takes into account inter-temporal substitution as well, see Ostry (1988).

$$\text{(6)} \qquad \begin{aligned} \dot{E}_X^k &= -\sum_{j\neq X}^{M} \Theta_X^j \cdot \dot{R}_k^j \\ &= \sum_{j\neq X}^{M} \Theta_X^j \cdot \dot{R}_j^k . \end{aligned}$$

This rule, however, could be implemented only with a substantial lag as changes in PPP real exchange rates can be observed only well after the fact.

An alternative rule that also would insulate country X from deflationary and inflationary shocks and which could be implemented without a lag is one that sets the equilibrium inflation rate in country X equal to the world rate of inflation defined as the following weighted average:

$$\text{(7)} \qquad \Pi_W^X = \sum_{j\neq X}^{M} \Theta_X^j \cdot \Pi_j ,$$

by setting equation (5′) equal to equation (7) produces the following exchange rate rule:

$$\text{(8)} \qquad \dot{E}_X^k = \sum_{j\neq X}^{M} \Theta_X^j \cdot \dot{E}_j^k ;$$

that is, the exchange rate rule reacts immediately to changes in the nominal exchange rates among the major currencies. Obviously, one can readily define many other exchange rate rules to serve any specific purpose that might be desired.

An important implication of equation (5) is that, while a credible exchange rate rule may result in interest rate parity, it is not sufficient to assure equality of real rates of interest. Even if the nominal interest rate in country X were to be governed by the nominal interest rate in country k and the exchange rate rule $\left(E_X^k\right)$, the (short run) inflation rate in country X will be influenced by changes in real exchange rates among third countries, which can give rise to potentially large real interest rate differentials.

3. How Major Currency Exchange Rate Fluctuations Affect Real Interest Rates in the Traded Goods Sectors of Small Countries

Assuming now that two small open economies, X and Y, have entered

into a free trade arrangement, and that both have a fixed exchange rate vis à vis the currency of country k, which implies that they also have fixed exchange rates vis à vis one another. Returning to equation (2), changes in the price levels in the traded goods sectors of the two countries, X and Y, holding P_k, E^k_X and E^k_Y constant, are as follows:

$$\Delta PT^k_X = \sum_j^M \theta^j_X \cdot \Delta R^j_k, \tag{9}$$

$$\Delta PT^k_Y = \sum_j^M \theta^j_Y \cdot \Delta R^j_k, . \tag{10}$$

Since countries X and Y must have quite different sets of traded goods (otherwise the free trade arrangement would be pointless), the parameters θ^j_X and θ^j_Y must be quite different. As a result, when, say, the U.S. dollar depreciates against the euro and the yen, the traded goods sectors of the two countries will experience quite different rates of inflation in their traded goods sectors.

Several empirical studies concerning estimates of the "thetas" indicate that only two or three currency blocs have significant market power, those being the U.S. dollar and euro blocs and, to a lesser extent, the yen bloc. Consider the case where only the U.S. dollar and the euro blocs are relevant, so $\theta^{EU}_X + \theta^{US}_X = \theta^{US}_Y + \theta^{US}_Y = 1.0$ and $\Delta R^{US}_{US} \equiv 0.0.$ Suppose further that the euro bloc dominates the world markets of country X's traded goods (e.g., $\theta^{EU}_X = 0.8$), but that the U.S. dollar bloc dominates those markets for country Y's traded goods (e.g., $\theta^{US}_Y = 0.8$ so $\theta^{US}_Y = 0.2$), and that over a sshort period of time the U.S. dollar has depreciated against the euro such that $\Delta R^{EU}_{US} = 0.3$ (30 per cent). It follows from equations (9) and (10) that $\Delta PT^{US}_X = 24$ per cent and $\Delta PT^{US}_Y = 6$ per cent! That is, the U.S. dollar prices of country Y's traded goods will have risen very little, and the euro prices of country X's traded goods also will have fallen very little, meaning that the U.S. dollar prices of that country's traded goods will have risen a lot. The upshot is that the price level of country X's traded goods, in U.S. dollars, has risen by 18 per cent relative the price level of country Y's traded goods. Since both countries have fixed their exchange rates against the U.S. dollar, and trade freely with one another, their trading relations would be severely disrupted. Moreover, if the fixed exchange rate regime in both countries is credible, they should have quite similar nominal interest rates, indicating that the real

interest rates in the traded goods sectors of the two countries would be very different. The above scenario is, of course, an extreme one, but it illustrates the nature of the problem, a problem that cannot be resolved by fixing exchange rates among the members of a preferential trading group, or even by the creation of a common currency for the member countries.

As, in this example, the euro bloc dominates the world market for country X's traded goods, a somewhat better outcome would be achieved if that country were to fix her exchange rate against the euro instead of the U.S. dollar. In that case ΔPT_Y^{US} remains positive at six per cent, but $\Delta PT_X^{EU} = -6$ per cent, so the effect on the real interest rate in country X's traded good sector is much reduced; note, however, that ΔPT_X^{US} remains at 24 per cent.

4. The Impotence of an Exchange Rate Rule to Stabilize Real Interest Rates

Fluctuations in PPP real exchange rates among the major currency countries have a direct impact on real interest rates in the traded goods sectors of small countries. If the exchange rate rule on major currency k is credible, we expect strong interest rate parity to hold, albeit with a spread:

$$(11) \qquad i_X^k = i_k = \dot{E}_X^k = \text{spread},$$

where the k superscript on i_X^k indicates that the exchange rate rule is defined on currency k.[8] We now turn to the factors that influence real interest rates in small countries and, in particular, the role of exchange rate rules.

It is clear from equation (5′) that if a country adopts a single currency exchange rate rule with a constant rate of devaluation (including zero), it will be subject to inflationary and deflationary shocks arising from fluctuations in the PPP real exchange rates among the major currencies. Indeed, during the rapid real depreciation of the U.S. dollar that occurred during the second half of the 1970s, several Latin American countries experienced inflation rates far higher than could be explained by their

8 Interest rates may not be exactly arbitraged as transaction taxes, country risk, etc., introduce systematic spreads which we assume to be uncorrelated with the exchange rate movements among the major currencies. Moreover, since the nominal rate of interest in country X cannot be negative, the maximum rate of *appreciation* of that country's currency *vis à vis* currency k is i_X^k pl us the spread. Were the exchange rate rule to require an appreciation at a rate greater than i_X^k, presumably the spread would have to increase.

exchange rate rules (the in-famous tablitas defined on the U.S. dollar) and the U.S. inflation rate. This behavior was sharply reversed during the first half of the 1980s when the rapid appreciation of the U.S. dollar, particularly during 1981-82, imposed strong deflationary pressures and very high real interest rates on those countries.

Equation (11) indicates that a single currency exchange rate rule can prevent changes in major currency exchange rates from impacting on domestic nominal interest rates but the domestic real rate of interest will still be affected by the gyrations in their inflation rates. On the other hand, if a country adopts a more complex rule, such as described by equations (6) and (8), to insulate itself from inflationary or deflationary impulses due to fluctuations in the major currency real exchange rates, the rule itself will create disturbances in the domestic nominal interest rate. Insofar as single currency exchange rate rules are concerned, then, the choice is only with respect to the channel by which real interest rates are pummeled by the instability of the major currency exchange rates. To illustrate this, consider the (ex post) real rate of interest in the traded goods sector of country X, which we write in the usual Fisherian manner:

$$r_X^T = i_X - \prod_X^T, \tag{12}$$

where the values of i_X and $\prod_X$ depend upon the exchange rate rule and reference currency (usually taken to be currency k in the case of a single currency exchange rate rule). Substituting equation (11) for i_X and equation (5′) (with $\prod_X$ replaced with $\prod_X^T$ on the left hand side of that equation) for $\prod_X^T$, we obtain the important result that:

$$r_X^{T,k} = r_k - \sum_{j \neq X}^{M} \Theta_X^j \cdot \dot{R}_j^k + \text{spread}, \tag{13}$$

where the k superscript on $r_X^{T,k}$ indicates that the exchange rate rule has been defined on currency k, and r_k is the real interest rate in country k. What is important to note from equation (13) is that, while the currency against which that rule is defined still matters, the exchange rate rule itself, $\dot{E}_X^k$, cancels out. As far as the real interest rate is concerned, one rule is as good as any other—as long as it is credible.

The explanation for the "impotence" of an exchange rate rule defined on a single currency is very simple: the rule determines only the channel by

which external disturbances are transmitted to the domestic real rate of interest. A rule that eliminates those disturbances to the inflation rate will introduce them into the nominal rate of interest; at worst, such a rule might exacerbate exchange rate risk to the extent that the country's access the international capital market is adversely affected. A rule that avoids the latter (e.g., a fixed exchange rate) cannot neutralize disturbances to the domestic inflation rate in the traded goods sector arising from fluctuations in major currency exchange rates.

One solution to this problem would be to adopt two exchange rates, one for commercial operations (to control the rate of inflation in the traded goods sector) and a second one for financial transactions (to control the domestic interest rate). In the past this approach has been employed (for other reasons) by several Latin American and some European countries but with little success as it is difficult if not impossible to eliminate the leakage between two markets with different prices for the same currency. As better solution is to define the country's exchange rate rule on a basket of currencies, rather than a single currency, to which we now turn.

5. Basket Based Exchange Rates

An exchange rate rule defined on a single currency admits but a single instrument (or degree of freedom)—the rule itself. But as we know from a basic economic policy theorem (Tinbergen, 1952), the number of policy instruments has to be at least as large as the number of policy targets. If a country wishes to stabilize the real interest rate in its traded goods sector, it must have two instruments, one for the nominal interest rate and another for the inflation rate. The advantage of an exchange rate rule defined on a currency basket is that it allows two degrees of freedom: the composition of the basket and the rule itself. As will be seen, the additional degree if freedom permits targeting the real interest rate in the domestic traded goods sector, which involves two nominal variables. An exchange rate rule that is defined on a single currency, a special case of a currency basket, expends one degree of freedom inefficiently in that all of the weight is given to one currency, whereas defining that rule on a basket if currencies offers a richer choice of weights. Although in practice the number of "large" countries seems unlikely to exceed two or three, at this stage the basket will be defined on all relevant currencies.

How to Define of the Basket

The basket rule for country X is developed in terms of its exchange rate with the currency of reference country 1. The basket is labeled "B" and its

value in terms of currency of country 1 is designated e_1^B :

$$e_1^B = \sum_{j=1}^{M} e_1^j \cdot X_j, \tag{14}$$

where the X_j, the number of units of each major currency in the basket, define its composition. The price of the basket in terms of currency of country X is:

$$\begin{aligned} e_X^B &= e_X^i \cdot e_1^B \\ &= e_X^1 \cdot \sum_{j=1}^{M} e_1^j \cdot X_j, \end{aligned} \tag{15}$$

which also defines the exchange rate rule adopted by country X. It is quite straightforward to show, where $E_1^B = \ln e_1^B$, that;

$$\dot{E}_X^1 = \dot{E}_X^B - \sum_{j=2}^{M} \gamma_j \cdot \dot{E}_1^j, \tag{16}$$

where $\gamma_j \equiv \left(e_1^j \cdot X_j\right) / e_1^B$ is the share of the j^{th} currency in the basket.

The Case of a Basket Based Exchange Rate Rule

As equation (16) defines an implicit exchange rate rule on the reference currency (i.e., country 1's currency), we can replace $\dot{E}_X^k$ in equation (5′) (with $\prod_X$ replaced with $\prod_X^T$ on the left hand side of that equation) with equation (2) to obtain a general expression for the inflation rate in country X's traded goods sector when that country pursues an exchange rate rule defined on a basket:

$$\prod_X^b = \prod_W^X = \dot{E}_X^B = \sum_{j \neq X}^{M} \left(\Theta_X^j - \gamma_j\right) \cdot \dot{E}_1^j. \tag{17}$$

By choosing the weights of the basket such that $\gamma_j = \Theta_X^j$, equation (17)

becomes:[9]

$$(18) \qquad \prod_X^b = \prod_W^X = \dot{E}_X^B,$$

and hence $\dot{E}_X^B$, the exchange rate rule vis à vis the currency basket, can be chosen to create whatever rate of inflation country X may desire. Note that, despite the fact that the World Bank and the International Monetary Fund continue to compute "trade weighted" effective exchange rates, there is no relationship between the magnitudes of the Θ_X^j's and trade weights.

Yet Another Possibility: Adopt a Floating Exchange Rate

It is possible that the adoption of a floating exchange rate might solve the problem. As interest rate parity tends not to hold when the exchange rate is floating, the domestic interest rate is determined by domestic factors and does not respond to responses of the foreign exchange market to fluctuations in the external prices of traded goods. In an earlier study of the Swiss case (Sjaastad, 1998), the author found that the floating Swiss franc immediately and totally neutralized fluctuations in the external prices of Swiss traded goods; a, say, 5 per cent increase in the dollar price of Swiss traded goods was immediately offset by a 5 per cent appreciation of the Swiss franc. This might occur when the foreign exchange market is highly organized and the traders in that market correctly perceive the objectives of the central bank of the country in question; in that case, those traders are implicitly acting as agents of the central bank. As the Korean won is not traded in a highly organized market (such as the Chicago International Money Market, as is the Swiss franc) it is doubtful that those conditions would be fulfilled at this time in the case of the won.

6. Summary and Conclusions

Despite the long-standing arguments made by economists, bi-lateral and multi-lateral trade agreements have been and are flourishing around the globe. These agreements have diminished the relevance of the World Trade Organization and its non-discrimination doctrine. Whether these agreements are welfare increasing for all member countries, however, is open to question.

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9 Since γ_X must be zero (the basket cannot contain country X's currency), but as θ_X^X need not be zero, it is evident why the θ's must be replaced with the Θ's.

Fluctuations in nominal exchange rates among the major currencies (the U.S. dollar, the euro, and the yen) can have profound effects on the external prices of goods traded internationally by small open economies. Small countries entering into preferential trading arrangements will generally have different compositions of their imports and exports (otherwise, the preferential trading arrangement would be pointless), and hence they will tend to be affected asymmetrically by changes in, for example, the U.S. dollar/euro exchange rate. As a result, the prices of traded goods of the various member countries can diverge substantially when the major currency exchange rates fluctuate, leading to a disruption of trade among those countries. In addition, the real rate of interest in the traded goods sectors of the member countries can be strongly affected, both positively and negatively, by fluctuations in the major currency exchange rates. These unfortunate consequences will prevail even if all members of the preferential trading group peg their currencies to the same major currency or even create a common currency.

There do exist, of course, single currency exchange rate rules that can neutralize the effects of major currency fluctuations on the domestic prices of traded goods, but adoption of such rules either will introduce movements in the nominal (and hence real) interest rates in the country in question, or it will exacerbate exchange rate risk, undermining that country's access to the international capital market. Moreover, there exists no exchange rate rule defined on a single major currency that can neutralize the effects of fluctuations of the major currency exchange rates on both domestic interest rates and the domestic prices of a country's traded goods. The reason is straightforward; an exchange rate rule defined on a single currency admits but one instrument (degree of freedom)—the exchange rate rule itself, and a single instrument cannot target both the nominal interest rate and the inflation rate.

An alternative solution would be to adopt two exchange rates, one for commercial operations and a second one for financial transactions. The defect with this approach is that it is difficult if not impossible to eliminate the leakage between two markets with different prices for the same currency.

A more viable solution is to define exchange rate rules on currency baskets. As the basket approach admits two degrees of freedom (the exchange rate rule and the composition of the basket), that approach can effectively neutralize the disturbances that arise from fluctuations in major currency exchange rates. Finally, it is possible, though not likely, that a floating rate could do the same trick for a small open economy such as South Korea.

APPENDIX: Exchange Rates and Prices of Traded Goods

Ignoring transport costs, tariffs and other barriers to trade, the "law of one price" for internationally traded good q states that:

$$\text{(A-1)} \qquad P_q^i = P_q^j = E_i^j,$$

where P_q^i is the (natural logarithm of the) price of currency j in terms of currency i.[10] With no loss of generality, set $i = X;$ i.e., the currency of country X will be the reference currency. The excess demand for good q in country j, $D^{j,q}$, will be written as function of its real price and a vector Z_q^j of all other relevant variables (i.e., the market "fundamentals" for country j):

$$\text{(A-2)} \qquad \begin{aligned} D^{q,j} &= D^{q,j}\left[\left(P_q^j - P_j\right), Z_q^j\right] \\ &= D^{q,j}\left[\left(P_q^X - E_X^j - P_j\right), Z_q^j\right] \end{aligned}$$

where P_j is the (natural logarithm of the) price level in country j. Since $P_q^X - EX_X^j - P_j = \left(P_q^X - P_X\right) - \left(E_X^j + P_j - P_X\right) \equiv P_q^{X,R} - R_X^j,$ where R_X^j is the PPP bilateral real exchange rate between countries X and j, country j's excess demand for good q is a function of the natural logarithm of the ratio of its real price in country X to the PPP bi-lateral real exchange rate between countries X and j:

$$D^{q,j} = D^{q,j}\left[\left(P_q^{X,R} - R_X^j\right), Z_q^j\right].$$

In a world of M countries, market clearing requires that the M excess demands sum to zero:

10 To the best of author's knowledge, a similar approach was first developed by Ridler and Yandle (1972) to analyze the effect of exchange rates on commodity prices. The actual model presented in this appendix first appeared Sjaastad (1985).

$$\sum_{j}^{M} D^{q,j}\left[\left(P_q^{X,R} - R_X^j\right), Z_q^j\right] = 0.$$

The summation is then differentiated totally and rearranged:

$$dP_q^{X,R} = \sum_{j}^{M}\left(D_1^{q,j} / D_1^q\right) dR_X^j - \left(D_2^{q,j} / D_1^q\right) dZ_q^j,$$

where $D_1^{q,j} \equiv \partial\left(D^{q,j}\right) / \partial\left(P^{X,R} - R_X^j\right)$, $D_2^{q,j} = \partial\left(D^{q,j}\right) / \partial Z_q^j$, and $D_1^q \equiv \sum_{j}^{M} D_1^{q,j}$.[11] A local linear approximation relating the real price of good q to PPP bi-lateral real exchange rates is obtained by integration:

$$\text{(A-3)} \qquad P_q^{X,R} = \sum_{j}^{M} \vartheta_j^q \cdot R_X^j + F\left(Z_q\right),$$

where $\vartheta_j^q \equiv D_1^{q,j} / D_1^q$ and $F\left(Z_q\right)$ is the integral of $-\sum_{j=1}^{M}\left(D_2^{q,j} / D_1^q\right) dZ_q^j$. The excess demand [equation (A-2)] may be either positive or negative but, as all $D_1^{q,j}$ are non-positive, the ϑ_j^q are non-negative fractions that sum to unity. $F\left(Z_q\right)$ captures the Z_q^j vectors (the global fundamentals) and that term is explicitly assumed to be orthogonal to the RER_X^j. The fundamentals include all factors (including expectations) that influence the global demand for and supply of good q other than exchange rates.

The structure of the world market for good q is summarized by the ϑ_j^q in equation (A-3), as those parameters measure the relative market power possessed by each participating country. In the limiting case of $\vartheta_j^q = 0$, country j is a price taker in the world market for good q as any change in its real exchange rate vis à vis reference currency X will have no effect on the price of good q in currency X. At the other extreme, if $\vartheta_j^q = 1$, country j is a price maker in that market as any change in its real exchange rate will be

11 The *excess* demand in country j is $D^j \equiv D^j - S^j$, where D^j and S^j are domestic demand and supply, respectively. The slope of the excess demand function is $\left(D^j / P_q^{j,R}\right) \cdot \eta_j - \left(S^j / P_q^{j,R}\right) \cdot \varepsilon_j$, where $\eta_j \le 0$ and $\varepsilon_j \ge 0$ are the elasticities of domestic demand and supply, respectively, with respect to the real price of the commodity in country in country j. It is clearly evident that the slope is non-positive.

fully reflected in an equi-proportionate change in the price of good q country X. It is important to note that the magnitudes of the ϑ_j^q have no logical relation to existing patterns of international trade.

The expression for the price of good q can be generalized to an index of the real prices of any set of N traded goods (e.g., imports and/or exports) denominated in currency X; that is defined as $PT_X^R \equiv \sum_q^M w_q P_q^{X,R}$, where the w_q are non-negative weights that sum to unity. Combining that index with the above expression for $P_q^{X,R}$ results in:

$$PT_X^R \equiv \sum_q^N w_q \left[\sum_j^M \vartheta_j^q \cdot R_X^j + F(Z_q) \right]$$
$$= \sum_q^N \left[\sum_j^M \left(w_q \cdot \vartheta_j^q \right) \cdot R_X^j \right] + G(Z_X),$$

where $G(Z_X) \equiv \sum_q^N w_q F(Z_q)$ captures the global fundamentals for the set N of traded goods. Moreover, as the $\sum_q^N w_q \cdot \vartheta_j^q$ terms are non-negative and sum to unity, PT_X^R can be written as a weighted average of the R_X^j:

$$\text{(A-4)} \qquad PT_X^R = \sum_j^M \theta_X^j \cdot R_X^j + G(Z_X),$$

where $\theta_X^j \equiv \sum_q^N w_q \cdot \vartheta_q^j$. The θ_X^j have the same interpretation as the ϑ_j^q; they measure the relative market power possessed by country j over the prices of the set N of goods traded internationally by country X. The θ_X^j will not be the same for different sets of goods (e.g., importables versus exportables), but the PT_X^R index can be tailored to refer to any subset of tradables for any country by choosing the w_q to correspond to that subset.

Equation (A-4) can be converted into an index defined on nominal prices simply by adding P_X to both sides of equation (A-4):

$$PT_X = \sum_j^M \theta_X^j \cdot \left(E_X^j + P_j \right) + G\left(Z_X \right).$$

Moreover, PT_X can be expressed in the currency of, say, country Y by using the identity $E_X^j \equiv E_X^i + E_i^j$ and the property that $\sum_j^M \theta_X^j = 1$:

$$\text{(A-5)} \qquad PTF_X = \sum_j^M \theta_X^j \cdot PF_j + G\left(Z_X \right),$$

where the appended "F" indicates that both PT_X and P_j are expressed in a foreign currency (i.e., $PTF_X = PT_X - E_X^i$ and $PF_j = P_j + E_i^j$). It is this expression that appears as equation (1) in the text.

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CHAPTER 2-1

Trade Liberalization in Chile: A Historical Perspective

by
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Abstract

In comparison with the rest of the Latin American region Chile has grown remarkably during the last two decades. This relative economic success has recalled the attention over the determinants of such growth. Today between Chilean economists and among some external observers, there is consensus that an important determinant of this economic performance has been the increasing degree of trade integration with international markets.

How was possible to achieve such level of integration? What forces were behind the trade liberalization that preceded it? In this paper we present a review of the Chilean trade liberalization experience from a historical perspective.

Keywords: Country case, Trade, Openness, Chile.

1. Introduction

In comparison with the rest of the Latin American region Chile has grown remarkably during the last two decades. This relative economic success has recalled the attention over the determinants of such growth (See Tables 1 and 2). Today between Chilean economists and among some external observers, there is consensus that an important determinant of this economic performance has been the increasing degree of trade integration with international markets, and the export growth dynamic. Graph 1 shows the strong correlation between GDP growth and exports growth. Table 3 shows that exports have been more dynamic that GDP over the last 30 years, and within exports the non-mineral exports.[1]

How was possible to achieve such level of integration? What forces were behind the trade liberalization that preceded it? In this paper we present a review of the Chilean trade liberalization experience from an historical perspective.

We start with a discussion on trade policy cycles, highlighting the possible determinants of switching in trade policies and "models" of development. At the light of the previous discussion we present the main Chilean trade policy cycles since the beginning of the twentieth century until recent times.

It is well known the institutional collapse that Chile suffered in the first half of the seventies. The democratically elected socialist government was overthrown by a military coup d'etat. The new government implemented important economic reforms, which were influenced by the ideas of a dozen economists trained in the University of Chicago. One of the main reforms the military regime initiated was the unilateral trade liberalization. Therefore, we review this process for the period 1973-1990.

Following the return to the democracy, in the early nineties, the new governments continue with the economic reforms, in particular trade was further liberalized. First, trade was unilaterally liberalized, and then in the second half of the nineties bilaterally and multilaterally liberalized. We review the main trade reforms and the list of the main treaties signed by Chile until today.

Finally, we review the evolution of the Chilean exports at the light of the trade liberalization process.

1 Garcia, Meller y Repetto (1995) find that non-mineral exports have a positive impact on the rest of the economy, they interpret this result as the presence of externalities of exporting sectors towards the rest of the economy.

1.1. The political Economy of Protectionism.

The analysis presented in this section follows from Lederman (2005). Corden (1986) states that there are three fundamental questions that should be answered when studying the political economy of protectionism:

- Why do some countries have a higher level of protection than others?
- Why is the level of protection raised in some years and not in others?
- What explains the structure of protection?

The first two questions refer to the determinant of trade protectionism policies and the third to the differential policies that apply to different industries within a given country.

The economic literature that studies protectionism has focused on distributional conflicts, interest groups and voters and politicians seeking political support. The interest groups are industries, firms or factors of production that are organized through associations and unions. All, interest groups voters and politicians interact, generally within the democratic system, trying to make prevail their particular interests.

In contrast, the political science literature has studied the determinants of the level of protectionism through study cases. More recently they have focused in the role of ideas, ideologies and institutions as determinants of protection.

The historical analysis presented in section two will consider both the economists and political scientist points of view.

1.1.1. The analysis of trade policy cycles.

In this section we present the concepts that are normally used when trying to characterize trade policy cycles.

Cassing (1991) and others have studied the causes of policy persistence and the causes of its changes, including economic shocks as terms of trade among others. Indeed, the Chilean case seems to agree to some extent with this theory. Since the late nineteenth century until the beginning of the twentieth century Chile had a relatively open economy and strong dependence on the successful exports of nitrates. This situation came to an end with the invention of the synthetic nitrate, and the subsequent fall on nitrate exports. This terms of trade shock derived in the end of the level of openness and laissez-faire prevailing until then in the economy.

Goldstein (1993) suggests that cycles are related to the dynamics of the institutionalization of economic ideas. This view seems to apply to the liberalization reform applied in Chile since the seventies. Although, according to Hachette (2000) there were at least two liberalization attempts during the fifties and sixties, these seem to have lacked of political support

in part due to the fact that existing protectionist institutions were still strong. With the overthrown of the democratic regime and the beginning of the military regime an important part of the protectionist institutions came to an end. Furthermore, there was a group of Chilean economist trained in the University of Chicago and that collaborate with the military regime that accelerate the institutionalization of the free trade ideas, making in this manner feasible the reform.

Krueger (1993) suggests that cycles are driven by economic outcomes which might be related to policies. This argument together with the institutionalization of ideas seems to apply to the trade liberalization reform that followed the return to the democracy. The relative success of the liberalization process that was initiated in the seventies and deepen in the eighties, might have moved the new authorities to follow even further with the trade liberalization process. The international reinsertion of Chile, as the result of the return to the democracy, made then possible to enlarge the number of ways in which the reform could be deepen. In particular, the return to the democracy without any doubt facilitated the negotiation of bilateral and multilateral free trade agreements.

This section has presented several theories that make possible to identify trade policy cycles.

The Chilean trade policy cycles.

Based in an empirical analysis Lederman (2005) establishes the existence of five periods:

- The rise of a small open economy (1810-1910): Almost all through the nineteenth century, with the exception of the seventies, Chile experienced an increasing degree of openness. The subsequent increase in openness was lead in part by the nitrates exports.
- Delegitimization of Liberalism (1911-1927): Mainly due to the nitrates crisis, liberalism and with it free trade lost political support.
- Institutionalization of Protectionism (1927-1955) : During this period were created the Ministry of Promotion (Industry), and the main development agency (CORFO) that searched for industrialization. Trough this period tariffs were increased, and credit to manufacturing industries were subsidized among other measures (See Meller (1996)).
- Delegitimization of Protectionism (1957-1973): In 1956 the Klein-Saks mission arrived to Chile and recommended among other measures liberalize trade. During the sixties surge some criticism to the import substitution industrialization followed by Chile due mainly to the lack of results after around of 40 years of implementation.
- Rise of liberalism (1973-): Starting in 1973 with the military regime liberal reforms gain ground in Chile, and with it free trade. After the return to the

democracy in 1990 the new authorities go even further in liberalizing trade, through unilateral tariff reductions and through bilateral and multilateral agreements that positioned Chile as one of the most open economies in the world, and the one with the greatest preferential access to international markets.

1. 2. Two Strategies, Two different Outcomes: 1927-to the Present

1.2.1. Import substitution industrialization (ISI).

This section is largely based in Meller(1996). Chile began the import substitution industrialization even before the conceptual framework was developed in the fifties. Chile introduced an active industrial policy as a result of external events as the nitrates crisis, the great depression and the second world war. All these events increased the relative price of imports making profitable to initiate an industrial policy. The government seek for independency of external shocks and the reduction of economic vulnerability.

The import substitution strategy established that: first should be stimulated the production of final goods, which in turn through backward linkages should favor the production of industrial inputs. The final stage should be to stimulate the production of capital goods.

In Chile, the promotion of the manufacturing industry was without specific targets, thus the underlying assumption was the belief that the country should industrialize at any cost.

Before the thirties there were tariffs and export taxes that were aimed to favor the industrialization. After the great depression were introduced multiple exchange rates, discriminatory tariffs, licenses, quotas, previous deposits were applied to imports, together with prohibitions, subsidies and specific taxes to exports.

Some of the arguments for import substitution industrialization in Latin America were the infant industry argument, and the existence of declining terms of trade for countries whose development was based in natural resources. These arguments were formally presented in the work of Prebish (1950) and the Economic Comission for Latin America and the Caribbean (ECLAC) work.

During the sixties began to raise the criticism to the ISI. There was substantial evidence that the national economy was inefficient, providing poor quality goods at high expense. Furthermore, the strategy had failed to decrease the degree of external dependence of the national economy.

Today, it can be argued that the Chilean infant industry kept being infant and never developed. There were no incentives towards economic efficiency, but to rent seeking. This situation was evident when you analyze the set of policies applied and its persistence through the time. A second fact that

contributed to the total failure of the ISI was the small size of the domestic market that never allowed firms to reach economies of scale, and levels of efficiency possible to reach in larger markets. Thus, the ISI without emphasizing the exportation of industrialized goods to international markets was condemned to fail.

1.2.2. Towards a small open economy.

One of the most important reforms that Chile experienced since 1973 was the trade liberalization process. This reform was aimed to correct price distortions that were the consequence of the protectionist regime that prevailed until then. The liberalization aimed to restore the efficient allocation of resources within the economy, decrease the monopolic power of some national firms, restore the principle of economic and political neutrality between sectors, reducing the anti export bias of trade protection, and transform the exporting sector in an engine of the Chilean economy.

1.2.2.1. The first stage of the trade reform: 1974-1981.

In 1973 the average tariff reached 105%, with a minimum of 0% and a maximum of 750%. There were prohibitions to import a fraction of goods, 56% of the tariff categories were subject to a previous deposit of 10.000% during a period of ninety days. The other 44% was subject to the government approval. This protection scheme was propitious to discriminatory and arbitrary decisions by the authority. As a result about two thirds of import categories were totally restricted (Hachette (2000)).

During a period of two years the non-tariff barriers were dismantle, whereas the the tariff barriers were dismantle more slowly and in stages. First starting in 1975, tariffs were reduced in a range between 10-35%. By 1979 a uniform tariff of 10% was implemented (See Graph 3). According to Hachette this reduction was implemented because there was tension between sectors due to the existence of different tariffs and levels of protection, and because Chile could take this kind of decisions after unsubscribing the Andean Pact. The 10% level was on the direction of free trade, which was considered good for a small economy as the Chilean and at the same time was high enough to guarantee certain level of resources collected by the government through the tariffs. The uniform tariff had an exception and it was the automobile industry that had a tariff between 10% and 90% depending on the type of car or part.

Chile abandoned the Andean Pact in 1976, due to the fact that this constituted a barrier to further trade liberalization and international integration by Chile. In particular the Andean Pact had important restrictions to FDI that the government had no interest to subscribe any longer.

The government committed to a consistent path of the exchange rate. The reduction of tariffs and a initially close capital account should, and indeed they did, increase the real exchange rate reducing the adjustment costs within the economy. However, since 1976 and until 1982 the real exchange rate showed a tendency to appreciate although in an erratic manner. From 1976 until 1979 Chile adopted a crawling peg exchange rate system, whereas in 1979 the exchange rate was fixed and became the main anti-inflationary anchor. Subsequently Chile gradually opened its current account allowing capital inflows encourage by the international economic situation. The real exchange rate in consequence appreciated and the nominal exchange rate was devaluated in 1982 in the middle of a balance of payment crisis. To fix the exchange rate and simultaneously opening the current account without considering the possibility of a reversal in capital flows or increases in international interest rates seems to have been a major economic mistake that had significant costs for the economy and the government who lost significant political support.

From a political economy point of view and the resistance to the reform it can be argued that entrepreneurs largely supported the change in government due to the collapse of the economy that accompanied the socialist government of Allende. However, it is important to mention that opposition to the reform was unable to manifest during the military regime given the political restrictions that accompanied it.

1.2.2.2. The balance of payment crisis and the brief return to protectionism.

During the period 1982-83 the GDP shrunk by more than 17%, and the unemployment reached more than 20% (See Graph 2). In order to "avoid" further consequences of the crisis the government increased the average tariff to 20% by mid 1983 and to 35% bu 1984. The social pressure against the government was high and this conceded a level of protection to the surviving industries with the intention of reducing political tensions.

From an economic point of view, major adjustments to the exchange rate were needed to solve to current account deficit. Thus, the currency was devaluated by 30.5% in 1982, 54.8% in 1983 (See Graph 3). The deficit of 3.300 million dollars in the trade balance in 1981 was reversed to a 1.000 million dollars superavit in 1983.

1.2.2.3. The return to the unilateral trade liberalization: 1985-1992.

The unilateral liberalization was reinitiated by 1985 with a reduction of uniform tariff to 20% in 1985 and a further reduction to 15% in 1989. This tariff reduction was accompanied by a depreciation of the currency during all this period. The growth of the economy spur, the unemployment fell and the exports flourished.

According to Hachette the reduction in the terms of trade, the debt burden, the restricted access to the capital markets, the gap between

potential product and expenditure, the decreasing trend of inflation, and the contractive fiscal policy allowed the depreciation of the currency. At the same time interest rates fell moving entrepreneurs to invest in the tradable sector.

Fiscal considerations limited a further reduction in the tariffs. During this period were also implemented countervailing and antidumping measures.

Hachette also documents that on minister of agriculture claimed for protection for the sector obtaining the implementation of price bands for wheat, sugar and edible oil. Valdes (1996) documents that the level of nominal protection to these sectors during this period was the double than the one provided to other sectors, with an effective rate of protection of 46%. In this manner traditional agriculture was compensated during the new openness process.

Other trade measures were the possibility to delay the payment of tariffs in the case of imports of capital goods during a period of seven years. At the same time the added value tax was returned to exporters. Both measures had to be dismantled during the year to 2002 according to the WTO regulations.

With the return to the democracy in 1990, many economic actors wondered whether the new authorities, that had been critics of the economic policies implemented by the military government, would go further with the reforms or would come back to old policies. However, none of this concerns were materialized, the new government went even further in the process of unilateral trade liberalization by reducing the uniform tariff from 15% to 11% in 1991, at the same time that increased its focus in social expenditure. This liberalization didn't have major opposition given the successful emergence of exporting sectors occur during the last decade and with it the political support for the reforms.

1.2.2.4. The new multilateral trade liberalization policies: 1992 to the present.

The new multilateral liberalization process started in 1992 with the signature of bilateral economic complementation agreements. These agreements were aimed to enlarge the markets for Chilean exports, protect against disloyal trade practices and considered the imperfection on the controversy solution system of the WTO, the implementation of more stable trade rules, and the need to promote exports. (J.G. Valdés (1998)).

Saez and Valdés (1999), the former Chief of the ALCA-North America Trade division and the director of economic affairs of the Foreign Affairs Ministry pointed the following reasons, among others, for the signature of bilateral and multilateral trade agreements:

- Access to markets: The unilateral trade liberalization has not effect on access to foreign markets therefore in a world of emerging trade blocks it was needed to secure the access to foreign markets.

- Ensure market access conditions and the stability of exports: Latin America has characterized by unstable trade policies, although since the late eighties the openness process of the region has been remarkably. Therefore, the agreements aim to secure the access conditions for Chilean exporters within the region and abroad.
- Eliminate trade barriers otherwise hard to eliminate: The clauses of the large provider and substantial interest do not apply to Chile in many cases due to the fact that is not a large producer of many goods, however bilateral negotiations permit preferential access to some Chilean exports.

To this arguments we can add the certain degree of skepticism in the government that the process led by the WTO would manifest in secure market access to Chilean exports. A final argument for subscribing a large number of bilateral and multilateral treaties is that in comparison with signing a reduced number of them is that reduces significantly trade diversion.

Thus, in the mid nineties the negotiations with Mercosur were initiated. The agreement was finally signed in 1997 despite the warnings on trade diversion and the resistance of some agricultural sectors who obtained the permanence of price bands during 18 years.

But the policies of the democratic government didn't just initiated the negotiation of bilateral and multilateral agreements. After some debate in 1997-98 was decided to reduce even further and in an unilateral manner the uniform tariff from 11% to 6% from 1999 until 2003.

In December 2000 Chile initiated negotiations with USA for a Free Trade Agreement (FTA). Finally the agreement came into force in 2004. Today Chile has signed 11 FTA, two asociation agreements, and six complementation agreements. The list of the agreements is the following:

- Free Trade Agreements: Canada(1997), Mexico (1999), Costa Rica (2002), El Salvador (2002), USA (2004), South Korea (2004), EFTA (2004), India (Partial 2006), China (2006), Panama (sign 2006), Japan (sign 2006).
- Associations: Mercosur (1996), European Union (2003).
- Complementation: Bolivia (1993), Venezuela (1993), Colombia (1994), Ecuador (1995), Peru (1998).

1.3. Exports Evolution through the Time: 1960-to the Present

With the trade liberalization trade has become more and more important for the Chilean economy. Indeed, during the sixties decade exports were above around twelve percent of the GDP, and reached a minimum in 1972 with nine percent share on GDP. Since the trade liberalization started in 1973, the exports share on GDP has grown steadily to a peak of 48% in the year 2005 (See Graph 4).

As it is widely know Chile's main export by far is the cooper. During the sixties the cooper share on exports was above sixty percent, and it reached a maximum of 80 percent in 1973. Since then, they decreased almost steadily to 31 percent in 1998 (See Graph 5). Today, cooper exports are the 44% of total exports mainly due to the high prices of the last two years. This decrease in cooper's share in total exports has been accompanied by an important export diversification. Indeed, the number of 4 digit SITC sectors in which Chile exports has grown also remarkably. During 1963 Chile had exports in 238 sectors whereas in the year 2000 Chile had exports in 494 sectors.

But this diversification in the number of exported products has been also accompanied by an important diversification in the main destinations of chilean exports. In the year 1970, the main destination was Europe with 58% of participation on Chilean exports, Japan concentrated 16% of exports, NAFTA concentrated 13%, and Latin América 12%. In the year 2005, Europe had a share of 25% of chilean exports, Asia without Japan 24%, Nafta 23%, Latin America 13%, Japan 12% and 3% other countries (See Graphs 6 and 7).

But have been FTA also sucessful for Chile? The FTA with the US grew 25% during 2004, the year in which the treaty was implemented, and almost 36% the following year. The exporting sector than have grown the most have been industrialized goods. This growth of exports seem to fit what are known as dynamic gains from trade. The association agreement with the European Union derived in a 29% increase in Chilean exports during the year 2004, and in a 7% increase during 2005. The FTA with South Korea showed an impresive 78% increase in Chilean exports during 2004 and a 14% increase during 2005. This last two treaties seem to represent the static and traditional once for all gains from trade (See Graphs 8-10).

2. Concluding Remarks

Chilean trade liberalization experience dates back to the early seventies and has continued until today. In a first stage protectionist measures were dismantled to correct price distortions and therefore inefficient allocation of resources within the economy. In order to put an end to pressure groups soon the tariff became a uniform tariff that implemented the principle of economic neutrality between sectors and that has been preserved until today.

Since the early nineties Chile started a new stage in the openness process by negotiating bilateral and multilateral agreements at the same time that reduced its uniform tariff. This new strategy has permitted the country to gain preferential access to over 80% of the world market.

The openness process has increased the participation of exports on the

GDP, has diversified the number of exported products, as well as the main destinations for Chilean exports. Today there is a wide consensus that exports are a fundamental part in the growth performance over the last thirty years.

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Appendix: Tables and Graphs

Table 1. Annual Real GDP Growth

(Constant 2000 US$)

	1990-1999	2000-2004
Chile	6.38%	3.97%
Latin America & Caribbean	3.01%	2.26%
World	2.76%	2.84%

SOURCE: World Bank.

Table 2. Annual Real Per Capita GDP Growth

(Constant 2000 US$)

	1990-1999	2000-2004
Chile	4.66%	2.78%
Latin America & Caribbean	1.32%	0.78%
World	1.26%	1.58%

SOURCE: World Bank.

Table 3. Growth and Export Performance, 1960-2005

(average annual growth rates, in percentage)

	1960-1973	1974-1989	1990-2005
Rate of growth of GDP	3.4	3.3	5.6
Rate of growth of total real exports	3.2	9.2	7.9
Rate of growth of non-mineral real exports	0.4	14.2	8.9
Gross fixed investment (% of GDP)	22.3	18.2	24.9

Source: Authors's calculations, based on data of the Central Bank of Chile.

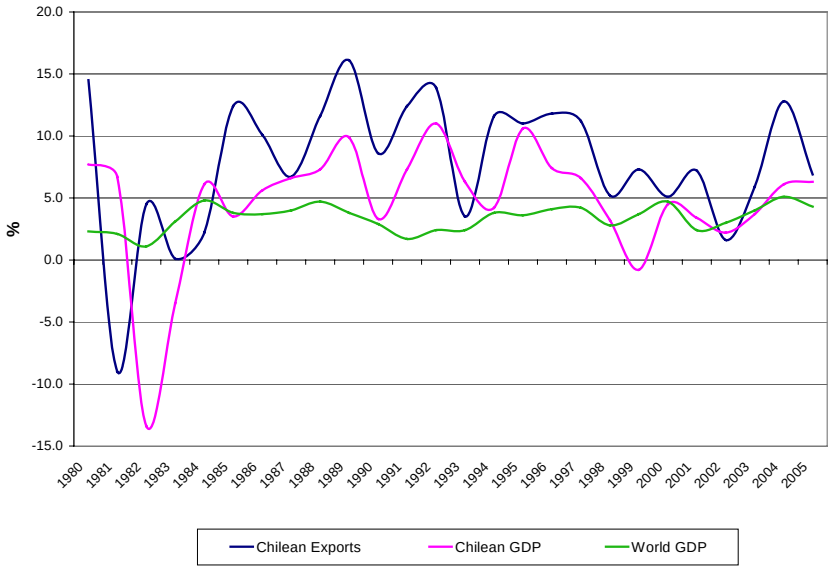
Table 4. Exports to Asian Countries

(% Total Exports)

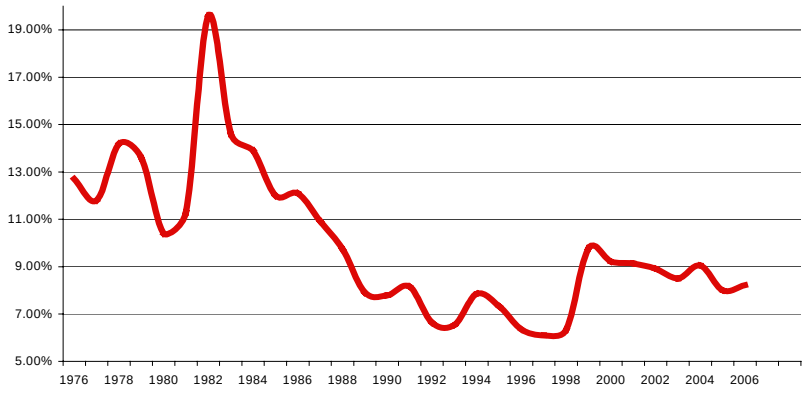
	1990	1995	2000	2005
Jap-n	17.49	18.96	14.44	11.75
China	0.80	2.01	7.50	11.61
Korea	3.94	6.11	4.58	5.73
Remaining Asian Countries	8.57	13.32	6.98	6.91
Remaining World Countries	69.20	59.60	66.50	64.00

Source: Comtrade & Prochile.

Graph 1. Exports and GDP Annual Growth: 1980-2005

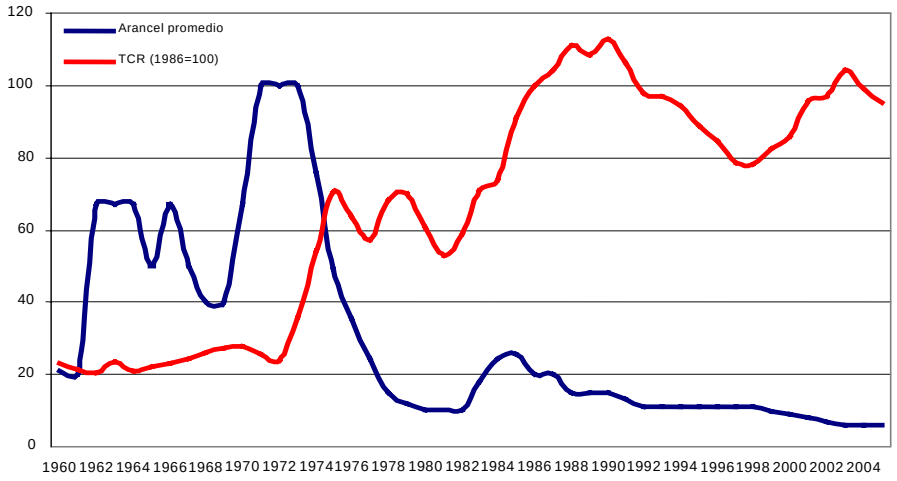


Graph 2. Annual Average Unemployment : 1973-2005

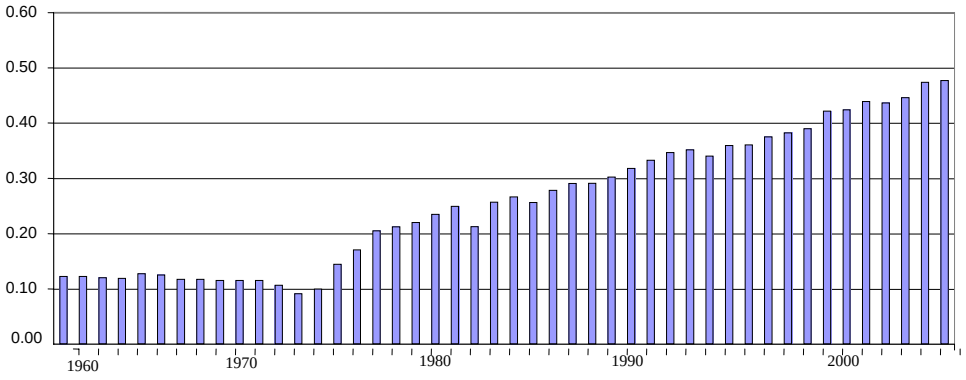


Source: INE, Chile

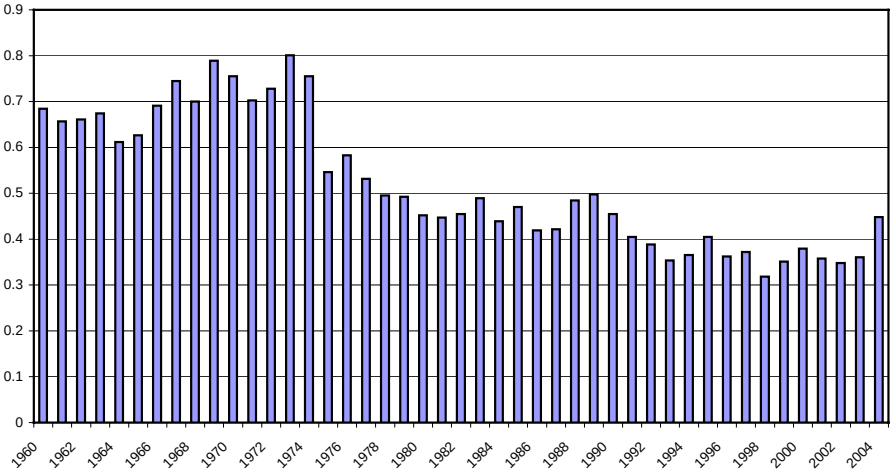
Graph 3. Real effective exchange rate and average tariff, 1960-2005



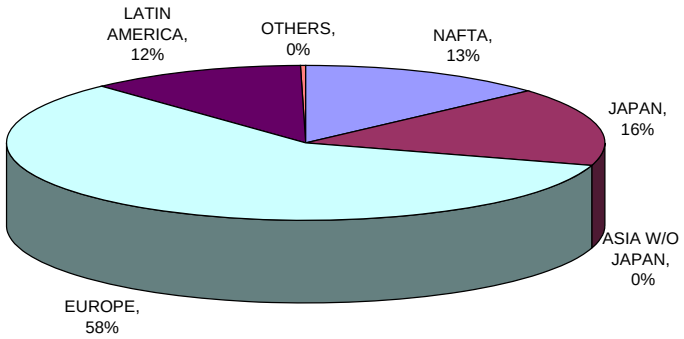
Graph 4. Exports Share on GDP: 1960-2005(1986 constant pesos)



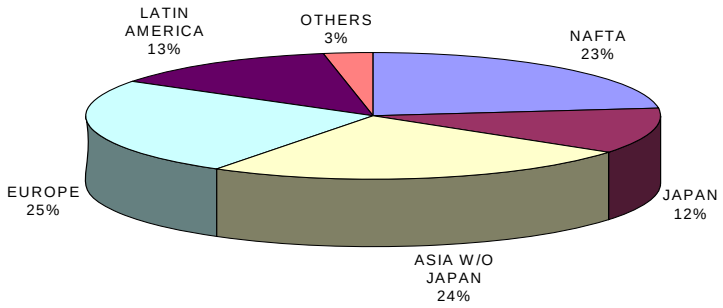
Graph 5. Copper's Share on Total Exports: 1960-2004



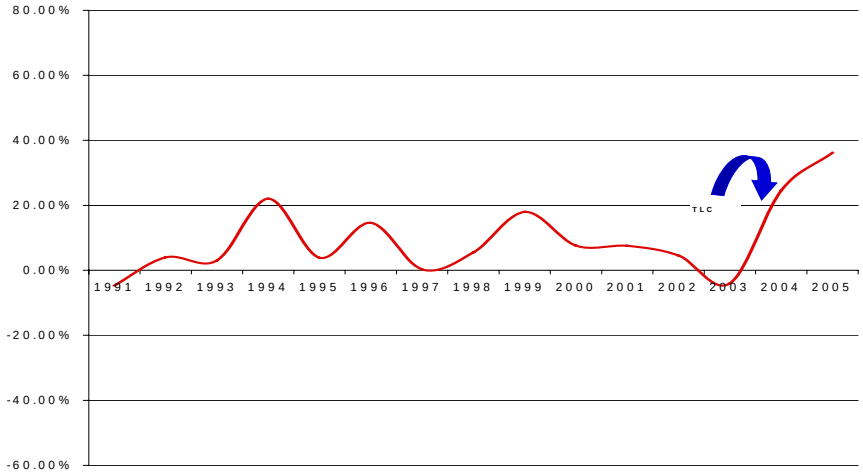
Graph 6. Export Destinations: 1970



Graph 7. Export Destinations: 2005

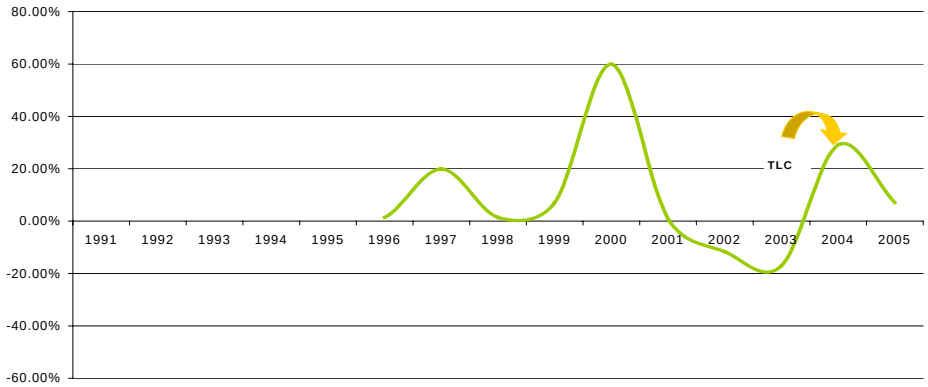


Graph 8. Chilean Exports: Annual Growth to United States



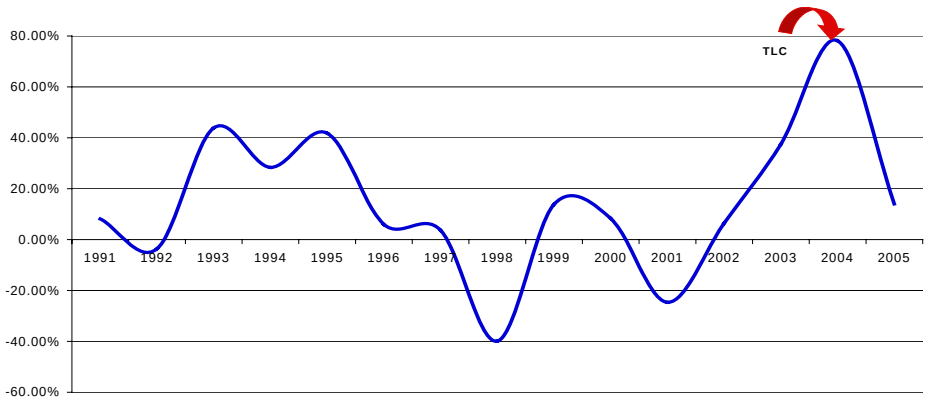
Source: http://tse.export.gov/

Graph 9. Chilean Exports: Annual Growth to European Union



Source: http://fd.comext.eurostat.cec.eu.int/xtweb/

Graph 10. Chilean Exports: Annual Growth to South Korea



Source: http://global.kita.net/marketing/main/staticsIndex.jsp

CHAPTER 2-2

Chile in the Era of Globalization[1]

by
Alejandro Jara[2]

Abstract

Chile's process of economic reforms initiated in the early seventies has allowed the country to set the bases for a strong financial and institutional framework that have been at the core of the Chilean economic performance over the last 15 years. During this process, Chile has become one the most open economies worldwide, thanks to the combination of a unilateral, bilateral and multilateral liberalization policy and the development of quality institutions, summarized in the mix of consistent fiscal and monetary policies.

[1] Paper presented at KDI conference on "NAFTA and Structural Changes: Experiences and Implications", Seoul, Korea, September 14-15, 2006.

[2] Senior Economist (Central Bank of Chile). The opinions expressed in this paper does not represent the Central Bank of Chile, therefore the author takes full responsibility for its contents.

1. Introduction

Over the last 30 years, Chile has converted its closed, state-run economy into a model of free-trade, market-oriented capitalism. Throughout this process, Chile has gained the reputation of being a small open economy that has benefited of its unwavering commitment to market liberalization, transparency, and fiscal accountability.

Currently recognized as a trade pioneer in Latin America, Chilean economic transformation started in the mid seventies with unilateral tariff cut and a deep financial liberalization program. Although abruptly discontinued after the eighties' financial crisis, this process was re-intensified later on through the signing of countless free trade agreements and a substantial privatization program. As a consequence, during these years, the Chilean standard of living has improved substantially, helping the authorities to gain support for the pursuit of a more internationally integrated economy. In addition, the building of a strong institutional framework, such as the more recent implementation of an inflation target monetary policy, a floating exchange rate regime, and the development of a solid financial system, has contributed to set the bases for the current Chilean economic success.

In an era of globalization, where an increasing number of countries are trying to take advantage of a more integrated international economy, it is important to look back to those countries, like Chile, that have walked a long way through opening up their economies. This article aims to briefly describe the main features that characterize the Chilean economic transformation of the last thirty years, and draw some conclusions for those countries that are following similar paths of development.

2. From Repression to liberalization and Crisis

In the early 70s, the Chilean economy was basically closed to international trade, suffering from widespread price and interest rate controls, a high degree of public intervention, and severe macroeconomic imbalances. Many studies have emphasized the state of extreme repression that the economy experienced at that time (De la Cuadra and Valdés (1992)), characterized by barriers to trade, export taxes, multiple tier exchange-rates, and a nationalized banking system. Not surprisingly, the first stage of reforms that started after 1973 was focused primary on the liberalization of trade and the financial system.

These reforms resulted in a sharp reduction in government spending and in the implementation of a restrictive monetary policy regime. In addition, a set of market-based reforms were implemented, including the removal of

price controls, privatization of state enterprises, reduction of restrictions to trade, and the deregulation of the labor market. On the financial side, credit and interest rates controls were eliminated, and competition was enhanced through the elimination of barriers to entry, as well as through an extensive program of privatization of state owned banks. In addition, credit ceiling and mandatory lending to priority sectors were also abolished, and banks' reserve requirements reduced, allowing the banking sector to reach a substantial growth.

The opening up of the capital account was also partially initiated during this period. The elimination of foreign investment restrictions, in conjunction with the fixed exchange rate regime that was in place at that time, encouraged domestic banks to use foreign capital as a source of funding, leading to a rapid increase in bank credit to the private sector. In addition, the lack of prudential supervision and prudential regulation contributed to the strong expansion of credit to the non-tradable sector and to related parties. Domestic credit grew at an annual average rate of 40%, raising banks proportion of GDP from 8% in 1975 to 35% in 1980; and increasing credit to related parties to 19% of total loans in the early eighties.

The failure to reduce the inflation rate forced the banking system to deal with extremely high interest rates, supporting an increasing inflow of foreign capital. Thus, the authorities' commitment to a fixed exchange rate regime slowly became unsustainable, making the stabilization program to lose its credibility. Soon enough, foreign lenders became nervous over the continuous real exchange rate appreciation, the rising foreign debt, the growing current account deficit, and the declining foreign exchange reserves. Under these circumstances it was not a surprise that the increase in global interest rates led to a retreat of capital from Chile (and throughout the region), giving rise to the 1982 Latin American debt crisis. On top of that, a number of additional shocks hit the Chilean economy, setting the scene for the country's worst financial crisis. Due to the decline in terms of trade (copper prices fell in conjunction with the rise of oil prices), decline in foreign reserves and the little chance for foreign borrowing, Chile was forced to float the peso, resulting in a huge corrective depreciation. Although there was no currency mismatch in the banking system's balance sheets, there was a mismatch in the sectors the banks were lending to; thus, increasing the banks' vulnerability to macroeconomic conditions (Cowan and DeGregorio (2005)). Additionally, there was the presumption that the government would bail out the banking sector, which contributed to banks' moral hazard problems. Therefore, nonperforming loans went up to 9% of total lending in 1985 and banks' profits turned into losses, leading to a costly banking system intervention by the Central Bank, which has been estimated at about 35% of GDP (Sanhueza (1999)).

To summarize, the first decade of reforms experienced certain short-lived policy achievements. Chile's over reliance on a fixed exchange rate as well as the emphasis on liberalizing controls of foreign capital led to a situation

where the large current account deficit and resulting debt burden were no longer supported by capital inflows.

3. Recovery, Institutional Build up and Current Performance

The developing of the financial crisis described above uncovered some major regulatory shortcomings, and triggered the revision of several policies and institutions. In particular, the authorities needed to focus their attention on trying to avoid the collapse of the financial sector and to reduce the large external deficit. They did so by nationalizing the banking system and raising tariffs, backing down the process of economic stabilization initiated almost a decade before.

After 1984, a new process of policy reforms was initiated, aimed to support export growth, promote competition and reduce inflation, as well as to encourage domestic savings. The achievement of these goals was accomplished through steady depreciation of the exchange rates, tightly controlled monetary policy, and a continuous process of privatization (Barandarian and Hernández(1999)). However, the general economic recovery actually did not begin until 1986, after a new banking regulation framework was in place. The General Banking Act (GBA) and the new bankruptcy law, both enacted in 1986, established the basis for solving the fundamental problems that caused the crisis of 1982, helping to improve supervision and prudential regulation. By restricting lending to related parties and limiting the state guarantee on deposits, the GBA's became one of the fundamental pieces of the Chilean banking system.

For everyone at that time, it was understood that this conservative approach towards banking was a natural legacy of the 1982 financial crisis. However, this approach, stamped on the GBA's basic framework, was not fully compatible with the globalization trend and economic growth followed by Chile by the late eighties. Thus, given that the GBA was limiting the development of the banking sector, some further improvements were required.

On the other hand, the pension reform initiated at the beginning of the eighties that replaced the old "pay as you go" pension scheme by a fully funded capitalization system, helped to improve private investment and the capital markets through the emergence of long-term funding instruments in the form of Central Bank debt, mortgage securities, equity and corporate bonds (Cifuentes et al (2002)). Moreover, Chile's international debt problems were also addressed through various secondary market initiatives (debt rescheduling and debt-equity swaps), that quickly helped Chile to reduce its annual financial obligations and to set the basis for a sustainable economic recovery. On the external front, the policies implemented during the seventies became a key element for the economic success of the late eighties. In fact, the initial unilateral approach toward opening up the economy was

complemented later on with a mix of foreign trading policies that combined unilateral, bilateral and multilateral agreements with an increasing number of countries (see Annex 1). As a result of all of the above, the economy grew on average more than 7% during 1985-97.

Since the nineties, the Chilean model has been based on a strong and stable institutional setting and a competitive open market economy, characterized by a full independent Central Bank, a full-fledged inflation-targeting regime complemented by a floating exchange rate, and a fiscal policy rule anchored to a 1% of GDP structural fiscal surplus. These solid macroeconomic fundamentals and these modern and robust institutions seem to be behind the outstanding records of inflation and growth that have contributed to the Chilean macroeconomic stability and financial strength over the past 16 years.

Nevertheless, during the nineties, financial integration was more gradual. In effect, through most of the 1990s, Chile set capital account restrictions, including the well- known unremunerated reserve requirement (URR), in respond to the 1990s capital inflows to emerging markets. The rationale for the 1991-98 URR was twofold: to maintain monetary policy independence without giving up the exchange -rate band and to discourage short term (more volatile) capital inflows.[3] Furthermore, sterilized and intra-marginal exchange rate intervention helped the authorities to slow down the exchange rate appreciation pace and to introduce additional uncertainty in the spot market. Once inflation had converged to the Central Bank's final target level and the banking system had been strengthened, the Central Bank removed all remaining capital account restrictions in 2001.

Nowadays, the Chilean banking system is rated at the top among emerging markets and at a similar level of many industrial countries, like Italy and Germany. This has been a consequence of the development in the capital market during the last twenty years, and the introduction of capital adequacy requirements in line with Basel standards, which has allowed banks to expand their activities and invest overseas.[4]

4. Challenges

In order to get the full benefits of the globalization process, it is crucial that countries put in place the right policies and institutions. In particular, macroeconomic and microeconomic reforms, as well as the institutions that help to support these reforms are key elements. In Chile, institutions and microeconomic foundations are in good stand in several areas: quality of

[3] Liberal policies toward long-term inflows were maintained.

[4] In particular, the pension funds reform of the early 1980s benefited the banking system and other financial institutions (stock market, financial intermediaries and institutional investors) through the increase in the supply of long-term funding.

regulation, economic freedom, property rights protection, rule of law, control of corruption, among others. Therefore, the main challenge faced by Chile in its current stage is actually to be able to ensure the stability of these current policies and institutions.

However, if Chile wants compete in an increasingly globalised world, there are some additional challenges that need to be addressed. In particular, further reforms are needed in its education quality and technological innovation, as well as in trying to reduce income inequality, which still remains as one of the most important drawbacks in the Chilean features. It is actually very surprising how the economic growth for more than two decades has not generated important improvements in these areas. Many economists view these costs as an unavoidable aspect of structural economic adjustment, but it is important to recognize that if they are left unaddressed, such unbalanced growth may risk the possibility of inciting social and political upheaval that could ultimately unravel economic achievements.

On the financial side, Chile requires some further improvements in its capital market infrastructure, and the continuous adoption of international standards and best practices. Despite its sustained growth, Chilean capital markets still remain relatively unsophisticated (low liquidity, limited use of derivatives, lack of venture capital, unconsolidated supervision). In this regard, Chile needs to move forward in areas such as market regulation, cooperation and information sharing among regulatory agencies, consolidated supervision, improvement of financial contracts, as well as in setting a clear, flexible and competition-promoting regulatory framework.

Finally, trade integration need to be continuously enhanced by extending and deepening trade agreements. Improving the access of Chilean exports to large Asian economies without loosing sight of the Americas, should focus increasingly on finding ways to accelerate technology transfer through broader agreements.

5. Conclusions

For many, the Chilean economy represents a paragon of economic adjustment policy gone right and an example to be emulated in Latin America and other developing areas. Throughout these years of reform, trade, in the form of unilateral liberalization and FTAs, has become a key element of the Chilean economic success. In addition, the development of a strong institutional framework, the mix of consistent fiscal and monetary policy, as well as a strong and well capitalized financial system, have all help the Chilean economy to attain strong macro fundamentals. Currently, the Chilean capital market is seen as the largest (relative to the economy size) among emerging market economies due to the increasing importance of institutional investors and to a more competitive and efficient banking system.

Nevertheless, some are quick to note that the economic reforms in Chile are also a story of serious policy setbacks and high welfare costs in the struggle for stabilization and growth. In fact, although Chile has finally realized a relatively stable economy, distributional issues remain pronounced, including skewed patterns of income and the poor quality of its education.

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Annex 1: Chile's Multilateral, Regional, and Bilateral Trade Agreements

Agreement	Type	Date Effective
P-4 (1)	Economic cooperation	2006
European Union	Economic coopertion	2003
Canada	bilateral FTA	1997
Korea	bilateral FTA	2004
China	bilateral FTA	2006
Costa Rica	bilateral FTA	2002
El Salvador	bilateral FTA	2002
Guatemala	bilateral FTA	in negociation
Honduras	bilateral FTA	in negociation
Nicaragua	bilateral FTA	in negociation
United States	bilateral FTA	2004
Mexico	bilateral FTA	1999
EFTA (2)	bilateral FTA	2004
Panama	bilateral FTA	in congress
Colombia	bilateral FTA	in congress
Per	bilateral FTA	in congress
Ecuador	bilateral FTA	1995
Mercosur (3)	regional FTA	1993
Bolivia	preferetial tariff agreement	1993
Venezuela	bilateral FTA	1993
India	Acuerdo de Alcance Parcial	in congress
Cuba	Acuerdo de Alcance Parial	in congress
(1) Chile, New Zeland, Singapur and Burnei.		
(2) Islandia, Liechtenstein, Noruega and Switzerland		
(3) Argentina, Brazil, Paraguay and Uruguay.		

Soure: DIRECON

Public Lecture

Peru-US FTA and Trade Liberalization

by
Roberto Abusada Salah

1. Background

With a population of 27.2 million and a per capita income of US$ 2,917 Peru is a low middle-income emerging economy. Salient characteristics include an economy with strong duality features, where almost 60 percent of GDP originates in the informal sector, and 51.6 percent of the population lives below the poverty line (persons living with less than US$ 2 dollars daily), and with 19.2 percent living in extremely poor conditions (living with less than US$ 1 daily).

Table 1. Peru, basic indicators 2005

GDP (US$ millons)	79,341.5
Population (millons)	27.2
Population growth (2000-2005 average)	1.3
Extrema poverty (2004)	19.2
Poverty (2004)	51.6
Inflation	1.5
Fiscal deficit (as % of GDP)	0.3
Public debt (as % of GDP)	37.8
Exports (US$ millons)	17,336.3
Current account superavit (as % of GDP)	1.4
Openness (X+M as % of GDP)	37.1

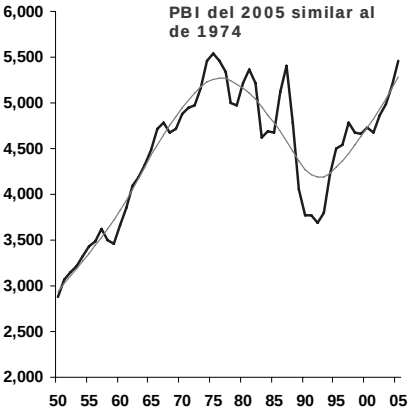
Source: INEI, BCRP, MEF, IPE

Although there have been periods of economic modernization and reform, during the second half of the twentieth century Peru has been subjected to militarism, populism, and state capitalism that along with other

countries in Latin America have resulted in very poor growth performance, with extreme economic volatility and recurrent crises. Per capita real GDP has grown very modestly over the last 55 years, at an average rate of 1.3 percent per annum. The high growth rate in income observed until the mid-sixties started to decline in the seventies, and plunged dramatically in the eighties. While in the fifties Peru had a per capita GDP (using constant PPP) similar to that of Spain and substantially higher than that of Taiwan and Korea, and despite some recuperation during the nineties, by the end of the century Peru had only a per capita GDP similar to that of 1970.

Figure 1. Per Capita Real GDP and Trend, 1950-2005

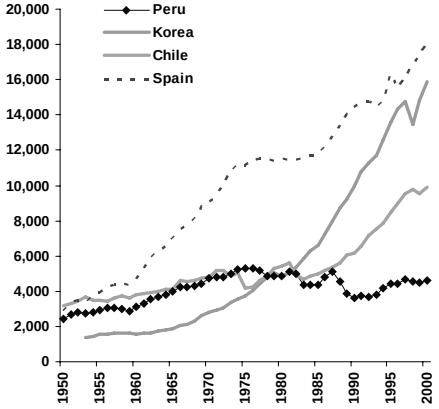
(in 1994 soles)



Source: BCRP.

Figure 2. Per Capita Real GDP, Peru, Korea, Chile, Spain

(constant international prices, 1996 US$)

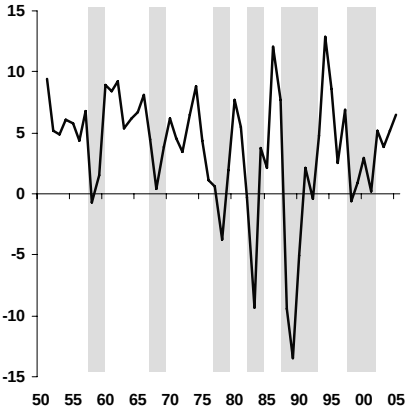


Source: Penn World Table 6.1.

Growth has been uneven. In 17 out of the last 55 years, per capita GDP declined (in 5 years by more than 5 percent), in at least six episodes of clear recession. Conversely, there have been periods of strong recuperation and economic boom, with annual per capita growth rates of 5 percent or higher in twelve out of the 55 years. Further, this volatility has tended to be higher in more recent years.

Figure 3. Real GDP Growth and Recession Periods, 1950-2005

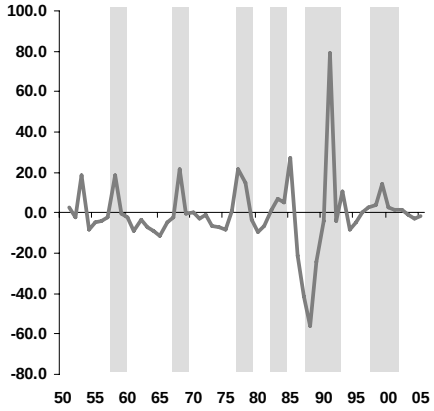
(YoY % change)



Source: BCRP.

Figure 4. Real Exchange Rate Changes and Recession Periods

(YoY % change)

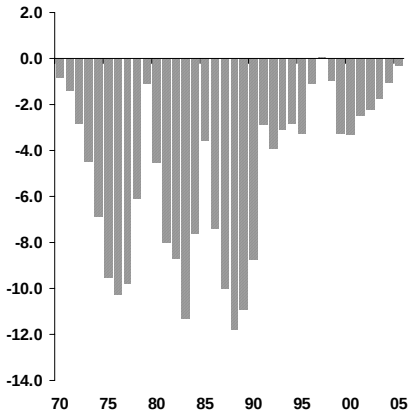


Source: Penn World Table 6.1.

In general, recession periods were not only characterized by exchange rate crises, but also by debt crises in many instances, where the government had to request the restructuring of the public debt (particularly bilateral and commercial). Moreover, during the eighties Peru declared a unilateral moratorium causing generalized arrears that resulted later in protracted negotiations (which ended with the Brady agreement in 1997). Before the eighties, the recessive and crises episodes were by-and-large free of banking crises. However, in the crises of the late eighties and nineties Peru saw a higher number of bank failures, leading to the liquidation of several banks at a fiscal cost estimated at the equivalent of 5 percent of GDP in the second half of the nineties.

Figure 5. Fiscal Deficit, 1950-2005

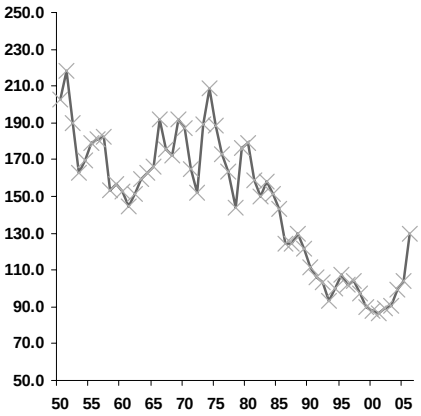
(as % of GDP)



Source: BCRP.

Figure 6. Terms of Trade

(index 1994=100)

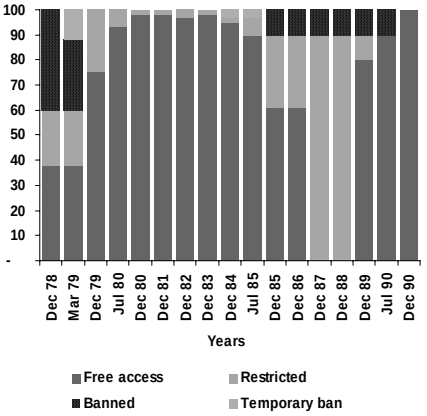


Source: BCRP.

Currency crises in Peru occurring until the early nineties were clearly caused by the deterioration of economic fundamentals. Failures were associated with fiscal fragility in previous years and an increase in loans to finance growing fiscal imbalances, with the loss of international reserves, higher domestic inflation, and real appreciation of the domestic currency (very much in line with the so called first-generation models of currency crises). The timing of the crises were also influenced by foreign events, particularly by the deterioration of terms of trade associated with a slowdown in the world economy, and in the first half of the eighties, by the sharp increase of international interest rates.

Figure 7. Non-Tariff Barriers

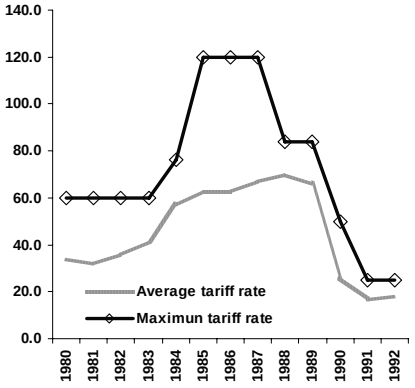
(as % of total tariff lines)



Source: Boloña and Illescas (1997).

Figure 8. Average Tariff and Maximum Tariff Rate

(%)

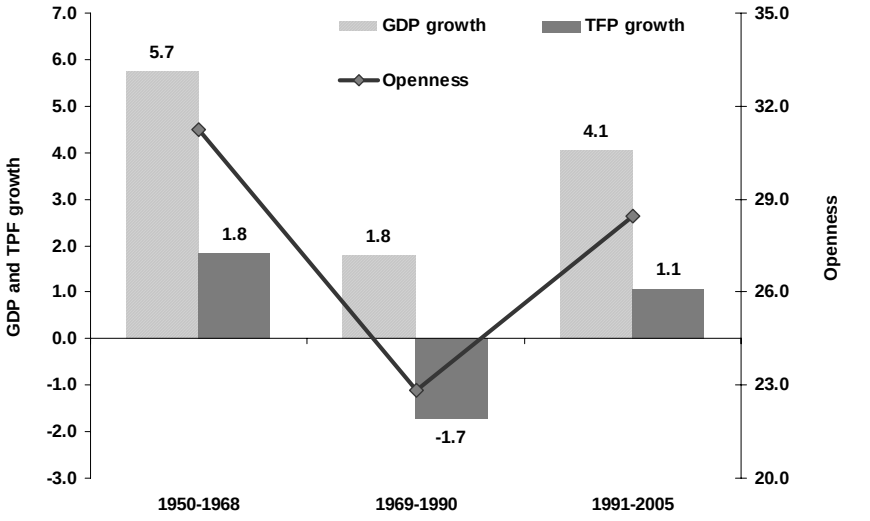


Source: Loayza (2005).

During the 1950s, Peru's economy was fairly integrated to the world economy, but by the end of the 60's economics was very much influenced by the so called dependency theory that essentially blamed developed nations for all things going wrong in Latin America. This was also the time when the economy started to become more protectionist, with the application of import-substitution-industrialization model. For the next 30 years, Peru would become a closed economy with a highly inefficient industrial sector catering basically to the domestic market, exposed to recurrent balance of payments crises. The 1970-1990 period was characterized by the introduction of very high import tariffs and the prevalence of an ample array of non-tariff barriers. GDP growth slowed down to a mere 1.8% per annum accompanied by a decline in productivity, while average population growth grew at a much higher rate.

Figure 9. GDP Growth, Total Factor Productivity (TPF) Growth, and Trade Openness, 1950-2005

(YoY % change average and as % of GPD)



Source: INEI, PWT 6.1.

2. Unilateral Liberalization

Trade liberalization became the focus of a reform process started in 1991. Prior to the start of the reform Peru had undergone a tough stabilization program aimed at controlling rampant hyperinflation. Together with trade liberalization, the Government adopted a set of other reforms that covered the labor, financial, fiscal, and social security aspects[1].

The main concern of the government behind the liberalization process was the increase in competitiveness and productivity throughout the economy. It would do this by putting in place a progressive unilateral reduction of tariffs, as well as seeking to enhance access of Peruvian exports in several markets by revamping several commercial agreements that had been signed during the decades of the 70s and the 80s. This process proceeded quite rapidly in the beginning, and continued up until 1997. The first action was to reduce tariff dispersion by setting maximum and minimum tariff rates at 50 % and 10 % respectively, as well as reducing the number of tariff categories from 30 to 24. By September of 1990 a big step in tariff reform was instituted through the reduction of

1 For a discussion of economic reforms in the 90s see Abusada et.al. (2000)

tariff levels to just three: 15, 25, and 50%. The average tariff level for consumption goods was then 41% while for other goods tariff averages hovered around 20%. The process continued to reduce the number of tariff rates until June 1993, where only the rate of 12 and 20% remained in the tariff schedule. By then, all non-tariff barriers, most notably those linked to the agricultural and health sectors had been lifted, and no import prohibitions remained in place. By 1997, 84% of all tariff lines were set at the level of 12%.

Table 2. Tariff Reform, 1990-1998

Date	Number of tariff rates	Simple average tariff rate	Standard Deviation	Coefficient of Variation
Jul-90	39	46.5	25.7	55.3
Aug-90	24	38.1	12.4	32.5
Sep-90	3	26.3	13.3	50.6
Jan-91	4	26.3	13.3	50.6
Mar-91	3	16.8	3.9	23.2
Mar-92	2	17.6	4.4	25.0
Jul-92	2	17.6	4.4	25.0
Jun-93	2	16.3	3.4	20.9
Apr-97	4	13.5	3.5	25.9
Jan-98	4	13.5	3.5	25.9
Mar-98	4	13.5	3.5	25.9

Source: Abusada *et al.* (2001).

Coupled with the tariff reform, the government established a substantial streamlining of customs processes, thus greatly simplifying import and export bureaucratic barriers.

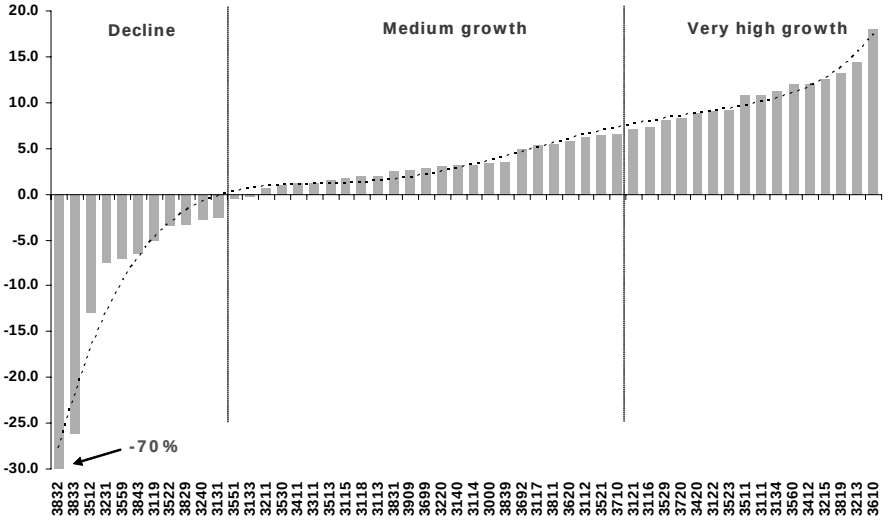
3. Industrial Restructuring and Growth

The end of hyperinflation and the reform program ushered a period strong growth. After a period of adjustment that lasted until the end of 1992, the economy grew vigorously at an average rate of 7.1% per year. But also, at the same time, the industrial sector was undergoing a profound restructuring process. The sharp reduction in tariff dispersion had produced

a marked decline in effective protection, particularly in those industries that were set up in the past to cater to the domestic market, and had a very high import component. The production in a few industrial categories declined sharply, or disappeared all together. Among them were those industries involved in the assembly or elaboration of products largely from foreign origin, and with minute domestic value added. Typical of this category were the assembly of electronic equipment, motor vehicles, and pharmaceutical products. However, the bulk of the industrial sector performed adequately, exhibiting growth rates in excess of 6% for the decade, while fifteen (4-digit ISIC) sectors grew at spectacular rates ranging from 9.7 to 28% per year throughout the decade of the 90s.

Figure 10. Peru – Industrial Sectors* Average GDP Growth, 1990-2000

(average YoY % change)



*4-digits ISIC code, rev. 2.

Source: MITINCI Average annual growth.

Table 3. High Growth Sectors. 1991-1999

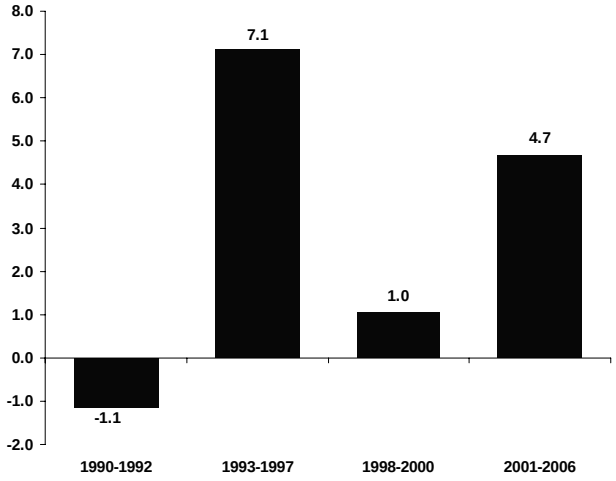
	(Average YoY % change)
Manufacture of pottery, china and earthenware	20.8
Manufacture of containers and boxes of paper and paperboard	19.8
Knitting mills	18.9
Manufacture of fabricated metal products	15.6
Manufacture of plastic products not classified elsewhere	13.6
Manufacture of basic industrial chemicals except fertilizers	12.0
Manufacture of soap and cleaning preparations, perfumes, cosmetics and others	11.7
Soft drinks ad carbonated waters industries	11.7
Elaboration of fishmeal	11.5
Slaughtering, preparing and preserving meat	11.1
Printing, publishing and allied industries	10.6
Manufacture of food products not elsewhere classified	10.4
Cordage, rope and twine industries	10.4
Manufacture of paints, varnishes and lacquers	9.9
Manufacture of glass and glass products	9.7

Source: Abusada *et al.* (2001).

Market reforms in the 1990s fostered substantial overall economic growth with increasing investment rates in all sectors of the economy. By 1997, the investment ratio to GDP had reached almost 25%, but high growth and a still insufficient export level drove the deficit in the current account of the balance of payments to a record 8.6% of GDP in 1995, forcing the government to engineer a soft landing that brought the real GDP growth rate down to 2.6% in 1996. The economy recuperated in 1997 and grew by 6.9%, but the advent of the Asian and Russian crises coupled with the political unrest prevailing in the period 2000-2001, brought the economy to a virtual standstill, with the economy growing at an average rate lower that 1% between 1998 and 2000. Since then, the economy has recovered, and it has grown at an average rate of 4.7% per annum.

Figure 11. Peru – Average GDP Growth Selected Periods, 1990-2006e

(average YoY % change)



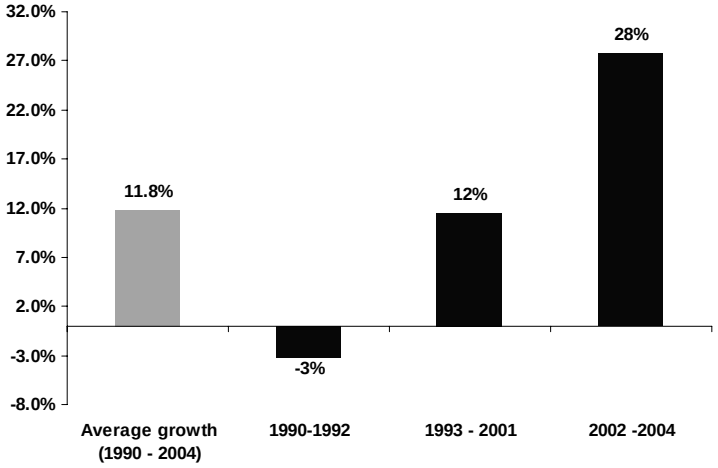
Source: BCRP.

4. The US Unilateral Preferential Access Programs

The origin of Peru's efforts to seek a free-trade agreement with the United States can be traced back to 1994, when the United States enacted a Preferential Access Scheme for Peru, Ecuador, Colombia, and Bolivia; the so-called Andean Trade Preference Act (ATPA), which allowed duty-free access for a vast array of Andean products. This program generated increased exports to the United States, particularly in the agricultural sector. Other sectors, most notably the textile sector, had no preferential access under ATPA, but it had started to produce primarily for the export market as a result of the drastic decline in tariff protection in the domestic market, and the advantages of the overall liberalization that removed to a great extent the anti-export bias. When ATPA was to expire in 2001, Andean countries lobbied intensely the United States to extend the preference scheme. This was achieved with the enactment of a new program, termed ATPDEA, Andean Trade Preference and Drugs Eradication Act. The new program extended preferences to the textile industry, and has since produced significant growth of that sector.

Figure 12. Peruvian Exports to the US Market Growth 1990-2004

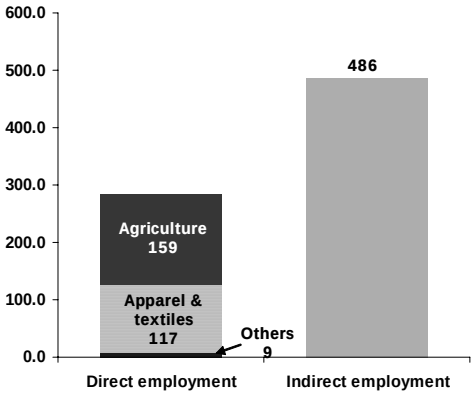
(YoY % change)



Source: USITC.

Figure 13. Jobs associated with Non-Commodity Exports under the ATPDEA Program, 2003

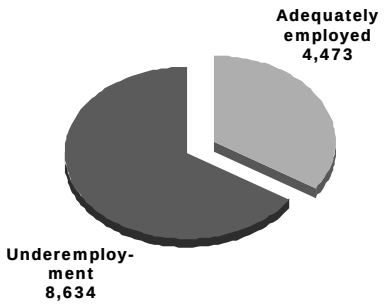
(thousands of jobs)



Source: Abusada et. al (2004).

Figure 14. Distribution of Employment, 2004

(thousands of jobs)

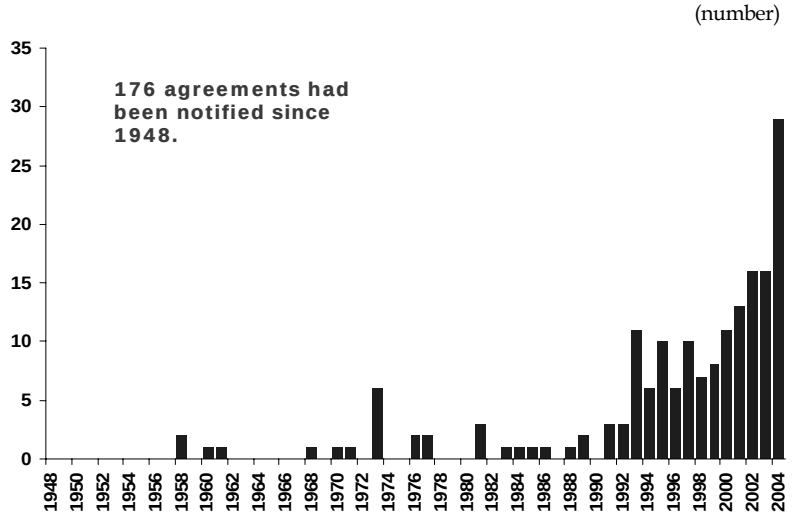


Source: Encuesta Nacional de Hogares 2004 IV.

More important, the preferential access schemes granted by the United States added to the unilateral liberalization that Peru underwent in the 90s, changed drastically the political economy of market reforms in Peru, and shifted the interest of vast segments of society, policy makers, and businessmen in favor of a deeper integration into the world economy. Further, the burgeoning exports embodied large domestic value added, and thus generated substantial additional employment. This phenomenon was magnified by the disenchantment with the Andean integration process, under the Andean Community of Nations (CAN), which for more than 30 years had unsuccessfully tried to construct a customs union (Chile, a founder member of the Andean Group, left in 1974 to pursue its individual liberalization process). Discussions for the design of a common external tariff had started in the 70s very much influenced by the idea of creating an expanded market, albeit relatively closed to third countries. The CAN trade scheme has finally resulted in a more or less ample free-trade zone, but with disparate tariff policies within each individual country, which in turn has introduced serious inequities in intra-Andean trade. Also, overall Andean trade has been relatively small, with the exception of trade between Colombia and Venezuela, a country that in the last months has left CAN and joined the southern cone's MERCOSUR.

Early during the current decade, it became apparent that the FTAA (Free Trade Area of the Americas) that had been promoted by the United States was not working, primarily because of Brazil, Argentina, and other countries that were refusing to enter negotiations in light of the United States' agricultural subsidies programs. For its part, the only Latin American country that had a permanent arrangement with the United States was Mexico, under NAFTA; while Chile had for almost ten years been trying to conclude an FTA with the United States. Peru had already concluded most of its industrial restructuring and was, like many other countries, weary of the slow progress of liberalization within the WTO. The added disillusionment with CAN's results, and the prospect of the APTDEA scheme expiring December 2006, left as the logical course of action for countries like Peru, Ecuador, and Colombia to seek an FTA with the United States. In fact, it has been the failure of the WTO in bringing about faster liberalization the cause behind the proliferation of regional integration agreements notified in the last two decades.

Figure 15. Regional Integration Agreements*, 1948-2004



* Include Free Trade Agreements (FTAs), Custom Unions (CUs),Common Markets and Economic Unions.

Source: WTO.

1.1. The Negotiation of the Peru-US FTA

The public announcement that Peru was officially pursuing an FTA with the United States brought all kinds of reactions within society, and while most of the attitudes towards the accord were of economic nature, there were also important considerations of political and ideological nature. For example, most of the intellectual left opposed the treaty on grounds that it would help to disintegrate Latin American unity in dealing with the United States. However, their arguments went far beyond; they actively campaigned against an FTA with unsubstantiated arguments that the deal would bring poverty and hardship to millions of Peruvian peasants, generic drugs would disappear from the domestic market, local industry would be wiped out, and that Peru's economy would be subjected to foreign interests.

Peru's agricultural sector had benefited enormously since the beginning of the 90s, through ATPA and ATPDEA. From that point on, a whole new array of products had been developed and exported to the American markets, as well as to other countries. These consisted primarily of fresh fruit and vegetable products, notably asparagus, where Peru became one of the most important suppliers worldwide. Other goods like avocados, artichokes, grapes, mangos, and paprika started to increase their production in a spectacular manner. Producers of these goods were campaigning actively for an accord that would be a successor to ATPDEA. Other

producers in agriculture, particularly those producing rice, cotton, maize, wheat, sugar, and potatoes, which typically in Peru belong to what could be called traditional agriculture, adamantly opposed the deal.

Some sectors of public opinion centered their opposition on issues of intellectual property rights, on worries about the supply of generic drugs and the assumed demands by the United States to extend the length of drug patents beyond the periods established by the WTO, through the use of the data protection mechanism.

The government worked to counteract this opposition by on the one hand offering to compensate those that would turn out to be hurt by the FTA, and on the other by commissioning various studies on the probable impact of the treaty on the Peruvian economy. The clear duality of the Peruvian economy worked against the Government's efforts. Peru has vast sectors and regions that either operate in the informal economy, or are relatively severed from modern parts of the country and receive very little assistance from the State in terms of active presence or the provision of public goods. In fact, this duality transpired clearly in the presidential elections of 2006, where the candidate that openly opposed the signing of an FTA carried the votes in those regions that did not benefit by exports in market access. In the end, Alan Garcia won the presidency, given the higher population density in the coastal regions.

Figure 16. Presidential Elections Results by Region

Source: ONPE.

Figure 17. Employment Impact of the ATPDEA by Region

Source: Abusada et. al (2004).

On the issue of intellectual property rights, the Government focused its attention in debunking several arguments regarding the presumed increase in health care costs put forth by the intellectual left and the domestic pharmaceutical industry that were clearly false, and also embarked in a campaign to explain the basic elements that were being negotiated within that chapter. Two studies[2] put out by independent institutes proved that the extra health costs to the consumer of singning the FTA would be less than 1% of total health expenditures, and that other aspects of the FTA such as the reduced protection to local industry and the elimination of the advantages that the local industry enjoyed when selling to the public sector, would probably outweigh any increase in costs to the consumer. Finally, since the discussion was only centered on the patents issue, one of the studies looked at the many other determinants of drug prices in local markets, such as the degree of penetration of generic drugs, the size of the market, quality controls, commercial practices, and the role of the State in providing information and transparency in the market, as well as the institution of sound public health policies.

Finally, several models were built in order to estimate the probable macroeconomic impact of the FTA. One of the a Dynamic General Equilibrium Model (DGSE) showed that in the first 5 years after the FTA was put in place, it would have the effect of raising the GDP growth rate by about 1% per year. The model included the fall in the Peruvian average tariff rate; the reduction in the average tariff rate faced by Peruvian exports; total factor productivity growth (larger exposure to technological progress elsewhere); increase in public expenditure (compensation to the agricultural sector, enforcement of intellectual property rights, buttressing the customs administration); and a one point increase in Value Added Tax to maintain fiscal equilibrium.

Table 4. Short and Long Run Effects of the FTA on the Economy[1]

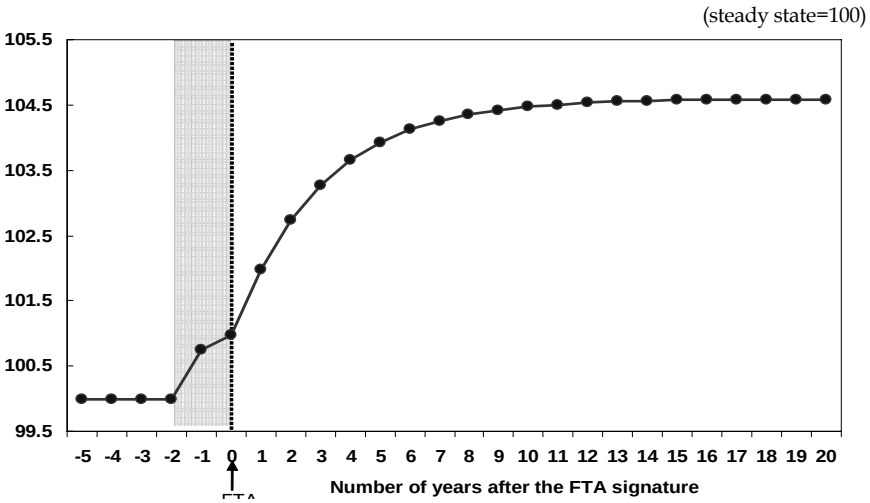
(% change over the steady state)

	Announcement	FTA takes effect	After 1 year	After 5 years	After 10 years	After 20 years
GDP	0.75	0.97	1.99	3.93	4.47	4.59
Consumption	3.34	3.43	4.01	5.11	5.41	5.47
Imports	13.93	29.49	24.59	11.64	7.79	6.97
Exports	13.66	22.6	19.99	12.88	10.77	10.32
Real exchange rate	-0.43	0	2.17	6.37	7.56	7.81

1/ Obtained by computing the steady states of the models with and without FTA.
Source: Morón, et. al (2005) .

2 Seinfeld, J. and K. La Serna (2005) and Apoyo (2005).

Figure 18. GDP Evolution with an FTA with the US



Source: Morón, et. al (2005).

Peru started negotiations towards an FTA in May 2004, along with Ecuador and Colombia. Internal political reasons and a move to nationalize an American petroleum company caused Ecuador to drop out of the negotiation process. There were 13 negotiation rounds. The FTA was modeled after those of NAFTA, CAFTA-DR, Chile, Singapore, and others. Peru considered the FTA as a successor to the ATPDEA arrangement due to expire December 2006. The FTA was signed on April12th 2006 and approved by the Peruvian Congress. Approval by the United States Congress is still pending.

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Appendix

Peru-US FTA negotiation
- Thirteen negotiation rounds, beginning date May 2004
- The FTA is modeled on NAFTA and CAFTA-DR, as well as that of Chile, Singapore and others.
- Peru considered the FTA as a successor of ATPDEA (expiration date December 2006)
- The FTA was signed on April 12th 2006
- Peru congressional approval completed
- US congress sanction pending

FTA Disciplines
- National Treatment and Market Access for Goods
- Textile and Apparel
- Rules of Origin Procedures
- Custom Administration and Trade Facilitation
- Sanitary and Phytosanitary Measures
- Technical Barriers to Trade
- Trade Remedies
- Government Procurement
- Investment
- Cross-Border Trade in Services
- Financial Services
- Competition Policy
- Telecommunications
- Electronic Commerce
- Intellectual Property Rights
- Labor
- Environment
- Transparency
- Administration of the Agreement and Trade Capacity Building
- Dispute Settlements
- Exceptions

Market Acess: Industrial Goods
- ATPDEA PLUS: Full zero tariff access to US market (20 tariff lines on shoes and tuna excluded)
- Peru liberalizes 77% of tariff lines
- Sensitive items have liberalization schedules over 7-10 years
- Used goods are excluded from the FTA
- Drawback and other export regimes are maintained

Agriculture
- Full ATPDEA consolidation
- Inclusion of agroindustrial goods
- Wider tariff preference for cotton fiber and pork preparations
- Larger Peruvian export sugar quota
- Peru will liberalize sensitive goods over periods ranging from 3 to 17 years
- Peru grants immediate access to US wheat
- Initially allows 500,000 MT of corn (12-year liberalization schedule)
- Rice: 17 year liberalization schedule (74,000 MT equivalent to 6% of domestic consumption is allowed at the outset)
- Pork: 5 years for meats, 7 years for pork preparations
- Mutton: 12 years
- Poultry: 17 years with 8-year grace period
- Cotton: free
- Sugar: Peru enlarges its export quota. US fructose and glucose 5 and 10 years

Textiles and Apparel
- Immediate liberalization of all textiles and apparel, including items not previously included in ATPDEA
- Safeguard measures can be established only during the first 5 years of the FTA
- Peru has obtained favorable conditions on rules of origin

Services
- Peru's ability to export professional services is enhanced
- Commitment on MFN, National Treatment, Transparency and Local Presence for the supplier
- Peru obtains a cultural reserve for the audiovisual industry, printing, visual arts, handicrafts and music
- Peru can establish TV time quotas for Peruvian film

Telecommunications
- The FTA conforms with Peru's legislation favoring competition in fixed telephony
- The dominant telecom provider is subject to the obligation of resale of services, leasing of infrastructure, and number portability for other operators
- Some exceptions are applied for rural telecommunications

Investment
- The FTA conforms to existing Peruvian legislation promoting foreign investment

- Includes mechanisms for transparent solutions of disputes between investor and government
- Excludes performance criteria limiting investment
- Non-discriminatory measures for the protection of the environment and the public well-being can be established

Government Procurement
- Peru gains access to US federal government procurement
- Transparency, non-discrimination, and due process measures are adopted
- Peru can establish rules to favor Small and Medium-sized firms
- Magnitude thresholds are applied for the central-federal level, public enterprises and construction
- Exceptions are made on purchases of clothing and shoes for the armed forces and the police

Intellectual Property Rights
- Rules to guarantee access to generic drugs are established
- Peru can invoke exceptions and limitations to TRIPS on patents and data protection
- Peru agreed to test data protection
- The US recognizes the importance of Peru's biodiversity and traditional culture, and its potential contribution to the economic and social development of Peru

CHAPTER 3-1

DR-CAFTA's Main Goals and Structural Changes; The Case of the Dominican Republic

By
Esther L. Aristy

The ratification and entry into force of the Free Trade Agreement among the Dominican Republic, Central America and the United States *(DR-CAFTA)* have aroused different reactions within the Dominican community. This treaty of historical dimensions implies a radical change in the Dominican Republic's relationship with its primary commercial partner in the world.

There are many perspectives from which one can exam this commercial process. However, the objective of this paper is not about making judgments on a fact that our generation must face. It is about becoming conscious of (i) the circumstances that contributed to the negotiation of this free trade agreement (FTA), (ii) the main goals or gains that it pursues and (iii) the structural changes that the Dominicans need to achieve these goals and to benefit from DR-CAFTA.

1. DR-CAFTA Historical Background

In order to fully understand the implications of this FTA, it is necessary to go back to the Great Depression in the 1930s. It was indeed, between 1929 and 1933 that there was a world economic contraction that reduced international trade by 25% (1).

Once World War II ended, the western hemisphere countries set the basis of a new monetary system and opened their economies to commerce. The 1944 Bretton Woods Conference launched the World Bank and the International Monetary Fund. In 1945, the United Nations was created under the leadership of the United States which emerged as the primary democratic power of the western hemisphere, once it was ended the Europe's dominion (2).

Two years later the General Agreement on Tariffs and Trade (GATT) was signed with the objective of promoting international trade through gradual liberalization of tariffs. Under GATT all countries assumed a common agreement according to which if one country gave another special or preferential treatment, it had the obligation to extend the same to the other members of the GATT (Principle of the Most Favored Nation or MFN).

However, this principle of the MFN allows exceptions. Thus, there were integrated into the GATT, first, the Habilitation Clause or Non-Mutual Preferential Treatment Clause for the third world countries (Tokyo Round of 1979), legal basis of the Generalized System of Preferences (GSP), and, second, the Exemptions or Non Generalized Preferences (Uruguay Round of 1994) that were the basis of programs such as the Caribbean Basin Initiate (CBI) and the Caribbean Basin Trade Partnership Act (CBTPA) (3). For many years, these MFN exceptions were the core of the international trade policies between developed countries and less developed nations.

With regard to trade among developed economies, the Reagan Administration defended free trade but demanded Reciprocal Preferences, another exception of the MFN. The objective of the United States was to obligate other developed countries to reduce their barriers to the United States exports and to reduce subsidies that they granted to their exporters. If any country did not satisfy these two conditions, the United States imposed special restrictions and/or tariffs to the exports originated in those countries (4).

This scheme of preferential reciprocity penetrated developed countries' trade policies toward the less developed countries. In this context, the United States, Canada and Mexico signed the North American Free Trade Agreement (NAFTA). Several years later, and in response to the negotiation proposals coming from the Central American countries, President George W. Bush expressed in his state of the nation speech of January 2002 that the negotiation of the free trade agreement with Central America constituted a priority of his administration's foreign policy.

By then, the Free Zones in the Dominican Republic had developed with the combined application of Dominican Law No. 8-90 and the preferential programs granted by the United States. Having learned about the United Stated negotiations with Central America, the Dominican free zone enterprises understood the threat that said negotiations represented for the access of its products to the American market, the destination of more than 90% of their exports (5).

The concern reached the Dominican government. The magnitude of the potential consequences was obvious given the Dominican Republic's dependence on the United States economy, in terms of commercial exchange as well as foreign investment given that in 2003 the United States consumed 87% of total Dominican exports (6), supplied 34% of imported goods (7) and represented close to 32% of foreign investments in the Dominican Republic (8). The government was then determined to negotiate a trade agreement

with the United States. At first, Central America and the United States were not interested in altering the on going process, until August 2003, when the US Trade Representative, Robert Zoellick, addressed a letter to the United States Congress expressing the intention of the Bush Administration to include the Dominican Republic into the CAFTA. An agenda of three working months (9) was established. The process concluded with the subscription of the DR-CAFTA on the 5th of August, 2004 and its ratification by the Dominican National Congress by the Resolution No. 357-05 promulgated the 9th of November of 2005.

2. DR-CAFTA'S Main Goals

Even though DR-CAFTA was not negotiated under favorable circumstances for the Dominican Republic, the results obtained by the DR were similar to that of the Central American countries. With regard to the pursued goals, some are of a strictly economic nature and they are expected to have an impact on the commercial exchange with the United States (a), while others are of an institutional character and their impact will transcend the commercial objective of this agreement.

(1) Economic Objectives

DR-CAFTA is aimed to create opportunities that could be of advantage to the export sector, as well as opportunities for consumption, that could be of advantage for the import sector.

One of the most important **export related objectives** is the permanent character of the preferential treatment of exports obtained in this FTA. Different from the previous US programs that have permitted the growth of Dominican exports in the last decades, the DR-CAFTA will not be subject to annual review. The agreement guarantees long term access to the largest market in the world, with a current population in excess of 300 million (10).

In addition, DR-CAFTA covers a greater variety of goods and services other than those included in previous preferential programs. The United States opened 99.6% of its market, protecting only 17 shoe lines and 5 lines of vegetables, dairy products and similar goods. It eliminated restrictions of the Buy American Act and thereby opened the contracts of the federal and 24 state governments (11).

To this we must add that the rules of origin applicable to products that contain components originated in countries other than the signatories are more flexible under DR-CAFTA than in the preceding preferential programs. This will facilitate the use of raw materials from other countries in the development of products destined to the US market.

The opportunity of rendering cross border services is opened. The Dominican Republic seems especially well suited for Business Process

Outsourcing (BPO's), particularly loan, accounting and finance processing services to the United States (12) and marketing studies and call centers to Central America (13).

With regard to **objectives related to imports**, the DR-CAFTA presents the opportunity of free import of raw materials and technology originated in the signatory countries. This benefit could have a positive impact not only in the import sector but also in the export sector and producers in general which will enjoy a reduction in costs of production.

More importantly, DR-CAFTA represents imports free of tariffs for over 4,000 products (14). The elimination of the tariffs, the 13% foreign exchange surcharge and the consular invoice, represent a significant reduction in the cost of imported products, which will benefit final consumers.

However, there are agricultural and industrial products –such as rice, beans, garlic, onion and certain plastic products- whose tariffs will be reduced in the medium or long term because the country opted to protect them from imports by establishing countervailing measures and special safeguards. These are products considered socially and economically sensitive.

The projected effects of these provisions has been estimated in recent research to increase Dominican industrial exports in 249 million US dollars per year including 189 millions of new trade and 59 millions of products previously exported by other countries.

With respect to imports, the research indicates that the potential increase is 349 million US dollars the first year and up to 418 million US dollars each year after that. The largest impact is expected in the import of vehicle, furniture, electrical or mechanical appliances and intermediate goods (15).

For the agricultural sector, the expectations are different. In the short term, Dominican exports are not expected to increase significantly because at present already 84% of exports enjoy preferential treatment under the CBI initiative and 14% have free access to the US market. With regard to the agricultural imports, no major impact is projected to occur in the short tem due to the protection given to the main agricultural products of the Dominican Republic. In the medium and long terms, DR-CAFTA could increase exports of non traditional agricultural products –tomatoes, mango, avocado, banana- in which the DR has strong comparative advantages (16).

(2) Institutional Objectives

In addition to the economic goals pursued, the DR-CAFTA is aimed to increase the level of rule of law and institutionalism in the country. Should they be taken advantage of, the results would go beyond the treaty scope in time and space. From an institutional point of view, the DR-CAFTA seeks to **consolidate previous legal structural reforms**. It provides for the opening of competitive markets in the energy, telecommunications and financial services. It also stipulates rights of foreign investors including national

treatment, the principle of Most Favored Nation, protection of the intention of investment and the use of related arbitration for conflict resolutions between the State and a foreign investor. Regarding intellectual property, the agreement improves the protection of such rights and strengthens the procedures to enforce intellectual property rights.

DR-CAFTA also **promotes administrative modernization and reforms** through the creation of agencies and the establishment of procedures to guarantee the fair implementation of the agreement, foresees the use of modern technologies and requires the modernization of Customs based on simplicity, agility, automation, communication with the Customs departments of other DR-CAFTA countries and a control system based on the analysis of risks. DR-CAFTA includes agreements of cooperation to raise the standards and the compliance with Customs, environmental and labor regulations. It also creates mechanisms to help the Dominican Republic overcome sanitary and phitosanitary barriers that regulate the entry of products into the United States and, in general, foresees cooperation to develop the trade capacity of the Dominican Republic, including human as well as institutional resources. Finally, the agreement establishes mechanisms that seek to increase the transparency level of the government and business. The Dominican Republic assumed the obligation to open bidding for government contracts. The publicity of regulations related to trade matters is mandatory and the establishment of governmental fees is permitted only when they do not exceed the cost of the service object of the fees. Moreover, the removal of tariffs for imports, the simplification of administrative processes, the automation of services and the establishment of sanctions will facilitate transparency and the elimination of corruption.

With the objective of **improving the level of compliance with the law**, DR-CAFTA creates courts that will have the power to review administrative actions related to the agreement and supranational committees that will supervise compliance with said agreement. DR-CAFTA provides that each country may take action against any other State part of the FTA, before the WTO or before a designated DR-CAFTA arbitration group after submitting a request to the Commission of Free Trade created under article 19.1.

Thus, each country is accountable not only before the national community but also before the regional and the international communities.

DR-CAFTA constitutes without a doubt a legal instrument that already pressures the Dominican Republic to increase transparency. This process, though a sacrifice for all, can assist all to make significant progress on the path toward development. It has also the virtue of placing the country in a more dignified position with the right to claim equal compliance with other countries since the FTA is based on reciprocity. It is worth mentioning that this position was not the one the Dominican Republic had under the previous unilateral preferential schemes.

It seems that these goals pursued by DR-CAFTA are as far reaching as challenging will be the efforts to achieve them.

3. Structural Changes Required to Benefit from DR-CAFTA

DR-CAFTA is just a legal framework. Its results will depend on variables related to economic, social and political structures. Thus, in order for a signatory country to be successful in achieving DR-CAFTA goals, structural changes must be implemented. In the case of the Dominican Republic, these changes include the strengthening of institutions, the undertaking of a business deregulation process, the development of the national infrastructure and a profound transformation of the Dominican educational system.

(1) Institutional Level

There is no doubt that private companies can only operate efficiently in countries with effective, legitimate and trustworthy governments (17). Within a democratic, free trade system, it is always necessary that the executive, judicial and legislative powers are able to comply with the laws and the ethical practices.

Competitiveness can only be achieved in a market ruled by clear and fair laws and with easy access to the local and international provisions regulating trade.

Even though DR-CAFTA provides mechanisms to improve the level of the rule of law, research indicates that international trade could have no direct effect over the public institutions (18). Thus, only we Dominicans can make this to happen.

An important step is to develop a dynamic, long term national planning process. In terms of DR-CAFTA, the Dominican Republic should research and profoundly investigate the agreement implications, the current national and global contexts, DR-CAFTA markets and the strengths and weaknesses of the Dominican Republic. The Dominican Republic must define and execute a national agenda for regional and eventual global integration under DR-CAFTA. This agenda should include actions to comply with and to benefit from DR-CAFTA.

Another process that seems on going is the development of a system of protection for national consumers and producers.

In a free market, it is important to protect all consumers' rights so that the openness of the market can bring a higher quality of life. In general, there must be a system that protects consumers by ensuring them that the products and services they buy are of satisfactory quality, they are as described by the supplier and they are fit for their intended purpose. If these conditions are not guaranteed by suppliers, the system must provide for administrative and judicial claims against the suppliers. Sanctions must be established as well as the appropriate institutional framework. The

Dominican government and civil society already promoted a modern legal framework that became the Law No. 358-05 or General Law of Protection of Consumers or User's Rights. The implementation of said law should be considered as a priority national task.

In addition to creating the mechanisms to protect consumers' rights, the Dominican Republic needs to develop an effective commercial defense system that can protect national producers from illegal practices as well as from subsidies on imported products. Those are practices that distort the market and damage national production in violation of the norms of the World Trade Organization (WTO). Thus, an important priority in the Dominican case is a consistent implementation of the legal framework urged already by the Dominican state and that became the Law No. 1-02 on Disloyal Trade Practices and Safeguard Measures. The Bill on Competitiveness already submitted by the Dominican government to the National Congress complements the legal framework required for a true open economy.

While these ideas are in progress, several Dominican agencies have been empowered and are already working in order to comply with the obligations assumed under DR-CAFTA. The Secretary of State for Industry and Commerce is the governmental organization in charge of administrating the trade agreements through its International Trade Department known as DICOEX. The ONAPI (National Office of Industrial Property), the ONDA (National Office of Copyrights) and the DIGENOR (Quality Norm General Directorate), are also departments at the Secretary of State for Industry and Commerce that are undergoing changes as part of the DR-CAFTA compliance and implementation processes. The Customs Department -after becoming an autonomous agency- is transforming its organizational structure, staff and administrative procedures. The Secretaries of State for Agriculture as well as Public Health are very actively involved in the compliance with DR-CAFTA. Likewise, the Indotel (Dominican Institute for Telecommunications) is also implementing some changes required by DR-CAFTA. Moreover, the Dominican Executive Office has granted power to the governmental organizations whose work allows the Dominican Republic to increase its level of competitiveness and to take advantage of the agreement opportunities. Among these organizations are the CNC (National Competitiveness Council), the CEI-RD (Export and Investment Center of the DR), the ONAPLAN (National Office for Planning), and the INAP (National Institute of Public Administration).

These institutions together with the private sector and civil society are working on the reforms required or simply u

In addition to the work been done by these governmental organizations, there are several private institutions playing a significant role. The American Chamber of Commerce (AMCHAM) should be recognized as a mayor contributor to the DR-CAFTA readiness of the Dominican Republic. All sectors together shall take further steps to introduce additional required

structural changes in the Dominican Republic.

(2) Deregulations

The Dominican Republic requires the revision of the norms that regulate businesses in the country. The Dominican Republic inherited a system of over regulation that negatively affects business operations. In the "Doing Business 2007" of the World Bank about the business environment, that incorporates the rules and policies that stimulate or discourage investment, productivity and growth, the Dominican Republic was 117 out of 175 countries with number being 1 the best location to do business (19).

Deregulation looks to reduce the business barriers, eliminating the provisions that are not necessary to protect the consumers or users and modifying those that are required to be more flexible. This process allows optimization of business environment and puts the Dominican Republic in position to attract more local and foreign investments. Thus, while increasing the export culture of the national business community, the Dominican Republic can also increase foreign investment from other countries with accumulation of capital and export tradition.

(3) Infrastructure

The development of infrastructure has an important impact in the way businesses operate in a country. The Dominican Republic must continue to improve its finance, transportation, customs, water and health systems. It is important to extend the universality of environment protection and national security.

The Dominican Republic must promote the functioning of the commissions and agencies created in DR-CAFTA and use all the cooperation programs available for the development of infrastructure within and outside this free trade agreement.

The biggest of the challenges in terms of infrastructure, however, is the supply of electric power. The current deficiency of energy is attributed to the high cost of power generation and a collection capacity estimated at 50%. This statistic has given the Dominican Republic the 4th place on the list of energy robbery worldwide, only being exceeded by Congo, Haiti and Moldova (20). At the moment there is no clear solution.

(4) Education for International Trade

There is a discussion at the public opinion level, of the need to reform the educational system in the Dominican Republic. There is a consensus that for the country to achieve regional integration, Dominicans need to develop human resources suitable for foreign trade.

A past study with Dominican companies indicates that "the education – meaning the educational system- is the biggest obstacle for the competitiveness" (21). Moreover, Dominican companies' leaders stated that "the problems of education are more related to the quality of the curricula than with the range of taught knowledge"… Companies have expressed that they are not satisfied with the fact that superior education is "full of theories" and lacks useful knowledge for work (22).

With regard to educational systems, Dietrich Schwanitz argues that education systems are in crisis and the primary reason is the obscurity of the objectives of teaching, so that it is difficult to distinguish between "the essential and the interchangeable, the central and the marginal, the obligatory and the free, the core courses versus the optional courses…" (23).

The reform of the educational system constitutes a significant challenge. To overcome this challenge requires a profound and dynamic transformation, new educational paradigms, and a great deal of work, creativity and ingenuity. Probably the system should dedicate significantly less time to the accumulation of data and more time to the development of abilities, values and knowledge adapted to the present and current markets. The Dominican Republic curricula should include:

- Fully bilingual programs,
- Laboratories for knowledge and technological practices,
- Consciousness of the environmental protection,
- Emotional and moral education, which are always important, but a sine qua non condition to effectively work with people from other cultures and/or living in other countries,
- Promotion and development of the "Intrapreneur" profile, in addition to the Entrepreneur, that is, an entrepreneur within the organization where he/she works, innovative, curious, imaginative, creative, pro-active, having a global vision, goals, capacity to adapt to circumstances, to solve problems and to be part of a team,
- Formation of a new generation of managers for the private and public sectors, engineers, technicians, professionals and specialists of the areas of knowledge that the international market requires to develop, and
- Promotion of the educational use of media and forums other than the classroom, such as companies, non profit organizations, radio, television, musical groups, written press, cinema, internet.

With regard to educational reform, both the Dominican Secretaries of State for Education as well as for Superior Education, Science and Technology have started to promote the use of technology in schools and universities. Furthermore, this system has just initiated important cooperation agreements with Korea, well known worldwide for its successful reforms in education. Work is being performed with the Korean Ministry of Education & Human Resources Development as well as with the Korean Education and Research Information Services. The purposes served

by these agreements are the training of teachers and professors as well as the implementation of the e-learning plan designed by the Dominican Republic.

A pilot ESL – English as a second language- program has been initiated in 2005 with 4,000 students.

Moreover, the Call Contact Center BPO Academy at the CyberPark in Santo Domingo offers programs in which students are taught English as well as trained at a technical level for the sector served by the Academy. Similar courses are offered at the ITLA (Technology Institute of Las Americas), the educational component of the CyberPark, where technology as well as language programs are part of the institutional objectives. Even more relevant, the CyberPark is playing a key role as the first technology incubator of the country from which the government supports innovation and facilitates the private sector's exports of technology products and services (24).

This innovative system is complemented, first, by a modern infrastructure of information and telecommunications that involves private and public institutions lead by the INDOTEL -Dominican Institute of Telecommunications- and, second, by the fostering of clusters, that is, groups of companies that compete or are interrelated but by cooperating in common challenges are able to develop competitive advantages in the international market. The CNC –National Competitive Council- is implementing an intensive program to form and support clusters as one of the most effective mechanisms to increase the competitiveness of big, medium and small enterprises. The best example is the Cluster of Technology Services of Santo Domingo –CluSTec-SD-, a single trade point that includes the leadings IT firms of the Dominican Republic committed to provide the best outsourcing solutions from the Enterprise to small and medium, sized businesses.

Thus the education program above described, together with a sound national innovation system, an infrastructure of information and communication technology, a network of clusters and support to the medium and small companies being developed, once complemented by an effective government, are the key elements in guaranteeing a competitive knowledge economy able to succeed in a global world (25).

4. Conclusions

The Dominican Republic, according to legal processes provided by the Constitution and the laws, subscribed, ratified and promulgated DR-CAFTA.

Without being a panacea per se, DR-CAFTA is an instrument of international trade legislation that offers many opportunities in the fields of consumption, export, foreign investment and even the implementation level of the rule of law and institutionalism.

In order to take advantage of these opportunities, the Dominican Republic must overcome great challenges, managing high levels of information, a dynamic planning process and a good quantity of intense work.

The education system demands profound reforms in terms of formats and programs. Other issues, such as institutional weaknesses, the over regulation of private business, and the deficiencies of infrastructure, also require special attention. Energy can be expected to continue being one of the biggest challenges.

Neither our counterparts in the DR-CAFTA nor our competitors around the world have the power to defeat us. "Only we can defeat ourselves" (26).

DR-CAFTA is a great opportunity that history presents to this generation of Dominicans to execute the structural changes required to propel the Dominican Republic toward development.

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CHAPTER 3-2

The US-Singapore FTA and its Economic Implications: Lessons for Korea

by
Rahul Sen

Abstract

The US-Singapore FTA (USSFTA), one of the most important bilateral strategic and economic trade pact for Singapore was implemented in 2004. This agreement, termed as a "gold standard" FTA, was by far the most comprehensive FTA ever signed or implemented by Singapore, involving legal provisions that entrenched domestic reforms and regulation aspects far greater than any other FTA in Asia. The agreement also reflected a far greater degree of private sector involvement than most FTAs being negotiated in Asia. The USSFTA thus holds important lessons for other Asian countries that are contemplating to negotiate similar agreements with the U.S, which include Thailand, Malaysia, and Korea. It is in the above context that this paper attempts to analyze Singapore's experience with the USSFTA, and explores possible lessons for Korea, while negotiating a Korea-U.S FTA.

1. Introduction

Singapore has been a leading advocate of global trade liberalization via the World Trade Organization (WTO). However the multilateral route to trade liberalization has been disappointingly slow, and negotiations have been rather protracted and cumbersome. In addition, in the aftermath of the East Asian crisis of 1997-98 and its adverse impact on trade and liberalization efforts within ASEAN and the APEC, the pace of and willingness to undertake trade and investment liberalization of Singapore's neighbours in the ASEAN countries appeared to be slowed down. This has led Singapore to explore the route of bilateralism to advancing its own commercial interests as well as promoting freer trade in Southeast Asia. It is in this context that Singapore has been engaged in negotiating bilateral Free Trade Agreements (FTAs) with its major trading partners.

FTAs, by definition, allow member countries to pursue discriminatory policies vis-à-vis non-members, and have often been viewed as being a stumbling block for multilateral liberalization that involves many countries, which are not a signatory to such an agreement. It is often argued that a spate of bilateral FTAs could lead to a spaghetti-bowl kind of a situation that entails high administrative and compliance costs (Bhagwati, 1995). However, on the other side, FTAs have also been viewed as a building block for multilateral trade and investment liberalization. This is especially so wherein FTAs could be used as an instrument to provide a positive momentum towards trade and investment liberalization, failing which there might be a lapse into protectionism, i.e. the so-called "bicycle theory" (Bergsten, 1998). FTAs, in which members agree to move beyond their WTO commitments, could provide a demonstration effect that motivates future rounds of broader multilateral negotiations under the auspices of the WTO. Such FTAs could act as a "testing ground or pilot project for exploring complex trade issues" and establish some sort of precedent or benchmark for trade negotiations involving a larger number of countries, including one at the multilateral level. WTO-Plus is an important characteristic of FTAs that have been signed involving Singapore[1].

Singapore has already established a bilateral FTA with New Zealand, Japan, and Australia, US, the European Free Trade Association (EFTA) consisting of Switzerland, Norway, Liechtenstein and Iceland, The Hashemite Kingdom of Jordan, India and Korea, among others[2]. It continues to negotiate FTAs with other countries worldwide. However, among all its existing and ongoing FTAs, the US-Singapore FTA (USSFTA) signed on

1 See Sen (2004).
2 It has also recently concluded a plurilateral agreement called the Trans-Pacific Strategic Economic Partnership involving New Zealand, Chile and Brunei.

May 6, 2003 was of major significance, both in economic as well as strategic terms. This was due to the fact that the USSFTA was the first such agreement that the US had entered into with any Asian country. Further, the USSFTA is much more comprehensive than most of the existing FTAs, since it includes newer and complex areas of trade negotiations including protection of intellectual property, and the inclusion of e-commerce and ICT services. With other ASEAN countries, Thailand and Malaysia beginning to bilaterally negotiate FTAs with the US, the USSFTA has set an early precedent in standards of economic and strategic engagement between the US and ASEAN[3].

This paper attempts to analyze Singapore's experience with the USSFTA, and explores possible lessons for Korea, while negotiating a Korea-U.S FTA. The remainder of this paper is organized as follows. Section 2 provides a snapshot of the USSFTA and some of the saline features involving its negotiations. Section 3 analyzes the possible implications of the USSFTA to Singapore. Section 4 provides possible lessons for Korea while negotiating an FTA with the U.S, while Section 5 concludes the paper.

2. A Snapshot of the USSFTA

The USSFTA has a wide scope of coverage from trade in goods, rules of origin (ROOs), cross-border trade in services, temporary entry of skilled manpower, telecommunications, e-commerce, to customs administration, and technical barriers to trade and investment, competition policy, government procurement, intellectual property protection (IPP), general provisions, labour standards, environment, and dispute settlement.[4] In many ways, both countries have gone way above their WTO commitments to model a FTA that could be labeled as being WTO-Plus in many respects.

The USSFTA negotiations demonstrated some important characteristics of the FTA that differentiated it from the ongoing and proposed FTA negotiations in Asia, involving Singapore and other members in the ten-member Association of Southeast Asian Nations (ASEAN) grouping. These characteristics provide insights into the conduct of U.S Trade Policy and its perceptions of FTAs as not just a tool of trade policy, but also that of foreign policy.

First, consisting of over 21 Chapters, the USSFTA is thus by far the most comprehensive FTA ever signed or implemented by any country in Asia. The agreement not only does cover a wide range of economic activity beyond trade in goods, but also has successfully negotiated strong commitments in areas of intellectual property protection and the three Singapore issues (trade facilitation, government procurement and

3 It has often being labeled as "Gold Standard" agreement by the leaders of the two countries.
4 See Annex 1 for Salient Features of the USSFTA.

competition policy), far beyond what has been agreed at the WTO. In this sense, the USSFTA has set a precedent in Asia for negotiating such issues bilaterally, outside the purview of the WTO.

Second, an important objective of USSFTA has been to advance the intere sts of U.S. business and industry in Singapore. Therefore the USSFTA negotiations saw a far greater degree of private sector involvement (especially from the U.S Business Community) than most FTAs being negotiated in Asia. This was evident in the interests of a single chewing gum company in U.S, viz. Wrigley's in the USSFTA to include a clause to let Singapore allow restricted imports of chewing gum for therapeutic purposes.[5] This is in contrast with many Asian countries whose FTA negotiations very rarely involve the business community, thereby making them skeptical of the potential benefits from FTAs.

Third, the USSFTA, through a number of legislative amendments, has locked in policy reforms and therefore committed Singapore to amend its practices and laws in accordance with U.S practices, especially in areas such as intellectual property and transparency. The USSFTA has involved legal provisions that have entrenched domestic reforms and regulation aspects far greater than any other FTA in Asia. The agreement stresses on enhanced regulatory transparency provisions in areas ranging from services trade and investments to government procurement, customs administration and dispute settlement.

Fourth, the USSFTA has not made any specific exceptions for negotiating with Singapore, compared to U.S's earlier FTAs, indicating that consistency is a key in its approach to negotiations. This was evident in the USSFTA negotiations on free flow of capital, which has been a feature with all FTAs involving the U.S so far, reflecting the genuine commercial interests of U.S companies, financial institutions and individual investors, all of whom have significant stock of investments overseas. Singapore insisted that being a small-open economy, it should have certain exceptions and exercise its right to imposition of controls in the event of balance of payments difficulties. The deadlock over this was finally broken with the free transfer clause being included (U.S position), but with reduced and liability for Singapore in being subject to claim for damages in the event that it does impose capital controls on short-term flow of capital.[6]

Fifth, liberalization provisions in the USSFTA especially in the services sector will require domestic companies in these areas to eventually compete with U.S companies. This implies Singapore companies would need to undertake restructuring in order to effectively compete with not just U.S companies, but also those from other FTA partners of Singapore, in the near future.

5 See Koh and Chang (2004).
6 See Menon (2004).

3. Implications for the Singapore Economy

The USSFTA confers a range of benefits for a high-income developing city-state economy of Singapore, not just in terms of reduced tariffs on its goods, but also in terms of increased access of Singapore's capital, manpower and s ervice providers to the U.S market, with a greater degree of predictability an d transparency. The USSFTA not only provides cost savings to Singapore bu sinesses from tariff reduction, but also provides them with equal treatment a s a U.S investor with respect to investments and services provision. It also pr ovides the right to a Singapore investor to take the U.S. government to an int ernational arbitration tribunal if it feels that the U.S. has acted in breach of it s obligations under the FTA. Strengthening its IPR provisions, Singapore als o ensures that it stays ahead of the curve in attracting knowledge-intensive i nvestments in Southeast Asia.

However, notwithstanding the above benefits, the USSFTA would require significant adjustments for the Singapore economy. As noted, the agreement requires Singapore to amend its practices and laws in a number of areas that include a) Amending its customs duties to reflect the preferential treatment to the U.S, subject to product-specific RoOs in many cases; b) Regulating manufacture and export of textile and apparel destined for U.S and share information on trade circumvention; c) Amending of laws and regulations related to sale and import of chewing gum; d) Amending government procurement act to procure goods and services in a manner that doesn't disadvantage U.S companies; e) Establishing a generic competition law ; f) Acceding to international conventions on protection of intellectual property within one year of coming into force of USSFTA.

The above implies that the USSFTA, while being beneficial in terms of deepening economic and strategic linkages between the two countries, has involved adjustment costs to the economy to be in a position to enforce the FTA effectively and gain from it. Singapore policymakers believe that the benefits far outweigh the adjustment costs, and that the USSFTA will help improve Singapore's competitiveness in the global market (Koh and Chang, 2004).

Since the enforcement of the USSFTA in 2004, there has been no discernible upward trend in bilateral merchandise trade between Singapore and the U.S that can be attributed to the FTA. It is observed in Figure 1 that over 1999-2005, bilateral merchandise trade between the two countries increased by S$ 9 billion, from S$ 69 billion in 1999 to S$ 78 billion in 2005, with imports increasing by S $ 6 billion (from S $ 32.0 billion to S $ 38.8 billion over 1999-2005).[7] However, in terms of trade shares (Figure 2), there

7 The growth rate of Singapore's Imports from the U.S over the 2004-05 period when the FTA came into force was 12.2%, higher than most of the previous year import growth rates.

was a decline in U.S's share in Singapore's total merchandise trade, including over the period 2004-05 when the USSFTA came into force. The decline was observed over the period 1999-2005 for both Singapore's merchandise exports to and imports from the U.S, with a concomitant and continued decline in share of Singapore's domestic exports to U.S as a share of total exports destined for the U.S over the period 2002-05, indicating the increased share of re-exports or exports of other Asian countries in the region that are transshipped through Singapore to U.S. This holds important implications for a regional entrepot economy like Singapore, wherein the FTA is expected to expand Singapore's domestic exports to the U.S, by providing them preferential tariff treatment.[8.]

Further, Figure 3 also indicates that over 1999-2004 (that includes the period when the USSFTA was being negotiated and therefore generated business expectations), there was no discernible trend in increase in share of U.S in both Singapore's inward and outward direct investment stock, indicating that the USSFTA probably did not have nay significant impact in generating bilateral investment flows between the two countries, at least prior to the entry of force of the USSFTA.

Taking into account the fact that it has been only 2 years since the USSFTA has come into force, its probably too early to predict the future trends of bilateral trade and investment flows between the two countries, based on the above trends. This is mainly because liberalization provisions for many goods and services in the USSFTA are phased over a much longer time period. It may thus be appropriate to argue that the full impact of the USSFTA on the Singapore economy is likely to be observed after a period of at least 4-5 years after coming into force of the agreement, and the above post-FTA trends may be a reflection of the ongoing adjustments in the Singapore economy to prepare its businesses for a complete impact of the USSFTA.

4. Lessons for Korea

In the context of the above experience of Singapore, what may be the lessons for a high-income developed economy viz. Korea in negotiating a possible Korea-U.S FTA? While it is too early to assess the post-FTA trends in USSFTA, and therefore base future expectations on the same, the nature of USSFTA negotiations, and its characteristics as identified earlier, as well as the likely adjustment costs to Singapore, provide the following lessons for Korea:

a) The agenda of negotiations in a possible Korea-U.S FTA is unlikely to be

8 See Sen (2000) for analysis of trade data of entrepot economies viz. Singapore and its implications.

any different from that of the USSFTA, covering a comprehensive agenda covering trade in goods and trade facilitation, cross-border trade in services, temporary entry of skilled manpower, technical barriers to trade and investment, government procurement, intellectual property protection (IPP), labour standards, environment, and dispute settlement, besides other general provisions. This implies that compared to past FTAs, the Korea-U.S FTA will be the most comprehensive agreement ever entered into by Korea outside the purview of the WTO.

b) As in case of all FTAs involving the U.S, there is likely to be a significant emphasis in a Korea-U.S FTA on enhanced regulatory and transparency provisions in several areas as in the USSFTA that would require Korea to change its laws and regulations to be in alliance with U.S practices.

c) An FTA with the U.S would almost certainly involve legal provisions that will entrench domestic reforms and regulation in the Korean economy far deeper than any of Korea's previous FTAs. This implies that policymakers in Korea would have to be prepared to undertake legally binding reforms in a range of areas from services trade liberalization to provide national treatment to U.S investors and service providers, to that of greater transparency and liberalization in government procurement procedures, aligning its IPR regime with U.S standards, and in establishing a generic competition law that does not discriminate against U.S businesses. It would also possibly have to negotiate the possibility of allowing free flow of capital between Korea and the U.S. These would impose significant adjustment costs for policymakers, and also on domestic businesses, who on one hand, would have to compete with U.S companies in a more predictable business environment, while on the other hand, would gain from being provided preferential treatment for exporting their goods, providing their services and investing in the U.S.

d) One of the areas in which negotiations with U.S is likely to be tough for Korea compared to that of Singapore would be that of agriculture sector, and agreeing to preferential tariff treatment therein. Since agriculture constitutes a negligible share of economic activity in Singapore, it has been relatively easier for any prospective FTA partner to negotiate with the city-state, including Korea that recently concluded a bilateral FTA with the same. However, for an economy like Korea wherein substantial share of GDP accrues to agriculture sector, liberalizing this sector would be quite sensitive since it would require policymakers to balance between domestic policies and external imperatives.

e) As in case of other FTAs involving the U.S, a Korea-U.S FTA is also likely to involve a high degree of involvement of the U.S business community in the negotiations, in order to ensure that their interests are taken care of. This implies that Korean business community would also need to involve themselves actively in the negotiations, in order to ensure that

their business interests in the U.S are negotiated to their satisfaction. The KORUS FTA Industry Alliance should therefore play a proactive role in the FTA negotiations to secure their business interests in the U.S.

f) While the experience of Mexico in the North American Free Trade Agreement (NAFTA) provides important lessons to be drawn in the context of negotiating an FTA with U.S, it is also important to note that while Mexico's trade and investment flows are highly dependent on the U.S (more than 50%), Korea is comparatively much less dependent on the U.S for its trade and investment flows. Therefore, the risk and magnitude of possible trade diversion is higher in a Korea-U.S FTA compared to that of Mexico in NAFTA. Further, being a cross-regional FTA, Korea would also need to analyze the impact of such an FTA on its regional trading partners in East and Southeast Asia, with whom it is also currently negotiating an FTA towards the goal of Asian Economic Integration.

g) While a Korea-U.S FTA would certainly be beneficial in economic and strategic terns, deepening business ties between the two countries, it would also involve adjustment costs on various economic agents and interest groups in the economy. Korea would therefore effectively gain from an FTA with the U.S only if it is able to generate enough benefits for its economy that can outweigh the adjustment costs as outlined earlier. While reforms entrenched through an FTA with U.S would be helpful in improving its global competitiveness, it will have to balance the interests of all sections of the society in undertaking those reforms that it commits legally through the FTA.

5. Concluding Remarks

It is evident from the above analysis that while an FTA with U.S would confer a range of benefits for trading partners, as in case of Singapore, there are significant adjustment costs associated with complying with the strong legal provisions that are usually associated with an FTA involving the U.S. Since these provisions lock-in policy reforms, negotiating an FTA with U.S is quite different than negotiating with other countries that might agree on an agreement with substantial exclusions and with a narrow negotiating agenda restricted to trade liberalization. This provides important lessons for Korean policymakers who would have to be prepared for undertaking such reforms in a range of areas beyond trade liberalization, while negotiating an FTA with the U.S. A possible Korea-U.S FTA will therefore have wide-ranging impact not just on the businesses, but also on consumers and all strata of society. Balancing the interests of gainers and losers from such an agreement, and ensuring that gains outweigh costs will therefore be a key to the success of a Korea-U.S FTA.

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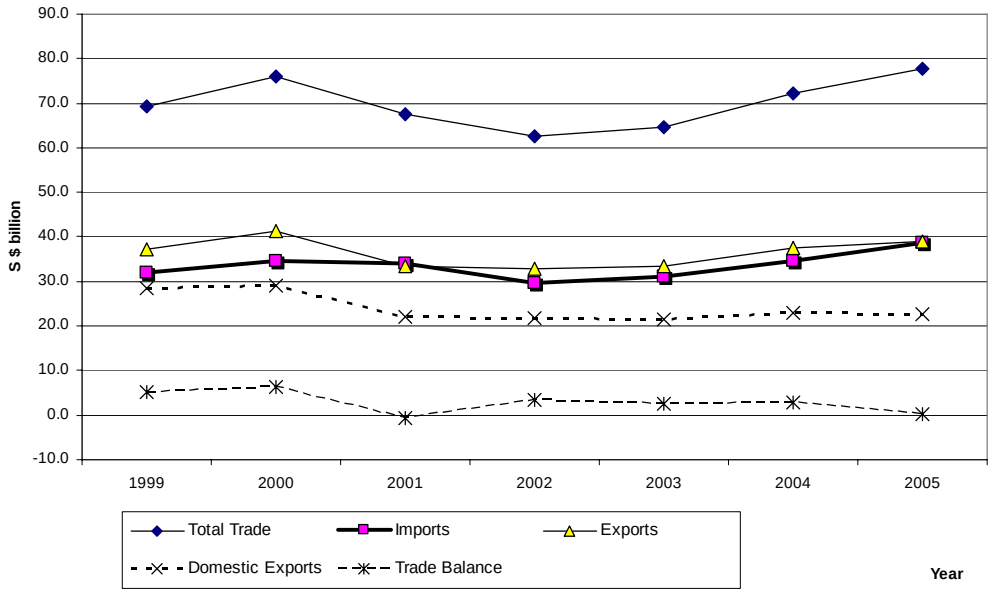
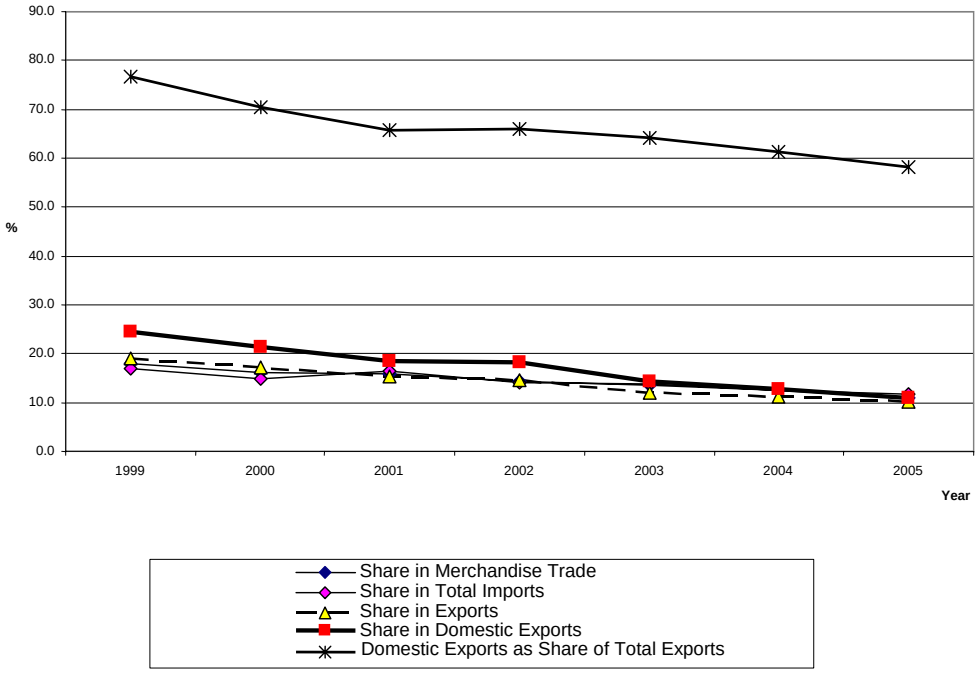
Figure 1. Trends in Singapore-U.S Merchandise Trade, 1999-2005



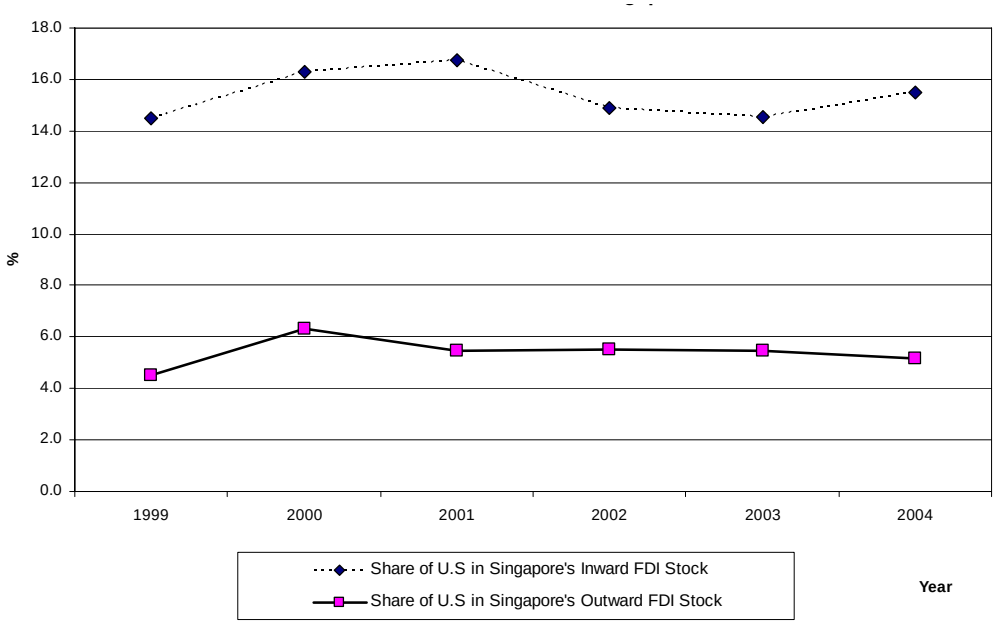
Source: Computed from Department of Statistics, Singapore (2005, 2006).

Figure 2. Trends in Shares of Singapore-U.S Merchandise Trade, 1999-2005



Source: Computed from Department of Statistics, Singapore (2005, 2006).

Figure 3. Trends in Direct Investment Flows between Singapore-U.S, 1999-2004



Source: Computed from Department of Statistics, Singapore (2006).

Annex 1.
Salient Features of the USSFTA

Some of the salient features of USSFTA are as follows:

1. The US has committed to eliminate nearly 92% of its current tariffs on exports from Singapore immediately upon entry into force of the USSFTA. It has agreed to eliminate all remaining tariffs within 8 years. Some of the sectors that ought to benefit from these measures would be chemicals and petrochemicals, electronics, instrumentation equipment, processed foods and mineral products.

2. In the textile and yarns industry, it has been proposed under the USSFTA that tariffs be eliminated for most products that are produced from yarn originating in the US and/or Singapore. Some apparel exports have been exempted from this rule for 8 years, with existing tariffs on them to be phased out in 5 years. Singapore has agreed to establish a system to monitor the import, production, and export of textiles and apparel products, to ensure that only eligible goods enjoy the tariff reduction benefits under the FTA.

3. In general, each product has a specific Rules of Origin (RoO) under the USSFTA. Thus, for some electronic products, the RoOs require that a rule of a specified threshold of local value content of about 30–60% must be satisfied in order to qualify for preferential tariffs in the U.S. Further, in case of certain chemicals / petrochemical products, a specified process, such as a specific chemical reaction, must occur in Singapore. The ROOs take into account the unique production pattern of Singapore, whereby certain stages of the production are outsourced to lower cost centers in the region. Thus, in the case of some electronic products, overhead activities done in Singapore, such as R&D, design, engineering, purchasing, are defined as having contributed towards value-added in Singapore, and would hence qualify for tariff concessions. The ROOs in the USSFTA also include the Integrated Sourcing Initiative (ISI). This initiative has been announced under the ROOs in the USSFTA to encourage Singapore manufacturers to source imports from its neighbouring regions.[9]

9 The Integrated Sourcing Initiative (ISI) aims to treat inputs sourced from the region and used in the manufacture of two main non-sensitive, globalized sectors, such as IT and medical equipment, as being of Singapore origin. Thus, intermediate inputs of these sectors sourced from Singapore's regional neighbours also qualify for preferential tariff.

4. Singapore is to implement systems and procedures to ensure preferential treatment is only granted to legitimate goods under the ROOs specified in the USSFTA. It has also been agreed to exchange information and use risk management techniques to enforce against trade in illegitimate goods.

5. USSFTA has adopted a 'negative list' approach to services trade liberalization. It has been agreed that individual states in the US can provide national treatment to Singapore service providers, i.e. provide a similar treatment that it gives to its supplier in the same state or to other US States. Appropriate regulatory mechanisms to ensure high standards of openness and transparency would be in place to facilitate bilateral trade liberalization in the service sector. Singapore has agreed to ease conditions on US firms creating joint law ventures to practice Singapore law, and have also agreed to recognize degrees earned from 4 US law schools for admission to the Singapore bar of lawyers, subject to certain criteria being fulfilled.[10] In the area of architectural and engineering services, board of director requirements for firms have been relaxed, while capital ownership requirements have been phased out for land surveying services.

6. Under the USSFTA, in the area of financial services, Singapore has agreed to provide US banks with an increased access to Singapore's retail banking sector. It has also agreed to remove the quota on Qualifying Full Banks (QFBs) and Wholesale Banks for US banks after 18 and 36 months respectively of entry into force of the USSFTA. The USSFTA has also agreed to the removal of restrictions on customer service locations for US QFBs after 2 years of entry into force of the USSFTA, while allowing Singapore incorporated US QFBs to negotiate with local banks for access to their Automatic Teller Machine (ATM) networks on commercial terms about 2½ years after the entry into force of this FTA agreement.

7. In the Telecommunications and e-commerce sectors, the USSFTA has allowed service providers in US and Singapore to have access to respective public telecommunications networks, including submarine cable landing stations, while ensuring transparent and effective enforcement through a proper regulatory mechanism. Provisions are also included to safeguard against discriminatory and anti-competitive behaviour by incumbent providers in areas such interconnection, co-location, and access to rights of way and resale.

10 One such criterion for recognition is that the person must be a Singapore citizen or a Permanent Resident at the time of receiving the degree from the four US law schools, as mentioned in the Side Letter on Legal Services under the USSFTA. This is available for download at the website of Ministry of Trade and Industry (MTI), Singapore.

8. Both countries have also agreed to ease restrictions on movement of natural persons to facilitate services trade liberalization. Separate categories of entry for citizens of both countries on a temporary basis to conduct a variety of business and investment activities have been created under the USSFTA, who will be subject to usual immigration and security measures.

9. Under the USSFTA, Government procurement has also been accorded priority, with both countries having agreed to allow market access by service providers from Singapore and the US through a negative list approach. These commitments apply to all procurement contracts for goods and services (with the exception of construction services) worth more than US $ 56,190 and for construction procurement contracts that are worth more than US $ 6.5 million.

10. The USSFTA has taken significant steps to boost bilateral investment relations. Thus, certain restrictions on performance requirements for investors such as requiring them to export a given level of goods and services, as a condition for the investment, have been removed. Provision has also been granted to establish an investor-to-state dispute settlement mechanism. Existing investors in both countries thus have the right to take the dispute directly to an international arbitration tribunal for resolution in case there is any breach of obligations. New Singapore investors who would enter into investment agreements with the federal government after the entry into force of the USSFTA are also allowed to do so. Both countries also grant national treatment provisions to investors.

11. The USSFTA has incorporated very strong commitments to enhance intellectual property protection (IPP) standards on a non-discriminatory basis. These measures go way above the WTO commitments provided by both countries with regard to IPP standards. Strong commitments on IPP standards are to be complemented by robust enforcement obligations. Thus, both countries have been willing to undertake stringent enforcement against piracy in close consultation and collaboration with the industry. In this context, both US and Singapore have agreed to provide an additional avenue for right owners to opt for compensation based on a pre-determined range of statutory damages for civil proceedings against copyright and trademark infringements. They have also agreed to prevent and enforce against the illegal manufacture, import and export of pirated goods.

12. Singapore has committed to its earlier announced intention to establish a general competition regime by 2005. Under the USSFTA, it has committed to maintain its existing policy of not interfering with the

commercial decisions of Government Linked Companies (GLCs), ensuring that GLCs are commercially run, and do not discriminate against US companies.

13. Both US and Singapore have agreed to enforce their own domestic laws relating to labour and environment and consult and cooperate closely on environmental and labour issues of mutual concern and interest.