

THE PARAMOUNT CHALLENGE FOR NORTH AMERICA:

CLOSING THE DEVELOPMENT GAP

**Robert A. Pastor, Editor
Director, Center for North American Studies
American University
Washington, D.C.
March 14, 2005**

Project Sponsored by the North American Development Bank

Copyright © 2005 Robert A. Pastor

THE PARAMOUNT CHALLENGE FOR NORTH AMERICA: CLOSING THE DEVELOPMENT GAP

Robert A. Pastor, Editor

Table of Contents

1. The Paramount Challenge: Introduction and Executive Summary	1
Robert A. Pastor	
2. Mexico's Development Strategy: What It Takes to Close the Gap	5
Sherman Robinson, Samuel Morley, and Carolina Diaz-Bonilla	
I. The Macroeconomic Overview: 1980-2004	
II: A Dynamic CGE Model for Mexico	
III. Dynamic Experiments	
IV. The Impact of Faster Mexican Growth on the U.S. Economy	
V. Conclusions	
3. A Proposal for a North American Investment Fund: Adapting Europe's Model and Avoiding Its Mistakes	29
Robert A. Pastor	
I. Two Models: Similarities and Differences	30
II. The European Experience with Convergence	34
III. Enlargement and Lessons from the EU's Experience	41
1. A Declaration of Goals	
2. Institutions	
3. Convergence and Conditionality	
4. The Best Projects for Regional Assistance	
5. How to Select Projects	
6. Building (and Broadening) Institutional Capacity: From 'Twinning' to Personnel Exchanges	
7. Avoiding Temptations/Focusing Scarce Resources	
8. Reducing Volatility	
9. Emigration	
10. The Magnitude of the Commitment	
IV. A North American Investment Fund: A Proposal	50
The Proposal: A North American Investment Fund	
1. Goal	
2. Mechanism	
3. Invest in Infrastructure and Education	
4. The Magnitude of Commitment	
5. A Community of Conditions	

Tables

Chapter 2		
Table 1	Base results	14
Table 2	Results for saving and labor force growth simulations	16
Table 3	Foreign savings simulation results: 1996-2011	22
Table 4	A comparison of the effect of technical change and labor force growth	24
Chapter 3		
Table 1	Parameters of Europe and North America	32
Table 2	Ratio of GDP per capita between the richest and the poorest country in the European Union and NAFTA, 1980-2004	33
Table 3	US and Mexico: GDP per capita (constant 1995 US\$)	33
Table 4	US and Mexico: GDP per capita, PPP (current international \$)	33
Table 5	Canada, US and Mexico: hourly wages for production workers in manufacturing, 1980-2002 (in US dollars)	33
Table 6	Convergence in EU, 1988-2003	36
Table 7	Distribution of structural funds for EU 15 and new members, 2000-06	42

Figures

Chapter 2		
Figure 1	Mexico-GDP in constant pesos	7
Figure 2	GDP per capita	7
Figure 3	Growth rate of GDP in Mexico	7
Figure 4	Foreign savings and exchange rate: from GTAXUP + FSAVINCR2 simulation	15
Figure 5	Real wages for the unskilled by simulation	19
Figure 6	Rent on capital by simulation	20
Figure 7	Foreign saving and GDP growth	21

Acknowledgements

We are grateful for the support, advice, and comments of Raul Rodriguez and Mauricio Gonzalez of the North American Development Bank. They have long recognized the importance of the development gap, and they encouraged us to explore options to address it. We submitted earlier drafts to two roundtables of experts from the North American Development Bank, the Washington area, and the Faculty Advisory Committee of the Center for North American Studies at American University. In particular, we would like to thank the following people for constructive and helpful comments: Robert A. Blecker, Katherine Bloemendal, Frank Dubois, Louis Goodman, Michael Hart, Allan Lichtman, Richard Linowes, Diana Moyer, David Stemper, and Sidney Weintraub. The Council on Foreign Relations Task Force on the Future of North America also offered incisive comments on the drafts and the proposal at a meeting in New York on December 10th. We especially want to acknowledge the dedication and skills of Vassia Gueorguieva, a graduate student at American University, who helped collect and analyze the data and assemble the papers into a coherent whole.

Contributors

Robert A. Pastor

Robert Pastor is Vice President of International Affairs, Professor of International Relations, and Director of the Center for Democracy and Election Management and Center for North American Studies. From 1985 to his arrival at AU in September 2002, Dr. Pastor was Professor of Political Science at Emory University and Fellow and Founding Director of the Carter Center's Latin American and Caribbean Program. He was National Security Advisor for Latin America from 1977-81, a Fulbright Professor in Mexico, and the Ralph Strauss Visiting Professor at Harvard where he received his Ph.D. He is author or editor of 16 books, including *Toward a North American Community: Lessons from the Old World for the New* (2001).

Sherman Robinson

Sherman Robinson is an Institute Fellow at the International Food Policy Research Institute (IFPRI). Before joining IFPRI in 1993 as Director of the Trade and Macroeconomics Division, he was a Professor of Agricultural and Resource Economics at the University of California, Berkeley. He has held visiting senior-staff appointments at the Economic Research Service, U.S. Department of Agriculture; the U.S. Congressional Budget Office; and the President's Council of Economic Advisers (in the Clinton administration). In the U.S. government, he worked extensively on trade issues, including the Uruguay Round of GATT negotiations and the North American Free Trade Agreement (NAFTA). He was also a Division Chief in the Research Department of the World Bank, an Assistant Professor of Economics at Princeton University, and a Lecturer in Economics at the London School of Economics. He is an international authority in the area of policy-oriented general equilibrium modeling. At IFPRI, he has applied these and

other tools to the analysis of policy issues related to international trade, macroeconomic policy, agricultural development, intersectoral linkages, income distribution, and poverty. In 2004, he will be a Visiting Fellow at American University's Center for North American Studies (CNAS). He earned his B.A. (1965), M.A. (1969), and Ph.D. (1970) in Economics from Harvard University.

Samuel Morley

From 1976 to 1993, Mr. Morley was a Professor of Economics at Vanderbilt University. He then moved to the Inter-American Development Bank to take a position in the social division working mainly on poverty and distribution problems in the region. From 1996 to 1998, he was the head of the Bank's poverty unit where he wrote the poverty strategy and social investment funds strategies for the Bank. In 1998 upon retiring from the Bank, Mr. Morley accepted a position as Senior Research Fellow at the Economic Commission for Latin America in Santiago. At the same time Mr. Morley took part in a big multi-country study of poverty in the region organized by the United Nations Development Program. He was the coauthor of a book summarizing the first stage of that project, and also the country author of the study on poverty in Paraguay. He continued on with this project when he returned from Santiago to become a visiting Research Fellow at the Food Policy Research Institute (IFPRI). Mr. Morley brought IFPRI into the third phase of the UNDP project in which they are looking at the impact of export led growth on poverty and the distribution, and he is also doing the country study of Mexico. He finished a short monograph on the Cash for Education Programs (such as Progreso in Mexico) for the Center for Global Development (started by Nancy Birdsall earlier this year). He has also been advising the World Bank and the United Nations Development Program on poverty strategies for Paraguay, and the Inter-American Development Bank on the Peruvian social investment fund, FONCODES. In 2004, Mr. Morley will be a Visiting Fellow at American University's Center for North American Studies (CNAS).

Carolina Diaz-Bonilla

Carolina Diaz-Bonilla is a Consultant for the Development Economics Prospects Group (DECPG) at the World Bank. She is currently working on the Millennium Development Goals project in DECPG. Before joining the MDG team, she worked on the Global Economic Prospects 2005 report on Trade, Regionalism, and Development and was co-author of one chapter. Prior to joining the Bank she worked in the Trade and Macroeconomics Division of the International Food Policy Research Institute. She co-authored two papers on the effects of export-led growth on poverty and inequality (for Mexico and Argentina), and gave technical assistance to other country authors as part of a Latin America-wide UNDP project. In 2004, she has also been a Research Associate at American University's Center for North American Studies (CNAS). Ms. Diaz-Bonilla holds a Master's degree in Economics from the Johns Hopkins University and will finish her Ph.D. from the same university in May 2005.

The Paramount Challenge:

An Introduction and Executive Summary

Robert A. Pastor

On January 1, 1994, the North American Free Trade Agreement (NAFTA) came into effect. One decade later, the outlines of a new and formidable region – North America – are visible. North America is the largest free trade area in the world in gross product and territory, and no three nations in the world trade as much with each other as do the United States, Canada, and Mexico. After one decade, North America is almost as integrated economically – measured in terms of intra-regional trade as a percent of total world trade – as Europe is after five decades of integration.

NAFTA, in brief, achieved its principal goal. It has largely dismantled trade and investment barriers, and among the three countries, trade during the past decade almost tripled, and foreign direct investment more than tripled. Despite this accomplishment, the perception in each of the three countries is that NAFTA helped the others more than its own country. Mexicans who expected NAFTA to lift their country to a first-world economy were disappointed. Americans who expected NAFTA to reduce undocumented migration have been disillusioned. Canadians who expected that the United States would not shut the border unilaterally either for security or health-related reasons were disenchanted.

NAFTA did not achieve all that its advocates promised, but it did succeed in reducing trade and investment barriers and accelerating trade and integration. Where it failed was in what it omitted, and no omission was as central to the health of the continent that the income gap that separates Mexico from its northern neighbors. That development gap has not narrowed in the last decade, and unless and until it does, a genuine partnership among the three countries is not possible, and undocumented migration from Mexico to the United States will increase. This development challenge is the focus of our papers, and we believe that it should be the primary issue for the three countries' leaders for the next decade. If Mexico, Canada, and the United States can find a formula for significantly narrowing the development gap in the next decade, North America will illuminate a path for all middle-income developing countries to reach a modern economy through global trade. If the three countries of North America fail to find that formula, then all three countries – not just Mexico - will suffer, and the prospects will be dimmer than other nations of Latin America or Africa will find their path to a modern economy.

The point of departure for the next two papers is that NAFTA is insufficient for addressing the development challenge. An enlarged market is fostering efficiencies among companies and industries in North America, but it is also exacerbating inequalities and generating externalities (new collective problems, e.g., at the border, or in currency volatility) – not so much by what it does, but rather by what it has failed to do. It is

possible in a century or more that we might begin to see a convergence in incomes among the three countries, but why should we wait when we can promote a convergence in our lifetime? What can be done today, and is there the political will?

The next two papers approach these questions from different directions, but they end up at the same destination.

The paper by Robinson, Morley, and Diaz-Bonilla approach the problem of the development gap from the perspective of Mexico's development strategy. They explore the history and identify the successes and failures of the past strategy. In the three decades following the Second World War, Mexico was one of the fastest growing countries in the world. Per capita GDP almost tripled between 1950 and 1982 when Mexico suffered a debilitating debt crisis. Per capita income did not return to the level of 1981 until 1998, and even though export-led growth has improved Mexico's performance since NAFTA, Mexico has not approached either the stability or the growth rates it had in its three miracle decades.

They do not suggest that Mexico return to its pre-1982 development strategy. They realize that import-substitution had both exhausted its usefulness and would constitute a setback in the contemporary world. Indeed, the debt crises compelled Mexico to open its economy, reduce trade and investment barriers, privatize state corporations; and stop inflation – all positive steps. NAFTA was still another step forward, accelerating trade. Mexico's exports have tripled since 1990, and the export ratio has risen from less than 15 percent in the late 1980s to 35 percent in 1999. More than 85 percent of the growth in exports came in the non-maquila manufacturing sector.

Robinson, Morley, and Diaz-Bonilla ask how Mexico could generate an annual rate of growth of 6 percent because if it did so, and the United States and Canada sustained, on average, a 3 percent annual rate of growth during the decade, such growth would permit Mexico to close the development gap by 20 percent. That leaves a great distance to travel, but at least, it gives Mexicans a sense a progress and hope that someday the gap could close and that Mexico had a future. Only then would Mexicans believe that they should invest as much in their country's future as they do in trying to move to the United States.

Their analysis is based on a dynamic Computable General Equilibrium Model (CGE). They do simulations based on changes in a number of key variables, including savings (domestic and foreign), investment, skilled and unskilled labor, to see which would induce the highest rates of growth. They conclude that only a fundamental change in development strategy will induce sufficient growth to permit a narrowing of the income gap between Mexico and its neighbors. The current export strategy would, at best, add 1 percent to their growth rate – not enough to close the gap.

Their model suggests that the dynamic shift should take one of two paths. Mexico could try to increase capital formation to the level of 30% or more of GDP, with some combination of foreign and domestic savings. Unless there is an increase in

domestic saving, Mexico would need \$30 billion more per year of foreign capital, net of interest payments. They conclude that would be unsustainable because of the existing debt burden. An alternative path would be to channel the investment to capital improvements that increase productivity or the supply of skilled labor. Such investments would be in transportation, research, training and higher education. If this occurs, Mexico could reach 6 percent growth with investment rates of 26-27 percent. In other words, **to reach 6 percent per year, Mexico needs a development strategy aimed at infrastructure and human capital (increasing skilled labor).**

Raising domestic savings would help but not enough to double the growth rate. Foreign savings also can help, but by itself, is not enough. Both are needed. Robinson, et. al. show that **Mexico needs a total of \$17-20 billion in new capital each year, net of interest payments, to bring the growth rate up to 6 percent.** As Mexico cannot sustain much more debt, grants are needed from abroad, coupled with increasing tax revenues at home. And this would only generate the needed growth if it were invested in infrastructure and education. They also estimated the impact of this added growth on the United States and Canada. In the first years, the added growth in Mexico would generate about \$5 billion additional exports to Mexico from the U.S. and Canada, but that amount grows to over \$20 billion per year in the subsequent five years, meaning that any investment from the U.S. and Canada would be re-couped quickly in more exports. The effect on migration would be much smaller in the short-term and would require a reduction in the gap in wages over a sustained period.

In “A Proposal for a North American Investment Fund,” I ask what can be learned from Europe in order to narrow the development gap. My answer is that the two models of European and North American integration are quite different, and so a precise application of European policies would be a mistake. On the other hand, a far greater mistake would occur if one failed to learn lessons from fifty years of European experience with integration.

Europe succeeded in significantly reducing the gap between its richer and poorer countries in just fifteen years. This was not by luck. Europe tried many different policies, and spent a huge amount of money. Much of what it spent was wasted, and many institutions that it established continued long after they had exhausted their usefulness. There are, in short, many – in fact, ten - useful lessons – both on what to avoid and on what to adapt to fit the North American model.

My paper also examines the issues confronting Europe as it incorporates ten countries, many of which are at Mexico’s economic level. While Europe is committed, in principle, to undertake the same policies to the new poor members as it did to the original four “cohesion” countries, in practice, the EU is avoiding the hard issues and not committing the funds that it had previously spent. In many ways, the mistakes made in the first round have come back to haunt the EU in the new phase of enlargement.

Based on that analysis, and with the benefit of the Robinson, et. al. paper, I develop a comprehensive proposal for a North American Investment Fund, which would

invest \$20 billion per year for a ten-year period in infrastructure (90%) and post-secondary school education (10%) aimed at connecting the center and the south of the country to the markets to the north. Half of the funds would come from the United States (90%) and Canada (10%), and half would come from Mexico's new tax revenues. The funds would not be committed unless Mexico were to implement a series of reforms that would permit the Fund to multiply its impact on the Mexican economy. The reforms are needed to establish a modern state and use scarce natural resources more effectively. Energy is an asset and a liability to Mexico as to most oil-producing countries. Mexico needs to find its path toward modernizing this sector, which today is inefficient and a burden on industry. Other reforms on electricity, labor, governance, and education (where the budget is misallocated) are needed, but the gridlock in Mexico's Congress has made passage impossible.

The three governments need to act together to build a North American community and help each other to break its own political deadlocks. If the U.S. and Canada offer substantial funds to develop Mexican infrastructure, then such a commitment would hopefully break the deadlock in Congress. One would hope that Mexicans would argue that if U.S. taxpayers are willing to contribute to Mexico's development, shouldn't Mexico's taxpayers? If Mexico continues to import 25 percent of its natural gas from the U.S., Mexicans might ask if the PEMEX monopoly serves Mexico's interests.

To narrow the development gap, the three governments should not establish a new institution; instead, it should establish a fund to be managed in the most transparent way by the World Bank under a Board representing all three countries.

Thus, the two papers converge. The computer model proposed an investment of about \$20 billion each year to reach an annual rate of growth of 6 percent, and the paper on the European experiences suggests that if those funds were invested in infrastructure and education, that is likely to yield the highest rate of return. Moreover, the World Bank estimated the Mexico needs \$20 billion per year for a decade to close the infrastructure gap. For North America to be a community, and for Mexico to begin to close the development gap, a North American Investment Fund is essential. With lessons from Europe, less than half of the amount which Europe has consistently invested in its poorest countries in the past 15 years – roughly €30-35 billion each year (at current exchange rates, approximately \$40-45 billion) would be needed. And half of that would come from domestic savings (increased taxes).

A good strategy would be to leverage the funds for infrastructure by making that part of an agreement that set new priorities on scarce public funds in education and on essential reforms on energy, electricity, etc. Indeed, **instead of a quid pro quo, the essence of the North American Community is to define a vision of the future that lifts all states and in which each would contribute.** The North American Investment Fund offers just such a vehicle. The question is whether the political leaders of the three countries are willing to drive or, at least, ride in that vehicle.

Mexico's Development Strategy: What It Takes to Close the Gap

Sherman Robinson, Samuel Morley, and Carolina Díaz-Bonilla

Mexico's economic health and growth prospects are critical to its own political stability and to its successful integration into a growing North America Free Trade area. Current trends are troubling. For a time after the signing of the NAFTA agreement in 1994, prospects seemed favorable. After a severe balance of payments crisis in 1995 Mexico grew rapidly until 2000 (Figure 1). However, 2000 was the high point for GDP per capita. Subsequently, per capita income fell for three consecutive years and in 2004 is still expected to be 1% lower than it was four years before (Figure 2). NAFTA has not narrowed the development gap between Mexico, Canada and the United States. Indeed it is now wider than it has ever been.

This paper starts from the proposition that it is important both for Mexico and for the North American economic community to narrow the development gap between Mexico and its two richer North American neighbors. In the period from 1960 to 1981 Mexican per capita income growth was far higher than either that of the United States or than it would be over the next 25 years. Between 1960 and 1980 the ratio of per capita income in the US to that in Mexico fell 25% from 8.0 to 6.4. But that turned out to be the closest Mexico ever got. By 1990, the gap was back up to 8.2, and despite a fairly strong recovery in the late 1990s and recession in the United States, in 2004 the gap was still higher than it was 44 years before (see Table 3 in Chapter 3).

Clearly if the gap is to be closed, income growth in Mexico has to significantly increase. We will take as a goal here an overall growth rate of GDP of 6% per year. That growth should be sufficient to narrow the development gap by around 2% per year or 20% per decade. While that may not sound like much, it is actually almost twice as fast a rate of convergence as what was achieved by Mexico during its rapid growth period in the 1960s and 1970s. The question we want to address is: what growth strategy can Mexico follow to reach such a growth rate? We will attempt to answer that question by considering alternative strategies in the context of a dynamic CGE model. The model will show explicitly the relationship between investment, foreign borrowing, and growth, as well as the trade off between more government or consumption now and growth later. As we will see, the key question is how Mexico can get itself onto a virtuous circle growth path where the decisions it makes now increase the productivity of its labor force or the rate at which it is able to create fixed capital and therefore grow more rapidly.

The paper will be organized as follows. In the next section we review briefly several key features of recent Mexican economic history, seeking clues to help explain the significant slowdown in its growth rate. In section three we introduce and briefly describe our dynamic CGE model. In section four we run several dynamic experiments with the CGE model and examine their implications for the labor market, employment, and relative wages. Section five concludes.

I. The Macroeconomic Overview: 1980-2004 ¹

Between the end of World War II and the explosion of the first debt crisis in 1982, Mexico was one of the fastest growing countries in the world. Growth rates were high and relatively stable. GDP per capita almost tripled between 1950 and 1982, and there were only three years during that entire 32-year period in which there was a decline in per capita income. The performance in the last twenty years has been markedly inferior. Overall the growth rate since 1980 has been far lower than it was earlier (Figure 3). In fact, per capita income did not return to its 1981 level until 1998 (Figure 2). Even if we omit the 1980s, which reflect the aftermath of the 1982 debt crisis, and look just at the period since 1990, the growth rate is lower. The growth comparison is still unfavorable even if we start in 1995 after NAFTA. Export-led growth has certainly improved Mexico's performance relative to the 1980s, but it has yet to match the growth rates reached between 1950 and 1980.

Not only is the overall growth rate lower; it is also far less stable. There have been three severe recessions since 1980 -- the debt crisis of 1982-3, the oil shock of 1986, and the Peso Crisis in 1995 -- and an extended downturn in the period since 2000. The declines in per capita income in all four of these periods were greater or more extended than anything experienced in the comparatively mild recessions of 1953, 1959 and 1977. (Per capita income fell 18% in 1982-3, 7% in 1986, and 6% in 1995 and a cumulative 3% between 2000 and 2003.)

Not only were these three recessions more severe than they had been earlier, the recoveries were weaker. As is evident in Figure 3, only once did the growth rate of GDP exceed 5% in either the two-year recovery between 1984-85 or the longer recovery between 1987 and 1994. It was only in the period between 1995 and 2000 that Mexico approached the rapid growth rates observed in the 1950s, 60s and 70s. But this recovery was cut short by a new downturn after 2000.

There are two other interconnected macroeconomic features of the period after 1980 that should be noted. The first is the successful fight against inflation in the late 1980s, and the other, linked to the inflation battle, is the appreciation of the real exchange rate.

Most of the 1980s were dominated by the repercussions of three negative shocks: the debt crisis that exploded in 1982, a severe earthquake in 1985 and the drastic decline in oil prices in 1986. All of these unfavorable events put severe pressure on the balance of payments and internal price stability. Up to 1986, the government response to the heavy debt burden and deteriorating oil market was a policy of aggressive devaluations and restrictive monetary policy. At the same time, the government was forced by rising government deficits to reduce price controls and dismantle an expensive system of price subsidies in government enterprises. The net result of all of these measures was a serious increase in the inflation rate, which rose from 25% in 1980 to over 120% in 1987.

¹ The descriptive sections of this paper are taken from S.A. Morley., "Growth and Distribution in an Era of Structural Reform: the Case of Mexico 1980-1999," (IFPRI, mimeo, 2001).

Mexico-GDP in constant pesos

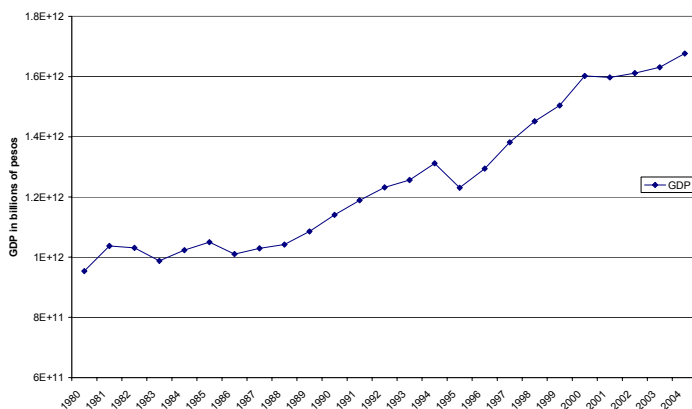


Figure 1

GDP per capita

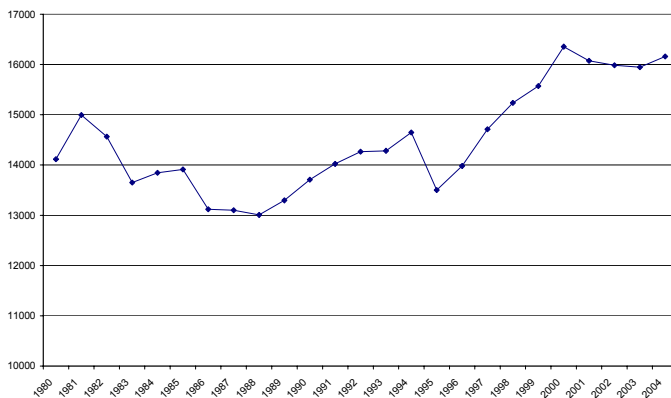
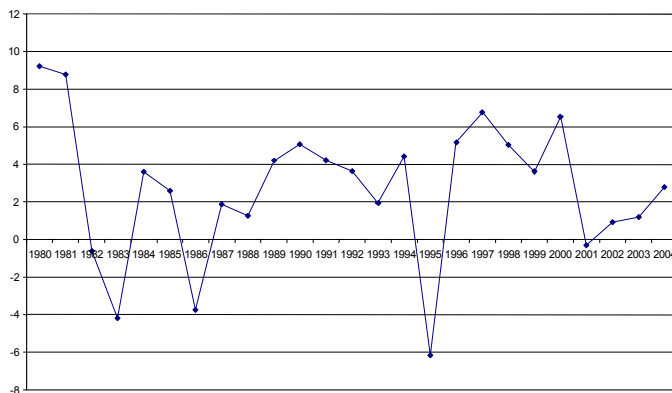


Figure 2

Figure 3

Growth rate of GDP in Mexico



By 1987, thanks to the Brady Bonds, debt-equity swaps, and better export markets, the economy began to recover. But the recovery was not particularly vigorous. Investment stayed below 15% of GDP, and private consumption remained weak (through 1989), reflecting the severe contraction in real wages that had taken place during the preceding inflation. Government expenditure as a fraction of GDP fell sharply over the remainder of the decade as Mexico struggled to reduce its deficit and prevent a renewal of inflation. Rising imports contributed to the overall weakness of the recovery. Responding to an appreciated exchange rate, significant reductions in tariffs and non-tariff import restrictions, and to the early signs of recovery, imports doubled between 1986 and 1996, more than offsetting a rise in export earnings.

The other feature or result of the inflation control program was two very sharp appreciations of the real exchange, the first between 1986 and 1994, and the second between 1995 and 2004.² Partly these were both the result of a policy decision to stabilize key prices under the control of the government in order to bring down and then hold back inflation. In an open economy inflation is highly correlated with the exchange rate. Thus, not devaluing should, in theory at least, reduce the inflation rate. At the same time it was thought that maintaining a fixed exchange rate would bolster the confidence of foreign investors who in fact did dramatically increase their investment in Mexico after 1989. But of course inflation did not stop but only fell to a much lower level. The result of all this was an appreciation of the real exchange rate and increasing current account deficits financed by the capital inflows. These imports supplied a good deal of the increase in aggregate demand in a non-inflationary way, but they also cut into the potential markets for Mexican production. In effect, using the exchange rate as an anchor helped in the battle against inflation, but the cost was the penalty it imposed on domestic production. The cost is not only the appreciation of the real exchange rate but also the relatively contractionary domestic monetary policy and accompanying high real interest rates that are required to maintain this policy stance.

Opening the Mexican Economy. In the last 15 years, Mexico made an important change of development strategy by implementing a wide range of economic reforms. Since 1985, it has significantly reduced its average tariff, reduced barriers to foreign investment, dismantled most price subsidies, privatized a wide range of state enterprises, and joined NAFTA. The neo-liberal model that these reforms were intended to implement envisioned an increase in economic growth led by exports. In the 1990s, Mexico appeared to be one of the shining success stories of this approach. Exports have tripled since 1990 and the export ratio has risen from less than 15% in the late 1980s to 35% in 1999. Growth overall was not particularly impressive until quite recently, and was interrupted by a severe crisis in 1995. However, thanks in part to NAFTA, per capita income has grown by 4% per year from 1995 through 2000 among the highest growth rates in Latin America.

² There was a 50% real devaluation during the balance of payments crisis of 1995, followed by nine years of appreciation in which the real exchange rate rose to a level higher than it had been in 1994 prior to the devaluation.

Between 1995 and 2000 Mexican export growth began to reflect the hopes of those who implemented trade reform. Up to the beginning of NAFTA in 1994 increased openness meant mostly a rise in imports. Exports as a share of GDP were lower in 1994 than they had been ten years earlier, and this was due mainly to the reduction in the manufacturing sector. On the other hand, imports as a share of GDP rise steadily after 1986, particularly in manufacturing. That reflects both the reduction in tariff rates that began in 1986 and a steady appreciation of the real exchange rate. Before NAFTA, Mexico's economic profile resembled those of many other countries that had reduced tariffs significantly. Capital flowed in, the exchange rate appreciated, imports flooded the market, and there were rising deficits in the trade account. Neither exports nor the economy grew very rapidly under that mix of policies.

All that changed dramatically with NAFTA. Total exports rose from \$51 billion in 1993 to \$166 billion in 2000. Part, but only part, of that was due to assembly operations (maquilas).³ Non-maquila exports grew from \$30 billion to \$86 billion, and 80% of that came from manufactured exports. Imports went up, too, after a decline during the recession in 1995. But this time, unlike the late 1980s, the growth in imports was matched by rising exports. Thanks to NAFTA and access to the rapidly growing US market in the 1990s, increased openness meant not just the replacement of domestic industry by imports. Rather it meant a switch in the structure of production toward the internationally competitive parts of the economy.

This good export performance was not just maquila. In gross terms maquila comprises a large fraction of exports, almost half of Mexican exports in the year 2000. However, this overstates the contribution of value added in the maquila sector since so much of maquila production uses imported inputs. (Imports by the maquila sector were \$62 billion in 2000.) If one compares the value added in maquila plus the domestically supplied intermediate goods used by the sector to total exports, one gets a better picture of the contribution of the maquila sector to export growth. Maquila value-added increased from just under \$4 billion in 1990 to \$18 billion in 2000, and the net contribution of maquila to adjusted exports rose from 9.5% to 13.6%. That is a significant share, but it is far lower than what appears in the unadjusted data. The point is that the success of Mexico since NAFTA is not a maquila story. More than 85% of the growth in the export sector was elsewhere.

Unfortunately for Mexico, this favorable picture of export growth post-NAFTA has quite dramatically changed since 2000, reflecting both the recession in the US economy and the deteriorating competitive position of Mexico relative to Asia. Overall, Mexico's share of total US imports topped out at around 12% in 2001 and has fallen to below 11% in 2003 while China's share has risen from around 11% to 13% over the same period.⁴ Maquila was particularly hard hit. In 2002, the number of firms in the sector shrank by 13% and the number of employees fell by over 100,000 (CEPAL Estudio

³ Maquila is defined in the Mexican national accounts as the assembly of goods primarily for exports and from imported inputs. All of maquila output is exported and most of its inputs are imported.

⁴ M. Ayhan Kose, G. Meredith and C. Towe, How Has NAFTA Affected the Mexican Economy? Review and Evidence (IMF, Working Paper 04/59, 2004), p.40.

Económico 2003). Total dollar revenue from maquila exports was lower in 2003 than it had been three years before. What happened to maquila was repeated by the rest of the traded goods sector. Exports and output in manufacturing and agriculture both fell and what growth there was in Mexico was led by internal demand and the non-traded goods sector. There was a slight recovery in 2003 and a somewhat stronger one in 2004. However at this writing it is still unclear whether the poor performance in 2001 and 2002 and the weak recovery in 2003-4 were the result of recession in the US and temporary overvaluation of the exchange rate or whether more serious structural problems are appearing. At the very least, the last five years show the dangers associated with too great a dependence on a single export market and on the difficulties of maintaining export growth in an increasingly competitive world economy.

II: A Dynamic CGE Model for Mexico

The central question we want to address in this paper is how Mexico can increase its growth rate. We will use a dynamic Computable General Equilibrium (CGE) model to do this. The model is a useful tool for examining the role of resource constraints, investment and saving rates, and the contribution that foreign saving can make to higher growth rates. It also enables us to illustrate the trade-offs that Mexico will face between more consumption or social expenditure now and more per capita income later. By construction, the CGE model is a supply-side model that ignores the role of short run demand shocks, balance of payments crises and the like. As Mexican experience illustrates, these short run factors can and do have a critical influence on the actual performance of the economy, including its growth rate. Our exercise here should be thought of as defining the limits of what will be possible under the most favorable demand conditions. Policymakers in practice have two tasks. First, they must try to make sure that they keep the economy as close as possible to its potential output level by wise countercyclical macroeconomic policy. Second, they must choose a growth strategy which expands that potential output level at an acceptable rate. It is this second task that we hope to assist with the dynamic CGE model exercise.

The CGE model that we have developed for Mexico follows closely the so-called standard model developed at IFPRI⁵ and previously adapted for Mexico by Harris⁶ and Morley and Diaz-Bonilla⁷ (2003).

The Morley-Diaz-Bonilla paper made three important modifications to the general CGE model for the Mexico case. It added an informal sector as an activity, a separate maquila activity and commodity (including a downward sloping export demand equation), and modified the labor market by including an upward sloping labor supply

⁵ Hans Lofgren, R. Harris, and S. Robinson, A Standard Computable General Equilibrium Model (IFPRI, TMD working paper #75, 2001).

⁶ Rebecca Harris, A computable General Equilibrium Analysis of Mexico's Agricultural Policy Reforms (IFPRI, TMD working paper #65, 2001).

⁷ Samuel Morley and C. Diaz-Bonilla, Do the Poor Benefit from Increased Openness? The Case of Mexico (IFPRI, processed, 2003).

curve. The model assumes that the informal sector uses urban unskilled labor and domestic commodity inputs. Since we are unable to estimate with any confidence the amount of capital in the sector, we treat production as if it were a linear function of labor and domestically produced intermediate inputs. That implies that the sector is not integrated into the internal market for capital. On the commodity side, all informal output is sold domestically and there are no imported intermediate inputs.

Maquila is treated as an activity and a commodity. We have not separated it within the different subsectors of manufacturing. Its production function has the same form as those of the other sectors of manufacturing using both imported and nationally produced intermediates, as well as labor and capital. Where the treatment is different is in the commodity account. No maquila output is sold domestically; all is exported. In addition, we assume that the sector faces a downward sloping international or US demand curve for its output. Thus we take US income as exogenous, and determine the output of maquila and its price simultaneously.

Because of the importance of the US market for Mexican exports we have replaced the small country assumption used in the export sectors in the general CGE model with the assumption that Mexico faces downward sloping demand curves for its manufactured exports, most of which go to the United States. In the dynamic model we assume that the US demand curve for Mexican exports shifts up or out at a constant rate over time.

We assume that in the short run the total supply of capital, land, and labor is fixed. Over time capital increases at a rate determined by the rate of investment. Obviously this rate will be one of the key policy variables in the model. The growth rate of skilled labor is assumed to be exogenous or a function of the size of the university population and its graduation rate. We have four groups of unskilled labor, male and female in agriculture and male-female in non-agricultural activities. We assume that the growth rate of male and female skilled labor is exogenous and equal. For non-agricultural unskilled labor we set the rate of growth such that the relative wages between skilled and unskilled was roughly constant in the base run.

The Social Accounting Matrix (SAM) used in this paper is based on the 1996 SAM for Mexico developed in Rebecca Harris.⁸ We have modified her SAM aggregating across regions and agricultural activities and disaggregating maquila and informal sectors. The final SAM is disaggregated into four agriculture sectors, ten manufacturing sectors, maquila, construction, informal, and three service sectors. Unskilled labor is defined as those with no more than high school education. We ran earnings regressions with dummy variables for skilled and unskilled labor in different subsectors and were unable to reject the hypothesis that after controlling for personal characteristics there are no significant sectoral differences in average wages, except in the informal sector. Therefore we assume that average wages for each labor category are equal across sectors other than the informal. The short run model solution determines the

⁸ Rebecca Harris, The Distributional Impact of Macroeconomic Shocks in Mexico: Threshold Effects in a Multi-Region CGE Model (IFPRI, TMD working paper # 44, 1999).

skill differential in the urban formal sector and the urban-rural wage differential for unskilled labor. The SAM has one type of capital, which is assumed to be mobile between sectors such that the rate of return is equal in all uses.

The dynamic model we will use here comprises a linked succession of single period comparative static solutions where certain variables such as the capital stock, the labor force or the inflow of foreign capital are considered to be constant in the short run but variable over time. For each of these variables a transition equation defines how the variable changes between periods in response to changes in the comparative static solution. In our model there are four key dynamic variables which change over time and which affect the dynamic trajectory of the solution. They are the capital stock, the rate of investment, the labor force, and foreign saving.

The capital stock in each period is defined as the capital stock in the previous period plus investment in the previous period, less depreciation. Investment in our model closure is determined by the total level of saving – government, private and foreign. The government can raise the level of capital formation by reducing its deficit through either raising the tax rate or reducing expenditures. An increase in the private saving rate will have the same effect.

The skilled labor force in the first group of the experiments is assumed to grow at an exogenous rate of 3.6%. In the education experiments we raise the rate of growth of skilled labor by a full percentage point assuming that it is a function of the expenditure of the government in higher education, or equivalently of the number of students graduating from the university system each year. This will give a rough idea of the payoff to government investment on higher education. It is only an approximation because we do not have a reliable estimate of how much it would cost the government to increase the rate of growth of skilled labor by one percentage point. We assume that unskilled labor force growth also rises by one percentage point.

In any open economy model, the level of foreign saving available to the economy is critical. In our model closure, foreign saving is exogenous in each short run solution. However in several experiments we wish to explore the effect on the growth rate of variations in foreign saving. We do this in two ways. In the first we simply make the level of foreign saving in each period a positive function of the level of GDP reached by the economy in the previous period. That reflects the notion that the borrowing capacity of the economy is related to the overall level of production. We could alternatively have made foreign capital inflows a positive function of total exports or of the debt burden of the economy. In the second we vary the inflow of foreign capital from the 1996 by one percent increments, holding all other saving parameters and labor force growth rates at their base run levels.

In order to estimate the effect of different policy choices on the growth rate, we first show what we will call the base run. It shows the dynamic trajectory of the economy from 1996, the year upon which the SAM is based, to 2011 under a set of assumptions based on past observed values of all the main variables. One could interpret the base run

solution as our guess of what the growth rate of potential output, employment, and real wages is likely to be for Mexico if foreign, government, and private savings continue at the rates observed in 1996. The only exception to this is the rate of growth of labor. Because of the small size of the skilled labor force in the early 1990s, it would have been unrealistic to suppose a continuation of the very rapid growth rates observed during those years, especially for women). (6.5% for male skilled and over 10% for female skilled). Therefore, we assumed an exogenous growth rate of 3.6%. This has a very strong effect on the potential growth rate of GDP in the base period solution. It turns out that the growth rate of the economy is more sensitive to the growth rate of skilled labor in our simulations than it is to the growth rate of investment. That is because the faster the growth rate of skilled labor, the larger the demand for unskilled labor satisfied either by an increase in employment or unskilled wages. In a sense, one could say that the unskilled labor market is driven, or pulled along, by the availability of skilled labor in the economy. The other key assumption used in the base solution was the growth rate of total factor productivity. It is assumed to grow at 1% per year in all but the last experiment.

The main results of the base period solution are first the 4.8% overall rate of growth that is achievable with the observed capital output ratio and investment rates of the past and our assumed growth rate of skilled labor. Investment grows from 20% to 23% of GDP and the capital stock grows by 4.1% per year.. Other than land and agricultural labor, the supply of total factors grows around 3.8% per year, which, when combined with our assumed growth of TFP of 1%, produces the 4.8% growth rate of potential output.

Factor returns reflect the relative growth rate of supply. In the base run we set the growth rate of unskilled labor so that the wage differential between skilled and unskilled labor would be roughly constant with real wages rising by around 0.7% per year. By assumption, a part of the rise in the demand for unskilled labor is satisfied by an increase in the supply with the remainder leading to a rise in the wage rate of the unskilled. Since land supply is fixed in the model, rents rise rapidly. The rate of return to capital also rises, despite the fact that the supply of capital rises faster than the supply of skilled labor, suggesting that demand will become increasingly capital intensive over time.

In the foreign sector, for the base run we set foreign saving at the level it reached in 1996 which was 3.8% of the GDP of 1996. That assumption implies that as GDP grows, foreign saving shrinks as a share of GDP falling to 2.2% in 2011. The economy is forced to reduce its trade deficit which it does by a real devaluation of 0.8% per year, or by 13% over the entire fifteen year base run. That is sufficient to lower the growth rate of imports. Essentially the economy is forced to produce more import substitutes to offset the reduction in the share of foreign saving.

Table 1: Base results

		1996 Initial	Base 1996 to 2006
		Value	Cp %ch
Foreign Savings		92.96	0.00
Exchange Rate		1.00	0.80
GDP at market prices	Real	2424	4.840
Private Consumption	Real	1694	4.3
Fixed Investment	Real	488	5.6
Government Consumption	Real	189	4.9
Exports		1006	4.9
Imports		-953	4.4
Investment as % Nom GDP		20.1	0.200
Private Sav as % Nom GDP		16.8	0
Foreign Sav as % Nom GDP		3.8	-0.1
Trade Deficit as % Nom GDP		-1.3	0.1
Gov Savings as % Nom GDP		-0.5	0.3
Import Taxes as % of GDP		0.6	0
Direct Taxes as % of GDP		10.6	0
Labor Force	AG-M	57.78	1.59
('00,000 people)	AG-F	16.67	1.59
	HS-M	157.51	4.11
	HS-F	96.23	4.11
	UN-M	26.32	3.63
	UN-F	15.31	3.63
	LAND	37.90	0.00
	CAPITAL	5946.47	4.11
Wages	AG-M	0.72	2.28
	AG-F	0.15	0.52
	HS-M	3.89	0.74
	HS-F	2.61	0.72
	UN-M	14.05	0.71
	UN-F	8.39	0.69
Rent	LAND	2.05	5.33
Rent	CAPITAL	0.135	0.566

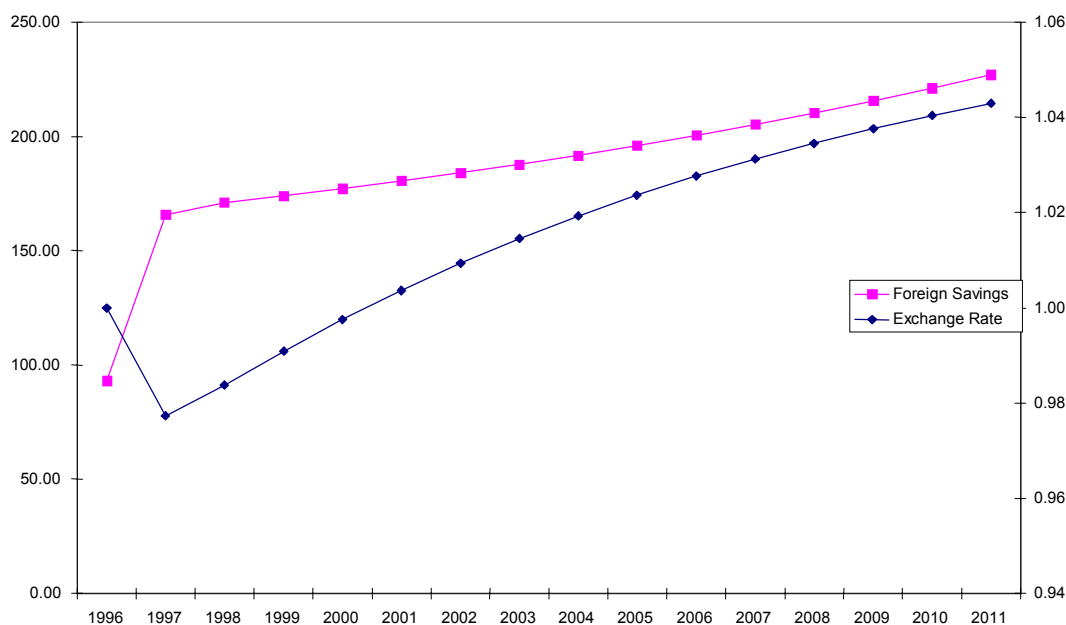
Notes: In the labor force rows: M and F refer to male and female, Ag is the agricultural labor force, HS refers to less than high school education and is our definition of unskilled labor, UN is high school and above, our definition of skilled labor. CP % Change means compound percentage change, where the compounding is instantaneous not annual.

III. Dynamic Experiments

Growth and Employment Under Alternative Policy Scenarios. Our first three experiments explore the implications of various ways of increasing the rate of saving in the economy while holding the growth rate of skilled and unskilled labor constant. By assumption, any increase in saving, from whatever the source, increases the rate of investment and therefore the growth rate of the capital stock. The increase is not one to one in any of the simulations because of adjustments in private saving in response to changes in tax rates or the distribution of income between institutions in the economy.

In the first experiment (GTAXUP) we raise the tax rate on all institutions in the economy by 20%. That will increase government saving by approximately 2% of GDP but reduce private saving. In the second experiment (FSAVINCR2) we set foreign savings equal to the base period amount plus 3% of last periods GDP and then assume it grows at 3% of any subsequent change in GDP.⁹ This effectively gives the economy a one-time increase in foreign saving, after which the inflows rise from the new level at 3% per year. We show this visually in figure 4. In the third experiment, which we will call a virtuous circle, we combine the first two experiments. That is, we increase government saving and investment which raises the growth rate of GDP, and we permit foreign saving to increase at the same rate that it did in FSAVINCR2.

**Figure 4: Foreign savings and exchange rate:
from GTAXUP + FSAVINCR2 simulation**



⁹ In fact, foreign saving increases by 3% of the growth in absorption rather than GDP, but the difference is minimal.

The second set of experiments explores the importance of human and physical capital formation. In PRIVSAV we raise the saving rate of households by 10% and increase the growth rate of unskilled labor by .25%. In (GTAXUP2 and VIRTUOUS2) we examine the combined effect on growth, employment and consumption of increasing the rate of growth of both physical and human capital. In GTAXUP2 we increase the government direct tax rate by 20%, raise private saving by 10% and increase the growth rate of skilled and unskilled labor by .75% relative to the base. VIRTUOUS2 is the same as GTAXUP2 except that we also increase foreign saving by 3% of any change in GDP just as we did in FSAVINCR2 in the experiments described above. In both experiments we have set the rate of growth of unskilled labor at .5% higher than the growth rate of skilled labor, a growth differential which was sufficient to keep the skill differential roughly constant in the base run.

Table 2 summarizes the results of these two sets of experiments.

Table 2: Results for saving and labor force growth simulations

<i>Annual Compounded Percent Changes</i>		<i>1996 Initial Value</i>	Base	GTAXUP	FSAVINCR2	VIRTUOUS	PRIVSAVE	GTAXUP2	VIRTUOUS2
			<i>1996 to 2011 An Cp %ch</i>	<i>An Cp %ch</i>	<i>An Cp %ch</i>	<i>An Cp %ch</i>	<i>An Cp %ch</i>	<i>An Cp %ch</i>	<i>An Cp %ch</i>
Foreign Savings		92.96	0.0	0.0	5.9	5.9	0.0	0.0	6.3
GDP at market prices	Real	2424	4.8	5.0	5.2	5.3	5.1	5.7	6.0
Private Consumption	Real	1694	4.3	4.3	4.6	4.6	4.4	4.8	5.1
Fixed Investment	Real	488	5.6	6.2	6.8	7.3	6.4	7.5	8.6
Government Consumption	Real	189	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Exports	Real	1006	4.9	5.2	5.0	5.2	5.3	6.0	6.0
Imports	Real	-953	4.4	4.6	4.9	5.1	4.8	5.4	5.8
Labor Force	Agric-Male	5.78	1.6	1.6	1.6	1.6	1.6	2.3	2.3
(’000,000 people)	Agric-Female	1.67	1.6	1.6	1.6	1.6	1.6	2.3	2.3
	Unskilled-Male	15.75	4.1	4.1	4.1	4.1	4.4	4.8	4.8
	Unskilled-Female	9.62	4.1	4.1	4.1	4.1	4.4	4.8	4.8
	Skilled-Male	2.63	3.6	3.6	3.6	3.6	3.6	4.4	4.4
	Skilled-Female	1.53	3.6	3.6	3.6	3.6	3.6	4.4	4.4
	Land	37.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Capital	5946.47	4.1	4.5	5.0	5.3	4.6	5.3	6.1
Wages	Agric-Male	0.72	2.3	2.3	2.2	2.2	2.5	1.9	1.9
	Agric-Female	0.15	0.5	0.5	0.3	0.3	0.6	-0.1	-0.2
	Unskilled-Male	3.89	0.7	1.3	2.4	2.8	0.7	0.9	2.4
	Unskilled-Female	2.61	0.7	1.3	2.4	2.8	0.7	0.8	2.3
	Skilled-Male	14.05	0.7	0.8	0.9	0.9	1.0	0.7	0.9
	Skilled-Female	8.39	0.7	0.8	0.9	0.9	1.0	0.6	0.8
Rent	Land	2.05	5.3	5.3	5.2	5.2	5.5	6.1	6.0
Rent	Capital	0.135	0.6	0.3	-0.3	-0.6	0.3	0.3	-0.5
<i>Initial and Final Year Values</i>		<i>1996 Initial Value</i>	Base	GTAXUP	FSAVINCR2	VIRTUOUS	PRIVSAVE	GTAXUP2	VIRTUOUS2
			<i>2011 Final</i>	<i>2011 Final</i>	<i>2011 Final</i>	<i>2011 Final</i>	<i>2011 Final</i>	<i>2011 Final</i>	<i>2011 Final</i>
Investment	% Nom GDP	20.1	23.3	24.8	26.3	27.6	25.3	27.6	30.4
Private Savings	% Nom GDP	16.8	16.6	16.2	16.6	16.1	18.2	17.8	17.7
Foreign Savings	% Nom GDP	3.8	2.2	2.1	4.8	4.7	2.1	2	4.6
Trade Deficit	% Nom GDP	-1.3	-0.1	-0.1	2.8	2.8	-0.1	0.1	3
Government Savings	% Nom GDP	-0.5	4.5	6.5	4.9	6.8	5	7.9	8.1
Import Taxes	% Nom GDP	0.6	0.7	0.8	0.7	0.7	0.8	0.8	0.8
Direct Taxes	% Nom GDP	10.6	10.8	12.5	10.7	12.4	10.8	12.6	12.4
Foreign Savings		92.96	92.96	92.96	226.85	226.85	92.96	92.96	239.48
Exchange Rate		1.00	1.13	1.11	1.06	1.04	1.13	1.14	1.07

Note: All the growth rates in this and other tables are shown for instantaneous rather than annual compounding. The difference between the two for the growth rates involved is around .1% per year. Note also that in this and all succeeding tables all initial values other than wages and profits including foreign saving are billions of 1996 Mexican pesos.

Growth. Each of our three saving experiments raises the growth rate of the economy and the growth rate of the capital stock. (See columns 3-5 in table 2) Experiment one (GTAXUP), in which we raise all tax rates by 20%, has the smallest growth effect because the rise in taxes is partially offset by a reduction in household saving which lowers the amount of additional investment resulting from the change in policy. Still, reducing the government deficit by 2% of GDP raises the growth rate from 4.8% to 5.0%. One gets a larger growth effect if foreign saving, instead of remaining at its 1996 level, takes a one time jump and then grows with the economy. In this case (FSAVINCR2), the overall growth rate rises from 4.8% to 5.2% because there is an almost straight pass through of the increase in foreign saving to increased investment. Obviously the virtuous circle experiment (VIRTUOUS2) in which we both raise taxes, reducing the government deficit, and make foreign saving a function of GDP gives us a bigger growth effect. Fixed investment rises from 20% to 27.6% of GDP, and the capital stock rises at 5.3% per year compared to 4.1% in the base run. GDP growth reaches 5.3%.

In our second set of simulations we examine the effect of varying the labor force growth rate. In PRIVSAV we raise the saving rate of households and the growth rate of unskilled labor. GDP growth rises to 5.1% and investment rises by 2% of GDP, reaching 25.3% by 2011. This is the same rate of growth and investment achievable by a 2% increase in foreign borrowing as we will see in the next section. In effect, instead of borrowing more from abroad to finance a higher rate of capital formation, here we increase the employment of the unskilled to get a .3% increase in the growth rate of GDP. A side effect of this strategy is a reduction in the rate of growth of real wages for the unskilled. Indeed, their real wages are below their initial level for the first ten years of the simulation run as we will see in a moment.

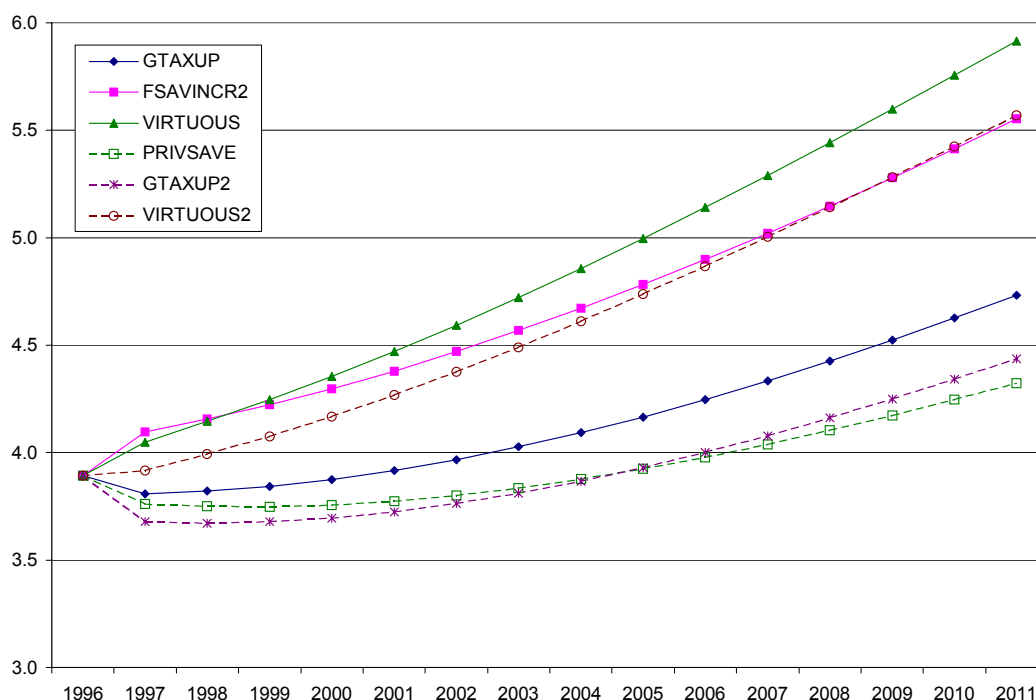
GTAXUP2 increases both domestic sources of saving and the rate of growth of skilled labor. Increasing these two saving rates by themselves increases capital formation by over 3% of GDP relative to the base run.¹⁰ That alone would have increased the growth rate of the economy by about .4%. If one adds to that increase in physical capital the increase in the growth rate of the entire labor force by .75% as we did in GTAXUP2, that increases the overall growth rate of the economy by an additional .5%, raising the growth rate from 4.8% in the base to 5.7%. Increasing the supply of labor expands the size of the economy for any given stock of physical capital. But that creates a virtuous circle in which the increase in GDP also increases government saving and capital formation. The results of this are clear in the table. Compare the level of GDP or consumption in GTAXUP2 with PRIVSAV. By 2011 real GDP is over 9% higher in GTAXUP2 and consumption is 6% higher than they are in PRIVSAV.

¹⁰ Raising the tax rate by itself increases total capital formation by 8% relative to the base, increasing private saving and the growth rate of unskilled labor in PRIVSAV increases capital formation by 11%. If the contribution of unskilled labor to this is 4%, then the contribution of additional saving to the result is a 15% increase in capital formation over the 15 years of the experiment.

The last experiment VIRTUOUS2 adds an increase in foreign saving to the two sources of domestic saving while keeping the growth rate of labor at the same high rate used in GTAXUP2. As in the first set of experiments we assume that foreign saving rises in tandem with the growth in the economy, essentially holding its contribution constant at 3% of GDP. In the first set of experiments where we held the growth rate of labor constant, the increase in foreign saving by itself permitted the economy to grow .4% faster than in the base run. Here the contribution of additional foreign saving raises the growth rate from 5.7% to 6.0%. (Compare GTAXUP2 with VIRTUOUS2).

Real Wages. Real wages for the unskilled rise in each of the first three experiments, and are positively related to the growth rate of the economy and negatively to the rate of depreciation of the exchange rate. (See figure 5). Recall that in the base run, the rise in real wages for males was about 0.7% per year. Here in the virtuous circle experiment real wages rise at 2.8% per year. That is partly because the overall growth rate of the economy is higher, and partly because the increase in foreign saving reduces the rate of exchange rate depreciation. With more foreign saving, more of growth comes from the non-traded goods sector, which favors unskilled labor. Real wages for the skilled are not as strongly affected by the rate of growth. In the base run, skilled wages for males rise by 0.7% per year. In the virtuous circle experiment they rise by 0.9% per year. Here foreign saving narrows wage differentials because it increases more the demand for unskilled than skilled labor.

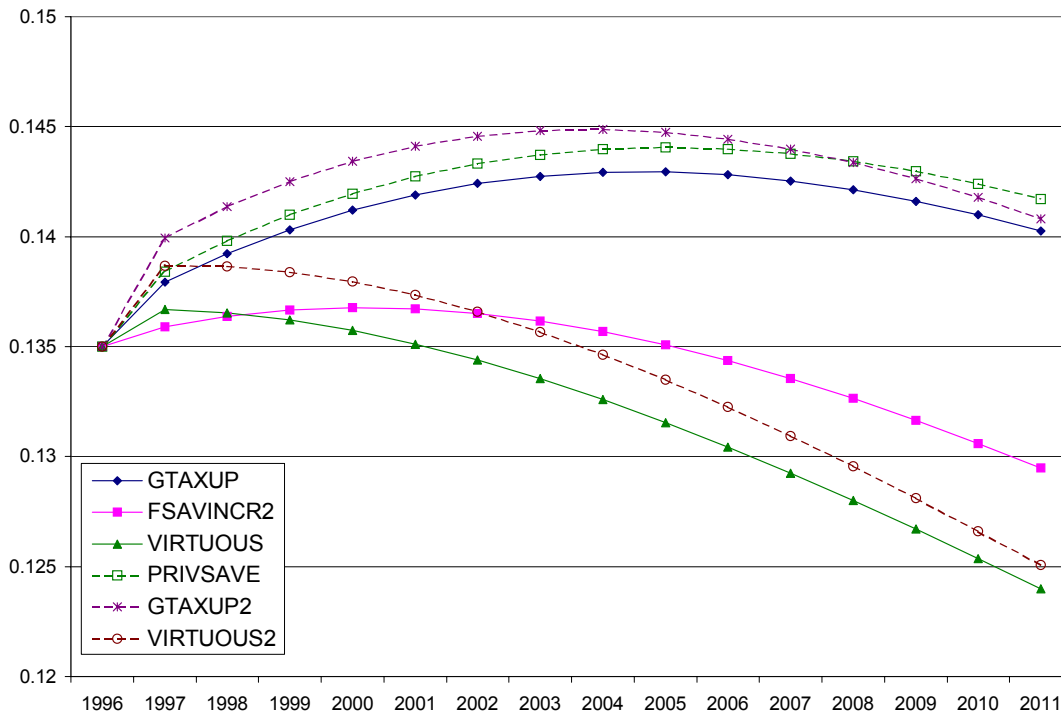
As before, foreign saving increases the rate of capital formation, the rate of growth of the economy and the characteristics of the growth path. With the additional capital inflow, the rate of depreciation of the exchange rate goes down. That favors the non-traded goods sectors and the factors of production used there. As mentioned above, non-traded goods are unskilled labor intensive. As one can see in table two and figure 5, permitting foreign saving to grow with the economy is very favorable for unskilled labor. Since the growth rate of unskilled employment is fixed in the first three experiments, the addition to foreign saving shows up in wages which rise by more than 2% faster than they would when all the increases in capital formation come from domestic saving. In these last two experiments, the rate of growth of the economy is much higher than it was in our first set of experiments but so is the rate of growth in employment. That is why the rate of growth of wages for the unskilled in VIRTUOUS2 is much lower than in VIRTUOUS. The assumed increase in employment combined with higher inflows of capital increases the growth rate of both income and imports. Indeed import demand rises by such a large amount that it takes a bigger depreciation of the exchange rate to produce the required increase in export revenue or import substitution so as to stay within the required trade deficit. Growth is still led by the non-traded goods sector, but the rate of growth of exports is higher than the overall growth rate.

Figure 5: Real wages for the unskilled by simulation

Returns to Capital. The return to capital is far more sensitive than wages to the different simulations because of differences in the rate of growth of capital. In the base simulation, the rate of growth of capital was 4.1% per year, roughly equal to the rates of growth of the complementary factors. As a result, the rate of return to capital rises slightly over time. Here each of our simulations increases the rate of investment and the rate of growth of capital. In the first virtuous circle simulation, capital grows at 5.3% per year and in the Foreign Savings simulation (FSAVINCR2) it grows at almost 5.1% per year – rates fast enough to drive the rate of return to capital down below its initial level in both simulations as shown in Figure 6. In the GTAXUP simulation, there is an increase in the rate of return, but it is falling by 2011 because of the compounding effect of the rate of growth on saving and investment.

In the second set of simulations we increase both saving and the rate of growth of the labor force. Increasing the supply of foreign saving increases the growth rate of capital relative to labor just as it did in the first set of experiments. That has an effect on the rate of return which falls, though not by as much as it does with the lower labor force growth rates of experiments 1-3. Additional foreign saving is progressive in three ways. It increases the rate of growth of the economy, reduces wage differentials and reduces the profit rate.

Figure 6: Rent on capital by simulation



The Effect of Foreign Capital on the Growth Rate. In this set of simulations we examine the effect of varying the inflow of foreign saving. We posit a one time increase in foreign capital equal to $x\%$ times the previous year GDP, with the amount increasing over time at roughly $x\%$ times the change in GDP in the previous year. Thus if we assume a 3% increase in capital inflows, we increase capital by 3% of the initial 1996 level of GDP which raises the second year foreign saving rate to almost 7%, and then we permit capital to increase by 3% of any subsequent change in GDP. (See Figure 4) We ran the simulation for rates varying from 1% to 6% and show the results in table three by the column heading G1 to G6. For the low rates of growth in the simulation, the capital flow as a share of GDP, while initially large, gradually falls over time.

Our main interest in this simulation is the sensitivity of domestic growth in Mexico to the availability of foreign saving. This relationship is summarized in figure 7 with more detail shown in table three. In the simulations capital inflows rise over time. To simplify the visual presentation in figure 7 we have averaged the inflows over the 15 years of the simulation and express them in billions of 2003 dollars. Thus the figure tells us that if foreign saving continues at the level of 1996 over the 15 years of the simulation, (\$8.6 billion per year), the economy will grow by 4.8%. If foreign saving is increased to \$20.6 billion per year as it is in FSAVINCR-G4, growth increases to 5.3%. With this \$20.6 billion increase in foreign saving, investment rises by four percentage points from 23.3% of GDP to 27.3% and the growth rate of capital rises from 4.1% per year to 5.2%. Note that foreign saving here is net of interest payments, or equivalently that the foreign

saving comes in the form of grants or that the gross figures which we do not calculate is large enough to cover all additional debt and interest obligations.

Figure 7: Foreign saving and GDP growth

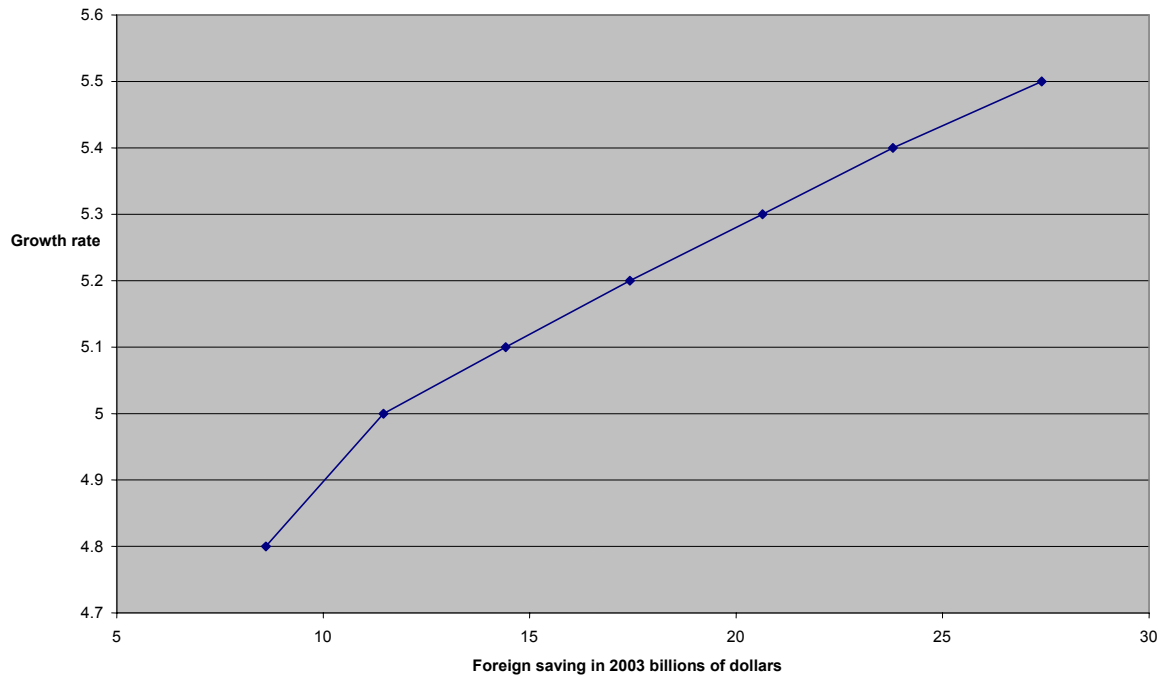


Table 3: Foreign savings simulation results: 1996-2011
Savings-driven investment closure

<i>Annual Compounded Percent Changes</i>		<i>1996 Initial Value</i>	<i>Base 1996 to 2011 An Cp %ch</i>	<i>FSAVINCR-G1 An Cp %ch</i>	<i>FSAVINCR-G2 An Cp %ch</i>	<i>FSAVINCR-G3 An Cp %ch</i>	<i>FSAVINCR-G4 An Cp %ch</i>	<i>FSAVINCR-G5 An Cp %ch</i>	<i>FSAVINCR-G6 An Cp %ch</i>
		Foreign Savings	92.96	0.0	2.5	4.4	5.9	7.3	8.5
GDP at market prices	2424	4.8	5.0	5.1	5.2	5.3	5.4	5.5	
Private Consumption	1694	4.3	4.4	4.5	4.6	4.7	4.8	4.9	
Fixed Investment	488	5.6	6.0	6.4	6.8	7.2	7.6	8.0	
Government Consumption	189	4.9	4.9	4.9	4.9	4.9	4.9	4.9	
Exports	1006	4.9	5.0	5.0	5.0	5.0	5.0	4.9	
Imports	-953	4.4	4.6	4.8	4.9	5.1	5.2	5.4	
Labor Force	5.78	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
(’000,000 people)	1.67	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
	15.75	4.1	4.1	4.1	4.1	4.1	4.1	4.1	
	9.62	4.1	4.1	4.1	4.1	4.1	4.1	4.1	
	2.63	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
	1.53	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
	37.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5946.47	4.1	4.4	4.7	5.0	5.2	5.5	5.8	
Wages	0.72	2.3	2.3	2.3	2.2	2.2	2.2	2.2	
	0.15	0.5	0.5	0.4	0.3	0.2	0.2	0.1	
	3.89	0.7	1.3	1.9	2.4	2.8	3.3	3.7	
	2.61	0.7	1.3	1.9	2.4	2.9	3.4	3.8	
	14.05	0.7	0.8	0.8	0.9	0.9	1.0	1.0	
	8.39	0.7	0.8	0.8	0.9	0.9	1.0	1.0	
Rent	2.05	5.3	5.3	5.3	5.2	5.2	5.1	5.1	
Rent	0.135	0.6	0.3	0.0	-0.3	-0.6	-0.8	-1.1	
<i>Initial and Final Year Values</i>		<i>1996 Initial Value</i>	<i>Base 2011 Final</i>	<i>FSAVINCR-G1 2011 Final</i>	<i>FSAVINCR-G2 2011 Final</i>	<i>FSAVINCR-G3 2011 Final</i>	<i>FSAVINCR-G4 2011 Final</i>	<i>FSAVINCR-G5 2011 Final</i>	<i>FSAVINCR-G6 2011 Final</i>
Investment	% Nom GDP	20.1	23.3	24.3	25.3	26.3	27.3	28.2	29.2
Private Savings	% Nom GDP	16.8	16.6	16.6	16.6	16.6	16.6	16.5	16.5
Foreign Savings	% Nom GDP	3.8	2.2	3.1	3.9	4.8	5.7	6.6	7.5
Trade Deficit	% Nom GDP	-1.3	-0.1	0.9	1.8	2.8	3.8	4.8	5.7
Government Savings	% Nom GDP	-0.5	4.5	4.6	4.8	4.9	5	5.1	5.2
Import Taxes	% Nom GDP	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Direct Taxes	% Nom GDP	10.6	10.8	10.7	10.7	10.7	10.6	10.6	10.5
Foreign Savings		92.96	92.96	134.76	179.35	226.85	277.40	331.16	388.33
Exchange Rate		1.00	1.13	1.10	1.08	1.06	1.03	1.01	0.98

Foreign saving has a very large impact on investment because all of the increase in saving by assumption is invested. But the effect on growth of this foreign saving is a good deal less dramatic. Each 1% increase in foreign saving increases the growth rate of the economy by only .1%. The reason for this is that capital is only one of four factors of production. By assumption the growth rates of the other three are not affected by changes in foreign saving. The same is true for the rate of technical change, set at 1% by assumption. If in fact foreign capital is devoted to investments that will either increase the growth rate of skilled labor or the rate of technical change in the Mexican economy, the growth rate of the economy will be more sensitive to variations in foreign saving. These simulated effects of foreign saving are undoubtedly lower bound estimates of the impact of foreign saving on the growth rate.

Two conclusions follow from this exercise. One is that it will take a very large inflow of foreign capital to bring the growth rate up to our goal of 6% if the inflows do not have an impact on either the growth rate of skilled labor or productivity. Given that

fact, the other implication of the figure is that one needs to consider ways by which foreign saving (or domestic saving) can be used more effectively to increase the growth rate. We explore several of these ways in the following section.

One further implication of these simulations is the strong negative relationship between foreign saving and the wage differential. Real wages for the unskilled rise by between .4% and .5% for each one percent rise in foreign saving. Skilled wages rise too but by far less. Foreign saving-led growth implies a rising trade deficit and an appreciating exchange rate. As the reader can see in table three export growth is virtually constant at 5% irrespective of how much foreign capital is invested, but imports rise. In the base run the exchange rate depreciated by 13% over the 15 year experiment period. As capital inflow increases the depreciation gets smaller, actually becoming an appreciation in the 6% experiment. In the full sector detail which we do not show here, we find that growth is increasing comprised of the non-traded goods sectors as the inflow of foreign capital increases. Agriculture and manufacturing grow more slowly, services more rapidly. Since the latter are relatively intensive in their use of unskilled labor and the growth in labor supply is fixed, unskilled wages rise and wage differentials narrow.

The Impact of Technical Change and Increases in Skilled Labor on the Growth Rate. In the last set of simulations shown in table 4 we examine the effect of technical change and the growth rate of skilled labor on the growth rate. In our previous simulations we varied the rate of capital formation and the growth rate of the labor force without tying either to the investment rate. We continue to do that here because, unfortunately, we do not have enough information on how much it costs to raise the average rate of technical change or how much the government would have to spend to increase the growth rate of skilled labor. Our estimates should be taken as a first indication of the sensitivity of growth to where the country invests.

In these simulations we first assume that foreign saving is growing at a rate of 3% with all the other parameters set at their base run levels. This is the simulation called FSAVINCR-G3 in table 4 and it implies that the average inflow of foreign capital is about \$17.2 billion per year (or \$18 billion if you start at the first year of the inflow). In the simulation called TFP1-FSAV3 we increase the rate of total factor productivity growth from 1% to 1.3% per year, while keeping capital inflows growing at 3%. Finally in LFG1-FSAV-3 we raise the rate of growth of skilled labor by one full percentage point from 3.6% to 4.6% and unskilled labor by the same amount. Technical change is reduced back to its initial level of 1%. Thus the simulation is a comparison of the effect of an increase of .3% in technical change with 1% growth in the labor force all assuming that capital inflows average about \$18 billion per year.

Table 4: A comparison of the effect of technical change and labor force growth

<i>Annual Compounded Percent Changes</i>		<i>1996 Initial Value</i>	Base	FSAVINCR-G3	TFP1-FSAV3	LFG1-FSAV3
			<i>1996 to 2011 An Cp %ch</i>	<i>An Cp %ch</i>	<i>An Cp %ch</i>	<i>An Cp %ch</i>
Foreign Savings		92.96	0.0	5.9	6.2	6.1
GDP at market prices	Real	2424	4.8	5.2	5.6	5.9
Private Consumption	Real	1694	4.3	4.6	5.0	5.3
Fixed Investment	Real	488	5.6	6.8	7.4	7.8
Government Consumption	Real	189	4.9	4.9	4.9	4.9
Exports	Real	1006	4.9	5.0	5.5	5.8
Imports	Real	-953	4.4	4.9	5.4	5.6
Labor Force	Agric-Male	5.78	1.6	1.6	1.6	2.6
('000,000 people)	Agric-Female	1.67	1.6	1.6	1.6	2.6
	Unskilled-Male	15.75	4.1	4.1	4.1	5.1
	Unskilled-Female	9.62	4.1	4.1	4.1	5.1
	Skilled-Male	2.63	3.6	3.6	3.6	4.6
	Skilled-Female	1.53	3.6	3.6	3.6	4.6
	Land	37.90	0.0	0.0	0.0	0.0
	Capital	5946.47	4.1	5.0	5.2	5.4
Wages	Agric-Male	0.72	2.3	2.2	2.5	1.8
	Agric-Female	0.15	0.5	0.3	0.5	-0.3
	Unskilled-Male	3.89	0.7	2.4	3.7	1.0
	Unskilled-Female	2.61	0.7	2.4	3.8	0.9
	Skilled-Male	14.05	0.7	0.9	1.0	0.7
	Skilled-Female	8.39	0.7	0.9	1.0	0.6
Rent	Land	2.05	5.3	5.2	5.5	6.4
Rent	Capital	0.135	0.6	-0.3	-0.4	0.3
<i>Initial and Final Year Values</i>		<i>1996 Initial Value</i>	Base <i>2011 Final</i>	FSAVINCR-G3 <i>2011 Final</i>	TFP1-FSAV3 <i>2011 Final</i>	LFG1-FSAV3 <i>2011 Final</i>
Investment	% Nom GDP	20.1	23.3	26.3	26.7	27.7
Private Savings	% Nom GDP	16.8	16.6	16.6	16.5	16.6
Foreign Savings	% Nom GDP	3.8	2.2	4.8	4.7	4.7
Trade Deficit	% Nom GDP	-1.3	-0.1	2.8	2.9	2.9
Government Savings	% Nom GDP	-0.5	4.5	4.9	5.5	6.4
Import Taxes	% Nom GDP	0.6	0.7	0.7	0.8	0.8
Direct Taxes	% Nom GDP	10.6	10.8	10.7	10.6	10.8
Foreign Savings		92.96	92.96	226.85	235.04	233.17
Exchange Rate		1.00	1.13	1.06	1.03	1.12

As we found in our foreign saving simulations, raising foreign saving by 3% raises the growth rate of the economy by .4% per year, from 4.8% to 5.2%. If that additional foreign saving or investment could in some way be directed to increasing total factor productivity growth (TFP1-FSAV3), that would push the growth rate up to 5.6%. That extra TFP growth, in addition to boosting the growth rate, would also have a dramatic positive effect on the wages of the unskilled. For males the growth rate of

wages jumps by 1.3% compared to the wage growth coming from 3% additional foreign saving by itself. If, on the other hand, the additional foreign saving is channeled into government expenditures on education, and if those expenditures permit the labor force to grow by a full one percentage point faster than in the base run, the overall growth rate jumps up to 5.9%, which is .7% higher than the rate reachable by undirected 3% additional foreign saving.

Reaching a 6% Growth Rate. It is clear that focusing investment on things that increase either TFP or the supply of skilled labor have a big effect on the growth rate. But the question remains of how much foreign capital is needed to reach the desired 6% growth rate. That is going to depend on how much of total investment can be financed by increased domestic saving and in turn how much investment is devoted to increasing either the supply of skilled labor or overall productivity, and on how much it costs to produce those changes. Since we have been unable to estimate the cost relationships and do not know what either the investment or saving strategy is going to be, we cannot make a firm estimate of foreign capital requirements. But our simulations give us an idea of the orders of magnitude involved. If productivity improvement continues to grow at only 1% and there is no growth in skilled labor, to reach 6% growth our results say that Mexico would need investment rates of over 30%. Unless there is an increase in domestic saving, that amount of total investment would require over \$30 billion dollars per year of foreign capital net of interest payments. Such an amount of foreign borrowing is likely to be infeasible, because of the increased debt and interest burden it would imply. **The capital requirements can be reduced considerably if a significant part of the additional investment is devoted to capital improvements that increase productivity or the supply of skilled labor along the lines shown in table 4. Under those assumptions Mexico should be able to reach 6% growth rate with investment rates of 26-27% or of 30% if productivity continues to grow at only 1% per year.**

There remains the question of how to finance that additional investment. **If there is no increase in domestic savings, the simulations reported in table four suggest that around \$17-\$20 billion per year of foreign saving would be required, again, net of interest payments. That is a large amount of additional borrowing. A more balanced approach would attempt to finance at least half of the additional investment by increases in domestic savings.** Since Mexico has a relatively low rate of direct taxation because of the existence of oil revenues, it could raise tax rates to substitute government for foreign savings. In the set of simulations displayed in table 2 we examined the financing question. First we showed that each percentage point increase in government savings raised the growth rate by .2%. (Experiment GTAXUP). In the experiment labeled VIRTUOUS2 we combined increases in both domestic and foreign savings and an increase in the growth rate of labor to get a 6% growth rate. In this experiment the required investment rate rises by 7 percentage points (from 23.3% to 30.4%), 2.4 percent of which is financed by foreign saving, and 4.6% from domestic sources.¹² **From all of these experiments we conclude that Mexico needs to raise its investment rate by between four and seven percentage points to reach a 6% growth**

¹² The investment requirements are higher here because we did not increase the rate of growth of productivity. The financing shares can be calculated from the figures on the lower portion of table 2.

rate and that this can be financed by a mixture of increased tax rates, a rise in government revenue because of growth and some increase in foreign savings. The latter need not, and we would argue, should not comprise any more than half of the total increase in capital formation.

IV. The Impact of Faster Mexican Growth on the US Economy

Largely because of NAFTA, the markets in labor and goods in Mexico, the U.S. and Canada are becoming increasingly integrated. Among other things, this means that changes in the Mexican growth rate have an increasingly significant impact on the other two economies. Faster Mexican growth increases the demand for U.S. and Canadian exports and may, over time, reduce the flow of legal and illegal immigrants into the U.S. labor market. Improvements in Mexican infrastructure, particularly roads, reduce transportation costs and the price of goods traded on both sides of the Mexican border. In all of these cases, the U.S. and Canada benefit from faster growth in Mexico.

Our model can give us some rough estimates of the probable size of these effects for trade and migration, at least for the U.S. economy. Consider first the relationship between Mexican growth and U.S. exports to Mexico. Our model says that with no change in policy or inflows of foreign capital, Mexico will grow at 4.8% (see the base run in Table 2). In that run, imports grow by 4.4% per year and jobs for the unskilled increase by 4.1%. If Mexico can raise the growth rate to 6% per year (as in Table 2, the experiment labeled VIRTUOUS2), imports would grow by 5.8% compared to 4.4% in the base run and employment of the unskilled would grow by 4.8%, compared to 4.1%. If we assume that the U.S. share of Mexican imports stays constant, we can estimate the impact of the additional growth of import demand by Mexico on U.S. exports. In 2003, Mexican imports from the U.S. amounted to around \$97 billion dollars. Using 2003 as a base, we find that **if Mexico is able to raise its growth from 4.8% to 6%, Mexican imports from the US in the first five years will, on average, be about US\$4.6 billion higher than they would have been in the base run. This difference grows to over US\$20 billion per year in the next five years.**

Those numbers do not appear to be terribly significant for the entire US economy, given that in 2003 GDP in the US economy was about \$11 trillion and total US exports were about \$1 trillion. But they are significant for certain states, in particular Texas which alone accounts for just under one-half of U.S. exports to Mexico, and for which those exports account for about 5% of the total GDP of the state.¹³ If the Texas share of total US exports stays constant, the added growth in Mexico will mean an additional US\$2 billion in exports per year for the first five years of the simulation and over US\$9 billion per year in the last five. That will add a bit less than 0.2 percent to Texas GDP in the first five years but almost one percent in the last five years.

¹³ This overstates the net impact of exports on Texas GDP since some part of Texas exports to Mexico are themselves produced in other states. But the same is true in the other direction. Some of other states' exports to Mexico may be produced in Texas.

Consider next the effect of changes in Mexican growth on the migration of Mexican unskilled labor to the United States. Conceptually migration should be a positive function of the differential between what can be earned in the US and in Mexico. The differential shrinks the higher the rate of job creation and the faster the growth in wages in Mexico. Our model gives us an estimate of how both wages and employment change in response to higher growth. We will use these to get an idea of the impact of fast growth on migration.

The Harris-Todaro model of rural-urban migration gives a useful way of thinking about the problem.¹⁴ That model makes migration a function of the difference between expected earnings in the receiving and sending labor markets. Wages in the urban labor market are adjusted by the probability of a migrant finding a formal sector job, which they proxied by the unemployment rate. In the case of migration between Mexico and the United States, we will argue that it is better to adjust the wage by the probability of finding a formal sector job *in Mexico* rather than the receiving labor market in the US. We proxy that probability, as Harris and Todaro did by one minus the rate of unemployment plus underemployment in the informal sector. If we do this, our model gives us the information to estimate the change in the wage differential as the Mexican economy moves from the base run growth rate of 4.8% to the desired growth rate of 6%.

According to Table 2, at the 6% growth rate, employment growth for the unskilled rises from 4.1% in the base run to 4.8%. Wages rise from 0.7% per year to 2.4%. Using those figures and assuming that the wages for the unskilled in the US are from four to ten times those in Mexico¹⁵, we find that raising the overall growth rate to 6% will reduce the wage differential between the US and Mexico by between 0.6% and 2%.¹⁶ If the elasticity of migration with respect to the differential lies between one and two, then the increase in the growth rate will reduce Mexican unskilled migration to the US by at most 4%. Since the net annual migration flow is thought to be around 400,000, the impact of higher growth in Mexico is unlikely to reduce migration by more than 16,000 per year, a relatively miniscule number given the size of the US unskilled labor market.

V. Conclusions

Without some significant change in development strategy, Mexico is unlikely to grow much more than 5% per year, which is not enough to reduce the development gap between it and its two North American partners. The only ways to improve this performance are by increasing the growth rate of its two key factors of production, skilled labor and capital or by some way of increasing total factor productivity. We looked at several of these alternatives here. Raising domestic saving either through tax increases or

¹⁴ Michael P. Todaro, Michael P, “A Model of Labor, Migration and Urban Unemployment in Less-developed Countries,” *American Economic Review* (1969), 59: 138-148.

¹⁵ Using varying rates for sensitivity analysis.

¹⁶ The higher the differential, the smaller the percentage change in the differential.

increases in the saving rate of households do raise the growth rate but only by 0.3% at best. Permitting foreign saving to increase along with GDP also helps, but here again it takes a 3% increase in foreign saving coupled with an over 4% increase in domestic saving to bring the growth rate of the economy up to 6%. Alternatively when we hypothesized an increase in the rate of growth of skilled labor along with the increase in capital formation we were able to produce our target rate of six percent growth in the economy.

Foreign saving has a positive impact but in isolation its effect appears to be rather small. According to the simulations, each one percentage point increase in foreign borrowing only raises the growth rate of the economy by .1 percentage point. In our last simulation we showed that the impact of investment on growth could be increased if it took the form of a concerted effort to invest in transportation or research which increased TFP or alternatively if it increased the supply of skilled labor. Under that assumption Mexico should be able to reach a 6% growth rate with an increase in the investment rate of between 4-7 percentage points, at least half of which can and should be financed by domestic saving.

What is also clear from our simulation results is the strong positive link between capital inflows and the welfare of unskilled labor. Increasing foreign saving directly increases investment and the rate of growth of the economy. That increases the demand for unskilled labor and raises the wage rate. It also lowers the profit rate. In addition, the capital inflows reduce the rate of devaluation, which helps the non-traded goods sector, a big employer of the unskilled.

A Proposal for a North American Investment Fund: Adapting Europe's Model and Avoiding Its Mistakes

Robert A. Pastor

The poorer countries of southern and eastern Europe sought membership in the European Union because they viewed it as a vehicle of convergence on a sure path to a first-world economy. Mexico had a similar motive for pursuing a North American Free Trade Agreement (NAFTA). Although the reason for seeking admission to the two largest free trade areas in the world was the same, the results were very different. Europe witnessed a striking convergence between rich and poor countries, but North America did not. What explains the difference? Europe's model is often dismissed in the U.S. as bureaucratic and sclerotic, and yet Europe succeeded in narrowing disparities. Could North America learn something from Europe's approach? Are there policies that could be adapted, and mistakes that could be avoided?

One partial answer to the question can be found in the experience of the United States. After the Civil War, the difference in income between the northern and southern states was chasmic. With the benefit of a single currency and free movement of labor, capital, and goods, that gap narrowed significantly, but it took a century,¹⁷ and a massive migration of six million African-Americans northward between 1916 and 1970.¹⁸ In other words, under the most optimal conditions of free movement of factors of production within a single state, more than 100 years were needed to achieve real convergence in income between rich and poor regions.

In the case of North America, the income gap between Mexico and its northern neighbors has not narrowed in the decade since the North American Free Trade Agreement (NAFTA) came into effect in January 1994. Even if Mexico were to grow 1 percent more per year every year than the United States, much more than a century would pass before Mexico would close the income gap. In contrast, Europe significantly closed its income gap between the richer and poorer countries in just fifteen years.

North America represents a very different model than Europe's, and few in the United States would consider replicating the model, but failing to learn from fifty years of experience with regional economic integration would be a serious mistake. The issue

¹⁷ Sukkoo Kim, "Economic Integration and Convergence: U.S. Regions, 1840-1987," working Paper 6335, National Bureau of Economic Research (Cambridge, Mass: December 1997). Virginia Postrel, "A Case Study in Free Trade: American Incomes Converge, but not at the Bottom," The New York Times, February 26, 2004.

¹⁸ Eric Foner, "Reconstruction II: Economic and Social Aspects," The Reader's Companion to American History. http://college.hmco.com/history/readscomp/recah/html/ah_074102_iieconomican.htm

for North America is **not** whether to **adopt** the European model; the two cases are too different. The question is: What can be learned and adapted from Europe's experience?

We shall pursue this question, first, by comparing the European and North American experiences. Then, we will analyze Europe's efforts to reduce disparities between rich and poor countries. Third, we will examine the lessons from Europe's past experience and its current enlargement. Fourth, we will offer a proposal for a North American Investment Fund, which is based on the lessons of Europe's experience and the needs of North America. If Mexico were to grow at 6 percent and the United States at 3 percent, the income gap would close by 20 percent in a decade, and if that trajectory could be sustained, in twenty years, the income ratio would be roughly 2:1. What does Mexico need to do and how much and what kind of capital would Mexico need to invest to sustain a 6 percent rate of growth?

I. Two Models: Similarities and Differences

The point of departure for European integration could not have been more different from North America's. So too were the evolution and destination of the two experiments. Any proposal for North America should begin with a full understanding of that difference.

Each region has a personality that is a composite of various factors: the origin and timing of the agreement; its objectives and policies on internal disparities; the composition of its members; its security foundation; the nature of its governing authority; and the philosophy that defines its distinctive vision.

Europe was born from dread - a revulsion from two catastrophic wars and a dream to reconfigure sovereignty to eliminate the possibility of another conflict. The preamble to the Treaty for the European Coal and Steel Community, established in 1951 as the first "practical" step toward a united Europe, began by recognizing "that world peace can be safeguarded only by creative efforts," and the countries resolved that "age-old rivalries" need to be replaced by a merging of interests that would form "the basis for a broader and deeper community among peoples long divided by bloody conflicts." Six years later, in the Treaty of Rome establishing the European Economic Community, six European nations (Belgium, France, Germany, Italy, Luxembourg, and the Netherlands) declared that they were "determined to lay the foundations of an ever closer union among the peoples of Europe."¹⁹

Since its beginning, the European Union (EU)²⁰ established one of its key objectives as the need to "reduce the differences between the various regions and the backwardness of the less favored regions." With the first enlargement in 1973 to include the United Kingdom, Denmark, and Ireland, the U.K. pressed for a more concerted

¹⁹ "Preamble to the Treaty of Rome," in The European Union: Readings on the Theory and Practice of European Integration, ed. Brent F. Nelsen and Alexander C-G. Stubb, 2nd ed. (Boulder, Co: Lynne Rienner Publishers, 1998), pp. 13-15.

²⁰ We shall use the term, "European Union" or EU to refer to the European integration effort even though that is just the latest of the many terms used to describe it.

approach to help the poorer regions, and George Thomson, a British Commissioner, was given responsibility to oversee EC regional policy. The subsequent enlargement to include Greece (1981) and Spain and Portugal (1986) led to a significant re-structuring and infusion of aid to these countries and Ireland. The EU model is based on **"recognition that wide disparities are intolerable in a community, if the term has any meaning at all."**²¹

In 1986, the 12 members of the European Community signed the Single European Act, which declared their intent to speak with "one voice," and in 1992, they established the European Union to forge a common citizenship, a single currency, and a united foreign and defense policy.

The North American Free Trade Agreement emerged from different soil. It aspired to be only an area where goods, services, and capital should be traded freely. Labor's movements were restricted. Mexico's President Vicente Fox raised the idea of a Common Market soon after his election in July 2000, but until that moment, no other leader in the three countries had even broached a preliminary step - a Customs Union with a common external tariff. NAFTA is also silent on an issue – disparities among members - in which the EU has been preoccupied, though the income and employment gaps are far wider in North America than in Europe.

In terms of gross product and territory, North America is about 25 percent larger than the EU. The two entities are comparable, but the aggregate size of the two regions masks the unevenness of its membership.²² The EU is composed of four strong states – Germany, France, U.K., and Italy – followed by numerous middle powers and then some very small states. The most powerful state- Germany – has about one-fourth of the EU's gross product and 7 percent of the world's product. The center and power of North America is the United States with almost 90 percent of the region's gross product and 29 percent of the world's.

To summarize, Europe aimed to avoid another war, and North America, to avoid protectionism. The goals similarly diverged, with Europe seeking solidarity and North American wanting to reduce trade and investment barriers. Europe therefore wanted to reduce disparities among and within its members, and North America ignored the issue. Europe's membership is more balanced, whereas North America's asymmetry is pronounced. Finally, while both trade agreements rest on a base of collective security, Europe constructed large and capable institutions, and North America has developed few institutions and most of them are circumscribed or weak. All this means that Europe has a consciousness, a sense of itself as a region, which North America lacks. (See Table 1)

The differences between the two regional integration models are real and should not be ignored or under-estimated. On the other hand, both regions are grappling with

²¹ European Commission, First Report on Economic and Social Cohesion, 1996 (Luxembourg: Office for Official Publications of the European Commission, 1996), p. 13.

²² World Bank, World Development Indicators Database (www.worldbank.org/dataquery.html).

similar challenges of how sovereign governments should adapt their policies to cope with an integrated market. Europe's journey has been more challenging as its decisions have required a consensus among all members. Every effort to move forward - from a coal and steel community to a free-trade area, a customs union, a common market, a unified currency and government - has been so slow that it has necessitated a crisis to resolve. In comparison, North America has only three members. If its leaders can embrace the vision and locate the will, decisions could be far easier. And to the extent that North America can learn from Europe's experience, it might find a smoother, more productive path toward integration.

Parameters of Europe and North America
Table 1

Parameters	EU	NAFTA
1. Origin	Fear of War	Secure market
2. Objectives	Unity, solidarity; Common Market	Lower trade and capital barriers; competitiveness
3. Policy on Disparities	Reduce	Ignore
4. Composition	Members – Even	Unbalanced
5. Security Base	NATO	Rio Pact/US-Canada
6. Authority/ Institutions	Supra-natl instit.; Natl Govts	Natl. Govts; Dispute mechanisms
7. Philosophy	Social market Economy	Regul. free market; Litigious dispute- settlement

The disparity in income between Mexico and its northern neighbors is the most salient feature of North America, and yet the three countries have failed to fashion a strategy to address it. Even measuring the income gap is not straightforward, though there is no disputing its existence. In the four tables below, we assess the gap with four types of measurement. In Table 2, we use GDP per capita in current dollars, and the ratio of U.S. to Mexico begins at a low of 4.03 in 1980 then rises to 5.6 in the year before NAFTA and to 6.27 a decade later, about 50 percent worse than in 1980. In comparison, the ratio between rich and poor countries in the European Union is much more modest and only slightly worsened from 1980 to 2002. (This omits Luxembourg, whose small population and large banking assets, skew their per capita income.) The enlargement of the EU in May 2004, however, alters the previous comparison. The new gap – this time between Denmark and Latvia – is even worse than that of North America's.

Measuring the Gap in Income

Ratio of GDP per capita (current prices, US\$) between the richest and the poorest country in the European Union and NAFTA, 1980-2004

Table 2

Group*	1980	1990	1993	2000	2002	2004
EC/EU (1957)	2.11	3.55	3.06	2.84	2.70	7.79
	(Ger/Ireland)	(Den/Port)	(Den/Port)	(Den/Gre)	(Den/Port)	(Den/Latvia)
NAFTA (1994)	4.03	7.35	5.58	5.84	5.66	6.27
	(US/Mexico)	(US/Mexico)	(US/Mexico)	(US/Mexico)	(US/Mexico)	(US/Mexico)

NAFTA=North America Free Trade Agreement

Sources: International Monetary Fund, *World Economic Outlook Database*, September 2004

US and Mexico: GDP per capita (constant 1995 US\$)

Table 3

Country	1960	1970	1980	1990	1993	2000	2002
Mexico	1,642	2,300	3,288	3,193	3,327	3,810	3,721
United States	13,155	16,893	21,001	26,141	26,592	31,730	31,891
Dev. Gap ratio	8.01	7.34	6.39	8.19	7.99	8.33	8.57

Source: World Bank, *World Development Indicators* database, <http://devdata.worldbank.org/dataonline/>

US and Mexico: GDP per capita, PPP (current international \$)

Table 4

Country	1960	1970	1980	1990	1993	2000	2002
Mexico	-	-	4,134	6,094	6,871	8,920	8,972
United States	-	-	12,228	23,131	25,727	34,162	35,746
Dev. Gap ratio	-	-	2.96	3.80	3.74	3.83	3.98

Note: - data not available

Source: World Bank, *World Development Indicators* database, <http://devdata.worldbank.org/dataonline/>

Canada, US and Mexico: hourly wages for production workers in manufacturing, 1980-2002

(in US dollars)

Table 5

Country	1980	1990	1993	2000	2002
Canada	8.87	16.33	16.97	16.48	16.68
US	9.63	14.72	16.28	19.46	21.11
Mexico	2.21	1.58	2.40	2.19	2.60
Ratio of highest to lowest	US/Mexico	Canada/Mexico	Canada/Mexico	US/Mexico	US/Mexico
	4.36	10.34	7.07	8.89	8.12

Source: US Department of Labor, *International Comparisons of Hourly Compensation Costs for Production Workers in Manufacturing-Table 2*, <ftp://ftp.bls.gov/pub/special.requests/ForeignLabor/ichccsuppt02.txt>

Table 3 measures GDP per capita with constant 1995 dollars, and this shows more consistency though also a wider gap that shows some volatility between the ratio of 8 in 1960 and virtually the same in 1993, on the eve of NAFTA, by 2002, the ratio of 8.6 is worse of all. Table 4 looks at GDP per capita, based on purchasing power parity, in current dollars. The PPP measure narrows the gap, but it doesn't improve over time for Mexico. Indeed, it is wider in 2002 (3.98) than it was in 1993 (3.74).

Emigrants do not bother to examine the aggregate data. They move in search of higher wages, and in Table 5, the gap in hourly wages for production workers in manufacturing between 1980 and 2002 doubled - from 4.36 to 8.12. What this means is that the average Mexican worker can earn more than eight times more working in the United States as in Mexico. That is the magnet attracting Mexican migrants.

While the numbers differ in the four tables, the pattern is similar and persuasive. With every measure and table, the gap has worsened since 1980. The gap is wider in constant dollars, and half as wide with PPP. But no matter how the issue is sliced, Mexico's goal of converging has slipped further away since NAFTA began.

II. The European Experience with Convergence

Although Europe defined one of its principal goals as reducing disparities among its members, it was slow to act on that goal, and did not allocate serious resources to achieve it for nearly thirty years. The Treaty of Rome gave voice to the goal and also identified two new instruments to address it. The European Investment Bank was established to make loans to lagging regions, and the European Social Fund would provide funds for vocational training.

However, the first European institution that focused exclusively on the problem of regional disparities was the European Regional Development Fund (ERDF), which was established in 1975 after the EU was enlarged to include the United Kingdom, Ireland, and Denmark. The ERDF's purpose was "to help to redress the main regional imbalances in the Community."²³ Roughly 85% of the ERDF-funded projects in the 1970s and 1980s were used for infrastructure, and 91% of its funds went to the poorest regions in five countries - France, Germany, Italy, Greece, and the United Kingdom. Member governments co-financed the projects. The budget increased eight-fold in the first ten years of the program (1975-84), but that only amounted to one-eighth of what was spent for the Common Agricultural Policy (CAP).

Jacques Delors as president of the European Commission in the 1980s guided the organization through enlargements to include Greece, Spain, and Portugal. Delors used the moment to transform the mandate, the programs, and the amount of funds devoted to the task. The Single European Act of 1986 included a new concept and a more precise set of goals under the title of "Economic and Social Cohesion" (Article 130A-E):

²³ Rainer Martin, Regional Policy in the European Union: Economic Foundations and Reality (Brussels: Centre for European Policy Studies, 1998), pp 81-83.

"In order to promote its overall harmonious development, the Community shall develop and pursue its actions leading to the strengthening of its economic and social cohesion. In particular, the Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favored regions, including rural areas." ²⁴

The operational definition of "economic cohesion" was convergence of incomes, rates of employment, and competitiveness. Under the "Delors I" plan, adopted by the EC in 1988 for a five-year plan (1989-93), the budget for Structural Funds for the poorer countries doubled in real terms, to 60 billion ECUs over five years, reaching in 1992 to almost 30% of the total budget and about .3% of EC Gross Domestic Product.

The end of the Cold War and the negotiations for the Maastricht Treaty led to Delors II (a six-year plan, 1994-99), which boosted funding for cohesion by fifty percent, up to .46% of EU GDP. The Maastricht Treaty also created two more cohesion instruments: the Cohesion Fund for the four poorest countries - Ireland, Greece, Spain, and Portugal - and the European Investment Fund for the poorer regions.

The EU allotted € 15.5 billion for the Cohesion Fund's four poorer countries for grants for projects between 1993-99, rising from an annual level of € 795 million in 1993 to € 2,769 million in 1999. This, however, represented only about 10 percent of money allocated to the "Structural Funds," which, in 1995, referred to the following four funds that has previously been established: The European Regional Development Fund (ERDF, which represented 50% of total Structural Funds), European Social Fund (ESF - 30% of the total), Agriculture (17%), and Fisheries (3%). The Structural funds were also grants and amounted to 170 billion ECUs during the 1994-99 period, or about one-third of total Community spending. The total budget for 2000-06 amounts to € 195 billion (at 1999 prices). This represents 1.27 percent of the EU's GDP in 1999. ²⁵

The Cohesion Funds are spent on the environment, infrastructure, and research and development in the four countries whose per capita GDP is less than 90% of the EU average (Spain, Portugal, Greece, Ireland). The EU claims that the total amount allocated for structural and cohesion funds amounted cumulatively to 6.5% of annual EU GDP during the decade of 1989-99. In comparison, the Marshall Plan aid from 1948-51 amounted cumulatively to 4% of annual US GDP. ²⁶ The comparison is a bit deceptive both on statistical and substantive grounds. The EU aid was a ten-year total, and the Marshall Plan was for four years, though the denominator in both cases is the GDP in just the first year of the program. Moreover, the EU transferred the funds to itself, often to the same countries. Nonetheless, in an age when foreign aid has been declining

²⁴ European Commission, First Report on Economic and Social Cohesion, 1996 (Luxembourg: Office for Official Publications of the European Commission, 1996), p. 13.

²⁵ For the data, see http://europa.eu.int/comm/regional_policy/activity/index_en.htm

²⁶ European Commission, First Report on Economic and Social Cohesion, 1996, p. 9.

precipitously, EU transfers represent a significant effort in a positive direction. In just the period from 1992 programmed through 2006, the EU will have transferred roughly € 425.2 billion.

Convergence in EU, 1988-2003
Table 6

Measure	Year(s)	Greece	Spain	Ireland	Portugal	EU3(a)	EU12(b)	EU15(b)
Annual aver. % change in GDP	1988-1998	1.9	2.6	6.5	3.1	2.6	2.0	2.0
	1988-1993	1.2	2.0	4.4	2.6	2.0	1.7	1.7
	1993-1998	2.7	3.1	8.7	3.6	3.1	2.4	2.5
	Projections 1998-2003	3.9	3.1	6.8	2.1	3.1	2.0	2.1
Annual aver. % change in pop.	1988-1998	0.5	0.1	0.5	0.0	0.2	0.4	0.4
	1988-1993	0.7	0.1	0.2	-0.2	0.2	0.6	0.5
	1993-1998	0.3	0.1	0.7	0.2	0.2	0.3	0.3
	Projections 1998-2003	0.9	0.7	1.4	0.8	0.8	0.4	0.4
GDP per head (PPS), EU15=100 (c)	1988	58.3	72.5	63.8	59.2	67.8	106.6	100.0
	1989	59.1	73.1	66.3	59.4	68.4	106.4	100.0
	1990	57.4	74.1	71.1	58.5	68.6	106.4	100.0
	1991	60.1	78.7	74.7	63.8	73.0	105.2	100.0
	1992	61.9	77.0	78.4	64.8	72.3	105.3	100.0
	1993	64.2	78.1	82.5	67.7	74.0	105.0	100.0
	1994	65.2	78.1	90.7	69.5	74.4	104.9	100.0
	1995	65.9	78.2	93.3	69.7	74.6	104.8	100.0
	1996	66.6	79.3	93.5	70.0	75.5	104.7	100.0
	1997	65.9	79.9	103.7	73.3	76.3	104.5	100.0
	1998	66.9	79.2	106.1	72.2	75.9	104.6	100.0
	1999	68.2	82.1	112.2	71.9	77.9	104.2	100.0
	2000	67.7	82.2	115.2	68.0	77.3	104.3	100.0
	2001 (d)	64.7	84.1	117.9	69.0	78.1	104.2	100.0
Projections	2002	69.0	83.4	119.1	72.5	79.0	104.1	100.0
	2003	70.4	83.8	119.9	72.1	79.5	104.0	100.0

Notes:

a. Greece+Spain+Portugal

b. growth rates 88-98 and 88-93: excluding new German Länder

c. ESA95 (European System of national and regional Accounts of the Community) methodology from 1995 onwards.

d. Greece: new population figure for 2001 (provisional census result)

PPS=Purchasing Power Standards

Source: Eurostat, calculations DGREGIO; European Commission, Second Progress Report on Economic and Social Cohesion, January 2003.

In its first Cohesion Report in 1996, the European Commission focused its analysis on the four poorer “cohesion” countries. It found the evidence mixed as to whether the disparities in income and employment between the richer and poorer states had narrowed, but by the Sixth Report issued in February 1999, the Commission declared: **"The evidence is now unambiguous: the GDP, or output, per head of poorer regions is converging toward the EU average." From 1986-99, the per capita GDP in the four Cohesion countries rose from 65% of the EU average to 78%. Since then, Europe's economies stagnated, but the four cohesion countries continued to close the gap, rising to more than 80% of the average by 2003.** (See Table 6).

Population growth rates in North America are much higher than Europe's, but that is not the cause of the divergence in income or the migration to the United States. Mexico's birthrate has averaged about 1.4 percent annually in the past decade (down from 2.4 percent three decades ago), while the United States is about 1 percent and Canada, about .88 percent. Emigration from Mexico has increased to the United States as the population growth rate has declined in Mexico, and interestingly, the states in Mexico with the highest numbers of emigrants are those that reflect a decline in population.²⁷ While the dramatic increase in Mexico's population since World War II undoubtedly set the stage of larger migration flows, the growing numbers reflect their own dynamic and particularly the higher income and the relative ease of migration.

While all four Cohesion countries (Ireland, Spain, Portugal, and Greece) have made substantial progress since entering the EU, an analysis of the differences in their rates of growth is useful for assessing the relative effectiveness of the EU's regional policies. Ireland has been successful beyond the most optimistic expectations - with its per capita income moving from the poorest country in the European Union in 1980 to the third richest in 2000. Although burdened with a weak infrastructure and educational system, Ireland took quick advantage of the EU and achieved the highest growth rates of any member state.²⁸ Its per capita GDP rose from only 61% of the EU average in 1986 to 96.5% one decade later. By 2002, Ireland's per capita income was \$31,334 - ranking above the U.K., Germany, and France - at 119% of the EU average.²⁹ Growth was not evenly distributed within Ireland. Most of it was concentrated in the eastern part of the country, particularly the service sector around Dublin.

Ireland received significant resources from the EU. For the decade beginning in 1989, Ireland received € 10.2 billion from both Structural and Cohesion Funds, and the government matched that amount with counterpart investments. The EU transferred

²⁷ For information on population growth, see Jean Dumas, The Populations of the NAFTA (Statistics Canada, 2001) or see: <http://www.statecan.ca/english/freepub/61-532-XIE/14-dumas.html>); also World Bank, World Development Indicators. For the data on the poorer states, see Rafael Tamayo-Flores, “The Differential Impact of International Integration on Local Economies: How Are lagging Mexican Regions Performing?” Documento de Trabajo AP-77, Mexico City: CIDE, 2000, p. 22.

²⁸ European Commission, The Impact of Structural Policies on Economic and Social Cohesion in the Union, 1989-99 (Luxembourg: Office for Official Publications of the European Communities, 1997), p. 71.

²⁹ EC, Second Report on Economic and Social Cohesion (2003); and International Monetary Fund (Table 6).

resources that were equivalent to 2.8% of Ireland's GDP. National counterpart funding raised the total investment to 5% of GDP.³⁰ This undoubtedly provided a significant boost to Ireland's development. The Economic and Social Research Institute in Dublin did a rather intensive analysis and evaluation of the EU's programs in Ireland and concluded that "no single factor can explain the economic turnaround," but it identified three mutually reinforcing variables: the gradual accumulation of human capital; fiscal control and the maintenance of wage competitiveness; and a sharp increase in EU structural funds. These funds began to arrive in 1989 just when there was a substantial backlog of projects and urgent infrastructural needs. **"Without the support of the structural funds," the report concludes, "congestion in public infrastructure and constraints in third level education would have limited the recovery."**³¹ Still another reason was that the Irish sought the conditionality required to gain the cohesion funds. They accepted reduced and more transparent tax payments, and a leaner and more efficient bureaucracy. Using several different models, the Institute concluded that the combined effect in the period 1995-99 raised GNP by 3-4% above the level it would have been without the EU funding.³²

Ireland's trajectory was astonishing, but the other three poor countries - Spain, Portugal, and Greece – also made progress. All three southern European governments slowly opened their economies and began to emerge from their authoritarian, protectionist shells in the early 1960s. As tariffs declined, foreign investment arrived, and the result was that all three countries witnessed important economic growth and an increase in real wages during the decade of 1963-73: 6.4% in Spain, 6.8% in Portugal, and 7% in Greece.³³

Spain's per capita GDP rose from 70% of the average of the EC in 1986 to 84% in 2003. The scale of EU transfers to Spain tripled between the two periods (1989-93 and 1994-99), and it is programmed to continue its high rate until 2006. By that time, Spain would have received € 111.6 billion – about the same as the other three cohesion countries combined and double the next highest recipient. Adding both the national counterpart funding and the private sector financing for the EU projects, the total amount of resources mobilized by the EU constituted about 1.5% of Spain's average annual GDP in 1989 and 3.4% in the years, 1994-99.³⁴ The investments were concentrated in infrastructure, primarily roads, but attention and resources were also devoted to telecommunications. Within five years of its entry into the EU, foreign businesses tripled their direct investment in Spain, giving rise to suggestions that it was "turning into the continent's Sun Belt."³⁵

³⁰ European Commission, The Impact of Structural Policies (1997), pp. 73-75.

³¹ Patrick Honohan, ed., EU Structural Funds in Ireland: A Mid-Term Evaluation of the CSF, 1994-99 (Dublin: The Economic and Social Research Institute, 1997), pp. xv-xxi.

³² Ibid., p. xviii.

³³ See Otto Holman, Integrating Southern Europe: EC Expansion and the Transnationalization of Spain (N.Y.: Routledge, 1996).

³⁴ European Commission, The Impact of Structural Policies (1997), p. 45.

³⁵ Stephen Greenhouse, "With Spain in Common Market, New Prosperity and Employment," New York Times, January 15, 1989, pp. 1, 9; and Alan Riding, "Spain Aims for a Competitive Edge in a Unified Europe," New York Times, June 14, 1992, p. F11.

During the last decade, Portugal grew faster than Spain and the EU as a whole but, of course, it started from a lower base. Its GDP per capita increased from 55% of the EC average in 1986 to 72% in 2003. With a weaker economy, Portugal's development has been more unbalanced. Most of the country has remained poor, but average income in its two urbanized regions - Lisbon and Norte - now approach the EU average.³⁶ The Community's investment of € 46.3 billion from 1989-2006 supported the transformation of the economy. This amounts to about 4% of Portugal's GDP (at 1994 level) or 7.2% when the central government and private sector funding is included. As in Spain, the EU emphasis on infrastructure was key to its development. During the last decade, the EU financed and constructed or improved nearly 4,000 kilometers of roads or almost half of all the roads in Portugal. It also constructed or improved 640 km of railroad and expanded and digitalized almost the entire telephone network.³⁷ Also, like Spain and Ireland, foreign investment played a pivotal role, mobilizing new development and introducing modern technology and higher-valued jobs.³⁸

Greece, the poorest state in the EU, initially made the least progress after its entry into the EU because of chronic fiscal and current account deficits and corruption. Notwithstanding the Greek government's flawed economic policies, the EU nearly doubled its aid in the second period so that from 1989-2006, the EU transferred € 51 billion to Greece. Together with national and private funds, the total amount represented 4.5% of the average annual GDP in the 1989-93 period and 7.2% for 1994-99 - quite a substantial amount. Per capita income increased from 58% of Europe's in 1988 to 70 percent in 2003.

To what extent did these funds contribute to growth in the four cohesion countries and to the reduction of income disparities? Perhaps the most comprehensive and incisive study of the effect of regional and cohesion policies was done by Robert Leonardi, the Jean Monnet Lecturer in European Union Politics and Policy at the London School of Economics. Among the states, he finds, as others did, significant convergence. Using regression analyses, he tests various explanatory variables, including distance from the core countries, foreign investment, level of industrialization, unemployment, and EC funding. The best predictor of convergence was distance from the core countries, and the best explanatory variable was EC spending. **Structural and cohesion aid, he concludes, "made a substantial contribution to economic investment and overall GDP in the three nations. [It] acted as a significant stimulus to the national economies, explaining in part the surge of these countries toward convergence."**³⁹

Leonardi did not assess whether structural funds or the single market were more important in explaining the convergence of the poorer states. The OECD did such a

³⁶ EC, *Sixth Periodic Report* (1999), p10.

³⁷ European Commission, *The Impact of Structural Policies* (1997), pp. 111-121.

³⁸ Peter Gumbel, "Portugal: A Recovery That East Europe Can Emulate," *Wall Street Journal*, May 1, 1992, p. All.

³⁹ Robert Leonardi, *Convergence, Cohesion, and Integration in the European Union* (N.Y.: St. Martin's Press, 1995), pp. 133, 170-6. See chapter 3 for his methodology.

study in 1994, and it concluded that it was “difficult to find strong evidence [that] the single market program has yet had sizeable effects on aggregate output.” They estimated that it had improved GDP by perhaps 1.5%.⁴⁰ That is not exactly a trivial contribution to gross domestic product, but it also does not compare to the kind of contribution that Leonardi attributes to the structural funds. But the OECD study suffered from the same problem as the others, including Leonardi, have had: how to answer the counter-factual: what would have happened in the absence of the single market?

In its "Third Report on Economic and Social Cohesion," The European Commission did attempt to answer that question through regression analyses. It found that the structural funds boosted the gross domestic product in Spain by 1.5% more than would have occurred without such funds. The funds increased growth in Greece by 2%; in Ireland, almost 3%, and in Portugal, by 4.5% higher than would have occurred in the absence of such support.⁴¹

Of the structural funds, which policies and projects were most effective? In a study of the regional policies and projects, Rainer Martin concluded that investments in two areas were most effective - infrastructure and human capital.⁴² The EU has emphasized these two areas, but it has also scattered funds into projects in other areas, such as environmental protection, regulatory policies, new initiatives to provide low-interest loans to small and medium-sized businesses, and technical assistance. And, of course, about half of the funds go to poor regions in richer countries.

Michele Boldrin and Fabio Canova wrote a critical analysis of the utility of the regional and cohesion funds. In a study of 211 regions within the European Union between 1982 and 1996, the two found little convergence. Indeed, they believe the EU funds were counter-productive. The best way to reduce disparities, in their view, was to facilitate the completely free flow of factors of production. In their view, the subsidies impeded the free flow of labor from the poorer to the richer nations, and this structural rigidity prevented convergence. They described the regional funds as "nothing more than pork barrel spending." As extreme examples, they pointed to Sicily and Calabria, which received the equivalent of 20 Marshall Plans since the 1950s - and to no effect.⁴³

The data and analysis by the European Commission on disparities suggest that there has been less convergence within than between states, and so Boldrin and Canova's analysis confirms that conclusion, but they are clearly wrong that there has not been any

⁴⁰ Cited by Loukas Tsoukalis, The New European Economy Revisited (N.Y.: Oxford University Press, 1997), pp. 75-76.

⁴¹ European Commission, A New Partnership for Cohesion: Third Report on Economic and Social Cohesion (Brussels, February 2004), p. xviii.

⁴² Rainer Martin, Regional Policy in the European Union: Economic Foundations and Reality (Brussels: Centre for European Policy Studies, 1998), pp. 66-72.

⁴³ Michel Boldrin and Fabio Canova, "Inequality and Convergence in Europe's Regions: Reconsidering European Regional Policies," Economic Policy (April 2001), 207-53; and "Regional Policies and EU Enlargement," in Bernard Funck and Lodovico Pizzati, eds., European Integration: Regional Policy and Growth (Washington, D.C.: World Bank, 2003).

convergence among rich and poor states.⁴⁴ Moreover, there was also substantial progress in many poorer regions. Per capita GDP in the 10 poorest regions increased from 41% of the EU average in 1986 to 50% in 1999, and of the 25 poorest regions, from 52% to 59%.⁴⁵ The critical point, however, is that the EU's efforts, particularly through its structural and cohesion funds, have been far more effective in narrowing the gap between rich and poor countries than between rich and poor regions within countries.

III. Enlargement and Lessons from the EU's Experience

When the EU decided to invite ten new and poorer members, it posed for itself several very difficult decisions. First, should it continue the strategy of allocating significant resources for regional and cohesion funds and, if so, at what level? Secondly, should it phase out the four cohesion countries - Ireland, Greece, Portugal, and Spain - in order to concentrate its resources on the poorer new members? And third, could it afford a Common Agricultural Policy in which the poorest farmers would not be in France, Italy, and Germany, but in Poland and the other new members?

The enlargement of ten additional countries in May 2004 added one-third more territory, one-fifth more people, but only one-twentieth more GDP to the European Union. As average per capita GDP in these ten countries is less than half the average in the EU-15, the EU's average per capita GDP fell by 12.5% with the enlargement. The gap between rich and poor countries that had narrowed so significantly during the previous fifteen years suddenly widened. The disparities made the EU more like that of North America. This is why the European Commission described the enlargement as "an unprecedented challenge."⁴⁶ That challenge is now the same as North America's, but Europe was seized with seeking a solution.

At a meeting of heads of state and government in Berlin in March 1999, Europe's leaders decided to continue the same cohesion policy, allocating € 213 billion from 2000-2006. This amounts to about € 30.4 billion per year (about \$40 billion US), or about .35% of the EU's GDP. However significant the amount of funds, the leaders dodged the two toughest issues – reallocating the funds to the new poor and phasing down or out the Common Agricultural Policy (CAP), which accounts for about half of the EU budget. The Spanish Prime Minister was beginning an election campaign, and he was unwilling to contemplate a reduction in cohesion funds. As Spain was the largest recipient, the other states could not identify a new formula that included the new members. **Without a decision to reallocate or reduce the Cohesion Fund, the French will not willing to consider a reduction in the CAP.** Nonetheless, as a sign of good faith toward the new

⁴⁴ For a critique of their work, see Robert A. Pastor, Toward a North American Community: Lessons from the Old World for the New (Washington, D.C.: Institute for International Economics, 2001), pp. 58-59; and Carole Garnier, "Discussion of 'Regional Policies and EU Enlargement,'" in Funck and Pizzati, eds., European Integration, pp. 95-105.

⁴⁵ European Commission, Regional Policy and Cohesion: Sixth Periodic Report on the Social and Economic Situation and Development of the Regions of the European Union (Luxembourg, February 1999), pp. i, 9.

⁴⁶ EC, A New Partnership for Cohesion (February 2004), pp. xxv, viii, ix.

members, the EU allocated roughly 2.5% of the Structural Funds to assist them for cross-border infrastructure projects. The idea of pre-accession aid was first applied successfully to Portugal, and the EU decided to continue and expand the program for the Central European countries.

They actually pursued three separate programs to the new members. The PHARE program provided € 11 billion between 2000-06 for improving administrative and institutional capacity. The IPSA program provided funds for transportation and environmental infrastructure, and SAPARD did the same for agriculture and rural development. These two programs amounted to € 3.1 billion.

Distribution of structural funds for EU 15 and new members, 2000-06

Table 7

EUR million		
Country or group	Total Funds	Funds as % of GDP (in 2000)
Cohesion countries		
Spain	56, 297	1.4
Portugal	22, 822	2.9
Ireland	3, 803	0.6
Greece	24, 880	2.9
Subtotal	€ 107, 802	
Other EU countries		
Austria	1, 848	0.1
Belgium	2, 038	0.1
Denmark	822	0.1
Finland	2, 120	0.2
France	15, 669	0.2
Germany	29, 797	0.2
Italy	29, 636	0.4
Luxembourg	92	0.1
Netherlands	3, 223	0.1
Sweden	2, 223	0.1
United Kingdom	16, 576	0.2
Subtotal	€ 104, 044	
New EU member states		
Cyprus	101	
Czech Republic	2, 328	
Estonia	618	
Hungary	2, 847	
Lithuania	1, 366	
Latvia	1, 036	
Malta	79	
Poland	11, 369	
Slovenia	405	
Slovakia	1, 560	
Subtotal	€ 21, 709	
Total	€ 233, 555	

Source: European Commission, *Third Report on Economic and Social Cohesion: A New Partnership for Cohesion: Convergence, Competitiveness, Cooperation*, February 2004.

In Copenhagen in December 2002, the EU added about € 20 billion to the € 213 billion that had been allocated for structural and cohesion funds for the period from 2000-06 and assigned that additional amount to the new members. Table 7 illustrates the strengths and weaknesses of the European project with extraordinary clarity.

On the positive side, though the European economies were not growing, the EU decided to expand a generous program for helping poorer countries and regions to close the development gap. The transfer of more than € 30 billion each year is a truly far-sighted initiative that the United States has not even approached since the Marshall Plan nearly fifty years ago.

The weakness of the EU's decision-making system is also evident. The Structural and Cohesion Funds had become viewed as a virtual "entitlement" program. Every country wanted some of it, and no country was willing to reduce its amount for needier new members. From the beginning, the EU gave about half of the funds to the richer countries even though the evidence is compelling that such funds were having little effect. That Germany and Italy each would receive more funds than any other country in Europe except Spain is an appalling statement. Indeed, the eleven richest countries in Europe are mandated to receive virtually the same amount as the four original cohesion countries. Ireland, whose spectacular growth propelled its per capita income above that of Germany, England, or France, still was classified as a "cohesion" country, and would receive nearly € 4 billion during this period. Sadly, the EU-15 allocated 90 percent of the cohesion funds to themselves, leaving the remaining 10% to the new, much poorer members.

The decision by the EU to continue and expand its regional and cohesion funds is a commendable one, particularly because it failed to agree to any major changes in the common agricultural policy. Farm subsidies for the new EU members start at a quarter of the Western levels and will rise to parity by 2013.⁴⁷ But most of the agricultural subsidies of the EU will not be available to the new members as this would be "too costly" for the EU. New EU members are legally obliged to adopt the Euro and the requirement for this is that they keep their currencies stable for two years. They will also adopt the Schengen system (the common border and visa regime, which allows for the free movement within the EU). With accession, the border controls between the old and new EU will remain for 3-4 years until the new members can prove they can enforce controls with non-EU countries.⁴⁸

The EU's failure to make dramatic changes in its agricultural policy or in its allocation of cohesion funds is not due to a lack of understanding or imagination, but rather to a political process in which each of the original fifteen EU countries have a veto on virtually every important decision. Expansion to 25 countries will only make this problem worse.

⁴⁷ Alan Cowell, "After May 1, East Europe's 'Haves' May Have More," *The New York Times*, March 27, 2004.

⁴⁸ *The Economist*, "A survey of EU enlargement: When East meets West," November 22, 2003, p.4.

This underscores the first lesson to be drawn by North America: before expanding to a Free Trade Agreement of the Americas (FTAA), with 34 member states, the three governments of North America should consider procedures to facilitate deepening. It should consider which institutions should be established and what decision process is needed to prevent stalemate and dysfunctional outcomes.

There are other lessons to be drawn from the EU experience for North America. By extracting from the European experience and adapting them to the case of North America, I will develop ten such lessons below.

1. A Declaration of Goals. From the beginning, European leaders set goals of solidarity and community – a sense that the peoples of Europe would cooperate in new ways to bring peace and well-being to all. These goals provided guidance and inspiration to member states, but most importantly, they provided a benchmark from which they could measure progress. There were few programs and little progress initially, but the goals remained a part of the EU's original charter. As the Cold War ebbed, a leader - Jacques Delors - came forward with a plan and a request for resources to implement it.

The lesson for North America is to draft a charter or simply a statement that enunciates a broader vision and set of goals. In the absence of a cooperative vision of North America's future, the request for resources or concessions by one party or another will look like foreign aid or special pleading and is unlikely to attract support. With a shared goal for a community of three sovereign nations, it would be easier to ask members to contribute. If the objective is far-sighted and yet achievable, the members are more likely to seek the resources to attain it.

Ironically, the first such vision was enunciated in Guanajuato, Mexico in February 2001 at the conclusion of the first summit meeting between President Vicente Fox and President George W. Bush. A key part of the statement pledged:

“After consultation with our Canadian partners, we will strive to consolidate a North American economic community whose benefits reach the lesser-developed areas of the region and extend to the most vulnerable social groups in our countries.”⁴⁹

This idea promised a very different approach to North America than the one envisaged in NAFTA - one more consistent with the Cohesion approach of the EU. After the Guanajuato meeting, President Fox consulted with Canadian Prime Minister Jean Chretien, who rejected the idea. President Bush also showed little interest in pursuing it, even before September 11th changed his and America's priorities.

⁴⁹ Towards a Partnership for Prosperity: The Guanajuato Proposal, “ a Joint Communique, February 16, 2001. www.presidencia/gob.mex./?P=42 &Orden=Leer&Tipo=Pe&Art=548

Nevertheless, the fact that a Republican President accepted this goal is not inconsequential, and this could be the basis for a broader declaration of North America's goal in its second decade after NAFTA. So, in brief, a clear statement of goals is necessary but not sufficient to construct a community of nations.

2. Institutions. The EU established many supra-national institutions. Most of them are needed to implement EU laws, but some of them exist because it is too hard to eliminate them, and many have expanded their activities because no one has stopped them. Clearly, one could identify a golden mean between the excessive institutionalism of the EU and the under-institutionalized NAFTA. Even in the area of regional and cohesion funds, there are now about nine separate EU funds, which necessarily lead to a dissipation of resources.

The lesson is that some institutions are necessary to govern an emerging and integrated market, but policy-makers should incorporate a "sunset" provision into almost every institution or funding mechanism, lest each assume a permanence that would diminish the capacity to reduce disparities. Rather one should look to existing institutions - for example, the World Bank or the North American Development Bank - and divide the task to allow each to use its comparative advantage.

3. Convergence and Conditionality. The spectacular reduction in the income gap between the richer and poorer countries of Europe in a relatively short period of time (since 1986) offers hope that regional trading schemes could be an effective vehicle for lifting middle-income countries. Among the many factors responsible for narrowing the gap was the **establishment of a single market, foreign investment, and the massive aid programs from the EU.** An analysis of the difference in growth rates among the four "Cohesion" countries - between Ireland and Greece, for example - leads to the inescapable conclusion that **national policy** is a fourth, critical determinant. The most effective "national policies" were those that utilized the incentive of conditionality to maintain stable macro-economic policies, insist on transparency, and invested the additional resources into projects that yielded the highest rate of return. There is a consensus that all four factors contributed to the reduction of disparities, but some disagreement as to which is most important.

The lesson: Use the first three factors as an incentive for the recipient government to adopt the appropriate economic policies that would make best use of the resources. Mexico understands that it needs to undertake fundamental reforms in sensitive sectors such as energy, taxes, pensions, electricity, and the judicial system. If its partners were to make clear that they wanted to define together a community of three nations and that each had to contribute to that future, then that might make it easier for Mexico to accept the "conditionality" and the reforms. The precise nature of the conditions or rather "contributions" will be developed in the proposal in the fourth section.

4. The Best Projects for Regional Assistance. Investment to narrow the development gap is essential, but that still leaves the questions of where to invest.

The EU has funded almost every imaginable kind of project through many channels, but most analysts believe that the most effective investments have been in infrastructure and higher education. These have had the highest multiplier effect. In their Third Report on Cohesion, the European Commission concluded that a significant narrowing of the development gap was only possible if the poorer countries "have suitable levels of both physical infrastructure (efficient transport, telecommunications and energy networks, good environmental facilities) and human capital (a labor force with appropriate levels of skills and training."⁵⁰

The success of the EU in these areas is persuasive. With such funds, the density of the highway network in the cohesion countries increased from 20% below the EU-15 average in 1991 to 10% above in 2001. In telecommunications, the number of fixed telephone lines in relation to population remains low, but this was compensated by a dramatic increase in the number of mobile phones. On railroads and on education, there was some progress.⁵¹

5. How to Select Projects. Some institutions of governance, analysis, and planning are needed to address the multilevel challenge of legislating, administering, judging, and enforcing EU rules and law, of harmonizing member-state policies, and of avoiding problems and seizing new opportunities. In response to criticism that the bureaucracy is too distant from the people, European politicians have spawned an intrusive oversight process and have insisted on local involvement. This, in turn, has encouraged local groups to demand a larger slice of the pie - with consequences of a positive nature (greater local participation) but also of a negative one (inefficiency and diversion of funds for political purposes).

Europe chooses its projects in a multi-layered, extremely politicized, and ultimately decentralized way. A study that the European Commission contracted in 2003 found the process was "unwieldy, ...risk-averse, not innovation-oriented, and very time consuming."⁵² The process is transparent but exceptionally political and bureaucratic. This is understandable when the projects are local, but it is unfortunate when the projects are genuinely regional in scope.

The lesson for North America is to keep democracy at the core of deliberations as an organization. Lean, accountable institutions are needed, and their work should be transparent. If the fund is tri-national, then the infrastructure projects should be defined and developed at a continental level. In the case of education, the projects will be primarily local, and Mexican input will necessarily have to be much greater.

6. Building (and Broadening) Institutional Capacity: From 'Twinning' to Personnel Exchanges. There are two dimensions of the institutional challenge that the three

⁵⁰ EC, *A New Partnership for Cohesion* (February 2004), p. xi.

⁵¹ EC, *A New Partnership for Cohesion*, pp. xi-xii.

⁵² OIR in association with LRDP and IDOM, commissioned by European Commission, Directorate General, Regional Policy, *A Study on the Efficiency of the Implementation Methods for Structural funds: Executive Summary and Final Report* (Brussels: European Commission, December 2003), p. 10.

governments of North America face regarding the development gap: building Mexico's capacity and expanding Canadian and American awareness to alternative ways to address the same challenge.

Here again, the EU's experience could provide useful lessons. Many of Mexico's institutions face the problem that the poorer countries joining the EU had: they have been closed to the world, are often corrupt, cannot regulate an enlarged market or modern economic transactions, and cannot implement first-world norms and legislation. To address this problem, the EU fashioned "twinning projects," whereby the poorer countries draw up plans for improving their institutions and executing the "aquis communautaire," the body of EU laws. The EU sends experts to work inside the ministries of the candidate countries for a year or more, and they advise on the development of better institutions.⁵³

This is a good idea, but in thinking about the differences between the EU and North America, some adaptation of it would accomplish the two dimensions of the institutional challenge better than a simple replication of the idea. Because North America does not have an "aquis" or supra-national institutions, and because the three members are unequal in size and power, the "twinning" idea should be adapted into a program for exchanging government officials among the three countries. Canadian and U.S. officials could go to Mexico to assist in building institutional capacity and developing regulations that ensure transparency and a capacity to serve the public. Mexican officials could go north for the same purpose, and officials from all three countries could serve two year terms abroad in order to broaden their understanding of their partners' perspective.

7. Avoiding Temptations/Focusing Scarce Resources. Assuming that investments on the scale of Europe's - € 30 billion per year (\$40 billion US) - would be a stretch for North America, the issue is how to make best use of scarce resources. **There are two temptations that need to be avoided. With the exception of a very small percentage of the total funds, North America should avoid transferring its trilateral funds to the poor regions in the rich countries, and secondly, avoid transferring funds to the poorest regions in the poorest country.**

More than half of the EU's structural funds go to poor regions in the rich countries (see Table 7), and several of the richer countries (notably France and Denmark) obtain large subsidies from the Common Agricultural Policy, which is half of the EU budget. ("Regional policies" take 30% of the budget.)⁵⁴ Much of the cohesion and structural funds went for commendable purposes in the richer countries, but its impact on the region's development was limited. Actually, the amount of EU funds that was

⁵³ Sergio Berensztein and Martin Bohmer, "Institution Building: Twinning Projects – A Look at Europe and Latin America," Working Paper Series No. 3A (Washington, D.C.: Inter-American Development Bank, March 2004).

⁵⁴ See Loukas Tsoukalis, *The New European Economy Revisited* (Oxford: Oxford University Press, 1997), pp. 202-222.

allocated to the poorer regions in the richer countries was a fraction of the funds that those countries deployed to the regions, and the EU funds had minimal impact. In other words, the real purpose of the EU compensatory funds was political and symbolic, stemming from the need by the richer countries to show their own people that they were not just EU donors but also recipients. But the cost of that was half – more than € 200 billion – of the total funds.

This does not mean that North American Funds should not be spent in the United States and Canada. Some funds should be used to provide scholarships for exchanges among students and faculty in the three countries and to establish research and policy-oriented Centers. These could build a sense of North American community, while generating ideas and project proposals, but the amount of funds for these purposes should be minimal – perhaps less than one-tenth of one percent of the total funds.

The second temptation would be to spend the money in the poorest part of Mexico or on the border area. Although the motive is good, and rationale is obvious, the funds, by and large, should not be spent in the poor regions or on the border because it would compound existing problems rather than solve them.

In many cases, rapid integration coincides with accelerating inequality among the regions in the poorer country. More often, this is not because the poor became poorer but because the prosperous regions - the ones tied to the EU by both exports and inward flows of investment - sped ahead. The poorer regions grew more slowly or just halted their growth.

This is exactly what happened in North America and, particularly, in Mexico. The lesson is different from what some have argued. Some critics of NAFTA point to the widening gap within Mexico and declare NAFTA a failure. In fact, the northern part of Mexico, which is most directly connected with the US and Canadian market, has been growing significantly faster (two to ten times faster) than the center and south of Mexico that are disconnected from the US market.⁵⁵ The problem, in brief, is not NAFTA, but that there is not enough NAFTA. Or to put it another way: it's not the fact of NAFTA but rather its absence that is holding back the poorer regions. The lesson, therefore, is to find new ways to connect remote areas to the largest market in the world, and that leads us back to a North American Investment Fund that helps build the infrastructure to connect the poorer to the richer countries.

⁵⁵ The estimates on the gap between northern and southern Mexico vary. Luis Ernesto Derbez, a World Bank Economist, who became Economy and then Foreign Minister of Mexico, estimated that during the 1990s, the export-oriented North grew at annual rates of 5.9 percent, while the South barely grew at .4% - more than 10 times faster. (Cited in Henry Tricks, "Free Trade Still Rules in Mexico," *Financial Times*, 27 February 2001, 6.) Rafael Tamayo-Flores also concluded that the gap in income between northern and southern Mexico had widened significantly since NAFTA even while the population in the poorer part of Mexico declined vis-à-vis the North. (See his "Mexico in the Context of the North American Integration: Major Regional Trends and Performance of Backward Regions," *Journal of Latin American Studies* (2001) 33, pp. 405-07). Based on data from INEGI and CONAPO, the North American Development Bank estimated that the northern part of Mexico was growing more than twice as fast as the south or center.

Using the funds on the border will only increase the power of the magnet, which is emptying the most enterprising labor from the southern and central parts of Mexico. Some funds are, of course, needed on the border, but this job should be left to the North American Development Bank – **not the North American Investment Fund.**

Considerable funds have been expended in the poorer, emigrant-sending regions of Mexico, but these investments often fail to develop the areas because they lack a strategy for connecting them to the markets to the north. In other words, the North American Investment Fund should begin with a strategy of connecting Mexico to the markets of the north and only as a part of that strategy should funds be spent in the poorer regions.

The lesson is to concentrate the money where it is most needed and will have the greatest effect on the community as a whole. That means investing in infrastructure (connecting the poorer countries to the richer ones) and education in the poorer country. This will require more focus by a political system that has a chronic attention-deficit disorder. North America needs to resist legitimate demands to divide up the funds in hundreds of small projects. It needs to identify the most important continental projects and fund them. This will not be easy, but if there is to be a definitive closing of the development gap with Mexico, North America will need to concentrate its attention and resources.

8. Reducing Volatility. While convergence did occur between richer and poorer countries, the poorer ones did not follow a straight path. Rather what occurred is that the cohesion countries outperformed the EU average in the boom years and did worse than the EU average during recessions.⁵⁶ The weaker partners, according to a study by Rainer Martin, experience much greater volatility as integration tightens.⁵⁷

The lesson is that the richer countries need to find ways to cushion the swings that the poorer economies suffer. Macro-economic policy consultation and, over time, coordination, and financial "swap" arrangements should aim to protect the poorer countries from foreign exchange crises. Systematic analyses are needed on the issue of a unified North American currency.

9. Emigration. As the disparities between rich and poor countries were reduced in Europe, migration was significantly reduced. Of course, the disparities were not as wide in Europe as they are between Mexico and the United States. As long as the wages for the same job in Mexico can yield ten or more times income in the United States, the lure of migration will remain compelling. In a poll on the issue of migration in Mexico, Alducin y Asociados found that 81.4 percent of Mexicans would emigrate to the United States if they could.⁵⁸ Only after a significant reduction of the income gap will Mexicans

⁵⁶ EC, *Sixth Periodic Report* (1999), p. 9.

⁵⁷ Rainer Martin, *Regional Policy in the European Union: Economic Foundations and Reality* (Brussels: Centre for European Policy Studies, 1998), pp. 53-61.

⁵⁸ Alducin y Asociados, "Emigracion de Mexico a Estados Unidos y Monto de las Remesas" (Mexico City, May 2003), p. 17. The national sample was 5,065.

begin to believe that the gap might eventually close. At that moment, illegal migration would diminish as a problem.

The lesson is that the only long-term solution to the problem of undocumented immigration is development in Mexico and further integration with the two northern economies.

10. The Magnitude of the Commitment. The task of closing the gap between richer and poorer countries in a free trade area is a formidable one, but the EU has demonstrated that it can be done, provided that its members make a serious commitment and appropriate significant funds expressly for that purpose. Reducing the income gap is going to cost a great deal of money and require the implementation of significant reforms. Leadership and political will are essential.

IV. A North American Investment Fund: A Proposal

The Success and Omission of NAFTA. When Europe decided on enlargement, concerns were raised about the effect on the weaker countries. The same concerns were evident in North America. Indeed, shortly after the U.S.-Canadian trade agreement came into effect in 1991, Canada suffered its worst recession since the 1930s. More than 450,000 jobs were lost. The FTA did not cause the recession nor was it the cause of the defeat of the Conservative Party. Rather the combination of tight monetary and fiscal policies, the over-valuation of the Canadian dollar, the American recession, and the unpopular Goods and Service Tax (GST) - all contributed to the recession and the Conservative defeat. Still, many blamed the FTA, and its reputation was soiled at birth.

The Canadian debacle was not as bad as the peso shock, which also occurred a year after NAFTA came into effect. In that case, the reduction in barriers to the flow of capital induced a huge surge of short-term loans to Mexico. When two grave political assassinations unsettled the market, and lenders began to withdraw their money, the Mexican government took dramatic steps to keep the money. It sharply raised interest rates and promised to pay the loans in dollars, but this only made a difficult debt problem worse. When the government finally had to devalue during Christmas 1994, the bottom fell out of the market, and the country tipped on the edge of bankruptcy. The failure of either the United States or Mexico to anticipate such a crisis and create a substantial swap arrangement further exacerbated the problem, and the Mexican economy sank 6.2 percent, its sharpest and worse decline since the great depression. Because of NAFTA and the expansion of an export-oriented manufacturing sector, the impact of the contraction of the economy was very uneven. Exports grew, but the domestic-side of the economy, which represented 70% of the GDP, declined by 14 percent.⁵⁹ The peso crisis thus disillusioned both the Mexican and American publics with NAFTA.

There is some evidence that NAFTA has contributed to Mexico's regional disparities, which were already quite bad. About half of all domestic production is

⁵⁹ For an excellent analysis of the impact of the 1994 crisis, see Mauricio A. Gonzalez Gomez, "Crisis and Economic Change in Mexico," in *Mexico Under Zedillo*, edited by Susan Kaufman Purcell and Luis Rubio (Boulder: Lynne Rienner Publishers, 1998), pp. 37-66.

concentrated in Mexico City and the states of Mexico, Jalisco (Guadalajara), and Nuevo Leon (Monterrey). After the 1994 crisis, the disparities between regions became even more pronounced. Per capita income in the southern states of Chiapas, Guerrero, and Oaxaca is 62 percent of the per capita income of the northern state of Nuevo Leon - roughly proportional to Southern Europe's income in relation to the EU average. An analysis of the eight regions of Mexico by the Confederation of Industrial Chambers of Commerce (CONCAMIN), using data from INEGI, concluded that the social and economic gap between the regions has widened since NAFTA.⁶⁰ Another analysis of the geographical impact of NAFTA on Mexico found that it "expanded the gap between southern and northern states," but this was because the northern states, connected to the US market, grew ten times faster than the southern ones, which do not have the infrastructure to bring goods to market.⁶¹ In other words, the problem of southern underdevelopment was not due to NAFTA, but rather to its absence.

The evidence on the diverging effects of integration is mixed but not inconsistent with what was learned from Europe. The strongest economic power in North America experienced the least effect. The weaker countries suffered the most volatility, although this was due also to mistaken macroeconomic policies. The weakest country experienced the widest disparities in income among classes and regions. The Canadian and U.S. system of income transfers among regions mitigate these disparities and lift the countries as a whole, but Mexico does not yet have the fiscal system that could permit such transfers, and there is no regional mechanism.

What makes NAFTA unique is the integration of a developing country with two more advanced ones. In the first decade, the three governments sought to implement the provisions to reduce the trade and investment barriers, and while there have been a few serious problems of compliance - notably softwood lumber, sugar, corn-fructose syrup, trucking - by and large, the agreement was implemented and accomplished its principal purpose: to expand trade and investment among the three countries and integrate firms and the economies.

In its second decade, North America faces **three challenges**: how to deepen trade and integration while addressing new security concerns and harmonizing regulatory policies; how to establish new modes of governance to anticipate and prevent problems and take advantage of new opportunities; and third, how to reduce the development gap separating Mexico from its two northern neighbors.

The third challenge is the most consequential and central: a true partnership in North America is simply not possible as long as one of the countries is as poor as Mexico. Europe offers many lessons for North America, but none as important as the

⁶⁰ Gonzalez Gomez, "Crisis and Economic Change," pp. 55-56; Elvia Gutierrez, "Disturbing Trend Haunts Economic Development: Regional Disparities Are Alarming," *El Financiero International Edition*, May 31, 1999, p. 15.

⁶¹ Rafael Tamayo-Flores, "The Differential Impact of International Integration on Local Economies: How Are Lagging Mexican Regions Performing?" Documento de Trabajo AP-77, Mexico City: Centro de Investigacion y Docencia Economicas (CIDE), 2000, p. 21.

steps it has taken in the past twenty years to successfully narrow the development gap between its poorer and richer countries and the commitment it has demonstrated to do the same for its new members.

In contemplating a “regional policy” for North America, let us recall that Mexico is at the stage that the Iberian countries were when they joined the EU. Indeed, the per capita income of Mexico was higher than in Portugal and Spain in 1950. By the year 2000, Mexico’s was roughly half that of Spain and Portugal.⁶² This was because free trade, investment, resource transfers, and a conditional approach by the EU to implement needed reforms.

The Proposal: A North American Investment Fund

1. Goal. The objective is to narrow significantly the gap in income between Mexico and its northern neighbors. Specifically, the three governments should set the goal of helping Mexico achieve a sustained rate of growth for at least one decade of 6 percent. If one assumes that the U.S. and Canada maintain a growth rate of 3 percent that would reduce the income gap by 20 percent in the first decade and hopefully provide the momentum to close the gap within 40-50 years. While it would be desirable for the gap to be closed, the trajectory may be as important. If Mexicans see the gap closing in a consistent way, their self-perceptions would change, and fewer Mexicans would emigrate.

While Mexico is the focus of the new proposal, a new cooperative relationship among the three governments is essential to ensure agreement for both sides of the proposal – funds and reforms. The premise is that a North American Community exists when each member believes that it benefits from its neighbor’s success. When the value of a neighbor’s house rises, that has a positive effect on one’s own house. When a neighbor’s house burns or is vandalized, then all the houses in the community are in danger. Those are the two sides of a vision of a North American Community. Increasing interdependence requires more active involvement by all three governments to ensure that the public is protected from a more integrated but less regulated market.

2. Mechanism. The three governments need to establish a "North American Investment Fund," which should adapt those elements of the EU's Structural and Cohesion Funds that were most effective and avoid those parts that failed or wasted money. Learning from Europe’s example, North America should not create a new bank or instrument. Rather it should deposit funds in a new “North American Investment Fund” to be administered by the World Bank and the Inter-American Development Bank under the supervision of a Board appointed by all three governments. It should begin with a ten year tenure, and it should be continued beyond that only by decision of all three governments.

⁶² Penn World Tables, cited by Ing. Raul Rodriguez Barocio, Director Gerente de NADBank, “NADBank: Desarrollo de Infraestructura Basica en la Frontera Norte,” Enero 13, 2005, p. 4.

3. Invest in Infrastructure and Education. The Fund should concentrate its scarce resources on two areas - infrastructure and education in the poorer regions of Mexico and in connecting those regions to the north and to the U.S. market. Eighty percent of the funds should be spent in infrastructure – building roads from the northern border to the cities in the center and the south and keeping them away from Mexico City. The projects should include ports, railroads, airports, telecommunications, etc. The Fund should avoid dissipating its resources in many other commendable areas. Fifteen percent of the funds should be used to build community colleges in the rural areas of Mexico, and five percent to promote research and educational exchanges.

Why infrastructure? **One effective way to reduce geographical disparities within Mexico while reducing pressures for out-migration would be to improve the road system from the U.S. border to the center and southern parts of the country.** Because of foreign investment, the northern border economy is booming and attracting labor from the poorer parts of the country. However, in many cases, workers stay on the Mexican side of the border only long enough to learn how to cross into the United States where they can earn a lot more. U.S. firms do not like to invest in the border area because of the pollution and the inefficiencies associated with such a high turnover rate, but they do so because the roads from the border to the center of the country are bad.

If roads were built or improved from the border to the center of the country, investors would locate there for three reasons. First, the center and south of the country – from Oaxaca, Zacatecas, Michoacan, Guanajuato – have the highest rates of unemployment and, indeed, are the principal sources of immigrants to the border and to the United States. Secondly, the wage level is much lower in these areas, and the workers are no less educated than those on the border. Indeed, they are often the same workers. Finally, the region is not the polluted, cramped border. The government has incentive systems to encourage investors to locate there, but the problem is a lack of infrastructure – roads, electricity, etc. Build them, and investors would come, immigration levels would decline and so would disparities in income.

Still another reason for this approach was advanced by Robinson, Morley, and Diaz-Bonilla. In their paper, they argue that Mexico can only reach 6 percent rate of growth with a different development strategy – one aimed at infrastructure and human capital.

Vicente Fox has already proposed a Puebla-Panama Corridor to connect Puebla, a city southeast of the capital, with the countries of Central America. The international development banks agreed to help Mexico build roads and infrastructure in the ten poorest southern and eastern states of his country to connect to Central America. Many of these Mexican areas have few or no roads, and thus a development project would help the region, but not nearly as much as if the roads connected to the northern border for the simple reason that Mexico faces a market of about 320 million people with gross product of \$11 trillion on its northern border. Facing south, the Central American population is 34 million with gross product of \$65 billion

Mexico has been criticized for subsidizing higher education at the cost of elementary and secondary schools, and there is some truth to that. The new Investment Funds therefore should not be spent on the rural community colleges without a clear change in the allocation of its domestic funds for education. Why rural community colleges? Spain and Portugal discovered that these investments had a large multiplier effect. College-educated students returned from the capital to their small towns to teach at these colleges, and in a short time, they began to improve the state of elementary and secondary schools where their children attended. The community colleges proved to be the catalyst to improve the level of education in the rural areas.

4. The Magnitude of Commitment. The World Bank has estimated that Mexico has a ten-year infrastructure deficit of \$20 billion per year. This is separate from the additional \$10 billion that Mexico needs to invest annually in exploration and development of its natural gas and oil fields.⁶³ The debt crises of the last two decades has led to a precipitous decline of investment in infrastructure – from about 8 percent of GDP in 1981 to less than 2 percent in 2002.⁶⁴ As Robinson, et. al., demonstrate, Mexico needs \$17-20 billion in new capital each year, net of interest payments, to grow at a rate of 6 percent each year for a decade in order to close the income gap by 20 percent. On the other hand, they note that Mexico cannot service new debt of that magnitude, but that half of that could come from domestic savings (increase in taxes). The rest would have to come from its neighbors. Thus, the North American Investment Fund should be prepared to provide \$20 billion in grants per year for ten years in order to help Mexico grow at a rate of 6% for a decade.

5. A Community of Conditions. Mexico was the one major country in Latin America that rejected Alliance for Progress funds for fear that it would compromise its independence. Understanding the importance of Mexico's development, the United States instead made sure that Mexico would receive more funding from the Inter-American Development Bank and the World Bank than any other country in Latin America. The world – and especially North America – has changed a great deal over the past forty years, and to accommodate those changes a different formula is needed.

Having accepted the goal – accelerated development of Mexico is in the interests of all three countries in North America – Canada, Mexico, and the United States should agree on what is necessary to accomplish this goal, and then divide the cost according to their comparative advantage and resources. As regards to the \$20 billion of funds each year for the North American Investment Fund, Canada and the United States should pay half, with the U.S. accounting for 90 percent of that, and Mexico should contribute the other half. In addition, the U.S. and Canada are only likely to contribute funds if both countries felt that it would be used wisely and that Mexico would undertake serious long-term reforms in energy, taxes, labor, and rule of law. Absent those changes, the U.S. and Canada might very well conclude that their funds would not be put to good use.

⁶³ Marcelo Guigale, Olivier Lafourcade, and Vinh H. Nguyen, eds., *Mexico: A Comprehensive Development Agenda for the New Era* (Washington, D.C.: World Bank, 2001), pp. 2, 10-11, 357-76.

⁶⁴ Raul Rodriguez Barocio, *NADBank*, op. cit., p. 15.

On fiscal reforms, Mexico relied on its oil monopoly to save its people from paying taxes. In 2003, Mexico received 18 percent of its gross domestic product in federal tax revenues. Of that, 6.5 percent came from oil revenues and 11.8 percent came from the federal income tax. That tax rate is the lowest in the OECD countries. Because the tax revenues are so low, the government needs to make up that huge short-fall by taking funds from PEMEX, the oil company, leaving it with a bloated, inefficient bureaucracy which lacks the funds for its own investments.

Mexico needs to increase its fiscal revenue as a percent of GDP from 11.8 percent in 2003 to about 16 percent, and ultimately to 18 percent. The 4 percent increase would yield approximately \$24 billion each year,⁶⁵ which would meet its half of the Investment Fund and substitute for PEMEX's contribution. PEMEX would then have substantial funds for exploration.

The United States, Mexico, and Canada are not prepared at this time to contemplate a North American Investment Fund on this, or perhaps any, scale, but it is not completely implausible in the future when new leaders in the U.S. and Canada emerge. Why? Both governments provide significant amount of foreign aid each year, and justify that by declaring that it serves the national interest. In just a few weeks after the Tsunami struck the Indian Ocean, Canada offered \$430 million in aid. It is hard to believe that any foreign aid would benefit the U.S. and Canada more than that which was invested in Mexico. As the Mexican economy grows, roughly 90% of the external trade and investment benefits flow to its two northern neighbors. From the U.S. standpoint, there are many additional reasons for providing such aid and lifting the Mexican economy: it would help build a stable, middle-class, democratic country, and over the long-term, it is the only way that undocumented migration would be reduced.

There are sub-optimal alternatives. North America could phase in its contributions, depending on how well they did. Secondly, Mexico could use the expertise in the international development banks. Since the establishment of the World Bank, Mexico has been the third largest recipient of its loans – 169 loans totaling \$30 billion. Only India, having received \$52 billion, and China, having received \$33 billion, obtained more. In June 1999, the World Bank Board decided to direct \$5.2 billion to Mexico during the next two years to improve social conditions for the poor, strengthen public sector reforms, and reinforce macro-economic stability. Mexico also received more loans from the Inter-American Development Bank - 160 loans totaling \$12.2 billion - than any country.⁶⁶ These loans have gone to a wide range of projects, but none have aimed to facilitate North American integration. If Mexico, the United States, and Canada all agreed that, say, half of the loans from these two institutions during the next ten years should be devoted to closing the development gap, the two Banks would probably respond positively, particularly because the precedent - integrating a developing country into a regional agreement with industrialized countries – is so important for the world.

⁶⁵ For a superb analysis of the tax issue, see Rogelio Ramirez de la O, "Tax Reform in Mexico," CSIS *Hemisphere Focus*, Vol. XII, No. 7 (April 9, 2004), P. 9.

⁶⁶ The figures from the World Bank and the Inter-American Development Bank are from their websites.

In terms of forging a regional identity, a case could be made that some “North American” projects should be built in Canada and the United States and advertised, as the EU does. Historically, one of the reasons why the United States has had so much difficulty sustaining public support for foreign aid or for international organizations is that the projects and the offices that manage them are outside of the country and the public’s view. That could be corrected if the projects and offices were also in the United States as well as in the two other countries most visited by Americans. The lesson of Europe, however, is that the funds for Canada and the U.S. should be relatively small and symbolic, perhaps focused on research centers on North America.

A regional development policy is essential to help Mexico board the first-world integration train. Lacking such a policy, Mexico is likely to experience greater volatility in its economics and politics, with devastating consequences for itself and its neighbors. To successfully integrate North America, it is hard to conceive of a better or more efficient investment. At a time when a stagnant Europe can transfer € 30 billion (equivalent to U.S. \$35 billion) to narrow the development gap in Europe, surely the United States and Canada, with a combined economy 30 percent larger than that of the EU, can invest one-third of that in Mexico.

There are those who believe there is no possibility of a North American Investment Fund. After all, the United States faces the largest fiscal and current account deficits in its history, and it is in the middle of a costly, debilitating war in Iraq. Still, on October 7, 2004, Senator John Cornyn (Republican of Texas) introduced a bill in the U.S. Senate (s. 2491) to authorize the U.S. President “to negotiate the creation of a North American Investment Fund to promote economic and infrastructure integration among Canada, Mexico, and the United States.” It is a far-reaching bill that incorporates the lessons from Europe and proposes to channel funds from all three governments toward infrastructure and education in Mexico, and it does so only on the condition that Mexico undertakes reforms that would allow it to make the most effective use of the resources. It also proposes a sunset provision of ten years for the Fund. The Senator is aware that few of his colleagues understand the necessity and urgency of such a Fund, but he introduced the bill to begin the debate.

How will the United States and Canada benefit from such a program? In the short term, Canadian and U.S. companies will have new opportunities to build the infrastructure in Mexico. For every dollar growth in the Mexican economy, it will increase its trade with the U.S. and Canada by about 40 cents. If Mexico’s rate of growth increases from 3 percent to 6 percent, that means additional growth of approximately \$18 billion, resulting in an increase in trade with its two neighbors of about \$7.2 billion in the one year. Compounded annually for a decade, that will not only contribute to Mexico’s development but to North America’s. This will not affect undocumented migration in the short-term, but it is the only solution in the long-term. The real benefits, of course, will accrue to all three nations in the long-term.

At the end of the Second World War, the United States turned on its head the approach that the victors of great wars had taken historically to their allies and to the vanquished. After every war in human history, the victors had pillaged the defeated, or in modern parlance, “imposed reparations,” and shared the spoils with their allies. Perhaps the worst example occurred at the end of the First World War, and Nazism and Fascism were the bitter fruits of that approach. Presidents Franklin Roosevelt and Harry Truman and Secretary of State George Marshall fashioned the opposite policy: instead of plundering the vanquished, they offered a “Marshall Plan,” the largest foreign aid program in human history to both allies and enemies and on the condition that they present a common plan that would lead to prosperity and peace for all.

It is that kind of vision that North America needs from its leaders today. The prosperity and security of all the peoples of North America require a bold new step to lift its weakest neighbors to a first-world economy. If North America cannot achieve that goal, then the hopes that many poor and middle-income countries have had in finding a path to modernization through free-trade would be dashed. If North America succeeds, they will provide an example and an inspiration for the entire world.