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INSTITUTIONAL FACTORS IN THE ECONOMIC GROWTH OF MEXICO.

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Abstract

During the last three decades Mexico has grown with an annual average rate of 4%, even with the changes from an inward-looking developing economic strategy towards a more open economy with a far-reaching trade liberalisation program. But the story at the sub-national level is different; these changes have modified the regional development strategies and consequently the growth paths of the 32 Mexican states. There is evidence of an uneven growth, greater disparities and important differences in welfare standards among regions. Labour, physical and human capital are traditional factors that can explain these differences, but how much agglomeration economies and institutions have contributed to them. We open the discussion on how institutional factor determine growth rate, how we define and measure them in a developing economies such as Mexico. We hypothesise that the uneven regional growth in Mexico can be explained by institutional factors. Firstly, we propose that states with an economic local policy more open to trade and foreign investment have led to higher growth rates; contrasting with those states that maintain stronger links with central government. Secondly, we add some of the characteristics of the networks in the regions, in order to show if a greater participation of population and changes in the political local governments have had an impact on growth. Our results indicate that there has not been any regional convergence after the openness period (1985-2000) and that the institutional structure has a significant relation with higher growth rates states.

Introduction

For the last three decades Mexico has been growing at an annual average rate of 4%, even with the changes from an inward-looking developing economic strategy towards a more open economy with a far-reaching trade liberalisation program. But it is also true that these last decades have been accompanied by important financial and economic crises, whose effects have been differentiated across Mexican regions. These changes have modified the growth paths of the 32 Mexican states, resulting in an uneven growth, greater disparities and important differences in welfare standards among regions. Labour, physical and human capital are traditional factors that can explain these differences, but to what extent have institutional factor and agglomeration economies contributed to them?

Considering that markets are socially constructed and economic behaviour is created in networks of interpersonal relations; institutions are according to North (1991) the game rules that determine the forms of social relationships. Their importance in the regional sphere is found in the contribution they have had in the reorganization of the production forms, through the reduction of transaction and production costs, the definition of the incentives structure and the changes of social participation. Institutional factor cannot explain by itself high growth rate, but when it is added economic and social variables, it might contribute in creating a dynamic process with higher levels of growth. Assuming this perspective, we shall hypothesise that the uneven regional growth in Mexico can be explained by institutional factors. Firstly, we propose that states with an economic local policy more open to trade and foreign investment have led to higher growth rates; in contrast to those states that maintain stronger links with central government. Secondly, we add some of the characteristics of the networks in the regions, in order to show if a greater participation of population and changes in the political local governments have had an impact on growth. Our results indicate that the convergence process of 1970-1985 was reverted after the openness period (1985-2000) and that the institutional factors have a significant relation with higher growth rates states in the period 1994-2000.

Second and third section present a brief revision of the main changes experimented in the economic policy of Mexico in the last thirty years, and the analysis of the impact of the

measures in the regional level in terms of gross domestic product (GDP) distribution, growth and convergence. The third section is devoted to presenting the main elements of the institutional dimension of growth. Section four presents some commentaries about institutional changes in the Mexican states. Section five presents a model in which the impact of hard and soft institutional factors on growth are measured using index social capital, economic freedom, trust and others for the period 1994-2000. This section also includes an analysis on the impact of each institutional variable mentioned in the region that has had the highest and lowest GDP growth rates in this phase. Section six summarizes the main conclusions.

I. Economic Policy Changes since 1970

For the last three decades the Mexican economy has been growing at an average rate of 4% per year. This period corresponds to the transformation of an inward-looking development model (the import-substitution protectionist development) to an outward economic strategy. For this study, we have identified three phases[1], each one has changed the sources of national economic growth; at the same time affecting the individual Mexican states in different ways. (See figure 1)

Prior to the mid-1970s Mexico enjoyed several decades of price stability, high per capita growth and financial stability. This was the result of an economic policy based on programs of infrastructure investment, an active land distribution and an industrialization process through import substitution, complemented with a fixed exchange rate regime from 1954 to 1976[2]. This stable economy that President Luis Echeverría (1970-1976) received was on the road to higher inflation through the considerable increase of public expenditure financed with inflation tax and external borrowing. In 1976, the country faced its first financial crisis. Later, under the government of Jose Luis Portillo (1976-1982) the discovery of substantial reserves of oil distorted the economic development agenda of the country. The "abundance" attributable to oil is utilized to obtain vast amounts of credits that increased the external debt and were mainly used for the expenditures of the

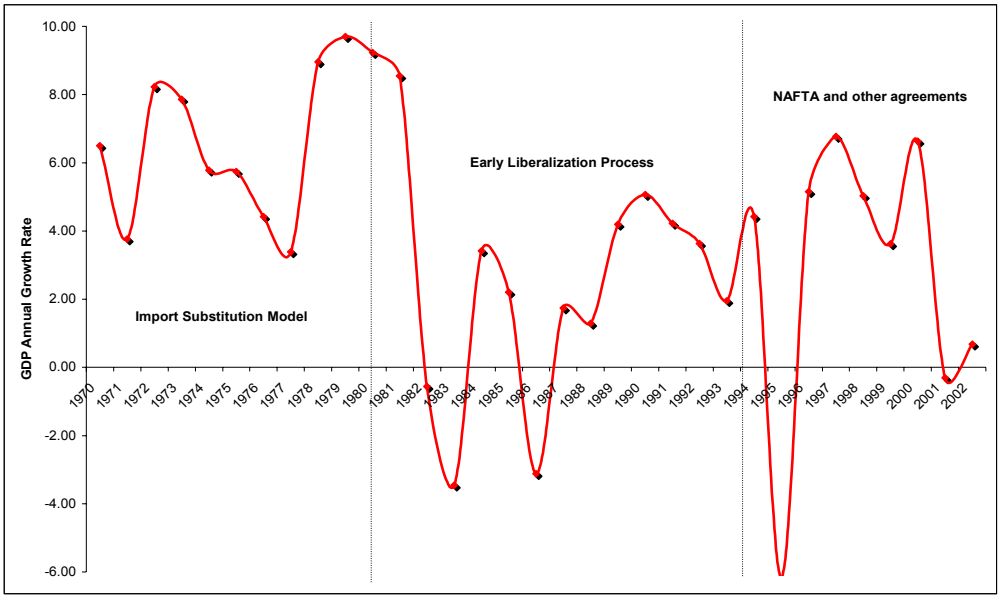
[1] These periods are Import Substitution Model (1970-1985), the early liberalization of the economy (1985-1994) and the NAFTA phase (1994-2000)

[2] This era known as *desarrollo estabilizador* was the result of the ripening of the institutions brought into being by the Mexican Revolution (Aspe, 1993)

bureaucracy and in the state-owner enterprises. Because of these measures, the period 1979-1981 was characterized by expansionary fiscal policy, an inflation rate of 30 per cent, an overvalued real exchange rate, negative domestic real interest rates and a massive capital flight (Agénor, 1999; 383). Meanwhile, the access to world markets was based on the production and commercialization of oil; whereas the efforts of participating in the General Agreement on Tariffs and Trade (GATT) were not successful.

The external difficulties led to a suspension of the payment of external debt, triggering the international debt crisis. In 1982, a new government by Miguel de la Madrid inherits an enormous fiscal deficit in the middle of a financial crisis and the collapse of the international prices of oil. This situation required the appliance of an adjustment program oriented by the IMF and the World Bank with the aim of stabilizing inflation, reactivating growth and improving debt servicing capacity, which also represented the first steps towards the integration to the world economy. The fiscal adjustment was accomplished by a cumulative real exchange rate depreciation tendency and a reduction of real wage.

Figure 1. Mexico's Growth Path 1970-2000



Sources: Ruiz D. Clemente (1999) Macroeconomía Global. Editorial Jus.
INEGI(2000) Estadísticas Históricas de México. INEGI website.

These measures brought disappointing results as per-capita incomes were reduced and in spite of the drastic programs there was a high rate of inflation, accelerated further by the collapse of oil prices in 1986. This orthodox program also implied the liberalization of the economy, in this manner the external trade policy of Mexico starts a new stage, having as initial step the entrance to the GATT.

At the end of 1987, the government applied a heterodox program[3] in order to stabilise the economy. Salinas' administration (1988-1994) followed these strong and deep reforms that finally reached a macroeconomic stability[4]. This process comprised a fiscal discipline, the deregulation programs, des-incorporation of state-owned enterprises and the establishment of a free trade agreement[5]. In 1990, the first informal meeting with U.S. government took place, with the aim of establishing a bilateral free trade agreement. One year later, this agreement was extended to Canada and ratified in 1993 as NAFTA, and formally started in January 1st, 1994 .

The launch of NAFTA embodied the institutionalization of the Mexican integration process into a regional economic bloc with U.S. and Canada. Although the program included sharp reductions in the import value subject to licensing, removal of import reference prices and reductions of import tariffs, these measures had already started in 1985, as well as the elimination of restrictions on foreign direct investment (FDI). The rewards of NAFTA were expected to be seen in the attraction of new FDI, as the country would guarantee stable access to U.S. market. NAFTA was expected to promote production location in Mexico, enhance business climate and also enable to manage a better balance of payment position (Tamayo,2001). Although the optimistic perspective brought by NAFTA and the successful macroeconomic results were achieved, the year 1994 was one of the most violent in politics: the assassination of the ruling party's presidential candidate and the uprising in the south happened in the first three months. The dominant uncertainty reduced the

[3] The key element was an agreement (El Pacto) among the government, business and labour that sought to break inflation inertia through nominal anchors: fixed regimes of exchange rate and public sector prices, a temporary freeze on wages and prices of basic goods, but also a reduction in tariffs and the removal of all import licensing procedures.

[4] Inflation rate and improvement in the primary surplus were achieved

[5] Liberalization and institutional reform in the financial sector were strategic elements of the structural reforms. The process started eliminating quantitative limits on banker's acceptances, the abolishment of controls on interest rates and maturities, introduction of a percent of liquidity ratio, removal of restrictions on lending to private and preferential rates to public sector, and finally a constitutional amendment in 1990 allowed full private ownership of banks.

international reserves; however the presidential elections were expected to enhance the environment. Ernesto Zedillo, the winning candidate, received a stable macroeconomic economy but with uncertainties around the exchange rate regime and the external accounts financing. His administration was complicated; it passed from an adjustment to a reactivation program after the financial crisis of 1998. At the same time, the electoral geography started to change; opposition parties were taking new positions in the local governments and parliaments. The macro economic policies, the crises and the uncertainties have affected in different ways each one of the thirty-two states. These changes are analysed in the next section.

II. The Regional Dynamics in Mexico

In order to see how the macroeconomic changes have affected the economic regional growth, we analyse the distribution of gross domestic product and dynamics in per capita terms. We evaluate through three indicators whether there has been regional convergence and some relevant changes observed in some regions.

Table 1. Regional Distribution of GDP by States 1970-2000 [(a)] (per cent shares)

	1970-1985	1985-1994	1994-2000
Top-five States in 1970			
Distrito Federal	24.96	22.50	22.95
México	10.23	10.79	10.47
Jalisco	6.84	6.63	6.42
Veracruz	5.99	5.14	4.47
Nuevo León	5.90	6.30	6.62
	53.92	*51.35*	*50.93*
Bottom-fifteen states in 1970	*14.6*	*17.4*	*17.0*

1/ From 1993 there is a changed of the methodology.

(a) Ranked by states' GDP shares in 1970.

Sources: (INEGI) National Accounts of Mexico.

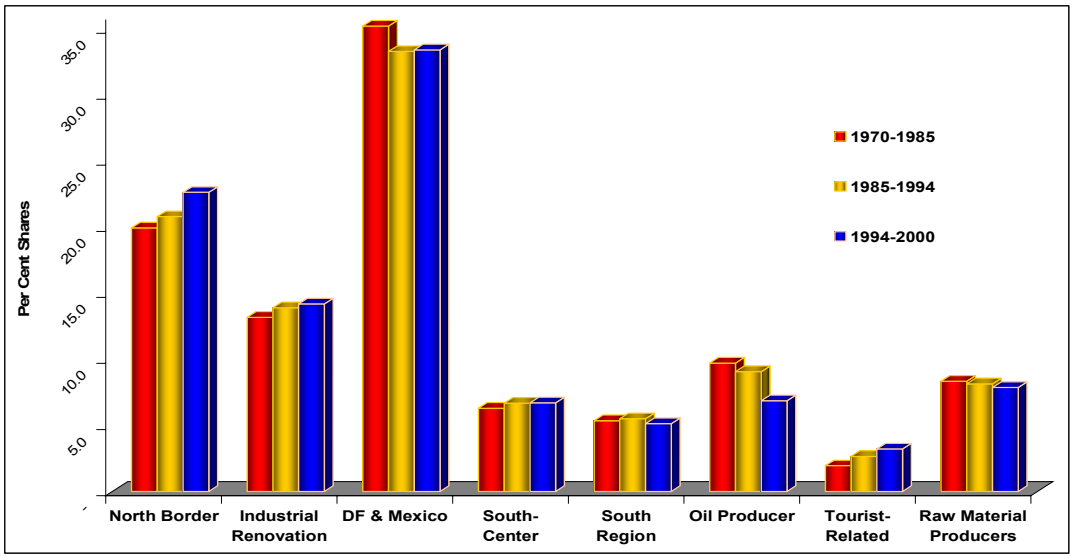
Gross Domestic Product by Federal Entity 1993, 1993-1996, 1993-2001.

Territorial Concentration of Economic Activity

As shown in Table 1, the distribution of product among regions is characterized by strong concentration, a pattern that has remained constant for the last 30 years. Between 1970 and 2000 the five most economically important states in GDP decreased their average participation from 53.92 to 50.93 per cent for this period. Particularly, the contribution of the capital (Distrito Federal) declined from 24.96 to approximately 22 % - although there was a small upturn for the years 1994-2000. From 1970-1985, the process of deconcentration in which economic activity shifted from Distrito Federal towards the state

of Mexico, was in fact simply a movement from the inner city to its northern peripheries. In contrast, the fifteen smallest economies increased from 14.6 to 17 per cent. During this period the oil discoveries found in Tabasco, a southern state, resulted in an important contribution of 2.39 per cent of the national GDP. A similar situation occurred in Campeche in 1985 when oil was discovered, resulting in a contribution of 2.13 % of GDP for the period 1985-1994. But both states reduced their participation to one percent for the period 1994-2000. A particular feature of the series is the substantial increase in the size of Quintana Roo's GDP, a state that started with 0.2% of national GDP in 1970 and reached 1.3 % in 2000. Its performance is strongly connected with the development of tourist-related activities.

Figure 2. Distribution of GDP by regions



Sources: Based on INEGI information.
Notes: *North Border* (Baja California, Coahuila de Zaragoza, Chihuahua, Nuevo León, Tamaulipas, Sonora); *Industrial Renovation* (Jalisco, Aguascalientes, Querétaro, Guanajuato and San Luis Potosí); *South-Center* (Morelos, Puebla, Tlaxcala, Hidalgo); *South Region* (Guerrero, Oaxaca and Chiapas); *Oil Producers* (Veracruz, Tabasco, Campeche); *Tourism Related* (Baja California Sur, Quintana Roo and Yucatán); *Raw Material Producers* (Sinaloa, Nayarit, Durango, Zacatecas, Michoacán, Colima).

Figure 2 shows how the participation of the main economic agglomeration formed by Distrito Federal and México has decreased over the years, although they still contributed 33 per cent of the GDP for 1994-2000. In contrast, two groups of states have increased their product participation: the North Border States (22.6%) and the industrial reconverted states (14.2%). Tamayo (2001) argues that the reasons for this performance can be found in the gains from the economic integration with U.S., especially for the northern region. However,

these states have also experienced a transformation in productive specialization towards a more adequate structure in accordance with the globalization standards. The situation of the smallest economies, though, is not enhanced, as we will observe in the next section.

Regional Disparities of GDP per capita

Table 2 shows the disparities in terms of GDP per capita of the thirty-two states of Mexico in the last thirty years. Since 1970, the largest economic centre (Distrito Federal) has also been the state with the highest GDP per capita. Five of the six states bordering the US have been enjoying the highest income levels of the last thirty years. In contrast, within the bottom-ten rank, the GDP per capita of the southern states (Oaxaca, Chiapas and Guerrero) and some raw material producers have been very low.

If we ignore the states of Campeche and Tabasco -that had an atypical prominent increase in their growth rates- Distrito Federal and Nuevo León have had the highest levels of GDP per capita for the period 1970-2000. The states in the top-ten rank have remained, with some variations, almost unchanged throughout the period. The exceptions are the states of México, Tamaulipas and Jalisco which have moved to the mid-level income economies since 1985. An important change in the income position is the entrance of the economies of Querétaro and Aguascalientes to the top-ten between 1985 and 1994. Both are part of the group of states that transformed their industrial specialization programs.More than the half of the bottom-ten group have remained the same since 1970, the exceptions being , Guanajuato, San Luis Potosí and Puebla, which moved out of the group after improvements in the 1980s and 1990s. However the three southern states (Chiapas, Guerrero and Oaxaca), Tlaxcala, Zacatecas and Michoacán stayed among the poorest during the whole period. Other states that fall into this group in 2000 are Veracruz, Nayarit and Tabasco.

Between 1985 and 1994, the convergence seems to be upturned. The ratio of the highest and the lowest income is of 6.03 times, the whole economy had a low growth rate of 2% for GDP and - 0.5. % in per capita terms. Nine of the top-ten states had above-average performance whereas only four of the bottom-ten states grew above the national average. For this period, there are sixteen states with negative growth rates of GDP per capita and

only Quintana Roo and Distrito Federal were more dynamic. The tendency of convergence seems to disappear for this period.

Table 2 Mexico's Gross Domestic Product per Capita by State 1970-2000
(Average Annual Rate of Growth and 1993 Prices)

	1970		1970-1985	1985		1985-1994	1994		1994-2000	2000	
	Rank (a)	Pesos 1993	Average growth	Rank	Pesos 1993	Average growth	Rank	Pesos 1993	Average growth	Rank	Pesos 1993
Distrito Federal	*1°*	19,900	1.6	*2°*	25,344	3.9	1°	35,661	1.5	1°	38,903
Nuevo León	*2°*	17,231	1.7	*4°*	22,078	0.6	3°	23,291	2.2	2°	26,522
Baja California	*3°*	14,998	1.0	*5°*	17,361	- 0.1	6°	17,257	1.9	7°	19,361
Baja California Sur	*4°*	14,383	0.6	*9°*	15,750	1.0	7°	17,180	1.4	8°	18,644
Sonora	*5°*	14,329	0.7	*7°*	15,974	0.1	9°	16,153	2.1	9°	18,249
Coahuila de Zaragoza	*6°*	12,397	1.8	*6°*	16,118	0.1	8°	16,303	3.5	6°	20,006
México	*7°*	11,159	1.1	*15°*	13,244	- 2.5	19°	10,541	2.3	17°	12,107
Tamaulipas	*8°*	10,845	1.6	*13°*	13,770	0.4	13°	14,216	2.3	12°	16,269
Jalisco	*9°*	10,736	1.9	*12°*	14,227	- 1.1	15°	12,918	2.5	14°	14,972
Chihuahua	*10°*	10,458	1.8	*14°*	13,686	2.8	5°	17,529	3.6	5°	21,622
Campeche			16.5	*1°*	85,297	- 13.5	4°	23,023	0.0	3°	23,056
Quintana Roo			2.9	*8°*	15,833	4.9	2°	24,333	- 1.4	4°	22,350
Tabasco			7.5	*3°*	22,208	- 9.3	21°	9,263	- 0.2	24°	9,145
Querétaro			4.0	*10°*	14,623	- 0.2	12°	14,395	3.9	10°	18,088
Aguascalientes						2.8	10°	14,783	3.3	11°	17,959
Guanajuato	*23°*	7,363	1.7	*24°*	9,453	- 0.5	22°	9,077	2.3	21°	10,374
Puebla	*24°*	6,420	2.3	*28°*	9,073	- 1.2	26°	8,163	3.4	22°	9,967
San Luis Potosí	*25°*	6,035	3.0	*25°*	9,398	0.7	20°	9,984	1.8	20°	11,092
Hidalgo	*26°*	5,552	3.5	*26°*	9,263	- 0.8	24°	8,646	1.4	23°	9,400
Michoacán	*27°*	5,419	2.1	*31°*	7,436	0.1	28°	7,489	2.6	27°	8,762
Guerrero	*28°*	5,336	2.4	*30°*	7,615	0.3	27°	7,789	0.1	30°	7,842
Zacatecas	*29°*	5,322	2.7	*29°*	7,972	- 1.0	29°	7,276	2.3	28°	8,358
Chiapas	*30°*	5,108	4.0	*27°*	9,246	- 4.8	32°	5,916	1.3	31°	6,394
Tlaxcala	*31°*	4,706	5.3	*21°*	10,144	- 4.0	30°	7,046	2.8	29°	8,304
Oaxaca	*32°*	3,640	4.3	*32°*	6,817	- 1.6	31°	5,918	1.2	32°	6,339
National		10,291	2.1		13,966	- 0.5		13,400	2.0		15,128
Ratio Highest/Lowest		5.47			12.51			6.03			6.14
Highest/National		1.93			6.11			2.66			2.57
Lowest/National		0.35			0.49			0.44			0.42

1/ After 1993, the methodology changed.

(a) Ranked by GDP per Capita in real prices (1993=100)

Sources: (INEGI) National Accounts of Mexico. Gross Domestic Product by Federal Entity 1993, 1993-1996, 1993-2001.

(INEGI) IX,X, XI and XII Population and Housing Census.

Finally, in the most recent period the distance between the richest and the poorest state has increased to 6.14 times. The national economy grows at 3.4 % per year and 2.0 % in per capita terms, in which five of the ten-top economies and four of the bottom-ten group

performed above this level. Results suggest there is not evidence of convergence for this period.

Some measures of dispersion are used as a second step for testing whether there is convergence among Mexican states. Firstly, the dispersion measure of the GDP per capita which is done using the standard deviation of the logarithm of income. This measure is also known as σ-convergence. Secondly, the weighted coefficient of variation of GDP is applied in order to have a better estimation of the disparities among states.

Figure 3. Dispersion of GDP per Capita in Mexico 1970-2000

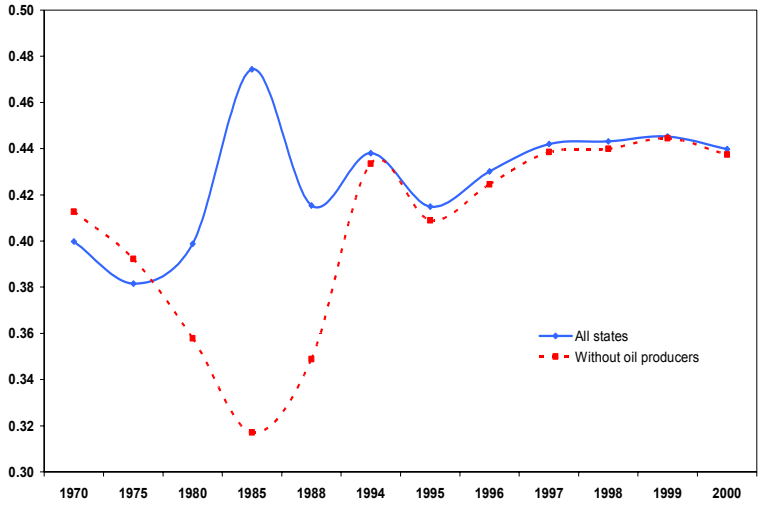
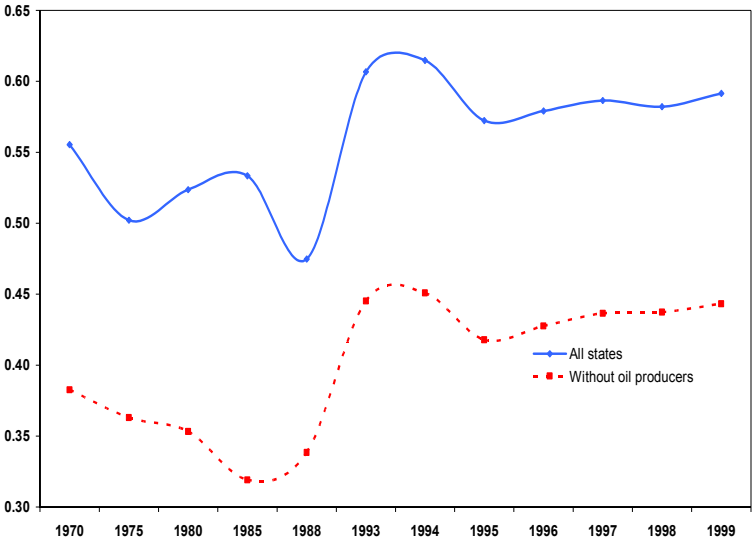


Figure 3 shows the dispersion of income (σ-convergence) between 1970 and 2000. There are two lines, the continuous line that includes the thirty-two states; while the second one excludes the states of Campeche and Tabasco. This is because their atypical behaviour might generate imprecise convergence estimators. Ignoring these states, there is not evidence of a reduction in regional income dispersion between 1970 and 2000. Meanwhile, in 1970 the σ-convergence measure was 0.40, thirty years later this indicator was only 0.44, in fact it seems constant. However between 1970 and 1985, there is a reduction in dispersion from 0.40 to 0.31 for the restricted sample. After 1985, there is an increasing tendency of the income dispersion that reaches a peak in 1994. In 1995 the dispersion is reduced to 0.415 but since that point it has been slowly growing. Considering the results from the restricted sample, there is some evidence of convergence for the period 1970-1985, divergence for the period (1985-1994) and an undetermined trajectory for the last phase.

Figure 4. Weighted Coefficient of Variation of per capita GDP (in 1993 prices)



Similar results are found using the weighted coefficient of variation (Figure 4), there is a decrease between 1970 and 1985, but after that the data show a clear increase in the coefficient. There is evidence that income differences in Mexico became greater after 1985; according to Fujita (2001) "*the larger the coefficient, the larger the disparity among regions*". However in the last period (1994-2000), the tendency is not clear, because there is a slight reduction of the variation that is reversed in 1995.

The final convergence indicator we use is an empirical estimation of convergence rate of group economies towards a common steady state. Using a simple adaptation from a neoclassical growth model, we estimated the following equation (Barro and Sala-i-Martin, 1995):

$$\frac{y_{i,t} - y_{i,t-\tau}}{\tau} = \alpha - \beta y_{i,t-\tau} + u_{i,t} \qquad (1)$$

Where $y_{i,t}$ is logarithm of income per capita in the economy (state) i in the period t, $u_{i,t}$ is a stochastic term, α is a constant that includes the steady state income, β is the convergence parameter and τ is a fixed time period. Equation (1) gives us an estimation of the convergence rate among different economies. A negative β implies that the growth rate of the top-rank states is lower than the rate if the bottom-rank states, which gives evidence of a reduction in the relative gap among states. If the rate of growth of the richest states is higher than the rate of the poorest states, the coefficient results positive, therefore is no convergence.[6]

[6] There are at least three concepts of convergences: absolute, conditional and club convergence. In the present document we use absolute convergence. However, we need to consider that a negative correlation between growth rate and the initial amount of income per capita is

Table 3. Absolute Convergence Rate for Mexican States (Dep. Var.: Annual Average Growth Rate of GDP per capita)

Regr.	Period	Convergence Rate		R^2	Obs.
		Coefficient	S.E.		
Without Oil Producers		-			
1)	1970-2000	- 0.0024	0.30	0.020	29
2)	1970-1985	- 0.0199 *	0.36	0.520	29
3)	1985-1994	0.0251 *	1.02	0.184	29
4)	1994-2000	0.0043	0.46	0.030	29

Notes: All regresions include constant term.

* Significative at 5% and 10%

The results of equation (1)[7] for Mexico are shown in table 3, in which a restricted sample has been used. The first line refers to the convergence of the period 1970-2000, the coefficient although not significant indicates some features of the trend. A negative value (0.2%) indicates a weak process of convergence of the economy for the last thirty years, although it has changed in this time.

For the period 1970-1985, the coefficient implies income per capita level converged at a rate of 1.9 % per year. During this phase, the rate of growth of the poorest states was higher than the rate of the richest states as figure A1(b) shows. This tendency is reversed for the period 1985-1994 when the states display a positive rate of 2.5% that suggests there is no evidence of convergence (See figure in appendix A1(c)). The last regression has an undetermined tendency; however it is possible to observe that the group of states that report higher growth rate belongs to the industrial transformation and the U.S. border area.

These results coincide with the tendencies reported by Juan-Ramon and Rivera-Batiz (1996), who found that between 1970 and 1985, there was a convergence across regions and in 1985 to 1993 cross-state divergence was observed. Also OCDE (1998) confirms that disparities narrowed during 1980-85 but widened between 1985 and 1993. In the same way, Rodriguez-Pose (2001) found a convergence rate of approximately 2% for the 70s and 80s. Esquivel (2000) and Messmacher (2000) present more detailed rates because they use

a necessary condition but not sufficient for dispersion reduction. Therefore we have two types of convergence: β-convergence and σ-convergence, where the presence of the first one implies the absolute convergence, but not the opposite.

[7] The data used belongs to the project UNAM-DGAPA "Territorial Dimension of the productive and entrepreneurial specialization in Mexico" (1999).Faculty of Economics, Mexico. UNAM. Regional Information was homogenised.

different time periods. However for the period 1993-2000, Esquivel (2003) interprets this rate as divergence of 0.5 per cent.

The gap between rich and poor states coincides with the change in the economic policy in Mexico towards a more open economy. Some of the states were expected to be benefited because of their proximity to U.S. but also the group of states that transformed their industrial specialization present positive growth rates in this period. The reason is not only the change that NAFTA created, but also the economies of agglomeration and the geographical advantages that favoured these states. Also south region does not have these advantages, neither an adequate infrastructure nor political instability.

Table 2 also shows how there is a relative immobility of the poorest states. In fact the five bottom states (Guerrero, Chiapas, Oaxaca, Tlaxcala and Zacatecas) in 1970 have remained in the group until 2000. A similar result is given by table A2, in which incomes per capita is shown by regions. There is also immobility in the income distribution, particularly in the extremes. The capital agglomeration and the north border area have been the states with the highest income per capita, meanwhile the south has stayed poor throughout the period. The tourist-related zone and the industrial renovated areas are the only sources of mobility observed between these years.

The convergence among regions shows that during 1970-1985, the poorest regions -those located in the south of the country, the raw material producers- and the south centre grew faster than the most developed regions (DF and Mexico, and North border region). Figure 5a illustrates a tendency of convergence. For the period 1985-1994, when the drop of the oil producers is not included, there is a divergence trend among regions. In this period almost all regions had negative growth and south region states had the lowest levels. (See figure 5b). In the last period, north border and industrial reconverted regions had the highest growth of GDP per capita. The main urban agglomeration of the country is not in the leader region, which could be because of a shift in markets towards U.S. border and the process of decentralization of economic activity towards south centre states. South Region

remains in the last position in a period that does not show convergence among regions (Figure 5c).

Figure 5a. Convergence and Divergence of GDP per capita in Mexico

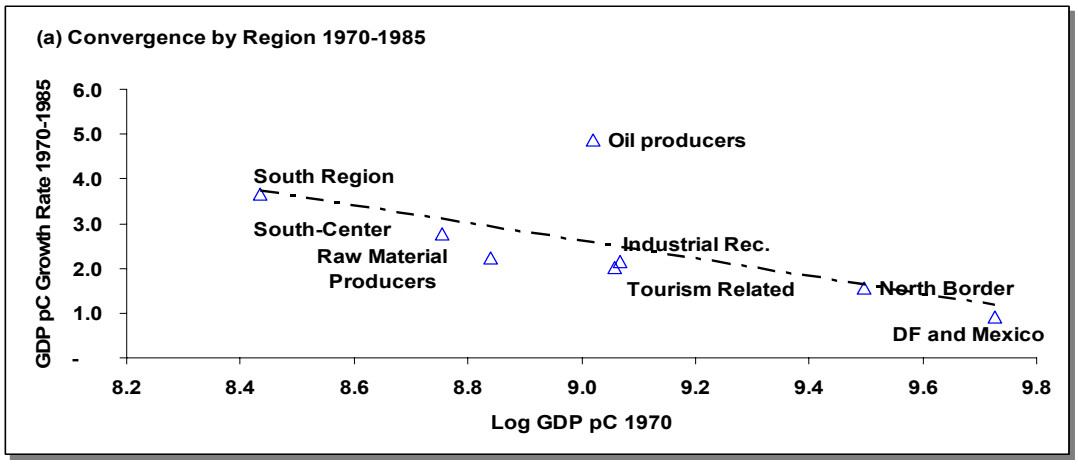


Figure 5b. Convergence and Divergence of GDP per capita in Mexico

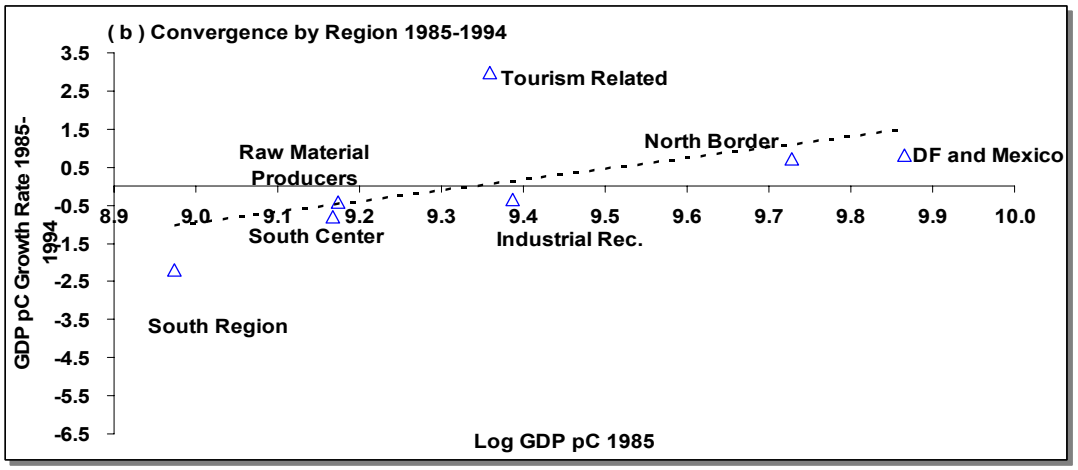
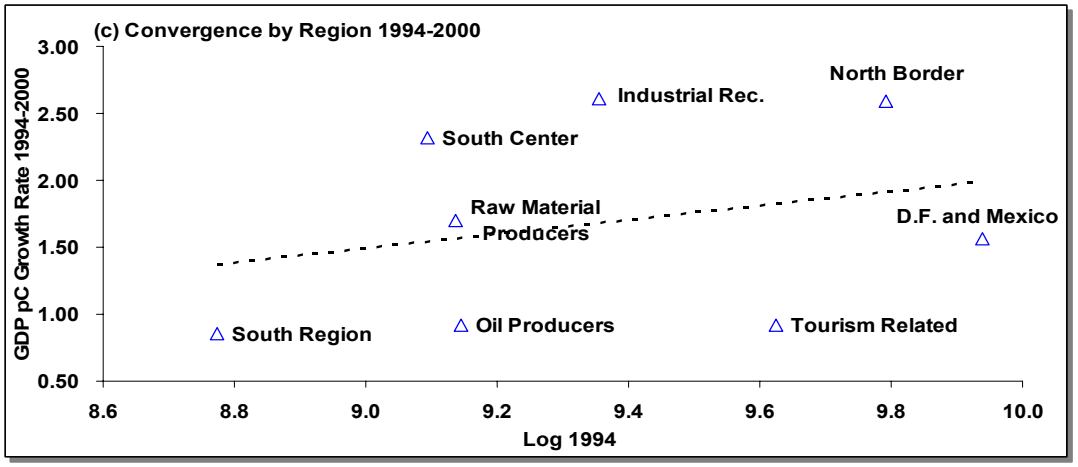


Figure 5c. Convergence and Divergence of GDP per capita in Mexico



The main question behind the dynamic observed during these years is what factors can explain the higher growth in some regions. Although they are ruled by a national economic policy, could there be a series of institutional factors that have favoured growth in some regions and made difficult the path to growth of others. To what extent institutional factors –formal and informal- explain regional growth in Mexican regions? This is the enquiry that we will try to explain in the following sections.

III.Institutions and Economic Growth in Mexico

The Institutional Dimension of Growth

One of the main inquiries in Economics is to explain the reasons of inequalities among societies, the causes of that division between rich and poor countries or regions. The question of unequal economic performance and territorial disparities has been unraveled through theories and models in which indicators of capital, investment, saving, productivity and some socioeconomic variables -such as education-, have been used. But the causes of uneven growth and disparities continue unconcluded. For instance, the neoclassical theory predicts that poor countries will grow faster than wealthy countries, but in reality poor countries are falling back rather than catching up. The endogenous growth theories in which technology and technological progress are the forces behind rising standards of living, conclude that differences in growth only depend on the amount of human and physical capital assigned to research and development. At the same time, these studies that only emphasize on technological factors had led to a certain neglect of the role of social forces. But society matters, social and institutional features define the structure in which economic activity is realized. They influence the quality of investment, the level of technical efficiency and the ability of the regions and countries to assimilate technology from abroad.

The reasons for considering institutions in the determinants of growth can be found in empirical evidence analysis. For instance, the persistence of disparities in regions, such as Europe where mobility of economic and technological factors is greater, suggests a connection with local social structure that helps some societies to assimilate, replace and respond to challenges in a better way than others. Moreover, the successful results observed in regions where institutional elements seems to have an important role as a

source of growth, have also opened a debate on the way regional policies must be. But precisely, the evidence of no-convergence among countries and regions and the studies of conditional convergence have triggered the challenge of assessing the role of institutions in growth. Also the connection among social indicator and institutions has shown that some of the indexes of social development are very useful for predicting subsequent growth (Temple and Johnson, 1988), because the social capability is reflected in those indicators.

In the literature of regional growth, some studies have sustained that differences in social and institutional variables shape the growth rate per capita income of countries and consequently their convergence rates (Cofey and Polese, 1984; Hall and Jones, 1996; Helliwell and Putnam, 1995; Knack and Keefer, 1997; Putnam, 1993; Rupansingha, 2000, 2002; Temple and Johnson, 1998). These studies are examples of how institutional features can explain growth in some regions, and added to other economic and social factors the results can elucidate the higher levels of efficiency and growth.

Background

The Institutional perspective of regional development is the analysis that acknowledged the collective and social foundations of *economic behaviour*, in which the economy is an instituted process and socially embedded activity therefore context-specific and path-dependent in its evolution (Amin, 1999). *Economy* is a composition of collective influences which shape individual actions as a diversified and path-dependent entity molded by inherited cultural and socio-institutional influences (Amin, 1999). These *influences* are understood to be: formal and informal institutions, the composition network of economic association and the intermediate institutions between market and states. This perception opens a different angle on analyzing growth and economic performance in national and regional fields, and also can explain the bases of unequal economic performance.

What are institutions?

For understanding what is meant by institutions, we assume that markets are socially constructed and economic life is rooted in networks of interpersonal relations; in which networks characteristics and properties -such as mutuality, trust and cooperation- are

elements that can affect the economic outcomes. Secondly, the different actors-network can produce different forms of economic behaviour or decision making. Finally, the economy is shaped by collective forces that include formal institutions such as rules, laws, constitutions, property rights, as well as informal ones such as individual habits, groups' routines, customs, traditions, social norms and values.

These collective forces are according to North (1991), the institutions: the game rules or the man-designed limits that determine the forms of social relationships and the incentives that modify human interaction. They are the instruments of stabilizing and interpreting a non-equilibrating and imperfect economy. North also affirms that the institutional structure is more than simple restrictive factor of economic growth. Institutions provide the framework of socioeconomic development, bring constraints and opportunities, influence all activities and define possibilities of growth. They reduce uncertainty in exchange, garner consensus and common arrangements and guide individual action.

Considering how institutions influence only the production arrangements that boost economic growth, we assume that the main effects are:

1) The reduction of transaction and production costs that gives efficient solutions in a competitive and asymmetric framework, as suggested by the New Institutional Economy. Therefore, they also define the incentives structure of the economy.
2) Changes in social participation that can encourage a greater confidence between agents and give a guarantee that contract can be fulfilled.

In this research we define two kinds of institutional elements:

a) *Soft Institutional Factors*: The characteristics of the networks of interpersonal relations that will be expressed by the following properties: mutuality, trust and cooperation. And also through individuals habits, routines, customs, traditions, social norms and values. These are the socio-cultural characteristics in space, shared values and norms.

b) *Hard Institutional Factors*: The long-lasting collective forces that shape the economy mainly identified with the formal institutional: rules, laws, constitutions, property rights.

Previous studies

The first analysis that integrated institutional features is distinguished for using neoclassical or endogenous growth models that embrace a broad set of diverse variables such as: government consumption and savings, openness of the economy, private ownership of enterprises, risk of expropriation, democracy and prevalence of rule of law. (Barro, 1991; Easterly and Levine, 1997; Sachs and Warner, 1997). However, their interest was not to determine the contribution of institutional elements. A review of the studies that had an explicit interest on institutional features can be divided in those referred to hard and soft institutional elements.

The Hard institutional elements

Some studies analyze institutional factors as a group of characteristics that define a setting that could be favorable or harmful for societies. For example, Scully (1988) tests how different institutional framework (integrated by political, civil and economic liberties) impact on economic growth. For the world reality of the eighties, Scully found that nations under statism regimes that suppressed these liberties, gravely affected the standard of living of their citizens. The information of country rankings of political and civil liberty, as well as the type of economic system and measures of freedom were taken from Gastil (1982). Another case is the study done by Hall and Jones (1996) who consider that the type of institutions –that they refer as infrastructure- is relevant for high growth in some countries. The model assesses the infrastructure using, an index of the extent to which government policies favor production instead of diversion. Likewise, they include the openness to trade, the degree of private ownership and the proportion of population that speaks English. Their results indicate that societies are successful if their infrastructure secures physical and intellectual property rights, whereas in those in which diversion is promoted, the productivity level will be lower.

Likewise, Knack and Keefer (1997) argue that the cause of the divergence between countries is found in an inadequate legal, political and regulatory framework – the institutional environment. The analysis investigates how the capacity of poor countries to catch up is partially influenced by this setting; because an inefficient environment may reduce investment and the ability of absorbing technological advance from abroad. For this proposal, they use the rule of law, the occurrence of corruption, the risk of expropriation and the contract repudiation as elements that characterize the institutional setting. They found that when good institutions are absent, convergence slows, even when there are factors such as investment in human and physical capital.

Rodriguez-Pose (1996) offers an example of how changes in institutional factors can also be incorporated as determinants of the regional growth path, taking the Spanish decentralization process. The basic idea is that the devolution of power to the regions can alter long-established links between economic actors and the administration, generating new opportunities and constraints for economic activity. The model uses the constitutional level of regional autonomy. The results imply that the early stages of regionalization have had some influence in the relative economic performance of the most decentralized regions. By contrast, regions still heavily dependent on national policies fare somewhat worse.

Soft institutional elements.

Another group of authors have worked on the properties of the networks that have defined the "social capital[8]" of the regions (Knack and Keefer, 1997b). Some of them have used the concept of institutional density, which refers to the inter-institutional relations, the collective representation, a common industrial objective and a series of shared norms and cultural values. A higher density can give legitimacy, enhance confidence relationships, encourage entrepreneurial capacity and strengthen roots of local economic activity. Their conclusions show that regions with higher institutional density offer better access to low production factor costs and to high effective social economic organization (Rodriguez-Pose, 1999).

[8] Social Capital is defined by Putnam (1995) as the features of social organization, such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit.

For instance, Knack and Keefer (1997b) assess the relationship between social capital and growth, using indicators of trust and civic cooperation. Both properties can give evidence of how differences in growth are affected by the kind of networks the countries have. They conclude that trust and civic co-operation are associated with stronger economic performance; however the associational activity is not correlated with economic performance. In contrast Putnam and Helliwell (1995) found that civic development was related with higher growth in Italy, such variable was a composite index or newspaper readership, the density of sports and cultural associations, turnout in reference, and the incidence of preference voting. Similarly, Rupansingha and Freshwater (2002) analyze how social capital has a positive effect on U.S. regions. Their study evaluates how associations (Olson-type and Putnam-type[9]) affect regional growth. For this proposal, they estimate the density per 10,000 persons in 1990 for the establishment of civic groups, religious organizations, sports club, labour unions and business organizations. Also they show a positive effect of ethnic diversity that reveals the level of polarization of the economy, although they recognize that a higher level of ethnic diversity yields less trusting societies.

Lall(2002) includes in his study of industrial productivity performance in Mexico, the role of the informal networks which are measured using the frequency of business lunch and reunions. The results showed a positive effect on productivity, as they represent access to backward and forward linkages. This type of measure is similar to Rupansigha et al.(2002) when social capital is measured by the size and activity of associations in U.S. Also the study found that inequality is harmful for growth, because local and state governments are under more pressure to redistribute resources in more polarized communities.

Having defined some of the features of this approach, we will try to use it doing an application on Mexican growth in the next sections. We carry out a first analysis in order to evaluate any relation between institutional factors and regional growth. Firstly, we consider how the changes in the hard institutions, basically referred to external policies of the country have affected growth. Secondly, we include the impact of the economic autonomy

[9] Olson-type associations are those that facilitate social interactions that may encourage trust and co-operation but are engaged in rent-seeking activities. Putnam- type groups do not have rent seeking objectives.

of the states in growth. Finally, in order to see some characteristics of the social capital, we introduce the impact of polarization and the degree of literacy population as indicators of trust.

IV. Regional Institutional Changes since 1970

Mexico is integrated by 32 states in a federal constitutional system, where the main line in the economic and regional policies organisation is found in the constitutional article 25, in which the central government receives the right of "*democratic planning the national economy*". This is the absolute expression of the centralism that has been ruling the Mexican regions since 1917.

During the seventies, the scheme of centralised decisions operated well with the Import Substitution Model; the regions performed passively, their role consisted in receiving resources from the centre. In the eighties, the traditional centralism confronts the reality that the economic openness and the structural change brought. The tendencies of the governments of the eighties on relying on the national planning from the centre and the failures in their results gave motives to the regions to take decisions on their own interests. Today, the federal structure of Mexico is a result of a series of central reactions to political and economic crises, which has led to a weak process of decentralisation. Taking into account that Mexico has been considered one of the least democratic countries during the 20th century[10], the decentralisation process has been seen more as a factor of political stabilization than a change for economic growth; as it has allowed opposition parties to access government. The economic and financial crises during the eighties reduced the credibility on the PRI [11]governments; hence in the first half of 1990s the electoral geography changed in favour of the opposition parties. Since then, the demands of decentralisation have become stronger, although some states still have a great dependence from centre.

[10] During 70 years, the Partido de la Revolución Institucional (PRI) dominated the country.

[11] Partido de la Revolución Institucional (PRI) was created in 1929 as one of the institutions in which different political and social forces converges after the revolution war of 1910.

At the same time, the economic strategy taken after 1985 has altered the regions in Mexico, it has increased territorial polarization[12]. The modern export-oriented production has facilitated regional and sectoral enclaves within the Mexican industrial landscape. Most of these enclaves have been associated to backward and forward linkages. The export-led growth has intensified the polarization across regions, increased income equalities and concentration in the highest deciles, and contributed to increase poverty. Meanwhile, the Foreign Direct Investment flows have resulted in the disintegration of the internal economy, as only few sectors have received large amounts (Dussel, 2000). In this sense, liberalization has integrated Mexico into the North American market but it has exacerbating internal disintegration.

Considering the decentralisation process and the external reforms occurring in the last decade, some of the local governments have been more interested in developing the external sector of their regions. These policies not only include measures for promoting exports but also reduction on restrictions and a set of incentives for attracting foreign direct investment flows. Simultaneously, the necessity of a process decentralisation has generated that some states, particularly those located in the U.S. border and the group of industrial reconverted states, have launched programs of regionalization.

Meanwhile, population has expressed the necessity of a new government and its lack of trust in previous regimes through the elections of 2000, in which for first time after 70 years the ruling party (PRI) was defeated by the Partido Acción Nacional (PAN). We include in the following models variables that reflect the participation in elections and the difference in economic performances as results of opposition governments for the period 1994-2000.

[12] Although, the effect of trade and economic integration on national and regional economic growth is still in debate, the evidence confirms the arguments of Krugman and Venables (1995) who emphasize that trade leads to greater concentration of economic activity and polarization.

V. The model and the variables

In order to test whether the institutional factors have had an impact on regional growth, we perform OLS regressions, for the period 1994-2000. The model used adopts the following form:

$G_{i,t} = f(\ lngdp_o,\ liecofree,\ icenpow,\ trustg_o,\ trusto_o,\ lisocap_o,\ dmx,\ dus,\ liinfr_o,\ oil)$ *(1)*

Where $G_{i,t}$ is regional real per capita GDP growth in each Mexican state for each period covered in the analysis. Initial per capita GDP is given by *lngdp*. The hard-institutions are measured using *liecofree* and *icenpow*. The variable *liecofree* is proxy of economic freedom, constructed as an index of exports and foreign direct investment with respect to GDP of each region for the whole period. Because of the changes that the economy has lived in this episode, it is expected to have a positive effect on growth. Meanwhile, the variable *icenpow* is a proxy that measures the importance of the central government over the regions. It is an index of investment and expenditure government and the amount of incomes obtained through taxation in each one of the states. A negative value corresponds to the less economic independence from central government.

For the soft-institutional factor, we have considered some characteristics of the social capita of the regions. The variable *trustg* and *trusto* are used as indicators of trust of the population on government and the opposition during this period. They are the difference in preferences of political parties in the last two presidential elections 1994 and 2000. A negative value means a reduction in the preference, that we consider as an indicator of loss of trust in a specific project. If the value is positive it means an increase in trust in a specific project (party or government). Government was identified with PRI votes, as it was the ruling party during this time. Opposition only relates to PAN votes.

For measuring the social capital in the region we calculated an index (*lisocap*) using information of indigenous population, literacy level, crimes density, election attendance, and institutional density using Putnam's and Olson's classification. Indigenous population was used as proxy for polarization and consequently as factor of trust reduction among

agents.[13] Literacy level is expected to have a positive effect on trust as it brings equal opportunities and confidence in agents' interaction. Crimes density is the number of serious offenses[14] per 10,000 as an indicator of insecurity, lack of trust and confidence among agents. Election turnout was included as proxy of civic norms strength. Institutional density is the number of associations per 10,000 habitants, classified in two types according to their objectives: rent-seeking aims (Olson's) or social network development (Putnam's).

Additionally, we include the distance from each state to the capital (*dmx*) and the U.S. border (*dus*), in order to see any change in the market orientation of the regions as it is expected with the entrance of the NAFTA and other commercial agreements in this period. The effect of agglomeration economies is captured through an infrastructure index (*liinfr*), in which the availability of services of water, electricity, drainage, and the urbanization level are measured for 1990. The atypical growth of oil producer states was denoted with a dummy variable (*oil)*.

In addition to this exercise, we analyses each one of the institutional variable used before with some interactions dummies, with the purpose of capturing some differential effects in the growth of the states located in the US border, south and industrial reconverted regions (*dnorth, dsouth* and *dindr*).

$G_{i,t} = f$ (*lngdp$_o$, one Institutional Variable, dummies, interaction dummies*) (1´)

Where Institutional Variable[15] *are : liecofree, icenpow, trustg$_o$, trusto$_o$, lisocap$_o$, liinfr$_o$*

The results[16]

Table A3.1 reports the results of regressing regional per capita growth rates for the period between 1994 and 2000[17]. We found that 50 per cent of the variance growth across states during this period was explained by the initial levels of GDP per capita and the. Index of

[13] Rupasingha, Anil, Goetz, S. and Freshwater, D. (2002) propose that racial polarisation causes negative impacts on economic growth. Because the higher level of ethnic diversity results in less trusting societies. In a polarized society, poor policies are encouraged, as well as poor education, inadequate infrastructure, and discourage economic development.

[14] These activities include the crimes regarding narcotics, firearms, theft, damages to property, embezzlement and against tax law.

[15] A more detailed explanation and sources of the variables are included in the appendix

[16] The results of this section are preliminary, the aim of this section is to expand it to the periods 1970-1985 and 1985-1994..

[17] The option of White Heteroskedasticity-Consistent Standard Errors has been used in all regressions. At the same time, the thirty two states have been included.

Economic freedom (*liecofree*). The coefficient indicates that a change of one unit in the index can cause a positive effect on growth of 0.65. Meanwhile, high initial levels of GDP per capita *(lndgdp)* are inversely correlated with growth rates meaning that highest growth has been concentrated in poor states of the south. The regional convergence rate during this period is enhanced an increase significantly as additional variables are introduced.

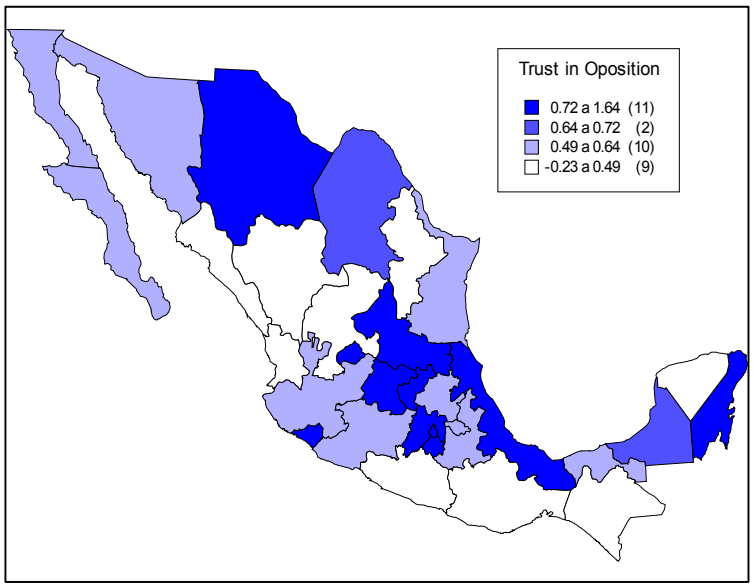
Although the rest of the variables are not significant there are interesting results in the trends obtained. For instance, social capital (*lisoccap*) has a positive impact on growth (0.94), followed by trust in opposition (*trusto*) with value of .88 on growth. Both coefficients present positive effects on growth complementing economic freedom (*iecofree*). Trust in government has a positive affect. In contrast, central power dominance (*icenpow*) shows a negative effect on growth (-0.09). Distance has a positive effect on growth, where capital city distance effect is stronger than American market distance. A surprising result is the negative signs obtained in infrastructure; however the results improve when some variables are omitted. The variable oil does not present any statistical significance. The results suggest that economic freedom is the quality that impacts more on growth in the recent period. But also social capital and trust in opposition are the forces that complement this growth.

After 1985 the states that accepted the liberalization changes, promoting trade and exports, were the ones that receive the immediate benefits. Chihuahua and Baja California were favored by the closeness to U.S., achieving the higher export participation of the period. Important changes in the entrepreneurial networks were being developed in the states where local government found in exports and tourism an alternative for a weak internal market. The states that report the highest levels of economic freedom index are Nuevo Leon, Distrito Federal, Tamaulipas, Chihuahua and Baja California, economies that also present growth rate of more than 1.5 per cent for this period. In contrast the states with the less economic freedom level are the oil producer states (Tabasco and Campeche) and the poor southern states of Oaxaca, Chiapas and Guerrero. With the aim of see which have been the differences across regions in terms of institutional factors, we produce the following results with model 1'.

Regional Effects

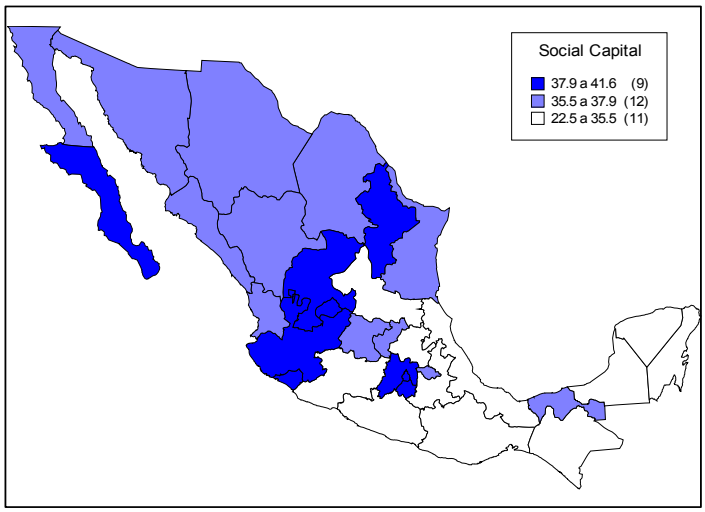
Trust in government. Trust is a variable that alone can explain 16 per cent of the variance of growth, it is a very low power, but it is enhanced when the regional impacts are included. Table A4.1 in model 4 shows that trust has an effect of .38 over growth, in the north the trust impact –1.30. However, it seems not robust, moreover when *dsouth* is included. Considering these results, we observe that trust in government in south region has a positive effect of growth (.45), meanwhile northern states seems to have lost confidence in the official project during 1994-2000. The population of Tabasco, Guerrero, Veracruz, Oaxaca, Chiapas and Hidalgo, -that also coincides with the group of most lagging states- still have a stronger preference for PRI project, therefore they display a strong confidence in the central government project of the period 1994-2000.

Figure 6.a Trust in Opposition project.



Trust in opposition. As a complement of the previous model, we consider which would be the effect of confidence in a new project represented by the PAN project. This variable can show the need of a change in the regions, the demand of a new project and the lack of trust in their governments in 1994-2000. Model 4 in table A4.2 shows that trust in opposition has a positive impact on growth (.93) meanwhile the effects are differentiated in north and south regions. The north states that have trusted in opposition parties had a strong effect on growth of 3.43 whereas the trust in south that has been less had resulted in –1.50 over growth. During this period, there is an increase in confidence (preference) on opposition project, as it is expressed in the elections. Once more the states that have more confidence in PRI project were the states with lower growth as we can observe in figure 6.a.

Figure 6.b Social Capital.



Social Capital. Model 5 in table 4.3 indicates that social capital has an elasticity with respect to growth of 2.67, and in equation 5 this variable can explain 45 per cent of regional growth. Moreover, the effect on growth of the social capital of the north and industrial reconverted states is stronger with elasticities of 3.13 and 3.10. Although, the results for south interaction dummy are not significant, the negative sign suggests that there is a weak social capital level in these states. Social capital index shows that the states that have lower levels are Oaxaca, Chiapas, Yucatan, Guerrero, Hidalgo and Quintana Roo. The states located in south region have the higher levels of polarization, and the lower levels literacy and election turnout. According to our index, these states have an intermediate level of Olson-type associations' density. However for Putnam-type associations, they have the lowest level for this period. The lacking of these links can explain a low level of entrepreneurial capacity in the region as well as a weakness in the roots of local economic activities. At the same time, a low level of participation in elections, can exemplify a low level of co-operation among agents. This situation becomes more difficult in we consider that there is a high level of ethnic polarization in the zone.

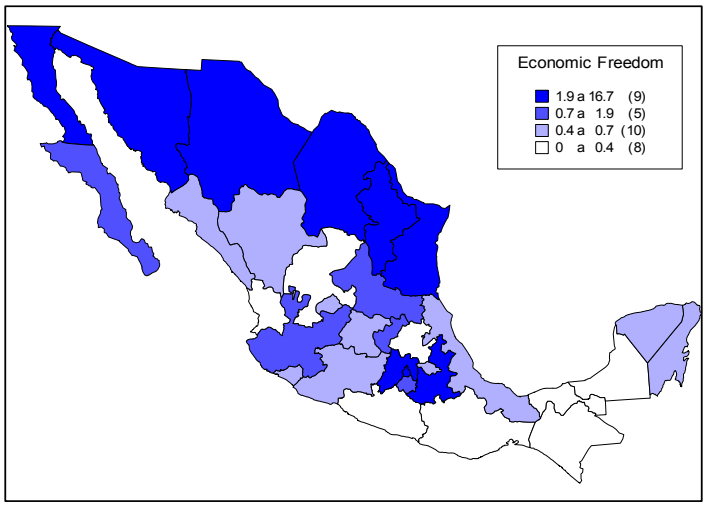
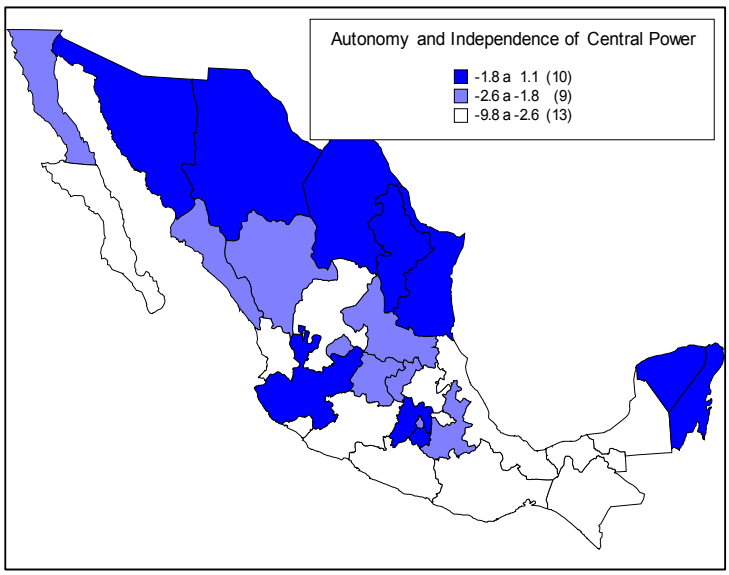


Figure 6.c Economic Freedom

Economic freedom. This variable exhibits a statistically significant relation with growth, reporting an elasticity of .66 in model 1 in table 4.4. However, the regional effects are not significant and trend suggests that industrial reconverted and north border region have advantage over south. As figure 6.c shows the northern states and those located around the main important agglomeration (Mexico City and Jalisco) have the highest levels, meanwhile south has the lowest. Particularly in these states there are important investment done by transnational enterprises such as: Ford Motor Company, General Electric, Philips, Toshiba, Kimberly Clark, Johnson &Johnson, Daewoo, Bosch-Skil, Mercedes-Benz, Nestlé, Nissan and Ericsson.

Figure 6.d Autonomy



Central power dominance. The variable that captures the impact of centralist policies on growth versus regional economic autonomy shows in model 1, that the growth elasticity is 0.27 per cent that is lower than economic freedom-growth elasticity. The differences among regions are not statistically significant, but they indicate that centralist policies applied in north and industrial reconverted regions have negative effects on growth. In contrast south reports positive effects, although very insignificant. The sources of growth in the first regions are not found in the centralist policies, suggesting that they have strengthened their economic performance through decentralization.

An analysis of the component of the index illustrates that the regions with a higher level of autonomy are Jalisco, Nuevo León, Chihuahua that also receive more income derived from taxes. Chiapas, Oaxaca and Hidalgo are the states that obtain important amount of financial

resources from central government and a similar situation is found in Tabasco and Campeche, but it is explained by their oil production. In figure 6.d, we observe how the level of economic autonomy (or decentralization) is higher in the north region of the country, contrasting with the south.

Infrastructure and Agglomeration. The variable *liinfr* illustrates the importance and the regional difference that infrastructure causes in growth. Considering model 3, in which 48 per cent of the variance is explained using infrastructure and interaction dummies, the infrastructure elasticity-growth elasticity is 3.53. This value is the highest elasticities we have obtained in this exercise, greater than the social capital-growth elasticity we found. At the same time, the values are greater for north and industrial reconverted states (3.89 and 3.90). However, the coefficient for south region is not significant; we obtained a negative trend, which shows that there is a lack of infrastructure that has undermined growth in last period. The index of infrastructure in Chiapas, Oaxaca, Guerrero and Hidalgo has the lowest level; particularly there is a low availability of services of water and drainage.

Conclusions

The performance of Mexican regional product in the last three decades has been characterized by a strong territorial concentration, in which there is no evidence of mobility in the ranking of the states. The regional economic growth shows a convergence pattern for the period 1970-1985, that was reverted after 1985, when the government launched a set of major structural reforms. The impact of the crises and stabilization programs during the Eighties has increased disparities among states. An analysis of the economic performance of the states for the period 1994-2000 shows that economic freedom has been the most significant factor that has opened the gap between rich and poor states. Secondly, our results suggest that a strong trust in opposition projects, an important level of social capital and a high level of infrastructure have helped the northern states to reach the highest levels of growth. In contrast, southern states with the lowest rates of growth have maintained a stronger confidence in PRI governments and have also exposed a fragile social capital.

Appendix
Description and sources for data used in the final regressions

$G_{i,t}$.-The dependent variable represents real per capita GDP growth in each state of Mexico for the period of the analysis (1994-2000). The regional GDP has been estimated by the INEGI (the National Statistical and Geographical Institute) and published in "National Accounts" three different years 1985, 1993 y 2000. The data was transformed to 1993 prices. Population was obtained from the census of 1970, 1980, 1990 and 2000. Some estimations were necessary for the years in between according to the inter-census rates.

$lngdp_o$ – The independent variable depicts the natural logarithmic of the initial regional GDP per capita (1994), extracted from the same data sources as the dependent variable.

liecofree.- This is the logarithm of the index of economic freedom, that was calculated as a linear combination of the ratios of regional exports and foreign direct investment with respect to GDP. Both ratios are the average value for the period 1994-2000. It was used as a proxy of the importance of external sector in the local economies, in order to see the links with the world economy and the changes in the orientation of local economic policies. For this period we use data from SIREM-Capem-Oxford, National Accounts, INEGI (1993-2000).

$$iecofree = (.50 * Exports/GDP_{i,t} + .50* Foreign\ Direct\ Investment/ GDP_{i,t}$$

icenpow.- This variable refers to the power that central government has on each one of the states, through the impact of investment and expenditure. At the same time, this variable confronts the effect of a greater economic autonomy in which larger levels of local incomes are obtained through taxation. The first two variables are the average ratio of investment and expenditure of government with respect to GDP. We use the proportion of the local government income that is obtained through taxes; it is the average for period 1994-2000. The source of these variables is INEGI.

$$icenpow = (-.25 * Government\ expenditure/ GDP_{i,t} - .25 * Investment\ expenditure/ GDP_{i,t} + .50 * Tax\ Income/ Total\ Incomes_{i,t})$$

trustg and $trusto_o$ – Both variables are the differences of vote preferences in the last two presidential elections in each one of the states (1994 – 2000). For government trust we consider the differences of the ratio votes that PRI obtained with respect to PAN in 1994 and 2000. For government opposition, we apply the same process with the ratio PAN/PRI votes. Sources: Instituto Federal Electoral (IFE) and Partido Acción Nacional (PAN) website.

$lisocap_o$.- This is the logarithm of the proxy we calculated as social capital. It was calculated using information of indigenous population, literacy level, crimes density, election attendance, and institutional density using Putnam's and Olson's classification. Indigenous population was a proxy used for polarization and consequently a factor of trust reduction among agents. It corresponds to the percentage of population (5 years old and more) that speaks an ethnic language for the Census of 1990. Literacy level is the percentage of population of 12 years old and more that is literate for the year 1990. Information can be found in Population Census of 1990 by INEGI. Crimes density is the number of federal jurisdiction offenses per 10,000. The offences include all that violate health, security, communication, fiscal and private property laws. Information source is

INEGI (2000). Election turnout was included as proxy of civic norms strength. It is the level of attendance for presidential elections in 1994, published by IFE. Institutional density is the number of associations per 10,000 habitants considered two types, according to their objectives: rent-seeking aims (Olson's) or social network development (Putnam's). Olson-type includes: entrepreneurial, commercial and production groups; labour unions; professional associations. Putnam-type considers social and religious and handicapped assistance groups, civil organizations, social, recreational and sport associations. Information was taken from the Economic Census of 1994.

*isocap = (-.25 * indigenous population) + (.25* literacy level) + (-.25* crimes density) + (.25 *election attendance) + (.25* Putnam type institutional density) +(-.25*Olson type institutional density)*

liinfr$_o$.- This is the logarithm of an index constructed as a linear combination of the services availability in each state. For this combination we consider the percentage of urbanization that refers to the percentage of population that live in communities of more than 2500 habitants; the second elements were the availability of services of water, electricity and drainage services for 1990. Information was taken from Population Census by INEGI.

*iinfr = (.25*urbanization)+ (.25*water service)+(.25*electricity service)+(.25*drainage)*

dmx, dus – These are the logarithm of the distance of each state to Mexico City and to the closest city to the U.S. border.

oil,- This variable gives a value of one to Tabasco and Campeche observations, which are the mail oil producers states

dnorth- This qualitative variable identifies (Baja California, Coahuila de Zaragoza, Chihuahua, Nuevo León, Tamaulipas, Sonora meanwhile. Variable *dindr* differentiates effects for the industrial reconverted status: Jalisco, Aguascalientes, Querétaro, Guanajuato and San Luis Potosí; *dsouth* refers to Chiapas, Oaxaca.

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Appendix

Table A1. Mexico's Gross Domestic Product per Capita by State 1970-2000
(Thousand of Pesos of 1993)

	1970	1975	1980	1985	1988	1994	2000
Aguascalientes	8.16	9.74	10.67	11.51	10.60	14.78	17.96
Baja California	15.00	16.39	17.35	17.36	16.03	17.26	19.36
Baja California Sur	14.38	16.49	17.13	15.75	15.51	17.18	18.64
Campeche	8.68	9.79	10.27	85.30	42.65	23.02	23.06
Coahuila de Zaragoza	12.40	14.92	15.49	16.12	15.52	16.30	20.01
Colima	8.87	12.00	12.32	14.33	12.71	14.46	15.19
Chiapas	5.11	6.26	11.80	9.25	6.45	5.92	6.39
Chihuahua	10.46	12.24	12.76	13.69	13.53	17.53	21.62
Distrito Federal	19.90	22.71	25.82	25.34	24.99	35.66	38.90
Durango	7.42	8.41	9.77	12.06	9.79	11.01	12.43
Guanajuato	7.36	8.51	8.77	9.45	8.57	9.08	10.37
Guerrero	5.34	6.62	7.17	7.61	7.33	7.79	7.84
Hidalgo	5.55	6.74	8.86	9.26	9.17	8.65	9.40
Jalisco	10.74	12.51	13.62	14.23	12.98	12.92	14.97
México	11.16	13.06	13.11	13.24	11.96	10.54	12.11
Michoacán	5.42	6.83	7.49	7.44	7.21	7.49	8.76
Morelos	8.71	9.86	10.35	11.49	10.94	13.09	13.33
Nayarit	7.82	8.76	9.59	10.58	8.85	8.84	8.97
Nuevo León	17.23	19.29	21.29	22.08	20.82	23.29	26.52
Oaxaca	3.64	4.65	5.38	6.82	5.82	5.92	6.34
Puebla	6.42	7.52	8.78	9.07	7.67	8.16	9.97
Querétaro	8.13	10.72	11.60	14.62	13.09	14.39	18.09
Quintana Roo	10.33	16.57	16.17	15.83	16.70	24.33	22.35
San Luis Potosí	6.03	6.77	7.88	9.40	9.35	9.98	11.09
Sinaloa	9.67	11.00	10.23	11.32	10.31	11.46	11.85
Sonora	14.33	14.68	14.66	15.97	15.31	16.15	18.25
Tabasco	7.49	12.74	33.88	22.21	12.95	9.26	9.15
Tamaulipas	10.85	12.19	13.89	13.77	12.29	14.22	16.27
Tlaxcala	4.71	6.81	7.45	10.14	7.81	7.05	8.30
Veracruz	8.40	8.98	9.78	10.11	9.18	8.17	8.80
Yucatán	7.41	10.35	9.68	9.54	8.78	10.68	11.94
Zacatecas	5.32	5.72	6.36	7.97	8.05	7.28	8.36
Nacional	10.29	11.91	13.56	13.97	12.52	13.40	15.13
Average	9.14	10.93	12.48	15.09	12.59	13.18	14.58
Range	16.26	18.06	20.44	78.48	36.83	29.74	32.56
Standard Deviation	3.81	4.24	5.87	13.56	6.92	6.47	6.99
Variance	14,488.12	18,003.63	34,447.73	183,932.06	47,944.01	41,880.18	48,929.08
Max	19.90	22.71	25.82	85.30	42.65	35.66	38.90
Min	3.64	4.65	5.38	6.82	5.82	5.92	6.34
Disparity Coefficient	5.47	4.88	4.80	12.51	7.33	6.03	6.14
Variation Coefficient	0.42	0.39	0.47	0.90	0.55	0.49	0.48
Without oil producers and Quintana Roo							
Average	9.21	10.91	11.84	12.51	11.58	12.99	14.48
Standard Deviation	3.92	4.37	4.52	4.25	4.36	6.39	6.99
Disparity Coefficient	5.47	4.88	4.80	3.72	4.29	6.03	6.14
Variation Coefficient	0.43	0.40	0.38	0.34	0.38	0.49	0.48

Sources: National Institute of Statistics, Geography and Computing, National Accounts of Mexico.
Gross Domestic Product by Federal Entity. 1993 and 1993-2000

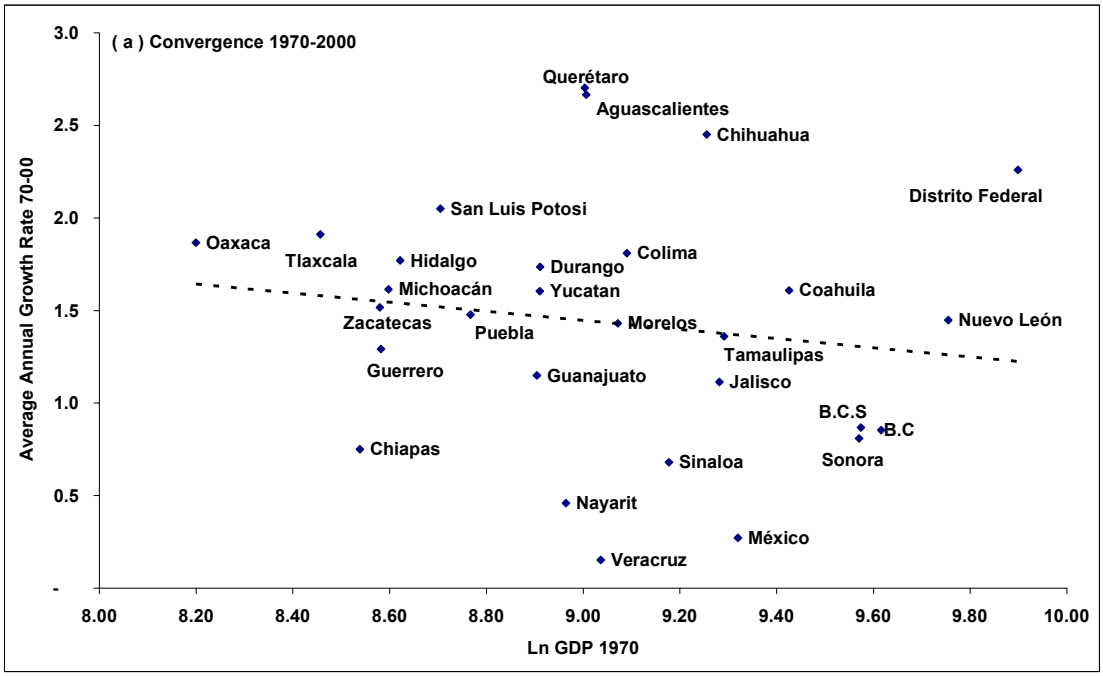
Table A2. Mexico's Gross Domestic Product per Capita by region 1970-2000 (Pesos of 1993)

1970		1985	
DF & Mexico	16,771	***DF & Mexico***	19,253
North Border	13,313	***Oil Producer***	16,878
Industrial Renovation	8,674	***North Border***	16,777
Tourist-Related	8,590	***Industrial Renovation***	11,929
Oil Producer	8,272	***Tourist-Related***	11,607
Raw Material Producers	6,904	***Raw Material Producers***	9,634
South-Center	6,346	***South-Center***	9,577
South Region	4,607	***South Region***	7,888

1994		2000	
DF & Mexico	20,714	***DF & Mexico***	22,732
North Border	17,892	***North Border***	20,855
Tourist-Related	15,129	***Tourist-Related***	15,984
Industrial Renovation	11,555	***Industrial Renovation***	13,490
Oil Producer	9,373	***Raw Material Producers***	10,272
Raw Material Producers	9,282	***South-Center***	10,207
South-Center	8,897	***Oil Producer***	9,903
South Region	6,463	***South Region***	6,803

Sources: Based on INEGI information.
Notes: North Border (Baja California, Coahuila de Zaragoza, Chihuahua, Nuevo León, Tamaulipas, Sonora); Industrial Renovation (Jalisco, Aguascalientes, Querétaro, Guanajuato and San Luis Potosí); South-Center (Morelos, Puebla, Tlaxcala, Hidalgo); South Region (Guerrero, Oaxaca and Chiapas); Oil Producers (Veracruz, Tabasco, Campeche); Tourism Related (Baja California Sur, Quintana Roo and Yucatán); Raw Material Producers (Sinaloa, Nayarit, Durango, Zacatecas, Michoacán, Colima).

Figure A1(a-b). Convergence and Divergence of GDP per capita in Mexico.



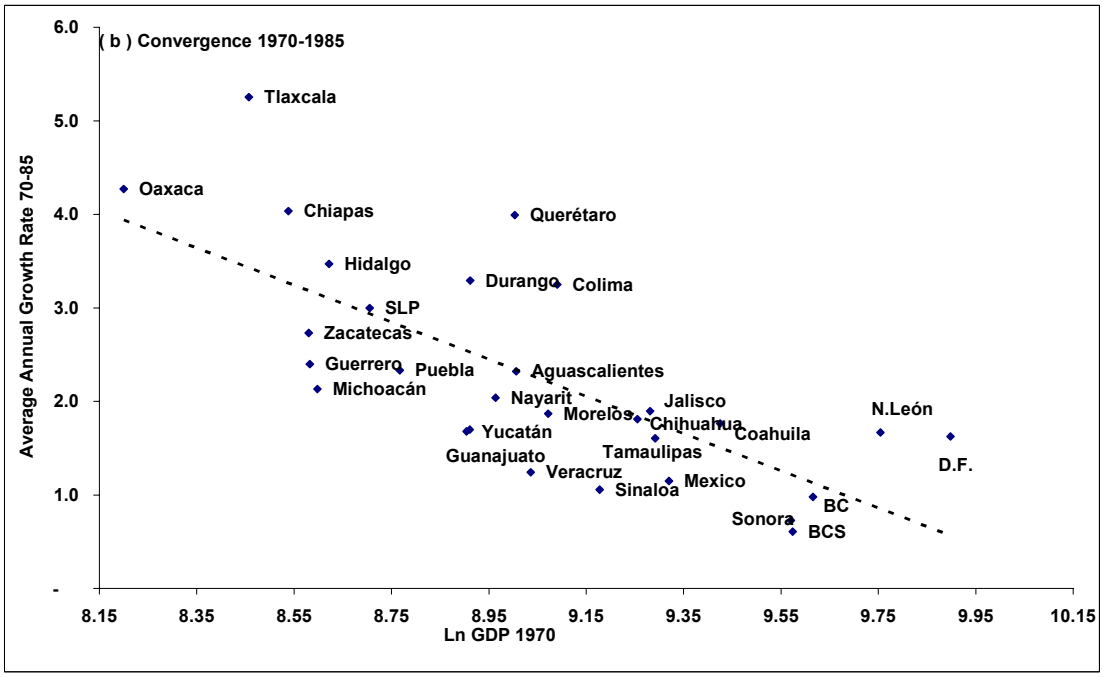
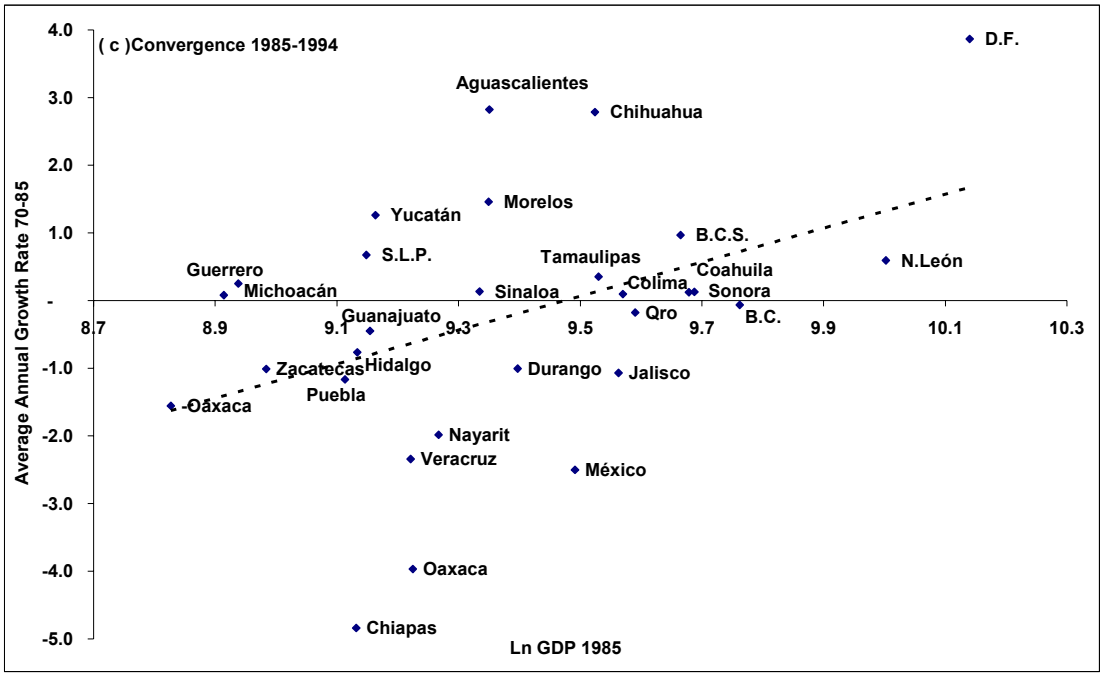
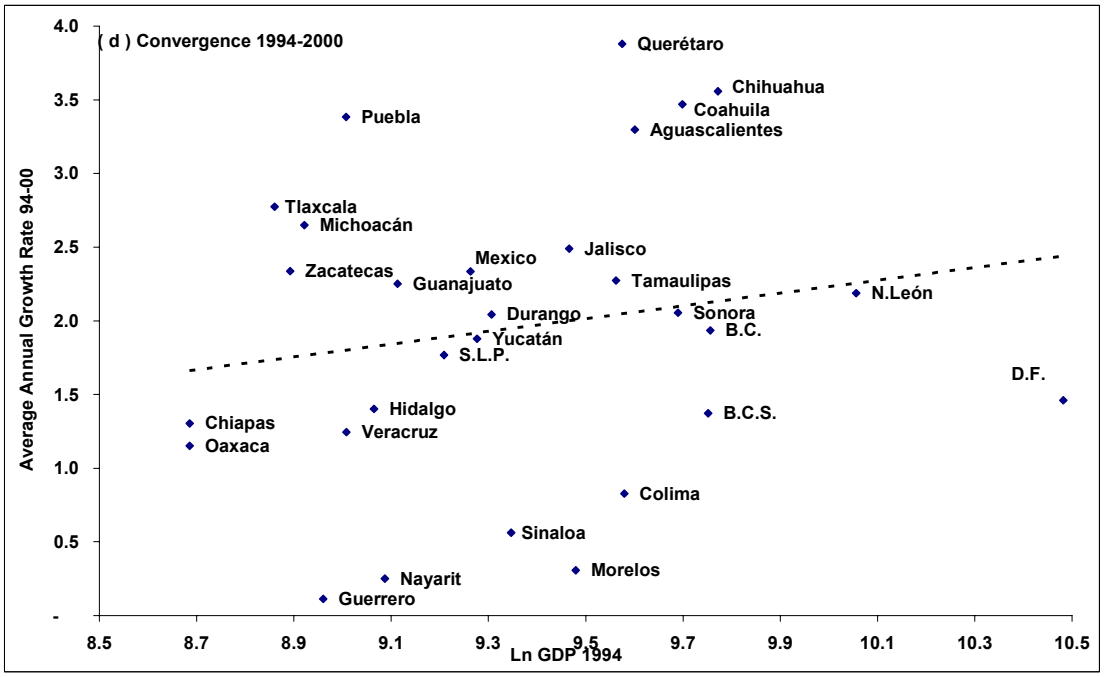
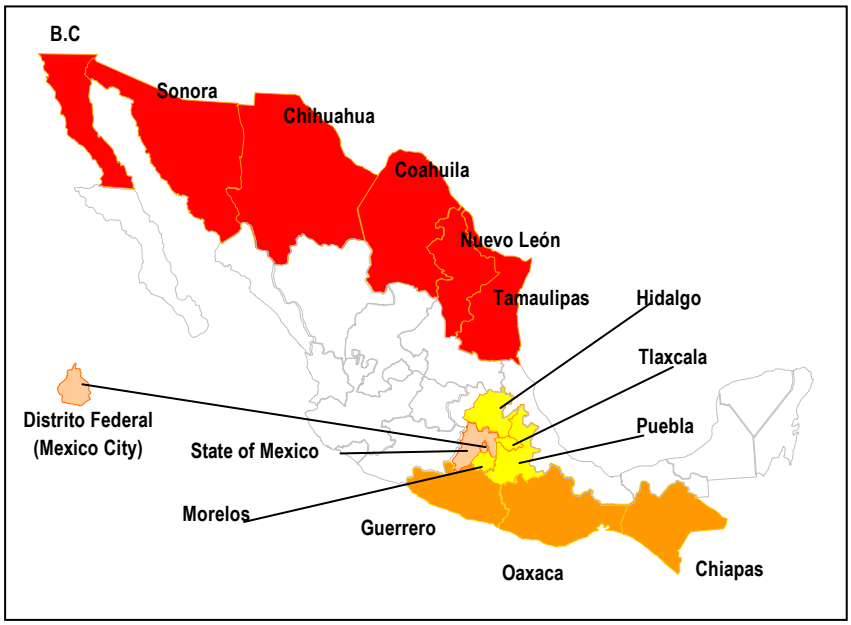


Figure A1(c-d). Convergence and Divergence of GDP per capita in Mexico.

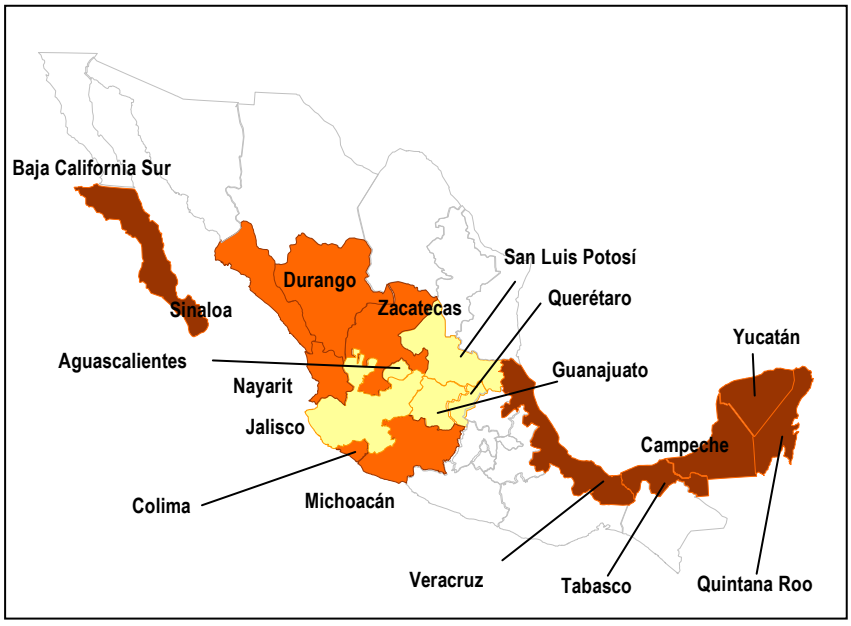




Map of Regions in Mexico



	North Border Region
	South Center
	DF and Mexico State
	South Region



	Raw Material Producers
	Industrial Reconversion
	Tourism Related and Oil Producers States

Table A3. OLS Results for the period 1994-2000

Dependent Variable: Rate of Growth of GDP per capita 1994-2000

Model / **Ind.Var.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
c	3.25 0.66	***16.09*** 2.95	***17.08*** 3.14	***17.86*** 3.27	***17.75*** 3.12	***17.39*** 3.35	***15.11*** 2.67	***14.87*** 2.56	***15.31*** 2.24	***15.32*** 2.03
lngdp94	-0.16 -0.31	***-1.51*** -2.58	***-1.58*** -2.72	***-1.70*** -2.94	***-1.74*** -2.98	***-1.73*** -3.09	***-1.77*** -3.05	***-1.78*** -2.95	***-1.74*** -2.45	***-1.74*** -2.37
liecofree		***0.68*** 4.16	***0.61*** 3.43	***0.55*** 3.01	***0.57*** 3.01	***0.63*** 2.55	***0.60*** 2.50	***0.64*** 2.42	***0.65*** 2.38	***0.65*** 2.34
trustg			0.23 1.38	***0.30*** 2.48	***0.29*** 2.34	0.38 1.60	0.37 1.55	0.39 1.57	0.40 1.42	0.40 1.23
trusto				0.70 1.19	0.81 1.24	0.91 1.41	0.86 1.23	0.88 1.24	0.88 1.21	0.88 1.19
dmx					0.06 0.71	0.08 0.84	0.08 0.83	0.10 0.95	0.10 0.92	0.10 0.85
icenpow						-0.08 -0.51	-0.08 -0.51	-0.10 -0.63	-0.09 -0.62	-0.09 -0.62
lisoccap							0.77 0.50	0.72 0.45	0.94 0.45	0.94 0.46
dus								0.05 0.36	0.05 0.36	0.05 0.34
liinfr									-0.38 -0.14	-0.37 -0.14
oil										0.00 0.00
R^2	0.00	0.43	0.46	0.49	0.49	0.50	0.50	0.50	0.50	0.50
Adjusted R^2	-0.03	0.39	0.40	0.41	0.39	0.38	0.36	0.33	0.30	0.27

Regressions done with White Heteroskedasticity-Consistent Standard Errors & Covariance

Significant at .05/ *Significant* at .10 (T-Statistic values)

Table 4.1 OLS Results for the period 1994-2000
Dependent Variable: Rate of Growth of GDP per capita 1994-2000

Model Ind.Var.	1	2	3	4	5	6	7	8	9
c	8.06 1.55	***14.07*** 2.20	***13.38*** 2.13	***14.23*** 2.48	***11.16*** 2.10	9.53 1.68	7.37 1.41	*10.56* 1.91	***11.53*** 2.22
lngdp94	-0.61 -1.12	*-1.32* -1.94	*-1.23* -1.85	***-1.29*** -2.12	*-1.00* -1.78	-0.78 -1.31	-0.55 -1.01	-0.87 -1.51	*-1.01* -1.82
trustg	***0.47*** 2.49	*0.30* 1.86	***0.34*** 2.20	***0.38*** 2.21	***0.37*** 2.43	***0.41*** 2.25	***0.45*** 2.47	***0.42*** 2.19	***0.44*** 2.58
*dnorth*trustg*			***2.54*** 3.04	***-1.70*** -3.27	***2.51*** 3.12				***-1.67*** -3.32
*dsouth*trustg*			*1.14* 1.72	***0.45*** 3.58		***0.36*** 2.59		***0.43*** 3.43	
*dindr*trustg*			*-2.47* -1.89		*1.22* 1.91	-0.74 -1.44	*-0.82* -1.70		
dnorth		***1.60*** 2.92							
dsouth		***-0.91*** -2.22							
dindr		***1.35*** 2.46							
R^2	0.16	0.49	0.47	0.39	0.44	0.27	0.24	0.21	0.33
Adjusted R^2	0.11	0.40	0.36	0.30	0.36	0.16	0.16	0.13	0.26

Regressions done with White Heteroskedasticity-Consistent Standard Errors & Covariance
Significant at .05/ *Significant* at .10 (T-Statistic values)

Table 4.2. OLS Results for the period 1994-2000
Dependent Variable: Rate of Growth of GDP per capita 1994-2000

Model Ind.Var.	1	2	3	4	5	6	7	8	9
c	4.55 0.93	***12.51*** 2.10	*10.95* 1.83	***12.86*** 2.34	7.97 1.60	5.76 1.02	2.83 0.58	7.61 1.37	***9.68*** 2.02
lngdp94	-0.36 -0.67	*-1.21* -1.91	-1.03 -1.60	***-1.27*** -2.15	-0.73 -1.33	-0.43 -0.71	-0.14 -0.26	-0.66 -1.11	*-0.95* -1.82
trusto	*0.83* 1.71	0.27 0.44	0.02 0.03	*0.93* 1.88	0.11 0.15	-0.05 -0.06	0.03 0.04	0.68 1.29	***1.09*** 2.31
*dnorth*trusto*			***2.76*** 3.58	***2.55*** 3.42	***2.75*** 3.72				***2.53*** 3.45
*dsouth*trusto*			*-3.11* -1.85	***-3.43*** -2.33		*-3.08* -1.79		***-3.33*** -2.11	
*dindr*trusto*			1.23 1.59		*1.29* 1.75	0.97 1.37	1.03 1.53		
dnorth		***1.76*** 3.53							
dsouth		***-1.08*** -2.13							
dindr		***1.38*** 2.33							
R^2	0.05	0.44	0.39	0.30	0.34	0.15	0.11	0.10	0.25
Adjusted R^2	-0.02	0.33	0.27	0.20	0.25	0.02	0.01	0.00	0.17

Regressions done with White Heteroskedasticity-Consistent Standard Errors & Covariance
Significant at .05/ *Significant* at .10 (T-Statistic values)

Table 4.3 OLS Results for the period 1994-2000
Dependent Variable: Rate of Growth of GDP per capita 1994-2000

Model Ind.Var.	1	2	3	4	5	6	7	8	9
c	*-4.40* -1.20	6.24 0.75	6.64 0.81	2.63 0.35	3.23 0.79	-1.48 -0.21	-3.07 -0.85	-3.24 -0.47	0.19 0.05
lngdp94	-0.80 -1.37	***-1.26*** -2.05	***-1.27*** -2.05	***-1.30*** -2.32	***-1.23*** -2.18	-0.70 -1.12	-0.68 -1.11	-0.81 -1.38	***-1.27*** -2.40
lisoccap	***3.83*** 2.51	1.93 0.89	1.83 0.87	3.13 1.47	***2.67*** 2.10	2.71 1.07	*3.11* 1.94	3.54 1.45	***3.73*** 2.91
*dnorth*lisoccap*			***0.47*** 3.57	***0.37*** 2.93	***0.46*** 3.76				***0.37*** 3.00
*dsouth*lisoccap*			-0.17 -0.61	-0.13 -0.43		-0.08 -0.27		-0.06 -0.19	
*dindr*lisoccap*			***0.38*** 2.50		***0.37*** 2.57	*0.26* 1.93	*0.26* 1.97		
dnorth		***1.68*** 3.58							
dsouth		-0.50 -0.52							
dindr		***1.37*** 2.46							
R^2	0.15	0.45	0.31	0.31	0.45	0.23	0.23	0.15	0.30
Adjusted R^2	0.09	0.35	0.21	0.21	0.37	0.11	0.14	0.06	0.23

Regressions done with White Heteroskedasticity-Consistent Standard Errors & Covariance
Significant at .05/ *Significant* at .10 (T-Statistic values)

Table 4.4. OLS Results for the period 1994-2000
Dependent Variable: Rate of Growth of GDP per capita 1994-2000

Model Ind.Var.	1	2	3	4	5	6	7	8	9
c	***16.09*** 2.95	***16.41*** 3.21	***16.33*** 2.90	***16.29*** 2.99	***16.13*** 2.86	***16.23*** 2.89	***16.11*** 2.87	***16.20*** 2.97	***16.11*** 2.94
lngdp94	***-1.51*** -2.58	***-1.58*** -2.91	***-1.54*** -2.54	***-1.53*** -2.61	***-1.52*** -2.50	***-1.52*** -2.53	***-1.51*** -2.51	***-1.52*** -2.60	***-1.51*** -2.56
Liecofree	***0.68*** 4.16	***0.48*** 2.74	***0.64*** 3.15	***0.65*** 3.16	***0.66*** 3.73	***0.67*** 3.68	***0.68*** 4.11	***0.67*** 3.72	***0.66*** 3.75
*dnorth*liecofree*			0.09 0.29	0.09 0.28	0.07 0.24				0.07 0.24
*dsouth*liecofree*			0.05 0.21	0.05 0.20		0.03 0.13		0.03 0.12	
*dindr*liecofree*			0.13 0.07		0.11 0.06	0.12 0.07	0.10 0.06		
dnorth		*0.90* 1.91							
dsouth		-0.42 -0.78							
dindr		***1.23*** 2.38							
R^2	0.43	0.57	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Adjusted R^2	0.39	0.49	0.32	0.34	0.34	0.34	0.37	0.37	0.37

Regressions done with White Heteroskedasticity-Consistent Standard Errors & Covariance
Significant at .05/ *Significant* at .10 (T-Statistic values)

Table 4.5. OLS Results for the period 1994-2000
Dependent Variable: Rate of Growth of GDP per capita 1994-2000

Model Ind.Var.	1	2	3	4	5	6	7	8	9
c	***11.54*** 2.73	***14.46*** 2.28	***11.21*** 2.16	***12.12*** 2.44	***11.23*** 2.42	***10.76*** 2.20	***10.77*** 2.47	***11.75*** 2.51	***11.92*** 2.65
lngdp94	***-0.97*** -2.11	*-1.36* -1.98	*-0.95* -1.69	*-1.03* -1.90	*-0.96* -1.91	*-0.90* -1.71	*-0.91* -1.93	*-0.99* -1.94	***-1.01*** -2.06
lieconpow	***0.27*** 4.72	0.13 1.36	***0.26*** 3.18	***0.27*** 3.27	***0.26*** 4.06	***0.26*** 3.20	***0.26*** 4.14	***0.26*** 3.27	***0.27*** 4.70
*dnorth*lieconpow*			-0.27 -0.64	-0.21 -0.56	-0.27 -0.65				-0.22 -0.58
*dsouth*lieconpow*			0.00 -0.03	0.02 0.21		0.00 -0.01		0.02 0.22	
*dindr*lieconpow*			-0.47 -1.57		-0.47 -1.58	-0.45 -1.58	-0.45 -1.59		
dnorth		***1.50*** 2.49							
dsouth		-0.78 -1.16							
dindr		***1.32*** 2.24							
R^2	0.22	0.48	0.30	0.23	0.30	0.29	0.29	0.22	0.23
Adjusted R^2	0.17	0.38	0.17	0.12	0.20	0.19	0.22	0.14	0.15

Regressions done with White Heteroskedasticity-Consistent Standard Errors & Covariance
Significant at .05/ *Significant* at .10 (T-Statistic values)

Table 4.6 OLS Results for the period 1994-2000
Dependent Variable: Rate of Growth of GDP per capita 1994-2000

Model Ind.Var.	1	2	3	4	5	6	7	8	9
c	4.27 0.64	4.67 0.70	2.04 0.47	3.41 0.52	-3.02 -0.55	-4.42 -1.17	-0.27 -0.06	-2.73 -0.48	-5.07 -1.34
lngdp94	***-1.72*** -2.63	***-1.71*** -2.60	***-1.71*** -2.71	***-1.75*** -2.54	*-1.29* -1.84	*-1.29* -1.89	***-1.75*** -2.63	*-1.39* -1.91	*-1.40* -1.97
liinfr	*3.04* 1.98	*2.93* 1.90	***3.53*** 2.77	*3.38* 1.79	***3.88*** 2.10	***4.21*** 2.71	***4.22*** 2.84	*4.08* 1.99	***4.63*** 2.80
*dnorth*liinfr*		***0.37*** 3.40	***0.36*** 3.53	***0.29*** 2.68			***0.28*** 2.69		
*dsouth*liinfr*		-0.12 -0.82		-0.17 -1.10	-0.07 -0.45			-0.11 -0.73	
*dindr*liinfr*		***0.33*** 2.72	***0.34*** 2.84		***0.24*** 2.17	***0.25*** 2.24			
dnorth	***1.61*** 3.40								
dsouth	-0.45 -0.76								
dindr	***1.42*** 2.69								
R^2	0.49	0.49	0.48	0.32	0.28	0.28	0.31	0.19	0.18
Adjusted R^2	0.39	0.39	0.41	0.22	0.18	0.20	0.23	0.10	0.12

Regressions done with White Heteroskedasticity-Consistent Standard Errors & Covariance
Significant at .05/ *Significant* at .10 (T-Statistic values)

Observations used for OLS models: 1994-2000

	Ln94	g9400	Trust in Government	Trust in Oposition a/	Index of Social Capital b/	Index of Economic Freedom a/	Index Central Power a/	Infrastructure Index b/	lnMX	LnUS	Oil
Aguascalientes	9.60	3.30	-0.64	0.80	40.09	0.68	-1.83	88.63	6.24	6.70	0.0
Baja California	9.76	1.94	-0.61	0.60	35.55	7.46	-2.03	82.35	7.88	0.00	0.0
Baja California Sur	9.75	1.37	-0.78	0.50	39.18	1.07	-2.60	80.73	8.37	7.33	0.0
Campeche	10.04	0.02	-1.93	0.64	32.57	0.05	-5.35	68.70	7.05	7.65	1.0
Coahuila	9.70	3.47	-0.80	0.65	37.88	2.10	-0.92	85.45	6.72	5.73	0.0
Colima	9.58	0.83	-0.94	0.72	38.39	0.46	-3.30	88.43	6.54	7.10	0.0
Chiapas	8.69	1.30	-2.23	0.35	23.60	0.12	-6.75	52.20	6.88	7.55	0.0
Chihuahua	9.77	3.56	-1.30	0.73	36.17	7.55	1.01	80.08	7.29	5.92	0.0
Distrito Federal	10.48	1.46	-1.05	1.19	41.56	16.62	-2.03	97.63	0.00	7.05	0.0
Durango	9.31	2.04	-0.83	0.42	36.68	0.44	-1.96	71.40	6.82	6.67	0.0
Guanajuato	9.11	2.25	-1.38	1.64	37.54	0.63	-2.20	73.63	5.90	6.84	0.0
Guerrero	8.96	0.11	-2.85	0.24	28.70	0.15	-3.34	56.80	5.62	7.26	0.0
Hidalgo	9.06	1.40	-2.10	0.50	30.41	0.25	-4.12	59.38	4.48	7.02	0.0
Jalisco	9.47	2.49	-0.37	0.52	39.88	1.45	0.06	85.93	6.30	6.92	0.0
México	9.26	2.33	-1.09	0.82	39.23	1.92	-0.55	84.73	4.16	7.03	0.0
Michoacán	8.92	2.65	-1.82	0.60	35.10	0.49	-3.17	71.80	5.71	7.04	0.0
Morelos	9.48	0.31	-1.53	1.05	37.92	0.72	-1.19	85.15	4.49	7.12	0.0
Nayarit	9.09	0.25	-1.37	0.28	35.89	0.20	-4.65	74.75	6.64	7.11	0.0
Nuevo León	10.06	2.19	-0.40	0.41	39.69	4.70	-0.19	90.75	6.83	5.41	0.0
Oaxaca	8.69	1.15	-2.27	0.36	22.51	0.03	-8.89	51.25	6.12	7.37	0.0
Puebla	9.01	3.38	-1.00	0.54	32.41	2.37	-1.88	67.53	4.81	7.15	0.0
Querétaro	9.57	3.88	-1.19	0.97	36.02	1.43	-2.04	71.85	5.37	6.84	0.0
Quintana Roo	10.10	-1.41	-1.10	0.85	30.87	0.60	0.83	76.73	7.22	7.75	0.0
San Luis Potosí	9.21	1.77	-1.42	0.77	34.09	0.81	-2.48	61.40	6.05	6.61	0.0
Sinaloa	9.35	0.56	1.02	- 0.23	36.12	0.60	-2.15	72.98	7.14	6.89	0.0
Sonora	9.69	2.05	-0.43	0.60	37.07	2.68	-0.28	81.83	7.58	5.65	0.0
Tabasco	9.13	-0.21	-5.94	0.52	36.04	0.16	-9.77	64.65	6.65	7.45	1.0
Tamaulipas	9.56	2.27	-0.89	0.60	37.22	5.38	-0.83	76.98	6.55	6.23	0.0
Tlaxcala	8.86	2.78	-1.17	0.52	36.84	0.45	-3.18	79.98	4.73	7.14	0.0
Veracruz	9.01	1.24	-2.35	0.75	33.57	0.51	-4.07	61.28	5.72	7.11	1.0
Yucatán	9.28	1.88	-0.32	0.25	28.33	0.51	-0.02	72.10	7.19	7.73	0.0
Zacatecas	8.89	2.34	-1.51	0.49	38.02	0.27	-3.59	64.25	6.42	6.53	0.0

a/ Average for 1994-2000 b/ Observation for 1990