

# **PUBLIC POLICY AND HIGHER EDUCATION PERFORMANCE IN THE STATE OF PUEBLA**

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Organizational Performance and Policy Decisions in Canada, the U.S., and Mexico



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## About the AIHEPS Project

The Alliance for Higher Education Policy Studies (AIHEPS) was funded in September 1999 by the Ford Foundation as a three-year collaborative between New York University and Centro de Investigación y Estudios Avanzados (CINVESTAV) in Mexico City. In 2002, AIHEPS was given a second three-year grant with responsibility for the Mexican studies shifted to The Autonomous University of Puebla. The University of British Columbia joined the project to conduct comparative studies in three provinces in Canada. AIHEPS has two primary objectives: 1) to improve comparative understanding of how changes in higher education policies and the norms and values to which they give rise (rules in use) alter the nature of higher education services produced as well as the conditions under which they are provided; and 2) to serve as a vehicle for training a small cadre of younger policy scholars in all three nations. The project also aims at building capacity and making relevant information available to policy audiences. AIHEPS has completed or is in the process of completing 12 case studies of state or provincial higher education systems in Canada, Mexico, and the U.S.

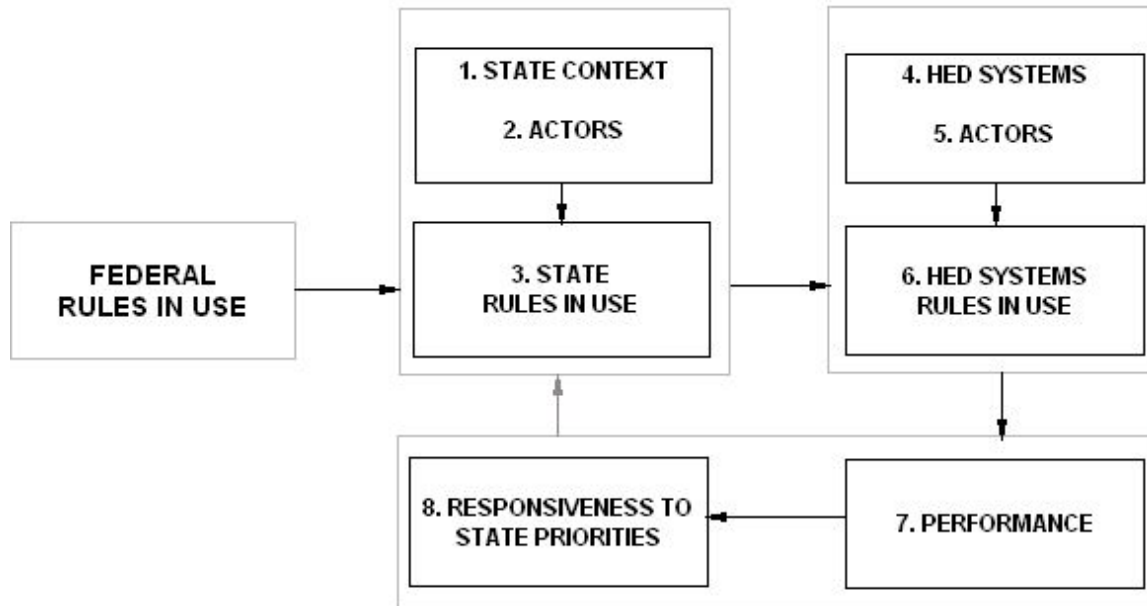
This report describes Puebla's system of higher education and links the arrangements used to govern and administer higher education within that state (rules in use) to indicators of performance. The framework for this report draws on earlier work (Richardson, Reeves Bracco et al. 1999) as well as on the related work of Elinor Ostrom and her colleagues (Ostrom 1999). We argue that colleges and universities in any state system try to achieve preferred goals within three nested sets of rules in use. The first set is established at the federal level, state leaders develop the second, and the third is a product of institutional governance.

Rules in use can be formal as defined in constitutions, statutes, court decisions, agency regulations, or governing board decrees. Rules can also be the informal practices that actors establish over time as they pursue preferred goals within the constraints of formal policy. Since rules in use can be changed, they represent the most accessible tools for influencing the priorities and performance of state higher education systems. The figure below provides a simple version of the framework as it has been used to organize the case report. A more detailed discussion of the conceptual framework and work plan for the project is available in a working paper (Richardson 2004). Numbers in the figure illustrate the order in which the topics are presented within the text.

The case report begins with an overview of state context at the time of the study. The report next identifies major state actors (who may be either groups or individuals) and describes their behaviors as they engage in such ongoing tasks as planning, program approval, information collection and dissemination, and resource allocation. The focus of the case is on identifying rules in use that influence system performance on five different indicators. By examining system performance in relation to state rules in use, we are able to draw conclusions about

the effectiveness of state strategies in promoting higher education responsiveness to state objectives. The report draws upon interviews with elected and appointed state actors as well as on documents, web pages, and archival data available to the general public.

### SIMPLIFIED AIHEPS Framework and Structure of this Report



States influence higher education systems through some combination of regulation and the use of market forces (steering). There are obvious advantages and dangers when either of these approaches is carried to an extreme. In practice most states seek some balance between the two, increasingly using market forces for fine-tuning. Part of our reason for undertaking this series of related studies in the U.S., Canada, and Mexico is to provide comparative information for state and provincial policy leaders as they examine the balance achieved by their rules in use. A review of the ways in which rules in use influence higher education performance seems particularly timely as state appropriations, the traditional approach to shaping performance, become an ever smaller proportion of institutional budgets.

The AIHEPS project has produced the following products, all of which are or soon will be available in Spanish and English on our web site:

<http://www.nyu.edu/iesp/aiheps/>. Links to these products are also available through the National Center for Public Policy and Higher Education (National Center) and through several sites that are regularly visited by the Mexican audience for these products. Products are written according to a mutually agreed upon framework that facilitates comparative analysis:

- Case reports for the Mexican states of Guanajuato, Jalisco, Nuevo León, and Puebla.

- Case reports for the U.S. states of California, New Jersey, New Mexico, New York, and South Dakota.
- Case reports for the Canadian provinces of British Columbia, Ontario and Quebec (Quebec will be available in French and English)
- Federal reports for Canada, the U.S. and Mexico.
- A working concept paper that describes the history of the project, the framework guiding comparative work in the three countries, and graphic and textual representations of the plan for completing the remaining work.
- A summary report of the younger scholars who have been involved with the project and their contributions.<sup>1</sup>

The following products are planned and will be available on the web site as they are completed:

- A synthesis report for Canada, for Mexico, and for the U.S. that incorporates insights from the relevant federal report, and from the state or provincial case studies. Each report will advance propositions about how rules in use and the policies that contribute to them influence performance. These reports will provide the basis for an international comparison scheduled to begin in June 2005.
- A synthesis report that incorporates the results of the cross-national analysis of data from the three countries by the project co-directors that speaks to the question of how policy can constructively contribute to the attainment of public priorities.



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<sup>1</sup> Since the inception of the project, ten younger scholars have contributed to the research.

# 1. Introduction

The data on which this report is based was collected by members of the AIHEPS team in the state of Puebla<sup>2</sup> and consists of documentary sources, statistics and interviews. Several recently concluded masters' thesis also contributed to the data utilized in this report in addition to helping build the underpinnings for the arguments developed here (Azcona 2004; Coronel 2004; Peña 2005).

This report has been written in conjunction with other thematic papers which illustrate specific issues and themes relating to changes in the system and policies of higher education in the states of Puebla and Nuevo León (and partially the states of Jalisco and Guanajuato, covered in the first phase of the AIHEPS project). Thus reference will be made to the following papers<sup>3</sup>:

- Raúl Medellín, *Public Policy and Higher Education Performance in the State of Nuevo León* (Medellín 2005)
- Norma Vite, *The Importance of Local Conditions in Determining University-Industry Collaboration: The Cases of Nuevo León and Puebla* (Vite 2004)
- Rollin Kent, *Private Sector Expansion and Emerging Policy Responses in Mexican Higher Education* (Kent 2004)

## 2. The state context

The state of Puebla is located in the central-southern region of Mexico, covering a surface area of 33,900 square kilometers and with a population of 5.08 million people according to the 2000 Census.

### 2.1 The demographic and social context

About half of the state population is concentrated in metropolitan area of the capital city, (Puebla city), which is one of the fastest growing urban areas in the country. The next largest city is Tehuacán in southern Puebla, followed by San Martín in the west. The metropolitan area of the city of Puebla is rapidly merging with that of Tlaxcala, the capital city of the neighboring state to the east.

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<sup>2</sup> The following team members contributed to the data collection effort in Puebla: Amanda Azcona, Francisco Romero, Norma Vite and Juan R. Peña. A valuable contribution was made by Zoraide Dzul, through the "Summers for Science" program sponsored by the National Academy of Sciences in Mexico. Wietse de Vries collaborated until June 2003. Readers of the previous draft are requested to disregard it in favor of the current version.

<sup>3</sup> Additional papers that have been written in conjunction with this project will be cited in the references (Kent 2005; Kent 2005 forthcoming; Kent 2005 forthcoming).

The population has doubled since 1970, but since the 1980s the demographic growth rate has decreased from about 2.5% yearly to 2.1% in 2000. As seen in **Table 1**, population growth in Puebla still surpasses the national average. This is due to the high birth rates among the rural population. However, this endogenous growth is counteracted by high emigration rates, as the poor population of the Puebla hinterland despairs of local economic opportunities and migrates to the United States. Another source of demographic growth is the internal migration to the cities from rural Puebla as well as from surrounding states. In sum, previously high birth rates are on the wane, the rural poor is emigrating to the United States and urban Puebla is growing rapidly. The current scenario is one of rapid change.

**Table 1. Population Growth in Puebla, 1990 - 2000**

	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>% Change</b>
<b>Puebla</b>	4 126 101	4 624 365	5 076 686	23%
<b>National</b>	81 249 645	91 158 290	97 483 412	20%
Source: (INEGI 2004); (INEGI 2000)				

When examining demographic trends, it is useful to consider changes in the age groups that roughly correspond to the different levels of the educational system. As **Table 2** shows, there is a shift afoot in the overall demographic structure. Although all age groups are growing, those above 20 years are growing more rapidly than young school-age children, whose proportion within the overall population is declining. The number of people of university-going ages, from undergraduate to graduate, is on the increase, as are the older strata of the population. Between 1990 and 2000, the number of school age children, from 5 to 14 years of age, grew 6%. But the group of young people between 15 and 19 years of age – typically enrolling in secondary schools – grew by 13%, and the university-age population, between 20 and 24 years, grew by 25%. The group of people from 25 to 29 years of age – typically looking at graduate school, if they have gone to university – has grown by 30%. Although relatively small proportions of these university age people actually enroll in higher education in Puebla, the demographic pressure to expand higher education is growing.

**Table 2. Puebla: age groups in 1990 and 2000**

(in thousands)				
Age Group	1990	%	2000	%
Total	4,126	100%	<b>5,076</b>	<b>100</b>
0 a 4 years	540.4	13%	578.6	11%
5 a 9 years	587.4	14%	623.9	12%
10 to 14 years	566.9	14%	600.4	12%
<b>15 to 19 years</b>	<b>471.3</b>	<b>11%</b>	<b>532.2</b>	<b>10%</b>
<b>20 to 24 years</b>	<b>369.8</b>	<b>9%</b>	<b>461.0</b>	<b>9%</b>
<b>25 to 29 years</b>	<b>295.5</b>	<b>7%</b>	<b>384.3</b>	<b>8%</b>
30 to 34 years	250.3	6%	332.7	7%
35 to 39 years	220.6	5%	297.7	6%
40 to 44 years	166.1	4%	243.6	5%
45 to 49 years	148.1	4%	197.5	4%
50 to 54 years	118.7	3%	162.7	3%
55 to 59 years	99.7	2%	127.6	3%
60 to 64 years	85.0	2%	112.0	2%
65 and more	186.5	5%	261.8	5%
Not specified	10.7	0.3%	160.7	3%
Source: INEGI, 1990 and 2000 Census				

The growth of the age group between 15 and 29 years of age – corresponding to secondary school, undergraduate and graduate education – made up 25% of Puebla’s total demographic development in the 1990s. By contrast, the growth of children of elementary school age contributed 11% to the expansion of Puebla’s population in the same period.

The data presented here point to a new *demographic transition* in Mexico: a general demographic shift from a predominantly young population to a middle aged population is occurring rapidly in Mexico (SEP 2001), thus posing new challenges in higher education and employment for a rising tide of young adults. At the same time, Mexico faces tough policy dilemmas regarding pensions for the growing number of retirees.

An important characteristic of the Puebla region is the urban / rural divide, which is also a social, economic and educational divide. Small scale agriculture, typical of the vast majority of poor and indigenous communities in the state, is declining rapidly, and is being replaced by large scale commercial agriculture and livestock breeding focused on the national and international markets. This development of capitalistic agriculture offers paltry economic prospects for traditional small scale

farmers who join the ranks of the migrant population. On the other hand, the urban areas are growing demographically and economically, in part as a result of rural-urban displacement. Manufacturing and services attract a growing number of workers from the smaller cities and other regions.

This divide is also an ethnic one. Over 500,000 people in the Puebla countryside speak an indigenous language as well as Spanish (and 10% of them are monolingual in an indigenous tongue). Most of these people live in poverty or extreme poverty and their level of educational access and achievement is also very low. Puebla has significant growth rates at all levels of the educational system, especially secondary and higher education. However, inequities in educational access are still quite noteworthy. For example, in the capital city and the principal urban areas, literacy rates of people 15 years and over hover around 95%, whereas the poorest rural towns have literacy rates as low as 48%. So generally poverty correlates highly with being a non-Spanish speaker, working in small scale agriculture and enjoying very limited educational opportunities.

Hence, Puebla provides a clear example of the broader tensions and contradictions faced by Mexico as whole. One part of the country, especially the urban areas in the center and north<sup>4</sup>, are relatively prosperous and have adapted to globalization, especially since the signing of NAFTA in 1993. But retooling for the export economy has been extremely difficult for the poor rural population in the south, who have been left to deal with the evaporation of traditional agriculture in a context where traditional subsidies to agriculture by the federal government have disappeared in the wave of liberalization and privatization policies that took root in the early 1990s.

## **2.2 Economic change in Puebla**

After the metropolitan area of Mexico City (Federal District), Monterrey in the north and Guadalajara in the west, Puebla is tied with Guanajuato (in the central region), as the fourth largest industrial region in Mexico. In Table 3 one may observe the evolution of the relative weight of each regional economy since 1993, a crucial year that signaled the signing of the North American Free Trade Agreement. The overall expansion of the Puebla economy has surpassed the national average, but its growth rate is significantly behind Nuevo León and slightly behind that of Guanajuato.<sup>5</sup>

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<sup>4</sup> Such as Nuevo León, another state covered in this study. See (Medellín 2005).

<sup>5</sup> We offer data on these states inasmuch as four of them are covered in the AIHEPS research and the Federal District is an unavoidable reference because of its size and importance in the Mexican context. These five regions constitute the main centers of economic activity in the country.

**Table 3. Gross Domestic Product in Five States, 1993 - 2003**

(in thousands of constant pesos of 1993)						
Year	National Total	Federal District	Guanajuato	Jalisco	Nuevo León	Puebla
1993	1,155,132,189	274,667,008	38,802,028	75,815,855	74,074,508	37,665,933
1994	1,206,135,039	284,644,326	40,679,335	78,432,706	78,156,160	39,212,207
1995	1,131,752,762	260,843,580	39,170,110	72,254,406	73,109,978	36,006,457
1996	1,190,075,547	269,365,159	42,752,964	75,531,416	76,675,538	39,218,126
1997	1,270,744,065	287,474,479	45,265,432	80,212,544	83,685,803	42,614,582
1998	1,334,586,475	296,152,634	48,243,149	86,371,980	89,659,354	45,899,365
1999	1,382,935,488	305,321,824	48,966,412	89,989,467	94,587,796	49,693,078
2000	1,473,660,184	327,670,181	52,570,843	94,902,377	101,756,935	51,828,416
2001	1,473,692,340	323,711,389	53,056,495	95,322,249	101,659,625	52,407,739
2002	1,483,284,358	327,008,981	55,582,819	95,730,582	105,269,745	51,219,040
<b>Growth 1993 - 2003</b>	28%	19%	43%	26%	42%	36%
Source: (INEGI 2004)						

The principal reason for this difference is that, while Guanajuato and Nuevo León have made great strides in integrating with the North American economy, the chief industrial sectors of the Puebla economy were made up of old industry (textiles, beverages and traditional food processing) that was hard hit by liberalization and has experienced difficulties in adapting to an open economy. Additionally, the chronic problems of agriculture in Puebla, mentioned above, have increased in the new economic environment.

Nonetheless, when examining the different rates of recovery after the 1995 financial crisis, the Puebla economy was able to place in the first five places along with the highly globalized economies of the northern states. In the second half of the 1990s, Puebla took large steps in abandoning old industry and moving into the service sector as well as in seeking foreign investment for new industry.

In this rapidly changing setting, the actual economic benefits received by the population of Puebla are significantly lower than the national average (see Table 4). The national mean in GDP per capita growth masks very large differences between states, as indicated by the standard deviation in table 4. Northern states bordering on the United States (such as Baja California) and states whose economies have made significant strides in linking up with the international market (such as Guanajuato) have high growth rates, which tend to raise the overall average. Many other states, however, have not been able to keep up and some even have negative per capita GNP growth. Thus greater regional imbalances

among states and within each state are a crucial aspect of the emergent economic pattern.

Hence, in this polarized context, the state of Puebla has enjoyed relatively good economic performance. In addition, it is the urban population of the state that has benefited from this growth. Not only has per capita income grown above the national average, but the number of people with very low incomes and very high incomes has grown in the state of Puebla, indicating an increasing gap between the very poor and the wealthy (see table in (Medellín 2005): Salary of Population in Number of Minimum Wages)

**Table 4. GDP per Capita Growth in Four States in the 1990s**

State	GDP per Capita (in thousands of 1993 pesos)		Change
	1993	2000	
<b>Guanajuato</b>	\$ 9,743	\$ 11,292	16%
<b>Jalisco</b>	\$ 14,298	\$ 15,020	5%
<b>Nuevo León</b>	\$ 23,905	\$ 26,577	11%
<b>Puebla</b>	\$ 9,129	\$ 10,219	12%
<b>National Total</b>	\$ 12,415	\$ 15,116	22%
<b>Standard Deviation by state</b>			10%
Source			

Elected officials in the Puebla government have consistently stressed the need to overcome poverty and to incorporate the local economy more fully with the more dynamic sectors of the national economy and with international trade. Rather than looking north, as other states in Mexico, economic policy in Puebla has looked to Europe and Latin America. Two state administrations (1992-1998 and 1998-2004) have made efforts in this direction by promoting foreign trade and investment (significantly in the automotive sector, because of the presence in Puebla of the largest Volkswagen plant in Latin America). They have also been active in the development of the *Puebla-Panama Plan*, an agreement reached in 2001 between the national governments of Mexico and Central America to integrate their economies through investments in infrastructure and commercial pacts. The state of Puebla figures prominently in this plan as its northernmost base.<sup>6</sup> The state government has also lobbied for the city of Puebla to be named as the seat of negotiations over the Free Trade Association of the Americas, which were initiated

<sup>6</sup> Although the Puebla-Panama Plan is basically a commercial agreement, there opportunities for cultural and educational exchange implicit in it, especially in relation to the internationalization of higher education. These opportunities have not figured prominently on the state agenda but the incoming state government in 2005 is making reference to them.

in 2001. It must be said that although neither of these initiatives has flourished as originally expected, successive administrations in Puebla have invested important political capital in promoting and participating in them, thus showing a level of initiative previously absent from local policy making.

A caveat is in order about the orientation of economic policy in Puebla. This state is in effect one of the foremost beneficiaries of financial remittances by migrants in the United States. Reports in the press in 2004 and 2005 point out that these remittances total more than 15 billion dollars yearly. A not insignificant portion of this income accrues to families in the state of Puebla.

Locally, state policy makers have stressed regional development, in support of various agricultural projects. Another important initiative for local development was the decision to promote the city of Puebla as a tourist attraction, capitalizing on its historical and archaeological offerings.

Also, in the later 1990s, the state government seized on the sprawling growth of private higher education in Puebla as an opportunity to promote the city as an attraction for out of state students. There is thus an emergent perception among policy makers that higher education in Puebla plays an economic role in addition to its traditional educational and cultural role. This perception is of course partly related to the usual economic benefits for training the workforce and providing technological inputs to local industry, but as Norma Vite shows (Vite 2004) Puebla has not made significant strides in this direction. Rather, it is developing a growing awareness of the actual weight of higher education as an economic sector per se, providing employment and investment (Kent 2004).

### **2.3 Higher education expansion and the changing structure of the educational system**

In Mexico, basic education, that is the number of years of schooling that the state is constitutionally obligated to offer citizens, comprises six years of elementary and three years of lower secondary for a total of nine years. Puebla does not yet meet the constitutional standard, as the average number of years of schooling in Puebla went from 6.2 in 1995 to 7.1 in 2001. Nationally this indicator went from 7 to 7.8 years of schooling, whereas in highly industrialized states such as Nuevo León the average numbers of years in school grew from 8.4 to 9.1.

A paradox of Puebla's educational system is that even as it has not achieved full coverage in basic education and literacy, higher education has expanded very significantly over the past decade. When higher education grows rapidly in such conditions, the gaps in educational achievement between different social groups persist or may even increase (see **Table 5**). As higher education grows, the value of certificates from primary and lower secondary school erodes. The challenge for educational policy then is not only to provide basic education for all but to further

increase the number of people going on to higher education. Inequities tend to persist or even grow in this context.

**Table 5. Levels of Educational Achievement, 1990 & 2000**

	Population over 12 yrs	No schooling	Primary	%	Lower Secondary	%	Preparatory and higher education	%
<b>1990</b>								
<b>National</b>	55,913,847	31,751,095	24,162,752	43.2	10,824,047	19.4	11,210,081	20.0
<b>Puebla</b>	2,751,729	1,172,014	1,579,715	57.4	446,519	16.2	429,187	15.6
<b>2000</b>								
<b>National</b>	69,235,053	33,471,562	35,763,491	51.7	17,475,321	25.2	17,324,956	25.0
<b>Puebla</b>	3,470,879	1,973,426	1,497,453	43.1	767,324	22.1	694,633	20.0
Source: [INEGI, 2004 #252]								

Higher education enrollments expanded from 59,000 to 87,000 between 1991 and 2001 in Puebla. This 47% increase in 10 years is actually on a par with national enrollment growth in higher education. What is particularly interesting about the Puebla case is the colossal growth of the private sector. Ninety four percent of this growth was in the emergent private sector. This represents a profound structural change for a state system that from its inception until the 1980s was predominantly public (and the public sector was dominated by a single type of institution: the Autonomous University). A similar process occurred in other states studied in this project, such as Guanajuato (Kent 2004).

An additional and decisive dimension of higher education expansion is the increasingly diversified institutional universe. In Table 6 one may observe the variety of institutions that have proliferated in the public and private sectors. Whereas public institutions are designed according to specific formats by policy (universities, four-year and two-year technical institutes), organizational layouts in the private sector do not result from policy designs but in fact from the exigencies of the market and the goals of the entrepreneurs who manage them. There is no accepted classification of institutions of higher education in Mexico. In this research, we have however observed how different institutional types make their presence felt over time. A useful starting point is Daniel Levy's formulation separating private institutions into two basic types, universities and demand absorbing institutions (Levy 1986). It is clearly the demand-absorbing sector that has taken up much of the new growth

**Table 6. Higher Education Expansion by Sector in Puebla, 1991 - 2001**

	Establishments		Enrollments	
	1991	2001	1991	2001
Private consolidated universities	4	4	12,267	18,416
Private demand-absorbing establishments	14	81	3,263	23,884
<b>Subtotal, private</b>	<b>18</b>	<b>85</b>	<b>15,530</b>	<b>42,300</b>
BUAP	1	1	40,000	28,663
Federal 4-yr Technical Institutes	3	3	3,922	7,177
State 4-yr Technical Institutes	0	10	0	3,772
State 2-yr. Technical Institutes	0	4	0	5,246
Other public institutions	0	3	0	629
<b>Subtotal, public</b>	<b>3</b>	<b>17</b>	<b>43,922</b>	<b>45,487</b>
<b>TOTAL</b>	<b>21</b>	<b>102</b>	<b>59,452</b>	<b>87,787</b>

Source: (ANUIES 2002)

Now, upon closer examination of the private sector, interesting differences emerge, especially within the so-called demand-absorbing sector. It is useful to think of differentiation in the expanding private sector as the result of various entrepreneurial responses to the market. To quote from (Kent 2004): “How to distinguish institutional types in the private sector, where no accepted classification exists and where establishments spring up with astonishing speed? ... Emergence and change are crucial elements here, and as Levy observes in a recent paper, one may ‘discern waves of growth evolving into different types (or sub sectors) of private higher education’ (Levy 2002). For example, small institutions that were clearly demand-absorbing at one point in time may in the future develop into something resembling a university. Other small institutions may erroneously be classified as *diploma mills* when in fact they are specialized institutions designed to train professionals in a specific area of expertise. From our observation of the strategies and changes in the private sector (Peña 2005), the following institutional types emerge:

- (a) **University:** academically well consolidated, with undergraduate and graduate offerings in a diversity of disciplines, well-trained faculty part of whom are full-time (although few private universities actually carry out research); internal quality control and external accreditation are normal procedures.
- (b) **Non-university establishments:** usually (but not explicitly) for profit, with undergraduate offerings in business, accounting, education or other “soft” social professions; part-time faculty with minimum credentials; usually not accredited.
- (c) **Specialized Institute:** Trains professionals in one or two associated disciplines, with reasonable academic infrastructure; faculty are usually part-time but well regarded practitioners; their programs are often officially accredited.
- (d) **Under Consolidation:** previously non-university establishments that have strengthened their faculty and academic facilities; they aim to become full-fledged universities.
- (e) **Expanding:** Non-university establishments that have grown in numbers but not in quality; facilities are elementary and faculty remain part-time and under-qualified; program offerings may have grown but rarely venturing beyond the social professions; quality assurance only under duress.

This typology is tentative, but it is not merely an academic exercise. The dynamism shown by the private sector is posing new issues for policy makers at the federal and state level. As we shall note below, the policy responses show signs of being overtaken by reality. This is in part because policy has been unable to deal in an agile fashion with the emerging differences among private institutions. Until the present the chief policy concern of federal and state officials with regard to new private institutions has basically been quality assurance. It is not clear whether their efforts in this direction have had the desired results, and one reason for this may be the difficulties in dealing with an increasingly diverse institutional universe using relatively simple policy tools.

The policy debate around private higher education has centered on quality assurance, but there are also important questions of equity involved, as a growing number of low-income students seem to gravitate toward demand-absorbing institutions in the private sector not having found openings in a restricted public sector. Thus the extensive changes in the private sector are posing unforeseen dilemmas for policy makers at the federal and state levels.

### 3. The state actors

#### 3.1 The policy environment: a legacy of conflict and a statist political culture

An important political fact of higher education in Puebla is its history of conflict. Until the 1970s the state's only institution of higher education, the Autonomous University of Puebla (UAP), went through an abrupt transformation brought on by enrollment expansion in response to rapid demographic growth followed by intense politicization<sup>7</sup>. When in 1973 the Communist Party won a majority in the University Council, the chief governing body of UAP, a schism opened up within the faculty. Many left, only to be recruited by a newly created private university led by the Catholic right in Puebla<sup>8</sup>. The deep confrontation between left and right in Puebla politics, symbolized by these two institutions, continued for at least a decade and a half. The same type of confrontation was enacted between state universities and political elites throughout the country in the 1970s, a consequence of the tensions between a closed political system and new expressions of political and cultural discontent that emerged on the left in Mexico. Since opposition parties were banned from the national stage, public universities played the role of surrogate political channels for participation of parties, student federations and unions on the left.

Public universities were irreversibly changed by this process, since the democratization of university governance occurred simultaneously with rapid enrollment expansion and ongoing confrontation with the government. At that time government policy toward higher education consisted basically in political damage control and the use of subsidies as levers for political negotiations. In effect, throughout the 1970s and early 1980s as universities expanded through an open door policy and changed their governance structures to include students and professors, at the level of the federal government educational policy per se operated in a virtual vacuum: decisions on matters such as planning, program approval, evaluation, faculty recruitment and other basic educational operations were left to universities, which in turn were in the process of reaffirming the principle of autonomy.

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<sup>7</sup> Similar processes occurred in other major public universities in Mexico: hitherto the stamping grounds of the upper classes, they rapidly opened their doors to growing numbers of middle and working class students who had benefited from widespread federal reforms in basic education implemented a decade earlier. Planning mechanisms were not in place, leading to improvisation and bureaucratization in universities. Public universities also became the stage for a new generation of opposition activists whose participation in the political system had been closed off by the authoritarian response to political mobilization in 1968.

<sup>8</sup> This institution was curiously named the Autonomous Popular University of the State of Puebla (UPAEP). It is not autonomous, nor does it cater to low income students (as "popular" would suggest) and is a private institution, not a state university. But it is a revealing label, suggesting that the new university, born of a painful break with UAP, might eventually supplant it.

In the early 1980s when national electoral reforms were enacted allowing opposition parties to stand openly for elections in congress, political action groups on the left shifted their focus from the universities to the political system. Although this important decision defused conflict, a mark was left on universities. In the public eye state universities came to be associated with conflict, inefficiency, low quality and *anarchic bureaucratization*<sup>9</sup>. One consequence was, to use Daniel Levy's term, (Levy 1986) *elite flight* from the public to the new private institutions, which rode the wave of discontent with public institutions by posing as purveyors of quality and efficiency, developing a discourse that implicitly (or at times explicitly) exhibited the new private universities as the alternative to degradation in public education. Throughout this turbulent period lasting fifteen years, the public / private divide in higher education was also a class and ideological divide.

The public university in Puebla was an important player in this drama. At UAP the process of expansion and democratization ended up colliding with the fiscal crisis of the state<sup>10</sup>. The fragility of this whole arrangement became painfully visible when federal cutbacks in subsidies led to internal confrontations within the university, provoking a crisis in governance in the late 1980s. It took the intervention of the federal government and the state governor to put the university back on its feet, but now the government set the rules of the game (Kent 1998). UAP's calamitous loss of credibility and its struggle to regain it in the 1990s are crucial to understanding the new role played by the university and the renewed ties of university rectors to local political leadership. Thus in a very short period UAP went from being an oppositionist *bête noire* to an intimate ally and faithful follower of *modernization* policy in the 1990s. The need to rebuild its reputation (and to recover financially) is the key to understanding UAP's rapid conversion to the federal government's strategy for evaluation, performance funding and planning (unthinkable only a few years earlier).

Despite having overcome the confrontations of earlier years, differences persisted among the various actors: rectors of public and private universities, elected officials, and leaders in industry. Notwithstanding UAP's about-face, the scars of conflict made collaboration with industry difficult. It took several years for the public and private sectors to use a common language and to agree on certain basic educational values<sup>11</sup>. Convergence on discourse, however, is not equivalent to actual cooperation and trust between public and private sectors, which takes a little longer to create. This is a far cry from the close relationships between universities

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<sup>9</sup> A term coined by José Joaquín Brunner in his seminal study of higher education in Latin America in the 1980s (Brunner 1991).

<sup>10</sup> Mexico's large foreign debt and the economy's extreme dependence on oil revenues became unsustainable when interest rates rose and oil prices fell in the early 1980s. Various devaluations of the peso in 1982 signaled the calamitous end of protectionism and fiscal generosity. The federal government agreed to a fiscal adjustment program with the IMF that cut spending in all social services. Thus, federal subsidies for universities – the chief source of their income at the time – dried up after 1983.

<sup>11</sup> Today the UAP leadership extols the virtues of competitiveness, productivity, and labor market relevance in higher education. A decade ago this discourse was virtually taboo.

and industry in Nuevo León, as described by Raúl Medellín (Medellín 2005) and Norma Vite (Vite 2004).

Throughout these profound transformations, however, certain key facets of the policy environment remained unchanged or, rather, became entrenched. One of them is the political texture on which policy decisions in higher education in Puebla are grounded. Actors in higher education -- whether they are rectors, government officials, or the media – understand implicitly that all statements about policy are also political messages. Positions taken on a given educational issue are read simultaneously on a political plane, thus indicating a political stance vis-à-vis other actors. Institutional leaders are also members of political groups or networks which are constantly jockeying for position (and positions) on the political stage. Thus, decisions over issues such as funding, program approval, faculty recruitment, and planning are inevitably woven into the broader political fabric.

A second aspect that deserves mention, and derives directly from the previous argument, is that local players in UAP's internal political structure, with the rector at its head, increasingly found it in their interest to nurture relationships with players in local government. A new set of political networks emerged linking the university careers to careers in politics<sup>12</sup>. In this setting, heads of departments, vice-rectors and other high level administrators at the university may indeed look forward to holding political posts.

Thirdly, it should be noted that, in contrast to higher education institutions in a state such as Nuevo León, Puebla's public institutions look to the state and not to industry as their main interlocutor. This trait is not in fact new, but rather the refurbishment of a practice of long standing in Mexican higher education generally. In this context, serving the state (more specifically, the power structure) usually takes precedence over serving business. Whereas universities in Nuevo León (and Guanajuato, another state covered in this project) tend to collaborate more intimately with industry, the rector of UAP takes pride in signing agreements with state and municipal governments.

### **3.2 The Governor and the state government**

Since the early 1990s the state of Puebla has had two elected governors: Bartlett (1992-1998) and Morales (1998-2004). Both governors belong to the PRI, the dominant political party in Puebla throughout the twentieth century. In contrast, states such as Nuevo León, Jalisco and Guanajuato, have overturned the traditional PRI power structure in recent gubernatorial elections. Previous research in this project has detected a certain degree of correlation between party alternation and change in higher education policy in those states where the PRI

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<sup>12</sup> Two exrectors of UAP have gone on to posts in local government. The most recent example was the election of UAP's rector as mayor of the City of Puebla in November 2004. During the latter part of his rectoral administration he campaigned openly for this political post.

has been displaced from the governorship (Kent 2002; Ramírez 2002), although this is qualified by other researchers (Acosta 2003). In this light, what should be expected from the Puebla case is continuity in higher education policy or at the very least a low degree of conflict within the political establishment. In Puebla, as in other states with minimal non-PRI opposition, the office of governor carries a high degree of influence and power. The state legislature has a history of backing the governor's initiatives without much resistance, and although in recent years other parties have increased their influence in the legislature the PRI continues to be the majority party. In this context, the governor enjoys considerable room for maneuver and is usually the initiator of policy in all areas.

It was not until recently, however, that the governor became an important actor in higher education policy. Starting with ex-Governor Bartlett's role in negotiating a strategy for UAP's recovery, the state government grew increasingly involved in higher education policy. This did not occur immediately, since the educational focus of Bartlett's administration was the improvement of basic education, in accordance with the national agreement in 1992 to reform basic education of the Salinas presidency<sup>13</sup>. It was really during Governor Morales' administration that policy acquired a more specific focus on higher education. During this period (1999 – 2004) the state secretary of education created the office of assistant secretary for higher and technical education. The individual appointed to head this agency was extremely active in establishing a network of new technical institutes throughout the state, in promoting collaboration with industry (in technical institutes) and in initiating procedures for quality assurance in the rapidly swelling private sector.

With regard to UAP, however, it was not the assistant secretary for higher education but the Governor himself who remained the chief interlocutor. Although heads in public universities are usually turned in the direction of the federal government, which continues to make the main policy decisions for this sector, in Puebla the Governor made his presence felt in UAP through his support for building three new regional campuses of the state university, in accordance with the Governor's interest in redressing social inequities in Puebla's poor hinterland. The state subsidy for UAP (which makes up about half of its income, along with the federal subsidy and the various federal funding programs), was usually negotiated directly with the rector and later approved by the state legislature without further ado.

The Governor is also the principal interlocutor for rectors of the main private universities: University of the Americas (UDLA, a secular elite institution), Autonomous Popular University of the State of Puebla (UPAEP, a religious elite university), Iberoamerican University (UIA, another religious elite institution), and the newly established campus of Monterrey Technical Institute (ITESM, a secular elite university). In interviews it emerged that although rectors of these institutions paid little heed to the state planning commission which was recently established by

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<sup>13</sup> Since Bartlett had been federal Secretary of Education before his election as Governor of Puebla, he brought a special interest in basic education to his administration.

the new assistant secretary of higher education, they were all in agreement with his policy of quality assurance toward the new private demand absorbing institutions. Rather, when they need to talk to someone in the government, they seek out the governor himself. But this need arises only rarely as private universities are completely independent financially and have their own accreditation procedures with national or international accrediting associations. Thus their interest in dealing with state higher education was focused on supporting the state's efforts to regulate the small private institutions.

For his part, Governor Morales was active in promoting the establishment of well regarded private universities in Puebla. His administration sought out the president of Monterrey Technical Institute and negotiated a new ITESM campus for Puebla by offering 20 hectares of prime real estate and by bringing together a group of local business leaders to help fund the new campus. When the University of the Valley of Mexico (UVM, which was purchased by Sylvan Learning Corporation in 2002) approached the Governor, he authorized the donation of land for a new UVM campus as well.

There is consequently a division of labor. The Governor interacts directly with the main public and private universities in the state, whereas the assistant secretary for higher education forms relationships with the public technical institutes and the private demand absorbing institutions.

### **3.3 The rectors, public and private**

Evidently, in this context an important actor is the rector of UAP. He heads the largest institution in the state and the fifth largest in the country, he manages a budget on a par with that of the city of Puebla, and has extensive political influence. His statements to the press are widely scrutinized, and his annual reports to the university council are splendid rites attended by the Governor, the Archbishop of Puebla, rectors of private institutions and a variety of public figures. During the 2000-2004 administration UAP bestowed several honorary doctorates on renowned literary figures, such as Carlos Fuentes, and these occasions served to parade and bring together leaders in the public and private sectors, thus enhancing the visibility of UAP's rector and his entourage. When he was elected Mayor of the capital city in 2004, the political connotations of those ceremonies promoted by UAP's university council became unmistakable. The rector of UAP is also active on the national playing field, in the meetings of the rectors' association (ANUIES) and lobbying efforts with the education commission of congress. The last three rectors, including the current one, have additionally been openly involved in the PRI and in electoral politics at the local level.

The emphasis placed here on the figures and dynamics of the public sector, however, should not shroud the growing presence of private higher education institutions in the state. During the Bartlett administration numerous authorizations

were issued for new establishments. Although some of them were apparently made without close regard to matters of quality<sup>14</sup>, some institutions of good standing were in effect authorized to operate in Puebla. In the Morales administration the rectors of the more reputable private universities were called upon to participate in the state planning commission for higher education, whose priority was the regulation of the new private establishments, an issue which came to the fore very rapidly toward the end of the 1990s. In 2001, there was in fact talk of a new law for higher education designed to put teeth in the government's authorization policy. This initiative was supported (if not actually promoted) by the rectors of the well established private universities, with the intention of alleviating the bureaucratic strictures of program approval for the consolidated institutions while enforcing stricter quality controls in the demand absorbing sector. Private universities were also interested in gaining access to the new state funds for science and technology. This law was not, in the end, presented to the legislature (Hernández 2001), but the initiative itself provided evidence of the new presence of the private sector in policy making for higher education.

Their presence was also felt in the media. Although rectors of private universities usually limit their statements to educational matters, some of them promote pet issues; an example is the rector of the University of the Americas, Nora Lustig, who is consulted by the press on poverty reduction programs, a specific area of her expertise. Generally, however, the political influence of rectors of the main private universities is administered through private channels, inasmuch as it still seems taboo for them to express such frank political opinions as the rectors of UAP have become accustomed to doing.

For their part, the demand absorbing institutions are beginning to exert a new kind of political influence. Although it is widely felt in the academic community that these institutions are businesses, rather than bona fide educational institutions, there is no doubt that the broad public perceives them as opportunities for obtaining higher education credentials (Coronel 2004). Their relationships with the state authorities have usually been limited to individual negotiations over program approval and inspections. This is changing. Recently they have been called upon by the assistant secretary of higher education to implement some kind of quality assurance. In response to such attempts at government regulation, some of the institutions have banded together to form an association, which is basically a lobby designed to exert defensive pressure on state authorities and to present a public image of educational seriousness through press releases. The association seems to have understood the writing on the wall about accreditation, which is now a full blown national policy involving both public and private institutions and is being promoted intensively in the press<sup>15</sup>. In response to the push for accountability at

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<sup>14</sup> No direct evidence was available of how these authorizations actually took place, but an examination of the number of new institutions in the demand absorbing sector that began operating after 1993 is revealing. Based on anecdotal evidence, it is possible to conclude that some authorizations were the object of political influence, such as those issued by the secretary of education to functionaries in the state government and UAP itself.

<sup>15</sup> On February 6, 2005, the national Council for Higher Education Accreditation (COPAES) released to the press the complete list of programs that have been accredited between 2002 and the present (COPAES 2005).

the national and local level, the above mentioned association has stated that it is attempting to create a local accrediting agency. The decision regarding the validation of this “accreditation mill for diploma mills” falls into the lap of the incoming state government.

## 4. State rules in use

Following are the educational policy goals set out by the two state administrations since 1992.

### 4.1 Policy goals for higher education

Since Governor Bartlett had been federal Secretary of Education before becoming governor and had been closely involved with national reforms for basic education, his administration in Puebla emphasized reforms for K-12 schooling, following federal guidelines. The main concerns in this area were reforming the structure of the educational system, implementing federal curriculum reforms locally, and spreading educational services to the most needy sectors of the population. Making sure that all children of school age be enrolled was also a priority.

With regard to higher education, however, Bartlett’s administration was not inattentive. His policy document for education (Secretaría\_de\_Educación\_Pública 1997) focused on several aspects:

- Create new opportunities in higher education for all sectors and regions
- Maintaining collaboration with federal authorities and the rectors’ association (ANUIES) in policy making
- Provide support for excellence in universities
- Reforming UAP in accordance with the new federal modernization strategy.
- Extending technical institutes to the regions
- Supporting university-industry collaboration.
- Promoting research and development focused on local and regional needs.
- Encourage institutions of higher education to collaborate in reforming secondary and basic education.

It must be pointed out that certain goals were in effect implemented, such as the first two. But others received only nominal support in practice, such as the third and fourth goals. Additionally, there are undeclared goals of policy that nonetheless

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It was interesting to see that the number of accredited programs in the public sector tripled whereas those in the private sector only doubled in number, in contrast to vast growth of new programs in the private sector. Private demand absorbing institutions have surely taken note of the fact that none of their programs are listed by COPAES. Incidentally, UAP also took notice that only eight of its programs have received accreditation, out of a total of 54 undergraduate programs.

were widely implemented. An important instance of this consisted in giving new private institutions a free hand.

The Morales administration (1998 – 2004) set out policy goals along similar lines, but special emphases emerged in certain areas. The general focus of educational policy was improving access especially by low income groups, raising the literacy rate, improving quality, bringing education and business closer together, and enhancing vocational training (Secretaría\_de\_Educación 1999). Special emphasis was placed on improving standards and efficiency in basic education, reducing the dropout rate and raising the rate of primary school leavers going on to secondary and higher education. Specific development plans were developed for each region in the state, stressing the need of raising the rate of schooling of poor and indigenous groups.

With regard to higher education, the following goals were established:

- Expanding and diversifying higher education throughout the state by 40%, bringing it closer to low income groups whose communities lack opportunities in this area.
- Adapting academic programs to social and economic needs of the seven different regions of the state.
- Developing a specific plan for supporting the expansion of postgraduate programs and research.
- Reforming the normal schools in the state and develop a plan for educational research.
- Coordinating the state system of higher education and improving collaboration and communication.

The general perspective of the Morales administration was firstly continuity with educational policy in the previous government. Within this perspective, certain sectors were singled out for special attention. One of them was higher education.

#### **4.1 Constitutional and legal rules**

The Puebla legislature reformed the state law of education in 2000, a year after Governor Morales took office (CongresoEstadoPuebla 2000). This was one of the first important legal initiatives taken by his administration. Educational legislation in the state had remained untouched for thirty years. The new law of education stressed the need to improve coordination and collaboration within the educational system and to improve its responsiveness to social needs. It placed special emphasis on redressing social inequality through education and expanding educational services in all regions of the state. The law addressed the need to coordinate state and federal policy, in the context of the so-called *new federalism*, the term used to describe the decentralization of education promoted by the federal government since the 1992 national agreement. In this respect, the legislature was attempted to update the law in accordance with current legal rules at the national

level and to underline the importance of education in reducing inequality and promoting development.

More specifically, the law made specific reference to higher education, stressing its strategic importance for the development of the state. The law mentioned the need to create a *state system of higher education*, which was expected to promote collaboration and mobility as well as scientific research. Thus, higher education required specific legal and policy instruments. The clear reference to higher education as a strategic sector and an object of state policy is a significant aspect of this reform.

Another noteworthy feature of the new law was its emphasis on the regulation of the private sector in education. The section on higher education states that the government has the authority to regulate private institutions and to define the minimum criteria they must meet. More generally, the law devotes a whole section to the regulation of all private schools in the state. It goes into some detail as to the requirements private institutions must meet as well as the government's authority to inspect and, if the case were warranted, to close them.

In December 2004, when the Morales administration was on the way out, the state legislature approved a Law for the Development of Scientific, Humanistic and Technological Research for the state of Puebla (Hernández 2004). This legislation defines the procedures for coordinating policy among federal, state and municipal governments. It calls for the involvement of social, economic and academic organizations in defining and implementing science and technology policy. It seeks to promote public and private investment in this sector. The law also calls for the creation of a state system of information on research and innovation, as a means to broadcast scientific findings and resources to the broader public. Finally it compels the state government to design six-year plans for developing research. Undoubtedly this legislation represents an important recognition by state authorities of the importance of higher education and research for state development. Its approval at the end of the administration may be seen as a way of merely shifting the burden of developing such a policy on the incoming government. But the law is also recognition of the need to formalize an emergent science policy that Morales promoted in the latter half of his administration.

In accordance with these legal reforms, changes were made in the state agency for education. The office of assistant secretary for higher education was created and was given the authority to plan and coordinate the establishment of new technical institutes throughout the state. A second important faculty assigned to this office was the regulation of the rapidly growing private sector, through a new state higher education planning council.

## **4.2 Planning**

Planning is a very different story at the federal and state levels.

### **4.2.1 The federal turnaround: strategic planning in public institutions**

With regard to planning in the public sector – UAP and the technical institutes – the principal agent is the federal government. Under the Fox administration, planning took a new turn (Kent 2005). The national education plan, released by the federal government in 2001 (SEP 2001), called for greater coordination of the higher education system and for integration of the grab bag of federal programs that had emerged over the previous two federal administrations. There also seemed to be some disappointment with the results of previous planning exercises. In this frame of mind, federal authorities decided to put teeth into the process by introducing public institutions of higher education to strategic planning.

Starting in 2001, state universities and technical institutes have been embarking on annual planning exercises, which involve not only rectors and institutional planning directors, as before, but also department heads and coordinators of academic programs. Federal authorities have concentrated all the previously separate funding programs, incorporating them into the strategic planning exercise. Public institutions no longer make separate requests for infrastructure funding, new equipment and laboratories, or funds for library expansion. They must now present integrated funding requests that must bring together the planning objectives of each department. Thus, in the spring of every year universities mobilize from top to bottom to produce information, develop goals and formulate funding requests to meet those goals. A significant addition to the strategic planning process is the requirement that all academic programs submit to external peer review and initiate accreditation proceedings.

The instruments of federal policy have change, but the overall policy goals remain the same: quality improvement and greater economic relevance.

### **4.2.2 Planning in the state government**

At the state level, two main concerns took up the attention of policy makers: the expansion of public and private higher education and the diversification of the public technical institutes. System coordination should have been a concern from the beginning, given the push for expansion, but it remained a secondary item on the agenda. There were attempts during the Bartlett administration to establish a state commission for planning in higher education, but it did not get off the ground. Regardless, his government went ahead with a permissive policy in the authorization of new private institutions, and it initiated collaboration with the

federal government to establish new two-year technical institutes<sup>16</sup>. In a very short time, several private institutions appeared, taking up the slack created by UAP's new restrictive admissions policy.

It is important to understand the context. Several critical events came together to produce demographic and political pressures on the state system of higher education:

- Pressed by the federal government, the largest institution in the state (UAP) cancelled its open door policy and actually reduced enrollments, the first and most consequential decision made in the wake of its recent crisis at the behest of the federal authorities. Another important decision was to increase tuition and fees at UAP. Both decisions had a considerable impact on the kind of students flowing to UAP.
- Secondary school enrollments and graduation rates were growing. When increasing numbers of secondary school leavers flocked to the new UAP entrance exam, many failed to meet the mark and began to shop around for alternatives. None were available in public institutions.
- Growing numbers of secondary school graduates from neighboring states were gravitating to Puebla to study in a university (Peña 2005).
- Since the main private institutions in the state have competitive admissions policies and high fees, they were avoided by the people who failed the UAP exam.

This *enrollment crunch* provided the rationale for the speedy authorization of new private establishments. The term *demand absorbing* institutions is absolutely pertinent in this case. In actual fact, the Bartlett administration's definition of "planning" involved discretionary decisions over the authorization of new institutions that were needed to absorb the new wave of graduates from secondary schools in Puebla and elsewhere. It turned out that some of the newly approved private schools are owned by state officials and even highly placed officials in UAP. That individuals in positions of authority in the state government and the university seemed to be profiting from UAP's new admission policy, while not openly illegal, did surround the policy with a certain murkiness that Morales' administration later inherited and attempted to deal with<sup>17</sup>.

Generally, the public debate over new private institutions has revolved around the issue of quality. The terms of debate around new private establishments were in

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<sup>16</sup> These institutions are named *Technological Universities*, apparently in an attempt to overcome the public's reticence to enroll in programs that do not lead to a university degree. Not many people seem to have been fooled, but depending on the context and the qualities of local leadership these institutes have grown roots in certain regions. They are by definition *decentralized* institutions, but the federal government keeps close track of their development (Azcona 2004).

<sup>17</sup> The federal law of higher education authorizes the federal and state governments and as well as state universities to grant licenses to new programs in private institutions. Thus private establishments have been able to shop at various agencies in search of approvals. Since 2001 the federal and state governments have reached agreements to coordinate approval decisions.

fact defined in this way at both the national and the local level. If poor quality is the problem, then the solution would logically be some kind of quality improvement or assurance mechanism. In consequence federal and state governments then moved to increase regulations on the private sector. There are, however, other facets to this question. One is the matter of equity and the other is the question of information for an increasingly diversified market for higher education. We briefly examine the former here and will approach the latter in another section. Most students in private demand absorbing institutions come from low income families, and a significant portion are students who attempted and failed entrance to UAP and are thus on the rebound (Coronel 2004). To some extent, then, the state system of higher education was becoming segmented:

- Middle income students from good preparatory schools (often the private schools) are able to pass the UAP entrance exam and pay the new fees;
- Students from upper income families with high academic abilities flow to the consolidated private universities;
- Low income students from poor preparatory schools end up paying fees at private demand absorbing schools with a poor academic reputation.

In the media and among policy makers and analysts these developments did not register as important at the time. Later on, under Governor Morales, the state's response to this question was to increase the provision of public technical institutes and the regional reach of UAP. Since the Morales administration inherited a situation in which growing demand was outstripping the supply of public and private offerings, it set out to redress this situation by increasing the number of public institutions. The Governor announced in his campaign that he would create new UAP campuses throughout the state as well as more technical institutes. He made good on his promises. Against the recommendation of federal higher education authorities, who were not interested in increasing infrastructure funding for the state university<sup>18</sup>, the governor provided the funds for three new UAP campuses. His assistant secretary for higher education took full advantage of federal shared funding programs to create several two-year and four technical institutes in various regions.

Whereas in 1990 Puebla's public higher education sector consisted of one state university and two federal technical institutes (two of which were located in the capital city and one in the second largest city), thirteen years later it was composed of a multi-campus state university and fifteen technical institutes distributed in low income regions throughout the state. It goes without saying that the private sector has expanded even more rapidly, although these institutions tend to be located in the capital and three other main urban areas.

What kind of planning was behind this radical transformation of the higher education landscape? Under the Morales administration, the state planning

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<sup>18</sup> This is based on a confidential conversation with a government official, who also made it clear that the federal focus for UAP was quality not growth.

commission became a functioning entity, a requirement set by federal programs for new technical institutes. Nonetheless, the hand of the governor seems to be present in certain decisions, especially when creating new institutions implied disregarding federal planning criteria. If the governor made a proposal to the planning commission, it was usually approved. The initiative for new UAP campuses arose in the governor's office and was not supported by federal officials. These decisions may be said to derive partly from electoral promises, as the Governor himself was not loath to admit, but they were also rationalized in terms of dealing with social inequities and supporting local economic development through the establishment of new institutions of higher education.

### **4.3 Program review and approval and the regulation of the private sector**

With hindsight it would seem that federal policymakers – with their fixation on quality improvement -- were somewhat surprised by the consequences of their decision early in the 1990's to limit enrollments in public universities without having provided sufficient alternative provision in the public sector to growing student demand. New public institutions, such as two and four year technical institutes, were in effect widely promoted in the second half of the 1990s, but by that time student demand had taken off and was flowing massively into the private demand absorbing institutions. The chaotic private sector expansion that followed created new problems that began to overwhelm established policy by the late 1990s. One of them is the process of program review and approval. The national accreditation council (COPAES) was only established in 2000, and it had to hit the ground running. As mentioned above, by 2005 the only programs that had been accredited were offered by public universities and private consolidated universities. At the time of this writing, not a single program in demand absorbing institutions – the sector that had been growing the fastest – was accredited nationally.

Another basic policy instrument in this regard is the authorization of new programs in the private sector. As mentioned above (see note 17), loopholes in the federal law for higher education and occasionally cronyism at the local level were proving to be insufficient. In response to this muddle, in 2000 federal officials reached an agreement with all state secretaries of education (and some state universities, which also have the authority to license new programs) to coordinate program authorization.

Education authorities in the Morales administration in Puebla followed suit. Since 1999 all new private sector programs have had to appeal to the state planning commission for approvals; the commission then consults with federal authorities and with UAP, before granting approval. It is interesting to note that UAP has stopped issuing program approvals during this administration. When interviewed the assistant secretary for higher education stated that approval standards had been raised.

Once approved, a program may be visited at least once a year by inspectors from the assistant secretary of higher education. Although inspection is stipulated in the state education law, it had not been seriously implemented until now. According to one inspector, this procedure generally serves as a way of verifying whether minimum standards (those needed to gain approval in the first place) are being met. On occasion, however, inspectors may fall prey to payoffs.

The assistant secretary for higher education developed additional quality assurance initiatives for the private demand absorbing sector (Peña 2005). He and other officials from his office made themselves quite visible in the local press pointing out that very few private institutions had obtained accreditations or certification of any kind. He has insisted that establishments obtain certification from the International Standards Organization (ISO) for their administrative and financial procedures. He has also pressed them to implement the national entrance examination managed by the National Evaluation Commission and to seek program accreditation with COPAES. At one point there were discussions about the need for a state accreditation commission, but this initiative – apparently promoted by some private schools -- seems to have been shelved by the government.

These policies are in their infancy, and they clearly require the passage of time for adjustment and improvement. Their impact, therefore, is difficult to judge at this point. But one indication that they are having consequences is the varied set of responses by private establishments, as documented by Peña (ibid) who found that most private establishments are at the very least aware of new policy requirements and are either simulating a response if not actually developing some kind of substantive quality improvement policy. Another clue, mentioned previously, is the political response of some institutions that prefer mobilization and lobbying. In any case, the state government has become an interlocutor for private institutions.

A significant step in this direction was the establishment in Puebla of several well regarded private universities. The assistant secretary of higher education stated that this decision was based on competition policy. According to this informant, when the Governor, surrounded by rectors and business leaders, inaugurated the new campus of Monterrey Technical Institute in 2003, the message was sent that private higher education institutions in Puebla must learn to compete with institutions of excellence. Therefore state policy toward the private sector is a dual pronged effort, comprising a regulatory aspect, mentioned above, and a market component. More on this below.

#### **4.4 Information**

Clearly the production and dissemination of information has acquired a new significance in higher education policy. If the introduction of strategic planning may

be seen as a way of creating *quasi markets* in public education, then it must be concluded that it also creates a need for information to regulate such a market. The initiative to coordinate federal and state approval procedures for programs in the private sector necessitates the exchange and validation of information at various levels. Governments are also making public the lists of institutions and programs that are granted approval as well as those whose approval has been removed. The national council for accreditation publicly releases lists of programs that are accredited. Information is being distributed on the web as well as through the press. The federal agency for higher education releases data and indicators on institutional efficiency as well as public funding.

The media are, for their part, very active in divulging such data. They have also been instrumental in putting the regulation of the private demand absorbing establishments on the policy agenda, both nationally and locally.

Information on quality is becoming a new type of *currency* in the public discourse and the modes of exchange in a system of higher education that grows in size and complexity. Nevertheless, information on the *costs* of higher education is less visible. The national press has begun to delve into the issues of affordability of private institutions. But generally public policy at the state level has not become aware of its role in informing the customer and thus contributing to regulate the private sector through the use of information on the costs as well as on the quality and relevance of undergraduate programs. Also, preparatory school leavers lack sufficient information on the variety of new public institutions of higher education. The traditional image of the *university* as the proto-typical institution dominates public perceptions, against which the new two- and four-year technical institutes have battled with little support from the government. Counseling is not widely practiced in preparatory schools.

#### **4.5 Funding and budgeting**

There is a variety of funding flows for public higher education in the state:

- Federal and state funding for UAP
- Federal and state funding for two- and four-year technical institutes.
- Federal and state funding for scholarships in public institutions.
- Federal and state funding for science and technology.
- Tuition and fees paid by students.

According to Table 7 funding to institutions grew in real terms over a ten year period. Federal and state funding for UAP grew by 47%; the university gained additional income from fees and tuition, but these figures were not available. Clearly a massive financial effort was made to create and expand the technical sector, with two and four year institutes. Data on funding in the four year technical institutes is not shown in this table, but it has also grown considerably. Hence the

data presented here actually underestimates the total growth of public expenditures. Expenditures for two year technical institutes in Puebla grew by 400%, and total public funding grew by 62% (without considering the four year technical institutes).

**Table 7. Federal and State Funding for Institutions in Puebla, 1994 - 2004**

(in thousands of 2002 pesos)									
UAP 1994-2004			Two-Year Technical Institutes (a)			Total (e)			
Federal (b)	State (c)	Total	Federal (d)	State (c)	Total	Federal	State	Total	
1994	821,966.3	205,122.0	1,027,088.3	41,206.4	2,929.7	44,136.1	863,172.7	208,051.7	1,071,224.4
1995	768,292.2	186,172.1	954,464.3	41,975.9	9,603.6	51,579.5	810,268.1	195,775.7	1,006,043.8
1996	781,081.9	189,283.1	970,365.0	59,118.5	12,227.9	71,346.4	840,200.4	201,511.0	1,041,711.4
1997	861,013.2	212,461.4	1,073,474.6	66,572.0	21,572.1	88,144.1	927,585.2	234,033.5	1,161,618.7
1998	970,333.6	238,740.1	1,209,073.7	122,950.2	40,895.6	163,845.8	1,093,283.8	279,635.7	1,372,919.5
1999	1,013,844.6	250,901.8	1,264,746.4	85,003.5	55,251.5	140,255.0	1,098,848.1	306,153.3	1,405,001.4
2000	1,169,780.8	262,648.7	1,432,429.5	127,815.4	63,364.8	191,180.2	1,297,596.2	326,013.5	1,933,609.7
2001	1,186,696.9	286,369.8	1,473,066.7	98,428.9	61,479.5	159,908.4	1,285,125.8	347,849.3	1,969,975.1
2002	1,239,008.1	294,340.6	1,533,348.7	138,117.3	85,245.3	223,362.6	1,377,125.4	379,585.9	2,100,711.3
2003	1,238,794.3	296,002.1	1,534,796.4	116,788.3	92,812.3	209,600.6	1,355,582.6	388,814.4	2,200,397.0
2004	1,219,665.2	291,096.9	1,510,762.1	133,171.1	91,531.7	224,702.8	1,352,836.3	382,628.6	2,300,464.9

a) Includes one new 4 yr polytechnic institute in 2003-2004

(b) Includes regular operating subsidy, investment in infrastructure, productivity bonuses for academics, and funds obtained through bidding based on strategic planning exercises

(c) Covers regular operating subsidies

(d) Includes investment in infrastructure for new institutes and operating subsidies

(e) From 2000 to 2004 this column includes funding for four-year technical Institutes.

Note: the exchange rate for pesos in 2002 was 10 per US dollar.

Source: SESIC-SEP, 2004, Aspectos financieros del sistema universitario de educación superior, <http://sesic.sep.gob.mx/site04/index.htm>

Additionally it is worth noting that expenditures for scholarships increased at a fair clip. The Fox administration created the National Scholarship Fund for Higher Education in 2001 to support low income students already enrolled in public institutions. Students who qualify must maintain a certain grade average throughout their studies to continue to receive support. Scholarships are on average about \$12,000 pesos a year (slightly more than US\$1,100 at current exchange rates). The program is designed to include both federal and state funds in equal portions. The Morales administration created a state institute for financial aid, which administers these funds.

**Table 8. National Scholarship Fund for Higher Education: Awards and Expenditures in Puebla**

Year	N° of Awards	Funding (*)		
		Federal	State	Total
2001	2,004	\$ 12,072	\$ 12,072	\$ 24,144
2002	7,556	\$ 45,517	\$ 45,517	\$ 91,035
2003	8,604	\$ 51,830	\$ 51,830	\$ 103,661

(\*) In thousands of 2002 pesos.

Source: SESIC-SEP, PRONABES:  
Becas asignadas por entidad federativa e institución federal participante  
<http://www.sesic.sep.gob.mx>

In the matter of budgeting for capital support, the federal and state governments have cooperated closely in setting up the new technical institutes: the federal authorities fund the initial construction and equipment costs, and once the institute is up and running, its regular operating budget is covered in a 50%/50% arrangement by both levels of government. The state university has also received funds from federal and state governments for capital support. Governor Morales has funded the construction of three new regional campuses for UAP. For infrastructure expansion at its main campus, the university must request federal funds through its strategic plans.

An important new trend here is the deepening involvement of the state government in funding higher education. The state increased expenditures for technical institutes by at least as much as it provided for the state university. Thus the Puebla government participated actively in the program to share the financial burden of new technical institutes and the new scholarship program with the federal government. This is an important change in the structure of state expenditures for higher education, which historically had consisted basically of subsidies for UAP alone. One consequence will be increasing competition among public institutions for state funds.

The state university negotiates its budget on two fronts: the federal and the state governments. At the federal level, budgets are increasingly focused and tied to performance on specific programs and goals, especially with the advent of strategic planning. However, state university rectors have become increasingly involved in lobbying the education committee in the federal legislature. The rector's close relationship with the Governor and the latter's majority in the legislature assure a speedy negotiation for the state budget for UAP,

Funding for private institutions, of course, is mainly dependent on fees and tuition paid by students. The private consolidated universities receive donations from business and foundations as well. Data is not made public on funding and budgeting in the private sector. By law these institutions are required to provide a certain number of scholarships to needy students. Students enrolled at institutions recognized by the National Federation of Private Higher Education Institutions, the principal accrediting agency in this sector, may acquire loans from a credit association set up in 1998 with a World Bank loan covered by the federal government (Canales 2004). Nationally, this association planned to extend credit to 50,000 students in 2003. However, it was not possible to obtain information on the program's coverage in Puebla's private universities.

#### **4.6 Science and technology policy**

In the past, state governments have not paid this area much heed, as science policy was perceived to be the province of the federal government through the National Council for Science and Technology (CONACYT). However, starting in the administration of President Zedillo (1994-2000) the Council initiated a program to decentralize funding for research. The Fox government continued this policy and proceeded to create regionally administered funding councils for research, with the participation of state governments, some of which had already created local research funding councils of their own. This trend caught the attention of the Puebla government midway through Morales' term, in part because of an intense lobbying effort by the coordinator of the state research funding council, Dr. Amy Arellano. This body was set up in the early 1980s and had lain dormant since then, but it became a working concern under her leadership. Dr. Arellano called on business people, government leaders and researchers in universities to collaborate in evaluating research projects and carrying out activities purporting to make science more visible and relevant locally (Arellano 2004). The council drew up legislation for formalizing science and technology policy in Puebla, which was presented and approved by the legislature in 2004 (see above). The state research council manages funding for research allocated jointly by CONACYT and the state government. It also provides support for students in concluding dissertations. In her ongoing conversations with business leaders, Dr. Arellano has acknowledged the need to bridge the distance between firms and academic institutions that sets Puebla apart from Nuevo León.

#### **4.7 Higher education as a sector of the economy**

Governor Morales stated on various occasions that Puebla is becoming a point of attraction for services in higher education and culture. He pointed out that the growing number of out of state students in Puebla universities is an economic and cultural asset for the state. In effect, higher education is a growing industry in Puebla and its importance for the local economy has caught the attention of the

political leadership. Quoting from (Kent 2004), the following figures provide an estimation of the economic import of the higher education sector in 2004:

- Total annual revenues of private institutions: \$540,000,000 pesos
- Total annual disbursements by students for indirect costs (books, meals, transportation, etc.): \$200,000,000
- Employment for academics (mostly part-timers): 5,000
- Employment for administrators and other non-academic staff: 1,000

Using this approximate calculation of total revenues generated by private higher education in the state of Puebla, we conclude that they comprised 1.4% of Puebla's total GDP in 2002 and 3.2% of Puebla's GDP in the services sector of the economy (including tourism, hotels and restaurants, social services and health).<sup>19</sup>

The sale of educational services to out of state students is now on the agenda for higher education policy. It remains to be seen whether this policy will be pushed internationally, that is in Central America.

## **5. Institutional actors and rules in use**

### **5.1 Rules in use at UAP**

The rules in use defined at the federal and state levels, as covered in the previous section, generally configure what may or may not be done at the institutional level. Over the past decade federal policy has deepened its interactions with public institutions of higher education in almost all areas: budgeting, personnel, capital support, planning and enrollments. State universities are legally autonomous, as regards governance and the content of their academic courses and research. That is, they enjoy substantive autonomy. But in terms of procedural autonomy, there is no doubt that universities have lost ground to federal authorities over time (Kent 2005).

The federal decision made fifteen years back to cap enrollment growth in public universities has remained unchanged. Universities may, of course, open new programs and this decision is made autonomously by university councils. In the case of UAP, in contrast to institutions in Nuevo León, these decisions are not usually discussed with the business community although they may respond to

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<sup>19</sup> Data for these calculations were obtained in the following way: information on fees, tuition and indirect expenditures by students were collected by direct visits at private institutions in Puebla for the AIHEPS project and by a survey of first-year students at a sample of institutions (Coronel 2004); economic data and public expenditures were obtained from the website of the National Statistics Institute (INEGI 2004).

requests arising in public administration<sup>20</sup>. But enrollments may not grow in any significant way.

Personnel policy is also closely monitored by federal authorities. In fact, basic decisions in hiring academic personnel are not made by the federal secretary of education but by the federal secretary of the treasury and budget. The national budget prepared by this agency covers new academic posts as well as the funds for productivity bonuses for which academics in public universities compete every year. Universities may hire part-time personnel on their own. But if a university needs to hire a new full time academic, this decision must be carefully negotiated on an individual basis with federal authorities through PROMEP, a program for the improvement of the professoriate, which sets the minimum academic requirements for new professors. In this way, unions are excluded from negotiating personnel decisions in the academic sector.

Although faculty recruitment is closely controlled by the government, the promotion of academics within institutions remains within the purview of universities. It is an interesting paradox that externally there is an ever greater pressure to raise the academic requirements of incoming professors (the PROMEP program will only support the hiring of people with doctorates), whereas internally the institutional rules over academic promotion are opaque and far from meritocratic. For instance, astonishingly UAP does not have specific regulations over promotion and tenure. In fact, the university council began consultations in 2004 to review and reform this crucial area of its operations, but for many years professors at UAP have understood that promotion is a political favor.

This is not a minor issue but rather a revealing fact about the institutional rules in use. The state university actually operates on two levels of rules: the rules that are formally on the books and the implicit rules of political exchange among various institutional actors. The directors of faculties (or departments) and the rector are elected by the university council. The members of the council are in turn elected tri-annually in the faculties or departments, where all professors and students have a vote. Under this governance structure, political allegiance plays an important role in actual decision making, especially with regard to faculty recruitment, the approval of new programs and budget allocations. Also it is clear that faculties (or departments) are important bases of power within the university: to build influence, a rector must negotiate with faculty directors. In this respect, the political fabric of UAP interweaves and shares common values with that of the larger political system at the state level.

Thus there is little incentive for student mobility within the university itself and among various institutions. The governance structure reinforces the traditional faculty system, where each profession or discipline is a world unto itself.

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<sup>20</sup> For instance, at the request of local legislative auditing commission a master's program in financial audits is currently on the drawing board.

Moreover, the incentive to excel and innovate is not very strong either. In areas such as internationalization, collaboration with industry or the use of technology in teaching and learning, UAP is behind other state universities, in spite of rectors announcing that UAP is successful in competitive bidding for federal funds. This statement must be qualified: naturally there are innovations in various areas, including those just mentioned. But they tend to maintain a low profile, for one of two reasons. The first is that decision making in the university is naturally more attuned to the interests and values at the summit of the structure and is hence slow to respond to new ideas coming up from the base. The second reason is more subtle but just as real: making oneself visible by developing innovations may be risky politically.<sup>21</sup>

Rectors have seen their financial maneuvering room diminish over time, as greater portions of the university budget are earmarked or obtained through competitive procedures. This has occurred in the context of new federal guidelines for transparency in all government expenditures but also as a response to the financial problems that affected state universities a decade earlier – UAP’s experience in this matter has been well documented (Kent 1998). Financial accountability has intensified considerably, and audits at universities are continually carried out by federal inspectors. This, in turn, raises the political premium on obtaining additional income through the sale of services, whose revenues are less easily controlled by external watchdogs.<sup>22</sup> It also puts a premium on imaginative accounting, thus boosting the importance of financial officers within the university.

In sum, there is a constant tension and a kind of perverse dialectic between institutional rules and federal rules. The latter implicitly assume that federal policy blaze the trail of excellence and efficiency and that state universities, if left to their own devices, will stray from this path. For its part, a state university such as UAP follows the lead of federal policy because it is the only way to obtain resources and to recover (or maintain) its reputation. In fact, the path to political influence as a rector today is to faithfully toe the federal line, as UAP’s rectors have shown. But at the same time, the internal workings and values of UAP’s political structure persistently pull it in a different direction, curiously confirming the implicit assumptions behind federal policy. Additionally it is paradoxical that federal policies designed to strengthen academic values in a politicized system of universities have in effect resulted in the empowerment of upper echelons of the new university bureaucracies rather than the academic base.

It must also be pointed out that increasing centralization in federal policy toward universities contrasts with decentralization in the technical sector, where state

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<sup>21</sup> This hypothesis is being tested by the research of a young scholar associated with the AIHEPS team, whose work on university-industry collaboration in UAP shows how the numerous innovations that are in fact emerging tend to be invisible to the power structure.

<sup>22</sup> At the time of this writing a controversy was raging in UAP’s university council over the destination of revenues from the university’s various services.

governments have been encouraged to become more active in funding and managing this new sector.

## 5.2 Rules in use in the private sector

The private sector in Puebla used to be left to its own devices, but today it is on the radar screen of the state government. In this section we offer an overview of institutional responses in the private sector to attempts by state officials to regulate these institutions<sup>23</sup>. Following the typology used above to classify private institutions, it is evident that there is no single type of response but rather a gamut of options.

**Figure 1. A typology of institutional responses to government regulation in the private sector in Puebla**

<b>Institutional Type</b>	<b>Response to Government Regulation, Accreditation and Competition</b>
<b>Universities</b>	Endogenous interest in quality control and assurance; many universities have been externally accredited for years, without urging by the government. Uninterested in government regulation, which is seen as directed to other private institutions which “must be forced” to increase quality. They are concerned by government promotion of greater competition among elite universities.
<b>Recently created demand absorbing establishments</b>	Government regulations perceived as unnecessary meddling by external authorities;
<b>Specialized institutes</b>	Endogenous interest in program certification, either nationally or abroad.
<b>Non-universities under consolidation</b>	Increasing acceptance of quality control and assurance as necessary to gain acceptance as academically reputable institutions.
<b>Expanding Non-universities</b>	Quality control and assurance are accepted only as external requirements, which are followed minimally. Unfettered growth is their guiding interest.
<b>International corporations</b>	Responses are similar to universities, sharing an endogenous awareness of quality control and assurance.
Source: [Peña, 2004 #214]	

<sup>23</sup> This section is based on research carried out by a young scholar associated with the Mexican team of AIHEPS, Juan Ramiro Peña (Peña 2005).

At one end, there is the endogenous interest in quality assurance by the consolidated universities, which declare that they are in fact ahead of the government in this matter and therefore are in no need of meeting government-set standards. The other extreme of the spectrum is reserved for the demand absorbing establishments which react negatively to what they consider unnecessary meddling by the state government. Some of these institutions have in fact banded together to exert collective action in their dealings with the state government, as noted above. The typology is useful as a means of detecting subtle but important differences in institutional responses, most of which lie somewhere along the middle of the spectrum. There are also significant individual instances in which institutional leaders in the private actively seek out political contacts and influence, much in the same fashion as rectors of public universities<sup>24</sup>. The assumption is that these political networks are useful in protecting some private institutions from governmental interference and in facilitating the authorization of new programs and campuses.

Whether institutions agree or not with government policy, they acknowledge that federal and state regulations have come to stay. Since policies in this area are evidently in their infancy, they are seen as malleable by the institutions and therefore there is a growing measure of participation in public discourse on the matter. The university-type establishments regard the demand absorbing institutions as a threat to the reputation of the private sector as a whole, and hence they support the state's attempts to regulate this sector. But they also deplore bureaucratic procedures demanded by the government and constantly demand they be freed from such strictures. Although this request is shared by all institutions, it has not been easy to seat them all at a single table, because of the diversity of interests and values. The government's requests for information are not always heeded.

## **6. Higher education performance in the state of Puebla**

In this section, we use the following criteria to evaluate performance: access and participation, degree completion, cost per capita (a rough estimate of system efficiency), choice (a measure of the educational possibilities available to low-income students), affordability, economic benefits, and non-economic benefits. The performance indicators developed by the National Center for Public Policy and Higher Education were our starting point. We then adapt them to the Mexican setting, taking into consideration especially the availability of data and recent discussions on the non-economic benefits of higher education (Kent 2004). We do not use preparation since data is sparse on a state-by-state basis in Mexico. Although affordability has been shown to be statistically unrelated to participation in

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<sup>24</sup> In the November 2004 elections the rector of a small but entrepreneurial private establishment was elected municipal councilwoman. The leader of another establishment of the same type consistently makes himself visible in the local press – a common path to political influence – and openly lobbies government officials.

the US context (Richardson 2004), we believe this indicator has its uses in the policy debate in Mexico.

## 6.1 Access, social participation and equity

A principal objective of state policy for higher education in Puebla has been the expansion of educational opportunities. In effect, the number of students enrolled and the number and diversity of institutions have grown. Thus access is greater today than a decade ago. But what are the results of this policy in matters of social participation and equity?

**Table 9. Population over 18 years of age with higher education**

	A	B	C	D	
	Total population 18 and older	Without higher education	With 1 or more years of higher education	With graduate education (included in C)	C/A
1990	2,115,282	1,188,603	168,881	12,953	8%
2000	2,782,993	2,469,733	289,744	15,803	10%
Increase 1990-2000	32%	108%	72%	22%	
Source: [INEGI, 2004 #252]					

As can be seen in Table 9, the percentage of people over 18 years of age with some higher education studies has grown from 8% to 10%. But the number of people in that age group without higher education has increased by 108%.

**Table 10. Participation in Higher Education by 19-23 year-olds, 1990-2000**

	1990	2000
Puebla	17.6%	21.9%
National average	13.8%	20.4%
Sources: SEP, Educational Indicators.		

Social participation in higher education in Puebla increased from 17% to 21%. It was considerably higher than the national average in 1990 and yet today it is on a par with the national indicator of social participation. The actual growth in the participation rate is rather low, in spite of the fact that enrollments have grown substantially. At the beginning of this report, we pointed out that demographic growth in the university going age group presents a special challenge in Puebla. Apparently the state is not meeting that challenge.

One problem with these figures is that they overestimate the actual growth of the participation rate. Many new entrants to the private institutions are out-of-state students. Therefore the actual increase in the participation rate of students graduating from preparatory schools in the state of Puebla is actually lower than indicated in Table 10.

Why has expansion in the public and private sectors been insufficient to redress social inequities? In this respect, as we learned from previous research in this project, [Kent, 2002 #267] it is useful to examine the evolution of secondary and preparatory schooling when analyzing social participation in higher education. From Table 11 we can infer that in fact Puebla has not made great strides in reforming and supporting the growth of preparatory schools. Enrollment growth in this sector is relatively weak compared to population growth, and efficiency is low as well. Although the percentage of secondary school leavers (age 15) that ended up enrolling in higher education at age 18 grew from 33% to 45%, the preparatory schools still graduate a small portion of its first year students. These figures show that state policy for preparatory schooling consisted mainly of expanding the number of places without improving quality and efficiency. Unless this issue is addressed the flow of poblano students into higher education will continue to be relatively low. It would be unfortunate if the growing numbers of out of state students masked the persisting inequalities locally.

**Table 11. Student Flows from Secondary to Higher Education, 1990-2000**

	1990	2000
Secondary school leavers	57,155	69,034
1st year students: Preparatory	43,844	56,479
Total enrollments: Preparatory	107,823	135,795
Preparatory school leavers	21,328	29,624
1st year students: Higher	18,641	31,020
Source: SEP Educational Indicators		

Finally, it is probable that most new entrants to higher education are middle and upper class students and that the participation of low income students is low and increasing rather slowly. This is the trend nationally in Mexico (Barceinas 2005).

Although widespread data on income distribution in higher education at the state level is hard to come by, it is known that the income levels of first year students in UAP, the largest university, are higher today than ten years ago. Private institutions – the real growth sector in higher education – cater mostly to middle and upper income strata. The new technical institutes, designed to meet the needs of low income people, actually provide a relatively small portion of new student places. The national scholarship program, mentioned in section 4.5, supports low income students who are already enrolled in a public institution and is focused on keeping them enrolled. The composite effect of all these factors is to limit the flow of low income students graduating from preparatory schools in Puebla into higher education.

## 6.2 Degree completion

**Table 12. Completion Rates in Puebla**

	<b>Puebla</b>	<b>Completion Rates</b>	<b>National</b>	<b>Completion Rates</b>
<b>1st Yr students 1985</b>	11,762		226,650	
<b>Graduates 1990</b>	4,779	40.63	118,457	52.26
<b>1st Yr students 1995</b>	14,996		301,617	
<b>Graduates 2000</b>	10,761	71.76	209,795	69.56
Sources: ANUIES, Demanda y Oferta de Educación Superior en Cifras 1985 - 1997; Statistical Yearbooks, 1990 & 2000 Table prepared by Amanda Azcona.				

## 6.3 Per Capita Cost

Per capita cost is used here as a proxy for efficiency of public expenditure. Since disaggregating different components of costs (capital expenditures, salaries, etc.) at the state level has proved to be quite complex, we provide the following measures: combined federal and state expenditures, an estimation of private spending, and an estimation of per capita public funding.

Total federal and state funding increased from \$1 billion to 2.3 billion pesos. Per student public expenditures have increased from \$17, 850 pesos in 1994 to \$25,000 in 2004.

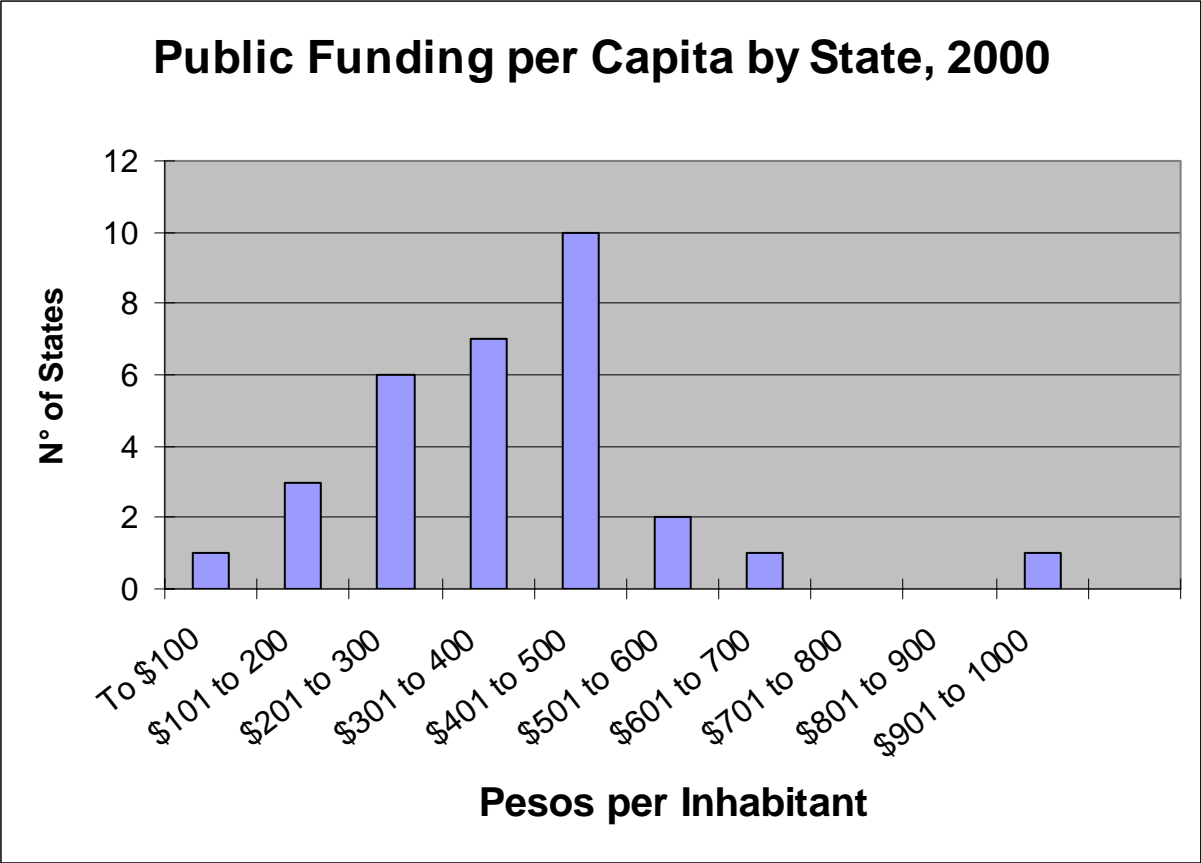
Now, it is interesting to note that private expenditures in higher education, as calculated only by family expenditures, increased from \$1 billion to \$2.8 billion pesos over the period of a decade<sup>25</sup>. This calculation actually underestimates

<sup>25</sup> This estimation is based on data collected for a master's thesis on private higher education in Puebla (Coronel 2004) and on publicly available data from consolidated universities.

private expenditures, given that data for donations and other source of income in this sector are not available. Suffice it to say that spending by families tripled, whereas total public expenditures (federal and state) grew by 130% (see Table 7).

In order to approximate a measure of efficiency public expenditures for higher education, it is useful to calculate them in terms of the total state population. As the following graph shows, there is a wide distribution across states.

**Figure 2. Public Funding per Capita by State**



The median is \$392 pesos per inhabitant, and the standard deviation is \$174. The spread among states is considerable.

The figures for four the states in our study for 2000 are presented in Table 13.

**Table 13. Total Public per Capita Funding in Four States, 2000**

<b>State</b>	<b>Per Capita Funding</b>
Puebla	\$392
Nuevo León	\$582
Jalisco	\$402
Guanajuato	\$181
median	\$392
Mean	\$385
S.D.	\$174

Puebla and Jalisco are at the national median, whereas Guanajuato is one standard deviation below the mean and Nuevo León above one standard deviation above the mean.

An additional measure that permits comparison among states is commonly used by OECD statistical studies: per capita public spending as a proportion of per capita GDP.

**Tabla 14. Per Capita Public Funding as % of Per Capita Income, by State**

<b>State</b>	<b>PC Funding / PC GDP</b>
Guanajuato	0.5%
Jalisco	0.8%
Nuevo León	0.6%
Puebla	1.1%
Mean	0.90%
Median	0.80%
S.D.	0.40%

This indicator attempts to measure the proportion of individual income that is allocated to public higher education funding distributed across all inhabitants of each state. It is interesting to compare Guanajuato and Puebla which are very similar in GDP per capita. The former not only spends a lower proportion of its public funds per inhabitant but also allocates less than half the proportion of individual state income than Puebla. Although per capita funding in Puebla is at the national median, it spends 1.1% of individual GDP on public higher education, more than Jalisco and almost twice as much as Nuevo León, both of which have

twice the per capita GDP of Puebla. To what extent can Puebla's economy – similar to Guanajuato's – sustain this level of spending?

## 6.4 Choice

In Table 15 we present the evolution of places for first year students in the various sectors of higher education over a thirteen year period.

**Table 15. New Entrants to Higher Education by Sector, 1990 and 2003**

	1990	2003
	1st Yr. Students	1st Yr. Students
<b>Public Sector</b>		
<b>UAP</b>	10,138	10,359
<b>4 yr Technical Institutes</b>	653	3,582
<b>2 yr Technical Institutes</b>	0	4,289
<b>Total Public</b>	10,791	18,230
<b>Private Sector</b>		
<b>Consolidated Universities</b>	3,030	4,052
<b>Demand Absorbing</b>	1,009	9,437
<b>Total Private</b>	4,039	13,489
<b>Total First Year Students in Higher Education</b>	14,830	31,719
<b>Private / Total</b>	27%	43%

Quantitatively, the number of places in the public technical institutes grew by 80% whereas in the private sector they increased by 200%. The greatest number of new places is in the private demand absorbing sector. The great majority of these establishments operate in the city of Puebla or other large urban areas in the state.

The public university offered no new places, but the new 2 and 4 year technical institutes now offer about 40% of all new places in the public sector. It is important to note that all these places are offered outside the city of Puebla, in the less developed interior of the state.

Qualitatively, it must be pointed out that the vast majority of new offerings is in the low quality private sector and in the new and insufficiently recognized two and four year technical institutes. Since the only possibility of credit recognition and transfer for graduates of the two year institutes is in the four year technical schools, but not the public or private universities, access to these new two year institutions offers limited educational opportunity.

Limited information to the student and scarce opportunities for transfer constitute focal traits of the higher education system in Puebla. It has expanded and

diversified, but the system as such has achieved a low degree of coordination that might enhance student choice.

Choice is arguably also a function of affordability. Affordability is the capacity of families to cover tuition and fees. Most private institutions in Puebla are in the \$6,000 to \$25,000 range (annual cost). How do these costs compare to family income? In Table 16 we calculate the percentage of family income by decile that is needed to cover the median annual cost of private institutions in Puebla over a period of a decade. This percentage has increased for all families, but especially so for the first three deciles. The cheapest institutions (\$6,000 a year) might still be affordable for families in deciles III or II but only barely.

**Table 16. Affordability of Private Higher Education in Puebla, 1992-2002**

Deciles of Income	Median Cost as % of Annual Family Income	
	1992	2002
I	45%	72%
II	31%	41%
III	24%	30%
IV	20%	24%
V	16%	19%
VI	13%	16%
VII	11%	13%
VIII	9%	10%
IX	6%	7%
X	2%	3%

See Note 26.<sup>26</sup>

## 6.5 Economic benefits

Following Norma Vite's analysis of university-industry collaboration in the states of Puebla and Nuevo León (Vite 2004), there are important differences in the way higher education has contributed to the economy in both cases. Nuevo León has clearly been more successful, mostly due to the strong links between both sectors, in contrast to the general "statist" orientation of public higher education in Puebla. In this state, contributions derived from research and development are minimal. Innovation in program offerings has not been an outstanding trait of higher

<sup>26</sup> Median cost of private institutions in Puebla in 2002 was \$12,000. Data on costs was taken from a sample collected by Coronel (Coronel 2004). Source for data on family income: National Income Surveys (INEGI 2000)

education in Puebla. One graduate follow-up study conducted in 2003 found that most graduates of UAP end up in public administration rather than in business.

## **6.6 Non-economic benefits**

This section borrows from recent discussions on the social, civil and cultural benefits of higher education for society. The World Bank (World\_Bank 2002) and other organizations in various countries have contributed to this debate. For the purposes of this study, Raúl Medellín's compilation of this literature (Medellín 2004) forms the basis of our analysis.

Although difficult to measure because such benefits usually derive from various inputs apart from higher education, the following types of benefits have been identified:

- Contributions to the educational system;
- Civic benefits, in terms of electoral participation and civic organization;
- The increased capacity to generate knowledge and to access information;
- The effects on public health;
- The contributions to a more cohesive civil society.

The contributions of higher education to the educational development of the state are measured in terms of the number of adults with university education and the number of people with postprimary schooling. See Tables 17 and 18.

**Table 17. Population 18 and over with one or more years of university studies**

State	Population 18 and over	With Under graduate studies	%	With Post graduate Studies	%
<b>1990</b>					
National	43,616,948	3,206,396	7.4	350,483	0.8
Guanajuato	1,994,161	79,978	4.0	10,739	0.5
Jalisco	2,804,844	203,066	7.2	22,521	0.8
Nuevo León	1,796,300	199,388	11.1	26,111	1.5
Puebla	2,115,282	135,744	6.4	12,953	0.6
<b>2000</b>					
National	56,718,834	6,200,651	10.9	388,397	0.7
Guanajuato	2,596,418	177,022	6.8	13,022	0.5
Jalisco	3,697,508	401,222	10.9	30,774	0.8
Nuevo León	2,431,091	363,423	14.9	28,111	1.2
Puebla	2,782,993	264,983	9.5	15,803	0.6
Source: (INEGI 2003)					

**Table 18. PostPrimary Schooling for the Population 5 years and over, 1990 – 2000**

State	Population 5 yrs and over	No Schooling	With Postprimary Schooling	Not specified
<b>1990</b>				
<b>National</b>	<b>70 562 202</b>	<b>11 703 836</b>	<b>23 076 622</b>	<b>1 623 156</b>
GUANAJUATO	3 396 283	701 412	772 892	113 517
JALISCO	4 584 728	684 432	1 448 154	95 014
NUEVO LEÓN	2 750 624	277 136	1 257 695	36 246
PUEBLA	3 565 924	739 321	914 327	97 312
<b>2000</b>				
<b>National</b>	<b>84 794 454</b>	<b>11 539 608</b>	<b>35 198 873</b>	<b>781 633</b>
GUANAJUATO	4 049 950	698 231	1 305 101	38 293
JALISCO	5 541 480	656 032	2 276 697	45 914
NUEVO LEÓN	3 392 025	283 703	1 849 097	47 615
PUEBLA	4 337 362	716 210	1 471 825	37 516
Source: (INEGI 2003)				

Civic development is usually correlated with schooling above the post secondary level and is measured by the degree of participation in elections. The data presented here refer to the national presidential elections of 1994 and 2000, which are widely regarded as being more representative of participation than local or midterm elections.

**Table 19. Electoral Participation in Four States, 1994 - 2000**

State	1994 Presidential Elections			2000 Presidential Elections		
	Registered Voters	Voters at Polls	Participation Rate (%)	Registered Voters	Voters at Polls	Participation Rate (%)
<b>Guanajuato</b>	2,099,320	1,757,816	83.73	2,784,508	1,857,517	66.71
<b>Jalisco</b>	2,885,694	2,405,261	83.35	3,846,656	2,623,960	68.21
<b>Nuevo León</b>	1,899,908	1,503,737	79.15	2,413,486	1,531,941	63.47
<b>Puebla</b>	2,096,193	1,552,078	74.04	2,753,111	1,722,172	62.55
<b>National</b>	45,729,057	35,285,291	77.16%	58,782,737	37,601,618	63.97%

Source: Instituto Federal Electoral, [www.ife.org.mx](http://www.ife.org.mx)

In all states there is a positive change in the number of registered voters, with little differences between states. The number of people who actually vote after registering is lower but still on the increase between elections. Nonetheless, there is a decrease in the participation rate (the percentage of actual voters over registered voters). The insignificant differences among states probably indicate the presence of other variables apart from higher education in determining electoral behavior. Generally registration and participation rates are high, compared to OECD countries.

**Table 20. Changes in Electoral Behavior, 1994 - 2000**

	Change in Registered Voters	Change in Voters at Polls	Change in Participation Rate
<b>Guanajuato</b>	33%	6%	-20%
<b>Jalisco</b>	33%	9%	-18%
<b>Nuevo León</b>	27%	2%	-20%
<b>Puebla</b>	31%	11%	-16%
<b>National</b>	29%	7%	-17%

The concept of knowledge generation is directly related to higher education and especially research and development. Table 21 shows that Puebla started from a low point in the number of patents filed and the number of researchers but has improved on both indicators.

**Table 21. Knowledge Generation**

Concept	1995			2000		
	National	Puebla	Puebla / National	National	Puebla	Puebla / National
Patents filed	432	7	1.62%	431	19	4.41%
N° researchers / 10,000 inhabitants	0.73			1.75		

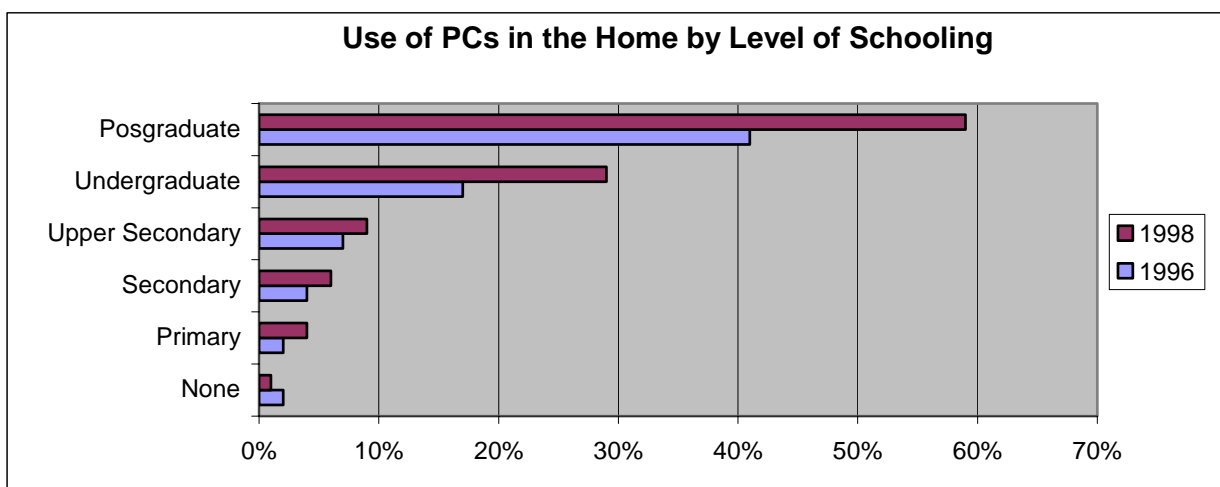
The capacity for increasing access to information is also directly related to the higher education system, in that students and graduates are more likely to use books, libraries and computers. However, the availability and price of these resources are not an effect of higher education but of the market. Table 22 shows figures on the use of computers in the home by level of schooling, but it was not available in disaggregated form by state. Nonetheless, the tendency is clear: graduates of higher education are intense users of computers.

**Table 22. Use of computers in the home, by level of schooling**

	1996	1998
Level of Schooling		
None	2%	1%
Primary	2%	4%
Secondary	4%	6%
Upper Secondary	7%	9%
Undergraduate	17%	29%
Posgraduate	41%	59%

Source: (Calvillo 2003)

**Figure 3. Use of PCs in the Home by Level of Schooling**



**Table 23. Use of Libraries**

Concept	1995			2000		
	Libraries	Volumes		Libraries	Volumes	
Libraries and available volumen	695	2,482,361		654	2,391,890	
Library Use	<b>Users</b>	<b>Accesses</b>		<b>Users</b>	<b>Accesses</b>	
	4,920,207	6,364,878		4,277,188	8,080,017	
Libraries according to Source of Funding	<b>Federal</b>	<b>State</b>	<b>Private &amp; Universities</b>	<b>Federal</b>	<b>State</b>	<b>Private &amp; Universities</b>
	105	485	105	33	531	90
	15.11%	69.78%	15.11%	5.05%	81.19%	13.76%
Users by type of Library	<b>Schools</b>	<b>University</b>	<b>General Public</b>	<b>Schools</b>	<b>University</b>	<b>General Public</b>
	741,770	2,053,973	2,124,464	695,057	919,554	2,662,577
	15.08%	41.75%	43.18%	16.25%	21.50%	62.25%

The positive effects of higher education on public health have been well documented. Individuals with university education tend to take better care of the health of their persons, their families and people in their communities (Medellín 2004). Among the principal indicators linked to higher education are a lower infant mortality rate, an increase in the average age of marriage and a longer waiting time for having children (in part due to the time needed to conclude university studies, but also because of the professionalization of women).

Tables 24, 25 and 26 illustrate these indicators. All states present reductions in infant mortality, but Puebla shows a more significant reduction than others, perhaps in part because it starts from a higher degree of mortality but also as an effect of higher education. Women in Puebla show a great change in the age of the first marriage than other states. Table 26 shows important changes in the distribution of births by level of schooling of the mother. Guanajuato and Puebla present the most significant changes.

**Table 24. Mortality rates among children from 0 to 14 years**

	1995			2000		
	Population	Deaths	Mortality	Population	Deaths	Mortality
<b>National</b>	31,146,504	66,742	0.21%	32,586,973	52,750	0.16%
<b>Guanajuato</b>	1,642,778	4,499	0.27%	1,706,947	2,729	0.16%
<b>Jalisco</b>	2,048,779	4,104	0.20%	2,132,355	3,184	0.15%
<b>Nuevo León</b>	1,051,536	1,511	0.14%	1,137,528	1,363	0.12%
<b>Puebla</b>	1,703,877	6,428	0.38%	1,803,010	4,382	0.24%

Source: (INEGI 2000)

**Table 25: Average Age at First Marriage**

	1995		2003	
	Men	Women	Men	Women
National	23.2	20	27.2	24.4
Guanajuato	22.7	20	25.1	22.9
Jalisco	23.6	20.4	26.7	24
Nuevo León	23.8	20.8	26.7	24
Puebla	23.2	19.9	27.7	25

Source: (INEGI 2000)

**Table 26. Distribution of Births by Degree of Schooling of the Mother**

	No Schooling	Some primary	6 Yrs. Primary	3 Yrs. Secondary	3 Yrs. Upper Secondary	Higher education
<b>1995</b>						
National	11.01%	15.79%	26.82%	24.39%	9.23%	6.34%
Guanajuato	33.51%	22.61%	30.04%	18.73%	5.82%	3.46%
Jalisco	3.42%	22.61%	33.16%	27.13%	9.70%	6.49%
Nuevo León	1.11%	5.34%	23.94%	42.62%	10.41%	12.25%
Puebla	13.77%	21.82%	29.54%	19.72%	7.53%	5.87%
<b>2003</b>						
National	7.40%	11.40%	27.50%	31.30%	13.80%	8.60%
Guanajuato	5.40%	16.50%	36.80%	26.20%	10.20%	5.00%
Jalisco	2.60%	9.90%	32.40%	32.80%	13.60%	8.70%
Nuevo León	0.60%	3.10%	17.80%	46.60%	17.50%	14.40%
Puebla	11.90%	16.10%	32.80%	23.20%	9.30%	6.60%

Source: (INEGI 2000)

## 7. Responsiveness to public priorities

In assessing to what extent the state of Puebla, in conjunction with the federal government, has developed the capacity to promote the fulfillment of public priorities in the higher education system, we use Merilee Grindle's definition of government capacity in her study of crisis and innovation in Latin America and Africa (Grindle 1996). In the AIHEPS report on public policy and higher education performance in the state of New York (Richardson 2004), four measures of state capacity are defined as follows:

- 1) *Defining priorities* has to do with state ability to establish authoritative priorities for the use of publicly provided resources and to influence colleges and universities to pursue these priorities even when they conflict with the preferences of the higher education community;
- 2) *Achieving accountability* relates to capacity to collect and disseminate credible and comprehensive information about higher education performance and to use this information to promote accountability;
- 3) *Enhancing collaboration* refers to state ability to structure competition and encourage collaboration across higher education segments and sectors and between the higher and basic education communities as well as with such other key stakeholders as business and industry;
- 4) *Managing conflict* involves capacity to provide effective mechanisms that involve stakeholders and the general public in identifying higher education needs and resolving conflicts over priorities and the use of available resources.

- Defining priorities.* One overarching policy concern with higher education in Puebla since 1990 was UAP's recovery from its crisis. Bringing the state university up to par has surely been the principal federal and state priority. This goal has been fulfilled. A second important goal has been the expansion and diversification of public non-university offerings. The collaboration between the federal and state governments in this respect has yielded obvious results. Containment of growth in the public university sector carried with it the use of the private sector for demand-absorption. In general quantitative terms, this strategy has worked. However, it has created unwanted consequences. In its growing concern over quality in these institutions, the government has explored various regulatory strategies. Although these strategies are in their infancy, the state has been clear in delineating this area as a new priority. Nonetheless, the persisting inequities in the Puebla system do not seem to be on the government's radar screen. It remains to be seen whether it has the capacity to perceive new challenges and to act on them
- Achieving accountability.* Accountability has been an important goal for federal policy since the late 1990s. Certainly, in the wake of "modernization" there has been a burgeoning of procedures, offices, indicators that today make up an extensive apparatus for planning, evaluation, accreditation and funding. Manning this system is a growing network of experts and managers, both within the institutions and outside them, who are not directly involved in academic work – teaching and research – but who do produce the information that an increasingly complex bureaucracy requires for its operation. Decisions over funding, human resource allocation and status distribution are, in effect, increasingly based on specialized information. Generally this would seem to be a step in the right direction. Nonetheless, this system seems to use information to communicate with itself rather than with the academic community and even less so with the public. Communicating with families and students is an increasingly important issue in a system which has diversified its offerings significantly over the past decade. However information to assist individuals in making educational decisions is lacking.
- Enhancing collaboration.* The national planning document for education of the Fox administration stresses the need to integrate the increasingly diverse system of higher education by promoting collaboration, mobility and exchange. In this respect, Puebla is only partially successful. Competition has certainly been promoted in both the public and private sectors by the state government's efforts to attract several well regarded institutions to the area. But effective collaboration in matters of student transfer, for example, is non-existent (except for the federal decision several years back to allow graduates from two year technical schools to four year technical institutes – but this was not a state endeavor). As noted by Vite (op. cit.), university-

industry collaboration is very weak in Puebla, especially if compared to Nuevo León. These issues are compounded by the paucity of information, mentioned above.

- *Managing conflict.* There is no question that the state government (with federal assistance) has been successful in calming the waters in UAP, thus setting the groundwork for its reconversion into a respected institution. Tensions with some demand absorbing institutions over new regulations have been well managed. Old animosities between public and private institutions have been forgotten, in good measure because of state leadership. The growing private sector and the greater number and variety of public institutions are fertile ground for new tensions. So far, the government of Puebla has managed them well. The cost, however, seems to be deeper involvement of the leadership of public institutions in local politics. This cost translates into institutional rigidity: we have tried to show that there are persistent difficulties in enhancing quality, innovation and flexibility because of this political factor.

In sum, the state of Puebla has demonstrated capacity to resolve the principal issues facing higher education. Its capacity in this respect is certainly greater today than a decade ago, and public perception of this capacity is relatively widespread, lending legitimacy to government policy. There are, notwithstanding, new challenges in the offing. It is not clear that the capacity to resolve problems up to now will be sufficient to face these new challenges.

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