Mexico's Mba Programs After 20 Years of Economic Openness

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Between 1994 and 2014 Mexico's economy went from being barely open, technologically backward and dependent on oil exports; to being very open and led by a technologically advanced export-of-manufactures sector. These changes contributed prominently to increase enrollment in Mexico's MBA programs; from about 6,300 students in 1994 to approximately 22,000 students at the start of 2014. Due, however, to persistent labor surpluses and persistent structural inefficiencies, like the dominance of monopolies and oligopolies in key sectors, the economic progress achieved in these two decades was not enough to finance a significant advancement in the academic quality of the MBA programs.

INTRODUCTION

MBA education in Mexico dates back to 1967. In that year, a group of prominent businessmen working in conjunction with the catholic order Opus Dei established, in Mexico City, the first MBA program in the country: the Instituto Panamericano de Alta Dirección de Empresa, IPADE. The initial program was part-time; later, in the seventies, IPADE started to offer a full-time, two-year, program. Since its foundation, IPADE's program has been based on the case method. Also since its foundation, the primary objectives of IPADE's program have been: to be a leader in the professionalization of management in the private sector, and to educate future business leaders about the importance that ethics and social responsibility have on good management (Insitituto Panamericano de Alta Dirección de Empresa [IPADE], 2014, Historia del IPADE).

During the following 27 years, at least 74 more programs were established. Enrollment, however, grew slowly, reaching a total of approximately 6,300 students at the start of 1994 (Asociación Nacional de Universidades e Insituciones de Educación Superior [ANUIES], 2001). In the next two decades, enrollment took-off, growing at an annual average rate of 6.4%, thus reaching a level of approximately 22,000 students at the start of 2014. This population was distributed unevenly in about 95 programs that were taught on at least 120 campuses (ANUIES, 2014). This vigorous expansion had several causes, among them, population growth and general social development. However, from an economic perspective, one major cause of the large expansion in enrollment was the economic progress generated by the implementation of 12 free trade agreements and other free market policies that transformed the economy from being inward oriented, heavily dependent on the exports of oil, technologically backward and minimally open before 1994; to being, by 2014, quite open and driven by a dynamic and technologically advanced export-of-manufactures sector (Banco de Mexico, 2016; Villarreal, 2012).

Despite the large increase in enrollment and the visible modernization of the economy, in 2014, like in 1994, the vast majority of the MBA programs had faculties dominated by adjunct professors who did not have advanced degrees. During these two decades, there was also little progress in the level of internationalization across programs and most of them made no verifiable progress in selectivity and accreditation. This suggests that the academic quality of the MBA programs was stagnated. This stagnation had cultural and economic causes. Salient among the cultural causes was the preference of practitioners over academicians in the formation of faculties. Salient among the economic causes was the sluggish growth of salaries across the economy, which limited the growth of tuitions, and thereby, the ability of the schools to finance the adoption of academic structures and practices needed to deliver a MBA education of high academic quality.

According to recent official projections Mexico's economy is likely to grow at 2% to 2.5% per year in the foreseeable future; while the supply of labor, across most occupations, is likely to continue increasing at rates that, although declining, will still exceed the projected rate of growth of the economy (World Bank, 2016, Mexico Overview). Thus, salaries and the tuitions that salaries finance will continue to experience weak growth; thereby suggesting that marked increases in the academic quality of Mexico's MBA programs are very unlikely to occur in the foreseeable future.

The rest of this article is organized as follows. The next section describes key aspects of the opening of Mexico's economy and the connection of this opening to the expansion of enrollment in the MBA programs during the 1994 to 2014 period. Section three discusses the evolution of generally accepted academic quality indicators of Mexico's MBA programs during these two decades. The fourth section contains conclusions.

ECONOMIC OPENING AND ENROLLMENT GROWTH: 1994 to 2014

In 1994 there were 30 MBA programs offered by state universities and at least 45 MBA programs offered by private universities. A few of these private universities like the Instituto Tecnólogico y de Estudios Superiores de Monterrey, known as ITSEM, and the Universidad del Valle de Mexico, offered their MBA programs on several campuses. Thus, the 75 MBA programs were offered on about 91 campuses with a total enrollment of approximately 6,300 students. (ANUIES, 2001). This was a rather small enrollment for a country where graduate management education had been present for 27 years and whose GDP had reached, according to the World Bank, $527.3 billion.

The small enrollment in the MBA programs was, to a large extent, a consequence of the economy generated by the import substitution model that Mexico had followed until 1994. In this economy, monopolies and oligopolies prevailed in important sectors like banking, television, energy, telecommunications, cement, department stores and airlines. This model was also responsible, at least partially, for the use of obsolete technologies in most sectors, the dependence on oil exports for economic growth and the complete absence of the private sector in the development of technology. Additionally, environmental regulations were non-existent and labor surpluses in blue collar, white collar and professional occupations were very common (Central Intelligence Agency [CIA], 1996; and The Economist, 1997). In this economic environment, managers did not have to be too concerned about quality, competition, labor scarcities, environmental constraints, investing in technological development and exporting. This was an economic environment where, according to a former dean of the MBA program of the Universidad Iberoamericana, the training provided by a MBA degree was of limited use; consequently, the number of job openings for MBA graduates, and hence, the enrollment in MBA programs had to be equally limited (Martinez, 2002).

The backward and inefficient economy began to improve in 1994. Between that year and 2014 Mexico's government implemented 12 trade agreements. The first of these treaties, the North American Free Trade Agreement, NAFTA, was signed with the U.S.A. and Canada. The other eleven agreements included treaties with Japan, the European Union, the European Free Trade Association, Israel, and with several Central and South American nations. Due to these agreements and other free market policies, the openness of Mexico's economy, measured by the ratio of imports of goods/GDP, tripled between 1994

and the start of 2014; it went from 8.9% to 27.9% (CIA, 2014). The increase in openness facilitated the importation of technologically advanced capital goods as well as consumer goods of quality, which in general, increased economic efficiency across sectors. Also, mostly as a result of NAFTA, a technologically advanced export-of-manufactures sector was formed. This sector became quite important because, for at least 15 years, it has generated between 20% and 25% of the GDP, thereby greatly helping the economy to grow at an annual rate of 4.6%, from $527. 3 billion in 1994 to $1.298 trillion in 2014 (Banco de México, 2016; and World Bank, 2016, Mexico Overview). This sector, also caused Mexico's economy to increase its degree of complexity, from 0.82 in 1994 to 0.95 in 2013 and to keep its 23rd place out of 123 nations, in the rankings of MIT's Index of Economic Complexity, (Massachusetts Institute of Technology, 2014). That is, between 1994 and 2014, Mexico's economy went from being backward, barely open and markedly dependent on the exports of a primary good; to being fairly open, quite modern and led by a dynamic and technologically advanced export-of-manufactures sector.

During these two decades of economic modernization, at least 20 more MBA programs were established. Thus, by 2014 there were 95 plus programs taught on about 120 campuses. Of these programs, 33 were offered by state universities, about ten were offered by private universities with good academic reputations and the rest were offered by, what could be considered, for profit institutions. The increase in the number of programs was accompanied by a 6.4% annual rate of growth of the MBA student population, from 6,300 to at least 22,000 and by a sharp increase in the number of MBA students per billion of GDP, from 12 to 17(ANUIES, 2014; Expansion, Marzo, 2014). These large increases came with a very noticeable change in the geographic distribution of the MBA student population.

In 1994, at least 60 percent of the student population was enrolled in programs housed in private universities located in the three main metropolitan areas of Mexico, namely: Mexico City, Monterrey and Guadalajara (ANUIES 2001). By 2014 at least 62 percent of the 22,000 MBA students were enrolled in programs located in the cities that house the vast majority of the factories and assembly plants that form the export-of-manufactures sector. Two of these cities, Queretaro and Toluca, are located in central Mexico; while the other cities are located on the U.S.-Mexico border, like Tijuana, Mexicali and Ciudad Juarez; or relatively close to the border, like Monterrey, Chihuahua and Torreon. In fact, in 2014, the Centro de Enseñanza Técnica y Superior, CETYS, located in Mexicali had an enrollment of 936 students; thus, greatly surpassing the enrollment of 494 students of the IPADE, located in Mexico City, and arguable, the most prestigious MBA program in the country (Expansion, Marzo 2014). This change in the distribution of the population suggests that, besides long-run socioeconomic progress and population growth, the economic modernization and high rate of economic growth triggered by the opening were major causes of the almost quadrupling of the MBA student population between 1994 and 2014.

ACADEMIC QUALITY OF THE MBA PROGRAMS: 1994 to 2014

In August of 2006, the business magazine Expansion, Mexico's most respected business publication, published its first annual ranking of the country's MBA programs (Expansion, Agosto, 2006). This was the first generally accepted ranking of Mexico's MBA programs and an indication that after 12 years of growing openness and economic modernization, the academic quality of the MBA programs had become an important issue for the business community (Lara y Aranguiz, 2007). Yet, as the following discussion suggests there was, in general, very limited progress in the academic quality of the programs. This suggestion is based on the changes experienced by five academic quality indicators used by ranking organizations and that should have been sensitive to the economic growth and modernization triggered by the growing openness of the economy. These factors are: internationalization, selectivity, composition and academic credentials of the faculty, accreditations and professional advancement of the graduates.

Internationalization

Previous to the opening of the economy, very few programs offered classes in areas of international business. At that time, international exchange agreements were a rarity, the number of foreign students in the very few programs that had them was tiny and practically none of the programs had any foreign

faculty. That is, in 1994, the degree of internationalization of the MBAs was practically non-existent (ITAM,2014, Acerca del ITAM-Historia y Ceremonias).

To gather information that would provide a good measure of the advancement made in internationalization by 2014, one of the authors of this paper did a survey, in September of this year, that included the web pages of 41 MBA programs; 28 offered by public universities, seven offered by for profit private universities, and six offered by private universities of solid academic prestige. In each of the 41 web pages reviewed it was stated that courses such as international finance and international marketing were part of the curriculum. This finding indicated that, at least, close to one half of the MBA programs had achieved some degree of internationalization. The same survey found, however, that in the area of international exchange agreements, the progress in internationalization had been significantly more limited. This was suggested by the fact that only two of the 28 MBA programs housed in public universities had this kind of agreements; while ten of the 13 private MBAs had very few exchange programs with little known U.S. and European universities, like the Universidad Europea in Spain and the Kendell School of Business in the U.S.A. So, in this survey of 41 programs, only three private MBAs had a good number of international agreements with foreign institutions that have a solid academic reputation. These were: IPADE; the Instituto Tecnológico Autónomo de Mexico, ITAM; and the Escuela de Graduados en Adminsitración de Empresas, EGADE, which since 1995 has been the graduate school of business of the Instituto Tecnológico de Estudios Superiores de Monterrey, ITESM.

IPADE had 58 exchange agreements with universities in 23 countries. These included HEC in France, London Business School in England, Dartmouth and Rice in the U.S.A., Laval in Canada, Universidad Católica in Chile and Nagoya University in Japan. ITAM had agreements with 70 universities which included, like IPADE, HEC, Universidad Católica and Nagoya University. Additionally, ITAM had agreements with the University of Chicago in the U.S.A., Louvaine in Belgium and McGill in Canada. EGADE had fewer agreements, no more than 50, but some of these were with very prestigious schools like Cornell in the U.S.A., Macquire in Australia and INCAE Business School in Costa Rica. EGADE was also the only program to offer dual degrees and to have an exchange agreement with an African University, Lagos Business School in Nigeria. EGADE's partner in the dual program was the McCombs School of Business of the University of Texas. Additionally, in conjunction with the Owen School of Business of Vanderbilt University, EGADE offered a program that required the students to take classes in three different countries, the U.S.A, Brazil and Mexico.

Due, mostly, to their number of exchange agreements EGADE, IPADE and ITAM were included in the 2013 rankings of Eduniversal. This is an organization based in Paris, France that ranks more than 4,000 programs across the world. Eduniversal ranking measures the degree of internationalization by considering international exchange agreements, membership in international associations and major rankings of business schools. The degree of internationalization is measured on a scale that goes from one to five *Palmes*. Five *Palmes* are given to schools that due to their high degree of internationalization are considered to have a strong global influence. Four and three *Palmes* are given to schools that according to their degree of internationalization are considered to have, respectively, significant and some global influence. Two and one *Palmes* are given, respectively, to schools that have regional and local influence. In 2013 EGADE received five *Palmes*; ITAM and the IPADE each received four *Palmes* (Eduniversal, 2013).

The arguments of the previous two paragraphs suggest that of the 95 plus MBA programs in Mexico, EGADE, IPADE and ITAM were the only ones that had reached a high level of internationalization. Yet, in the survey mentioned above, it was found that IPADE, EGADE and ITAM, like the other 38 programs in the survey: did not require fluency in a foreign language as an admission or graduation requirement, did not systematically teach some of their classes in a foreign language and had not been able to attract significant numbers of either foreign students or foreign faculty. Thus, it seems appropriate to conclude that, in general, 20 years of economic openness were not able to generate a solid advance in the degree of internationalization of the country's MBA programs.

Selectivity

In the years before the economic opening began, the majority of the programs made their admissions decisions based on the applicant's professional experience, the results of an interview with an admissions committee, documentation proving that the applicant had an undergraduate degree and the ability to pay the cost of the MBA. At that time IPADE, ITAM and the MBA program of the ITESM, which would become EGADE in 1995, had an admissions test and were, within the MBA environment, informally considered to be the most selective programs. However, at that time there were no generally accepted criteria to determine or measure the selectivity of the different programs, since none of them published figures such as acceptance rates, GPAs of the admitted students or any other figures that would have given an idea of their level of selectivity.

By 2014, possibly as result of the vigorous growth of the MBA student population, there was some progress in this respect since, by that year, IPADE, ITAM and EGADE were using the GMAT in their admission processes; while IPADE and EGADE were reporting acceptance rates. In that year, the average GMAT scores of the students accepted to IPADE, ITAM and EGADE were, respectively, 608, 580 and 628; and the acceptance rates were 44% for IPADE and 73% for EGADE. These average GMAT scores and acceptance rates would have placed these three programs between the 25th and 75th place of the 2015 MBA Selectivity Rankings of the Princeton Review (Princeton Review, 2015).

None of the other 92 plus MBA programs required, by 2014, an exam like the GMAT or published any kind of admission figures that would have given an idea of their level of selectivity. However, the annual rankings of the magazine Expansion could help on this respect. Since the first publication of these rankings in 2006, between 18 and 24 programs have been considered to have had enough academic quality to be included. Also, since 2006, the top three programs on this ranking have been, in descending order, IPADE, EGADE and ITAM; while the remaining 15 to 21 programs have tended to include the MBAs of prestigious private universities and some programs of public universities. Thus, given that IPADE, EGADE and ITAM would have ranked between the 25th and the 75th place in the 2015 Selectivity Rankings of the Princeton Review, it seems appropriate to conclude that the other 15 to 21 programs usually included in Expansion's ranking had a selectivity level that would have placed them below or well below the 75th place in the said 2015 rankings of the Princeton Review; while those programs not included in Expansion's rankings could be assumed to have had, quite possibly, selectivity standards that were consistent with policies of open admissions.

The low level of selectivity of the programs of prestigious private universities included in the rankings of Expansion, like the MBA of the Universidad Iberoamericana and the MBA of the Universidad Anáhuac, did not necessarily imply that the students who enrolled in these programs had weak academic backgrounds. This is suggested by the cost of these programs. The MBA programs offered by universities like Universidad Iberoamericana and Universidad Anáhuac were not as expensive as IPADE, which in 2014 had a cost of $56,115, or EGADE, which in that year had a cost of $61,582; but these programs still had a cost between $28,000 and $33,000 (Expansion, Marzo, 2014). These tuitions were high enough to assure that their applicants came from the upper socioeconomic echelons of society. This means that the applicants to these programs tended to have solid college educations, since they were very likely to have received their undergraduate degree from one of the prestigious private universities or from one of the most demanding programs of a public university, like engineering in the Universidad Nacional Autónoma de México, the UNAM.

Composition and Academic Credentials of the Faculty

At the start of the economic opening, ITAM had the only MBA program where close to one half of the faculty was formed by full-time professors. At that time, ITAM also had the only program where the majority of the professors, full-time or adjunct, had advanced degrees from prestigious U.S. and European universities. This was due, to a large extent, to the support given to the MBA program by the economics department of ITAM, where no less than one third of the faculty had a Ph.D. in economics from top U.S. or European universities. In the other 74 plus programs, the vast majority of the faculty was formed by adjunct professors who very rarely had advanced degrees in business related areas. In general, the adjunct

professors who taught in the MBA programs of prestigious private universities tended to be high ranking or relatively high ranking executives; while the adjunct professors of MBAs of public and for profit universities tended to be low ranking executives. Given the predominance of adjunct professors, research was, outside of the ITAM, practically non-existent (ITAM, 2014, Acerca del ITAM-Historia y Ceremonias).

By 2014, adjuncts who very rarely had advanced degrees in business related fields continued to dominate the faculties of most programs. There were, however, four MBAs where at least one third of the faculty was formed by full-time professors. These MBAs are reported in table one below.

TABLE 1
PROPORTION OF FULL-TIME FACULTY WITH PH. Ds., 2013-2014

Program	MBA Students Enrolled	FT Professors	Students per FT Professor	Percentage of FT Professors with a Ph. D.
EGADE	1,313	48	27.3	93.75%
IPADE	494	63	7.8	33.33%
ITAM	312	47	6.6	51.06%
UDLAP	48	30	1.6	93.33%

Source: Expansion, Marzo, 2014. Los Mejores MBA de México y el Mundo.

As can be seen in this table, at IPADE and ITAM, the number of students per full-time professor was quite good. At the Universidad de las Américas-Puebla, UDLAP, this ratio was way too low, which was result of the very small MBA enrollment in this program. This suggests, however, that the full-time professors in this program were probably concentrated in the undergraduate business and accounting programs of this university.

As can also be seen in table one, at EGADE and at UDLAP, the percentage of full-time faculty with Ph. D. degrees was at levels found in high ranked programs in the U.S. and Europe. However, the academic benefits normally associated with having such a high percentage of full-time faculty with Ph. Ds. may have been rather limited for both programs. At the UDLAP this limitation was due to the strong possibility that most of these professors were, as mentioned above, focused on undergraduate programs rather than on the MBA; while at EGADE this limitation was probably result of the fact that no less than 30% of the full-time professors with a Ph.D. obtained this degree at the EGADE (ITESM, MBA in Global Business & Strategy, 2014). This anomaly, academic inbreeding, was more acute at IPADE, where the vast majority of the faculty, adjuncts and full-time professors, were graduates of IPADE's own MBA; and the relatively few professors with a Ph.D. degree, obtained this degree at universities of limited or very limited academic prestige (IPADE, 2014, Profesores). At ITAM, the 51.06% of full-time faculty with a Ph. D. is certainly low for international academic standards. Yet, in 2014 like 20 years earlier, the majority of the professors of the ITAM who have a Ph. D., obtained this degree at world class institutions; which may compensate for the relatively low percentage of Ph. Ds in the full-time faculty (ITAM, 2014, Faculty).

According to Prof. Alvaro De Garay, a former director of EGADE, the almost complete absence of faculties formed by full-time professors with advanced degrees was due to cost. According to Prof. De Garay, to develop and maintain this type of faculties would require tuitions that the great majority of students could not afford (Expansion, 2007). The tuition and faculty composition at EGADE suggest, however, that the dominance of adjunct professors had at least one other cause.

In 2014, EGADE's MBA had a cost of $61,582 (Expansion, Marzo, 2014). This price made EGADE'S MBA the most expensive in Mexico and comparable in cost to very respectable MBAs in the U.S. and Europe. Yet, as can be seen in table one, EGADE had a large number of students per full-time

professor; which suggests that adjuncts were a significant part of the faculty. A possible cause of this was that, culturally, across higher education there is the firm conviction that practitioners, which means adjunct professors, have relevant and very practical knowledge that is lacking in Ph. Ds with little or no experience outside of academia (Martinez, 2002). A solid example of this cultural preference is given by the Escuela Libre de Derecho.

The "Libre", located in downtown Mexico City is, by far, the most prestigious and the most selective law school of the country. Despite its prestige, the tuition is low. In the great majority of classes students take one test only, which is either oral or a lengthy written essay. Students are also required to work in jobs related to their schooling. That is, the program at the "Libre" is, academically, very demanding. Yet, the entire faculty is formed by adjunct professors. The great majority of these professors are prominent lawyers and the idea of replacing them with Ph.Ds. with no solid experience in the legal profession is unthinkable (Escuela Libre de Derecho, 2016). None of the MBAs has, however, a faculty formed by executives whose professional reputation rivals the professional reputation of the lawyers that form the Libre's faculty. Nonetheless, the Libre's faculty structure constitutes a model that is far less expensive and culturally more appealing, than the model followed by foreign universities where the faculties are formed by Ph.Ds. with little or no experience outside of academia.

Accreditations

Prior to 1994, the miniscule openness and backwardness of the economy created an environment where there was no interest at all in accreditation. The large opening of the economy and the accompanying international exposure of Mexico's MBAs failed, however, to induce a significant enthusiasm for accreditation, since by 2014, the only programs that have been accredited by well-known international agencies were: EGADE, IPADE and ITAM. EGADE and ITAM had been accredited by the AACSB, the European Quality Improvement System, EQUIS; and by the Association of MBAs, AMBA. IPADE had also been accredited by AACSB and AMBA, but not by EQUIS.

One possible cause for the low interest in accreditation was cost. To gain and maintain accreditation, the MBA programs must adopt academic structures and practices, such as forming and sustaining faculties dominated by full-time professors with Ph.Ds. As mentioned above, this would have required the MBA programs to charge tuitions that most students could not pay.

A second possible reason for the low interest in accreditation was the limited appeal it added to the great majority of the MBA programs. Among Mexican MBAs, accreditation was good for those programs that needed international recognition (Lara and Aranguiz, 2007). These were the very few programs that attracted students who were fluent in a foreign language, usually English, and who could afford participating in exchange programs or enrolling in dual degrees. The majority of MBA students in Mexico, however, work full time and are not fluent speakers of English; which implies that the majority of the MBA students lack the time, the financial resources and the linguistic skills to study abroad. Hence, for most MBA programs accreditation was an investment that was not likely to have positive returns because it would not have attracted a significant number of students.

Accreditation may have also attracted very little interest because it did not seem to help MBA programs to obtain financial support from the government. To receive financial support from the government, either in the form of research grants or tuition assistance, the programs had to be classified within the group of programs of academic excellence of Mexico's science and technology agency, the Consejo Nacional de Ciencia y Tecnología, Conacyt. In 2015, this group included at least one thousand graduate programs. Yet, in that year, there were only three MBAs included in this group; these were: EGADE at its main campus in Monterrey and at its satellite campus in the city of Chihuahua; the program offered by the Universidad Autónoma de Nuevo Leon, UANL, in the city of Monterrey; and the program of the Universidad de Guadalajara, in the city of Guadalajara. (Consejo Nacional de Ciencia y Tecnología [Conacyt], 2015). That is, by 2015 for Conacyt, only three of the more than 95 MBA programs in the country had enough academic quality to receive financial support; and of the these three, only one, EGADE, had been accredited by international agencies.

Professional Advancement

As mentioned before, the export-of-manufactures sector led economic growth during the 1994 to 2014 period. Three key elements for the formation of this sector were: NAFTA; manufacturing companies from the U.S. and other developed countries; and labor surpluses of unskilled, skilled and professional labor. NAFTA provided the legal structure needed to facilitate the export of goods assembled and manufactured in Mexico to the U.S. Companies from the U.S., Japan, Europe, Korea and, recently China, provided the access to the U.S. markets, the technology and the engineering. Mexico contributed the labor surpluses, *i.e.,* the cheap labor (Villarreal 2012).

These surpluses combined with other structural inefficiencies, like the dominance of oligopolies and monopolies in key sectors, restrained the growth of salaries, including the salaries of professionals, to about one percent per year during these two decades (Vargas, 2014). Hence, if salary gains are considered synonymous with professional advancement, it follows that during these twenty years, the university educated, which obviously includes the MBA graduates, experienced little progress in their respective professions. Yet, as has also been mentioned before, during these two decades the MBA student population grew at an annual rate of 6.4%.

This high rate of growth suggests that the MBA degree had to have produced salary gains that, although low, were enough to pay, in a relative short period of time, the cost of obtaining this degree (El Economista, 2013). To some extent, this is likely to have happened because the cost of most MBAs was, as explained below, affordable. This can be appreciated with the help of table two below.

This table reports the cost, location and enrollment of eight programs. These programs are listed, in ascending order, according to their cost. The first two programs are housed in state universities and the other six are housed in private institutions of solid academic prestige. All of these programs were included in the 2014 rankings of the magazine Expansion and they enrolled 3,603 students or a little more than 16% of the approximately 22,000 MBA student population.

TABLE 2
COST OF EIGHT MBA PROGRAMS 2014

Program	Cost 2014 U.S. Dollars	Cost as Percentage of Income per Head	Location	Enrollment 2014
Universidad Nacional Autónoma de México, UNAM.	$1,549	14.71%	Mexico City	138
Universidad Autónoma de Nuevo León, UANL.	$7,641	72.6%	Monterrey, Nuevo León	172
Universidad Iberoamericana-Torreón UIA-Torreón.	$11,271	107%	Torreón, Coahuila	77
Centro de Enseñanza Técnica y Superior, CETYS	$14,302	136%	Mexicali, Baja California	936
Universidad de Monterrey, UDEM	$22,662	215%	Monterrey, Nuevo León	161
ITAM	$48,561	461%	Mexico City	312
IPADE	$56,115	533%	Mexico City	494
EGADE	$61,582	585%	Mexico City and Monterrey, Nuevo León	1,313

Source: Expansion, Marzo, 2014

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As can be seen, the program of the UNAM had a cost equivalent to 14.7% of the average national income per head; income that in 2014 was $10,527 (Economic Commission for Latin America and the Caribbean, 2016). This made UNAM's MBA the most affordable MBA in Mexico. The second program, that of the UANL, with a cost equal to about 75% of the national average income per head, was either the most expensive or one of the most expensive MBAs housed in public universities. Thus, since there were 33 MBAs housed in public universities, the costs just mentioned indicate that about one third of the MBA programs in Mexico had a very affordable cost.

The costs of the next three programs reported in this table, UIA-Torreón, CETYS and UDEM, range from 107% to 215% of the national average income per head. This is a range that includes the costs of 56 to 59 of the approximately 62 private MBAs. The few programs that have a cost that is close to the upper limit of this range tended to be housed in private schools of solid academic prestige, like the UDEM, and/or located in the cities that house the export-of-manufactures sector. Hence, the incomes of the graduates of these programs were likely to have been higher than the national average income; thereby making the programs with these levels of cost relatively affordable.

Not affordable for what may be considered the majority of MBA students were the programs of EGADE, IPADE and ITAM; which were, respectively, the first, second and third most expensive MBAs in Mexico. Despite their high costs these programs enrolled 2,119 students or about 9.6% of the total MBA student population in the nation. A likely cause of such direct correlation was unusually high salary gains.

In Forbes ranking of non-U.S., two-year MBA programs, based upon five-year post-MBA salary gains attributable to this degree, IPADE's ranked in 5th place in 2008 with a salary gain of $73,000. Six years later, in 2014, IPADE's MBA came down three places, ranking in 8th place, but with a salary gain that had increased to $86,000 (Badenhausen 2009 and 2015). Neither EGADE nor ITAM have ever been included in Forbes' rankings, which suggests that the salary gains their MBA diplomas generated have been inferior to those generated by the MBA degree of IPADE. However, there are a couple of factors that suggest that their salary gains could not be have been too far behind the gains generated by IPADE. The first of these facts was the socioeconomic class of their student populations. All three programs draw their students from the upper echelons of Mexican society; *i.e*, the student populations of these three programs have similar social capitals; hence, they are expected to have similar performances in their professions. Second, in the rankings of Expansion, since the first ranking in 2006, employers have stated that their favorite MBAs are, in descending order, IPADE, EGADE and ITAM (Expansion, Marzo, 2014).

Aside from the low or relatively low cost of the majority of the MBA programs, the vigorous growth of the MBA student population also required the presence of a rapidly growing demand for MBA graduates. This was provided by the 4.6% annual growth rate of the GDP and its accompanying increase in the complexity of the economy, which together generated, according to official figures, more than one million industrial jobs (TLCAN, 2016). Such a large number of new industrial jobs had to generate a good number of managerial jobs; especially in the cities where most of these jobs were created, which were the cities that house the export-of-manufactures sector and where more than 60% of the MBA student population was concentrated by 2014.

The combination of a dynamic demand for MBA graduates and a relatively low cost to obtain these degrees suggests that the education provided by most programs, although far from reaching the academic levels of internationally ranked programs, was quite adequate for the managerial jobs generated by an economy that was growing rapidly and that was also becoming more technologically complex. From this perspective, even if the salary gains generated by most MBA programs were limited, most of these programs seem to have helped the majority of their graduates to achieve some professional progress.

CONCLUSIONS

At the start of 2014 the cities that house the export-of-manufactures were also the cities where no less than 60% of the MBA student population was concentrated. This suggests that the almost quadrupling of the MBA student population between 1994 and 2014, from about 6,300 to at least 22,000, was to a considerable extent, the result of the high GDP growth and modernization of the economy triggered by the growing economic openness.

The vigorous growth of the student population generated progress in the academic quality of the MBAs offered by EGADE, IPADE and ITAM. This progress was significant in the area of accreditation, but marginal in the areas of internationalization, selectivity and composition and academic credentials of the faculty. In the remaining 92 plus programs, if there was academic progress in these or any other academically relevant areas, such progress was sufficiently small so as not to be reported in the marketing materials of the respective program or in the reviews of the programs made by respected business magazines such as Expansion.

The economy is expected to continue opening and the GDP is projected to grow at moderate rates. Thus, the number of managerial jobs that will require a MBA education is also expected to continue growing. If this growth is accompanied, as in the preceding 20 years, by affordable MBA programs, the MBA degree will continue to have a positive net present value. Hence, the MBA programs will continue to offer professional advancement to those who obtain this degree, which basically assures the continued expansion of the MBA student population. The academic quality of the programs is not, however, likely to increase until there is sufficient economic growth to cause marked and sustained increases in the salaries of professionals.

REFERENCES

Asociación Nacional de Universidades e Instituciones de Educación Superior. (2001). *Población Escolar de Posgrado Anuario Estadístico 2000*. México, DF.

Asociación Nacional de Universidades e Insitutciones de Educación Superior. (2014). *Población Escolar de Posgrado Anuario Estadístico 2013. Mexico, DF*. Retrieved July 15, 2014 from www.anuies.mx

Badenhausen, K. (2009). The Top Non-U.S. Two-Year Business Schools. *Forbes*. Retrieved August 15, 2016,from: www.forbes.com/2009/08/03/best-business-schools-09-leadership-careers nonus2yr_slide_6.htmls

Badenhausen, K. (2015). The Top Non-U.S. Two-Year Business Schools. *Forbes*. Retrieved August 15, 2016, from: www.forbes.com/2015/08909/best-two-year-international-business-schools-2015

Banco de Mexico (2016). *Estadisticas.* Retrieved September 5, 2016, from www.banxico.org.mx/estadisticas/index.html

Central Intelligence Agency (1996). *The World Factbook*. Retrieved February 22, 2014 from: http://www.cia.gov/library/publications/the_world_factbook/rankorder/2001rankhtml?contrynam e=Mexico&countrycode=n

Central Intelligence Agency (2014). *The World Factbook*. Retrieved February 22, 2014, from: http://www.cia.gov/library/publications/the_world_factbook/geoes/ar.html

Consejo Nacional de Ciencia y Tecnología. (2015). *Programas de Calidad*. Retrieved December 26, 2015, from www.conacyt.mx/index.php/becas-y-posgrados/programa-nacional

Economic Commission for Latin America and the Caribbean, ECLAC. (2016). *Statistical Yearbook 2015*. Retrieved November 4, 2016 from: www.cepal.or/en/search?as-q=statistical%20yearbook

Eduniversal. (2013). *The best 1,000 Business Schools in 154 countries*. Retrieved August 31, 2014 from http://www.eduniversal-ranking.com/methodology/palms

El Economista. (Mayo, 2014). La relación entre ingreso y educación. Retrieved September 3, 2016, from: http://eleconomista.com.mx/columnas/agro-negocios/2013/05/01/relacion-entre-ingreso-educacion

Escuela Libre de Derecho (2016). *Escuela Libre de Derecho Licenciatura*. Retrieved September 11, 2016, from www.eld,edu,mx/licenciatura

Expansion (Agosto, 2006). Los MBA en México 2006. Retrieved September 9, 2016, from: www.expansion.mx/especiales/los-mejores-mba-en-mexico-y-el-extranjero/los-mba-en-mexico

Expansion (Agosto, 2007). Los Mejores MBA en México 2007. Retrieved August 8, 2016 from http://expansion.mx/especiales/especial-educacion-agosto-2007/la-supremacia-regia

Expansion. (Enero, 2014). Más mexicanos estudian pero ganan mal. Retrieved September 5, 2014, from:www.cnnexpansion.com/mi-carrera/2014/01/28/mayor-escolaridad-no-mejora-salarios

Expansion. (Marzo, 2014). Los Mejores MBA en México y el Mundo. Retrieved September 5, 2014, from: www.cnnexpansion.com.especials/2014/03/04/metodología-mejores-mba-en-méxico-2014

Insitituto Panamericano de Alta Dirección de Empresa. (2014). *Historia del IPADE*. Retrieved October 25,2014, from www.ipade.mx./experiencia/Pages/quienes-somos-historia.aspx

Insitituto Panamericano de Alta Dirección de Empresa. (2014). *Profesores*. Retrieved October 25, 2014, from: www.ipade.mx./Pages/profesores-areas-académicas.

Instituto Tecnológico Autónomo de México. (2014). *Acerca del ITAM-Historia y Ceremonias*. Retrieved August 12, 2014 from: www.itam.mx/en/historia/historia.php

Instituto Tecnológico Autónomo de México. (2014). *Faculty.* Retrieved August 12, 2014 from: www.itam.mx/facultad/profesoresBuscador_EN.php

Instituto Tecnológico y de Estudios Superiores de Moneterrey. (2014). *ITESM, MBA in Global Business & Strategy*. Retrieved August 31, 2014, from: www.itesm.mx/wps/wcm/connect/EBS

Lara, T. y Aranguiz, G. (2007). Los Mejores MBA en México 2007. *Expansion*, 17 de agosto de 2007. Retrieved August 20, 2016, from: cnn.expansion.mx/especiales/los-mejores-de-mexico-y-el-mundo

Martinez, R. (2002). Mexico's MBA Programs: Seven Years Into NAFTA. *International Business & Economics Research Journal*, 1, (8), pp. 3-4
Massachusetts Institute of Technology (2014). *Economic Complexity Observatory.* Retrieved February 5, 2016, from: http://atlas.media.mitedu/en/resources/economic_complexity
Princeton Review (2015). Best Business Schools 2015. Retrieved November 9, 2016 from: www.proncetonreview.com/schools/1027728/business
TLCAN. (2016). Tratado de Libre Comercio de América del Norte. Retrieved January 13, 2016, from: www.tlcanhoy.org/facts/default_es_asp
The Economist (1997, December 6). Survey: Business in Latin America, pp. 3-26
Vargas, I (2014). Sueldos, poco competitivos en Mexico. Expansion, 31 de marzo de 2014 Retrieved September 3, 2016 from: http://expansion.mx/mi-carrera/2014/03/28/salario-profesional-promedio-en-13-mil
Villarreal, A. (2012). Mexico's Free Trade Agreements. *Congressional Research Service*. Retrieved from: http://www.fas.org/crs/rowR40784.pdf
World Bank (2016). *Mexico Overview*. Retrieved September 3, 2016, from: http://www.worldbank.org/en/country/mexico/overview