

Social pertinence of a doctorate in administration under the guidelines of the PNPC

Pertinencia social de un doctorado en administración bajo las directrices del PNPC

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ABSTRACT:

The objective of this research, of a descriptive type, of documentary analysis and field study is to analyze the social pertinence of a new Doctorate in Administrative Sciences in Mexico according to the National Postgraduate Quality Program of the National Council on Science and Technology of Mexico. The results show that the formation of doctors in the subject will remedy the need of the public and private sector to correct the actual problem of inadequate work structures.

Keywords: Doctorate in Administration, Mexico, National Postgraduate Quality Program, pertinence study

RESUMEN:

El objetivo de esta investigación, de tipo descriptivo, de análisis documental y estudio de campo es analizar la pertinencia social de un nuevo Doctorado en Ciencias Administrativas en México de acuerdo con el Programa Nacional de Posgrados de Calidad del Consejo Nacional de Ciencia y Tecnología de México. Los resultados muestran que la formación de doctores en el tema remediará la necesidad del sector público y privado de corregir el problema real de estructuras inadecuadas de trabajo.

Palabras clave: Doctorado en Administración, México, Programa Nacional de Posgrados de Calidad, estudio de pertinencia.

1. Introduction

The current globalization, information technologies and the preponderance of the free market cause society and universities to face new challenges and forecast the changes that will lead to their transformation. Considering the global environment and the coercion that execute their dynamics on the public institutions of higher education. Since social relevance symbolizes for universities a responsibility and involvement of scientific communities with the current perspectives of contemporary societies. In Mexico, the National Association of Universities and Institutions of Higher Education (ANUIES) establishes that social relevance is an essential factor from which the indissoluble link of the mission of higher education institutions with the needs and interests of society is recognized (ANUIES, 2007). The academic institutions oriented in the area of social sciences, in their updating plans recognize the above, such as the Higher School of Commerce and Administration (ESCA) belonging to National Polytechnic Institute (IPN), which takes as a premise the need to solve problems of social relevance with a multidisciplinary approach based on the training provided in tertiary education. For Mexico, this is necessary because it lacks high-level frames to help solve the national problems (Savin-Baden, 2004; OECD, 2015a; OECD, 2015b; Scott, 2014; McKinsey, 2014). In order to fill the gap, this research

outlines the objective of analyzing the social relevance of a new doctorate in administration in Mexico.

1.1. The administrative sciences: its historical perspective

The exact historical beginning of the science is indeterminable in time. Administration, as a social science, is as remote as the human being. However, administration as an object of research emerges in the early eighteenth century with the movement denominated "cameralism" and especially with the science of police, but is to Bonnin in 1808 in France and to Von Stein in Germany who can be attributed its creation; while in its modern period from 1887, it is attributed to Woodrow Wilson in the United States who initiates the science of public administration although with the pretension of founding a universal discipline but without the European administrative development, that ends up becoming a field of study more with the identity and American idiosyncrasy, creating an ambivalence in the perception of the administration which in England, more than a science, prevails the idea of a philosophy of public administration unlike the majority of the European countries where it is conceived as administrative science (Small, 1909; Guerrero, 1997; Waldo, 1990).

It is only until the nineteenth century with the emergence, growth and a complex administrative organization of the large private industry that Bluntschli raises the differentiated study of the public administration on the one hand, and the private administration on the other, based on their differences, facing this, Henry Towne starts the scientific basis of the private administration, although with Henri Fayol such term begins to be applied to the administration of companies, emerging the private administration as an independent discipline (Langrod, 1954, 1968; Guerrero, 1997) and thus a profound controversy on its object of study and progression that before this date, did not exist.

Over time the theoretical evolution of the administration has been developed under the perspective of various currents in the study of the state administration: orthodoxy, heterodoxy, neoclassical, public policies, new public administration, new political economy, public management and new public management (Ramirez & Ramirez, 2002; Sánchez, 2001). While the theoretical evolution of the private administration has developed under various theories, approaches or schools of thought on the efficiency of the organizations: the administration classic of 1990-1924; Humanistic 1924-1950; behaviorist psychological school 1943-1960; systemic approach 1950-1980 and the strategic administration 1980-present (Rodríguez, 2015; Robbins & Coulter, 2013; Israel & Millan, 2009; Chiavenato, 2004; Reyes, 2004; Montaña, 2001).

However, the administration is too recent as an area of knowledge, has little over a hundred years under his belt compared to other disciplines that have more historical background and, in contrast to most of them, lacks from the idiomatic possibility of linking its noun with an adjectivization referring to knowledge, therefore it is usual to refer, though not universally accepted, to Administration Science (White, 1999; Guerrero, 1997). Given this and for various reasons, the administrative investigation has not traditionally been one of its strengths, further by its orientation towards instrumentalists aspects lacks itself of a cognitive purpose, neglecting its theoretical development that has led to an incipient epistemological level and it has not made possible to achieve consensus in the scientific community about its object of study (Calderón & Castaño, 2005) reason why it faces a huge disciplinary and epistemological task (White, 1999; Baena del Alcázar, 1985; Waldo, 1990).

1.2. The doctorate in administration: its pertinence in Mexico

According to the International Standard Classification of Education, the doctoral training is located at level 8, reserved for tertiary education programs devoted to advanced studies and original research, therefore the doctorates have a preponderant role in the training of scientists and technologists and hence in the development, creation and consolidation of knowledge (UNESCO, 2012). In spite of this, institutions of higher education are home within its doctoral programs, of two major types of knowledge: scientific and professional, both considered as an orientation in programs of social sciences area by the National Council of Science and Technology of Mexico, which has caused uncertainty and confusion in the professional areas, same ones that were conceived from its origin as an almost exclusively space of transmission of knowledge and associated more to the development of skills of transformation, demanded according to the economic conditions and labor markets, meanwhile that, those with scientific training with the primary objective of generating new knowledge (Hirose, 2001) through the development of research, which it is for the universities something of its basic essence (Calderón & Castaño, 2005; Hirose, 2001).

Nevertheless, in the creation of a new doctoral program in either of the two orientations must be preceded by a study of social pertinence "that is evidenced through the existing coherence between the objectives and the terminal profiles with the prevailing needs in the field of influence of the educational institution, with the labor market or with projects of local, regional or national development" (ANUIES, 2007), as well as the requirement of graduates that will enable the satisfaction of those needs (Instituto Politécnico Nacional, n. d.). Under it, the pertinence of an educational program represents how

educational institutions contribute for society achieves better levels of economic and social development and, although there are many methodologies for its study as institutions that perform them, are coincident in the main components.

1.3. The Superior School of Commerce and Administration Santo Tomas Unit in the framework of the National Quality Postgraduates Program

The National Postgraduate Quality Program (PNPC) is part of the public policy of promotion of quality of the national postgraduate studies that the National Council of Science and Technology and the Ministry of Public Education have promoted since 1991.

For the Superior School of Commerce and Administration (ESCA) the accreditation of the PNPC postgraduate programs represents a recognition of its quality given their seniority, and in consideration of its social pertinence (Conacyt [Consejo Nacional de Ciencia y Tecnología], 2014b). This accreditation has been reflected with benefits in terms of scholarships, academic mobility and participation in sectorial funds for the development of projects.

IPN, as a decentralized body of SEP, is the most important technological university in the country, offering a total of 147 postgraduate programs between specialties, masters and doctorates, of which 92 are accredited in Conacyt and 8 are of international competence (Instituto Politécnico Nacional, n.d.b). In them 1,115 members of the National System of Researchers work, only below the 4,203 of the National Autonomous University of Mexico (Instituto Politécnico Nacional, 2014). IPN has 98 academic units of support and is linked with 22 federative entities of the Mexican Republic; 26 of the units are of superior level and among them is the ESCA, Santo Tomás Unit, the oldest institute founded in 1845. In its Section for Postgraduate Studies and Research, six programs are offered: Specialization in Management of Educational Institutions, Master in Science in Business Administration, Master in Public Policy Management, Master in Business Administration for Sustainability, Master in Management and Administration and Development of Education (the last two included in the PNPC) and a Doctorate in Administrative Sciences, created in 1962 (Escuela Superior de Comercio y Administración, Unidad Santo Tomás, n.d.), and has 11 national researchers (Instituto Politécnico Nacional, 2015).

Meanwhile, in the international scene the strengthening of research groups has stimulated the formation of new science doctors in all areas of knowledge (Rodríguez, 2015), as it is in economies with high levels of development (Conacyt, 2012). China is the nation with the highest percentage of formation of doctors with an annual increase of 40%, while Mexico ranks second with 17.1%, above the UK with 5.2% and the United States with 2.5% increase per year (Cyranoski, Gilbert, Ledford, Nayar and Yahia, 2011). However, in Mexico the formation of doctors is insufficient in relation to the need for human resources to conduct research (Rodríguez, 2015; Conacyt, 2014a; Foro Consultivo Científico y Tecnológico, AC, 2014), even in the administrative sciences which are the most demanded by the students in the country. The reason is that, paradoxically, only 14 of 111 PhD programs are recognized as quality postgraduate programs by the National Council on Science and Technology. In consequence, for the Mexican Government one of its priorities in the National Development Plan is Quality Education, and emphasizes that scientific, technological and innovation work are pillars for sustainable economic and social progress, and it is therefore necessary to encourage the quality in the formation acquired in the graduate programs and their accreditation in the National Postgraduate Quality Program of the Conacyt (Gobierno de la República, 2013).

The objective of this descriptive research is to analyze the social relevance in Mexico for a program of Doctorate in Administration at the Superior School of Commerce and Administration, Santo Tomas Unit of IPN under the guidelines of the postgraduate courses of quality.

2. Methodology

The research design was based on the methodology of the Technical Guideline for the creation request, redesign or cancellation of programs of postgraduate studies at IPN (Instituto Politécnico Nacional, n.d.a) with the development of four categories of analysis for a new doctorate in Administration: 1. State of the art of the discipline object of the proposed program, 2. Diagnosis of socioeconomic status and sector or of the productive activities in which the program aims to influence: macro and micro-regional study, study of the labor market, 3. Alienation of the academic program with the programmatic framework at federal, state and municipal levels, 4. Study of the offer (domestic and international) and educational demand.

The analysis involved a documentary part for categories one and three. Likewise, to perform the quantitative-qualitative analysis two instruments of information collection were designed.

For category two, two semi-structured interviews were designed and conducted, with open and closed questions. The first of these was applied to key informants, such as directors of government organizations, academic institutions. The second was for recruiters representing Business Chambers. For

category four, a questionnaire with closed questions was constructed and validated by experts and was applied to students and graduates of masters related to the administration field.

2.1. Design of questionnaires and semi-structured interviews, its samples

For the study of the labor market, they were designed and applied two semi-structured interviews to key informants, on the skills required by the business and government sectors of the country in the managerial and executive positions in organizations. The interviews included a question to identify the most pressing needs to solve in the Mexican administrative context, and questions about the capabilities, skills and knowledge, necessary for management or executive positions in the organizations. For this purpose, two non-probability samples were selected by experts (Hernández, Fernández-Collado and Baptista, 2014), one of which was applied to eleven senior managers of the business sector, while the second interview to six key informants, characterized by their workplace: two leaders of parastatal organizations, two from public institutions, one from the academia sector and one from the legislative power. The application of the interviews was in the June-July 2015 period.

For the study of the potential demand for the program, a questionnaire was designed and applied. Therefore, related master's programs to the Administrative Sciences in Mexico City were selected, which are the National Autonomous University of Mexico (UNAM), IPN and the Autonomous Metropolitan University (UAM), through a simple random sampling, a sample of 50 students and / or graduates per school was selected.

The application of the questionnaires was in the period May-June 2015. At the end resulted a total of 136 valid questionnaires, of which 62 were men and 74 women.

3. Results

3.1. The science of administration, its state of the art and trend

The indexed databases of the Science of Administration lack a formal classification that gathers together the lines of investigation of this discipline, there is such diversity as researchers of this science in Mexico and the world, unlike for example of the economy field which has the international standard of classification of the academic economic literature, the JEL - Journal of Economic Literature- (American Economic Association, 2015).

Facing this, a perspective to identify the areas where the lines of investigation are grouped for the Administration is to analyze the high-impact publications, in this case from the Social Science Citation Index of Thomson Reuters (Thomson Reuters, 2015). It concludes with a low participation of the Administration with a 11.4%, considering that it is the International Index of Social Sciences, which in 2015 concentrated 2,826 publications, of which 323 in administration and in the following fields: in economics 164 (50.8 %), management 79 (24.5%), accounting 22 (6.8%), finance 16 (5%), public administration 14 (4.3%), organization 14 (4.3%), business 10 (3.1%) and marketing 4 (1.2%), a broad transversality of themes is observed.

However, differentiating between journals with a impact factor greater than two and the most recurrent areas of knowledge, on the private administration are 71 journals and oriented topics to the strategic management (30%), organizational theory (15%) and marketing (10%), while for the public administration with 26 journals, to the administrative management of public organizations (54%), politic science (23%) and social analysis (12%) and diverse themes (11%). As said before, even in specific fields, there is ambiguity in the lines of investigation.

Nevertheless, the great social, economic, political and technological changes and its globalization have influenced on the object of study of the administration, for the public affairs has focused on the study of democratization before society and the citizens for the solution of problems (Uvalle, 2009), currently there are four trends: 1. Transparency and accountability in government; 2. Governance understood as efficiency of government management; 3. Electronic Government and adoption of intelligence systems in the State security; 4. Increase in the integration of economies (Rivas, 2016). Meanwhile, for private management, sustainable development, eco-efficiency and business responses to climate change; corporate social responsibility, new organizational styles, approaches on the intellectual capital, the use of new technologies to increase competitiveness (Muñoz, 2003; Strange and Bayley, 2008; FIMPES, 2013; Rivas 2016).

3.2. Diagnosis of the socio-economic situation and of the sector or activities: macro and micro regional study, labor market study

IPN is an institution with educational services for all social sectors with a presence in 22 of the 31 states

of the country. It has supported the process of industrialization of México and the productive sector in the training of specialists, however, this sector demands increasingly, high level human resources to improve their competitiveness (Conacyt, 2012). Mexico City is the headquarters of the largest number of schools of this institution and where the offices that govern the school administratively and academically are located. This entity is the political, cultural and economic center of the country, is positioned in the first places nationally in several indicators, ranks first in terms of its contribution to Gross Domestic Product (GDP) with 17% of the total. It is also positioned in the first place in the State Competitiveness Index which analyzes the ability of an entity to attract and retain talent and investment. Nevertheless, the unemployment rate of the city amounting to 6.93% is higher than the national average of 4.82%; the highest if compared with the rest of the states (Foro Consultivo Científico y Tecnológico, AC, 2014). Its population has an average schooling of 10.5, above the national average of 8.6 (Foro Consultivo Científico y Tecnológico, AC, 2014). According to the Instituto Nacional de Estadística y Geografía (2015a) the 53.5% of the inhabitants of Mexico has basic education, 21.7% with high school and 18.6% with a career. The service sector is the most dynamic in the region generating 85.1% of state GDP sectorial and has an index of economic specialization of 1.33, which positions it in the second place in the country.

In Mexico City, various global and national companies dedicated to the service sector have presence, which has become a center of service activities at international level especially for Latin America, highlighting financial services, insurances, trade, tourism, real estate, transportation and information in mass media, education and health (Foro Consultivo Científico y Tecnológico, AC, 2014). Next in importance, the industrial sector and its branches in foods, beverages, tobacco, textiles, paper, furniture, publishing and printing, chemical, electrical devices, rubber and plastic; activities taking place in various industrial parks: "Parque Tecnológico y Educativo Milenio Ferrería", "Tecno parque Azcapotzalco", "UNITEC Coyoacán" and "Parque Industrial de Alta Tecnología en la Colonia Ejército Constitucionalista Cabeza de Juárez". However, the specialization index of the industrial sector is low (0.40), which places the entity in place 31, indicating that there is not specialization in the industrial sector (Foro Consultivo Científico y Tecnológico, AC, 2014; Instituto Nacional de Estadística y Geografía, 2015b).

It is additionally, an entity with high relative concentration of institutions of high educational and scientific level and with the highest capacity of students where, approximately 50% of the researchers of the National System exerts. Therefore, it occupies the number one position in the ranking of science and technology on a national level, which reveals its strength and potential in various indicators of scientific and technological research (Foro Consultivo Científico y Tecnológico, AC, 2014). Moreover, within the entity, are established about 12% of companies nationwide and has a human development index of 0.83. Locally, the Hidalgo Delegation, which is the demarcation where the ESCA of Santo Tomas is located, holds an economic activity that contributes with more than 22.6% of the Gross Domestic Product (GDP) of the city, equivalent to 3% of national GDP, while its unemployment rate is the one of the lowest with 3.8%, which eventually would enable the doctoral program graduates to penetrate in the professional field whether in the public or private sector (ANUIES, 2015; Instituto Nacional de Estadística y Geografía, 2013; Foro Consultivo Científico y Tecnológico, AC, 2014; Conacyt, 2014a; Conacyt, 2014c; Romo, 2013; UNAM, 2012).

Regionally, have been identified in the city three key productive sectors: the financial services, touristic, logistics; and four with great development potential in consideration of the capabilities of the city: biopharmaceutical products, design and fashion, medical services and research services (Foro Consultivo Científico y Tecnológico, AC, 2014).

Despite this, the prospects for development of the City in a short- and medium-term, the employment landscape of the new doctors in any field of knowledge is not simple (Academia Mexicana de Ciencias, 2011; Hernández et al., 2014) even the "National Researchers System" itself encourages researchers to obtain work through CONACYT Chairs and then continue with their research work. Nevertheless, the most demanded competences for the occupational profiles of the business and educational sector, the

National Council for Standardization and Certification of Labor Competences proposes that they be transversal, technical and of sustainability and innovation (Consejo Nacional de Normalización y Certificación de Competencias Laborales, 2012) but for the field of research, it is not indicated what should be the competences for researchers, except some generic ones regardless of the specialization, among which are cognitive skills in philosophy, epistemology, research methods, English language proficiency and notions of the field of specialty chosen by the researcher, as well as some skills and teamwork traits such as perseverance, discipline, oral and written expression and informatics for research development (Rivas, 2011; Berkeley, 2004; Partington, 2002).

As for the outlook of the eleven key informant interviewees, thought it was necessary to strengthen the areas of human resources, finance and strategic planning, 45% believe that the most appropriate educational training for leadership or management positions is the degree of master, followed by the doctorate with a 37% and ultimately engineering or BA with 18%. The main desired administrative competences are leadership and conflict management, capacity for negotiation and knowledge in

research. Regarding the needed attitudes to show stand out flexibility and expression of confidence in employees, demonstrating at the same time organization skills and commitment to the work. While, for the six key informants the results indicate that the most pressing problems in the administrative context are due to the lack of coverage and investment in education, which translates into corruption and on inefficient bureaucratic government structures.

There is therefore the need to strengthen the existing administrative cadres with high performance human resources to overcome the problems of Mexico. Consequently, the priority specialties that need to be developed in the administrative area are human resources, finances, strategic planning and leadership. All productive sectors, especially the public sector, have the of need administration researchers that solve problems in marginalized areas of the primary sector, such as is in agriculture and cattle industry. For which, competences must be formed to occupy strategic positions in the planning and coordination for solving national problems, focused on the development of leadership and decision making and to a lesser extent, in research methodologies, interpretation skills, of projects formation and strategic planning. Develop skills of analysis, synthesis and of formulation and solution of research questions. Likewise, they must possess basic knowledge of economics, finances, research methodology, technology and innovation, performance evaluation, statistics, sociology, political science, business, psychology, senior management, organizational development and leadership.

The education in these competences will allow the Doctors in Sciences of Administration to work both in organizations of the public administration or in the private, example of this are the public education institutions where are taught 336 master programs and doctoral degrees in Social Sciences, offered in 27 institutions and / or public research centers in Mexico City or in any of the 2,527 postgraduate programs taught in the country (ANUIES, 2015). As in government agencies, non-governmental or at the business sector.

3.3. Alignment of the academic program with the federal, state and municipal programmatic framework

It is essential that the research conducted in the doctorate is oriented towards the solution of the national, state and local problems within its competence of research, reflected in the sectoral plans and programs. Thus, in the National Development Plan 2013-2018 it is considered as one of its national goals, a quality education with the objective of making the scientific and technological development and innovation, the pillars for the economic and sustainable social progress of the country, through a solid annual growth of the domestic investment in scientific research and technological development until reaching a level of 1% of the Gross Domestic Product (Gobierno de la República, 2013) that will eventually would be allocated in accordance with the Special Program of Science, Technology and Innovation 2014-2018 to promote the development of vocations and scientific capacities, technological and of local innovation, to strengthen the sustainable and inclusive regional development and contribute to the formation and strengthening of high level human capital that generates and transfers knowledge and technology that would link the Higher Education Institutions and research centers with business needs (Conacyt, 2014a; Gaceta Oficial del Distrito Federal, 2013a).

3.4. Study of offer (domestic and international) and educational demand

On the international level, economies with high levels of development have stimulated the formation of new doctors, strengthening research groups in all areas of knowledge (Rodríguez, 2015; Conacyt, 2012). Example of this is China, with the highest percentage of training of doctors and with an increase of 40% annually, followed by Mexico with 17.1% (Cyranoski et al., 2011), however, the training of Mexican doctors is insufficient in relation to the need for human resources for conducting research (Rodríguez, 2015; Conacyt, 2014a; Foro Consultivo Científico y Tecnológico, AC, 2014), despite more than 1,198 doctoral programs offered in the country. Of these, only 607 (50%) are accredited in the PNPC, even there is also a lack of standardization in the formative camps of the doctorates, while for the ANUIES (2015) requires eight: education; arts and humanities; social sciences, administration and law; natural, exact and computing sciences; manufacturing and construction engineering; agriculture and veterinary; health and services. For CONACYT there are seven: Physical-Mathematical and Geosciences with 62, Biology and Chemistry with 73, Medicine and Health Sciences have 37, Humanities and Behavioral Sciences offer 95, Social Sciences with 141, Biotechnology and Agricultural Sciences with 75 and Engineering with 124 (Conacyt, 2012).

As for the 1,198 doctorates, the ANUIES determines 375 in social sciences, administration and law subdivided into four areas of knowledge: Social Sciences and behavioral studies; Sciences of the Information; law, business and administration, the latter registers 117 (22.2%) programs (ANUIES, 2015) and only 14 of them can be found in the Register of Quality in the field of Administration: 13

research-oriented and 1 towards the professional: six are of recent creation, four of development (one in Mexico City: Technological Institute of Higher Studies of Monterrey) and four are consolidated (two in Mexico City: National Autonomous University of Mexico and Metropolitan Autonomous University). Of these, 13 programs consider in their egress the formation of high-level researchers; two focus on high-level academic exercise and four in the specialized professional practice (Conacyt, 2013) they are oriented towards the research of organizations and various management studies. However, this offer is insufficient against the number of students who demand it and make it one of the most requested programs, graduating near 72,687 students per year, in correlation with the admitted (Conacyt, 2013).

On the international level, the best universities in the world in social sciences that offer Doctorates in Administration are: the University of Harvard in its two faculties, the Harvard Business School with its DBA or PhD programs and the Harvard Kennedy School with his PhD in Public Policy, the Stanford University in its Business Graduate School with a PhD, the Massachusetts Institute of Technology with the MIT Sloan School of Management with a PhD Management and the University of Oxford with its Saïd Business School University of Oxford DPhil Program in Management Studies and the Blavatnik School of Government with its DPhil in Public Policy (Ranking, 2015; Academic Ranking of World Universities 2014), all these programs, and also those of the six universities that follow them positioned as the best in the world, specialize by functional areas of the administration, the most common are: accounting, economics, finances, administration, marketing, organizational behavior and strategic management, unlike the programs in Mexico that are more oriented toward lines of generation and application of knowledge. In half of them, the graduate profile considers its researchers positioned in the administrative field either in government or corporate organizations (Harvard Business School, 2015; MIT Sloan School of Management, 2015; Saïd Business School, 2015; Times Higher Education Ranking 2015).

Finally, the field study regarding the potential demand for a new doctorate in administration indicates that of the 136 students and graduates interviewed, 62 are men and 74 women (45.6% and 54.4% respectively) and the following socio-demographic factors: they have an average age of 27 years between a range of 25 to 35, 38 are single, 36 have children and 41 work full time. Also, 33 of the participants receive a salary of among \$ 16,001 to \$ 25,000, have a regular job stability and subsist by themselves and by family income. In addition, 53 of interviewees do not have funding or scholarship. Of them all, 60 chose the option of pursuing a doctoral degree, and 14 more, possibly also; 46 (62.2%) would study in IPN, 14 (18.9%) in IPN or UNAM, 9 (12.2%) in UNAM, 2 (2.7%) at UAM, 2 (2.7%) abroad and 1 (1.4%) is not defined. In addition, 52 of them, would study with a research orientation and 8 to the professional field. Research is the main objective that would guide them to study a PhD, being that of the 74 interested, in case of continue studying, 41 (55.40%) would guide their research to the administration of organizations and businesses, 17 (22.97%) to the public administration and 16 (21.62%) to the administration of educational institutions. The field of knowledge that would choose those who chose public administration would be national, regional and local government; intergovernmental relations, in the first instance. The ones who chose the administration of educational institutions would choose the analysis of education and research in higher education. While the ones from management for organizations and businesses would choose business administration and secondly the objectives, structure and organizational behavior.

4. Conclusions

Administration is very recent as an area of knowledge compared to other disciplines, which can be observed in a relatively low participation with the 11.4% of the publications in administration in the index of the Social Science Citation Index of Thomson Reuters, standing out themes associated with this discipline about economy with 50.8% and management with a 24.5% and a wide transversality among them. From this edge, research of this discipline contributes already marginally to strengthen knowledge in Social Sciences. However, the science of administration faces a huge disciplinary and epistemological task. Facing this, the development of programs dedicated to advanced studies and original research is necessary, that enables the achievement of high quality standards and consolidate the training of scientists in administration with presence in the local and international level, which is, in this discipline or any other, one of the triggers of a higher added value of products and services in an economy. In the case of Mexico, it is achieved with the recognition in the National Register of Quality Postgraduate Studies of the National Council of Science and Technology. However, the National Council of Science and Technology distinguishes two large kinds of knowledge in doctoral programs in Mexico: the scientific and professional, which has caused uncertainty and confusion, coinciding with Hirose (2001), for the urgent need to generate new knowledge and development of research, which is for public universities much of its essence, beyond the transmission of knowledge.

Which is why the country's most important technological university, IPN, with 1,115 National Researchers and the School of Commerce and Administration Unit Santo Tomas, the oldest in Latin America founded in 1845 ascribed to it, must align their programs to these governmental policies of

quality, according to its history and privileging the scientific knowledge, conciliating their social role.

A first conclusion from this study is that in Mexico the most pressing regional problems at the administrative level and under the context of business, government and educational, are due to the lack of coverage and investment in education, which translates into corruption and on inefficient bureaucratic government structures. Which makes it necessary for all public sectors, non-governmental and business strengthen administrative cadres with high performance human resources, as practiced by economies with high levels of development. The field study shows that the desirable academic education is of master's degree with 45% followed by the doctorate with 37%, who should occupy managerial positions and strategic directors in financial areas, of planning and human capital, with competences that are mainly focused on the development of leadership, decision making and research. That's why is essential to stimulate in the country, the training of doctorates who would perform solution-oriented research to the national, state and local problems, identified in the National Development Plan 2013-2018 and sectoral programs of the country, although paradoxically the National Council for Standardization and Certification of Labor Competences lacks of studies of the competences that researchers must develop, which concludes with some that are necessary and cognitive in research methods as well as skills and traits for teamwork as perseverance, discipline, oral and written expression as well as informatics for the research development, coinciding with Rivas (2011), Berkeley (2004) and Partington (2002).

A second conclusion that reinforces the above is the need to favor the scientific knowledge and recognition of the quality programs but without discouraging the social role of the educational institutions that offer them, there is a low accreditation in the Administrative Sciences, that in conjunction with the Social Sciences, is the most demanded field by students in Mexico, although the Ph.D. represents only the 7% of the total enrollment versus 71.3% of Master's and only the 12.6% of doctoral programs in administration are in the National Registry of Quality, only one is oriented to professional development.

It is necessary that the doctoral programs in Administrative Sciences in Mexico, consider in their graduate profile, as well as the best international practices, the formation of senior researchers, authorizing them in the academic and professional specialized practice, in the own trends of science for the matters of the public, towards the study of democratization before society and citizens: transparency and accountability, government efficiency. While for the private administration, sustainable development, eco-efficiency and business responses to climate change.

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