

## *Higher education and work: towards the construction of an information system on college graduates*

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**Abstract:** The linkage between higher education and the world of work in Mexico is an issue that often leads to controversy, usually because of erroneous conceptions of the role played by education in the sphere of labor, but mostly due to insufficient information on the results achieved by college graduates in the labor market. In this context, this paper discusses the consequences of the lack of systematic and comparable information on the graduates' insertion into the labor market, and identifies some of the challenges faced in building an information system that contributes to the establishment and evaluation of public policies for higher education. **Key words:** higher education, graduate follow-up, labor market, public policies.

### Introduction

The interest in the relationship between higher education and the labor market, and especially in the insertion of college graduates into this market, is shared by many actors in our society. Students and their families want to know the potential benefits of studying in a university, or at least what they can expect when they choose a major. Political actors are interested in learning about the results of public investment in higher education, with the aim of supporting current programs or promoting the creation of new educational offerings. Higher education institutions (HEIS) need to feel the pulse of the labor market to verify the validity of their degree plans and programs, and thus determine if the skills and knowledge developed by their students are being valued by the productive sector. Private institutions, and sometimes also recently created public ones, have an urgent need to show the benefits of studying in their schools, among them the success of their graduates in the world of work. Educational authorities at different levels with a responsibility for guaranteeing the quality of education require information on the relevance of the degree programs offered, a task performed in recent years through evaluation and accreditation mechanisms (CIES, COPAES), which include graduate follow-up among their quality

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indicators. Finally, among researchers, with economists in the lead but with important contributions from sociologists, psychologists and especially educational scientists, there is a continuous and growing interest in learning about the impact of higher education on employment through a number of social, economic, and cultural indicators and, more recently, comprehensive indicators of individual well-being.

However, despite the importance of having data on this phenomenon, and in spite of a long tradition of research on the relationship between education and work, with pioneers in the 1980s like María de Ibarrola and Carlos Muñoz Izquierdo, there is still no national system of information on the insertion of higher education graduates into the job market (nor is there one on other sub-systems like middle education, but in this paper our focus is only on higher education). This has led actors interested in this issue to rely on partial or limited – from a comparative standpoint – sources, in order to satisfy our demand for information. After a brief review of some basic concepts that help to understand the relationship between higher education and work, we will survey the sources of information currently available to address this issue. Finally, we will point out some of the main challenges faced by Mexico in creating an information system on higher education graduates.

### **Education and work: basic concepts**

The relationship between the world of education and the world of work, especially paid labor, is a fertile field for controversy and ideological debate on the role both dimensions must play in social life. Rather than understanding it as a mechanical relationship, the evidence suggests that this phenomenon raises more questions than it answers (De Ibarrola, 2010). Overall, it is important to acknowledge that, on the one hand, the aims of education go beyond the needs of the labor market and, on the other hand, that companies do not depend exclusively on education to train their employees or the entrepreneurs and businessmen who lead them. Therefore, if we accept these two premises, educational policy should take some distance from the “supplier-client approach”, which assumes that there is a “client” – the productive units – that would have complete, specific, and updated information on the requirements of its present and future job positions, and a “supplier” – the State, as a direct provider and/or regulator of private education – that would provide in a timely fashion a labor force qualified to meet the needs of the labor market (Planas, 2014). But even assuming that the productive sector were fully certain of the kind of training its future employees would need – which we believe would be somewhat problematic, especially among the micro or small companies that concentrate most of the employment in Mexico – there would be a natural gap between the moment when the graduate profiles were required and the time it took the educational sector to train future workers. Moreover, when this posture is adopted it often ignores the potential for innovation that recent graduates represent for companies, the so-called “supply effect” (Béduwé and Planas, 2002).

From a theoretical viewpoint, with the appearance and popularity of the theory of the human capital (THC) in the 1960s (Becker, 1964; Schultz, 1972) there was a widespread expectation about the economic benefits that education would bring society. While in general terms this promise was fulfilled – more education, better income – soon the empirical evidence showed weaknesses in the theory (Bonafant, 1998; Klees, 2016). Alternatively, other theoretical approaches have tried to account for phenomena that the THC has not been able to explain: credentialism (Collins, 1989), the signaling theory (Thurow, 1983), the filter theory (Arrow, 1973), the correspondence theory (Baudelot and Establet, 1987; Bowles and Gintis, 1983), or the theory of labor market segmentation (Piore, 1983). The authors who put forth these theories opened the debate to discuss the influence of non-economic elements such as the influence of social class, age, gender, geographical location, specialized training, race or ethnicity, or the economic period being analyzed, among other variables that make the benefits of education heterogeneous, both individually and collectively.

Another angle of the debate on education and work lies on the degree of adequacy between the graduate offer and the labor demand. After years of comparative research in many countries, Planas (2011, 2014) strongly criticized the “adequationist approaches” that seek, from a normative viewpoint rather than an empirical one, to pigeonhole the specializations and/or levels of training into the specializations of labor as an indicator of success in the labor market. Planas forcefully points out that the question should not revolve around an *a priori*, normatively pre-defined degree of adequacy, but rather focus on the evaluation of the actual work situations in which graduates apply the competences acquired in their training:

In reality, without establishing pre-defined correspondences, we see that people are able to perform different kinds of jobs, with few restrictions regarding their initial training and, symmetrically, most jobs can be performed by people who have had different kinds and levels of training (Planas, 2014: 97).

Along the same lines, De Vries and Navarro (2011) claim that we are faced with a sort of “bipolar environment” in which there is on the one hand an unbridled optimism about the benefits of education for social progress and, on the other hand, a pessimism that underscores only the problems that some graduates have to enter the labor market, or the entrepreneurs who cannot find candidates with enough training to fill their vacancies (Bolio *et al.*, 2014; Mourshed *et al.*, 2013; CIDAC, 2014). In our view, this bipolar dynamic is nurtured, among other things, by the absence of solid and systematic information on this phenomenon, which leaves room for interpretations that are often based on ideologically biased premises. A periodical review of the press on this issue is a good indicator to feel the pulse of the usually pessimistic and sometimes biased perception there is of this complex phenomenon.<sup>1</sup>

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<sup>1</sup> Some examples: Elizondo (2014), Ortiz (2014), Sarmiento (2015), Cantillo (2016), Hernández (2015), or Fariza (2017).

## Sources of information on the insertion of graduates in the labor market

Before reviewing the sources of information that account for the insertion of university graduates in the labor market in Mexico, it is important to identify these data within the broader framework of the relationship between higher education and the world of work. Brennan *et al.* (1996) propose three dimensions of analysis: a dimension of higher education that is “relevant to work”, another dimension of work that is “relevant to higher education” and a different one that analyzes the overlap between both dimensions, “linkages between higher education and work”. Table 1 shows the components that make up each one of the dimensions and we can see that, although this is an analytical distinction, the insertion of graduates in the labor market is related to higher education. This would mean that the stress on the analysis of this insertion should be placed on the side of the demand, rather than the side of the supply.

**Table 1:** Relationship between higher education and work

Dimensions of higher education related to work	Linkages between higher education and work	Dimensions of work related to higher education
<ul style="list-style-type: none"> <li>• Quantitative and structural development (number of graduates provided by the educational system).</li> <li>• Curriculum, additional job training and socialization.</li> <li>• Educational services and options of students.</li> </ul>	<ul style="list-style-type: none"> <li>• Labor market of graduates, intermediary agencies and transition.</li> <li>• Regulatory system.</li> <li>• Lifelong education.</li> </ul>	<ul style="list-style-type: none"> <li>• Employment.</li> <li>• Career.</li> <li>• Tasks and requirements of the job.</li> <li>• Profession.</li> <li>• Quality of work and of employment.</li> </ul>

Source: Brennan *et al.*, 1996, p. 2.

The information on the results obtained by graduates is important, among other things, because it is a mechanism that allows us to reduce the distance – without naively expecting it to disappear – between the educational offer and the needs of the labor market. According to Grubb and Lazerson (2006), access to information, together with a direct connection between schools and the workplace and the reinforcement of competence certification systems, would be three privileged mechanisms to achieve a better understanding between education and work.

On the other hand, when one tries to get information on the employment of professionals in Mexico, the main source consulted is usually the National Survey on Occupation and Employment (ENOE), conducted by Mexico’s National Institute of Statistics and Geography (INEGI). Since the goal of ENOE is to have a wide panorama of the country’s labor force, it features an aggregate representation of different groups around variables such as age, sex, educational level, employ-

ment status, working conditions, benefits, etc. A first consideration is that ENOE is not designed to have specific information on particular groups, as would be the case of college graduates. This is an important limitation, because a widespread practice in studies on graduates is to consider a reference graduate cohort, which is measured in its insertion to the labor market in a period usually ranging from one to five years after finishing their studies (Teichler, 2003). That is, using the ENOE one can have an approach to the occupational reality of a group of professionals of all ages, regardless of the year when they finished their college studies. The alternative used by some researchers to analyze insertion in the labor market is to take the younger professionals, for instance those younger than 30, as a proxy for the recently graduated, since there are no representative samples divided by specific ages. This leaves out the possibility of analyzing, for instance, what happens to college students who graduated at an age different from the typical ones, to observe the effect of having obtained a college degree on their employment history.

Secondly, and not less importantly, ENOE does not contain sufficiently representative samples by majors. While there was considerable advancement in recent years after incorporating the variable “major” to the survey, from a statistical viewpoint there is no certainty that the college graduates surveyed are representative of what happens to the other graduates of the same major. Still, this has been no obstacle for research and reports<sup>2</sup> on specific results of insertion in the labor market by majors, which offer young people and their families a remedial alternative to the absence of more accurate information on the occupational performance of existing majors in the educational system. But we must emphasize that that these are only general overviews of the labor market for professionals, which provide no information on specific processes of insertion, on the use of the competences acquired as a student, or on more subjective aspects such as job satisfaction or satisfaction with the training acquired, which are usually part of graduate follow-up surveys.

A second source of information on the insertion of graduates in the labor market is actually the studies on graduates that universities conduct on their own, together with processes of evaluation and accreditation by external agencies (CIIES, COPAES). In this respect, Mexico’s National Association of Universities and Higher Education Institutions (ANUIES) played an important role in promoting these studies since the late 1990s by creating a “Basic Scheme for Studies on Graduates” (ANUIES, 1998) that, although it was a recommendation that institutions may or may not attend to, continues to be the basic document for graduate follow-up in many Mexican HEIS. Still, given the complexity of the institutional arrangement in Mexico’s higher education system, graduate follow-up is usually conducted with diverse methodologies, uneven results, and little transparency. What can be found in a review of the literature is often reports or research on spe-

<sup>2</sup> For example the “Labor Observatory” of the Ministry of Work and Social Welfare, with information (<http://www.observatoriolaboral.gob.mx/swb/>), the portal “ComparaCarreras” of the Mexican Institute for Competitiveness (<http://imco.org.mx/comparacarreras>) or the portal “Tu futuro laboral” of El Universal, a newspaper (<http://data.eluniversal.com.mx/carreras-universitarias/>).

cific universities or majors (see the State of Knowledge published every ten years by COMIE: Barrón, 2003; Reynaga and Ruiz, 2003; Márquez *et al.*, 2013), or in the best of cases more ambitious studies such as the PROFLEX project (De Vries and Navarro, 2011), which has not been replicated. Naturally, the data that can be traced from this research is far from constituting systematic and comparable information from a temporal, institutional or geographic standpoint. As benchmarks of a systematic and comparable information system, we could point to experiences such as those of France, the United States or, at a regional scale, Catalonia.<sup>3</sup>

### **Conclusion: some challenges in the creation of a national system for graduate follow-up in Mexico**

The configuration of the Mexican system of higher education leads us to believe that creating a national system of college graduate information and follow-up may be an impossible task. We understand the challenges faced by a system that encompasses almost four thousand higher education institutions, more than six thousand schools, and offers almost 34 thousand higher education degree programs, including majors and graduate degrees (SEP, 2017). Besides, to add to the complexity of our higher education system, it is divided in three large groups, with more or less the same number of students: federal public higher education, state public higher education, and private higher education. However, international experiences show that, when there is the will and the consensus to recognize the advantages that a robust information system would give the country, the task seems possible. Concretely, we propose two aspects that could be discussed by inter-sectorial public policymakers with the aim of creating a national system of information on college graduates.

- **Financing:** graduate follow-up and processing the information is an expensive process. Therefore, it is one of the main obstacles to the creation of a national system of information on college graduates. International evidence shows that arrangements such as collective financing by HEIS, managed by an institution where the investment is centralized, could be an optimal solution. Mexican IES are already investing significant amounts of money on graduate services offices and/or graduate follow-up surveys, so they could contribute part of the budget required to create such a system.

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<sup>3</sup> Each of these countries or region has a college graduate follow-up system at a system level, which is comparable through time due to the replicable nature of its methodologies (intra-systemic comparability). The studies referred to are “Enquêtes d’insertion (Génération)” (<http://www.cereq.fr/themes/Acces-aux-donnees-Themes/Enquetes-d-insertion-Generation>) in France, “National Survey of Recent College Graduates” (<https://www.nsf.gov/statistics/srvyrecentgrads/>) in the United States, “Graduate Labour Market and Student Engagment Survey” (<http://agcas.org.uk/pages/graduate-labour-market>) in the United Kingdom, and “Encuesta de la inserción laboral de los titulados y tituladas de las universidades catalanas” (<http://www.aqu.cat/estudis/graus>) in Catalonia.



- Access to graduate registries. Broadly speaking, there are two possible ways to identify graduates: house-to-house surveys, and surveys based on graduate registries. The first scenario involves a national survey, which could materialize, for example, as an additional module based on a sample of the ENOE (similar to the ENILEMS module on middle education graduates conducted in 2010 and 2012). This strategy would have to be the product of a centralized decision from the State and, given the budget cuts in recent years, does not seem a viable scenario. In the second scenario, we refer to studies that use the contact data of graduates collected by the HEIS themselves. That is, each institution would contribute data from a selected sample of graduates so that the agency that centralized the system could find the graduate students. One of the challenges here would be the management of the graduates' private information, as well as the distrust generated in recent years by the increase in the violence caused by organized crime. A middle-of-the-road solution would be, on the one hand, to create sufficient incentives for the HEIS to conduct comparable studies on graduates, using similar methodologies and with agreed-upon dates of application and, on the other hand, to have them share the information collected in their studies with the rest of the actors in the system.

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