—HIGHER—
EDUCATION
—POLICY—

Higher Education Policy, **2021, 34**, (1010–1026)

www.palgrave.com/journals

Original Article

Dual Labor Markets in Higher Education? The Case of Two Schools at the University of Buenos Aires

Marcelo Rabossi
Torcuato Di Tella University, Buenos Aires, Argentina.
E-mail: mrabossi@utdt.edu

The dual labor market theory (DLM) posited the existence of two distinct labor markets working in parallel. A primary one is a place where high wages, employment stability and high opportunities for advancement are the norms. On the other hand, low wages, arbitrariness and less desirable working conditions determine a secondary market. The main object of this investigation is to see if differences between schools at the University of Buenos Aires, the most important and populated institution in Argentina, are stark enough to conclude the presence of DLMs. Although some authors have analyzed the higher education market using the DLM theory, in general these approaches have emphasized the presence of two markets in relation to tenured versus non-tenured professors, or between full-time versus part-time faculty members. However, few studies, if any, have tackled the issue of market segmentation in relation to fields of study.
Higher Education Policy (2021) **34,** 1010–1026. https://doi.org/10.1057/s41307-020-00186-x; published online 30 March 2020

Keywords: higher education; academic labor markets; Argentina; dual labor markets; University of Buenos Aires; faculty members

Introduction

The University of Buenos Aires (UBA) is a sum of multiple and different realities. With 319,866 students in undergraduate courses and 22,527 faculty members, this mega institution is far from being a homogenous organization (SPU, 2016). Moreover, the difference among academic units (schools) is so sharp that is possible to speak about multiple academic labor markets cohabiting within this university.

Dispersion and singularities among schools are the norm at the UBA, and each of the thirteen academic units works as satellites gravitating around the central authority connected through different sets of rules, norms, procedures and privileges. Consequently, academic qualifications of faculties, funds available per student and the number of enrollees per teacher vary among schools. In addition to this, in order to obtain their financial resources, some of them work under market

dynamics, while others are "protected" by bureaucratic rules. It could be said that these differences among academic units may lead and favor the development of dual labor markets (DLM).

The DLM hypothesis, or market segmentation, is part of the economic analysis of discrimination. The neoclassical perspective suggests that some individuals have a "preference" for arbitrariness, paving the way for the appearance of two different kinds of markets (Becker, 1971; Pager and Shepherd, 2008). A primary one is a place with higher wages, better job stability and higher opportunities for development and advancement. On the other hand, lower wages and less desirable working conditions determine a secondary market (Doeringer and Piore, 1971). Sometimes this behavior arises from prejudice among social groups. Other approaches understand that certain organizations favor and reinforce the presence of two different labor markets for productivity reasons (Williamson *et al.*, 1975).

The DLM theory has not been popular among researchers who analyzed the dynamics found in higher education settings. And when they took advantage of this approach, they emphasized the presence of two markets in relation to tenured versus non-tenured professors (Roemer and Schnitz, 1982), or between full-time versus part-time faculty members (Gappa and Leslie, 1997a), for example. However, the theory of market segmentation still proved to be a useful framework to interpret differences in questions of race, gender and cultural capital (Lemelle, 2002; Siegwarth Meyer and Mukerjee, 2007), factors that deals with migration and unemployment (Barbier-Gauchard *et al.*, 2014; Eichhorst and Kendzia, 2016), and to study the distribution of workers among jobs (Passaretta and Wolbers, 2016).

By using the DLM as the theoretical frame, the main object of this investigation is to see if differences between schools at the UBA are stark enough to conclude the presence of two different internal markets. It is worth mentioning there are few studies, if any, that tackle the problem of segmentation in internal labor markets — academic ones or not — and particularly none in academic settings in relation to the field of study to which the faculty body belongs. Here, the DLM theory is not employed as another way to describe that some faculty members make their living from the university alone versus those that do not, but to describe the dynamics and organizational arrangements found in two different schools within a single institution. Consequently, the DLM theory is used as a complementary approach of the "loosely-coupled-system" paradigm, where academic units, in spite of being part of a single organization, have few variables in common (Weick, 1976).

I have chosen the UBA as a case study to demonstrate the benefits of the DLM theory as a tool to evaluate different organizational dynamics within a single institution, and the rationale behind opposed outcomes in internal academic labor markets. In relation to external labor markets, where salaries and the assignment of graduates for jobs are determined by demand and supply forces, in internal ones the allocation of resources is defined by bureaucratic rules and free from market pressure. This study refers to the latter. In this sense, it is an empirical illustration of

a theoretical model. Also, this case is not presented for the purpose of generalization; more research and testing of the model are needed. All quantitative data come from the UBA 2011 academic and students' census — last available — UBA 2013 budget report and statistics provided by the Secretary for University Policies (2013, 2016).

The paper is divided into 3 sections plus a final conclusion. Section "Labor Market Discrimination and the Dual Labor Market Theory" presents a description of the economic analysis of discrimination and why the structural point of view of the DLM hypothesis explains in a better way labor dynamics found in certain organizations, for example, higher education institutions. In general, the DLM literature has concentrated its attention primarily on non-academic markets. Thus, the intention is to extrapolate some of the findings into higher education realms. The second section briefly describes the UBA and its magnitude within the higher education system, while Sect. "The academic labor market at the UBA" presents the main characteristics of the academic labor market at the UBA. Section "Differences in the Internal Labor Market: Quasi-Private Versus Bureaucratic Dynamics at the UBA" begins by describing what the main part of this work is: two different internal labor markets operating at UBA. For comparative purposes, I have selected two academic units: the School of Natural and Exact Sciences (SNES) and the School of Economic Sciences (SECS). The rationale behind the selection is also explained. Conclusions close this work.

Labor Market Discrimination and the Dual Labor Market Theory

Historically, labor market differences have been the object of analysis from both an economic and a sociological perspective. Different approaches have made the attempt to explain or even to justify disparities in labor conditions. Stratification and labor mobility have been the focus of interest for sociologists. Using a structural approach, several surveys describe how the intrinsic morphology of labor markets can enhance, reduce or perpetuate asymmetries among workers (Blau and Duncan, 1967; Sullivan, 1981; Picault, 2013). On the other hand, economists were more concerned about questions of demand and supply under perfect competition. Then, wage differentials among workers are determined under a marginal productivity analysis (Stigler, 1962; Althauser and Kalleberg, 1981). Under this approach, the most productive workers get a better salary.

Diverse and even conflicting theories have enriched the literature on labor market disparities. An explanation on wage theory and exploitation derives from the works of Hicks (1963). Using a classical economic approach, in *The Theory of Wages* the author explains that at equilibrium, the only possible wage must equal the marginal productivity of workers. However, he agrees that in some situations exploitation could arise and real wages find its equilibrium below marginal

productivity levels. For example, when workers face high costs to move to another job. Also, departures from equilibrium could also arise before the presence of an imperfect market. If, for example, there is a single buyer of labor, a firm may possess some monopsony power if it is able to use its wage to influence the supply of labor. Thus, the employer will be in a better position to pay a lower wage in comparison with what an employee would get in a competitive market. This happens when there is one major employer and many workers seeking to gain employment. Thus, the employer maximizes their benefits rewarding the worker under the value of his/her marginal productivity.

An alternative view is presented by the structuralist school. Some authors argue that social inequalities arise from the way institutions are designed. By avoiding external competition, organizations are able to allocate resources imposing a bureaucratic way of control (Baron, 1984; Youn, 1988). Both structural sociologists and institutional economists highlight the main role of firms and organizations in determining career patterns. Through this approach firms develop their own internal market of rewards and promotions. Moreover, firms can detach from external markets for efficiency reasons, distributing rewards through bureaucratic regulations and ad hoc rules. If it were feasible to insulate one labor market from another generating multiple layers without any or little communication among them, it would be possible to segment and discriminate one group of individuals from the other.

Doeringer and Piore (1971) challenge those approaches by putting forward the dual labor market hypothesis (DLM). From a structural perspective, these authors see the labor market divided into two segments with little or even no interaction at all between them. A primary market is a place where high wages, employment stability and high opportunities for development and advancement are the norms. Workers with higher skills and better academic credentials interact within this market. Contrarily, low wages, arbitrariness and less desirable working conditions determine a secondary market. This is a place where less educated workers perform their duties.

The DLM theory can also be related to the dynamics found in an internal labor market. In the search for efficiency, organizations have to decide how to distribute their labor costs among their employees. However, tension among competing forces could surge when allocating salaries and rewards through custom or bureaucratic rules. When defining what kind of workers to hire in order to be more efficient, a firm has to decide between high wage employments and stable working conditions or lower wages and more labor rotation in a less stable environment. Vis-à-vis this situation, Piore and Sable (1985) argue that in search for competitiveness, firms divide their internal workforce into different layers in more or less the same way as external labor markets are divided into primary and secondary markets. It is then possible to speak about the presence of an internal DLM within a single firm or institution.

However, firms are also able to reduce their costs not simply by depressing what workers get for their duties but through changing the composition of the working force. Labor is no longer a quasi-fixed factor of production as described by Oi (1962). Outsourcing and part-time working are also strategies for keeping costs under control. In this context, organizations require a flexible working force and many of them are increasing the use of part-timers to turn organizations into flexible entities. Full-time workers trained with specific skills are now seen as a burden in terms of cost and not as an investment that renders an economic return. However, part-time contracts could promote inequalities within workers (OECD, 2015).

In the academic labor market, several reasons explain the increasing use of adjunct professors. The growing number of part-timers is not only the consequence of older retirees re-entering the labor market but young individuals gaining experience and accepting part-time conditions (Mangan, 2000). The urgency to keep costs under control is a powerful reason for universities to rely on a more flexible and less expensive working force. This is evident when we see that even the US academic market — historically distinguished by the large use of full-time positions — is increasing the number of part-time workers in its institutions. In part explained by a decrease in total real appropriations that institutions face during times of financial stress, the number of part-time faculties has been growing steadily not only in community colleges but in 4-year institutions (Gappa and Leslie, 1997b). Currently, three-quarters of US faculty members are adjunct professors. In 1975, only 30% were part-timers (Edmonds, 2015).

By analyzing the supply side of part-timers, working fewer hours in the academia could be also consequence of a personal decision. Here, we find those faculty members that prefer the part-time alternative given that they face a high opportunity cost by staying in the academia. Giving up the non-academic market is costly for some. Other groups work several hours for two or more academic institutions. In some cases, faculty members work in several universities as to complete a full-time equivalent situation. According to Bernasconi (2009), these are the full-timers of the system. At the other end, there can be found faculty members who wish to hold a full-time position but were not able to find an institution to fulfill their preferences. Similarly, a market with a large number of unemployed young graduates surges as an opportunity for organizations that need to employ a more flexible working force. Thus, it is not strange to find young graduates working without getting monetary remunerations while waiting until a position opens in the academic paid market.

The University of Buenos Aires and Its Dominant Position in the University Sector

In Argentina, there are 131 universities and university institutes (66 public and 65 private). In addition to this, the system has 2213 non-university institutions (46% public and 54% private) that grant professional degrees and train primary and secondary teachers (SPU, 2016; DINIECE, 2017). From the public side, except for five provincial institutions, all universities are national entities financed by the federal government. The non-university public sector operates under a decentralized scheme at the provincial level. On the other hand, while private universities get no public funds, some of their non-university counterparts can get direct public funding. In terms of demand, there are a total of 2,981,618 students enrolled in higher education from which 67% attend the university market and 33% is part of the non-university institutions (SPU, 2016; DINIECE, 2017).

Within this context, the Universidad de Buenos Aires (UBA), funded in 1821, stands out as the largest and most influential of the system. It enrolls 17% of all university students, or 22% of all public enrollees. The academic labor market is also dominated by the UBA. This institution offers 18% of all university jobs (SPU, 2016). The power that UBA has to influence the whole system is evident.

New national universities opened their doors during the 1990s and again at the end of the 2000s in the geographical area that surrounds UBA, thus diversifying the academic offer. This has been beneficial to many faculties that are now able to expand their professional opportunities beyond the UBA. Avoiding labor rigidities, at least in what faculty contracts is concerned, these institutions appear as a valid alternative for faculty members looking for new horizons. But again, it is worthwhile noting that this new market is still very limited and, although growing, the UBA is still at the top of the preferences of prospective students at the moment of choosing a university to continue their post-secondary studies, making it more difficult for these new institutions to evolve beyond certain limits.

The academic labor market at the UBA

As in the national system, the academic labor market in the UBA is hierarchically organized in two levels: professors (titular, associate and adjunct[1]) and auxiliaries. At the same time, auxiliaries are divided into three main categories: chief of practical work (*jefe de trabajos prácticos*), first level helper (*ayudante de primera*) and second level helper (*ayudante de segunda*). Professors are responsible for a *cátedra* (chair), and auxiliaries are in charge of practical work derived from the theoretical lecture. Sometimes auxiliaries take almost full responsibility for the *cátedra*, particularly during the first years of study. However, in order to keep up with the expected standard, the *cátedra* where auxiliaries teach is under the name or supervision of a titular professor.

According to the last census administered by the UBA in 2011, there were a total of 28,232 faculty members (professors and auxiliaries) and from these, 6624, or 23.5%, work without monetary compensation (*ad honorem*). Here, it is worth mentioning that more than being exploited, this group of professors start their academic career in the hope of being part of the remunerated market in the near future. Analyzing only those who get paid, 14,079 are auxiliaries. In other words, 65.1% of faculty members at the UBA are not professors. Another feature that characterizes this institution is the large amount of part-timers. Excluding *ad honorem* positions, in the UBA only 8% of its faculty body works under a full-time contract[2]. However, when this category is sorted into auxiliaries and professors, we find that 93.2% of the formers are part-timers, while 81.7% of professors are not working under a full-time contract (UBA, 2011a). Undoubtedly, the academic labor market at UBA can be categorized as a "part-time-auxiliaries-dominant-model" (68.3% of the whole faculty body). Consequently, as a group that represents more than 2 out of 3 faculty members, they exercise a main influence upon how resources are distributed, both physically and financially, and over the way in which this institution structures and determines its academic activities.

One main feature that may prove the existence of a DLM is the academic qualifications of the faculty body. Of course one could expect part-time faculties to have less academic credentials than those who are employed under a full-time contract. However, in teaching or professional universities, a doctoral degree is not fundamental for developing an academic career, mainly in countries where graduate education has started to have a mainstream appeal only during the last decades. On the other hand, since the UBA has a monopsonistic power, either because it is almost the only institution demanding faculty members in certain academic fields, or because of its prestige — "everybody" wants to be part of it — it will not be unusual to find auxiliaries with doctoral degrees, particularly in some areas of study as for example, the exact and natural sciences.

At the UBA, 57% of the faculty has completed an academic program beyond undergraduate studies, but only 18% of this percentage holds doctoral degrees. Breaking this number (57%) down into professors and auxiliaries, within the former, 67.5% has graduate education and from them, 26.1% has completed a doctoral program. On the other hand, 54.9% of auxiliaries have completed a graduate school program, but only 16.8% are doctors (UBA, 2011a). Thus, and even though there is a difference between professors and auxiliaries regarding their academic credentials, it is not possible to speak about a significant distinction between both categories.

Regarding salary policies, the UBA structures the internal academic labor market in two layers: those who are paid for their activities and those who are not. More than 20% of professors work without monetary compensation (UBA, 2011a). On the other hand, 33% of auxiliaries work *ad honorem* implying that 1 out of 3 are somehow "discriminated." At this point, it is worth mentioning that for this group,

all part-time academics, working without getting a salary is a personal choice, expecting to get a rented position in the near future. Independently of the school, the UBA, as an elite institution, has enough prestige to attract potential academic workers who are willing to be part of the unpaid group. And although there are some differences between professors and auxiliaries in terms of salary policies, I found that decisions about who gets paid and who does not are somehow distributed uniformly, avoiding a clear stratification between both categories.

In sum, when analyzing the internal academic labor market at the UBA, the existence of a DLM taking place inside the institution does not remain clear. Although there are some differences between both categories (professors vs. auxiliaries) in terms of the type of contract (full vs. part-time), academic qualifications and remuneration policies among groups are not different enough to conclude that auxiliaries are working within a secondary labor market in relation to professors.

Differences in the Internal Labor Market: Quasi-Private Versus Bureaucratic Dynamics at the UBA

Now I will not analyze two hierarchical levels (professors vs. auxiliaries), or the type of contract under which professors are recruited (full vs. part-time), but two schools. Specifically, I will evaluate the School of Natural and Exact Sciences (SNES) and the School of Economic Sciences (SECS). The objective is to see if each academic unit is working in a different internal market and, if so, if differences are stark enough to conclude that DLM dynamics are present at the UBA. These two academic units were chosen under the logic of a purposive sample. This is a non-probability sampling method in which each academic unit presents some organizational traits that represent the issues to be studied (Schutt, 2004). The rationale behind the selection lies in the interest to explore schools that ex-ante present stark structural and organizational differences and opposite or different goals. SNES is basically a research intensive unit, while the main objective of SECS is to train professionals for the external labor market. However, there are some similarities that make the analysis more attractive. There is no wage differentiation between schools; the opportunity cost of salaries is not taken into account. This makes it less appealing for some faculty members to stay as full-timers when jobs outside the university are available. I also recognize that differences between basic science and professional academic units in the way they are organized are common traits found in most Latin American countries. Then, the DLM hypothesis is used as a theoretical framework to describe those different organizational dynamics find in schools that have dissimilar academic objectives and present different opportunity costs.

In relation to the academic credentials of professors and researchers, differences between the SNES and the SECS are clear. Also, the ratio between full and part-time contracts between academic units differs. It is evident that each school chooses its own organizational arrangement in order to better serve their academic requirements or purposes. Specifically, each defines the structure where administrators, faculty members and students interact according to their own needs, restrictions and culture.

The SNES and the SECS secure its academic operations by using opposite strategies or organizational approaches. Working under "financial restrictions", the SECS is pushed to work into *quasi-private dynamics*, the first approach, to secure its operational funds. In order to survive, this academic unit is pushed into the "external market" to get extra resources. With more than 36,000 students (2011) and real market power, the SECS is able to collect funds through the sale of services (UBA, 2011b). As a consequence, this unit only gets 35% of its total revenues through bureaucratic negotiations with the administration of the university. On the other hand, the SNES works under *bureaucratic dynamics*, the second approach, and has an edge over the former in terms of financial availability. Securing enough operational funds through political negotiations with the administration of the UBA, it gets its main resource in the "internal market." With less than 7100 students, 95% of their operational resources are assigned bureaucratically from funds distributed by the Ministry of Education (UBA 2013).

Quantitative and qualitative differences, such as the proportion of full-time versus part-time positions, or the percentage of faculty with graduate education, are clear between schools. For example, at the SECS only 7% of professors have doctoral degrees and more than one-third have only undergraduate education.

Table 1 Breakdown of faculty members according to the maximum level of education in two schools in the UBA

School	*Professors*			*Auxiliaries*		
Maximum level of education	*Undergraduate (%)*	*Graduate other than doctorate (%)*	*Doctorate (%)*	*Undergraduate (%)*	*Graduate other than doctorate (%)*	*Doctorate*
School of Economic Sciences	35.7	57.3	7.0	54.0	45.8	0.2
School of Natural and Exact Sciences	5.6	31.3	63.1	37.6	42.6	19.8

Source: UBA (2011a).

However, at the SNES almost 20% of auxiliaries are doctors, and more than 60% of its professors have completed a doctoral degree (see Table 1). The stock of academic human capital is larger at the SNES.

One characteristic that makes the academic market less attractive for some professors than for others is that at the UBA there is no salary differentiation among faculties that work in different schools. At the UBA, wages are defined by ranks and seniority and independent from the academic unit. The same happens for auxiliaries. The opportunity cost of salaries is not taken into account. Consequently, there are fewer incentives for faculty members to get better academic credentials when job alternatives are available outside the academia. For example, it is relatively easier for an undergraduate in business administration to get a better payment in the private market than for an undergraduate in physic[3]. In fact, while almost 50% of professors at the SECS have a job outside the university, generally the main source of income, less than 10% at the SNES have an alternative position other than his or her activities at the university (UBA, 2011a). It must be taken into account that opportunities outside the UBA are relatively scarce for faculty members that work at the SNES. This is because the demand for researchers in the fields of mathematics, physics and chemistry in the private market is scarce. We must bear in mind that in these fields of study, the national university offers more than 5 jobs for every position available in private firms (MINCYT, 2015).

Under the same rationale, it is not unusual to see larger percentages of full-timers in those schools where academics face a lower opportunity cost. Thus, it is simple to understand why the SNES has 52.2% of professors and 17.4% of auxiliaries working under full-time positions. On the other hand, only 2.6% and 0.5% of professors and auxiliaries are full-time faculties, respectively, at the SECS (see Table 2). Then, it is not surprising to infer why some schools work as research centers while others operate more as teaching units under a professional profile. For these latter, having a larger pool of full-timers is not a key requirement to cement its academic reputation.

On the other hand, it is also true that some epistemological characteristics can also explain the increasing use of part-timers in some academic fields. Job experience gained outside the academia is of paramount importance in some professional disciplines. On-the-job training explains an important part of an

Table 2 Breakdown of faculty members according to their academic status in two schools in the UBA

School	*Professors*		*Auxiliaries*	
	Full-time (%)	*Part-time (%)*	*Full-time (%)*	*Part-time (%)*
School of Economic Sciences	2.6	97.4	0.5	95.5
School of Natural and Exact Sciences	52.2	47.8	17.4	82.6

Source: UBA (2011a).

individual's human capital endowment. It could be said that, in general, professors at the SECS are specialists who have stable positions outside the academia. This can be seen as an academic strength for those careers oriented to the labor market. Likewise, available financial resources are also a good proxy indicator to explain how a school determines the ratio of full-time versus part-time faculties. Economic resources, as an exogenous variable, play a key role at the moment of choosing the most efficient and feasible organizational structure under a cost–benefit analysis.

A sharp differentiation between schools surges when analyzing the total amount of funds per student (see Table 3). Through bureaucratic negotiation, the SECS receives 16 cents in federal funds per student by each ($) peso got by SNES. This situation forces the SECS into going into private realms to compensate for this difference. Given that universities are not allowed to charge tuition fees for undergraduate education, extra resources mainly come through the sale of services other than tuition, although students pay for their schooling at the graduate level of education. However, at the end of the day, the SNES invests $AR 28,066 per student each year. On the other hand, the overpopulated SECS spends less than half this amount. Only $AR 11,946 are distributed per student (UBA, 2013).

Of course this significant disparity in the amount of funds per student that is bureaucratically distributed is not a direct consequence of discrimination but field of study differentiation. On the one hand, with five times more students than in SNES, there are economies of scale at SECS. On the other hand, the acquisition of modern equipment and cutting edge apparatus to perform advanced research in the SNES is expensive. State support is critical for developing a state-of-the-art laboratory and up to international standards. Also, more available resources per student explain why full-time positions dominate at the SNES.

Beyond some intrinsic traits that determine how each field of study behaves and why each academic unit differs from the other, the relatively scarcity of funds at the SECS also clarify why this unit chooses a different organizational design to perform their activities. I can speculate that this is one of the reasons why a larger percentage of faculties at this school works *ad honorem*. This group of faculty members receives no payment for their academic duties (see Table 4).

Table 3 Total revenues per student at two schools in the UBA

School	*Total federal funds per student* $AR (*a*)	*Total own generated funds per student* $AR[a] (*b*)	*Total funds per student* $AR (*a* + *b*)
School of Economic Sciences	4203	7743	11,946
School of Natural and Exact Sciences	26,633	1404	28,037

[a] Own funds are revenues generated by each school through the sale of services.
Source: UBA (2011b, 2013) and own calculations.

Table 4 Breakdown of faculty members according to their monetary status in two schools in the UBA

School	*Professors*		*Auxiliaries*	
	Salary earners (%)	*Ad honorem (%)*	*Salary earners (%)*	*Ad honorem (%)*
School of Economic Sciences	85.0	15.0	22.4	77.6
School of Natural and Exact Sciences	99.6	0.4	99.5	0.5

Source: UBA (2011a).

As already stated, human resources trained in business and economic disciplines are more employable outside the academic market than mathematicians, physicists or chemists, particularly in countries where research activity in private firms is scarce or almost nonexistent[4]. Then, working in the academia "for-free" during a period of time may not be so critical. This may help to explain why the SECS relies so much on part-time faculties, with more than 77% of auxiliaries working *ad honorem* (UBA, 2011a).

In sum, the existence of certain features that define a DLM is somewhat clear at the UBA. Relatively speaking, a primary market may be evident at the SNES. With a relatively larger percentage of full-time positions, this academic unit may offer greater job stability. In addition to this, given the fact that public research funds are distributed according to the number of hours each faculty member works, more full-time positions are translated into a greater access to additional resources. Furthermore, more than 99% of teachers (professors and auxiliaries) at the SNES receive a salary for their work. This is almost 15 percentage points more in comparison with the SECS. In addition to this, 94.4% of the faculty body at the SNES has graduate studies meaning a better academic endowment of human capital. On the other hand, and relative to the latter, a secondary market is present at the SECS. Only 2.5% of professors and 1.1% of auxiliaries have a full-time position (UBA, 2011a). This implies a larger proportion of faculties weakly tied to the academia. Moreover, 15% of professors and 77.6% of auxiliaries work *ad honorem*, which means obtaining neither pecuniary rewards for their work nor access to research funds. The relative scarce proportion of professors with master or doctorate degrees found in the SECS implies a lower endowment of human capital in comparison with the SNES. All these features are generally present in a secondary market.

Conclusion and Discussion

The university labor market in Argentina, as is the case in much of the region and the world, is basically a part-time faculty phenomenon. And the UBA is not an

exception. However, it is not the proportion of part-time positions per se or the relationship between tenured and non-tenured professors what promotes the development of a DLM in academic settings. Some organizational features that distinguish an academic unit in relation to others, including the profile of the human resources employed by each, might generate the necessary conditions for the appearance of a primary and a secondary market cohabiting within an institution. One main characteristic of the schools under analysis is that there is no competition for resources between both, as happens in an external market. Each academic unit cohabits with almost no relation or interaction with each other, feature that characterized a loosely coupled organization. Also, each has its own "formal and "informal" sectors, as defined in the DLM hypothesis, where the latter, the "informal," is more evident in the SECS than in the SNES.

In addition to this, market dynamics, or external pressure, plays a role at the moment a school chooses an organizational structure to better serve an academic mission. I can presume that a combination of endogenous (epistemological characteristic of the discipline) and exogenous (market forces) factors determines the way each academic unit defines its organizational arrangement. As loosely coupled academic units, schools are able to persist or survive despite radical changes in the environment. This allows for sub-system breakdown without damaging the entire organization. Differentiation is a rational behavior in order to survive. Then, some academic units present similar organizational behaviors commonly found in a secondary market, while others have attitudes more aligned with what defines a primary market. As rational entities, each school organizes its internal academic market in order to maximize its productivity. In the end, faculty members traditionally feel much more committed to their discipline than to the university (Altbach, 1997).

Even though the SNES and SECS cases revealed the coexistence of two internal academic labor markets operating under a different set of rules, rituals and incentives, I consider these organizational differences necessary, but probably not sufficient conditions to conclude a clear presence of a DLM at the UBA. However, it is possible to affirm that relatively to SNES, SECS presents some features more attuned to a secondary market. Working under bureaucratic dynamics, the SNES secures a relatively larger level of funds than the SECS. Needless to say that this academic unit invests almost five times more per student than the latter (UBA, 2011b; 2013). Consequently, it has the power to recruit a larger amount of full-time faculties with greater job stability and higher academic credentials. This relative economic advantage allows for a lower percentage of faculty members working *ad honorem*. Also, the higher percentage of professors with graduate education enables this school to have a better stock of academic human capital.

Labor conditions also differentiate a primary from a secondary market. The number of students per faculty member is a good proxy to determine working labor status. For example, fewer students per faculty imply a better labor environment

with more available time for issues with higher personal private returns, as for example doing research. Within this context, academics at the SNES also have an edge on faculty members at the SECS. While the former has a total of 4.8 students per faculty, the latter has 17.5. Also, a smaller proportion of full-timers and more faculties working *ad honorem* at the SECS imply lower job stability, no personal office and thus worse working conditions (UBA, 2011a, b).

Although there is an intrinsic need for building a more robust stock of human capital in those academic units where research is highly promoted, it is evident that the market also plays its role. For example, if the university has no monopsony power in the labor market, the opportunity cost of leaving the academia looking for an alternative job outside the university is lower. In other words, it is costly to stay in the academic market as a full-time professor. In this case, having a doctoral degree is not paramount to find a full-time employment in the academia. This is the case at the SECS. By staying in the university market, graduates in accountancy and business administration, for example, face a relatively higher opportunity cost in comparison with professors in the SNES. Also, having a doctoral degree in social sciences, for example, is not fundamental to get a job and a good salary outside the university. As a matter of fact, only 9.1% of graduate students in social sciences pursue a doctoral degree, while in the exact sciences, where the university is the main employer in the market, this figure rises up to 83.4% (SPU, 2016). As I said, salaries at the UBA depend on seniority and academic ranks. Consequently, regardless of the school, all faculty members get the same payment. The opportunity cost is not taken into account. Then, the higher proportion of part-timers at SECS should not surprise.

To conclude, I found that distinction between both schools is stark and not only the consequence of field differentiation. Obviously, the epistemological characteristics of the field have a say regarding the way each unit organized itself and evolved. Indeed, there is an explanation that links up those epistemological characteristics and the way individuals approach that inquiry (Becher, 1984). And even though it is not possible to clearly conclude the presence of a DLM operating at the UBA, it is evident that in relation to the SECS, the SNES presents many of the features that are found in a primary labor market. Also, it is worth saying that although the DLM hypothesis proves an alternative framework to analyze structural differences between internal labor markets, it also presents some shortcomings. For example, there is no salary differentiation between schools, while the theory characterized the secondary market as a low-waged one. Also, as opposite to the secondary sector in the DLM approach, there is no gender distinction in terms of salary at the UBA. In this sense, some of the claims of the dual labor topology have been relaxed. However, the DLM hypothesis proves beneficial to differentiate organizational dynamics found in professional versus academic units. In this sense, given the growth of the non-university sector in terms of number of students, the variety of institutions and distinctions of status in relation to the university market,

it would be worth investigating if the DLM hypothesis is a good framework to analyze organizational differences found in each sector.

Compliance with ethical standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Notes

1. Adjunct is a category independent of the number of hours. An adjunct faculty can be either a full or part-time professor.
2. If we change the definition of full-timers adding those who work more than 20 h, the percentage of full-time faculty at UBA increases from 9.4 to 19.5%. Also, if we count only professors keeping aside auxiliaries, the percentage of full-time professors grows to 18.3% and 34.4% if we sum only those who work 40 h and more than 20 h, respectively. On the other hand, if we incorporate to the analysis faculties that work *ad honorem* counting them as part-time positions, the number of full-timers would drop to 7.2% (UBA, 2011a).
3. There are 52,031 places available for researchers in the national university, whereas private firms offer only 9827 positions (MICYT, 2015).
4. In 2015, Argentina spent 0.63% of its gross domestic product (GDP) on research and development (R&D); Japan and the US 3.12% and 2.62%, respectively. From that low percentage, 29.7% corresponds to public universities and 21.5% to business enterprises (MINCYT, 2015).

References

Altbach, P. (1997) 'Problems and possibilities: The U.S. Academic Profession, in P. Altbach and M. Filkenstein (eds). *Contemporary Higher Education: The Academic Profession*, New York: Garland Publishing, pp. 3–20.

Althauser, R.P. and Kalleberg, A.L. (1981) 'Firms, occupations, and the structure of labor markets: a conceptual analysis', in I. Berg (ed.), *Sociological Perspectives on Labor Markets*, New York: Academic Press, pp. 119–149.

Barbier-Gauchard, A., De Palma, F. and Diana, G. (2014) 'Why should southern economies stay in the Euro Zone? The role of labor markets', *Economic Modelling* 43(C): 201–208.

Baron, J. (1984) 'Organizational perspective on stratification', *Annual Review of Sociology* 10(1): 37–69.

Becher, T. (1984) 'The cultural view', in B. Clark (ed.), *Perspectives in Higher Education: Eight Disciplinary and Comparative Views*, Berkeley: University of California Press, pp. 165–198.

Becker, G. (1971) *The Economics of Discrimination*, Chicago: The University of Chicago Press.

Bernasconi, A. (2009) *Gestión del cuerpo académico en las universidades chilenas: La institucionalización de la profesión académica en un contexto de mercado*. Paper presented at the International Seminar: The Future of the academic Profession: Challenges for Emerging Countries; 30 March, Buenos Aires, Argentina.

Blau, P. and Duncan, O. (1967) *The American occupational structure*, New York: Wiley.

Dirección Nacional de Información y Evaluación de la Calidad Educativa (2017) *Anuario Estadístico Educativo 2017*. https://www.argentina.gob.ar/educacion/planeamiento/info-estadistica/anuarios. Accessed 16 May 2018.

Doeringer, P. and Piore, M. (1971) *Internal Labor Markets and Manpower Analysis*, Lexington, Massachusetts: Health Lexington Books.

Edmonds, D. (2015) 'More than half of college faculty are adjuncts: should you care?' *Forbes*, 28 May.

Eichhorst, W. and Kendzia, M. (2016) 'Workforce segmentation in Germany: from the founding era to the present time', *The Journal of Labour Market Research* 49(4): 297–315.

Gappa, J. and Leslie, D. (1997a) *Two Faculties or One? The Conundrum of Part-timers in a Bifurcated Work Force*, Washington: American Association for Higher Education.

Gappa, J. and Leslie, D. (1997b) 'Employment profile of part-timers', in P. Altbach and M. Filkenstein (eds.) *Contemporary Higher Education: The Academic Profession* New York: Garland Publishing, pp. 3–20.

Hicks, J. (1963) *The Theory of Wages*, London: Macmillan.

Lemelle, A. (2002) 'The effects of the intersection of race, gender and educational class on occupational prestige', *The Western Journal of Black Studies* 26(2): 89–97.

Mangan, J. (2000) *Workers Without Traditional Employment: An International Study of Non-standard Work*, Cheltengam: Edward Elgar Publishing Limited.

Ministerio de Ciencia y Tecnología (2015) *Indicadores de Ciencia y Tecnología. Argentina 2015*, Buenos Aires: Ministerio de Ciencia, Tecnología, e Innovación Productiva.

Organization for Economic Co-operation and Development (2015) *Employment Outlook 2015*, Paris: OECD Publishing.

Oi, W. (1962) 'Labor as a quasi-fixed factor', *Journal of Political Economy* 70(6): 535–555.

Pager, D. and Shepherd, H. (2008) 'The sociology of discrimination: racial discrimination in employment, housing, credit, and consumer markets', *Annual Review of Sociology* 34(1): 181–209.

Passaretta, G. and Wolbers, M. (2016) 'Temporary employment at labour market entry in Europe: labour market dualism, transitions to secure employment and upward mobility', *Economic and Industrial Democracy* 40(2): 1–27.

Picault, J. (2013) 'Unionization and labour-market discrimination: a closer look at non-unionized workers', *Labour* 27(3): 272–287.

Piore, M. and Sable, C. (1985) *Second Industrial Divide*, New York: Basic Books.

Roemer, R. and Schnitz, J. (1982) 'Academic employment as day labor: the dual labor market in higher education, *Journal of Higher Education* 53(5): 514–531.

Schutt, R. (2004) *Investigating the Social World: The Process and Practice of Research*, Thousand Oaks: Pine Forge Press.

Secretaría de Política Universitaria (2016) *Sistema universitario*. http://portales.educacion.gov.ar/spu/sistema-universitario/. Accessed 16 May 2017.

Secretaría de Políticas Universitarias (2013) *Anuario 2013*. https://drive.google.com/file/d/1wPoQYcn5lb-YDfl2W-OxgwuoWS2jkBdo/view. Accessed 16 May 2017.

Siegwarth Meyer, C. and Mukerjee, S. (2007) 'Investigating dual labor market theory for women', *Eastern Economic Journal* 33(3): 301–316.

Stigler, G. (1962) 'The economics of information', *Journal of Political Economy* 70(2): 94–105.

Sullivan, T. (1981) 'Sociological views of labor markets: some missed opportunities and neglected directions, in I. Berg (ed.) *Sociological Perspectives of Labor Markets*, New York: Academic Press, pp. 329–346.

UBA (2011a) *Censo de Docentes*. http://www.uba.ar/contenido/294. Accesed 20 November 2018.

UBA (2011b) *Censo de Estudiantes*. http://www.uba.ar/contenido/294. Accesed 20 November 2018.

UBA (2013) *Presupuesto*. http://www.uba.ar/contenido/98. Accesed 20 November 2018.

Weick, K. (1976) 'Educational organizations as loosely coupled systems', *Administrative Science Quarterly* 21(1): 1–19.

Williamson, O., Wachter, M. and Harris, J. (1975) 'Understanding the employment relation: the analysis of idiosyncratic exchange', *Bell Journal of Economics* 6(1): 250–278.
Youn, T. (1988) 'Studies of academia markets and careers: an historical review', in D. Breneman, and T. Youn (eds.) *Academic Labor Markets and Careers*, New York: The Falmer Press, pp. 8–27.