

The Limits of Academic Merit in Chile: How Social Class of Origin Influences the Careers of Academics with Doctorate Degrees

This dissertation addresses a classical question in the field of higher education: To what extent does the social class of origin of doctorate holders affect their opportunities in the labor market? I addressed this question looking at the case of Chile; a country that until recently figured as a model of economic growth and political stability in the Latin American region. Chile, relatively well-known in the USA for his wine and his political history, is an interesting example of emerging economies that have set “higher education” as the main vehicle of economic and social progress.

Nonetheless, research shows that the promise that higher education is a means for upward social mobility is constrained by the unequal concentration of wealth in the country. Indeed, the deep roots of socio-economic inequality of Chile are equivalent to nations like Zimbabwe whose level of poverty is 20 times greater than the Chile’s level of poverty. Such level of income inequality was one of the major causes that triggered the social unrests of October 2019, which stopped the country for over two months in 2019.

My three-article dissertation provides concrete evidence of how such matrix of inequality operates among doctorate holders, who represent less than 1% of the workforce population of the country and are typically seen as the intellectual elite of the country.

In what follows, this 10-page summary is organized in three parts. First, I briefly explain the contribution of my work to the field of doctorate education. Then, I explain the research questions and methods used in each of the three articles. Finally, I offer a short poem that summarizes my findings and the heartfelt motivation of this dissertation.

Contribution to the international field of doctorate education

Social class is one of the main variables that explain the social stratification of countries. Yet, the field of doctorate education has barely paid attention to the ways in which social class of origin of doctorate holders, typically measured by the level of education and occupation of parents, affects their work opportunities after PhD completion. As described by some scholars, “measuring” and “qualifying” the effects of social class of origin on the career of doctorate holders poses an interesting methodological problem. Doctorate holders have spent at least 20 years studying and have overcome many educational milestones, which made them already a very selective and biased group of the workforce. Likewise, individuals embark on the decision of conducting a doctorate degree when they are already independent of their parents, and there are other agents of socialization in their life that are shaping their decisions, such as romantic partners, employers, and friends. Different to race and gender, social class of origin is supposed to be an imperceptible variable among doctorate holders due to their prolonged socialization into the academic culture.

As such, this dissertation addressed the methodological challenge by looking at the phenomenon from three angles. The first article of my dissertation offers a quantitative methodology to **identify** social class of origin (latent class model) of doctorate holders relying on proxies of social class of origin. Likewise, it offers a model to account for the accumulated effect of social class throughout the unequal access to prestigious university.

The second article offers a qualitative approach that analyzes how processes of faculty hiring may exert (un)conscious social class bias in the evaluation and selection for the short list of candidates (four academic departments in engineering and three academic departments in economics).

Finally, the third article is a qualitative study on how doctorate holders went about to find their academic jobs, paying especial attention to how social class influenced their chances of developing academic networks with senior professors who participate in faculty hiring decisions.

The triad of articles allowed me to address the methodological problem of “measuring” and qualifying the effect of social class of origin among doctorate holders. To a certain extent, my dissertation set a precedent about the relevance of considering social class of origin as a key variable in the projects that track the career of doctorate holders worldwide.

The Dissertation

The number of doctorate graduates in Chile has almost doubled in the last decade (RICYT, n.d.). Expansion of undergraduate enrollment – estimated to have grown from 400 thousand in 1998 to 1.15 million in 2018 (MINEDUC, 2018) – and 10,000 doctoral fellowships awarded from 2008 to 2015 – has likely increased the number of individuals from working class backgrounds interested in pursuing a doctorate (CONICYT, 2016, 2018). In this context of expansion and diversification of the population with doctorate credentials, a key question for educational scholars is to understand how the PhD degree enables individuals from different social backgrounds to compete for a position in the labor market. This question is particularly relevant for a country like Chile, which ranks fourth in the list of Latin American countries with the highest levels of income inequality (The World Bank, n.d.).

This income inequality is reflected at all levels of social life (PNUD, 2017), including the type of educational institutions that people from different classes attend from preschool to university. Some research shows that this chain of cumulative socioeconomic (dis)advantages associated with the social class of origin persists among college degree completers, even among those who graduated from the same undergraduate program and universities of equivalent prestige (Núñez and Gutiérrez, 2004; Urzúa, 2012).

However, significantly less is known at the doctoral level. Indeed, reliable data about the social class of origin of the population with doctorate degrees does not exist in Chile. Some data that describe doctorate fellowship recipients between 2008-2015 show that around 29% of the fellows went to public high schools, which in the context of Chile is associated with low social class of origin. The remaining 70% is equally distributed between doctorate recipients who went to private high schools (upper class) and subsidized high schools (middle class) (CONICYT, 2016, Mizala and Torche, 2012).

Further, empirical evidence regarding the career paths of doctorate holders in Chile is not only scarce (Brunner et al., 2010; MINECON, 2015, 2016; Pinto, 2016), but it has paid little attention to whether job opportunities differ significantly among doctorate holders who grew up in different social class groups. Likewise, literature on faculty careers in Chile, whose ranks include both doctorate holders and professionals with lesser academic credentials, is an emerging field of study (e.g. Bernasconi, 2008, 2010; Berríos, 2014a, 2014b; Celis and Kim, 2018; González, Brunner, and Salmi, 2013; Véliz-Calderón et al., 2018). Official figures show that around 80% of the doctorate holders living

in Chile work in the academic sector (MINECON, 2012, 2015), but no empirical study has analyzed how and to what extent social class of origin influences the careers of faculty with doctorate degrees in Chile. Similarly, the international literature on doctorate education and faculty has paid little attention to the role of social class of origin on the careers of faculty, as compared with the number of studies that have analyzed the effect of gender and race on faculty income and promotion (Jungbauer-Gans and Gross, 2013; Torche, 2018; Oldfield, 2010).

The three articles in this dissertation contribute to filling this knowledge gap using a mixed-method approach, that progresses from a quantitative analysis into qualitative analysis on the processes of faculty hiring and mechanisms to find faculty jobs (Creswell, Piano, and Clark (2011)). The first article quantitatively estimates the direct and indirect effects of social class on faculty income; whereas the second and the third articles qualitatively analyze the faculty hiring process and the strategies that early-career doctorate holders employ to secure faculty jobs, respectively. Conjointly, these three articles answer two overall questions: To what extent does the social class of origin of faculty in Chile influence their career? What are the mechanisms of social class reproduction in Chilean academia?

To conceptualize social class and the mechanisms of social reproduction, I heavily rely on Bourdieu's theoretical work (Bourdieu, 1983; 1985, 1987) and the work of Bourdieu and Passeron (1977) on how education as a field reproduces the inequalities of society. Social class positioning depends on the amount and exclusivity of different types of capital—economic, social, and cultural—that individuals use to secure a position that guarantees power and status.

The first article - *Unfolding the Effects of Social Class of Origin...*- utilizes the Career Doctorate Holders survey (version 2011) to identify the social class of origin of doctorate holders and estimates the direct and indirect effect of social class of origin on faculty levels of income. A latent class analysis (LCA) (Wang and Wang, 2012) was conducted, using several of the survey's variables, to identify the social class of origin of the doctorate holders. In this analytical framework, social class of origin is an unobserved characteristic among the current doctorate holders, but it is manifested in the type of high school attended (public, subsidized, and private) and the level of parents' education. Four categories of social class groups were identified –upper, middle-upper, middle-low, and low –.

Then, a path analysis was conducted to account for the cumulative effect of social class on the faculty members' level of income. Findings confirm the hypothesis that social class of origin has a significant *indirect effect* on faculty income, associated with the unequal opportunities to attend prestigious undergraduate and PhD-granting universities for individuals of different social class backgrounds. It also shows that coming from the lowest social class group (none of the parents finished high school, all attended public high schools) has a *direct effect* on income, even after controlling for the level of prestige of undergraduate and PhD universities and other relevant variables. Doctorate holders from the lowest social class group receive around USD2,300 dollars less annually in income¹, as compared to their upper-class peers (both parents had a college degree, attended private high school), keeping all other factors equal. Doctorate holders from middle-upper

¹ Estimation was conducted considering that the effect of low social class group is 0.07SD on income. Income was reported in a seven-point scale interval that ranges from USD 13,900 to USD 159,000. Currency exchange 1USD=607CL.

and middle-low social class do not report statistically significant difference in their salary as compared with their peers from upper social class.

This latest finding raised several questions concerning how academic departments conduct faculty hiring processes in Chilean academia and whether the hiring procedures exert a potential negative bias against individuals from the lowest social classes of origin. It also posed potential lines of inquiry about the role of academic networks in securing tenure track positions, as compared with the scientific productivity of doctorate holders.

To answer the questions above, I conducted a qualitative case study on the processes of faculty hiring at industrial engineering and economics departments at four universities. A maximum variation technique (Merriam, 2009) was used to identify universities located within the same geographical area (Metropolitan Region), but that have a different ownership status (private traditional, public, new private) and represent different levels of research capacity, institutional prestige and sociodemographic profile of undergraduate students.

I conducted semi-structured interviews (Patton, 2001) with 46 faculty who have directly participated as faculty hiring committee members or have been involved in faculty hiring decisions. I selected economics and industrial engineering departments because these fields represent academic fields that have a higher degree of professionalization of their academic career (Bernasconi, 2010) and offer undergraduate programs that are in high demand of undergraduate enrollment as compared with other disciplinary fields (MINEDUC, 2018).

Together, these characteristics assume that academic departments in these fields are particularly in need of hiring doctorates to teach and conduct research in their disciplinary areas and the resources to guarantee full-time, tenure-track academic positions.

Faculty members such as deans, department chairs and faculty hiring committee members were extensively asked about the faculty hiring process conducted by their respective academic departments; this information was complemented and contrasted with a set of institutional documents about hiring policies and procedures. Additionally, all faculty were asked about their own experience searching for faculty jobs.

Drawing from this empirical evidence, the second article – “Limits of Academic Meritocracy in Faculty Hiring Processes in Highly Stratified Higher Education System: Insights from the Case of Chile” – analyzes to what extent the organizational procedures of faculty recruitment and selection of the short list of applicants adhere to the meritocratic ethos of science (Merton, 1973). The normative ethos of science, briefly described here, poses that the scientific institutions are the most meritocratic social institutions, mainly because their reward system focuses on the research outcomes or potential rather than on the socio-demographic characteristics of researchers. I selected these two hiring procedures, instead of other stages of the processes (job interviews, job talk, identification of final candidates, negotiation, final decision about hiring), because faculty are less exposed to identify candidates’ social class origin that may be manifested in other signs through face-to-face interactions (e.g. linguistic cues, dressing code, appearance, etc.). During recruitment and shortlisting of applicants, faculty in hiring committees are supposed to evaluate candidates just on paper.

Findings show that not all academic units have open recruitment procedures and formal job search committees for recruiting candidates. Likewise, academic departments within the same

disciplinary field receive a different number of applications according to their levels of research capacity. Academic departments are seeking candidates who have a high number of publications, have graduated from top-ranked international universities, have teaching and disciplinary expertise in the areas needed by the academic departments, and are likely to accept the job offer. These criteria, for the most part, go along with the meritocratic principle discussed earlier, but findings show that faculty make a subjective valuation on the likelihood of “who is more likely to accept the job offer”; that leaves a lot of room for unconscious bias.

All academic departments lack mechanisms to prevent conscious and unconscious bias in hiring processes. Faculty in hiring committees, at economics units, in particular, exclude two types of candidates: a) the candidates that seem very competitive and likely will receive invitations for job interviews from a good number of top-ranked universities; and b) the candidates who belong to other academic networks and probably will accept a job offer from their respective network.

Finally, the third article – Seeking a Faculty Job: Exploring the Relationships between Social Class of Origin and Hiring Networks in Chilean Academia – analyzes how early-career faculty in engineering (N=10) used their academic networks to find their current faculty jobs.

The goal of this latest article was to elucidate how the social class of origin influences the configuration of networks that enable individuals to secure a faculty job. To develop this article, I exclusively considered the group of early career academics who held a doctoral degree in engineering and were working in engineering departments. Faculty in engineering represented a more diverse social class background than faculty in economics. Findings show that social class of origin mediates the academic network configuration of faculty-job seekers through unequal opportunities for attending prestigious Chilean undergraduate universities, and subsequently, unequal chances of studying for a doctorate at top-ranked foreign universities. Only upper-class candidates who completed their doctoral studies at top international universities were capable of securing positions at the top research-intensive Chilean universities. Nevertheless, findings also show that these conditions – upper-class and foreign PhD credentials – do not guarantee a faculty position, unless faculty job seekers have ties with professors who are involved in hiring decisions or demonstrate exceptional research productivity.

Mechanisms of social class reproduction. Findings from the three articles confirm that a good number of individuals from low social class groups have completed their doctorate degrees, partially due to the considerable investment in PhD fellowships sponsored by the Chilean government to study in Chile and abroad. The first article – “Unfolding the direct and indirect effects of social class of origin on faculty income” – shows that social class of origin has an indirect effect on income through unequal chances of entering prestigious universities. It also shows that coming from the lowest social class has a direct effect on income, which raises the hypothesis that there may be barriers of access to compete for the highest-paid faculty positions that cannot be sorted out through education.

Indeed, the other two articles reveal that there are three main mechanisms, that occur during the faculty hiring process, that contribute to preserving the gap between academics from different social class backgrounds. Specifically, the second article – “The Limits of Academic Merit in Chile...” – on how academic departments conduct recruitment and shorten the list of applicants shows that the first mechanism of social class reproduction in Chilean academia occurs through networks. The article – “Seeking Faculty Jobs” – demonstrates that the connections established with professors and peers

during undergraduate study then become the main point of contacts to find out about Chilean faculty jobs for the doctorate holders who studied abroad. Due to the strong association between students' social class of origin and prestige of the undergraduate university, academic departments that intentionally favour undergraduate alumni (inbreeding) in their faculty hiring will end up reproducing the stratification of the undergraduate level in the processes of faculty hiring. Consequently, this practice restricts the possibility that doctorate holders who come from the lowest class get faculty positions at the most prestigious universities in Chile and vice-versa.

The second mechanism through which social class gets reproduced in the careers of faculty is through unequal access to prestigious doctoral universities. The article "The Limits of Academic Merit" reveals that academic departments, particularly in economics with a great number of applications, use the level of prestige of the PhD-granting university as a shortcut for reducing the number of applicants, or as a criterion for shortening the list of who will receive a job call. Using this selection criterion (un)intentionally favours candidates from upper social classes, mainly because the prestige of PhD-granting universities is measured by international university rankings that disproportionately favour the model of research-intensive universities located in non-Spanish-speaking western industrialized countries. Access to top-ranked, prestigious foreign universities not only requires an understanding of how to apply to postgraduate programs at such universities but also proficiency in a foreign language, which in the Chilean context is closely associated with upper-middle or upper social class. Also, the article "Seeking Faculty Jobs..." reveals that intending to apply to top-ranked foreign universities requires a situation where the doctoral student is free of financial responsibility of contributing to familial income. Such obligations are often the duty of doctorate holders from low social class of origin.

Finally, the third mechanism that contributes to maintaining the effect of social class along the careers of academics is the lack of formal procedures that account for and prevent conscious and unconscious bias in faculty hiring processes. As the second article of this dissertation showed, faculty in hiring committees make several subjective calculations concerning which candidates are likely to accept the faculty job to select the short list of applicants. Lack of critical analysis on how processes of recruiting and hiring criteria could exert unconscious biases by class (or gender, race, immigration status) exacerbates, or at least reproduces, the effect of social class of origin transferred through networks and the prestige of PhD-granting and undergraduate universities.

These three social-class reproduction mechanisms do not neglect the principles of the human capital or knowledge economy, that hold education and scientific knowledge to be a catalyst of economic and social prosperity. Indeed, the stories of doctorate holders from low and middle class show that they were able to climb up the social structure, but the findings of this dissertation show that there is a limit in the equalizing power of gaining specialized skills and the doctorate credential per se. This limit has a lot to do with the willingness of employing institutions, particularly the most prestigious ones, to call into question the premises and rationales that define "who is included and excluded" in the short list of applicants who will receive a job interview. Critical reflection on the multiple biases of the hiring process that might favour individuals with a specific social class background (or gender, race, nationality, etc. to the extent these work similarly to class) might not change "who" tends to get the faculty job", due to structural conditions of access that might still restrict individuals from low social class from completing graduate education. Nonetheless, knowing

and naming these biases would at least guarantee more awareness and open the potential for change in practices of hiring.

As Zen teachings explain, awareness will not solve the problems of the world or change the current conditions of high social inequality that Chile has, but allows us to become conscious of the roots of the problem and be more cautious about the promises attributed to education and knowledge in a stratified higher education system by class. I trust that this dissertation contributes to unpacking the limits of academic merit in determining individual outcomes and inspiring the questions and actions that will guarantee that higher education actually exerts more fully its power of equality and liberation.

Research findings in the format of a poem

The motivation

The promise of modernity
installed in colonial times
was a project of European minds.
They have made us to believe
that more sciences will make us free.
But, colonial roots are strong!!
Main exports are still raw!
Technology is not much used.
Private firms & government excuse
Create science capacity costs a lot.

But wasn't knowledge the engine to grow?
In the south, foreign firms don't invest
R&D in the north, they prefer.
While several statistics show
that more people with PhD
complain for the lack of jobs,
I'd like to dive a little bit more.
Knowledge for the public good
could inequalities reduce
but deeper work needs to be done.

The research

I got obsessed with measuring
the effects of education,
class, and social connections
on one's chances to get a job.
I only focused on those
who succeeded, PhD completed.
Took me a couple years to
figure it out the equation.
Education can enable better futures

for those who grew up with less.
Yet, social class groups are closed
and they prefer those who already belong.

Let' me explain what I saw.
The power game. Your fruits
are because your roots.
Sometimes, merit could lead
to formal and upward succeed.
Truth. More people from low class
became professors at once.
Yet, they still earn a lot less
than the ones with foreign last names.
Not all got the same gains.

My research shows that social networks,
-the friends- are the real treasure.
You can use whatever measure
and the formula always works.
Meet the people who know
and ask the right questions.
They will give you the suggestions
you need to get the ideal job,
The space you sought for so long...

Then, be gracious and share your lessons.

Be intentional about it
and bridge, bridge, bridge the knots
the separated, distant dots
of the wounded, societal web.
In a colonized unequal place
You only get to meet a few
who are really different to you.
School, work, love and church:
all seem organized to just reproduce.

So, go beyond and break the rules.
Be skeptical of the power you got

The invitation

Visit and make friends with those
who do not have anything common to you.
Do not keep the secrets that brought you here,
Challenge the internalized ways of being
Unfold your truth, and praxis how you want to live.

Use your voice for challenging the mechanisms
that maintain us separated; use education to question
the chains that kept us small; use knowledge to unwire the places of oppression.

Then, remember the trees of your childhood and humbly plant new seeds
Perhaps, we can harvest relationships
in ways that recognize and honor
our intrinsic connection...

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