CLASSISM, DISCRIMINATION AND MERITOCRASCY IN THE LABOR MARKET: THE CASE OF CHILE

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Documento de Trabajo Nº 208

Abril 2004

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Classism, Discrimination and Meritocracy in the Labor Market: The Case of Chile.[1]

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Abstract

This paper examines the returns to the socioeconomic background of origin (or "class") in the labor market in Chile. We employ individual data from several cohorts of graduates from the same program (Business and Economics) of a large and diverse public University in Chile. The data includes productivity measures uncommon in earnings differential studies, such as academic performance at University, school academic quality, and second language proficiency. Four measures of socioeconomic background are employed, which are significantly correlated. These are highly significant in explaining earnings despite their collinearity, and after controlling for various measures of productivity.

The class wage gaps obtained by a Oxaca-Ramson decomposition amount to approximately 25 to 35 percent, which are remarkably higher than wage gaps reported in the literature for other workers' characteristics such as gender, race and physical appearance. Moreover, the effect of class is more important in determining earnings than academic performance at University.

Future research must focus on explaining the causes of this large return to class. These may emerge from some combination of pure employer discrimination, productivity-enhancing discrimination from other parties (such as consumers, peers and suppliers), statistical discrimination by employers and "pure" class-related productivity.

[1] We are grateful to Dante Contreras, José Miguel Benavente, Pilar Romaguera, Osvaldo Larrañaga, Joseph Ramos and Rodrigo Montero for their valuable comments and suggestions. We also thank Teresa Vargas, Fernando Hoces and Graciela Pérez, who provided parts of the data.

I. Introduction

Discrimination in the labor market has received a great deal of attention from economists. The vast theoretical and empirical research done in this area has studied different forms of discrimination based on several workers' characteristics such as race, gender, ethnicity and physical appearance. Yet, discrimination may emerge also from other workers' characteristics than those commonly addressed in the literature. The purpose of this work is to study the effect on earnings of another common but neglected phenomenon: "classism" or class-consciousness.

Studying the effect of class on earnings is interesting for both efficiency and normative reasons. Labor market efficiency requires labor to be rewarded according to marginal productivity, that the division of labor exploits individual talents, and that efficient investment in human capital is driven by expected increases in productivity. These conditions are violated if class discrimination exists, as earnings would not be driven by expected productivity only. From a normative perspective, class discrimination contradicts the largely shared principles of equal opportunities and meritocracy, inhibits social mobility and perpetuates economic inequality. It also reduces the incentives of the poor to invest in human capital, being even harder for them to improve their economic condition.

Class can affect earnings for various reasons. First, class can be associated with some productivity–enhancing skills or characteristics. Some examples include the quality of education and networking skills. Second, employers can be "classists" or class-conscious in the sense of having pure preferences for hiring employees from a certain class. In this case they would be willing to sacrifice some productivity in order to hire someone from a preferred class. Third, even if employers do not class-discriminate, class-discrimination from other sources can still exist (for example from peers, consumers or suppliers). These forms of non-employer discrimination may affect an employee's productivity, which profit-maximizing employers should be concerned with. Finally, employer statistical class-discrimination would exist if employers hire an employee just because they expect his or her class to be associated with certain skills or productivity-enhancing characteristics. Since the effect of class on earnings may be caused in principle by discrimination and/or productivity effects, in what follows we shall refer to it simply as the returns to class.

Most works on discrimination have failed to fully disentangle discrimination and productivity effects in the determination of earnings because they often employ few measures of

productivity, and therefore many aspects of productivity remain unobserved by the researcher. [2] This paper employs a richer and more detailed dataset than most of the related studies on earnings differentials, which are based typically on population surveys. Our dataset contains various measures of ability and productivity uncommon in the literature, such as performance at university, school academic quality and second-language proficiency. This allows us to interpret the class effect on earnings either as caused by some form of discrimination, or caused by some unobserved source of productivity unrelated to academic merit. As long as academic performance is an appropriate measure of merit, this interpretation sheds light on the degree of meritocracy of the labor market.

We investigate empirically the returns to class employing a dataset of different cohorts of Economics and Business graduates from one large public university in Chile, regarded as one of the best of the country and of Latin America[3]. As a public and meritocratic university, it has a significant degree of socioeconomic diversity among its students. The latter plus the fact that all graduates were exposed to a common academic treatment have fairly similar jobs produce an exceptionally interesting dataset to assess the effect of class on earnings.

Chile constitutes also an interesting place to assess empirically the relationship between class and earnings. Since the Spanish conquest, Spanish and Amerindian descendants have mixed incessantly, and the size of afro-american population has historically been negligible. As a result, and except for the small current amerindian populations, "race" and "ethnicity" as such are not meaningful categories to identify and describe the vast majority of the mixed-blood chilean population, unlike other nations in the Americas.[4] Instead, we claim that class is a more appropriate characteristic to examine labor market discrimination in Chile.[5] It is well known that Chile has historically exhibited a particularly unequal income distribution even in comparison to other developing nations, being also a relatively class-segregated country.[6] Not surprisingly, as Chileans would agree, Chilean culture, language and everyday life is plagued with eloquent manifestations of class-consciousness. As we shall discuss in some detail, historians have claimed that this class-segregation can be traced back to various idiosyncratic developments of Chilean history, whose consequences may be still echoing today. In this

[2] However, see Kahn (1992), Hamermesh and Biddle (1994) and Biddle and Hamermesh (1998).
[3] University X is the only Chilean university included in a recent academic ranking of the top 500 universities of the world elaborated in January, 2004. Only seven Latin American universities appear in this ranking. See http://europa.eu.int/comm/research/headlines/news/article_03_12_31_en.html.
[4] In the 2002 census less than 5 per cent of the population declared to belong to one of the existing Amerindian ethnic groups.
[5] Of course this does not imply that there is not an association between class and genotypes, as we shall discuss later.
[6] See for example Larrañaga (2002), Ruiz-Tagle (1999) and Contreras, Morone and Fortunato (2003).

context, it is interesting to study whether contemporary Chilean society, having undergone profound market reforms since the 70s, shows signs of being a more meritocratic society.

This work is structured as follows. Section 2 defines and discusses the notion of class employed in this paper. This section also describes the dataset and explains in detail the four measures of class used in the empirical analysis. Section 3 presents the returns of class on earnings by means of earnings equations. Earnings predictions are obtained for various hypothetical combinations of class and academic performance, which sheds light on the relative importance of socioeconomic background and academic merit on the determination of earnings. Next, this section reports Oaxaca-Ramson earnings decomposition estimates and class earnings gaps. These are contrasted with earnings gaps reported in the literature for other workers' characteristics, namely gender, race and physical appearance. Section 3 ends by discussing some plausible interpretations of the class earnings gaps. Finally, section 4 presents the main conclusions and recommendations of this work.

II. Data

This article employs data from a follow-up survey conducted on a representative sample of students graduated from Business and Economics from University X in different years.[7] University X is one of the largest universities in Chile, and it enrolls students from diverse socioeconomic backgrounds. As mentioned earlier, the similar academic treatment received by the students combined with the wide disparity of their socioeconomic background produce a rich database to study the effects of class on earnings. The survey contains detailed information of each individual's performance in the labor market, as well as job and employer characteristics. It also contains information about postgraduate studies followed by the individuals. This database has been merged with data containing detailed information about each individual's socioeconomic background of origin. In addition, University X has provided detailed data about each individual's academic performance throughout their undergraduate studies. A description of the variables in the merged dataset is presented in Appendix 1.

Class is certainly a complex concept. However, as Weber first noted, there is agreement that class involves a notion of economic status as well as other characteristics that provide social

[7] Business and Economics is a single 5 –year undergraduate program, which consists of 3 years of taught core courses in both disciplines, followed by 2 years in which students must choose either an Economics or Business specialization. However, both specializations are fairly good substitutes for a wide variety of occupations in the labor market in Chile.

status within a society.[8] In this paper we define "class" as an individual's socioeconomic *background*, understood as a set of characteristics imprinted by his family and social environment of *origin* in the early phases of his life cycle. Therefore, our definition implies that class is a set of characteristics acquired early in life, which remain constant throughout time, and therefore cannot be modified during an individual's life cycle. However, this notion does not contradict the possibility that individuals may modify their socioeconomic status throughout their life cycle, for example by investing in education. Our notion of class has the important property of being exogenous from an econometric perspective. This implies that the causal relationship between class and earnings examined in this article is unambiguous; since the imprinting of class precedes the participation in the labor market, a statistical association between class and earnings must be interpreted as a causal effect of class (socioeconomic background) on earnings.

In order to embrace different aspects of class, we employ four different measures of it. These are; i) family and environmental socioeconomic background, measured as the average income of the individual's Municipality of origin; ii) the socioeconomic status of the individual's school; iii) the individual's ancestry, measured as the number of Basque or (non-Spanish) European surnames; and iv) an experimentally-generated subjective measure of the individuals' socioeconomic status judged from their two surnames.[9] Each of these measures of class requires detailed explanation and justification, which are provided next in sequential order.

i) As already mentioned, Chile has historically had one of the most unequal income distributions in the world, exhibiting also a high degree of statial class-segregation.[10] As a consequence, the average income of an individual's Municipality contains a great deal of information about an individual's likely family background, as well as about the socioeconomic background of his neighborhood and social environment of origin.[11]

ii) Chile's school system is also highly segregated; while the majority of State schools enroll mostly lower-income students, private schools are attended mostly by well-off students. Therefore, school characteristics reveal information about each individual's family background, as well as the socioeconomic background of the individual' classmates and social environment. We employ the earliest available measure of each school's socioeconomic background, which is

[8] This is well illustrated by the concepts of "new rich", "old money vs. new money" and so on. See for example Marshall (1994) for various operational definitions of "class".
[9] Unlike Anglo-Saxon countries, in Spanish-speaking countries both the father and mother's surnames are employed.
[10] See Larrañaga (2002)
[11] For example, the richest Municipality of the sample has an average income 11 times higher than the poorest Municipality of the sample.

a five-point variable provided by the Ministry of Education for 1998. Since a great deal of time persistence can be expected for a school's socioeconomic background, this measure is employed for all cohorts in the sample.[12] The five-point measure was transformed into a dummy variable equal to unity for schools of upper socioeconomic status. In order to distinguish the possible effect on earnings of schools' socioeconomic background from schools' academic quality, we employ also comparable data of schools' academic performance in the empirical estimation.[13]

iii) Apart from economic characteristics, there are reasons to hypothesize that class is also affectd by ancestry, particularly in Chile. Chilean historians have long emphasized how Chile's socioeconomic elite has been formed largely from the descendants of the Basque and non-Spanish European immigrants. In fact, the term "Castillian-Basque aristocracy" was coined by historians to represent the elite that arose from the merge of upper-class *criollos* (Spanish descendants living in Chilean territory) and the Basque immigrants who arrived in Chile mainly in the late colonial times.[14] Later, other flows of European immigration occurred during the XIX and part of the XX centuries. It has been well documented how these immigrants and its descendants merged with the existing Castillian-Basque aristocracy and overtook a significant fraction of Chile's most productive land, developed different trades and industries, and engaged in the most prestigious professions. As a result, towards the turn of the XX century a significant fraction of national wealth and political and economic power was concentrated on a relatively small group of families and dynasties, a notion that is well captured by the well-known term "*la Fronda Aristocrática*". These families were often connected by kinship relationships, and did not inbreed with the large *mestizo* (half-bred) population.[15] This situation is still recognizable today in Chilean society; it is estimated that only 25 per cent of the Chilean population descend mainly from Europeans, while 70 per cent are *mestizos* and 5 percent are predominantly of Amerindian ethnic background.[16] To capture the notion of ancestry we make use of the individuals' father's and mother's surnames. They were classified as being of Basque or non-Spanish European origin, or otherwise (i.e. non-Basque Spanish) employing Chilean and

[12] In any case, this measure is highly correlated with schools Public/Private dependency. However, we employ the socioeconomic measure because it is more closely related to each individual's socioeconomic background.

[13] This data correspond to the average scores in the SIMCE test administered by the Ministry of Education for 1998. Previous data is not available for all schools. However, since a lot of time persistence exist in a school's academic performance as the evidence suggest, we employ this measure for all the cohorts in the sample.

[14] Mainly in the second half of the XVIII and the beginning of the XIX centuries. Hence Miguel de Unamuno's famous remark that the two greatest creations of the Basques were the Society of Jesus and the Republic of Chile. Collier and Sater (1996), p.18.

[15] See for example Villalobos (1987) and Collier and Sater (1996).

[16] See Collier, Skidmore and Blakemore, (1992).

international literature on the genealogical origins of surnames existing in Chile.[17] Accordingly, each individual obtained either none, one or two surnames of Basque or non-Spanish European origin.

iv) Finally, the fourth measure of class was constructed by means of a novel experimental procedure; 30 university undergraduate students of various socioeconomic backgrounds were asked to provide anonymously and individually their perception of the graduates' socioeconomic background judging only from their two surnames using a five-point scale.[18] The results from this experiment are remarkable and interesting in its own right; all 420 partial correlations of the ranking of the 30 evaluators were positive and statistically significant at 1 per cent confidence, ranging from 0.27 to 0.76 with an average of 0.53. Moreover, the variance of the 30 evaluations obtained by each of the 300 pairs of surnames evaluated was statistically lower than the variance that would be obtained if evaluators had assigned their ranks randomly. This lower-than-random variance achieved for all evaluated individuals suggests that *all* individuals obtained a significant degree of consensus regarding their socioeconomic background as perceived from their surnames.

Table 1 presents the partial correlations among the four measures of class explained above. Both the Ancestry variable, defined as the number of Basque and Non-Spanish European surnames, and the Subjective Socioeconomic Status (SES) equal to each individual's average ranking in the experiment were significantly correlated with each other. This suggests strongly that the evaluators indeed assessed the individuals' likely socioeconomic background based on the ethnic origin suggested by their surnames. Moreover, these measures were also significantly correlated with the other two measures of class, namely the average income of the Municipality of origin and with School's Socioeconomic Status (SES). These results suggest that socioeconomic background is in fact associated with ethnic background. In addition, these results suggest that in Chile surnames contain and reveal information about an individual's *perceived* socioeconomic background of origin, and that this perception is amply shared and consensual. Finally, this agreed perception is actually correct, in the sense that the common perception is indeed associated with the individuals' real socioeconomic background.

[17] Only non-Spanish European surnames were considered because it is impossible to disentangle Spanish surnames from recent Spanish immigrants from those of the large *mestizo* population. Moreover, Amerindian surnames were not identified separately because they were very few. The details and sources employed can be found in Núñez and Pérez (2003).

[18] The five categories of socioeconomic status were High, Upper-Middle, Middle, Lower-Middle and Lower Socioeconomic Status. Subjects were paid $ 1.000 for turning-up and for doing the experiment, plus a prize ranging from $15.000 to $5.000 for the top three evaluators whose guesses coincided the

The high and statistically significant correlations among the four measures of class shown in Table 1 pose a potential collinearity problem, which may undermine the statistical significance of each class measure in the empirical estimation. If, however, these measures of class turn out to be jointly significant in causing earnings despite their positive correlation, then their coefficient should be taken as fairly robust.

Table 1. Correlation Matrix of Class Measures

	School SES	Ancestry	Subjective SES
Municipality SES	0.39	0.28	0.34
School SES		0.24	0.37
Ancestry			0.58

All correlation coefficients are significant at 1 per cent confidence.

III. The returns to class

The graduates' earnings were collected as ordered data by the follow-up survey. Respondents were asked to report their earnings using a scale of nine money intervals. In order to obtain money measures of earnings for each individual, we employed two alternative procedures. The first was to compute the median value of each interval, and the second was to compute the mean value of each earnings interval derived from a kernel density function applied on the ordered data.[19]

Table 2 shows the results of mean-difference tests for the kernel-based earnings of upper vs. lower SES groups, according to each of the four class variables described above. In all cases upper-class individuals have, on average, statistically higher earnings. Table 3 shows the results of various specifications of earnings equations. Each model in Table 3 includes three different measures of earnings as dependent variables. The first column of each model is an ordered probit regression employing the ordered earnings data. The dependent variable of the second and third columns of each model are the log of the median value of each earnings interval and the log of the mean value of each earnings interval derived from the kernel-based procedure. As in the rest of the article, all regressions have robust standard errors. Table 3 indicates that the

highest number of times with the most voted rank for each individual across the 30 evaluators. The details of the experiment can be found in Núñez, and Pérez (2003).

[19] From the optimal kernel density function f(x), we computed the term f(x)/x for all earnings intervals, and then imputed this value for all the observations of the corresponding interval.

results are very similar regardless of the dependent (earnings) variable and the econometric specification employed. All specifications yield the standard results of an earnings equation, namely concave experience, and relative earnings premium for males. The coefficients of various measures of academic performance at university are positive, significant and robust across the different specifications, namely the academic performance percentile, performance in final exams and whether the student had interrupted or failed in a previous university degree (homolog).[20] Schooling in years is not included as a regressor because all observations in the sample are university graduates, yielding very little variance in this variable. However, dummy variables for post-graduate studies yielded positive coefficients, although not statistically significant. This may be possibly due to the inclusion of the various measures of ability described above, which is consistent with the possibility that post-graduate studies may have an important signaling component. Employees in private firms earn more than their counterparts (mainly in universities and in the public sector), and Economics and Business majors have similar earnings. The reduced regressions in Models 3 and 4 include only the variables significant at 10 per cent confidence. These variables explain nearly half of the variance in earnings, more than most of the standard earnings equations in the literature. This may be due to the inclusion of regressors not commonly employed in other earnings studies, namely measures of academic performance and class.

All four measures of class are highly and jointly significant and robust across all specifications despite the existence of collinearity among them, with the exception of Ancestry and Subjective SES, which have the highest correlation (0.58). However, they become significant when included separately from each other but keeping the other class variables, as in Models 3 and 4 of Table 3. Taken at face value, the evidence of Table 3 indicates that there exists an important and statistically significant return to employees' socioeconomic background. It is important to note that the measures of class are significant and robust even when other possibly class-related measures of productivity are included, such as school's academic performance, school size (as measures of networking opportunities), English proficiency, postgraduate studies, "leadership" (measured as participation in student unions and/or competitive sports as undergraduates), and geographical origin.[21] This suggests that the return to class may be the result of some form of discrimination and/or some class-related source of productivity unrelated to those included in the models in Table 3.

[20] The score in the PAA, a multiple-choice test required to apply to a University degree in Chile was not included for two reasons. First, this score is not designed to be strictly comparable across cohorts. Second, PAA scores measure an individual's relative performance in a given year. This raises yet another comparability problem as the coverage of the PAA has increased significantly in the last decades.

[21] A large proportion of jobs in Business and Economics are located in Santiago. Employees born and raised in Santiago may have more connections and networking opportunities than outsiders.

Note that all models included in Table 3 assume that the effect of academic performance on earnings is the same regardless of the individuals' socio-economic background. However, there is a reason to expect academic performance to be relatively more important in determining earnings for graduates from poorer backgrounds: while better-off students may compensate a poor academic performance with social skills and connections, students from poorer backgrounds are less likely to do so. Accordingly, academic achievement seems a relatively more important means to succeed in the labor market for poorer students. We investigate this hypothesis in the models presented in Table 4, where academic performance at university has been interacted with the various measures of class. This procedure poses an econometric problem, however: the variables that employ the class measures either in isolation or interacted with academic performance are collinear, which reduce their statistical significance. To avoid this problem, we have estimated only those models where a specific class measure is employed either in isolation or interacted with academic performance, as shown in Table 4.
(Insert Table 4 here)

The models in Table 4 share interesting features. First, all the variables have very similar coefficients and statistical significance across the models. Second, all the models indicate joint existence of intercept class effects and interactions between class and academic performance. In particular, all models suggest an increased return to academic performance for students from lower socio-economic status, which confirms the hypothesis mentioned above.

The results of Table 4 allow studying the relative importance of class vs. academic performance in determining earnings. In order to do so, we computed earnings predictions from various hypothetical combinations of class and academic performance, which are reported in Table 5. The model used to obtain these predictions was selected from those in Table 4 by employing Davidson and Mackinnon´s J-test, designed to choose among nonnested models. Each model in Table 4 was tested against all the remaining models.[22] This procedure indicated that the Models 1 and 5 could not be defeated by any of the remaining models, while they could not defeat each other. Model 5 was finally selected due to its slighter better goodness-of-fit.

Table 5 presents the predicted income in chilean pesos of 2000 for various combinations of class and academic performance derived from Model 5 in Table 4, keeping the remaining variables of the model fixed at their sample means. Table 5 provides several interesting results. First, the earnings estimates show that a bottom-of-the-class student raised in a rich Municipality and a rich school, and endowed with upper-class ancestry is expected to earn

statistically more than a top-of-class student raised in a poor Municipality, without upper-class ancestry and coming from an average State school. Various cells of Table 5 even suggest that the bottom-of-the-class hypothetical employee raised in a privileged environment is likely to earn statistically more than an ample variety of top-of-class students raised in *average* socioeconomic backgrounds. This exercise provides clear suggestions that socioeconomic origins seem relatively more important than academic performance in determining earnings in the labor market. Accordingly, this evidence portrays the Chilean professional labor market as being far from a meritocratic one.

However, Table 5 does indicate that academic performance is indeed rewarded in the labor market, although in varying degrees depending on the students' socioeconomic background. As hypothesized and demonstrated earlier, a marginal increase in academic performance raises a poor student's expected income more than that of an upper-class student. In fact, Table 5 shows that academic merit is fairly irrelevant in determining an upper class student's expected income, judging from the first column of the upper panel. The enhanced responsiveness of a poor students' expected income to his or her academic performance suggests that academic merit or effort is indeed a means that socially-handicapped students can employ to improve their prospects in the labor market. However, our earlier conclusion indicates that academic merit is unlikely to fully close the earnings gap relative to an upper-class student, regardless even of the latter's academic performance.

The predictions of Table 5 also provide an order of magnitude of the earnings gap between employees of upper vs. lower socioeconomic background, keeping academic merit fixed. For example an average student (in the 50^{th} academic percentile) from an upper-class background is likely to earn nearly 50 per cent more than an average student from the poorest socioeconomic background in the sample.[23] This rough figure does stand out as a large gap even in comparison with the earnings gap reported for other workers characteristics. Next, we estimate more appropriate class earnings gaps following one of the standard methodologies employed in the literature for these purposes. Tables 6a and 6b show the Oaxaca-Ramson (1994) decomposition of class-earnings effects for the four measures of class, with Ancestry and Subjective SES included separately as in models 3 and 4 of Table 2.[24] Each row of Tables 6a and 6b decomposes the earnings gap associated with the corresponding class measure into a premium and a penalty for upper and lower SES employees, respectively, in addition to the part of the

[22] See Greene (2000) for a detailed explanation of Davidson and MacKinnon's J test.

[23] This figure is obtained using the expected earnings figures of 1828724 and 1203572 chilean pesos reported in Table 5.

[24] The derivation and interpretation of the Oaxaca-Ramson decomposition is fairly standard and it is not presented here. For a presentation and discussion, see the original paper in Oaxaca and Ramson (1994).

earnings gap explained by differences in skills between the two class groups. Tables 6a and 6b indicate that School, Municipality, Ancestry and Subjective SES all have statistically significant earnings premium for upper SES employees, as well as earnings penalties for lower SES employees, controlling for differences in observable skills. In all three cases, the order of magnitude of the earnings premium and penalties is in the range of 4 to 7 per cent. Accordingly, each of the class measures yields earnings gaps unrelated to skills differences of around 10 per cent, which correspond to the sum of the premium and the penalty for each class measure.

Note that Tables 6a and 6b report the decompositions for each class measures separately, that is, keeping the remaining class measures fixed at the sample mean values. Therefore, the sum of the premia and penalties of all three measures of class provides a measure of the total earnings gap associated with socio-economic background, once skills differences between the upper and lower class groups have been considered. The combined effects of the three measures of class in Tables 6ª and 6b yield class earnings gaps of 30 to 35 per cent between upper SES and lower SES employees, all other observable characteristics kept constant.

The class earnings gaps reported in Tables 6a and 6b seem remarkably large in comparison to the earnings gaps reported in the literature for other workers' characteristics. For example, the earnings gaps between African Americans and Whites in the US reported in the literature are typically situated in the 5 to 15 per cent range, after controlling for skills differences.[25] On the other hand, gender earnings gaps unexplained by differences in observed skills are in the range of 20 to 25 per cent.[26] Comparable gender earnings gaps in Chile are close to 20 per cent.[27] Finally, estimates of the beauty earnings gap amount to 12–13 percent.[28]

The large class earnings gaps reported above can be interpreted as evidence of class discrimination exercised by employers under the assumption that all relevant skills and sources of productivity have indeed been included in the model. It is certainly impossible to actually observe all possible sources of productivity. However, our database does include various measures of productivity, many of which are uncommon in earnings differential studies, such as academic performance at university, school's academic quality, second language (English) proficiency, and post graduate studies.[29] This suggests that interpreting the large class earnings gap reported here as resulting at least partly from employer discrimination seems plausible and even likely. This hypothesis, however, remains an interesting topic for future research.

[25] See, for example, the evidence reviewed in Borjas (2000).
[26] See for example, Altonji and Blank (1999), and Borjas (2000).
[27] Contreras and Puentes (2001).
[28] Hammermesh and Biddle (1994).
[29] However, note that only the former turned out to be statistically signifficant.

V. Conclusions

This paper has shown that class, understood as an individual's socioeconomic background of origin, can be an important factor in the determination of earnings in the labor market. A large return to class emerged simultaneously in several measures of class, despite some degree of collinearity among them. These effects were highly statistically significant and robust throughout different specifications. The order of magnitude of the class earnings gap is nearly twice as large as than the gender earnings gaps, and about three times as large as the earnings gaps for race and beauty reported in the literature. The effect of class on earnings is more important than academic performance, which suggests a modest degree of meritocracy in the labor market for professionals in Chile.

Studying the causes of the large returns to class remains a topic for future research. In particular, future investigations must try to establish the extent to which the return to class is explained by some form of discrimination in the labor market, or by other sources of labor productivity not included in this article.

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Table 2. Labor Market Earnings of Higher vs. Lower SES Professionals

(Chilean Pesos of 2000)

Measures of SES	High SES	Low SES	Difference	t-test
School	1,625,091	1,355,342	269,749	2.69[a]
Municipality	1,725,734	1,281,667	444,067	4.72[a]
Ancestry	1,667,980	1,449,967	218,013	2.23[b]
Subjective SES	1,787,577	1,434,531	353,046	3.29[a]

* a, b indicate statistical significance at 1 and 5 per cent, respectively.

Table 3. Earnings Equations

		Model 1			Model 2			Model 3			Model 4	
	ycateg	Ln(yvmed)	Ln(yk)	ycateg	Ln(yvmed)	Ln(yk)	ycateg	Ln(yvmed)	Ln(yk)	ycateg	Ln(yvmed)	Ln(yk)
Experience	0.53[a]	0.17[a]	0.16[a]	0.53[a]	0.17[a]	0.17[a]	0.53[a]	0.17[a]	0.17[a]	0.53[a]	0.17[a]	0.17[a]
	(0.057)	(0.018)	(0.016)	(0.051)	(0.014)	(0.014)	(0.051)	(0.015)	(0.014)	(0.050)	(0.014)	(0.014)
Experience^2	-0.02[a]	-0.01[a]	-0.01[a]	-0.02[a]	-0.01[a]	-0.01[a]	-0.02[a]	-0.01[a]	-0.01[a]	-0.02[a]	-0.01[a]	-0.01[a]
	(0.0026)	(0.0008)	(0.0008)	(0.0021)	(0.0006)	(0.0006)	(0.0022)	(0.0007)	(0.0006)	(0.0021)	(0.0006)	(0.0006)
Gender (Male=1)	0.76[a]	0.26[a]	0.25[a]	0.77[a]	0.27[a]	0.27[a]	0.77[a]	0.27[a]	0.27[a]	0.76[a]	0.27[a]	0.26[a]
	(0.16)	(0.06)	(0.05)	(0.14)	(0.05)	(0.05)	(0.14)	(0.05)	(0.05)	(0.14)	(0.05)	(0.05)
Capital District=1	-0.22	-0.10	-0.08									
	(0.30)	(0.13)	(0.12)									
Received Funding =1	-0.05	-0.03	-0.03									
	(0.18)	(0.064)	(0.062)									
dramos homologados	-0.49[b]	-0.15[b]	-0.15[b]	-0.49[a]	-0.16[b]	-0.16[a]	-0.48[a]	-0.16[b]	-0.16[a]	-0.51[a]	-0.17[a]	-0.17[a]
	(0.22)	(0.076)	(0.075)	(0.19)	(0.063)	(0.062)	(0.19)	(0.063)	(0.062)	(0.18)	(0.062)	(0.062)
Academic Percentile	-0.50[b]	-0.17b	-0.16[c]	-0.38[c]	-0.14[c]	-0.13[c]	-0.41[b]	-0.15[b]	-0.15[b]	-0.37[b]	-0.14[c]	-0.13[c]
	(0.24)	(0.085)	(0.082)	(0.21)	(0.075)	(0.073)	(0.21)	(0.074)	(0.073)	(0.21)	(0.076)	(0.074)
Passed finals 1st Attempt	0.36[c]	0.13[c]	0.12[c]	0.44[b]	0.16[b]	0.15[b]	0.44[b]	0.16[b]	0.16[b]	0.43[b]	0.15[b]	0.15[b]
	(0.21)	(0.073)	(0.070)	(0.19)	(0.067)	(0.064)	(0.19)	(0.068)	(0.065)	(0.19)	(0.067)	(0.064)
Leadership	0.05	0.05	0.06									
	(0.31)	(0.11)	(0.10)									
Business in business job with MBA degree	0.44	0.15	0.16									
	(0.39)	(0.13)	(0.13)									
Top mark in finals=1	-0.21	-0.07	-0.07									
	(0.27)	(0.085)	(0.083)									
English Proficiency =1	-0.19	-0.06	-0.06									
	(0.24)	(0.081)	(0.080)									
		0.0004										
Postgraduate studies	0.04		-0.01									
	(0.20)	(0.069)	(0.067)									
High SES School=1	0.18	0.06	0.06	0.35[b]	0.12[b]	0.12[b]	0.40[a]	0.13[a]	0.13[a]	0.36[b]	0.12[b]	0.12[b]
	(0.30)	(0.104)	(0.101)	(0.15)	(0.052)	(0.050)	(0.15)	(0.051)	(0.049)	(0.15)	(0.052)	(0.051)
School Size*High SES School	0.002	0.001	0.001									
	(0.0023)	(0.0008)	(0.0008)									
School's Score	0.005	0.002	0.002									
	(0.0035)	(0.0011)	(0.0011)									
Municipality Average Income	0.0016[b]	0.0006[b]	0.0005[b]	0.0017[b]	0.0006[b]	0.0006[b]	0.0018[a]	0.0007[a]	0.0006[a]	0.0018[b]	0.0006[b]	0.0006[b]
	(0.0008)	(0.0003)	(0.0003)	(0.0007)	(0.0003)	(0.0002)	(0.0007)	(0.0003)	(0.0002)	(0.0007)	(0.0003)	(0.0002)
Basque/Non-Spanish European Ancestry	0.10	0.04	0.04	0.13	0.06	0.05	0.21[b]	0.08[b]	0.08[b]			
	(0.13)	(0.044)	(0.043)	(0.11)	(0.039)	(0.038)	(0.090)	(0.032)	(0.031)			
Subjective SES	0.26[c]	0.07	0.07	0.18	0.05	0.05				0.25[b]	0.08[b]	0.08[b]
	(0.15)	(0.053)	(0.052)	(0.12)	(0.044)	(0.043)				(0.10)	(0.036)	(0.036)
Private firm=1	0.57[b]	0.15[c]	0.15[b]	0.45[a]	0.14[a]	0.14[a]	0.46[a]	0.14[a]	0.14[a]	0.45[a]	0.14[a]	0.14[a]
	(0.24)	(0.080)	(0.077)	(0.15)	(0.052)	(0.050)	(0.15)	(0.052)	(0.050)	(0.15)	(0.052)	(0.050)
Public firm=1	0.39	0.12	0.11									
	(0.26)	(0.089)	(0.085)									
Self-employed	-0.27	-0.11	-0.11									
	(0.48)	(0.16)	(0.16)									
Self-employed *Received Funding	-1.13	-0.33	-0.31									
	(1.07)	(0.37)	(0.35)									
Firm size	-0.12	-0.03	-0.03									
	(0.10)	(0.036)	(0.035)									
Economist in economics job	0.016	-0.003	0.001									
	(0.32)	(0.11)	(0.11)									
Economist in business job	-0.21	-0.06	-0.05									
	(0.30)	(0.10)	(0.11)									
Business in business job	0.078	0.017	0.023									
	(0.29)	(0.10)	(0.10)									
Constant		12.10[a]	12.15[a]		12.45[a]	12.51[a]		12.61[a]	12.65[a]		12.38[a]	12.43[a]
		(0.40)	(0.38)		(0.17)	(0.17)		(0.13)	(0.12)		(0.17)	(0.16)
R^2		0.55	0.55		0.51	0.51		0.51	0.51		0.51	0.51
Pseudo R^2	0.21			0.19			0.19			0.19		
Observations	246	246	246	283	283	283	283	283	283	283	283	283

* With a, b, c significant to 1%, 5%, 10% respectively. Standard deviation in parenthesis.

Table 4. Earnings Equations with Class-Academic Performance Interactions

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Experience	0.167a	0.170a	0.169a	0.168a	0.168a	0.169a	0.169a	0.169a
	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
Experience^2	-0.0056a	-0.0057a	-0.0056a	-0.0056a	-0.0056a	-0.0056a	-0.0056a	-0.0056a
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Gender (Male=1)	0.261a	0.270a	0.267a	0.263a	0.266a	0.267a	0.266a	0.269a
	(0.047)	(0.046)	(0.046)	(0.046)	(0.046)	(0.046)	(0.046)	(0.046)
Previous studies=1	-0.169b	-0.180a	-0.173a	-0.171b	-0.171b	-0.180a	-0.179a	-0.178a
	(0.067)	(0.067)	(0.066)	(0.067)	(0.067)	(0.066)	(0.067)	(0.067)
Passed Finals 1st attempt	0.149a	0.162a	0.160a	0.156a	0.156a	0.160a	0.155a	0.158a
	(0.058)	(0.057)	(0.057)	(0.057)	(0.058)	(0.057)	(0.057)	(0.057)
Academic Percentile	-0.130c	-1.020a	-0.914a	-0.770a	-0.357a	-0.872a	-0.297a	-0.471a
	(0.078)	(0.208)	(0.216)	(0.223)	(0.106)	(0.218)	(0.096)	(0.108)
Private Firm =1	0.137a	0.128a	0.129a	0.130a	0.133a	0.126a	0.128a	0.129a
	(0.049)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)
High SES School = 1	0.121b		0.123b	0.122b	0.116b			
	(0.052)		(0.051)	(0.051)	(0.052)			
Municipality Average Income	0.0006a			0.0006b		0.0006b	0.0006b	
	(0.0002)			(0.0002)		(0.0002)	(0.0002)	
Subjective SES	0.082b				0.080b		0.084b	0.086b
	(0.037)				(0.037)		(0.036)	(0.036)
High SES School *Ac. Percentile		0.232a				0.247a	0.268a	0.242a
		(0.090)				(0.087)	(0.086)	(0.089)
Municip. Avg. Income*Ac. Percentile		0.0009b	0.0011b		0.0012a			0.0010b
		(0.0004)	(0.0004)		(0.0004)			(0.0004)
Subjective SES* Ac. Percentile		0.167b	0.172a	0.188a		0.173a		
		(0.065)	(0.065)	(0.064)		(0.064)		
Constant	12.427a	12.888a	12.816a	12.717a	12.546a	12.788a	12.498a	12.593a
	(0.159)	(0.106)	(0.112)	(0.119)	(0.160)	(0.116)	(0.161)	(0.161)
R^2	0.507	0.517	0.515	0.514	0.511	0.512	0.515	0.515
Adjusted R^2	0.489	0.499	0.497	0.496	0.493	0.500	0.497	0.498
Observations	283	283	283	283	283	283	283	283

Table 5. Predicted income conditional upon class and academic performance (Chilean Pesos of 2000)

Distinctive Municipality		Highest Income Municipality (Vitacura)			
School SES		High SES		Low SES	
Subjective SES		High	Low	High	Low
Academic Performance Percentile	10 % (top)	1,838,060	1,572,587	1,643,241	1,377,767
		(82,433)	(96,243)	(109,684)	(95,891)
	50 %	1,828,724	1,563,251	1,633,905	1,368,432
		(70,579)	(87,191)	(112,059)	(99,373)
	90 %	1,818,681	1,553,207	1,623,862	1,358,388
		(112,742)	(124,484)	(151,012)	(142,433)

Distinctive Municipality		Average Income Municipality (Ñuñoa)			
School SES		High SES		Low SES	
Subjective SES		High	Low	High	Low
Academic Performance Percentile	10 % (top)	1,823,867	1,558,393	1,629,048	1,363,574
		(84,235)	(96,100)	(109,348)	(93,775)
	50 %	1,764,855	1,499,382	1,570,036	1,304,562
		(66,909)	(74,982)	(101,834)	(78,820)
	90 %	1,701,370	1,435,897	1,506,551	1,241,077
		(90,092)	(90,511)	(122,963)	(99,461)

Distinctive Municipality		Lowest Income Municipality (La Pintana)			
School SES		High SES		Low SES	
Subjective SES		High	Low	High	Low
Academic Performance Percentile	10 % (top)	1,801,424	1,535,951	1,606,605	1,341,132
		(88,355)	(97,098)	(109,894)	(91,625)
	50%	1,663,864	1,398,391	1,469,045	1,203,572
		(91,986)	(85,289)	(108,139)	(72,137)
	90 %	1,515,876	1,250,403	1,321,057	1,055,584
		(130,330)	(113,036)	(138,211)	(97,930)

* Standard errors in parenthesis.

Table 6a. Oaxaca-Ramsom Earnings Decomposition: Class Premium, Class Penalties and Skills Differences

Variable	Component	Estimated Value	Estimated Value by Bootstrap	Standard Deviation by Bootstrap	95% Confidence Interval	
					Min	Max
School	Premium: $X_H(B_H-B_P)$	0.041	0.05	0.023	0.003	0.096
	Penalty: $X_L(B_P-B_L)$	0.075	0.044	0.02	0.005	0.083
	Premium + Penalty (1)	0.116				
	Skills Differences: $(X_H-X_L)B_P$	0.068	0.092	0.043	0.006	0.177
Municipality	Premium: $X_H(B_H-B_P)$	0.057	0.055	0.018	0.02	0.09
	Penalty: $X_L(B_P-B_L)$	0.071	0.068	0.023	0.023	0.113
	Premium + Penalty (2)	0.128				
	Skills Differences: $(X_H-X_L)B_P$	0.199	0.203	0.049	0.106	0.3
Basque/ Non-Spanish European Ancestry	Premium: $X_H(B_H-B_P)$	0.053	0.05	0.023	0.003	0.096
	Penalty: $X_L(B_P-B_L)$	0.046	0.044	0.02	0.005	0.083
	Premium + Penalty (3)	0.099				
	Skills Differences: $(X_H-X_L)B_P$	0.089	0.092	0.043	0.006	0.177
Total Class Earnings Gap (1+2+3)		0.343				

Sub-indexes H, L, P indicate Higher, Lower and Population's socio-economic status (SES) according to each SES measure, respectively.

Table 6b. Oaxaca-Ramsom Earnings Decomposition: Class Premium, Class Penalties and Skills Differences

Variable	Component	Estimated Value	Estimated Value by Bootstrap	Standard Deviation by Bootstrap	95% Confidence Interval	
					Min	Max
School	Premium: $X_H(B_H-B_P)$	0.036	0.036	0.014	0.008	0.064
	Penalty: $X_L(B_P-B_L)$	0.066	0.065	0.025	0.015	0.115
	Premium + Penalty (1)	0.102				
	Skills Differences: $(X_H-X_L)B_P$	0.084	0.089	0.048	-0.007	0.185
Municipality	Premium: $X_H(B_H-B_P)$	0.050	0.049	0.018	0.012	0.085
	Penalty: $X_L(B_P-B_L)$	0.062	0.059	0.023	0.013	0.106
	Premium + Penalty (2)	0.112				
	Skills Differences: $(X_H-X_L)B_P$	0.214	0.215	0.047	0.121	0.309
Basque/ Non-Spanish European Ancestry	Premium: $X_H(B_H-B_P)$	0.066	0.065	0.032	0.000	0.129
	Penalty: $X_L(B_P-B_L)$	0.024	0.024	0.012	0.000	0.048
	Premium + Penalty (3)	0.090				
	Skills Differences: $(X_H-X_L)B_P$	0.130	0.132	0.048	0.036	0.228
Total Class Earnings Gap (1+2+3)		0.304				

Sub-indexes H, L, P indicate Higher, Lower and Population's socio-economic status (SES) according to each SES measure, respectively.

Table 7. Description of Variables

Variable	Observations	Average	S.D.	Min	Max
Income by category	293	4.392491	2.127658	1	10
Experience	315	7.766667	3.661688	0.5	25.5
Experience^2	315	73.68651	66.72715	0.25	650.25
Schooling	322	17.49689	0.9145703	17	21
Gender (Male=1)	322	0.6614907	0.4739392	0	1
Capital District=1	317	0.9337539	0.2491049	0	1
Municipality Average Income	315	198.4052	104.397	43.622	410.505
Private School = 1	322	0.6925466	0.462157	0	1
High SES School=1	316	0.6550633	0.4761016	0	1
School Size	283	182.7456	177.2286	16	643
School's Score	283	307.0336	24.99776	219.5	344
Received Funding =1	316	0.3924051	0.4890606	0	1
ramos Homologados	316	0.1329114	0.3400174	0	1
English Proficiency =1	316	0.1455696	0.3532336	0	1
Leadership	316	0.0664557	0.249472	0	1
Academic Percentile	319	0.5222026	0.2942802	0.0153846	1
Economics degree =1	322	0.4099379	0.4925874	0	1
Passed finals 1st Attempt	322	0.7919255	0.4065622	0	1
Graduated=1	316	0.9810127	0.1366966	0	1
Top mark in finals=1	322	0.0621118	0.2417342	0	1
Postgraduate studies	319	0.2915361	0.4551838	0	1
Economist in economics job	304	0.2138158	0.4106743	0	1
Economist in business job	304	0.2006579	0.4011529	0	1
Business in business job	304	0.5427632	0.4989893	0	1
Business in economics job	304	0.0394737	0.1950401	0	1
Local MBA degree=1	322	0.0652174	0.2472934	0	1
International MBA degree=1	322	0.0124224	0.1109336	0	1
PhD degree = 1	322	0.0186335	0.1354374	0	1
Mining=1	295	0.0101695	0.1005003	0	1
Manufacture =1	295	0.0983051	0.2982326	0	1
Construction=1	295	0.0338983	0.1812749	0	1
Commerce=1	295	0.1288136	0.3355627	0	1
Government Services=1	295	0.1355932	0.3429378	0	1
Financial services=1	295	0.3118644	0.464042	0	1
Personal services	295	0.0372881	0.1897889	0	1
Natural resources=1	322	0.0248447	0.155894	0	1
Private firm=1	322	0.6055901	0.4894842	0	1
Public firm=1	321	0.0778816	0.2684036	0	1
Civil servant	321	0.0996885	0.3000519	0	1
Education sector=1	321	0.0373832	0.1899951	0	1
Consultant	321	0.0311526	0.1740014	0	1
NGO	321	0.0186916	0.1356449	0	1
Self-employed	321	0.05919	0.2363485	0	1
Unemployed	321	0.0685358	0.2530576	0	1
Firm size	297	3.306397	0.9499606	1	4
Amerindian	322	0.015528	0.1238324	0	1
Basque	322	0.1583851	0.3903922	0	2
Asian	322	0.0186335	0.1567604	0	2
Middle east	322	0.0186335	0.1924445	0	2
Non-Spanish European	322	0.4037267	0.6203093	0	2
Jewish	322	0.1645963	0.4745104	0	2
Non-Basque Spanish	322	1.242236	0.7552631	0	2
Subjective SES	289	3.45917	0.6556861	2.2	4.9

Appendix 1: Correlation Matrix (n = 246)

	Experience	Experience^2	Gender (Male=1)	Capital District=1	Received Funding =1	dramos homologados	Academic Percentile	Passed finals 1st Attempt	Leadership	Top mark in finals=1	English Proficiency =1	Postgraduate studies	High SES School=1
Experience	1												
Experience^2	0.9372	1											
Gender (Male=1)	0.153	0.1539	1										
Capital District=1	-0.033	-0.0291	-0.0066	1									
Received Funding =1	-0.0669	-0.0687	0.0898	0.0287	1								
dramos homologados	0.19	0.1891	0.0506	0.0495	-0.1058	1							
Academic Percentile	0.0614	0.0415	0.0967	0.0641	0.137	0.0264	1						
Passed finals 1st Attempt	0.0003	0.0115	-0.038	-0.0012	-0.1084	0.0023	-0.2284	1					
Leadership	-0.0685	-0.0534	0.0048	-0.015	0.0779	-0.0543	-0.2035	0.0882	1				
Top mark in finals=1	-0.1155	-0.101	-0.0404	-0.011	-0.0688	-0.0499	-0.1766	0.1254	0.0465	1			
English Proficiency =1	-0.1135	-0.1005	-0.1945	-0.1072	-0.2132	0.041	-0.1976	0.0241	0.0726	0.2219	1		
Postgraduate studies	0.0051	-0.0187	0.0174	0.0686	0.0259	0.0385	-0.0487	0.1115	0.2275	0.0686	0.0315	1	
High SES School=1	0.0333	0.03	-0.0607	-0.0846	-0.519	0.0385	0.0017	-0.0453	-0.0049	-0.0161	0.1714	-0.1379	1
School Size*High SES School	0.1105	0.0911	0.0543	-0.1175	-0.435	0.0064	0.0477	-0.087	0.0565	0.0156	0.2226	-0.0698	0.8307
School's Score	0.0085	0.0064	-0.0344	-0.2236	-0.1911	-0.0189	-0.0189	-0.0132	0.1165	0.0331	0.1406	-0.0434	0.2896
Municipality Average Income	0.0347	0.0346	0.0065	-0.3309	-0.3788	0.0068	-0.0682	-0.0563	-0.023	-0.0562	0.1369	-0.0618	0.3927
Basque/Non-Spanish European Ancestry	-0.0115	-0.0418	-0.0381	-0.0247	-0.1993	-0.075	-0.0515	-0.0526	0.0731	-0.0473	0.1249	0.0462	0.2387
Subjective SES	0.0535	0.0339	-0.0174	-0.0161	-0.3427	0.0112	-0.1711	0.0307	-0.0172	-0.1011	0.1235	-0.121	0.367
Private firm=1	0.0307	-0.0223	0.0536	0.0295	-0.2324	0.027	0.0607	-0.0643	-0.1241	-0.0717	0.0603	-0.2391	0.2255
Public firm=1	0.0054	0.0074	-0.0521	0.0184	0.2208	0.0073	0.0757	0.007	0.1707	-0.0356	-0.0892	0.1763	-0.2689
Self-employed	0.2144	0.2423	0.061	-0.0742	-0.1663	-0.0499	-0.0959	0.0832	-0.0766	-0.0742	-0.0602	-0.1068	0.1207
Self-employed *Received Funding	0.1066	0.1014	0.0652	-0.0247	0.1067	-0.0331	-0.0584	-0.0775	-0.0254	-0.0247	-0.0356	-0.0588	-0.0338
Firm size	-0.2488	-0.2571	-0.0365	0.0092	0.0255	-0.0976	0.0799	0.0431	0.0201	0.0261	-0.0202	0.0523	-0.0304
Economist in economics job	-0.1931	-0.1506	0.0157	-0.0155	0.0512	-0.0876	-0.0166	0.0687	0.2116	0.0648	0.0127	0.2553	-0.0666
Economist in business job	0.2382	0.2017	0.0868	-0.058	-0.0191	0.0033	0.016	-0.1133	-0.1031	-0.058	0.068	0.0699	-0.0591
Business in business job	-0.0584	-0.0589	-0.1188	0.0796	-0.0462	0.044	0.0023	0.0673	-0.066	-0.0173	-0.0604	-0.2502	0.1203

	School Size*High SES School	School's Score	Municipality Average Income	Basque/Non-Spanish European Ancestry	Subjective SES	Private firm=1	Public firm=1	Self-employed	Self-employed *Received Funding	Firm size	Economist in economics job	Economist in business job	Business in business job
School Size*High SES School	1												
School's Score	0.3241	1											
Municipality Average Income	0.3659	0.2014	1										
Basque/Non-Spanish European Ancestry	0.2262	0.2254	0.275	1									
Subjective SES	0.2608	0.1276	0.343	0.5782	1								
Private firm=1	0.2152	0.118	0.2298	0.114	0.1622	1							
Public firm=1	-0.2187	-0.1615	-0.1544	-0.1208	-0.1225	-0.4525	1						
Self-employed	0.1208	0.0558	0.1025	-0.0473	0.1029	-0.2402	-0.0896	1					
Self-employed *Received Funding	0.0019	0.033	0.0266	-0.012	-0.0154	-0.1246	-0.0298	0.3323	1				
Firm size	-0.016	-0.0123	0.0159	0.0554	-0.0159	0.2198	0.1347	-0.4658	-0.1745	1			
Economist in economics job	-0.0702	0.0787	-0.11	0.042	-0.0519	-0.3653	0.1104	-0.0556	-0.0452	0.0244	1		
Economist in business job	-0.0008	-0.0286	0.0123	0.0617	0.0317	0.0059	0.1063	0.0217	0.0668	-0.1075	-0.2519	1	
Business in business job	0.0686	-0.0432	0.0901	-0.0567	0.0318	0.2701	-0.1508	0.0473	-0.0111	0.1186	-0.5638	-0.5709	1