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The Evolution of Educational Expectations in Spain (2003-2018): An Analysis of Social Inequality Using PISA

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The Evolution of Educational Expectations in Spain (2003-2018): An Analysis of Social Inequality Using PISA

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Abstract

This paper examines the educational expectations of the Spanish student body at the end of compulsory education. Using the 2003 and 2018 waves of PISA, I report a remarkable increase in the educational ambition of the Spanish student body. Two aspects are worth noting. Firstly, virtually all 15-years-old students expect to enroll in Upper Secondary Education by 2018. Secondly, Higher Vocational Education has become a very appealing alternative at tertiary level. Furthermore, significant inequalities have been documented in the configuration of educational expectations. However, inequality has been reduced in the expectations of enrolment in Upper Secondary and Tertiary Education due to the higher educational ambition among socioeconomically disadvantaged students. In turn, inequality has increased in the horizontal expectation of enrolment in the academic track in both levels because a larger share of socioeconomically disadvantaged students preferred the vocational track in 2018 (diversion thesis). Using counterfactual analysis, I have observed that this increase in horizontal inequality would have been larger had it not been for the change in the social structure between 2003 and 2018.

Keywords: educational expectations, social inequality, simulated scenario analysis, PISA, Spain

Evolución de las Expectativas Educativas en España (2003-2018): Un Análisis sobre Desigualdad Social a Partir de PISA

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Resumen

El presente trabajo analiza las expectativas formativas del alumnado español al final de su educación obligatoria. Utilizando las oleadas 2003 y 2018 de PISA, ha sido posible observar un notable incremento en la ambición académica del alumnado español. Dos aspectos merecen ser destacados. Primero, la práctica totalidad del alumnado de 15 años espera matricularse en Educación Secundaria Superior. Segundo, la Formación Profesional de Grado Superior se ha convertido en una alternativa muy atractiva dentro de la Educación Terciaria. Asimismo, ha podido comprobarse que existe una importante desigualdad en la configuración de expectativas formativas. No obstante, la desigualdad se ha reducido en las expectativas de matriculación en la Educación Secundaria Superior y Terciaria debido a la mayor ambición formativa de los alumnos de extracción social baja. En cambio, la desigualdad ha aumentado en la expectativa horizontal de matriculación en la vía académica en ambos niveles dada la mayor preferencia por vía profesional de ese mismo alumnado de extracción social baja (hipótesis de la desviación). Empleando un análisis contrafactual, se ha podido comprobar que ese incremento de desigualdad horizontal hubiese sido aún mayor de no ser por el cambio en la estructura social entre los años 2003 y 2018.

Palabras clave: expectativas educativas, desigualdad social, análisis de escenario simulado, PISA, España



The study of educational expectations has a long tradition in Sociology. The renowned Wisconsin Model of Status Attainment gave a prominent role to the configuration of educational aspirations and expectations in the process of educational and occupational attainment (Hauser 1972; Sewell, Haller, & Ohlendorf 1970; Sewell, Haller, & Portes 1969; Sewell and Hauser 1972, 1975). The Wisconsin Model is a socialization theory in which students configure their expectations early in their educational career under the influence of significant others, relevant people for the students (parents, close relatives, teachers or peers) whose expectations and plans are incorporated by students as their own. Many recent works are based on those initial contributions from the 1960s and a big debate goes on about the causal link between academic expectations and performance and the stable nature of such expectations or its adaptability over the academic life (Andrew & Hauser, 2011; Bozick et al., 2010; Buchmann & Dalton, 2002; Carolan, 2017; Hegna, 2014; Karlson, 2015).

Educational expectations are also crucial in different formulations based on rational action deliberation, such as in the works of Gambetta (1987) or Morgan (1998, 2002). In contrast, Bourdieu (1973) considered that educational expectations were only a reflection of the structure of opportunities perceived by the student. Therefore, no intrinsic value is acknowledged to the study of expectations as an independent variable. In turn, expectations have been employed as a proxy for the student's *habitus* in the analysis of social differentials in educational achievement (Dumais 2006; Grodsky & Riegle-Crumb 2010; Roksa and Potter 2011; Roksa and Robinson 2017).

Regarding the study of educational expectations in Spain, Torío et al. (2007) observed at the beginning of the century that most of the students in the last course of compulsory education expected to pursue further education and, ultimately, enrol in university, but those expectations were highly conditioned by the student's educational background. Using PISA 2015, Valdés (2019a, 2019b) concluded that inequality in the expectation of enrolment in university in Spain is the result of the combined action of primary effects (performance-based inequalities) and secondary effects (decision-based inequalities), with a 50% contribution of each source of inequality that, nonetheless, vary notably by region. Also employing PISA 2015, Choi (2018)

has analysed the effect of educational expectations on academic ability in Spain, finding a substantial association but not solving the question about the direction of causation.

Other works have shown a high degree of adaptability of academic expectations to educational performance. For instance, Criado and Bueno (2017) studied two cohorts of Spanish students in 2010 whose parents were asked about their educational expectations about their children. The authors observed that expectations were far more related to academic results at 16 years of age than at 12 because low-performers' parents lowered their initial expectations. Elias and Daza (2017, 2019) relied on a longitudinal study with students in the last year of compulsory education and observed that they adjusted their expectations and decisions in response to academic results throughout Upper Secondary Education. Generally speaking, it is likely that the more unrealistic the educational expectations, the more they will be forced to adapt. In countries with a generalized desire to complete university studies – such as Spain – it is to be expected that a substantial share of the student body is forced to downgrade their educational expectations. In relation with that argument, Bozick et al. (2010) concluded that long-lasting expectations were far more effective in the explanation of educational decisions than volatile ones, and Jacob and Wilder (2011) observed that upper-class students not only show higher expectations, but they are also more likely to fulfil them.

Research in Spain is also abundant regarding the so-called immigrant optimism paradox: controlling for academic results and socioeconomic background, the educational expectations of immigrant students are higher than the expectations of their native counterparts (Cebolla & Martínez de Lizarrondo, 2015; Cebolla-Boado et al., 2020; Gil-Hernández & Gracia, 2018). This body of research agrees on the idea that this apparent paradox is the result of the unfulfilled mobility aspirations in the migratory projects of parents. Those aspirations are inherited by their children, who express excessively high levels of educational ambition given their academic ability and socioeconomic condition. However, other hypotheses such as the anticipation of labour discrimination or the deficits of information about the educational and occupational system in the host country are commonly considered.

My intention in this work is to contribute to this body of knowledge about

the configuration of educational expectations and, particularly, to the study of expectations in the Spanish case. In order to do that, I will rely on the Programme for the International Student Assessment (PISA) and compare educational expectations in 2003 and 2018. Note that I intend to study expectations, not aspirations nor consummated decisions. On the one hand, aspirations refer to idealized goals, which may not be realized because of different types of barriers and impediments. Even though both aspirations and expectations are affected by the same set of predictors (Bohon *et al.*, 2006), aspirations are substantially higher than expectations and much more stable over time (Beal & Crockett, 2010; Goldenberg *et al.*, 2001). On the other hand, expectations are not consummated decisions. Participants in PISA are aged 15, which in Spain means to participate at the theoretical age of enrolment in the last course of compulsory education. Therefore, expectations can be considered highly realistic but not equivalent to consummated decisions.

Furthermore, participants in PISA manifested their expectations about all post-compulsory alternatives, which allow me to study both vertical (whether the student expect to enrol a level of education) and horizontal expectations (which track the student expect to enrol in that level of education). As PISA also collects plenty of information about social origin, I have been able to examine vertical and horizontal dimensions of inequality.

The organization of the rest of the paper is as follows. First, I succinctly describe the Spanish educational system. Then, I introduce the PISA database, describe the variables in the study, and present the methodology employed. Results follow and I discuss the results and conclude in the last two sections.

The Spanish Educational System

The basic structure of the Spanish educational system has remained mostly unaltered since it was established in 1990 by the LOGSE Act. Compulsory education extends from age 6 to 16 divided into two educational levels: six courses of Primary Education and four courses of Lower Secondary Education (ESO). Throughout compulsory education, students follow a mostly unified curriculum. If successful, students are awarded the ESO diploma, which grants access to a stratified Upper Secondary level divided into two main

tracks: Baccalaureate, a two-year academic track leading to university education, and Middle Vocational Education, a two-year vocational track valid to enter the labour market or to continue into Higher Vocational Education. Students who finish Baccalaureate may also enter in Higher Vocational Education, and those who finish this program can enrol in university. Figure 1 depicts this structure.

Although the structure of the system has remained mostly the same in the last three decades, successive legislation has altered the regulation of the bridges between all these post-compulsory alternatives. Interestingly, the transition between Middle and Higher Vocational Education required to sit an access examination in 2003. By 2018, the consecution of the Middle Vocational Education diploma was enough to enter Higher Vocational Education.

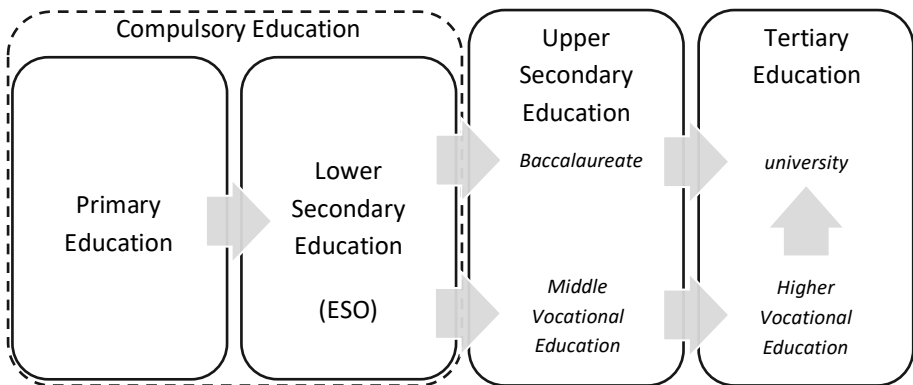


Figure 1. Structure of the Spanish Educational System.

Data and Methods

Data and Sample

I will rely on the Programme for the International Student Assessment (PISA) carried out by the Organization for Economic Cooperation and Development (OECD) every three years since 2000. PISA assesses the literacy of students

in three basic domains (maths, reading, and science) at age 15, which, for the Spanish case, means to be enrolled in the last course of compulsory education (4th ESO). Nonetheless, the high retention rates in Spain make that around one-quarter of the participants is enrolled in prior courses.

Furthermore, the Spanish sample in PISA has been traditionally large because of the desire to count with regionally-representative samples. In 2003, 10.790 students participated in the study, while 35.926 students did so in 2018. However, as not all regions have participated with a representative sample from the beginning and the sample size of each region is different, it is crucial to appropriately weight the results.

Finally, the PISA study is based on different internationally standardized questionnaires. Nonetheless, not all countries implement all questionnaires, nor all the questions in each questionnaire are finally used in all countries. For instance, educational expectations were part of the student questionnaire in 2003, 2009, 2015 and 2018. However, Spain decided not to ask students about it in 2009. Furthermore, the format of the question changed in 2015, invalidating the comparison with other waves. Thus, the two moments available are 2003 and 2018, which allows the examination of the evolution of the educational expectations of the Spanish student body during the two first decades of the 21st century.

Variables

Participants in PISA 2003 and 2018 were asked about their expectation of completion of all four post-compulsory alternatives in the Spanish educational system. The exact wording of the question was: “*Which of the following do you expect to complete? Middle Vocational Education (Yes or No), Baccalaureate (Yes or No), Higher Vocational Education (Yes or No) and university (Yes or No)*”. Using this information, I have constructed four variables: (1) the vertical expectation of enrolment in Upper Secondary Education; (2) the horizontal expectation of enrolment in Baccalaureate for those who expect to enrol in Upper Secondary Education; (3) the vertical expectation of enrolment in Tertiary Education; (4) the horizontal expectation of enrolment in university for those who expect to enrol in Tertiary Education. Note that horizontal expectations are only defined for those who expect to

enrol the corresponding level of education.

However, some problems needed to be addressed. The OECD expected that participants answered “yes” to all the alternatives involved in the realization of their educational horizon. In turn, of those who expected to complete university education in 2018, only 81.1% checked ESO and Baccalaureate, 4.8% checked ESO but not Baccalaureate, 2.8% checked Baccalaureate but not ESO, and 11.3% did not check either option. Put simply, some students only answered “yes” to the maximum level of education expected, and not to the intermediate steps, which is problematic in several ways.

For starters, the simplest way to construct the vertical expectation of continuation into Upper Secondary Education would be summing up those students that answered “yes” to Baccalaureate and Middle Vocational Education. However, if we proceeded in this way, we would ignore those students that only answered “yes” to the maximum level of education expected. Therefore, I am forced to consider that students hold the expectation of enrolment in Upper Secondary Education if they expect to complete any post-compulsory alternative. The assumption is that every student that expects to enrol in Tertiary Education expects to complete first the previous level of education.

The situation is more problematic for the horizontal expectation of enrolment in Baccalaureate instead of Middle Vocational Education. On the one hand, some students answered “yes” to both alternatives. I consider this pattern of response as uncertainty and these cases are coded as missing values for the horizontal expectation about Upper Secondary Education. On the other hand, if neither option was answered “yes” but university was, the horizontal expectation takes value 1, meaning that I assume that, if no other information is provided, those participants that expect to complete university also expect to complete previously the most straightforward route towards university education, i.e. Baccalaureate. I do not assume the same with the vocational track as both Baccalaureate and Middle Vocational Education are valid routes towards Higher Vocational Education.

The construction of the vertical expectation of enrolment in Tertiary Education is easier. It takes value 1 if the student answered “yes” either to university or Higher Vocational Education. However, students might answer

“yes” to both options. Although it could mean uncertainty again, it is completely possible to enrol university after having finished Higher Vocational Education. Therefore, I cannot drop these cases. Instead, I consider this indirect route to university as a third option which will be examined separately from enrolling directly in university and enrolling Higher Vocational Education as the maximum level of education. Nonetheless, for some of the subsequent analyses, I will just distinguish those students who expect to enrol in university (directly or indirectly) from those who expect to enrol Higher Vocational Education as the maximum level of education.

In addition to examining how those educational expectations have evolved in the last fifteen years, I intend to study how they are affected by social origin and how that effect might have changed between 2003 and 2018. Fortunately, PISA includes plenty of information about the socioeconomic background of participants. On the one hand, the OCDE collects information about the occupational status of both progenitors. Using the dominance criteria, I have employed the three-class reduced version of the EGP scheme (Erikson & Goldthorpe, 1992) distinguishing the salariat class (class I+II), the intermediate class (class IIIa, IVabc, V) and the working class (class IIIb, VI, VIIab)¹. On the other hand, the OCDE provides information about the educational level of both parents. Using again the dominance criteria, I have used the ISCED classification – a standardized international measure of educational attainment – to create a three-category variable that distinguishes among higher education (ISCED 5a, 6), intermediate education (ISCED 3abc, 5b) and lower education (ISCED 0, 1, 2)².

Using that information, I will study how inequality has fared in the expectations about Upper Secondary and Tertiary Education. In the first place, Maximally Maintained Inequality (MMI) theory argues that saturated educational levels become irrelevant in the process of stratification and inequality move upwards in the educational ladder with time (Gerber & Hout, 1995; Raftery & Hout, 1993). Therefore, I anticipate that:

Hypothesis 1. The reduction of inequality in the vertical expectation of enrolment in Upper Secondary Education is associated with an increase of inequality in the vertical expectation of enrolment in Tertiary Education.

Secondly, Effectively Maintained Inequality (EMI) theory predicts that horizontal inequality increases as a response to declining vertical inequality because of a reaction of socioeconomically advantaged students, who observe higher rates of participation of less advantaged students and take refuge in the most desirable and profitable educational alternatives inside that level of education (Lucas, 2001, 2009). Therefore, I expect that:

Hypothesis 2. The reduction of vertical inequality in Upper Secondary or Tertiary Education translates into higher horizontal inequality because socioeconomically advantaged students increase their expectation of enrolment in the academic track.

Finally, the diversion thesis asserts that disadvantaged students are incited to pursue further education, therefore reducing vertical inequality, but are diverted away from the most desirable alternatives, increasing horizontal inequality as a result (Becker & Hecken, 2009a, 2009b; Hillmert & Jacob, 2003). Therefore, I hypothesize that:

Hypothesis 3. The reduction of vertical inequality in Upper Secondary or Tertiary Education translates into higher horizontal inequality because socioeconomically disadvantaged students access the vocational option in a larger proportion.

Method

I will present descriptive information about the educational expectations of the Spanish student body, its evolution between 2003 and 2018 and the inequality observed in such expectations. However, to understand that pattern of evolution in the educational expectations of Spanish students, I will carry out a simulation exercise.

First, note that the evolution of the proportion of students that hold an educational expectation is the result of two dynamics. On the one hand, that proportion may vary because of changes in the social structure. As socioeconomically advantaged students are more ambitious than their less advantaged peers, if the latter grow in relative size, the proportion of

ambitious students also grows. On the other hand, the preferences in each social class might also change. Maybe socioeconomically disadvantaged students become more ambitious and, as a result, the overall ambition grows. So, in the end, we will observe higher educational expectations both because there are less socioeconomically disadvantaged students and because the remaining disadvantaged students become more ambitious. The following simulation exercise aims to disentangle those two forces.

For starters, observe that the proportion of students that hold an educational expectation, P , can be expressed as the weighted sum of students that hold this expectation in each social group, using as weights the relative size of each social group:

$$P = \sum_{j=1}^J \frac{p_j}{n_j} \times \frac{n_j}{N}$$

Where j indexes the social groups, N refers to the sample size, n_j refers to the size of the group j , and p_j refers to the proportion of students that hold this expectation in the social group j .

We can compute that quantity for each wave in PISA:

$$P_{2003} = \sum_{j=1}^J \left(\frac{p_j}{n_j} \right)_{2003} \times \left(\frac{n_j}{N} \right)_{2003}$$

$$P_{2018} = \sum_{j=1}^J \left(\frac{p_j}{n_j} \right)_{2018} \times \left(\frac{n_j}{N} \right)_{2018}$$

And we can also compute a simulated scenario for 2018 where the preferences of each social group are allowed to change but the social structure remains as it was in 2003:

$$P_{2018}^S = \sum_{j=1}^J \left(\frac{p_j}{n_j} \right)_{2018} \times \left(\frac{n_j}{N} \right)_{2003}$$

Using that information, we can calculate the following quantities. First, the total change in the proportion of students that hold this educational expectation:

$$\Delta P = P_{2018} - P_{2003}$$

Second, the change due to the alteration of the preferences in each social group:

$$\Delta P^P = P_{2018}^S - P_{2003}$$

And third, the change due to the alteration of the social structure:

$$\Delta P^{SS} = P_{2018} - P_{2018}^S$$

Observe that summing up ΔP^P and ΔP^{SS} , we obtain the total change between 2003 and 2018, ΔP . Therefore, by computing the proportion that these last two quantities represent over the total change, we learn how much of it is due to the alteration of the preferences inside each social group and how much is due to the alteration of the social structure.

Results

The Educational Expectations of Spanish students

For the sake of transparency, I present in the Appendix the raw educational expectations as they were answered in PISA. Since that information has no analytical interest, I directly begin by considering Figure 1, where the vertical and horizontal expectations of enrolment in Upper Secondary and Tertiary Education are reported. On the one hand, we can see that, in the course of these 15 years, a larger proportion of students at the end of compulsory education expected to enrol in Upper Secondary Education (an increase of 8 percentage points). However, less of these students expect now to enrol

Baccalaureate over Middle Vocational Education (a decrease of 4 points). On the other hand, the proportion of students that expected to enrol in Tertiary Education grew 17 percentage points between 2003 and 2018. This remarkable increase was accompanied by a significant change in the preferences about the alternatives inside this level of education. Firstly, the expectation of enrolling Higher Vocational Education as the maximum level of education increased by 5 percentage points. Secondly, the percentage of students that expected to complete Higher Vocational Education to later enrol in university increased by 12 percentage points. As a result, the proportion of students that expected to enter directly university decreased by 17 percentage points.

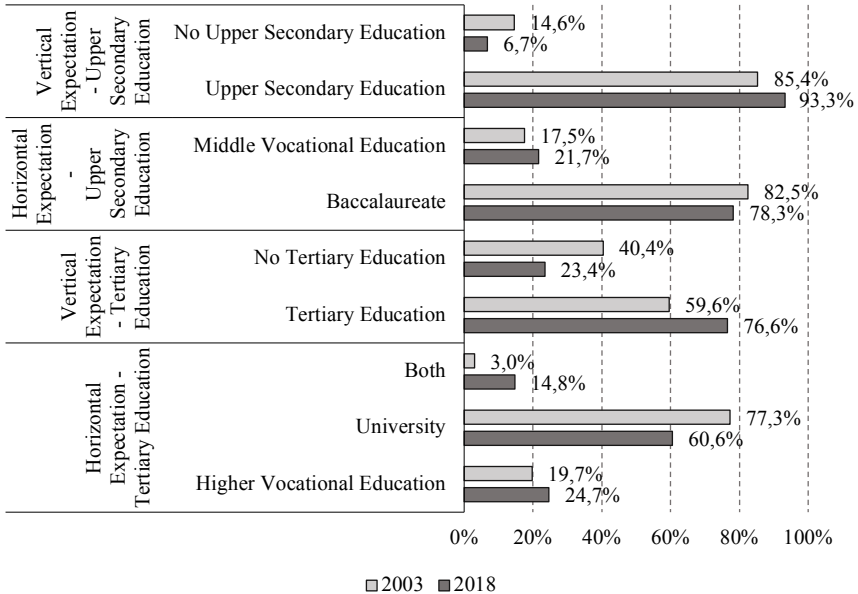


Figure 2. Vertical and horizontal expectations about Upper Secondary and Tertiary Education of the Spanish student body. Source: PISA 2003 and 2018.

Educational Expectations by Social Origin

This notable change in the educational expectations of Spanish students between 2003 and 2018 is in accordance with the remarkable change in the social and educational structure of the Spanish population during that period (Figure 3). One fifth of the working class was lost to the salariat class and families with no education beyond Lower Secondary level have been almost halved, resulting in a larger proportion of families with post-compulsory non-university education and, specially, university education.

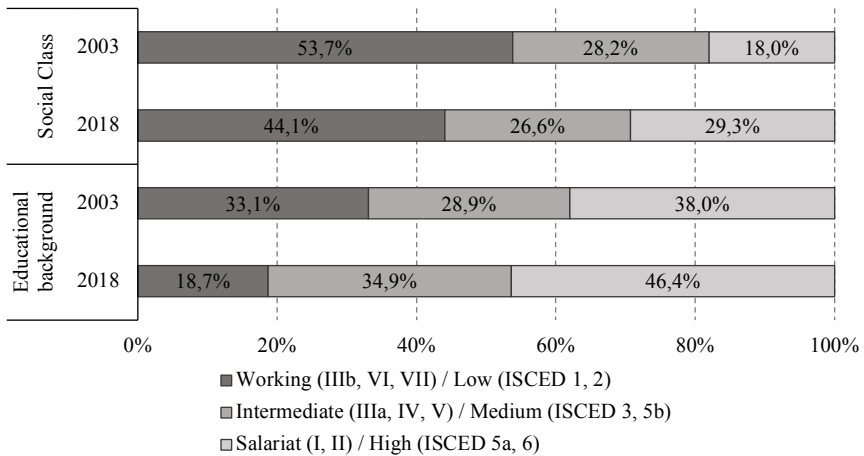


Figure 3. The social and educational structure of the Spanish student body. Source: PISA 2003 and 2018.

Figures 4 to 7 use that information and break down the educational expectations of Spanish students by social class and educational background. As this mammoth amount of information might be overwhelming, I present in Table 1 absolute and relative measures of inequality for 2003 and 2018. Absolute inequality is computed as the difference between the proportion of students that hold an expectation. For instance, we see in Figure 4 that 79.1%

of working-class students and 93.1% of salariat-class students expected to enrol in Upper Secondary Education in 2003. Therefore, absolute inequality in the vertical expectation of enrolment in Upper Secondary Education amounted to 14 percentage points in 2003. In turn, 93.1% of working-class students and 96.7% of salariat-class students expected to enrol in Upper Secondary Education in 2018, for an absolute difference of 3.6 percentage points. Thus, inequality in the vertical expectation of enrolment in Upper Secondary Education has been strongly reduced. Results are similar if we consider the educational background instead of the social class.

In addition to that, I also compute the odds ratio, a relative measure of inequality that captures the different structure of opportunities perceived by distinct social groups. Looking again at Figure 4, we see that the odds of holding the expectation of enrolment in Upper Secondary Education in 2003 for working-class students was 3.8 ($0.791/(1 - 0.791)$), meaning that, for the average working-class student in 2003, it was 3.8 times more likely to expect to enrol in Upper Secondary Education than not. The equivalent odds for a salariat-class student was 13.4 ($0.931/(1 - 0.931)$). The odds ratio is just the quotient of those two odds. Therefore, in 2003 it was 3.55 ($13.4/3.8$) times more likely that a salariat-class student expected to enrol in Upper Secondary Education than not, than a working-class student. By 2018, that odds ratio declined to 2.9, meaning that the relative advantage of salariat-class students in the expectation of enrolment in Upper Secondary Education was reduced between 2003 and 2018.

However, Table 1 reports an increase of inequality in the preference for Baccalaureate over Middle Vocational Education, larger if we consider the educational background than the social class but substantial in both cases. Figure 5 shows that, although such preference for Baccalaureate has decreased for all social groups, the decrease is higher for working-class and low-educated families, forcing inequality to increase. In other words, if inequality has increased in the horizontal expectation about Upper Secondary Education, it is not because advantaged students changed their behaviour but because disadvantaged students now prefer Middle Vocational Education in larger numbers.

Regarding Tertiary Education, the inequality observed in the vertical expectation has been notably reduced between 2003 and 2018. For an average

working-class student in 2003, it was almost as likely to expect to enrol in Tertiary Education than not (odds ratio = 0.95). In turn, for a random salariat-class student in 2003, it was 3 times more likely to expect to enrol in Tertiary Education than not. Therefore, the odds ratio in 2003 was 3.2 and, by 2018, it decreased to 2.5. In absolute numbers, 48.9% of working-class students expected to enrol Tertiary Education in 2003, while that percentage substantially rise to 70% in 2018, causing inequality to decrease from 26.3 percentage points to 15.5. The reduction of inequality is even larger if we compare students from low and high educated families.

Finally, Table 1 reports an increase of horizontal inequality in Tertiary Education. Furthermore, Figure 7 indicates that, while the proportion of salariat-class students that preferred university over Higher Vocational Education as the maximum level of education barely decreased, the proportion of working-class students that hold that preference was reduced from 72.1% to 65.6%. The same is observed in the comparison of students from high and low-educated families. Again, if horizontal inequality has increased it is not because advantaged students took refuge in the most desirable alternatives in Tertiary Education, but because disadvantaged students now prefer Higher Vocational Education more often.

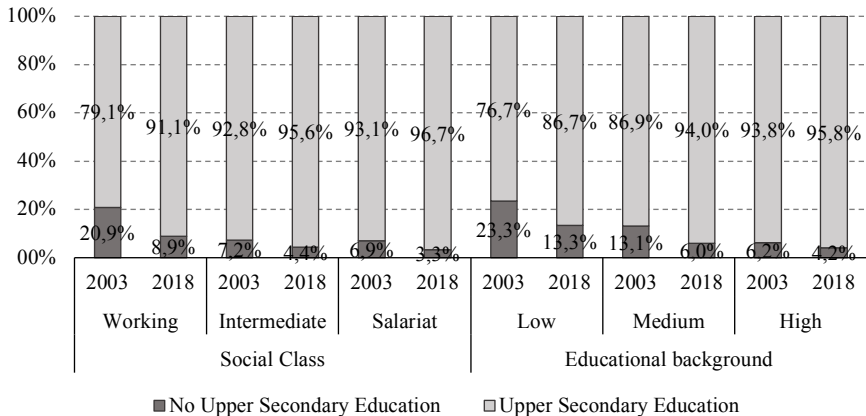


Figure 4. Vertical expectation about Upper Secondary Education by social origin.

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Source: PISA 2003 and 2018.

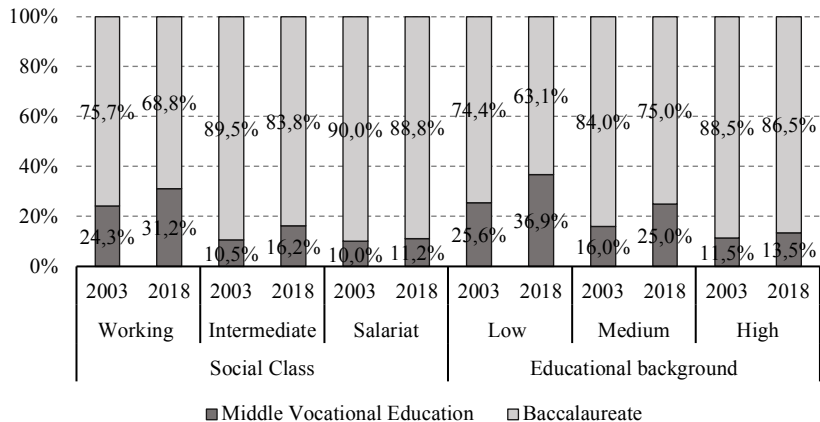


Figure 5. Horizontal expectation about Upper Secondary Education by social origin. Source: PISA 2003 and 2018.

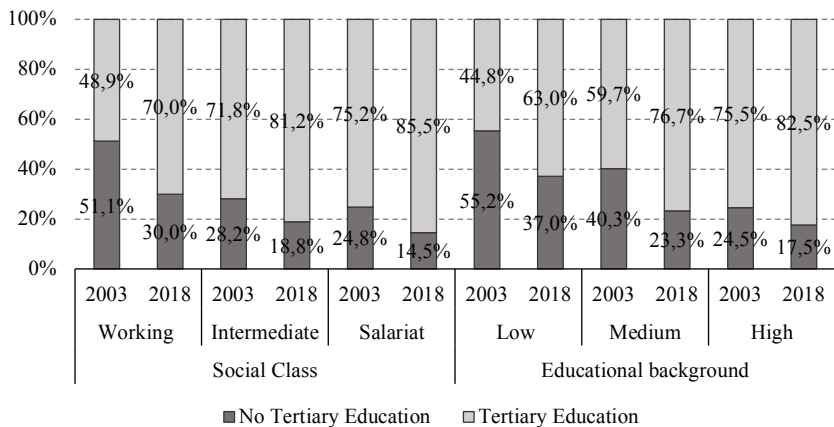


Figure 6. Vertical expectation about Tertiary Education by social origin. Source:

PISA 2003 and 2018

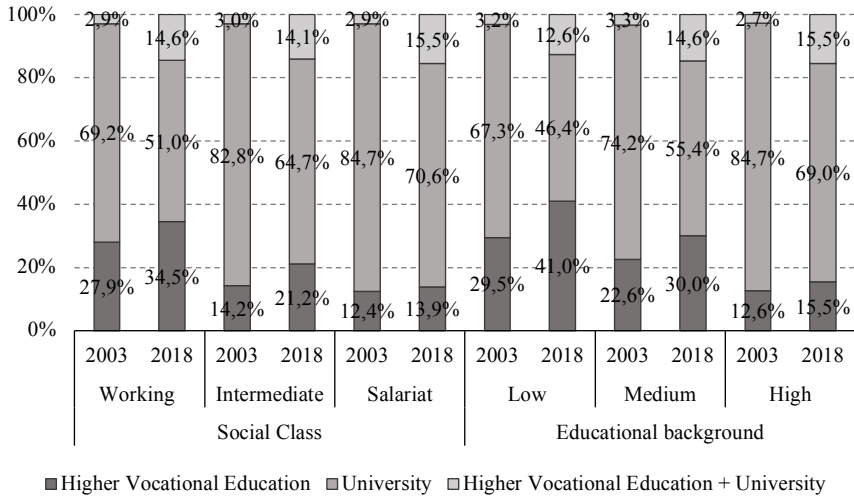


Figure 7. Horizontal expectation about Tertiary Education by social origin. Source: PISA 2003 and 2018.

Table 1

Evolution of inequality in educational expectations. Source: PISA 2003 and 2018.

		Absolute difference		Odds ratio	
		2003	2018	2003	2018
Upper Secondary Education	Salarial vs Working Class	14.0%	5.7%	3.55	2.90
	High vs Low Education	17.1%	9.1%	4.58	3.48
Baccalaureate	Salarial vs Working Class	14.3%	19.9%	2.88	3.57
	High vs Low Education	14.1%	23.5%	2.66	3.76
Tertiary Education	Salarial vs Working Class	26.3%	15.5%	3.18	2.53
	High vs Low Education	30.7%	19.5%	3.80	2.77
university	Salarial vs Working Class	15.5%	20.5%	2.73	3.25
	High vs Low Education	16.9%	25.4%	2.90	3.77

Simulated Scenario for 2018

Figure 3 clearly established that the proportion of working-class and low-educated families strongly declined between 2003 and 2018. On top of that, Figures 4 to 7 reported that the educational expectations of each social class and educational group have changed between 2003 and 2018. At first sight, it is not possible to disentangle which of these two dynamics drives the evolution of each educational expectation.

To assess that, I have carried out a simulation exercise that answers the following question: what would be the proportion of students that hold a particular educational expectation in 2018 had the social or educational structure remained the same as in 2003? In that counterfactual scenario, the change observed would be entirely due to the alteration of the educational preferences inside each social group. Table 2 displays the proportion of students that hold each educational expectation in this simulated scenario and the share of the change between 2003 and 2018 attributable to each of these two dynamics.

Take the vertical expectation of enrolment in Upper Secondary Education as an example. In 2003, 85.4% of students expected to enrol this level. The simulation for 2018 tells us that, if no change in the social structure would have occurred since 2003, that figure would have been 93.3% instead of 93.9% in 2018. In other words, instead of observing an increase of 8.5 percentage points in the expectation of enrolment in Upper Secondary Education, the increase would have been of 7.9 points. Therefore, we can conclude that 92.4% of the change in the vertical expectation of enrolment in Upper Secondary Education between 2003 and 2018 is due to the change in the expectations of each social group and 7.6% is due to the change in the social composition of the Spanish population.

Regarding to the horizontal expectation about Upper Secondary Education, we observed that the preference for Baccalaureate over Middle Vocational Education decreased between 2003 and 2018. Table 2 reveals that this decrease would have been even larger if not for the change in the social and educational structure. The only reason why we see this moderate reduction is because the percentage of working-class and low-educated families was

substantially reduced. Put differently, the decrease would have been 41.2% larger if the social structure would have remained unaltered and 47.3% if the educational structure would have remained the same.

Moving on to the vertical expectation of enrolment in Tertiary Education, we observed in Figure 5 a large increase of 17.5 percentage points between 2003 and 2018. We can see now that 90.6% of that effect would have been observed if the social structure had not changed and 84.7% if the educational structure were fixed. The reason why the expectation of enrolment in Tertiary Education has increased between 2003 and 2018 is mainly that those in lower social strata have changed their preferences about Tertiary Education.

Finally, the preference for university over Higher Vocational Education as the maximum level of education has decreased between 2003 and 2018 around 4 percentage points. However, if the social structure would have remained the same, the decrease would have been almost 40% as large. In other words, the structural changes in the composition of the Spanish population smoothed the decrease in the preference for university inside Tertiary Education.

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Table 2

*Simulated scenario keeping constant the social and educational structure of 2003.
Source: PISA 2003 and 2018.*

		2003	2018 ^S	2018	Change in the expectations... ...due to a change in the expectations of each social group	...due to a change in the social structure
Social Class	Vertical Expectation - Upper Secondary Education	85.4%	93.3%	93.9%	92.3%	7.7%
	Horizontal Expectation - Upper Secondary Education	82.7%	77.3%	78.9%	141.2%	-41.2%
	Vertical Expectation - Tertiary Education	60.0%	75.9%	77.5%	90.6%	9.4%
	Horizontal Expectation - Tertiary Education	80.8%	75.4%	76.9%	139.3%	-39.3%
Educational Background	Vertical Expectation - Upper Secondary Education	86.1%	92.2%	93.4%	83.6%	16.4%
	Horizontal Expectation - Upper Secondary Education	83.0%	76.3%	78.4%	147.3%	-47.3%
	Vertical Expectation - Tertiary Education	60.8%	74.4%	76.8%	84.7%	15.3%
	Horizontal Expectation - Tertiary Education	81.1%	75.1%	76.8%	139.0%	-39.0%

Note: the proportions reported in this table do not coincide exactly with the proportions presented in Figure 2 because the former are affected by the missing information in social class and educational background.

Discussion

Results clearly report a significant rise in the vertical expectations of transition into Upper Secondary and Tertiary Education between 2003 and 2018 particularly among disadvantaged students, which meant a notable decrease in the inequality observed in both expectations. In turn, the academic track in Upper Secondary Education and Tertiary Education is less appealing than 15 years ago and horizontal inequality has increased because working-class students and students from low educated families preferred more often Higher Vocational Education. However, some aspects require further discussion.

Firstly, results suggest that Upper Secondary Education has become the educational minimum in the country as virtually all students aged 15 expect to complete some form of education at this level (93.3% of the sample). This level of saturation results in a substantial reduction of inequality. However, proponents of the Maximally Maintained Inequality theory argued that saturated educational levels, although more equal, become irrelevant in the process of social stratification and educational inequality moves upwards in the educational structure (Gerber & Hout, 1995; Raftery & Hout, 1993). Contrary to that argument, I do not observe that inequality in the expectation of transition into Tertiary Education increased between 2003 and 2018. Instead, it has been notably reduced. Nonetheless, it must be acknowledged that I am looking at the end of the process of saturation of Upper Secondary Education (the expectation of enrolment was already 85.4% in 2003) and it is possible that in previous decades, when the participation of lower-class students in this level intensely grew, there was a period of increasing inequality in the vertical expectation about Tertiary Education.

In turn, I observe that the lower level of vertical inequality in the expectation of enrolment in Upper Secondary Education translated into higher horizontal inequality in the preference of Baccalaureate over Middle Vocational Education. This increase is not the result of advantaged students taking refuge in the academic track as expected in EMI theory (Lucas, 2001, 2009), but because the new disadvantaged students that expect to enrol in Upper Secondary Education highly prefer the vocational track as anticipated by the diversion hypothesis (Becker & Hecken, 2009a, 2009b; Hillmert & Jacob, 2003). However, note that I have only studied one particular type of

horizontal inequality (the distinction between academic and vocational education) and socioeconomically advantaged families had quite saturated Baccalaureate by 2003 (9 in 10 students preferred this option). It would be difficult to resort even more to Baccalaureate to differentiate their education. In turn, they might take refuge in the most rewarding Baccalaureate modalities, increasing inequality in this alternative horizontal dimension. As PISA does not collect data on the modality expected in Baccalaureate, I cannot test this hypothesis with the data at hand.

I have also reported a notable increase in the expectation of enrolment in Tertiary Education. This might be positive not only in terms of future participation in higher education but also for performance in the previous levels. Some authors have argued that students commit to their educational expectations and adapt their academic performance and intermediate decisions to the realization of such plans (Morgan, 1998, 2002). We can say then that high expectations cause high academic performance. However, research in the Spanish case about that causal relationship is more prone to affirm the opposite: high generalized initial levels of ambition are downgraded as a response to poor demonstrations of academic ability (Criado & Bueno, 2017; Elias & Daza, 2019). Even more, it has been argued that generalized unrealistically high expectations about higher education may lead to undesirable results, such as a shared consideration of previous preparation as irrelevant to attend higher education and the consequent reduction of effort in the preparatory levels for university (Rosenbaum, 1998). However, Domina et al. (2011) found a strong positive relationship between expectations and effort in a context of generalized college-attendance expectations.

It is also remarkable the new role of Higher Vocational Education in the Spanish educational system. If Tertiary Education is more appealing for disadvantaged students in 2018 it is entirely due to Higher Vocational Education. Indeed, the simplification of the transition between Middle and Higher Vocational Education together with the possibility to access university education after completing Higher Vocational Education make this option attractive for all students but, particularly, for those whose culture is most present in this vocational and work-oriented type of education (Bourdieu & Passeron, 2009; Lamont & Lareau, 1988). This result is in agreement with Holm et al. (2013), who observed for Denmark that enrolment in the

vocational track in Upper Secondary Education decreases inequality in accessing higher education. However, they also observed that disadvantaged students preferred lower-tier higher education, therefore increasing horizontal inequality. I have observed the same for Spain: the decrease in the inequality observed in the expectation of transition into Tertiary Education came at the cost of increasing inequality in the preference of university over Higher Vocational Education as the maximum educational level.

Indeed, these results are interesting beyond their contribution to examine the Spanish case, as they offer evidence for the comparison between two competing hypotheses about the transformation of vertical inequality into horizontal inequality. Even though many different studies have documented the increase of horizontal inequality as educational expansion make vertical inequality to decrease (Andrew, 2017; Byrne & McCoy, 2017; Guetto & Vergolini, 2017), not so many works have studied if that result is due to the behaviour of socioeconomically advantaged students as EMI theory predicts or it is due to the behaviour of disadvantaged students as the diversion hypothesis expects. Schindler and Lörz (2012) carried out one of the few studies that have explicitly compared both hypothesis examining the evolution of educational inequality in the transition to Tertiary Education in Germany. They observed that it was working-class students and not their salariat-class peers who change their behaviour over time, agreeing with the diversion hypothesis. Similarly, I have reported that the decrease of inequality in the expectation of transition into Upper Secondary and Tertiary Education has translated into larger inequalities in the preference for the academic over the vocational track because disadvantaged students highly preferred the latter.

Finally, the simulation exercise showed that the increase in the vertical expectations of transition into Upper Secondary and Tertiary Education is mostly driven by the higher educational ambition of working-class and low educated families. This is good news as it indicates that we are talking about a sustainable change in the levels of ambition in the country, not just a compositional effect. In turn, the change in the social and educational structure obscured the real change in the preferences of the Spanish student body about academic and vocational education. As we saw, in the absence of that structural change, the decrease in the expectation of enrolment in the academic track in Upper Secondary and Tertiary Education would have been

substantially larger.

Conclusions

The main conclusion of this work is that Spanish students are much more ambitious in 2018 than they were in 2003. These are potentially good news, but it is important to be aware of the possible unintended consequences of this rise in educational expectations. Indeed, students need to be aware of the kind of preparation required to fulfil their educational plans. Encouraging ambitious plans without providing the necessary information and means to be able to realize them will provoke frustration among those who fall short. Furthermore, students might develop the perception that Tertiary Education is less demanding than it really is just because all students expect to complete some form of education at this level. If the only reason why Spanish students have increased their educational expectations is because many of them do not have enough information about higher education, we cannot consider this increase a positive trend. Therefore, further research is required to assess how this increase in expectations has affected preparatory effort for Tertiary Education and educational policy must be aimed at providing information as complete and accurate as possible about the kind of preparation required to successfully participate in tertiary level.

Furthermore, these results make clear that providing different types of educational alternatives increase the participation in post-compulsory education, particularly at tertiary level. It is likely that eliminating the entrance exam to Higher Vocational Education for those who successfully complete Middle Vocational Education has increased the attractiveness of Tertiary Education, which emphasizes the fact that educational policy is capable to affect the educational decision-making process. However, horizontal inequality in the expectations about Upper Secondary and Tertiary Education has increased, which will translate into larger inequality in educational attainment. Working on the transition between Higher Vocational Education and university can be useful to revert those effects (Ustrell, 2012). Two ideas might help. First, the design of the programs in Higher Vocational Education and university should be more coordinated, so students who decide to make that transition were exempted of coursing most of the two first years at

university and the time for completion of the Bachelor's degree was shortened. Second, scholarships are highly needed to cover for the direct, indirect, and opportunity costs of prolonging that much the educational career, as the students that access university via Higher Vocational Education spend at least two more years than their counterparts in Baccalaureate.

Limitations

This study has taken advantage of the fact that participants in PISA manifest their expectations at the theoretical age of enrolment in the last year of compulsory education in Spain, which make their expectations about post-compulsory education highly realistic. As the OECD collects plenty of information about the social origin of the student, I have focus on social inequalities in the configuration of those expectations. However, I have not considered how these trends in social inequality relate to other important aspects such as gender or immigrant background. Research on the interaction between social origin and gender have documented that social inequality in educational expectations is larger among boys than girls (Ortiz-Gervasi, 2020), and many different works have offered evidence on the already referred immigrant optimism paradox (Cebolla-Boado et al., 2020). Further research must be dedicated to analysing inequalities in educational expectations by gender and immigrant background, and how compositional changes in those variables might affect the trends in social inequality described in this work.

Notes

¹ Social classes are defined as follows: Class I – Large proprietors, higher professionals and managers; Class II – Lower professionals and managers; Class IIIa – Routine non-manual workers, higher grade; Class IIIb – Routine non-manual employees, lower grade; Class IVa – Small proprietors with employees; Class IVb - Small proprietors without employees; Class IVc – Farmers and smallholders; Class V – Lower-grade technicians and manual supervisors; Class VI – Skilled manual workers; Class VIIa – Semi- and unskilled manual workers; Class VIIb – Agricultural and other workers in primary production. However, there is not enough information in PISA to distinguish self-employed and proprietors from farmworkers, so they all have been categorized as working-class.

² The ISCED classification groups educational levels in Spain as follows: ISCED 1 – Primary

Education; ISCED 2 – Lower Secondary Education (ESO); ISCED 3A – Upper Secondary Education, General (Baccalaureate); ISCED 3BC, Upper Secondary Education, Vocational (Middle Vocational Education); ISCED 5A, Bachelor's degree (university); ISCED 5B, Higher Vocational Education; ISCED 6, Master's degree (university).

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Appendix

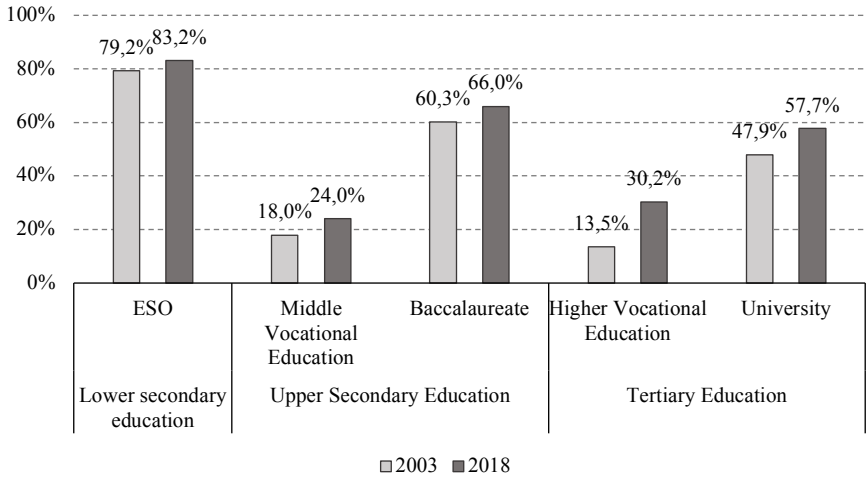


Figure A1. Raw educational expectations of the Spanish student body.
 Source: PISA 2003 and 2018.