Are the traditional dimensions of inequality changing? An analysis of unskilled jobs for young people in Spain*.

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Abstract:

This paper analyses the likelihood of occupying an unskilled job in the last 30 years in Spain for young people who have completed their studies, as well as the influence and the evolution of traditional dimensions of inequality, such as educational attainment, gender or nationality in avoiding these jobs. To this end, all of the trimesters of the Spanish Labor Force Survey have been used, from the third trimester of 1976 to the third trimester of 2007. The results from logistic regression models show that the likelihood of having an unskilled job has decreased slightly due to the decline in agricultural jobs, and also to an increase in the proportion of people with high qualifications (they are less likely to have an unskilled job). The effects different educational attainment has on the likelihood of avoiding these unskilled jobs have decreased due to a certain devaluation of educational degrees, although the gap between the various levels remains very large. Gender inequality has disappeared or decreases clearly in the areas where it still persists. Finally, nationality has become a crucial factor of inequality.

Introduction

Spain's insertion into a globalized economy over the last three decades has radically transformed the Spanish labor market. Despite the archaic economic and occupational structures from the past, there is no lack of pessimists regarding the present. Thus, four beliefs about the unfortunate consequences of the arrival of postindustrial society and about the influence of globalization in Spain come up cyclically: 1) The worst jobs have become more extended, especially among young people; 2) education no longer provides a guarantee for avoiding these jobs; 3) with the expansion of the service sector, women occupy a higher proportion of the worst jobs, something which was more typical for men in industrial society; and 4) with the arrival of immigrants, new sources of inequality and discrimination unknown until recently in Spain arise, for example, nationality.

The purpose of this article is to find out the following. 1) To discover whether the likelihood of young people having unskilled jobs has increased, decreased or remained constant over the last 30 years in Spain. 2) To determine the importance of the classic forms of inequality, such as educational attainment, gender, and nationality, for avoiding these jobs. And 3) to see how these factors have varied over time. Thus, this article focuses on the worst jobs and on young people.

In order to answer these questions, the data from all the trimesters of the Labor Force Survey (LFS), from the third trimester in 1976 to the third one in 2007, were used. Two files were constructed with individuals with typical labor market entry ages, on one hand, and with typical labor market consolidation ages, on the other. The likelihood of having an unskilled job was analyzed. In order to compare the way the factors that structure inequality have varied throughout time, the analysis was also carried out separately with several groups of cohorts entering the labor market.

The text is divided into 5 sections. The first section underlines the most important changes in the Spanish labor market with reference to the research subject. Then the hypotheses that guide the analysis are presented. Afterward, the data are described, the process for preparing the files used is described, and the variables are listed. In the two final sections, the results and conclusions are presented.

The transformation of the Spanish labor market over the last three decades

Over the last three decades, the Spanish labor market has undergone changes that have decisively influenced the transition from the educational system to employment. On one hand, the economic cycles have conditioned the labor lives of young people, who are more likely than adult workers to suffer the consequences of a critical cycle. Spain has undergone two crisis periods, followed by two other periods when jobs were created. The first crisis period went from the mid-seventies to the mid-eighties. During this phase, more than 1,700,000 jobs were destroyed, one million of these jobs in farming. Between 1985 and 1991, the number of people employed rose from eleven million to a little over thirteen million. Between 1991 and 1994 the second crisis took place; it was shorter than the previous one but more virulent. The number of people employed decreased by 700,000. Since 1995, Spain has experienced a period of prosperity unprecedented in duration and magnitude. From a little over twelve million people employed in 1994, the number has risen to twenty and a half million in the third trimester of 2007. The great expansion of employment in recent years has been complemented by the massive arrival of immigrants.

Behind the waves of job destruction and job creation, there are hidden currents that have changed the shape of the labor force and the occupational structure. Spaniards' qualifications have improved noticeably. Only 26% of the people born between 1946 and 1950 entered upper-level secondary education. The figure rose to 65% for the people born thirty years later. This appreciable improvement has provoked far-reaching changes, such as women's incorporation into the labor market and the variation of the occupational structure. Regarding the first of these, it is worth pointing out that women in the younger cohorts have higher levels of educational attainment than men of the same age. One revealing fact is that three out of every ten women born between 1976 and 1980 have university degrees, compared to only two out of every ten men. Thus, women's participation in the labor market has increased enormously. The old biography has been substituted by a new one in which women born from the fifties onward, and especially from the sixties onward, most of whom were trained for work, openly opt for an uninterrupted job career (Garrido 1992). In 1976, 27% of the women between 30-34 years of age were active. The proportion in the third trimester of 2007 rose to 78%.

Together with women's better qualifications and access to the labor market, there is the change in the occupational structure, which has gone from being characterized by the enormous importance of employment in agriculture to a configuration more characteristic of post-industrial societies. According to the LFS, 20% of working people were employed in the primary sector in 1977. The figure dropped to 5% in the first three trimesters of 2007. Similarly, the proportion of people employed in typically post-industrial jobs rose from 18% to 38% in the same period. Within these occupations, there was an expansion at the higher and lower ends of the structure, with the professionals going from 6% to 19%, while the proportion of unskilled service workers also increased from 9% to 14% (Bernardi and Garrido 2008).

Another primordial characteristic of the new employment model is the flexibilization of the labor market. This phenomenon has particularly affected young people in the form of temporary contracts, something unknown until the mid-eighties. Finally, another of the most outstanding changes of the last decade is the arrival of immigrants. According to official statistics, there were 637,000 (1.6% of the population) in 1998; in 2007, there were 4,500,000 (10% of the population).[1]

Theories and hypotheses

The research objective focuses our attention on the impact of the arrival of post-industrial society and globalization on the occupational structure. Regarding the consequences of post-industrial society, the debate is framed within two contrasting visions. The optimistic vision underlines the preeminence of the professional and technical classes in the occupational distribution (Bell 1973), while the pessimistic one emphasizes the greater presence of unskilled jobs, especially in the service sector (Rumberger and Levin 1985; Bluestone and Harrison 1988; Sayer and Walker 1992; Rifkim 1996; Wright and Dwyer 2003).

The transition toward post-industrial society in Spain reflects these two opposing visions. On one hand, there has been progress that should lead to an improvement in the occupational structure. The increase in the qualification level, the increase in the proportion of professionals, and the process of deruralization, which has meant big losses of unskilled jobs in the agricultural sector, follow these lines.

But post-industrial society has also brought a noticeable expansion of unskilled jobs in the service sector. Garrido and González (2005: 89-97) have recently studied the evolution of class structure in Spain. On one hand, they point out the appreciable increase in the best jobs: professionals, technicians, directors and non-manual supervisors (the service class in the neo-Weberian sense), have gone from 11% of non-agricultural employment in 1977 to 23% in 2004. The other side of the coin is the increase in the number of unskilled workers, which has gone from 13% of non-agricultural employment in 1977 to 20% in 2004. This uneven evolution in the labor market leads the authors to conclude that "with our data, it would be premature to speak of polarization, but it is clear that the combination of de-industrialization and the expansion of the service sector favors a recomposition (...) of the working classes in which the traditional blue-collar worker (...), is being substituted by a new less skilled worker in more precarious working conditions" (Garrido and González 2005: 97).

In a recent study on the service proletariat in Spain, Bernardi and Garrido (2008) also point out the remarkable increase in professionals and technicians, but above all they note that unskilled workers in the service sector went up from 9% to 14% between 1977 and 2005. We can say that this evolution, described as assymmetrical polarization, converges with the evolution in the United States (Wright and Dwyer 2003), although it diverges from that of other countries in the European area, such as Germany, due to the high proportion of workers with unskilled jobs in the service sector in our country (Esping-Andersen 1993, 1999). Similarly, Zambarloukou (2007) identifies a common pattern in the evolution of the occupational structure of southern European countries. This pattern is characterized by the increase in the demand for service jobs that do not require any skills, with very low salaries, and with very precarious contracts.

Thus, the debate on the consequences of the arrival of post-industrial society is flanked on one side by an optimistic hypothesis that speaks of the increase in professionals and technicians, and on the other by a pessimistic hypothesis that focuses on the increase in the worst jobs. If the pessimistic hypothesis turns out to be true in Spain, the likelihood that young people will have these bad jobs should have increased in the last thirty years.

Together with this hypothesis, there are others referring to the impact of globalization on the classic factors that structure inequality. There is a certain consensus that globalization generates uncertainty due to the internationalization of markets, job

flexibilization, privatizations, the acceleration of commercial transactions, and the markets' greater volatility (Blossfeld *et al* 2006). But sociologists diverge when it comes to interpreting the consequences of this uncertainty in the classic variables of inequality. Some authors think that the increase in uncertainty affects all individuals, making education and social class less relevant for explaining inequality (Beck 1992, 2000; Beck and Beck-Gernsheim 2001). From this perspective, class society has turned into risk society, or, expressed differently, if before there were structural factors (such as education, gender, or social class) that conditioned individuals' biographies to a large extent, now individuals "have no choice but to choose" (Giddens 1994, p. 175). From this point of view, high educational attainment is no longer a protection, like it was before, against unskilled jobs, especially for young people, where insecurity is present to a greater degree.

Other authors, however, point out that the classic sources of inequality are very persistent (Breen 1997; Goldthorpe 2002). Specifically, they state that, regarding education, post-industrial society and globalization require highly skilled individuals, making education an increasingly crucial factor in job segregation. Castells (1997:280) synthesizes this idea when he theorizes about the flexibility of network society, writing that "the increase in educational preparation, whether it be general or specialized, required in the reskilled positions of the occupational structure segregates labor even more according to education." If this is true in Spain, the gap for avoiding bad jobs between the high and low ends of the educational structure should have become more pronounced.

It is also worthwhile to connect another of the unintended consequences of globalization to the importance of education in advanced societies. The increase in the use of new technologies in job positions and the tertiarization of the economy, promoted in advanced economies by globalization, have made the States invest increasingly in education, so that, in general, young people's educational attainment today is much higher than thirty years ago. In this sense, some educational levels may have become devaluated, with qualifications growing more than the positions associated with them (Bourdieu 1998:140-145; Collins 1979; Müller and Shavit 1998:7-8). For the case of Spain, the study by Carabaña (1996) on the devaluation of degrees stands out. Based on data from the 1991 Sociodemographic Survey, he concluded that the higher degrees that

grew the most became devalued. On the other hand, upper secondary school and professional training did not lose value as such, although they were already worth less than their pre-1970s equivalents. Finally, the author concluded that mandatory schooling did not become devaluated. Given the higher proportion of individuals with post-mandatory levels of studies from 1991 to the present, it can be hypothesized that today, people with higher educational attainment should be at a higher risk than before of having unskilled jobs, especially at the beginning of their job career. This hypothesis makes the same prediction as the risk society hypothesis (that high educational levels do not protect people as well as they did before from bad jobs), although the mechanisms are quite different.

We also find contrasting hypotheses regarding gender. Blossfeld and Hofmeister (2006) present the hypothesis that globalization may have reversed the tendency toward greater gender equality by fomenting flexibility and the proliferation of the worst jobs in the service sector, more appropriate for women than the bad jobs of the industrial era. In this sense, gender differences in the likelihood of holding an unskilled job should have increased in recent years to the detriment of women. But the fact that women achieve higher levels of education than men in Spain, and that a good education should be related to good jobs, supports the opposite hypothesis: gender differences should not exist regarding the likelihood of having in an unskilled job and, if there is any difference, it should be the men, among young people, who are more likely to suffer this type of job.

Finally, the analysis includes nationality as a factor that structures inequality. The growing flow of foreigners, particularly from Latin America, Eastern Europe, and Northern Africa in recent years, ready to take bad jobs in exchange for a much higher salary that they would earn in their countries of origin, leads us to believe that they are much more likely to hold these jobs than Spaniards are, even taking into account educational attainment and activity sector.

Data, methods, and variables.

The data used are from the Labor Force Survey (LFS). The LFS is a survey that is carried out every three months in about 60,000 homes, thus containing information on between 160,000 and 180,000 individuals every three months. The data are available in

digital format from the third trimester of 1976 on. In this research, all the trimesters available, from the third trimester of 1976 to the third trimester of 2007, were used, making a total of 125.

The analysis focuses on young people's first steps in the labor market. Specifically, we analyze the typical labor market entry age —according to educational attainment and birth cohort— as well as higher ages when the people are typically settled in the labor market. Unfortunately, the survey only began to include the school-leaving age in 1999. In order to analyze labor market entry and the consolidation period, two special files were created from the original surveys. In order to construct the file for labor market entry, individuals with typical ages for school-leaving and labor market entry were selected, trimester by trimester, according to their educational attainment and birth cohort, and they were grouped together in a file called "labor market entry file (EF).

In order to study the phase of settling into the labor market, another file was created, choosing individuals with the same characteristics as those in the labor market entry file (same birth cohorts and educational attainment), but five years older. We called this file the "labor market consolidation file" (CF). The following table is an example of how both files were constructed.[2]

[About here Table 1]

The key idea is that each year, individuals with a certain level of education, who are not students, and who are two years older than the median age at which this birth cohort achieved this level of education, are selected. The median ages were calculated from the 2004 LFS and fit the ages for school-leaving that mark normal trajectories according to educational itineraries very well. However, since a noteworthy proportion of students repeat years or do not finish at these ages, the ages finally selected are two years higher than the typical ages for each level of educational attainment. In order to take into account variation in the school-leaving age throughout time, above all due to changes in itineraries, the typical ages were calculated for each educational level and, within each level, for each cohort. In the case of people with less than the level of mandatory education or who left the educational system at least two years before the minimum legal age for entering the labor market, this minimum legal entry age, 16 years of age, was chosen.

Table 1 gives an example of the logic used to construct the files on which our analysis is based. The median school-leaving age for people with lower secondary education in the cohorts born between 1961 and 1962 is 14 years of age. The age chosen for the labor market entry file is 16 years of age. In this case, it coincides with the minimum legal labor market entry age. Therefore, 16-year-old non-students with a lower secondary school educational level in the 1977 and 1978 LFS were selected. In contrast, the median school-leaving age for students with lower secondary education born in 1984 is 16 years of age. In this case, the 18-year-old non-students with a lower secondary school education in the 2002 LFS were chosen. These calculations were carried out for all the LFSs from 1976 to 2007, always controlling the typical age for school-leaving by birth cohort and educational level.

In order to follow these cohorts' labor market entry trajectories, individuals with the same characteristics, but five years later, were chosen. In our example, 21-year-old individuals with lower secondary education in the 1982 and 1983 LFSs were chosen, and 23-year-olds with this educational level were chosen in the 2007 LFS (five years more than the LFSs of the labor market entry file). This method was also applied to all the LFSs. Thus, two files were created, corresponding to the two moments studied (labor market entry and labor market consolidation). The files have the following size. The labor market entry file (EF) has 128,756 cases, and the labor market consolidation file (CF) has 161,169 cases.

The dependent variable of the analysis is dichotomic: having an unskilled job as opposed to having a skilled job. By unskilled jobs, we mean farm hands, unskilled construction, industry, and transportation workers, and jobs in the service sector that do not require specific skills, such as some personal service jobs (mainly domestic employees and cleaning people), as well as restaurant workers.

The independent variables are the following:

- Labor market entry cohorts, grouped according to the economic cycles and, in the final period of prosperity, according to the legislatures. They are divided as follows: 1976-1980 is the first phase of the economic crisis, 1981-1985 is the period of highest unemployment, 1986-1991 is the recovery, 1992-1995 is the second crisis and the beginning of the recovery, 1996-1999 is the first Partido Popular (PP) legislature, 2000-

2003 is the second PP legislature, 2004-2007 is the Partido Socialista Obrero Español (PSOE) legislature presided by Rodríguez Zapatero. As mentioned previously, from the mid-nineties onward, employment has grown enormously.

- Educational level: Elementary or below, lower secondary, professional training, upper academic secondary, middle university, upper university.

- Gender.

- Nationality: This variable was divided into two groups: citizens with only Spanish nationality and citizens with double nationality or foreign nationality.

- Sector: Based on Singlemann's (1978) classification; we discriminate, however, between public administration and social services, as well as between the transformation sector and the construction sector. The variables are extraction, transformation, construction, distribution services, production services, public administration, social services, and personal services.

In the multivariate analysis, the logistic regression technique (Liao 1994; Pampel 2000) was used. In order to follow the cohorts' trajectories and answer the question of whether people with unskilled jobs exit these conditions as time passes, beyond the first phases of the labor market, the artificial cohort method was used.

Results

Before getting into the results concerning unskilled jobs, the employment rates extracted from the files constructed from the LFS are worth looking at. Graph 1 shows the employment rate of thirty-two cohorts with typical labor market entry ages (continuous line). The discontinuous line shows the same rate for these cohorts five years later. The graph clearly shows that employment depends, to a large extent, on the economic cycle, above all for entry into the labor market. The undulating continuous line shows the employment cycles, the two crisis periods, and the other two expansion periods with precision.

A second noteworthy fact is the unequal fortune of the cohorts depending on the relationship between the moment in their job biography and the economic cycles. Thus, cohorts that had "bad luck" in their entry into the labor market were recompensed in the

job consolidation stage (five years later), because they recovered and had quite high employment rates. This is the case for those who entered the labor market in the mid-eighties or the mid-nineties, with a low proportion of employed people in the typical entry ages but with high rates five years later. The opposite happened to the entry cohorts in the second half of the seventies, the end of the eighties, and the beginning of the nineties. They encountered good entry prospects, but five years later, in the midst of their career development, their employment rates were slightly lower than those of other cohorts. Those who entered the market from the end of the nineties up to the year 2002 (last data available for comparing the entry stage with the consolidation stage) are the ones who had the best conditions, because they encountered a good economic situation both at entry and in the consolidation stage.

[About here Graph 1]

Having seen the employment rate, we will now present the results regarding unskilled jobs themselves. Graph 2 shows the unskilled employment rate (calculated using the group of employed people), for people entering the labor market and for the consolidation stage.

[About here Graph 2]

The following relevant facts can be gathered from the graph. First, in the last thirty years, an average of 26 out of every 100 employed people with typical labor market entry ages held unskilled jobs. However, the evolution has been slightly favorable. The average from 1976 to 1985 was 30.4%. The proportion dropped to 25% in the next 10 years, and to 23.7% in the last 12 years, in a context where a large number of jobs were created. The decrease is not so pronounced among those whose ages are right for labor market consolidation. The proportion of people employed in unskilled jobs went from 25.4% in the first period to 22.4% in the second, and to 22.3% in the last seven years.

A large part of the decrease in the proportion of people employed in jobs that require no qualifications is due to de-agriculturalization. Between 1976 and 2007 the occupational structure has undergone important changes in its composition. The proportion of people employed in service sector has grown and the proportion employed in the agricultural sector has dropped dramatically. We have studied the consequence of this change on the proportion of unskilled jobs (composition effect). It is worth pointing out that the

composition effect is large: the decrease of the proportion of young people working in unskilled jobs is due to the decrease of people employed in the primary sector, where most of jobs (around 60%) are unskilled.

Finally, the graphs bring up another interesting issue: do the people who end up in these kinds of jobs tend to leave them? Until the decade of the nineties, the proportion of people employed in bad jobs was lower in the consolidation phase than in the entry phase (Graph 2), indicating a certain tendency to leave these jobs as their job career advanced. From that moment onwards, the differences are not so evident.

Nevertheless, we are talking about rates (calculated using the total number of people employed). In order to answer this question, the artificial cohort method is more useful. With this method, the job biography of artificial birth cohorts can be followed trimester by trimester.[3] Graph 3 shows the job trajectory for unskilled jobs for men according to several five-year birth cohorts (born between 1946-50 and 1976-80). The calculations were done using the total of the cohort, not only the people with jobs. The results are quite clear. First of all, it can be seen that, in almost all the cohorts in which the trajectories can be compared from the time when the subjects were in their twenties, the highest unskilled employment rate is reached between 23 and 28 years of age, when almost everyone has had the real option of entering the labor market upon leaving school. At these ages, around 15% of each cohort is employed in unskilled jobs. The proportion drops slightly in almost all the cohorts as they grow older, until their early thirties. From this age on, the proportion of people in bad jobs remains very constant, between 12% and 10%, depending on the cohort. Keeping in mind the precaution necessary when using the artificial cohort method, due to its not following the trajectories of the same individuals, this result can be interpreted in the following way. Once they turn thirty-some, there are clear indications that people who have unskilled jobs do not tend to leave them.

[About here Graph 3]

Having seen the general proportions, Tables 2 and 3 show the results of the logistic regression analysis for studying the evolution of the factors that structure inequality and its impact on the likelihood of having unskilled jobs. The models reflect the favorable evolution discussed previously because, in comparison with the second half of the

seventies and the first half of the eighties, the likelihood of having an unskilled job has decreased.

Different factors explain this general decrease in unskilled jobs. On one hand, the conversion from a society where the agricultural sector was very important to a post-industrial society has turned out to favor jobs that require a certain amount of skill, despite the increase in unskilled jobs in the service sector. On the other hand, the improvement in workers' qualifications, inserted in Spain's modernization process, has contributed to decreasing the importance of unskilled jobs.

This can be seen in the second model of the analysis applied to all the cohorts. The effect is interesting because it shows the country's improvement in qualifications and its impact on reducing unskilled jobs. However, it also shows that, for the same educational attainment, someone who entered the labor market in recent years is more likely to have an unskilled job than someone who entered during the second half of the seventies, indicating that degrees have been devaluated. The effect of degree devaluation can be clearly observed in the analysis applied to different cohorts. In percentages, 26% of the people who had just entered the labor market in 1976 with a lower secondary education were employed in unskilled jobs. The proportion for individuals with this same educational level and in the same situation in 2006 rose to 38%. The same thing happens with all the levels (39% as opposed to 51% for those with primary education, 9% as opposed to 21% for those with professional training, 11% as opposed to 38% for those with upper secondary education, 2% as opposed to 9% for middle university degrees, and 2% as opposed to 4% for upper university degrees).

[About here Table 2]

[About here Table 3]

Despite the devaluation, the educational levels have a strong segmenting effect, as there are large differences between one and another. The hierarchy is clear: the higher the educational attainment, the lower the likelihood of having an unskilled job. Graphs 4 and 5 show the evolution throughout time of the differences between levels for both entry analysis (Graph 4) and consolidation analysis (Graph 5). Regarding the entry analysis, three issues stand out. First, during the first five years of the eighties, the differences decreased, except for upper level university degrees, which distanced

themselves even more from the rest (avoiding bad jobs more and more compared to the other levels). Second, during the first half of the nineties, people with upper university degrees lost part of their *status quo*. The differences among the rest of the levels remained relatively stable. Third, with the new millennium, people with upper university degrees continue to move closer and closer to the rest, while those who possess upper secondary education or professional training are progressively moving away from people with lower educational levels.

[About here Graph 4]

The relative decrease in the distances could be either because lower educational attainment protects against unskilled jobs more than before or because having a higher educational level does not protect against bad jobs as much as it used to. In reality, it is the second which is true. We can add the following percentages regarding the consolidation file to the previous ones. 30% of the people with lower secondary education who had been in the labor market around 5 years in 1982 were employed in unskilled jobs. The proportion for individuals with this same educational attainment and the same situation in 2006 rose to 32%. The figures for the other levels are 40% compared to 39% for primary education, 10% compared to 19% for professional training, 13% compared to 29% for upper secondary education, 2% compared to 9% for middle university degrees, and 0% compared to 4% for upper university degrees.

This fact partially corroborates the theories that predict inflation in educational credentials. Higher educational attainment does not protect people from bad jobs as much as it used to. This phenomenon is even clearer in the multivariable models and in the labor market consolidation file, where the noticeable decrease in the distances between university graduates and the rest stands out, as well as the slight reduction in the differences between people with an upper secondary education or some professional training degree, and lower levels of training, controlling for gender, nationality, and activity sector (see Graph 5).

Having said this, it is necessary to remark on another even more relevant phenomenon. Despite university graduates having lost part of their *status quo*, the distances between the lower and upper levels continue to be very high. Keeping the variables constant, the comparative advantage that people with higher university degrees have for avoiding unskilled jobs over people with a lower secondary education is 15 times greater in the

labor market entry file (2004-2007 cohort), and 17 times greater in the labor market consolidation file (2000-2002 entry cohort).

[About here Graph 5]

The second source of inequality analyzed here is gender. In this respect, the results indicate that women are slightly less likely than men to take bad positions upon entering the labor market, and slightly more likely to have bad jobs in the consolidation stage. It is important to underline that the effect of educational attainment has an impact on the relationship between gender and type of job. With the same educational attainment, women are slightly more likely than men to have these jobs when they enter the labor market. This phenomenon is reinforced in the consolidation stage and it holds up when the sector in which they work is introduced, pointing toward some gender segregation at equal educational levels and in the same sectors.[4] Even so, this inequality decreases throughout time, as the analyses carried out for each group of cohorts indicates. Even in the case of labor market entry, inequality disappears.

Another important source of inequality is nationality. Regarding this, the results are very interesting and conclusive. Foreigners are much more likely to have unskilled jobs. Specifically, the comparative advantage of people who only have Spanish nationality over foreigners for avoiding these types of jobs is 3.6 times higher in the entry file and 3.7 times higher in the consolidation file. This might be viewed as being due to their educational level and the activity sector in which they work. But even taking these two factors, as well as gender, into account, in the same activity sector and with the same educational attainment, Spaniards' comparative advantage over foreigners for avoiding these bad jobs is 2.5 times higher at labor market entry and 3.2 times higher in the consolidation stage.

As the models show, the gap between Spaniards and foreigners has appeared above all in recent years, from 2000 onward, when immigrants from developing countries began to arrive. This presents an interesting paradox in the evolution of inequality in globalized societies. From a national perspective, globalization increases inequality because immigrants are much more likely than natives to have unskilled jobs, making it possible for income inequality to increase among the residents in developed countries. On the other hand, from an international perspective, inequality decreases, because immigrants receive higher incomes than they would if they had not emigrated and,

besides, they send money home to their countries of origin, increasing the wealth of these countries.

Finally, the sectors where unskilled jobs are most common are construction, with a high proportion of unskilled laborers, extraction, because of the field hands, and personal services, with the high number of restaurant workers, personal caregivers and household workers. At the opposite pole, there is the transformation sector, consisting fundamentally of skilled manual workers, the distribution sector, the business services sector, and public administration.

Conclusions

Part of the article has focused on scrutinizing one of the pessimistic hypotheses of post-industrial society and of globalization, the hypothesis that there are constantly more and more of the worst jobs, especially for young people. The data indicate that the worst jobs have not increased during the last thirty years in Spain. Even the likelihood of having one of these bad jobs has decreased slightly for people with typical labor market entry ages. This is mainly due to the de-agriculturalization process.

So are there reasons to be optimistic? The results indicate two facts that are not so favorable. Even if it is true that the likelihood of having the worst jobs has not increased, it is also true that it has not decreased noticeably. Besides, the proportion of young workers in this type of job does not fall very much throughout the life cycle. The analysis carried out with the artificial cohorts shows that the proportion of employees in unskilled jobs is quite constant from the age of thirty onward. This is an indication that people who have these types of jobs at these ages do not usually get away from them.

Have the traditional dimensions of inequality regarding the likelihood of having an unskilled job changed? Are educational attainment, gender, or nationality important for avoiding these bad jobs? Let us begin with education. The differences between the different levels have decreased. In this case, this is a negative decrease, because high educational attainment does not ensure avoiding a bad job in a person's first steps in a job career as much as it used to. This fact is due to a devaluation of educational credentials resulting from the noticeable increase in the proportion of individuals with higher education. More importantly, although the differences between the different

levels have decreased, they are still very important. Even controlling for activity sector, people with higher education continue to avoid unskilled jobs to a much greater extent.

Regarding gender inequality, great social progress has been observed during the period analyzed. Inequality between men and women has disappeared in the typical labor market entry ages, and has gone down in the typical labor market consolidation ages.

The article shows a new reality, nationality as a clear structuring factor for inequality in Spain. Even with equal educational attainment, activity sector, and gender as Spaniards, the likelihood that foreigners will have unskilled jobs is noticeably higher. In this sense, nationality has become a new and crucial factor of inequality in the Spanish labor market in recent years.

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[1] www.ine.es

[2] In order to compare the two subsamples created with the real data using the variable "school-leaving age," logistic regression analyses were carried out with the data from the LFSs between the first trimester of 2000 and the third trimester of 2007, selecting non-students who finished studying 2 years previously and 7 years previously. No significant differences were found between the analysis carried out with the subsamples presented in this article and the subsample prepared using the "school-leaving age."

[3] They are called artificial cohorts because in the LFS a sixth of the sample changes each trimester, making it impossible to follow the trajectory of a real cohort, that is, of the same interviewees, for longer than a year and a half. Despite this, considering that the LFS survey is very representative, it is possible to infer results from the trajectories of individuals born the same year. Since this technique requires the group followed to be constant, everyone not born in Spain was excluded from the analysis because they were incorporated to the survey at ages that would distort the tracking of the cohorts.

[4] Using someone who is in the consolidation stage and who entered the labor market between 2000 and 2002 as an example, keeping nationality, activity sector, and educational attainment constant, the comparative advantage of a man over a women for avoiding bad jobs is 1.26 times higher ($\exp^{0,23}$). We must remember that there would be no advantage if the regression coefficient were 0: $\exp^{0}=1$.

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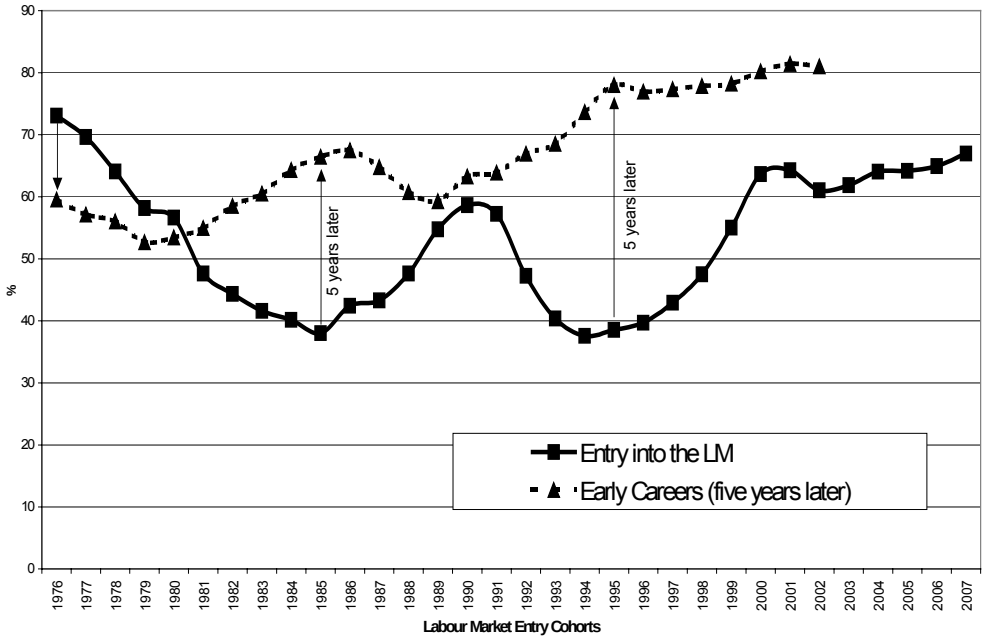
Table 1: Example of construction of files for analysis.

Level of education	a	b	c	d	e	f
Lower secondary	1961	14	16	1977	21	1982
Lower secondary	1962	14	16	1978	21	1983
Lower secondary	1984	16	18	2002	23	2007
Lower tertiary	1956	22	24	1980	29	1985
Lower tertiary	1957	22	24	1981	29	1986
Lower tertiary	1976	23	25	2001	30	2006

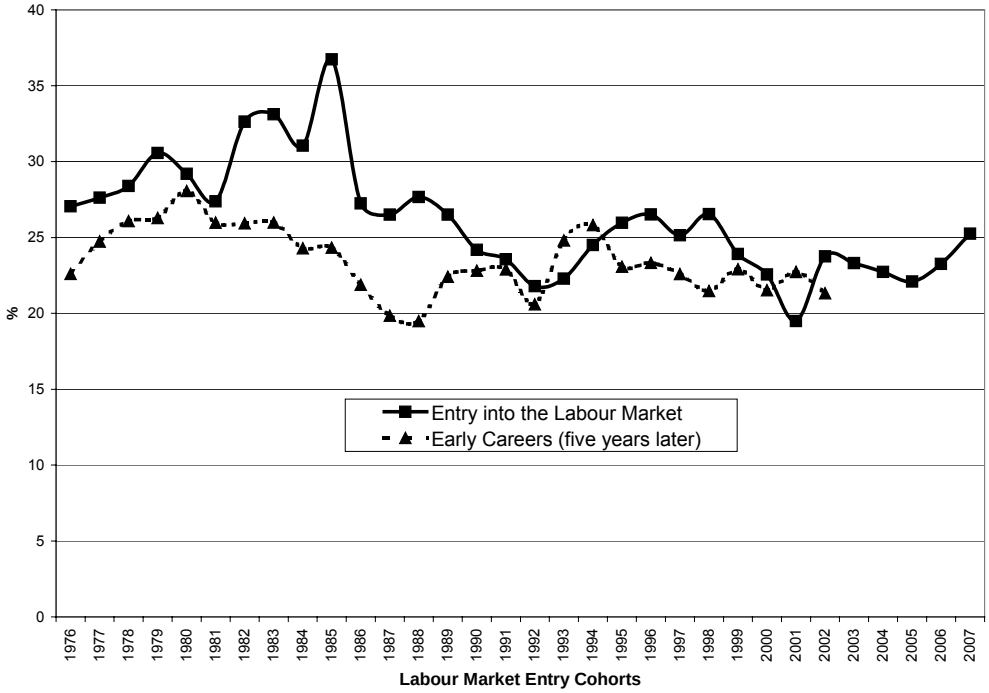
A: birth cohort; B: b: typical age at end of studies for that level and that cohort; C: age selected for the labor market entry file; D: LFS for the Labour Market Entry File; E: age selected for the early career file; F: LFS for the early careers file.

Graph 1. Employment rate by cohort with typical labor market entry ages and typical consolidation ages (5 years later)



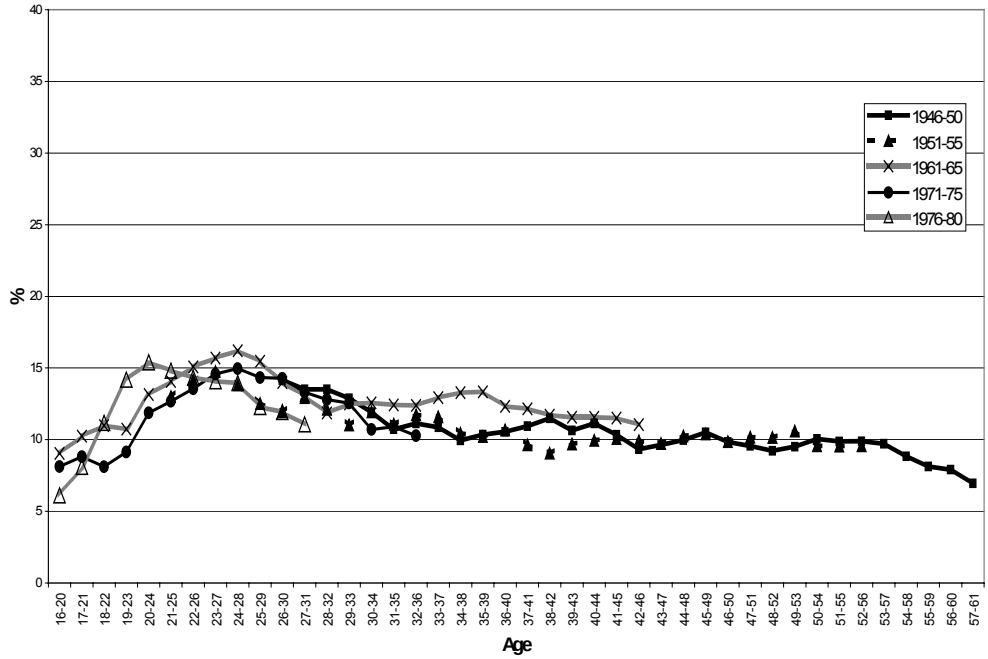
Source: Authors' calculations based on files created from the Labor Force Surveys (all trimesters from the third trimester of 1976 to the third trimester of 2007).

Graph 2. Unskilled employment rate for cohorts with typical labor market entry ages and typical consolidation ages (5 years later)



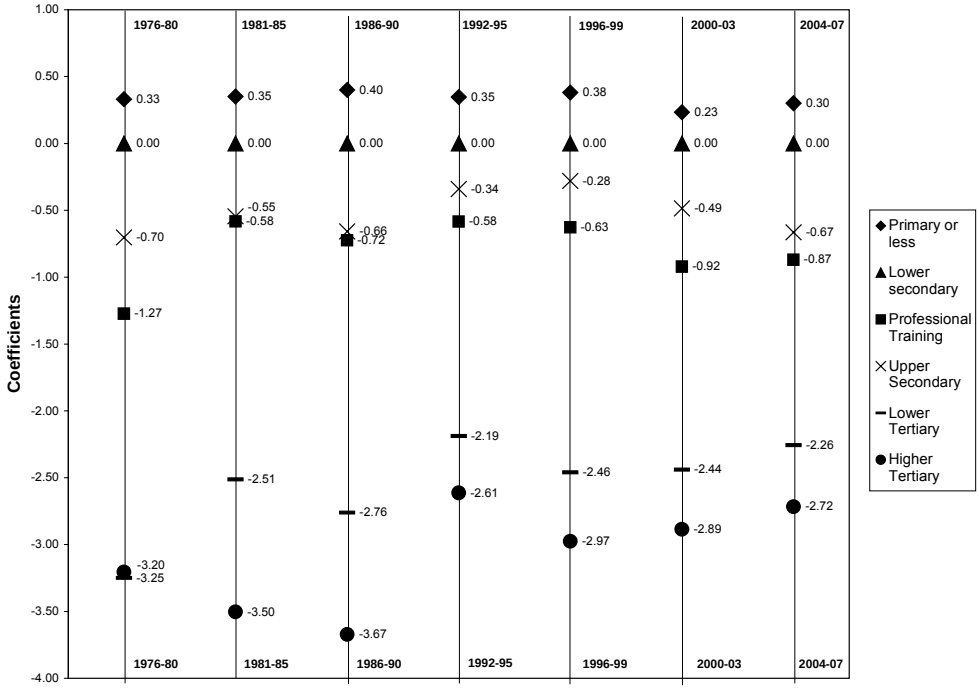
Source: Authors' calculations based on files created from the Labor Force Surveys (all trimesters from the third trimester of 1976 to the third trimester of 2007).

Graph 3. Proportion of workers in unskilled jobs according to birth cohorts and age. Men.



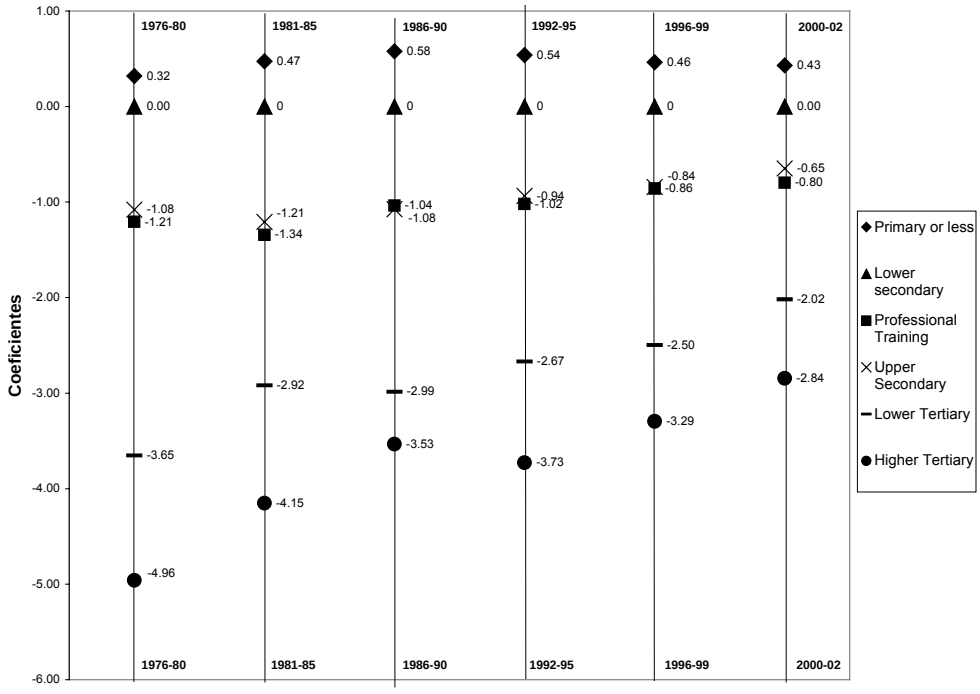
Source: Authors' calculations based on files created from the Labor Force Surveys (all trimesters from the third trimester of 1976 to the third trimester of 2007).

Graph 4. Coefficients of the effects of educational attainment on the likelihood of having an unskilled job. Young people with typical labor market entry ages (entry cohorts 1976-2007). Controlled for gender, nationality, and activity sector.



Based on coefficients of table 2

Graph 5. Coefficients of the effects of educational attainment on the likelihood of having an unskilled job. Young people with typical ages for labor market consolidation (1976-2002 entry cohorts). Controlled for gender, nationality, and activity sector.



Based on coefficients of table 3

Table 2. Logistic regression. Likelihood of having an unskilled job. File of typical labor market entry ages.

	Labour Market Entry Cohorts 1976-2007			76-80	81-85	86-91	92-95	96-99	00-03	04-07
	Mod.1	Mod.2	Mod.3							
Gender										
Men (ref.)										
Women	-0.19**	0.13**	0.17**	0.46**	0.36**	0.27**	-0.13**	-0.15**	0.01	0.11*
Nationality										
Only Spanish										
Foreigner or double	1.28**	1.38**	0.91**	0.18	0.43	0.34	0.25	-0.07	0.89**	1.15**
Level of Education										
Elementary or less		0.48**	0.35**	0.33**	0.35**	0.40**	0.35**	0.38**	0.23**	0.30**
Lower Secondary(ref.)										
Vocational Education		-0.77**	-0.74**	-1.27**	-0.58**	-0.72**	-0.58**	-0.63**	-0.92**	-0.87**
Upper Secondary		-0.62**	-0.51**	-0.70**	-0.55**	-0.66**	-0.34**	-0.28**	-0.49**	-0.67**
Lower tertiary		-2.32**	-2.40**	-3.25**	-2.51**	-2.76**	-2.19**	-2.46**	-2.44**	-2.26**
Higher Tertiary		-2.92**	-2.88**	-3.20**	-3.50**	-3.67**	-2.61**	-2.97**	-2.89**	-2.72**
Sector										
Extractive			2.31**	3.54**	2.77**	1.95**	1.73**	1.45**	1.95**	2.05**
Construction			1.49**	2.77**	2.41**	1.65**	0.96**	0.76**	0.95**	0.61**
Distributive services			0.33**	1.37**	1.02**	-0.41**	-0.29**	0.04	0.24**	0.05
Producer Services			0.31**	0.84**	0.77**	0.33**	0.15	-0.02	0.25*	-0.25+
Public Administration			1.00**	0.67*	1.28**	1.09**	0.30	1.01**	1.02**	0.74**
Social Services			1.32**	2.40**	1.98**	1.25**	0.78**	1.05**	1.18**	0.89**
Personal Services			3.03**	3.66**	3.53**	2.78**	2.62**	2.94**	3.17**	2.77**
transformative (ref.)										
Labour Market Entry Cohort										
1976-80 (ref.)										
1981-85	0.11**	0.37**	0.19**							
1986-91	-0.26**	0.13**	0.10**							
1992-95	-0.33**	0.23**	0.36**							
1996-99	-0.22**	0.63**	0.83**							
2000-2003	-0.43**	0.52**	0.71**							
2004-2007	-0.52**	0.40**	0.58**							
Constant	-0.74**	-0.95**	-2.33**	-3.26**	-2.72**	-2.03**	-1.49**	-1.09**	-1.32**	-1.30**
-2 log likelihood	148577	132369	107184	20936	17704	20062	11254	12542	12356	10693
R squared Cox and Snell	0.01	0.13	0.28	0.33	0.32	0.28	0.25	0.27	0.27	0.26
R squared Nagelkerke	0.02	0.19	0.41	0.46	0.45	0.42	0.37	0.39	0.41	0.40

Source: Own calculations based on the LFS (from third trimester of 1976 to third trimester of 2007).

** $p \leq 0.01$

* $p \leq 0.05$

+ $p \leq 0.10$.

Table 3. Logistic regression. Likelihood of having an unskilled job. File of labor market consolidation stage (5 years after typical entry ages

Labour Market Entry Cohorts 1976-2002	Mod.1	Mod.2	Mod.3	76-80	81-85	86-91	92-95	96-99	00-02
Gender									
Men (ref.)									
Women	0.13**	0.39**	0.31**	0.57**	0.38**	0.24**	0.27**	0.16**	0.23**
Nationality									
Only Spanish									
Foreigner or double	1.30**	1.55**	1.17**	0.04	-0.56	0.71**	0.65**	1.27**	1.31**
Level of Education									
Elementary or less		0.60**	0.47**	0.32**	0.47**	0.58**	0.54**	0.46**	0.43**
Lower Secondary(ref.)									
Vocational Education		-0.98**	-1.01**	-1.21**	-1.34**	-1.04**	-1.02**	-0.86**	-0.80**
Upper Secondary		-0.97**	-0.99**	-1.08**	-1.21**	-1.08**	-0.94**	-0.84**	-0.65**
Lower tertiary		-2.39**	-2.69**	-3.65**	-2.92**	-2.99**	-2.67**	-2.50**	-2.02**
Higher Tertiary		-3.25**	-3.51**	-4.96**	-4.15**	-3.53**	-3.73**	-3.29**	-2.84**
Sector									
Extractive			2.15**	2.98**	2.12**	2.23**	1.81**	1.83**	2.18**
Construction			1.35**	2.64**	2.07**	1.44**	0.95**	0.48**	0.52**
Distributive services			0.01	0.67**	-0.19**	-0.05	-0.02	-0.26**	0.04
Producer Services			0.85**	1.23**	1.15**	0.94**	0.85**	0.46**	0.24**
Public Administration			0.86**	1.57**	0.97**	0.94**	0.49**	0.62**	0.72**
Social Services			1.74**	3.00**	1.62**	1.59**	1.57**	1.50**	1.45**
Personal Services			2.85**	3.61**	2.73**	2.75**	2.76**	2.73**	2.75**
Transformative (ref.)									
Labour Market Entry Cohort									
1976-80	0.05**	-0.13**	-0.10**						
1981-85 (ref.)									
1986-91	-0.22**	-0.05**	0.09**						
1992-95	-0.12**	0.19**	0.43**						
1996-99	-0.30**	0.15**	0.39**						
2000-2002	-0.49**	0.05*	0.26**						
Constant	-1.08**	-0.91**	-2.18**	-3.03**	-2.21**	-2.05**	-1.58**	-1.47**	-1.80**
-2 log likelihood	175907	154414	127883	19953	25834	27597	20383	20763	11637
R squared Cox and Snell	0.01	0.13	0.27	0.33	0.29	0.26	0.25	0.25	0.24
R squared Nagelkerke	0.02	0.20	0.40	0.48	0.42	0.39	0.37	0.38	0.38

Source: Own calculations based on the LFS (from third trimester of 1976 to third trimester of 2007).
** $p \leq 0.01$
* $p \leq 0.05$
+ $p \leq 0.10$.