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INTERGENERATIONAL EMPLOYMENT TRENDS IN
SPAIN IN RECENT DECADES

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ABSTRACT

This article analyses the employment possibilities of the new generations, in comparison with those of previous generations at a similar age. The generational standpoint offers several interesting findings. First, in each age bracket, average real wages received by skilled workers have declined over the generations, while those received by less skilled workers have scarcely changed. Second, when these wage data are combined with the amount of time worked, it is found that in recent times there has been a widespread drop in average annual wages. This decline in annual employment income experienced by the younger generations appears to have a certain cyclical component. Lastly, in terms of job insecurity, the younger generations face a slightly lower temporary employment ratio, but those who continue with temporary contracts suffer a higher degree of turnover. The rate of growth of part-time employment has increased, especially among the younger generations with a low or medium level of education.

Keywords: intergenerational wages, intergenerational income, employment conditions.

JEL classification: D31, I26, J31, J62, J81.

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Introduction

A question that has gained relevance following the financial crisis that began in 2008 is whether young people's employment prospects are now worse than those of their parents' generation.

In recent years, the average level of academic achievement of the working age population has risen in Spain (see Chart 1), mainly because the young people entering the labour market have a higher educational achievement level than the generations leaving it. Such an increase in the supply of skilled labour may cause a mismatch if it is not accompanied by an equivalent increase in the demand for skilled labour. Moreover, there are doubts as to whether the specific skills that these workers offer, gained during their education and from previous work experience, match the skills required in recent times in the workplace.¹ Accordingly, it is interesting to analyse, from an empirical standpoint, how the employment conditions of the most highly educated young workers have changed.

In the case of younger people with a lower level of education, there is the fear that automation (especially of the most repetitive and routine tasks) may affect their employment prospects.² It may lead to a decline in demand for unskilled work and, therefore, to these young people facing more employment difficulties than previous generations throughout their working lives.

Lastly, the emergence of new forms of working, prompted by information technology developments, raises doubts about whether new labour market entrants face a higher degree of job insecurity. Although job insecurity may affect workers of any age and level of education, it is more harmful for young people, as it occurs at a crucial time in their working lives when they need to build up experience.

The aim of the article is to conduct an empirical study of the employment opportunities available to young people in Spain, establishing for this purpose intergenerational

1 Puente and Casado (2016) analyse the mismatch between the skills held by the unemployed and the skills required in the workplace, by level of education. In Spain, in the case of the most highly educated workers, the level of mismatch is one of the highest among the OECD countries.

2 See, for example, Acemoglu and Autor (2011). The literature has also identified globalisation as a further potentially harmful factor for employment among less skilled workers (see Feenstra and Hanson (1999)).

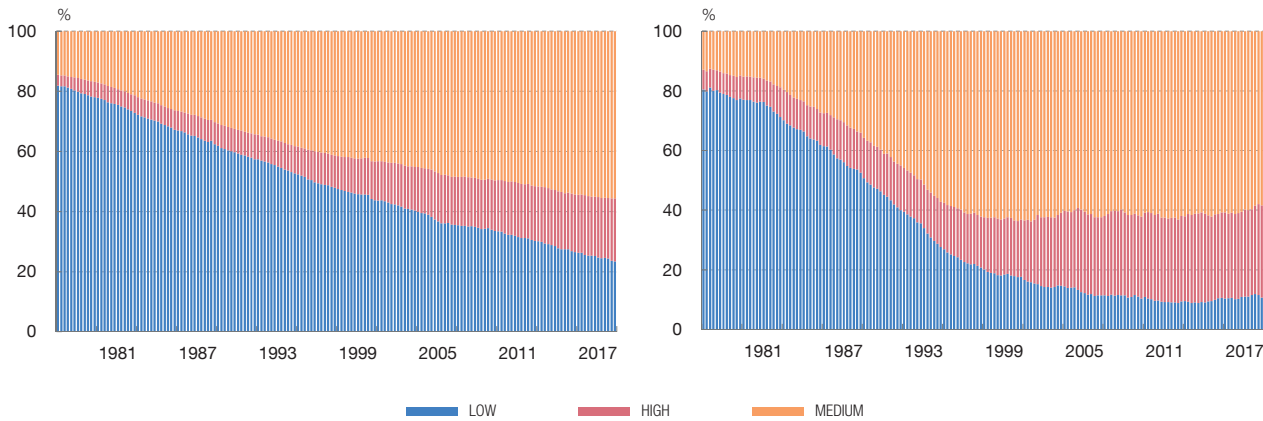
Chart 1

POPULATION BY LEVEL OF EDUCATION (a) (b)

The level of education of the Spanish population has increased, primarily because the younger generations entering the labour market have a higher educational achievement level than the generations leaving it.

1 POPULATION OVER AGE 16, BY LEVEL OF EDUCATION

2 POPULATION AGED 30 TO 35, BY LEVEL OF EDUCATION



SOURCES: INE and Banco de España.

a Own calculations, drawing on EPA microdata. Both sexes.

b Levels of education: Low = no schooling, only primary, or lower secondary without qualifications; Medium = secondary completed, Bachillerato (post-compulsory), vocational training, etc.; and High = university.



comparisons.³ In this respect, there are two variables that must be considered when making the comparison: age and the economic cycle. As regards age, the most obvious solution is to compare the employment conditions of different generations, not at the present time, but at the *same* age.⁴ The economic cycle poses the second difficulty, considering for instance that starting one's working life at the age of 20 in a booming labour market (for example, the generation born in 1980) is not comparable with doing so in the midst of a severe economic crisis (for example, the generation born in 1990). In consequence, to address this problem, the findings presented here are cyclically adjusted.

The total wage income obtained by workers over a specific period is the combination of two factors: the average wage received per hour worked and the total number of

3 Using as the database the social security administrative labour records (MCVL). The existence of maximum contribution bases makes it difficult to observe the highest wages. This is resolved by income imputations for those affected by the contribution ceiling, based on a Tobit model estimation for monthly full-time wages of workers who have contributed for the full month, for each age group combination (up to 25, between 25 and 55 divided into 5-year groups, and over 55), contribution group (divided into three categories, the first including groups 1 and 2, the second groups 3 and 4 and the third groups 5 to 11), month and year. Using this model, ten random imputations of wages above the maximum ceiling and, therefore, not observed, were made. The accuracy of the imputation mechanism was checked, with satisfactory results, using the tax data module, available since 2004.

4 With the data used it is possible to observe workers' full working lives, provided they have been economically active at some stage since 2004. Workers who have been economically inactive since that date are not included in the records. This creates a selection bias, as only workers who have maintained a minimum level of economic activity in recent years are observed. This bias may be most relevant in the case of the female population, given their lower participation rate, and for this reason it was decided to confine the analysis to the male population.

hours worked in the period. Given that these two factors may have different determinants, in the article they will be examined separately. Specifically, the next section analyses average monthly full-time wages, defined as the average wage received for working full-time in a full month, as an approximation to average hourly wage. This information is then combined, in the following section, with the total number of hours worked in a specific year, analysing the total employment income received by each worker in each year. The difference between the two measures lies, logically, in the changes in the number of total hours worked. To conclude, in the last section different measures of job insecurity are examined. This analysis is important, because the same amount of income may be received, but the associated uncertainty is very different according to whether or not it is a steady source of income.

Average monthly full-time wages

As Anghel et al. (2018) argue, workers' hourly wages and employment income can behave very differently in an economy such as the Spanish one, owing to unemployment, the temporary employment ratio and part-time working. Following these authors, the average monthly wages of full-time workers who have worked a full month are used to approximate pay per hour worked.⁵

For purposes of illustration, Chart 2.1 shows how average monthly full-time wages evolved in real terms (base 2011)⁶ throughout the working lives of those born in 1967, 1977 and 1987. The blue line corresponds to workers with a low level of education born in 1967. On average, these workers received a monthly wage slightly over €1,000 at the age of 20.⁷ This wage gradually increased, as they built up work experience, such that by the age of 40 their average wage was slightly over €2,000 per month. The blue line in Chart 2.3 shows the same for workers with a high level of education born in 1967. Thus, a university graduate born in that year received an average monthly wage of slightly over €2,500 at the age of 30. In this case also it gradually increased with age, up to almost €4,000 by the age of 40.

The brown lines in Charts 2.1 and 2.3 show the same for workers born 10 years later (in 1977), and the orange lines for those born 20 years later (in 1987). The charts show that, previous to the crisis of 2008, average monthly wages before the age of 30 for

5 Note that, as part-time work is excluded and a full month's work is a necessary condition, possible measurement errors in the part-time ratio or in the number of days worked do not affect the calculation of the average wage.

6 All wages and income presented in this article are CPI deflated (base 2011).

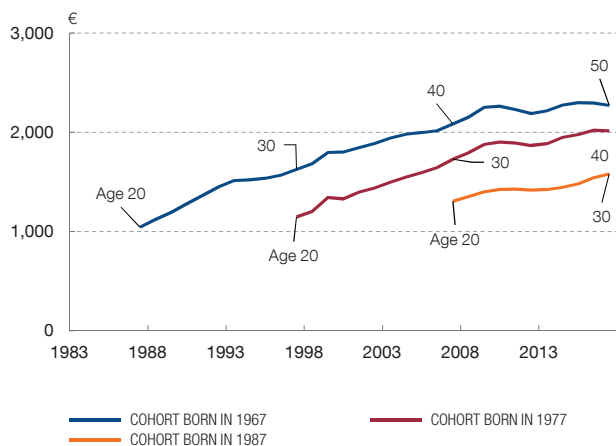
7 The education variable in the MCVL is taken from the Census data and, therefore, is not a precise measure. In consequence, in this article workers are considered to have a high or low level of education depending on their social security contribution group, according to the following criteria: if they made any contributions in group 1 (long-cycle university graduates and engineers) or group 2 (short-cycle university graduates and engineers) before the age of 31 they are considered to have a high level of education throughout their working lives; in all other cases, they are considered to have a low level of education.

Chart 2

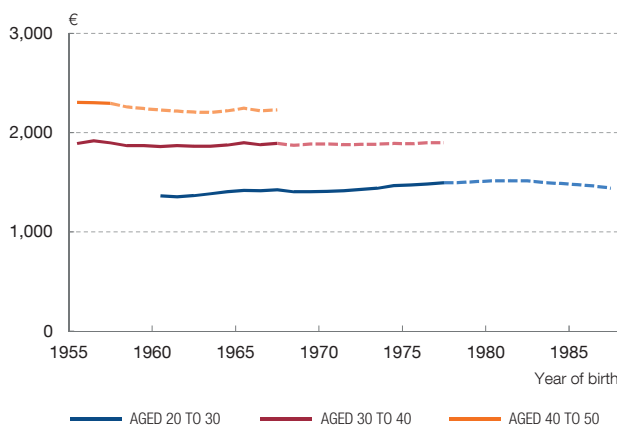
MONTHLY WAGES AT DIFFERENT STAGES OF LIFE CYCLE

The average monthly wages received by workers with a low level of education have barely changed across the different generations. In the case of workers with a high level of education, they have declined for the younger generations.

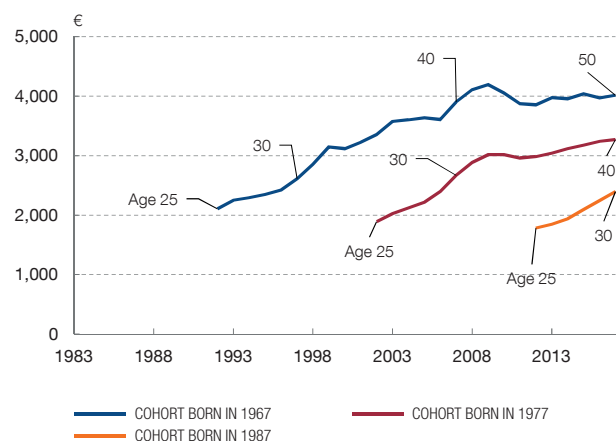
1 MONTHLY WAGES FOR CERTAIN COHORTS
LOW LEVEL OF EDUCATION (a) (b)



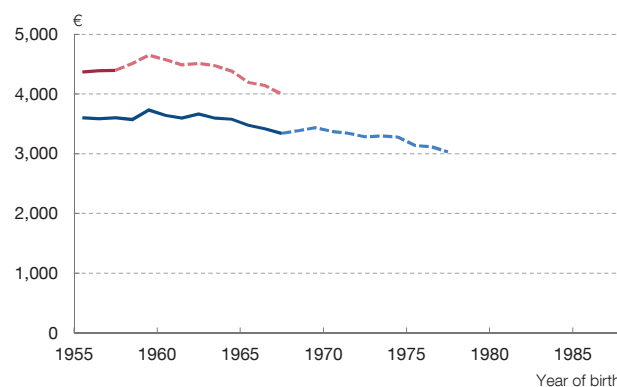
2 MONTHLY WAGES FOR EACH AGE GROUP BY YEAR OF BIRTH
LOW LEVEL OF EDUCATION (b) (c)



3 MONTHLY WAGES FOR CERTAIN COHORTS
HIGH LEVEL OF EDUCATION (a) (b)



4 MONTHLY WAGES FOR EACH AGE GROUP BY YEAR OF BIRTH
HIGH LEVEL OF EDUCATION (b) (c)



SOURCES: Ministerio de Trabajo, Migración y Seguridad Social (MCVL) and Banco de España.

a Annual average monthly full-time wage, working a full month, for each cohort, in real terms. Only male population.

b High level of education: any social security contributions in groups 1 or 2 before the age of 31.

c Average monthly full-time wage, working a full month, for each age group, in real terms. Only male population. The broken lines indicate that these data are affected by at least one year of the 2008-2013 crisis.



later generations were similar to those received by earlier generations, and even slightly higher in the case of less skilled workers. However, with the onset of the economic crisis in 2008 and in subsequent years, the pace at which average wages rose as workers built up experience slowed. This development was widespread among all generations and across all levels of education and has meant, for instance, that workers with a high level of education born in 1977 received an average wage at the age of 40 (in 2017, that is, post-crisis) that was significantly lower than that received

at that age by those born in 1967. Workers born in 1967 were in the 30 to 40 age group in a decade of economic expansion (1997-2007), whereas those born in 1977 were in that age group in 2007-2017. This decline in wages post-crisis also affected workers with a lower level of education, but to a lesser extent. However, if the above analysis is repeated, but taking into account the effect of the economic cycle on wages,⁸ the intergenerational differences barely change. This suggests that the lower average wages observed for the younger generations after the financial crisis could be due not to factors related mainly to the cyclical position of the economy but to structural factors and would, therefore, be a more permanent development.

Charts 2.1 and 2.3 compare three generations at the same age, but only a limited number of generations can be depicted clearly. For this reason, Charts 2.2 and 2.4 present the same type of information, but ordered differently so as to facilitate the intergenerational comparison with a broader time horizon. In particular, the horizontal axis represents the *year of birth* and the lines the average monthly full-time wage commanded by each generation in each age group. Accordingly, for the intergenerational comparison, it is sufficient to see whether each of the series increases or decreases as it moves towards the right, that is, as it moves towards later generations. In addition, in order to make the economic cycle visible in the charts, where the data are affected by any of the years of the economic crisis that began in 2008 they are depicted by a broken line.

Analysis of these charts corroborates the conclusions drawn from the comparisons between specific generations in the previous examples. Thus, before the onset of the crisis in 2008, average monthly full-time wages at a similar age were very steady between generations. The only apparent differences observed were a slight increase in pay of the youngest low-skilled workers, and a slight decrease in that of workers aged 30 to 40 with a high level of education. After the outbreak of the crisis, wage moderation affected all groups, but unevenly, so that since then the decline in average wages commanded by highly-skilled workers is more significant. By contrast, in the case of workers with a low level of education, the decline in wages is clearly less marked. Once again, the analysis of cyclically-adjusted data suggests that these differences persisted during the recent recovery.⁹

In consequence, two conclusions may be drawn from the analysis of average wages. Until the crisis began in 2008, average monthly full-time wages presented quite a

8 In particular, for each of the six groups considered (combinations of three age groups and two education levels), the wages observed at the individual level are regressed on different measures of the economic cycle, such as the unemployment rate, the rate of growth of GDP and the relationship between the latter and a downturn indicator taken from the Business Cycle Dating Committee of the Spanish Economic Association (AEE). The combined effect of all these variables is then subtracted from the wage. The resultant wage, after stripping out the economic cycle effect, is very similar to that observed (with differences of less than 3% in all the points of both series) and, therefore, is not represented in the charts.

9 Note that the last generation analysed is that of those born in 1987, as this is the last generation for whom employment performance can be fully observed for at least one of the age groups (20-30 years).

pronounced level of intergenerational stability, broken only by slight increases in the case of young people with low levels of education, and small decreases in the case of skilled workers in the 30 to 40 age group. However, the onset of the crisis coincided with widespread wage moderation for the new cohorts, which was most severe for workers with high levels of education.

The role of unemployment and hours worked: annual wage income

The analysis made in the previous section does not take into account any possible intergenerational differences in the probability of being employed and in the incidence of part-time work. Accordingly, for an overall analysis of whether total employment income of recent generations is lower than that of previous generations, total annual wage income should be examined, which includes spells of unemployment and hours worked, in addition to the monthly full-time wages analysed in the previous section. To this end, the sum of all wage income received throughout each year is calculated, for each generation and educational level, tracking each cohort at different ages. In this way, account is taken not only of the monthly full-time wages effectively received, but also of any periods without work or with part-time work.

The findings obtained from this analysis are set out in Chart 3; for purposes of illustration, Charts 3.1 and 3.3 depict annual wage income over the early years of certain generations' working lives. Thus, workers with a low level of education born in 1967 or 1977 received average annual wages of around €2,000 at the age of 20. By contrast, the wage income received by workers of the same age and with the same level of education but born in 1987 was considerably higher, almost €6,000 per annum. This positive difference was also observed at a later age. For instance, low-skilled workers born in 1967 received annual income of €9,000 at the age of 30, while those born ten years later received €12,000 at that age. A similar pattern is observed for workers with a high level of education. Thus, the typical annual income of a university graduate born in 1967 was slightly more than €20,000 at the age of 30, whereas for workers with the same profile born ten years later it was €25,000 at that age. This positive difference is not observed at the age of 25, although it is important to note that at that age some of these workers are still in education.

As observed earlier, with the onset of the financial crisis annual income curves shifted down significantly, but affecting all workers, irrespective of their level of education.

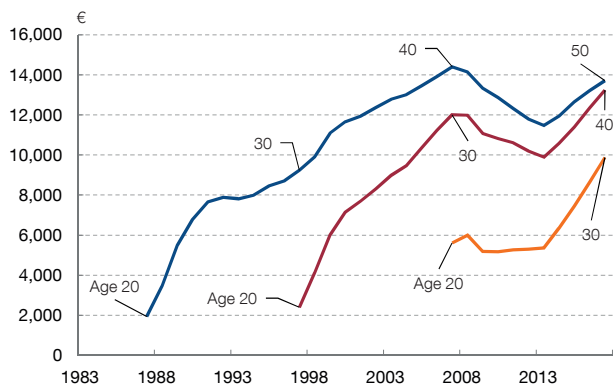
In this case, however, in contrast to the analysis of average full-time wages, the economic cycle did play an important part in developments in employment income. For this reason, Charts 3.2, 3.4, 3.6 and 3.8 present the same information as

Chart 3

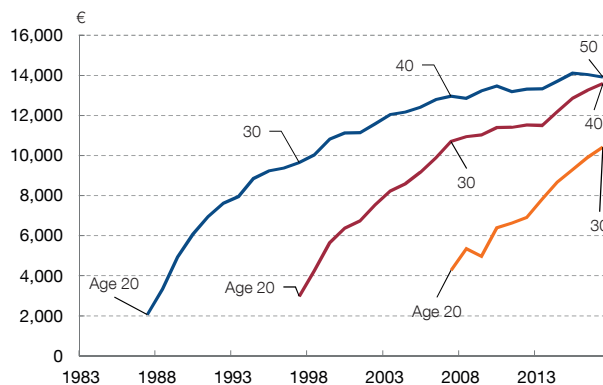
EMPLOYMENT INCOME AT DIFFERENT STAGES OF LIFE CYCLE

The widespread decline observed in annual average employment income for the youngest generations appears to have a certain cyclical component.

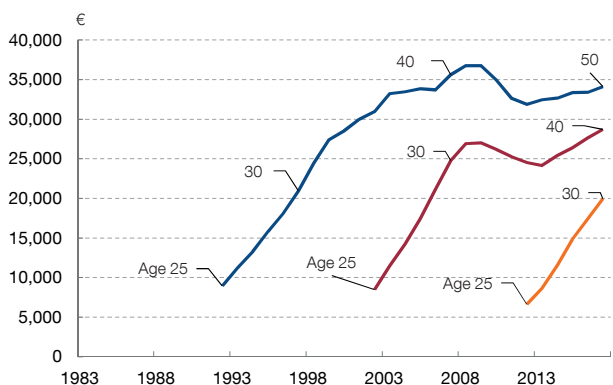
1 EMPLOYMENT INCOME FOR CERTAIN COHORTS (a)
LOW LEVEL OF EDUCATION (b)



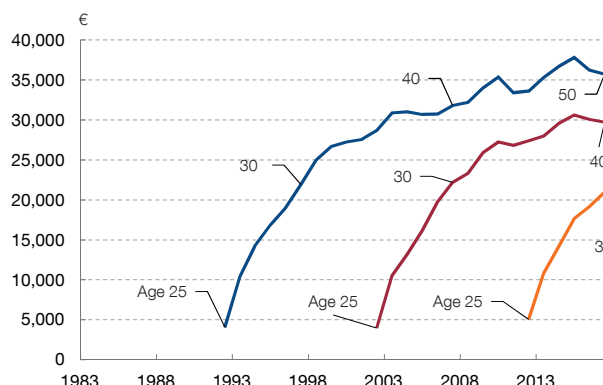
2 CYCLICALLY-ADJUSTED EMPLOYMENT INCOME (a) (c)
LOW LEVEL OF EDUCATION (b)



3 EMPLOYMENT INCOME FOR CERTAIN COHORTS (a)
HIGH LEVEL OF EDUCATION (b)



4 CYCLICALLY-ADJUSTED EMPLOYMENT INCOME (a) (c)
HIGH LEVEL OF EDUCATION (b)



— COHORT BORN IN 1967 — COHORT BORN IN 1977 — COHORT BORN IN 1987

SOURCES: AEE, INE (EPA), Ministerio de Trabajo, Migraciones y Seguridad Social (MCVL) and Banco de España.

- a Annual employment income of each cohort, in real terms. Only male population.
- b High level of education: any social security contributions in groups 1 or 2 before the age of 31.
- c The cyclically-adjusted data are obtained by subtracting from the original data (as defined in note (a)) the effects of the cyclical variables estimated when regressing – separately – the employment income of six population groups on GDP growth, the unemployment rate and the downturn indicator (AEE, 1995). The six population groups are defined by level of education (high and low, as per note (b)) and by age group: 20-29 (25-29 in the high level of education group), 30-39 and 40-49.



Charts 3.1, 3.3, 3.5 and 3.7, but after stripping out the cyclical effect.¹⁰ In Charts 3.2 and 3.4 most of the intergenerational differences observed in the income curves in

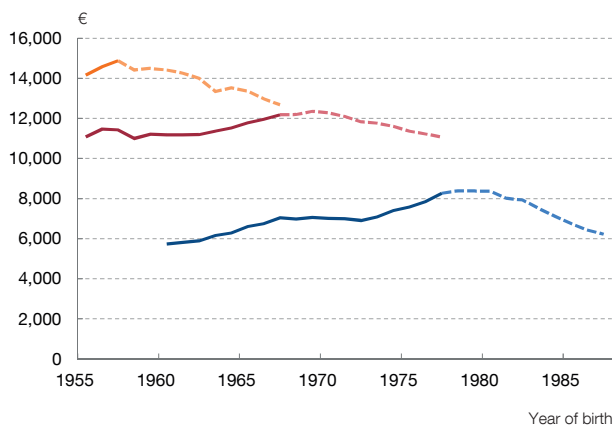
10 In particular, for each of the six groups considered (combinations of three age groups and two education levels), total wage income obtained in one year, at the individual level, is regressed on different measures of the economic cycle, such as the unemployment rate, the rate of growth of GDP and the relationship between the latter and a downturn indicator taken from the Business Cycle Dating Committee of the Spanish Economic Association (AEE). The combined effect of all these variables is then subtracted from the wage and the resultant wage, after stripping out the economic cycle effect, is that represented in the charts.

Chart 3

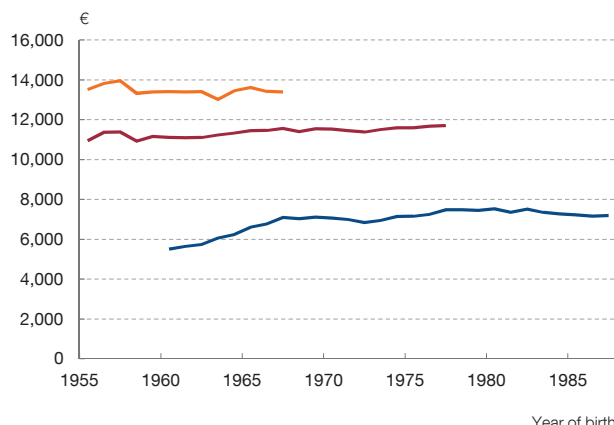
EMPLOYMENT INCOME AT DIFFERENT STAGES OF LIFE CYCLE (cont'd)

The widespread decline observed in annual average employment income for the youngest generations appears to have a certain cyclical component.

5 EMPLOYMENT INCOME IN EACH DECADE BY YEAR OF BIRTH (d)
LOW LEVEL OF EDUCATION (b)

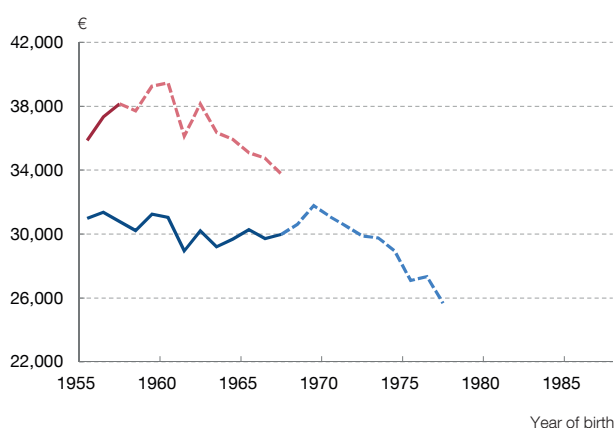


6 CYCLICALLY-ADJUSTED EMPLOYMENT INCOME BY YEAR OF BIRTH (c) (d)
LOW LEVEL OF EDUCATION (b)

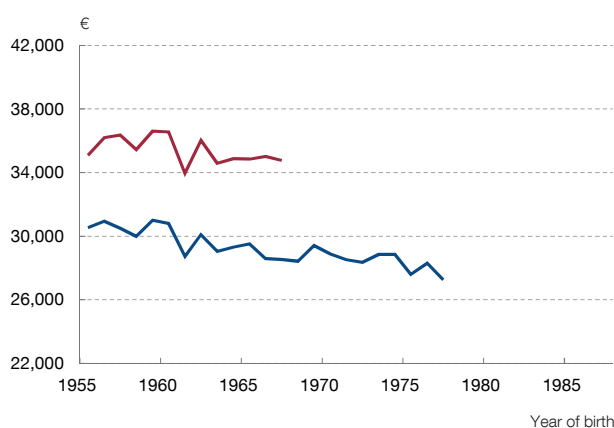


— AGED 20 TO 30 — AGED 30 TO 40 — AGED 40 TO 50

7 EMPLOYMENT INCOME IN EACH DECADE BY YEAR OF BIRTH (d)
HIGH LEVEL OF EDUCATION (b)



8 CYCLICALLY-ADJUSTED EMPLOYMENT INCOME BY YEAR OF BIRTH (c) (d)
HIGH LEVEL OF EDUCATION (b)



— AGED 30 TO 40 — AGED 40 TO 50

SOURCES: AEE, INE (EPA), Ministerio de Trabajo, Migraciones y Seguridad Social (MCVL) and Banco de España.

- b High level of education: any social security contributions in groups 1 or 2 before the age of 31.
- c The cyclically-adjusted data are obtained by subtracting from the original data (as defined in note (a)) the effects of the cyclical variables estimated when regressing – separately – the employment income of six population groups on GDP growth, the unemployment rate and the downturn indicator (AEE, 1995). The six population groups are defined by level of education (high and low, as per note (b)) and by age group: 20-29 (25-29 in the high level of education group), 30-39 and 40-49.
- d Average annual employment income – original data or cyclically adjusted – in each 10-year cohort, in real terms. Only male population. Where these are original (not cyclically-adjusted) data, the broken lines indicate that the data are affected by at least one year of the 2008-2013 crisis.



Charts 3.1 and 3.3 disappear, giving rise to very similar income curves, irrespective of the year of birth.

In Charts 3.5 and 3.7 the horizontal axis is again changed to represent the year of birth, to facilitate the same-age intergenerational comparison with a broader time horizon. In this case, each of the lines represents the average annual wage income obtained by each generation in the three age groups. As may be observed, by way of illustration, workers with a low level of education born in 1961 (where the blue line starts in Chart 3.5) received average annual employment income of €5,810 at the age of 20 to 30. From then on a gradual improvement is observed in subsequent generations, up to the onset of the crisis. Accordingly, annual employment income for the same group (unskilled workers aged 20 to 30) rose to €8,267 for those born in 1977. These improvements are also observed for low-skilled workers in other age groups, but for workers with a high level of education, income is steady in this period. The onset of the crisis (the broken lines in the charts) prompted a drop in annual employment income across all age groups and levels of education. Returning to the previous example, for younger workers with low levels of education, annual employment income fell from €8,267 for those born in 1977 to €6,223 for those born in 1987.

However, after stripping out the economic cycle effect (Charts 3.6 and 3.8) the recent downward shift observed since the onset of the crisis virtually disappears. Likewise, part of the improvement that low-skilled workers in both the 20 to 30 and the 30 to 40 age group enjoyed immediately before the onset of the crisis. Yet the improvements observed among young workers with low education levels in the pre-1968 cohorts persist. In other words, after stripping out the cyclical effect, there is a clear increase in the annual employment income of young workers with low levels of education up to the 1968 cohort. In subsequent generations, the income of less skilled workers in both the 20 to 30 and the 30 to 40 age group remains practically unchanged, with just a timid improvement being observed. By contrast, in the case of workers with high levels of education, the cyclical adjustment does not fully eliminate the recent drop in income experienced by workers in the 30 to 40 age group whose annual income continues to fall slightly, in a gradual decline observed across all the generations analysed.

To conclude, for the period before the 2008 crisis, the intergenerational comparisons suggested that annual employment income rose for young workers with low levels of education, whereas for more skilled workers it was quite steady. But during the crisis, the decrease in employment opportunities – especially for workers with low levels of education – and the drop in hourly wages in the case of workers with high education levels gave rise to a decrease in annual employment income. The evidence presented here suggests that these declines in total employment income, once the number of hours worked in the year is taken into account, had a certain cyclical component and, therefore, may be expected not to be permanent. Nevertheless, unemployment spells may weigh on future working lives, even in the medium and

long term, as unemployed workers, especially the long-term unemployed, build up less work experience.¹¹ This is particularly relevant for young people entering the labour market in an economic downturn, as it is especially important for their future professional paths that they are able to build up work experience at an early age.

Employment stability

One last aspect to analyse is whether job insecurity is greater for today's young people than for previous generations. In this section two job stability indicators are used to assess this question: temporary and part-time employment.¹²

In Chart 4, the horizontal axis once again represents the year of birth, to facilitate intergenerational comparison, and each of the lines represent the average temporary employment ratio of each generation in each age group. The first finding (Charts 4.1, 4.3 and 4.5) is that age is a key determinant of temporary employment, as it is much more prevalent among younger workers. At the same age, permanent employment contracts are more prevalent among workers with a higher level of education. That said, from an intergenerational standpoint, it is important to ascertain how these patterns change over the generations. In this comparison, account must be taken of the part played by the increasing use of temporary employment contracts since they were introduced in Spain in the 1984 Economic and Social Agreement.¹³ From then and until 1993 the temporary employment ratio rose continuously. Subsequently, various regulatory measures succeeded in easing the ratio, albeit to a very limited extent, in addition to the fall in temporary employment typically observed in downturns owing to the large-scale destruction of temporary contracts. In consequence, the first conclusion drawn is that, as a result of the above-mentioned regulatory change, the temporary employment ratio increased in the period 1984-1993 across all generations and for workers of all ages and education levels. This may be observed in Chart 4, taking for instance the blue line in Chart 4.1 which depicts the temporary employment ratio of workers with a low level of education aged 20 to 29. The line starts for those born in 1964, the generation aged 20 to 29 in the period 1984 to 1993, which were the years of expansion of temporary employment contracts. In comparison, the generation born in 1973 was aged 20 to 29 in the period 1993-2002, when temporary employment contracts were already fully established. Accordingly, the increase in the temporary employment ratio observed between these two generations corresponds to the above-mentioned regulatory change. The same is true of the increases in the temporary employment ratio observed in the charts up to the 1963 cohort for the 30 to 39 age group (the brown line) and up to the 1953 cohort for the 40 to 49 age group (the orange line). Temporary

11 See, for example, Jacobson et al. (1993) or Box 2.2, Chapter 2, *Annual Report 2009*, Banco de España (2010).

12 The Spanish Labour Force Survey (EPA) microdata are used for this purpose as the data series are longer.

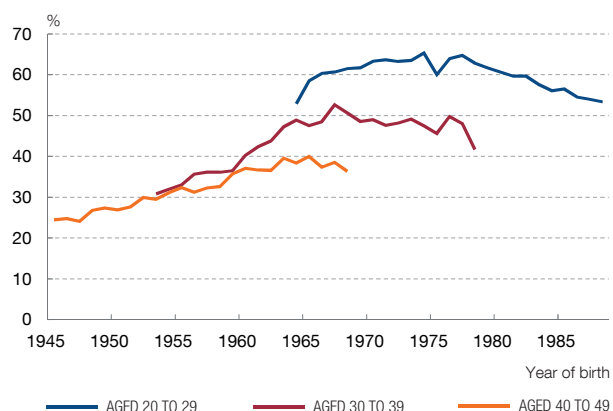
13 Some elements of the Workers' Statute were reformed in 1984 to facilitate the use of temporary contracts.

Chart 4

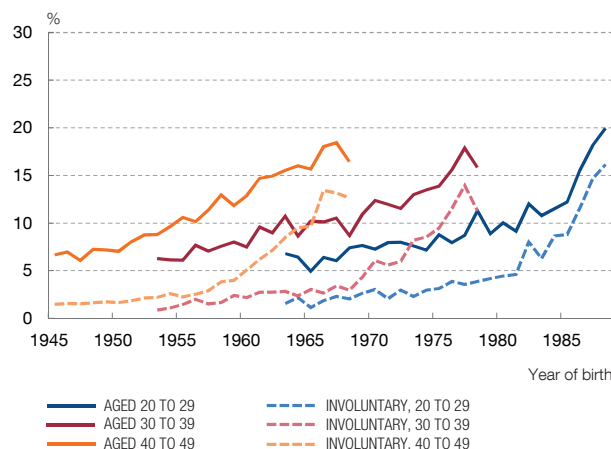
TEMPORARY AND PART-TIME EMPLOYMENT RATIO BY GENERATIONS (a) (b)

The temporary employment ratio has declined modestly for the younger generations, but the part-time employment ratio has risen sharply.

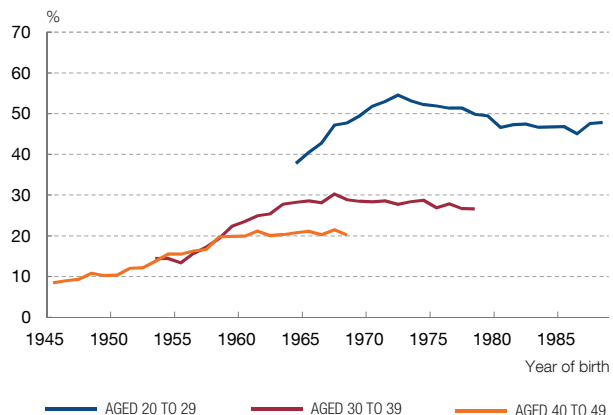
1 TEMPORARY EMPLOYMENT RATIO BY AGE, BY YEAR OF BIRTH
LOW LEVEL OF EDUCATION



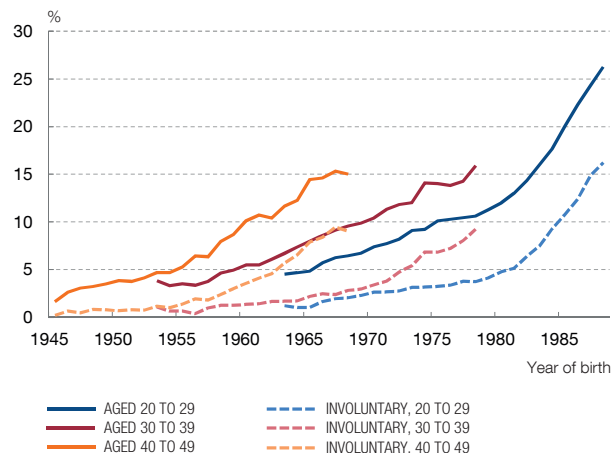
2 PART-TIME EMPLOYMENT RATIO BY AGE, BY YEAR OF BIRTH
LOW LEVEL OF EDUCATION



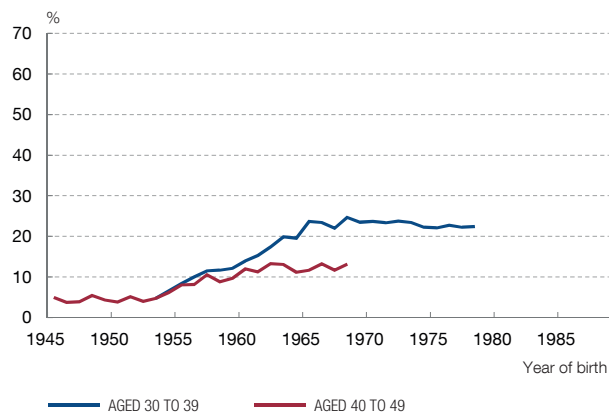
3 TEMPORARY EMPLOYMENT RATIO BY AGE, BY YEAR OF BIRTH
MEDIUM LEVEL OF EDUCATION



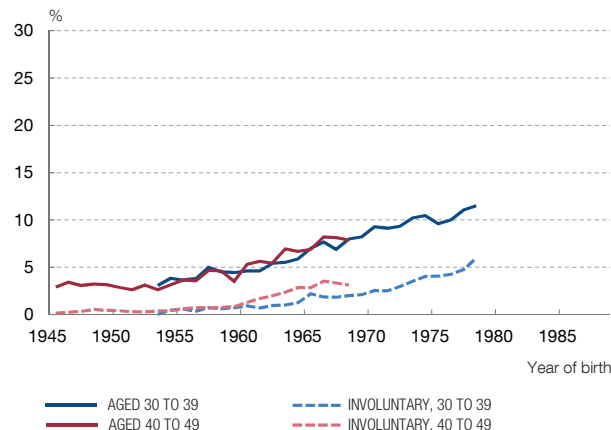
4 PART-TIME EMPLOYMENT RATIO BY AGE, BY YEAR OF BIRTH
MEDIUM LEVEL OF EDUCATION



5 TEMPORARY EMPLOYMENT RATIO BY AGE, BY YEAR OF BIRTH
HIGH LEVEL OF EDUCATION



6 PART-TIME EMPLOYMENT RATIO BY AGE, BY YEAR OF BIRTH
HIGH LEVEL OF EDUCATION



SOURCES: INE (EPA) and Banco de España.

a Own calculations, drawing on EPA microdata. Both sexes.

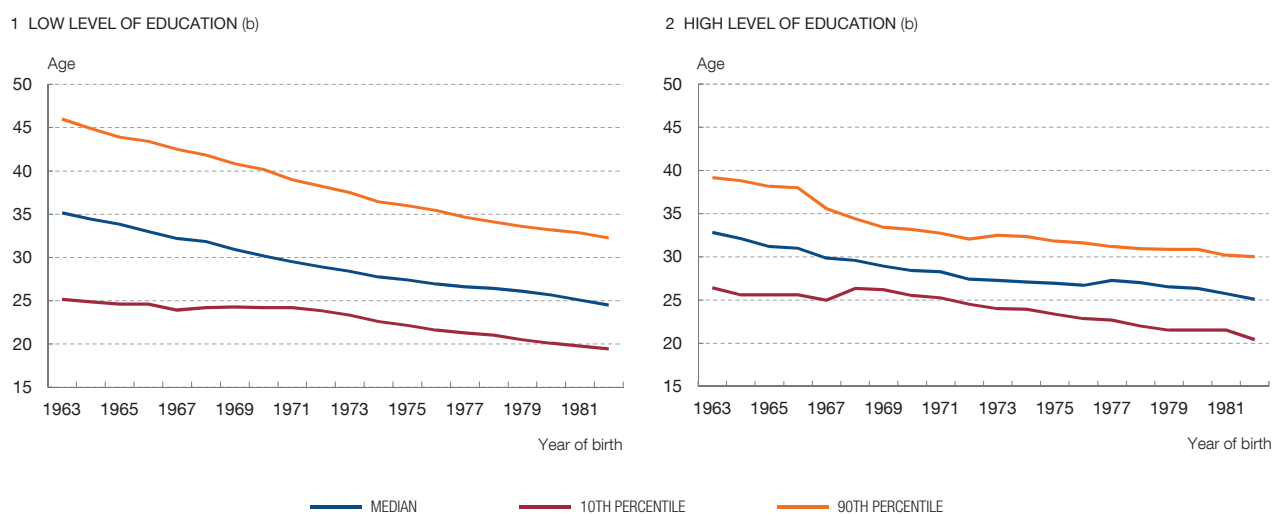
b Levels of education: Low = no schooling, only primary, or lower secondary without qualifications; Medium = secondary completed, Bachillerato (post-compulsory), vocational training, etc.; and High = university.



Chart 5

AGE AT WHICH FIRST PERMANENT EMPLOYMENT CONTRACT IS OBTAINED BY BIRTH COHORT (a)

The average age at which generations obtain their first permanent employment contracts has gradually declined.



SOURCES: Ministerio de Trabajo, Migraciones y Seguridad Social (MCVL) and Banco de España.

a Own calculation, drawing on MCVL records for private-sector wage-earners (General Social Security regime). Only male population.
b High level of education: social security contribution groups 1 or 2; low level of education: others.



contracts were only fully established for subsequent generations, so the previous increases were essentially due to the expansion of temporary employment, prompted by the above-mentioned regulatory change.

Temporary employment contracts have been well established since 1993. Accordingly, it may be considered that since then¹⁴ changes observed in the temporary employment ratio are no longer marked by the new regulations introduced in 1984. For young people the temporary employment ratio has fallen since the 1977 cohort, and since the 1970 cohort for those with a medium level of education. In the 30 to 39 age group there is also a shift towards a lower level of temporary employment, although this is less apparent for workers with medium and high education levels. Lastly, among older workers, the temporary employment ratio continued to increase throughout the period, albeit at a more moderate pace in recent years. In any event, it is observed that the temporary employment ratio among young people in the last cycle was not higher than the admittedly already high levels observed in 1993.

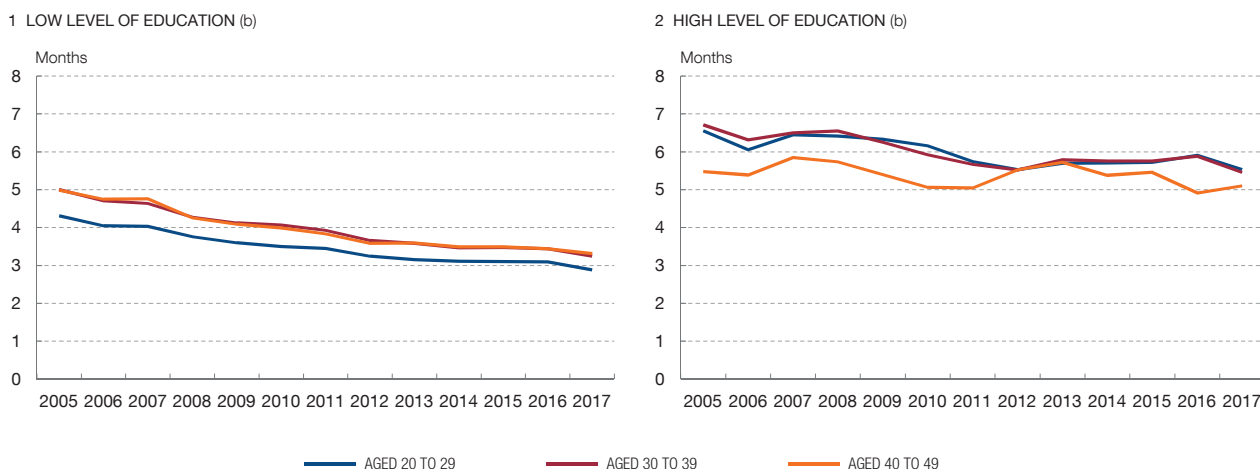
These recent relative improvements among young people in terms of temporary employment are also reflected in the age at which workers obtain their first permanent employment contracts. In this respect, Chart 5 depicts the age at which workers

¹⁴ In other words, from the 1973, 1963 or 1953 cohort, for the temporary employment ratio among those aged 20 to 29, 30 to 39 and 40 to 49, respectively.

Chart 6

EXPECTED DURATION OF TEMPORARY EMPLOYMENT CONTRACTS AT DIFFERENT STAGES OF LIFE CYCLE, BY LEVEL OF EDUCATION (a)

Among workers with temporary employment contracts, the average duration of contracts has gradually shortened, especially for workers with a low level of education.



SOURCES: Ministerio de Trabajo, Migraciones y Seguridad Social (MCVL) and Banco de España.

- a To obtain the average duration, the average probability of termination of the contract for each possible month of job tenure is calculated. These probabilities are calculated separately, for each year, age group and level of education, and are combined to give the mathematically expected duration. Calculated drawing on MCVL records for private-sector wage-earners (General Social Security regime), both sexes.
- b High level of education: social security contribution groups 1 or 2; low level of education: others.



sign their first permanent contracts, by year of birth, broken down by level of education. Thus, the median age at which workers with a low level of education born in 1963 obtained their first permanent contracts was just over 35. However, this median age has declined continuously, down to less than 25 for those born in 1981. In this generation, 90% of workers signed their first permanent employment contract before the age of 32.3. For workers with a high level of education there is also a continuous, albeit slightly smaller, improvement in the age at which the first permanent employment contract is obtained. Among the youngest generations, therefore, there is practically no difference in the age at which workers with low and high levels of education obtain their first permanent employment contracts.

It may be concluded, therefore, that in terms of temporary employment, the new generations do not appear to face more job insecurity than earlier generations, as both their temporary employment ratio at the start of their working lives and the age at which they obtain their first permanent contracts have gradually declined in recent decades.

However, as shown in Chart 6, there does appear to have been a decrease in the average expected duration of temporary employment contracts. In 2005, temporary contracts for low-skilled workers had a duration of four to five months, according to

the workers' age. This duration gradually declined over the years, down to around three months in 2017. In addition, the decrease is persistent and gradual, with no sign of cyclical patterns, and appears therefore to be structural.¹⁵ The duration of temporary contracts has also decreased for workers with high levels of education, except for older workers for whom the average duration has ranged between five and six months since 2005.

Turning to part-time employment, Charts 4.2, 4.4 and 4.6 paint a completely different picture from that of temporary employment. The differences by level of studies or by age are much smaller than in the case of temporary employment. In addition, a steady increase in part-time employment is observed among all groups; this increase is largely involuntary. The only discordant feature in this pattern is among the youngest generations, specifically those born since the mid-1980s, for whom this upward trend is more accentuated.

In consequence, in terms of part-time employment, there does appear to be a clear structural shift towards shorter working hours, affecting all age groups and education levels. Moreover, in recent years this pattern has accelerated in the case of younger workers, among both those with low and medium levels of education.

25.5.2020.

¹⁵ If Chart 6 is extended to 1984, confining the sample to the male population, it is observed that the decrease in the duration of temporary employment contracts effectively began previously.

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