

## The future of the middle classes: technology and demographics will bring change, but they will not disappear

In recent years, numerous articles have appeared discussing the possible end of the middle class in advanced countries. Is there any truth to this? Estimates made to date (see first chart) foresee that **the relative weight of the middle classes will continue to gradually decline** in advanced economies. In this article, we focus on two key aspects that emerge when seeking to analyse the future evolution of the middle class: technological change and demographic trends.

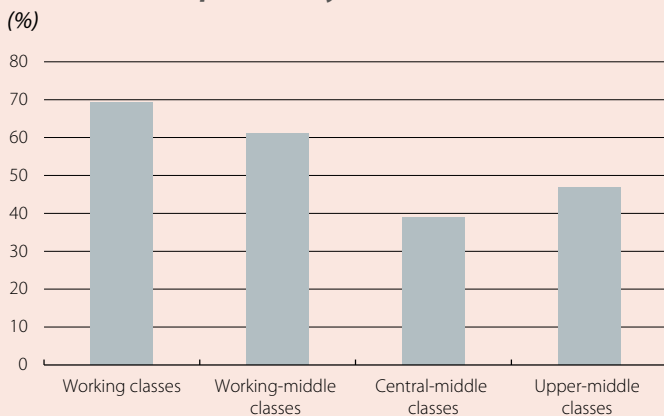
### On technological change

The impact of technological change on the economy, and on the middle class in particular, is highly uncertain. Nevertheless, if we analyse the type of jobs that are more likely to be destroyed or created, and the type of jobs and skills that those who make up the middle class have, we can get an idea of what is most likely to happen over the coming years.

To assess the expected impact in the short and long term, we calculate the probability that the occupations currently performed by the middle classes in Spain will be automated in the future,<sup>1</sup> using the methodology developed by Frey and Osborne.<sup>2</sup> The results obtained are as follows:

- The risk of automation of jobs that are generally performed by the middle class is significant (48%), although it is much lower than that of the working classes (69%).

### Middle classes: probability of automation



**Note:** We define the working-middle classes as those with an income between 75% and 100% of the median; the central-middle classes as those within a range of between 100% and 125%, and the upper-middle classes as those between 125% and 200%. For more details, see note 1 in the text.  
**Source:** CaixaBank Research, based on data from Frey and Osborne (2013), the LFS and the QLCS.

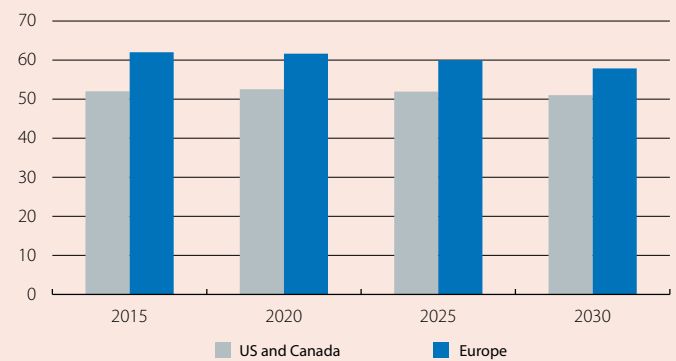
1. We define the lower-middle classes as those with an income between 75% and 100% of the median; the central-middle classes as those within a range of between 100% and 125%, and the upper-middle classes as those between 125% and 200%. We do not have data in excess of 200% of the median wage, so we cannot calculate the probabilities for the upper classes. The data on wages by occupation are at the 3-digit level (169 occupational categories), based on an allocation of the information from the Quarterly Labour Cost Survey (QLCS) and the LFS for 2014.

2. See C. Frey and M. Osborne (2013). «The Future of Employment: How Susceptible Are Jobs to Computerisation?». Academic Journal, Oxford University.

3. See L. Nedelkoska and G. Quintini (2019). «Automation, skills use and training». OCDE Social, Employment and Migration Working Papers n° 202.

### The weight of the middle classes in the future

(% of the total population)



**Note:** Estimates obtained by multiplying the percentage of the population belonging to the middle classes in 2015 (data from the OECD) by the difference between the expected growth rate of the middle classes (households with incomes between 75% and 200% of the median) and the expected growth rate of the total population in each geographic area.

**Source:** CaixaBank Research, based on data from the OCDE, M. Kharas (2017). «The unprecedented expansion of the global middle class». Brookings Institute and the UN.

- Within the middle classes, there are notable differences: the lower-middle classes are likely to be more affected (61%) than the central-middle classes and the upper-middle classes (41% average). This is because the lower-middle classes tend to be employed in occupations involving more «routine» tasks, such as accounting and administration. In contrast, the risk of automation is notably lower in the jobs that are generally performed by the rest of the middle classes, since they are largely employed in professions requiring a greater degree of creativity and interpersonal skills: medical staff, engineers, teachers, scientists, architects, security forces, economists, etc.
- These results are consistent with a recent study<sup>3</sup> which documents that in virtually all OECD countries the risk of automation decreases as the salary increases.

In the long term, the impact of the technological revolution is even more uncertain and largely depends on the type of jobs that will emerge, which is difficult to predict today.

- **There are reasons to be optimistic: the new occupations will require skills that are already within the reach of the middle class.** According to the economists David Autor<sup>4</sup> from MIT and Lawrence Katz from Harvard University, the new occupations will require creative and social skills, as well as agility and problem-solving abilities. Much of the middle classes already work in occupations in which these skills are important, so their situation could improve if these skills become even more relevant. Autor states that this could benefit many workers with intermediate skills who already belong to the middle class, or who are currently working class but, with these changes, could make the leap to the middle class more easily.
- **An example of a group that could potentially benefit from technological change is healthcare and nursing workers, who could take on a more key role in the future as diagnostic tasks and surgery are increasingly performed by machines.**
- **Education that emphasises these new skills will be key in order to enable people to take advantage of these new opportunities, allowing a new middle class to flourish in line with the new economy.**

### On demography

For young people in developed countries, it is increasingly difficult to form part of the middle class.

- **There are fewer middle-class millennials:** according to a recent OECD study,<sup>5</sup> the percentage of people aged between 20 and 30 who belong to the middle class currently stands at 60%, compared to 68% of baby boomers<sup>6</sup> when they were the same age.
- **The middle class increases in the baby-boom generation:** the percentage of baby boomers who belonged to the middle class when they were between 50 and 60 years of age is larger than the previous generation or the next.

The middle class has aged at a faster rate than the population as a whole over the past 30 years.

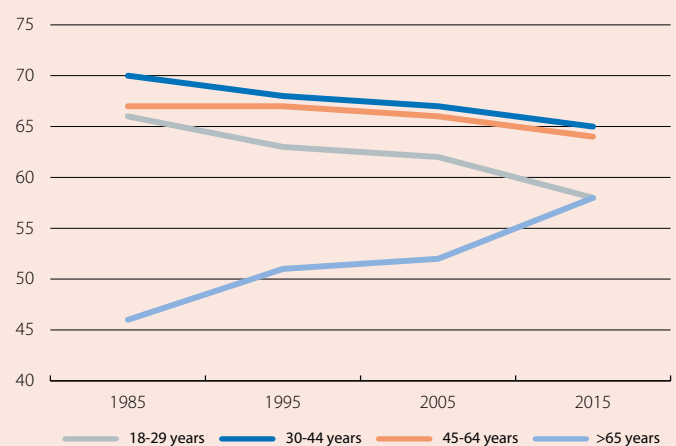
- In OECD countries, the proportion of people aged over 65 who belong to the middle class has risen from 46% in 1985 to 58% in 2015, while among young people aged between 18 and 29 it has gone from 66% to 58% (see third chart).
- The countries where this trend has been most pronounced are France and the Nordic countries. That said, in Spain these trends have also been significant, with a reduction of 10.4 pps in the percentage of young people who form part of the middle class between 1985 and 2015 and a 5.5-pp increase among people over the age of 65.

The middle class of the future will no doubt be older than the current one.

- **The number of middle-class people whose main source of income is a pension will increase significantly.** Of course, in order for a significant portion of elderly people to continue to belong to the middle class, it is imperative that the purchasing power that their pension provides them remains relatively stable. However, this is likely to stretch the public finances of many developed countries or to generate certain inter-generational tensions. In the end, the ageing of the population is expected to result in a reduction in the proportion of the working population, unless reforms are introduced. To avoid such tensions, and to balance the interests of all generations, the institutional structure that determines the degree of inter-generational solidarity will need to be redesigned.

### Middle classes by age group in OECD countries: 1985-2015

(% belonging to middle-class households)



Source: CaixaBank Research, based on data gathered by the OECD.

Javier Garcia-Arenas

4. See the tribune in the New York Times by D. Autor and D. Dorn (2013). «How technology wrecks the middle class».

5. See chapter 2 of the OECD report of April 2019, «Under Pressure: A squeezed middle class».

6. Defined as people born between 1943 and 1964.