Belgium: Automation-induced shifts in the labour market

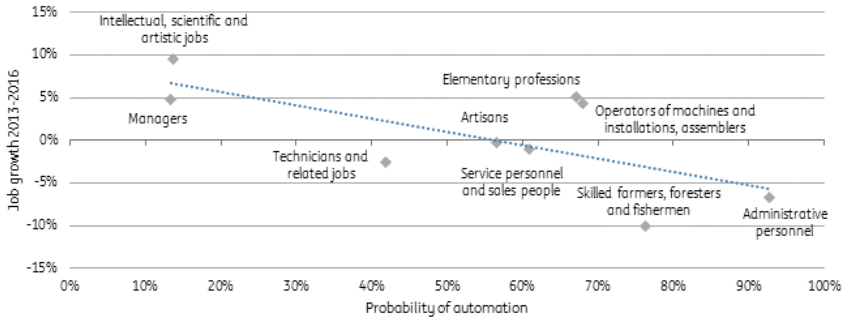
Technological progress is gaining strength. Even though most people see the benefits of this, there is also some concern for the negative effects on the labour market. Automation could make some human labour redundant, leading to higher unemployment. In this study, we investigate if automation has already hit the Belgian job market

A negative relationship

Our new study (read the full study in French or in Dutch) shows that there is already an effect of automation on the Belgian labour market. We looked at job growth of all jobs in Belgium (based on the ISCO classification) over the period 2013-2016 and linked it with the probability of automation of that particular job. The analysis shows that there is indeed a negative relationship.

Job growth was lower for the job categories with a high degree of automation, such as administrative jobs, and higher for job categories that are less automatable, such as managers. On a more disaggregated level, job growth for accountants, a profession that faces high automation risk, was much weaker than growth of jobs with a low probability of automation, such as social workers.

Growth of jobs with a high probability of automation did less well



*Note to the graph: The probability of automation of the job categories is a weighted average of the individual jobs within that category. The estimated relationship equals: Job growth = 0.09 – 0.16*probability of automation. The estimated relationship using all jobs (we have data for 300 jobs) is very similar: Job growth = 0.09 – 0.13*probability of automation. Source: Baert and Ledent (2015) (See this study here in French or in Dutch) and FOD economie.*

Technology also creates jobs

Even though the above finding sometimes causes fear, automation does not necessarily lead to higher unemployment as technological change also creates jobs. In that way, job losses can be compensated. An app developer or a drone operator are examples of jobs that didn't really exist only a couple of years ago. Moreover, it is important to recognise that our analysis does not take these new jobs fully into account. The definition of jobs is fixed in our sample period and so it is impossible for new categories to enter the analysis. When the database gets revised, new categories could be added.

In addition to the emergence of new jobs, automation can also lead to stronger economic activity and so higher demand for human labour. As new technology increases productivity, wages should also increase. The increased spending power, in turn, stimulates demand and therefore production that uses human labour.

The importance of adaptability and social skills

So our study shows that automation is already causing a shift in the Belgian labour market and we expect that this trend will strengthen. How can people prepare themselves for this?

Due to the constant change of our technological possibilities, it will become increasingly important that people remain active in the labour market and don't drop out of it. It may be stating the obvious, but having the right education and (re-)training will be vital. Adaptability and the will to change will therefore be an asset in the job market.

In addition, we must continue to recognise the importance of strong social skills, such as teamwork and communication. Despite new technologies, and so a strong demand for people with technical skills, the importance of social skills does not disappear. It becomes even more important! Academic research for the US shows that the share of jobs where strong social skills are important

grew by 12 percentage points between 1980 and 2012. Wages of such jobs also grew faster over that period.