Industry 4.0 and the consequences for the labor market and economy

This study focuses on the economic effects of the phenomenon of “Industry 4.0”, the digitalisation of the production processes. These developments involve considerable challenges for companies as well as on a political level.

This five-step scenario analysis begins with the impacts of increased investments in equipment (1) by companies and in the network infrastructure (2) by the government on the overall economy and the labour market. On this basis, we continue to model the consequential personnel and material costs of the companies (3) and a changed pattern of demand according to occupations and skills (4). The cumulative effects of these four partial scenarios are compared to a baseline scenario, which does not contain an advanced developmental path to Industry 4.0. In another scenario, the effects on the labour market of a potentially increasing demand for goods (5) are taken into consideration and also contrasted with the baseline scenario. The results show that Industry 4.0 will accelerate the structural change towards more services. In the process, labour force movements between sectors and occupations are significantly greater than the change of the number of employees overall.

The turnover on the labour market is accompanied by an increasing added value, which not only leads to more economic assets but also – due to greater demands on the labour force – to higher aggregate wages. The underlying assumptions have a positive effect on the economic development. However, that also means that, given a delayed implementation, the assumptions are turning against the business location Germany: We will export less and demand more “new” goods from abroad. In order to continue to improve the economic findings on the effects of digitization, a further development of the QUBE-I4.0-project is planned.

The document is also available in german [here](#).