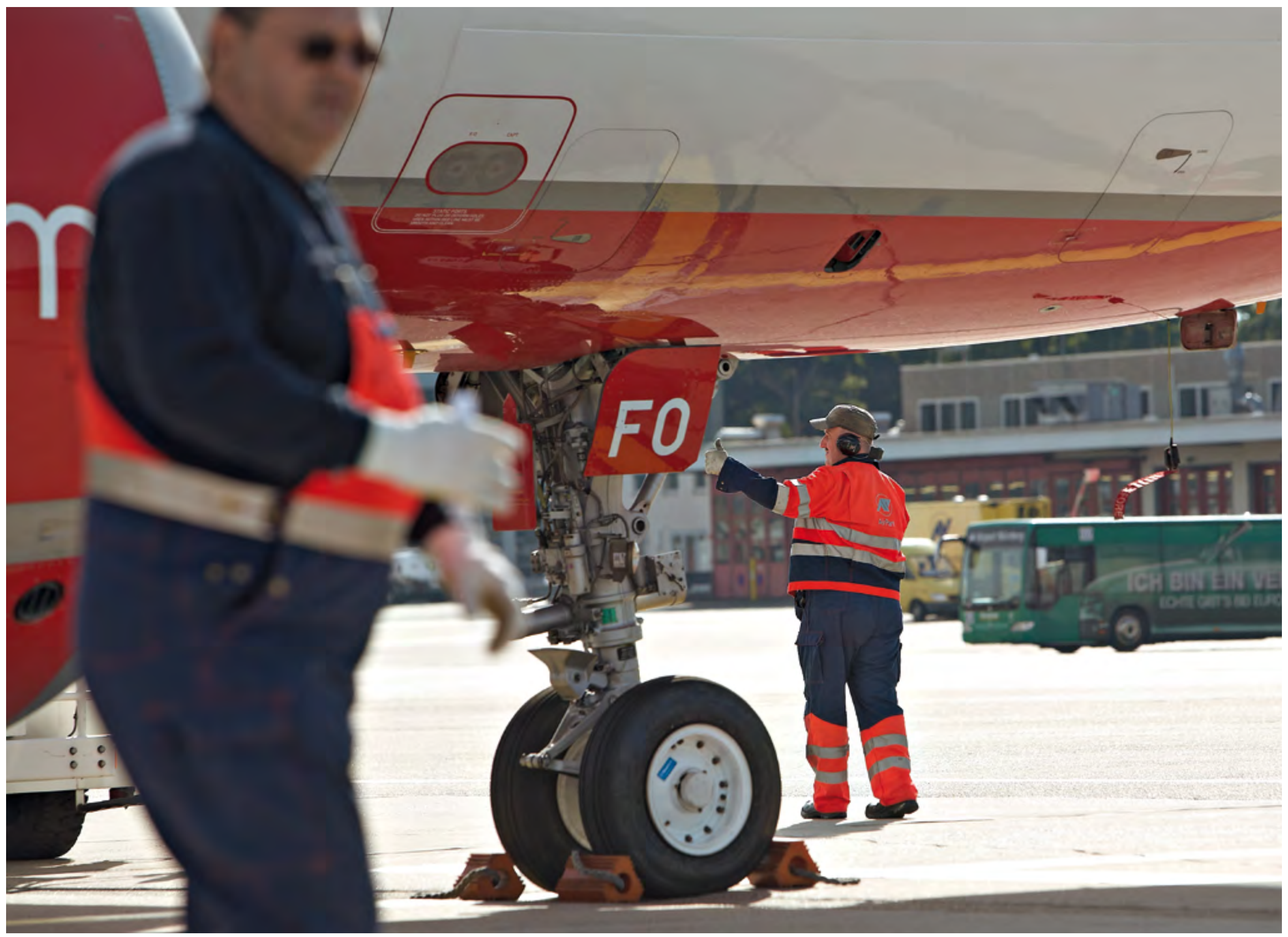
The dynamics of the requirement for qualified professionals
In the long run, the forces of the market will counteract labour shortages

The economy needs qualified professionals. If the population of Germany becomes older more quickly and shrinks in the future, less workers will be available. At the same time this does not necessarily lead to an insolvable problem: actors on the labour market are continually reacting to demographic developments. Wages rise, demand changes, workers move from one region to another or change their professions, establishments meet bottlenecks with new recruitment strategies or enhanced investment in education. The market adapts. However such dynamic processes also have their limitations.



According to the population forecasts of the Federal Statistical Office, the population of those living in Germany will in general shrink. In 50 years only about 65 to 70 million people will be living in Germany. However the population will not only decrease, it will also become perceptively older. While up to recently only around 20 per cent of the population was 65 years or older, the figure will rise to roughly 34 per cent in 50 years.

Among other things, this process of demographic change will leave its mark on the labour market. Calculations by Johann Fuchs and Gerd Zika of 2010 show that the number of people who are currently working, are out of work or at least are in principle at the disposal of the labour market will sink. This circle of persons represents the so-called „labour force potential" from which establishments recruit workers – and, with that, also qualified professionals. Starting from a labour force potential of roughly 45 million in 2010, this figure will drop by three to three-and-a-half million by the year 2025 – and here a growing participation of women in paid employment, a net immigration of 100,000 persons per year, and pensions at 67 have already been taken into account.

Against the background of the continuing discussion on already existent bottlenecks in the availability of qualified professionals, this development seems to represent a threat. Apart from other things, from an economic perspective it is taking place in a relatively short time. Nevertheless what one must not forget is that, as Johann Fuchs and Gerd Zika say in their study of 2010, „demography may set the agenda" but the actors on the labour market react constantly to this and the market adjusts itself.

And yet the fact that the population of Germany at an age capable of work will in a few decades clearly be smaller than today is in itself not an economic problem. Even considerably smaller countries – such as Switzerland – can be very successful economically. According to the argumentation of Stephan Brunow and Alfred Garloff of 2011, from an economic perspective market mechanisms will be at work that will overcome temporary bottlenecks in the long run. However, such an adjustment process will accompany Germany for at least a generation. That is why this article deals mainly with the structural change that is triggered by the shrinking and aging of the population. Here there will definitely be distortions to be expected which will lead to regional or occupation-specific bottlenecks in the short or medium term. How did this all come about, and what mechanisms will gradually even this out?

Bottlenecks are to be expected in the short and medium term

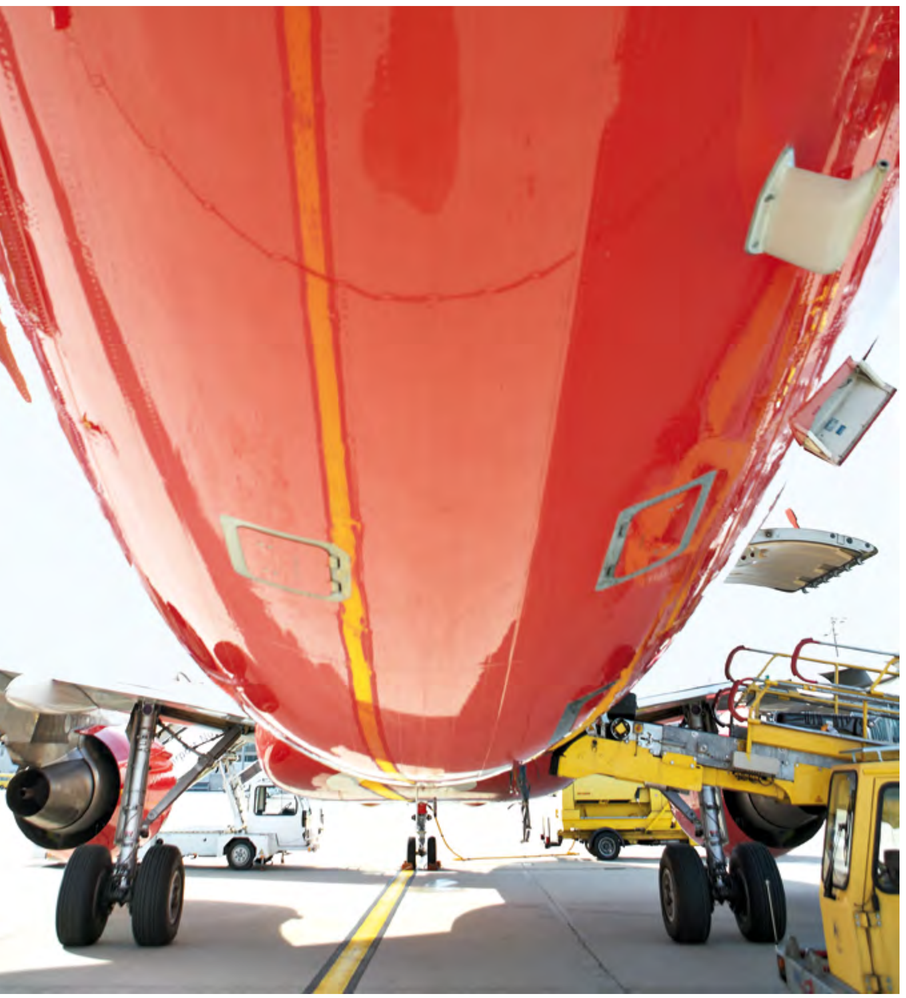
The machines, plants, equipment and manufacturing facilities as well as the offices, hospitals, hotels and transport infrastructure form the capital stock of a national economy. This is increased by means of investments and reduced by depreciation. In the long run, the capital stock will adjust itself to suit the shrunk population, that is, it will shrink likewise or at least grow at a slower rate. This will take some time as the capital stock only changes in a sluggish way. Once it has been built, a manufacturing plant is intended to be used for a long time and is therefore not normally closed down from one day to the next. Similarly, a production network that has evolved at a particular location cannot easily be relocated. If this is so, then the number of workers that are needed to run the capital stock at normal load is predefined in economics in the short or medium term. If the labour force potential drops noticeably, then an imbalance can exist between supply and demand for labour for a certain period.

Wage and productivity increases

In such a situation, employers compete more strongly for qualified labour. This sets in motion a tendency towards wage rises. The competition for qualified professionals will be won by the more productive establishments which are in a position to pay comparatively higher wages. The losers are the less productive companies whose workers have been enticed away or who have difficulty in recruitment. In these companies, an acute shortage of qualified professionals is to be expected which will also force some to exit the market. This may not only affect individual enterprises but also complete sectors. As was the case with the textile industry, they could turn their backs on Germany.

This would then lead one to fear that Germany would lose some of its international competitivity because of the rising costs of wages. However on account of the mechanism described, productivity would also rise. The remaining industrial structures would be those with which Germany is especially competitive by international comparison. This is where the shrunken labour force potential is employed in the most efficient way. In the course of its slimming down, the German economy might even become fitter. At the same time the international division of labour will adjust itself to the new conditions. The demand for goods from sectors that are breaking away will be covered by imports.

A further aspect that is to be seen more as „negative" concerns returns on investment. All conditions being equal, a shrinking labour force potential also means sinking returns on investment. In other words: investments in Germany will tendentially become less attractive. In international competition for locations, Germany could thus more often be left standing, despite increased labour productivity.



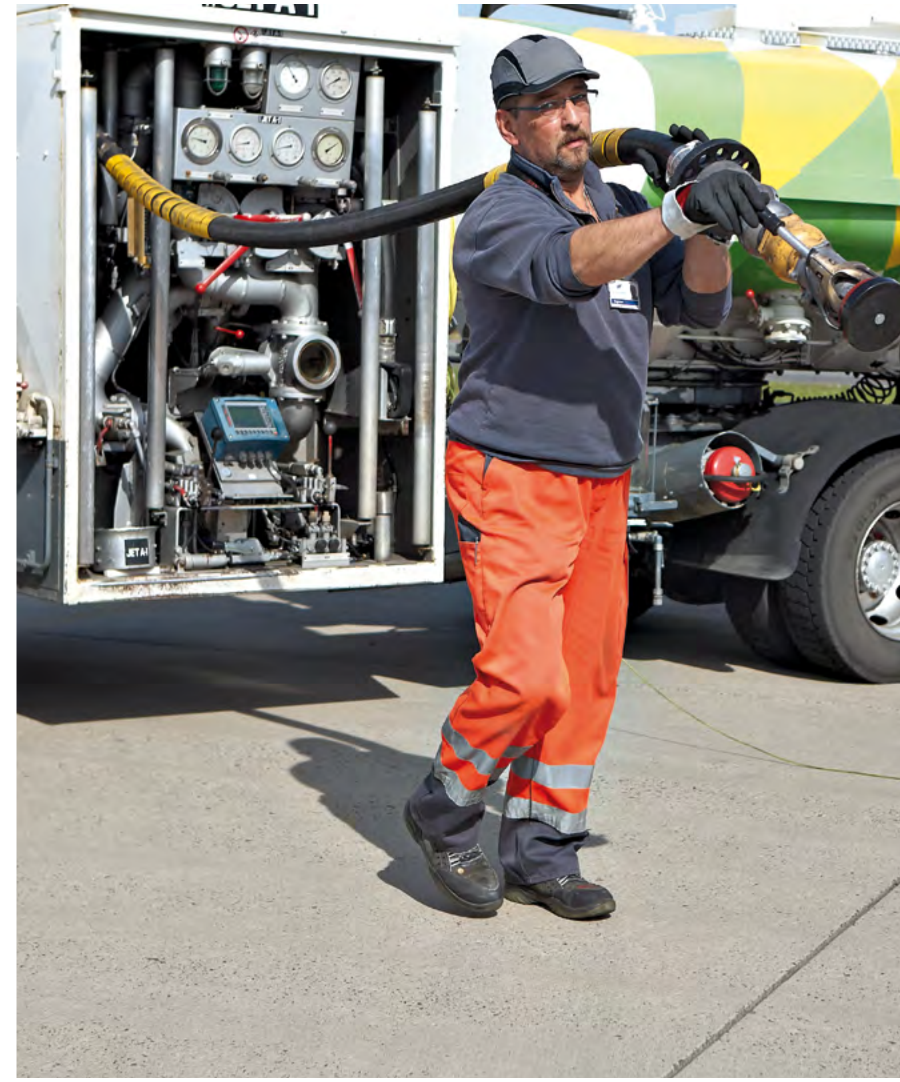
Changes in the demand for products and services

In order to investigate the impacts of shrinkage and aging on the demand for goods and services it is helpful to subdivide these into non-tradable and tradable. The first kind covers those that are exclusively produced and in demand locally, such as food in a restaurant. The second category covers those goods which can also be produced for the transregional market. The production of cars might be an example of this. With this latter type of goods, local demand often only constitutes a relatively small share.

As the population ages, the demand for certain non-tradable goods and services will presumably grow. In the area of care and health, this is particularly obvious. The provision of these services ties workers to an area in which the advances in productivity tend to be estimated as minimal and where the wage level, at least in partial areas, is low. If the labour force potential drops, then under certain circumstances there will not be enough workers available to the sector of non-tradable goods any more. As less and less additional persons can be mobilized from the unemployed or the hidden labour force, serious bottlenecks could arise – and that in an area with a demand that is partially rising strongly, such as care giving. To counteract the gap in qualified professionals solidifying, wages there would have to rise. This is the only way in which wages can exert their steering function in respect to the distribution of workers in individual branches and occupations. Because of the fairly minimal chances of increasing productivity in this area, the costs are then likely to rise. In how far this then stifles the demand for non-tradable products and services is not easy to judge. For at least in one part, demand is likely to be fairly insensitive to a rise in prices – namely in the area of health and care. At the same time, the way in which the demand for non-tradable goods develops with rising incomes plays a role.

Regional and occupational mobility have an impact as a balancing mechanism

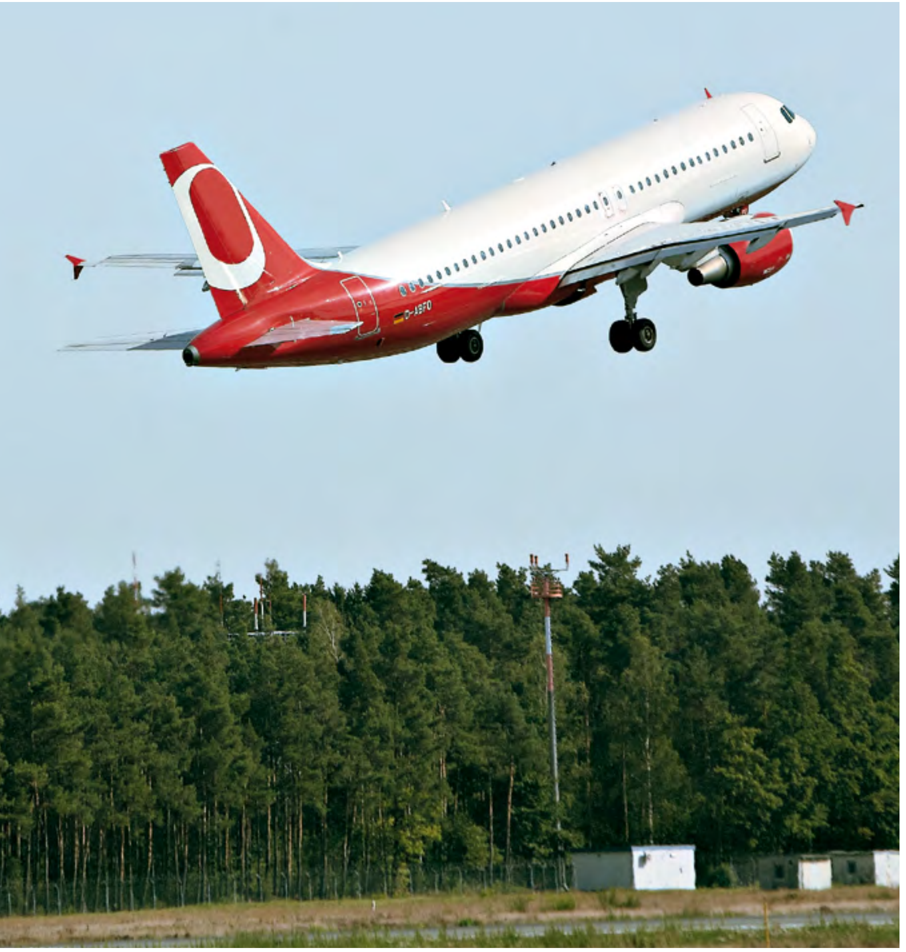
The not inconsiderable probability that bottlenecks in the availability of qualified professionals which emerge at many locations in certain qualifications, sectors and occupations will have negative economic consequences could also be cushioned by a higher regional mobility on the part of workers. Better job perspectives or offers of higher salary increase the incentives of workers to move within Germany or to commute. This offers the opportunity of equalizing out imbalances in the labour market especially in growth regions. Empirical studies by Pierre-Philippe Combes and his research team in 2009 show that the most productive enterprises tend to be located in concentrated areas. The reason for this lies in the advantages of a higher concentration of enterprises and workers. More productive companies can pay higher wages. This applies particularly to knowledge-intensive production processes. Such processes function better if interlinked companies and specialized knowledge carriers are close to each other, as this facilitates the exchange of knowledge within a value-added chain.



On the other hand, areas with a negative balance as regards mobility are among the losers. Today already the population is becoming thinner and thinner in many peripheral regions – especially in the east – while in comparison the prospering towns and metropolitan regions are increasingly attracting workers. For the regions that are losing part of their population, this may set a downwards spiral in motion. Problems will arise when the infrastructure is weakened and critical masses for the economic development are undercut, for instance through the loss of suppliers.

Along with regional mobility to the influx centres, bottlenecks in skilled workers can also be defused by occupational mobility. Although training in Germany is very specialized and strongly linked to proof of qualifications and certificates, a not insignificant degree of occupational mobility can nevertheless be observed. It is true that not everybody can carry out the job of a doctor, as a degree in medicine is a prerequisite for this; but in certain occupational fields, for instance the commercial area, transitions are taking place. They are particularly possible when the fields of activity related to an occupation overlap. The result of this is a reduction in the adjustment costs of a potential change of occupation. This can likewise help to cushion a scarcity on individual partial markets.

Here wages act as signal: If job offers are better paid in a closely related occupational field, changing one's job to this occupational field can be worthwhile – even with given re-training or (formal) further training costs. Studies show that occupational mobility declines with the degree of difference of a potential occupational field, the more strongly it is protected by certificates or the longer the requisite training, as with notaries, medical doctors and specialized engineers.



Employers react to labour shortages

Along with wage adjustments, establishments ultimately also have other possibilities of reacting to a labour market that is becoming narrower. An important area is personnel policy. When recruitment efforts are to be boosted, search strategies alone do not only play a role but also the pool of applicants that an establishment reaches out to.

The study „Perspectives 2025" of the Federal Employment Agency (BA) of 2011 illustrates new paths: for enterprises which wish to secure their requirements for skilled workers over the long term, the employment of women, older persons, migrants and qualified professionals from abroad will more and more form part of their personnel policy repertoire. Special significance will also be laid in this connection on the attractivity of a company as a flexible employer which takes the life situation of its staff, both male and female, into account.

Investments in the training of one's own personnel, such as within the framework of occupational training and further training, will secure the stocks of human capital that a company has. A workforce that is better qualified raises productivity and lowers the danger that an establishment will lack qualified professionals. If the staff are further qualified so that they can also carry out other activities than those they have learned, then the workforce can react in a more flexible way and can cushion bottlenecks. Particularly companies that are perceived as attractive employers might be tempted to entice suitable staff away from other establishments. Finally, working time could be adapted, for instance by changing part-time employment into full-time employment.

Although in-house adjustment processes are important in order to raise own productivity, they nevertheless meet limitations. An enterprise that is situated in a regionally unfavourable environment may not have enough qualified professionals and specialists despite its own efforts. In this case, relocating production cannot be ruled out.

Conclusions

Demographic change is putting the German labour market under pressure: on the one hand, there will be fewer people in work in the future; on the other, the structure of consumption will change. This will result in more or less strongly characterized requirements in various different occupations, regions and sectors.

Several establishments will feel the effects of the demographic process particularly hard: less productive establishments will possibly not be able to pay increased wages and will have to close down. Other companies will undertake the relocation of production. The structural change triggered by this could actually benefit the macroeconomic development of productivity. However it will be problematical at locations where the reduction of the labour force potential causes critical masses to be undercut. In an economy that depends strongly on the exchange of information, that can mean serious disadvantages. Regional disparities may become even more pronounced.

In the long term, the economy and the labour market will adapt to the demographic upheavals of our society. In the short and medium term, more or less distinct bottlenecks in the availability of qualified professionals are to be expected. Serious signs of deficiency that may emerge during the transition can be cushioned by suitable political measures. The recommendations for action that are currently being discussed – such as a higher participation of women, older persons and migrants in gainful employment; the recruitment of foreign qualified professionals; and above all the reduction of unemployment for example through the increased reintegration of the long-term unemployed – are all sensible strategies. If these are applied consequently, then the drop in the labour force potential can be perceptively cushioned.

What would be fatal would be to expect the unemployment caused by demographic change to simply go away – active labour market policy continues to be required here. Regional and especially occupational mobility should be supported. Retraining and further training could redirect qualified professionals to segments of the labour market where there is tension. Enterprises will also be under pressure to bind qualified staff to their company in the long term and to retain and increase the productivity of its workforce. This can be approached via further training for their staff, the attempt to reorganise in-house processes and by making working times more flexible.

In this way, the creeping character of the demographic development also represents an opportunity: there is still time for the actors involved to prepare for the foreseeable developments.

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