

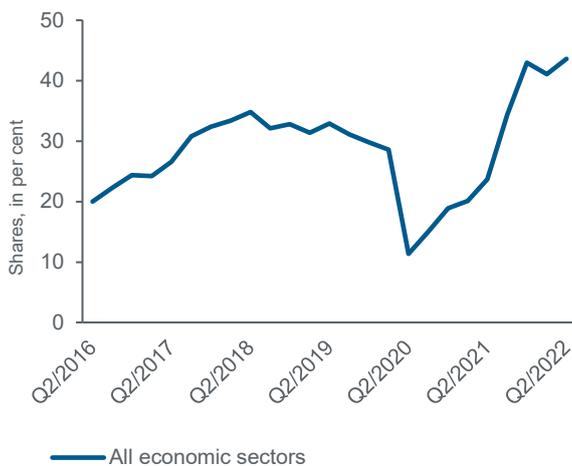
»»» Despite pandemic and Ukraine war, growing demand is worsening the skills shortage

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- At the start of the second quarter, skills shortages were disrupting operations at 44% of businesses. That means skilled workers are now in much shorter supply than before the coronavirus pandemic.
- Around 40% of manufacturing firms saw their business operations hampered by skills shortages, the highest rate in the past 30 years.
- The services sector has been hit hardest, with half of all companies affected by a shortage of skilled workers, and the trend is rising.

KfW-ifo Skilled Labour Barometer



Shares of businesses whose operations are being negatively affected by a shortage of skills. Q2/2022 means 2nd quarter of 2022, with the survey conducted in the first month of each quarter, meaning April for the current quarter.

Sources: KfW Research, ifo Institute

Number of job vacancies rises to record high despite crisis and uncertain economic outlook

Businesses' expectations are currently being influenced by global bottlenecks in the supply of commodities and inputs, sharp increases in the price of energy and materials and negative reports about the potential consequences of a stop of Russian gas supplies. The bottlenecks and risks are indeed considerable. In a scenario without an abrupt interruption of energy supplies, however, the recovery of the German economy is expected to continue in the further course of the year, if with significantly reduced momentum.

A large number of businesses are therefore still hiring. In April, 852,000 job vacancies were reported to the Federal

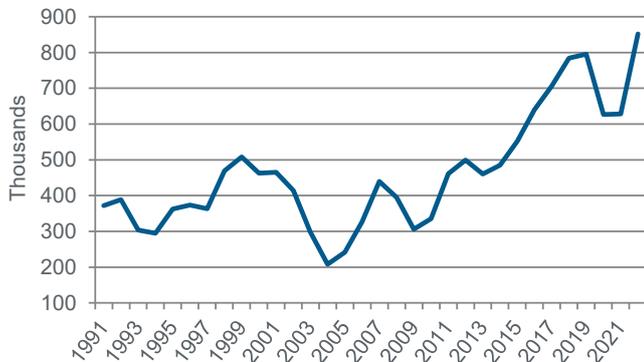
KfW-ifo Skilled Labour Barometer – Economic Sectors



Employment Agency, the highest number since German unification (see figure on reported job vacancies). According to estimates made by the Institute for Employment Research (IAB) on the basis of the IAB Establishment Panel, the total number of job vacancies (including those not reported to the Federal Employment Agency) stood at a record high 1.7 million in the fourth quarter of 2021. That means the skills shortage, too, has reached its peak to date. In April 2022, 43.6% of SMEs surveyed under the KfW-ifo Skilled Labour Barometer reported that their operations were hampered by a shortage of skilled workers. In the services sector it was as high as 47.7%. Overall, large enterprises were affected slightly more often than small and medium-sized businesses (45.4 vs. 42.7%).

These figures clearly show that it would be a mistake to only focus on commodities and inputs from abroad as bottlenecks that hamper the recovery. The skills shortage, too, has a significant impact which will likely be even more severe, particularly in the long run.

Number of job vacancies climbs to record high



Job vacancies reported to the Federal Employment Agency, up to 1999 including jobs of the supported second labour market, from 2000 only the first labour market.

Source: Federal Employment Agency, own illustration.

The sectors that have been hit particularly hard by a shortage of skilled workers include law firms and tax accountancy, as well as auditing, architecture and engineering activities. More than 60% of these were affected (Table of KfW-ifo Skilled Labour Barometer in figures). More than 50% of manufacturers of data processing devices, electronic and optical equipment and printed materials as well as businesses involved in the duplication of sound, image and data carriers as well as in land-based transport, catering and hospitality are affected by a shortage of skilled workers.

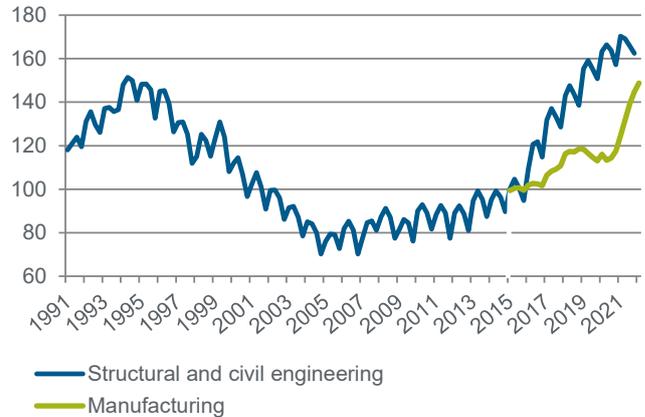
Demographic change is hitting the German economy with growing force

Two causes can be named for the sharply increased skills shortages:

1. Although the crises are building up, there is no demand shortage. The order books of enterprises are bursting at the seams. The stock of orders in the construction and civil engineering industry has reached the highest volume since German unification (see figure on stock of orders). The order backlog in construction is thus larger than during the peak of the rebuilding of eastern Germany. Orders in manufacturing have also climbed to the highest volume since the start of the official time series in 2015.
2. Demographic change in Germany is already well underway and hitting the labour market with growing intensity. The number of people of pension age living in Germany has grown by more than 50% since the year 1991 and the trend is pointing sharply upward (figure on demographic change). By contrast, the prime working age population between 19 and 65 years has dropped slightly. The number of children and youths up to 18 years has fallen by 11%. The consequence of this development has been that the labour force has had to provide for growing numbers of pensioners and retirees for years. In addition, an ageing society is creating a need for new skills from a growing demand for health and care services. Weak productivity growth is worsening the resulting skills shortage.

All demographic forecasts predict that this development will significantly intensify in the coming years owing to the successive retirement of the baby boomer generation. Without a response, this will significantly hamper the growth potential of the German economy already by the middle of this decade.ⁱ

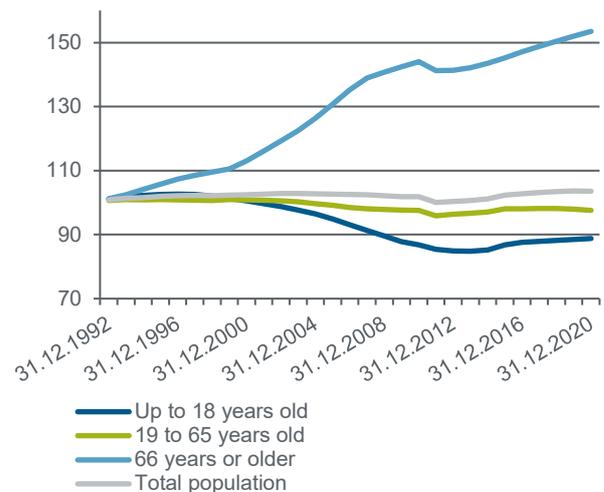
Orders are piling up – skills and materials shortages prevent processing



Stocks of orders, quarterly development, volume indexes, 2015=100, time series for manufacturing did not begin until the first quarter of 2015.

Source: German Federal Statistical Office, own calculations and presentation.

Demographic change is already well underway – with worsening effects on the labour market



Development of German population by age class, index, 1991=100.

Source: German Federal Statistical Office, own calculations and presentation.

Immigration alone is not enough

A current survey by KfW Research shows that half the working age population favours stepping up efforts to attract skilled migrants.ⁱⁱ However, immigration alone will not be enough to fully meet the needs. According to preliminary data from the Federal Statistical Office, the net balance of immigration to Germany was 317,000 in the year 2021. Despite this high migrant intake, skills shortages have continued to increase. One reason for this is the mismatch between occupational and German language skills required and what the workers can offer. The number of migrants working as auxiliary staff is well above the average. The intake of refugees from Ukraine will hardly be able to change this situation despite their high level of education.

Shortage of more highly qualified workers is also worsening social inequality

The shortage is most acute in more highly skilled occupations. The income gap has widened further as a result. A recent income analysis by KfW Research has shown that the incomes of more highly qualified workers have grown most strongly in the last two decades.ⁱⁱⁱ By contrast, lower income earners in particular have fallen behind. Growing income disparities are exacerbating social inequality, while at the same time generating indispensable incentives to acquire more skills. With the goal of securing prosperity, the best way to reduce inequality therefore consists in persuading rather than less educated people to train for occupations that are in demand and thus better paid.

As far as addressing the skills shortage, it is already five minutes past twelve

The high and growing number of affected companies shows that the rapidly intensifying skills shortage requires more decisive countermeasures because the challenges have grown significantly. The accelerated energy and transport transition, the need to catch up in digitalisation, the growing need for skilled workers in the health and care sector as well as in the areas of childcare and education, the housing shortage in metropolitan areas, the urgent need to invest in public infrastructure and the rising number of pensioners and retirees to be cared for are creating new demand for skilled workers. These challenges are also setting in motion a structural change that requires the workforce to show more flexibility and adaptability, which often means being willing to change jobs as well. The need to secure raw materials and supply chains as a response to the coronavirus crisis and the Ukraine conflict also requires structural changes. Germany therefore needs to improve and systematically implement its strategy for securing the supply of skilled labour without delay in order to meet these challenges.

A broad economic and labour market initiative is required to address the shortage of skilled labour

A range of leverage points must be used to address the skills shortage:

Increasing the labour force participation rate, particularly of women and older workers

- Expanding affordable and free childcare and professional aged care.
- Making the retirement age more flexible with the aim of retaining more older workers in the labour market.
- Abolishing or reducing disincentives to seek work in the tax and transfer system, which factually prevent women in particular from seeking employment. This also includes income tax splitting for married couples.
- Age-appropriate housing conversion with the aim of reducing aged people's need for assistance.

Promoting lifelong learning, continuing education, upskilling and retraining

- Building a culture that embraces lifelong learning starting in kindergarten and mainstream schools.
- Motivating self-directed learning already in mainstream schools. Targeted teaching of skills that are useful for the economy and society and for personal development. Education is not an end in itself but should provide recognisable benefits for children and adolescents as well.
- Economically and practice-relevant education at public universities.
- Reducing learning deficits in digital education and STEM subjects.
- Transparent educational landscape for vocational education with certified training in quality assurance.
- Modular vocational education offers for people in employment.
- Financial support from the state for continuing professional development.
- Encouraging more workers and unemployed, especially low-skilled and educationally disadvantaged people, to embrace lifelong learning. This includes teaching soft skills to improve self-efficacy, communicative skills and resilience and to preserve physical and mental health.
- Promoting continuing professional development and additional training of migrants.
- Further improving the attractiveness of skilled migration from third countries
- Ensuring quick and simple procedures for obtaining residence and work permits.
- Free or affordable German language courses.
- Simple, swift recognition of foreign training and qualifications.
- Promotion of initial and continuing training and education.
- Creation of migration options for workers in childcare and aged care roles from third countries even without formal qualifications.
- Strengthening the growth of labour productivity and innovative strength^{iv}
- Improving the overall framework for productivity-enhancing investments, innovations and innovative business start-ups.
- Reducing deficits in business-related infrastructure, especially in digital infrastructure.
- An educational initiative as described above, which also aims to reduce unemployment and the high number of low-skilled workers without qualifications and increase the number of new highly qualified STEM graduates. The latter is of key importance for securing Germany's innovative strength and competitiveness and advancing digitalisation.

KfW-ifo Skilled Labour Barometer in figures

Shares of businesses whose operations are being negatively affected by a shortage of skills.

		Quarter / Year		
		04/2021	01/2022	02/2022
Total		23.7	41.1	43.6
Manufacturing	Total	19.4	35.9	39.8
	Manufacturing vehicles & parts	15.2	23.4	31.3
	Mechanical engineering	17.0	33.0	38.7
	Manufacturing food & animal feed	25.2	34.8	32.9
	Manufacturing chemical products	9.6	17.5	20.0
	Manufacturing metal products	27.8	44.2	48.3
	Metal production & processing	17.9	39.5	23.4
Construction	Total	25.5	32.9	36.3
Trade	Total	15.9	32.9	33.5
	Wholesale	16.1	32.4	31.8
	Retail	15.7	33.6	35.8
Services	Total	26.4	43.6	47.7
	Transport: overland / pipelines	36.1	54.0	54.0
	Telecommunication	14.2	40.5	51.6
	Provision information services	37.2	51.8	49.8
	Legal & tax consultation	54.8	50.3	61.4
	Business consultation	21.6	35.6	39.1
	Arch./eng. firms, Tech./phy./chem. te	42.1	57.8	61.2
	Research & development	20.2	48.2	48.8
	Catering	5.9	35.6	51.6
	Accommodation	6.9	41.5	53.0
SME		24.1	39.9	42.7
LSE		22.9	43.4	45.4

Source: KfW Research, ifo Institute

Abbreviations:

S(mall and) M(edium-sized) E(nterprises). L(arge-)Scale E(nterprises).

Construction and interpretation of the KfW-ifo Skilled Labour Barometer

The KfW-ifo Skilled Labour Barometer is based evaluations of the ifo economic surveys which are used to calculate, among other things, the well-known ifo Business Climate Index. The Skilled Labour Barometer reports on the share of enterprises in Germany that report adverse impacts on business operations from a shortage of skilled workers. Each quarter about 9,000 enterprises from trade and industry, construction, wholesale, retail and services (without the banking and insurance sectors or the state) are polled on their business situation, among them some 7,500 SMEs. In addition to providing an overall indicator for the skills shortage in the German economy and indicators for various sectors and regions, the barometer also enables a company size-specific data evaluation separated into SMEs and large enterprises. Enterprises are generally classed as small to medium-sized if they employ a workforce of not more than 500 and record an annual turnover not exceeding EUR 50 million. For a more accurate analysis, however, these quantitative distinctions have to be drawn more narrowly for retail trade (maximum annual turnover of EUR 12.5 million), the building and the construction industry (up to 200 employees) and services (maximum annual turnover of EUR 25 million). All enterprises that exceed at least one of these thresholds are classed as large-scale enterprises. The construction and civil engineering sector was first surveyed on the impacts of skills shortages on business activity in the third quarter of 2018. That was the reason the sector was not integrated into the overall indicator before that quarter. The value of the overall indicator varies only marginally as a result.

ⁱ Cf. Müller, M. (2020): Corona-Krise und Fachkräftemangel bremsen das Wachstum (*Coronavirus crisis and skills shortage are hampering growth* – in German only), Focus on Economics No. 293, KfW Research.

ⁱⁱ Cf. Leifels, A. (2022): Hälfte der Erwerbsbevölkerung für mehr ausländische Fachkräfte – Unterschiede nach Bildung, Einkommen und Region (*Half the working age population favours more foreign skilled workers – differences by education, income and region* – in German only), Focus on Economics No. 383, KfW Research.

ⁱⁱⁱ Cf. Müller, M. (2022): Lohnschere geht weiter auseinander – Höherqualifizierte bauen Vorsprung aus (*Wage gap continues to widen – higher-skilled workers are expanding their lead* – in German only), Focus on Economics No. 377, KfW Research.

^{iv} For a more detailed analysis of the measures required to strengthen labour productivity cf. Müller, M. (2021): Deutschland muss produktiver werden, um die künftigen Herausforderungen zu meistern (*Germany must become more productive to meet the challenges of the future* – in German only), Focus on Economics No. 356, KfW Research.