4.10 The Bitkom-ifo-Digital-Index

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4.10.1 Concept and Objectives

The digital economy is an increasingly important economic sector, covering a broad spectrum of subdivisions associated with digitization. However, there is no official data on economic developments in this sector. To close this gap, the ifo Institute constructed a business climate for the digital economy in Germany, known as the Bitkom-ifo-Digital-Index. Including information from the manufacturing, trade, and service sectors, the index was developed in cooperation with Bitkom, the most important industry association of the digital economy in Germany. It is published exclusively by Bitkom and can be accessed on their website[11] alongside with other results.

Information and communications technology (ICT) companies supply technologies and services for the processing and communication of data and thus form the core of the digital economy. The special significance of ICT results from its function as an important driver of innovation and growth in almost all economic sectors. While digitalization was initially limited to individual companies and industries, it is now increasingly shaping economic and social change. Thus, digitalization is a decisive factor not only for the competitiveness of individual companies, but also for the future viability of entire economies in global competition.

Since there was no official definition of the digital economy in the classification of economic activities by the Federal Statistical Office (2009), the economic sectors included in the new digital index first needed to be defined. In consultation with Bitkom, ifo has decided to include four manufacturing sectors (electronic components; computers and peripheral equipment; communication equipment; consumer electronics), three service sectors (telecommunications; computer programming, consultancy, and related activities; data processing, hosting, and web portals), and wholesale and retail ICT trade.

To calculate the indicators for the digital economy as a whole, existing time series from the monthly ifo Business Survey are used for the mentioned economic sectors and aggregated with corresponding weights. These weights are based on the number of persons employed in the respective sectors. With a total of 75.9%, the service activities have by far the largest weight on the digital index. Trade activities (12.9%) and hardware manufacturing (11.2%), on the other hand, are included in the overall indicator with a lower weight. The distribution is also roughly reflected in the number of participants in the ifo Business Survey. In total, the digital index is based on answers from around 470 companies. The Bitkom-ifo-Digital-Index calculates a geometric mean of the current business situation and business expectations

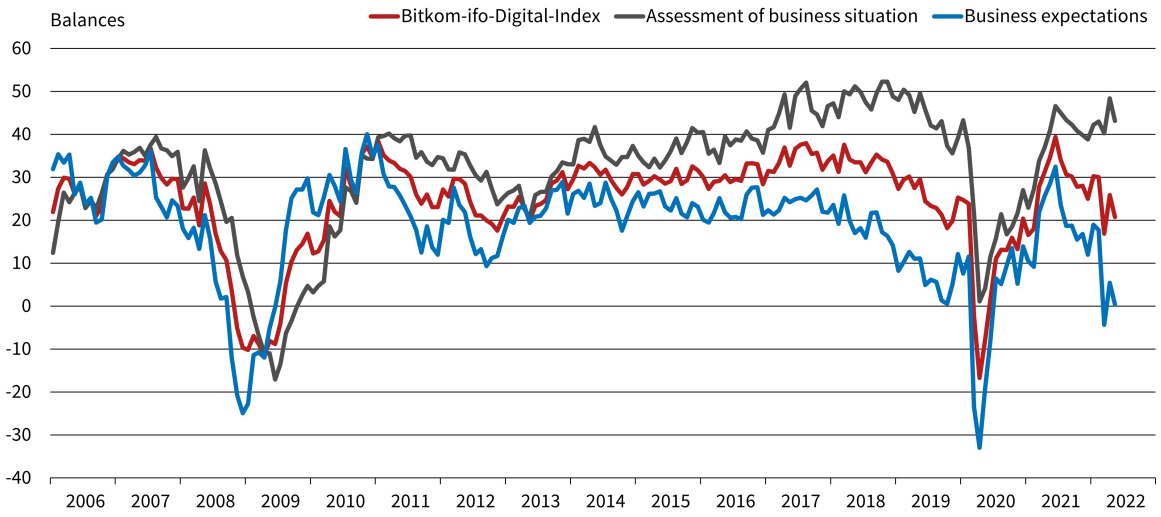
[11] https://www.bitkom.org/Digitalindex

(Sauer and Wohlrabe 2018b), analogous to the methodology of the ifo Business Climate Index for Germany.

4.10.2 Results

Figure 4.28 shows the Bitkom-ifo-Digital-Index together with its two components. In the first years of the time series, for example during the significant downswing and recovery associated with the global economic crisis of 2008/2009, it can be seen that the development of the business situation usually followed the expectations with a lag of a few months. This didn't hold at the outbreak of the Covid-19 crisis, when both time series plummeted at the same time; the recovery of both time series was also almost parallel. In the years before, the majority of participating companies were satisfied with their current business situation while the expectations were characterized by dwindling optimism. One reason for this was that the already very good assessments of the situation could hardly improve any further. Correspondingly, companies indicated that the current situation should remain good. The situation in 2022, after the Russian invasion of Ukraine, was mostly characterized by rising energy prices and supply bottlenecks. Thus, the expectations of the firms were clearly less optimistic. The current business situation, however, was still assessed as very good.

Figure 4.28: The Bitkom-ifo-Digital-Index and its sub-indices



Source: ifo Business Survey. © ifo Institute

In comparison with the ifo Business Climate Index for Germany, the upswings and downswings of the two indicators largely coincide in time. In fact, the basic course of the time series is similar. This is also confirmed by the very high correlations between the series of more than 0.9 in each case (Pols et al. 2019). However, the short-term economic signals of the survey indicators may be different because of sector-specific information that differs from the overall development.

Beyond business climate, business situation, and business expectations, there are more time series available for economic developments in the digital sector. For example, expectations for future price setting, employee developments, or negative influences on the business of the companies, such as unfavorable demand situation, workforce shortages, or financial constraints, are covered. Among other issues, these results show that a lack of skilled workforce is a big problem for the digital sector in Germany. In May 2022, half of the firms of this sector participating in the ifo Business Survey stated that they had difficulties finding skilled workers. All results are also calculated separately for small and medium sized enterprises of the digital sector, and are published in a yearly report by Bitkom (2021).