

Executive Summary of the study

"The Economic Footprint" of Selected Companies in the Healthcare Industry and its Impact on Germany as a Business Location

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The healthcare industry's importance as a driver of growth, innovation and exports, and also as a motor for employment, has been demonstrated by the macro and micro-economic analyses of a selection of companies **which conduct research and production in Germany**. This includes companies and business sections belonging to Bayer HealthCare AG; Boehringer Ingelheim Pharma GmbH & Co. KG; Fresenius SE & Co. KGaA; Grünenthal GmbH; Merck KGaA; Roche Holding GmbH and Sanofi-Aventis Deutschland GmbH.

In 2010 the companies realized a total **gross value added (GVA)** of almost EUR 10.4 billion. From 2005 to 2010, GVA increased by around EUR 2.9 billion (38 percent), representing an average annual growth rate of 6.6 percent, higher than German industry's growth (2.2 percent).

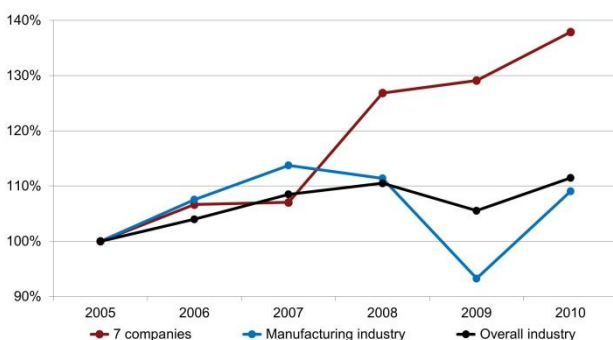


Figure 1:
Development of the nominal GVA from 2005 to 2010.
Source: Federal Statistical Office; authors' calculations.

To work out the full impact of the companies' economic footprint on the German economy, the complex economic interdependencies with other companies and service-providers, as well as public

sector budgets, were also determined by calculating the **indirect and induced effects**.

Thus the companies' direct gross value added produces a further EUR 8.0 billion – that is EUR 4.7 billion indirect value added effects and EUR 3.4 billion induced value added effects - in other areas of the economy. Thus, in total, EUR 18.4 billion gross value added in Germany overall can be put down to the business activities of the companies examined.

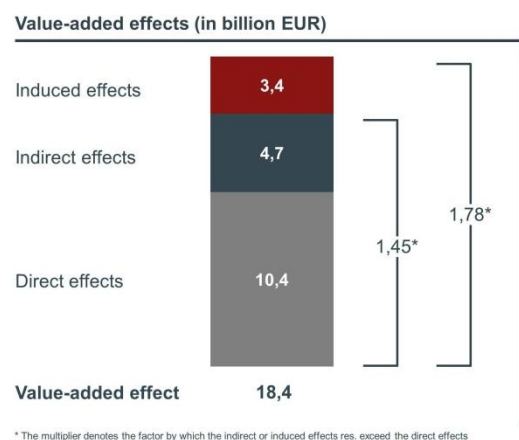


Figure 2: The companies' value-added effects, 2010.
Source: Companies' calculations.

The multiplier of all value-added effects on the direct effects is thus 1.8.

This is similar to the **production effects**. In 2010 the companies produced goods and provided services for EUR 20.3 billion. Indirect interdependencies and induced effects result in a further EUR 15.3 billion for the German economy.

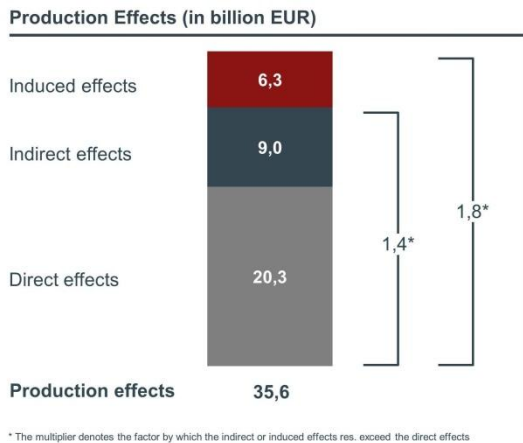


Figure 3: The companies' production effects, 2010.
Source: Companies' calculations.

In other words, for every EUR 1.00 increase in production performance achieved by these companies there is a further EUR 0.75 production – i.e. EUR 0.44 indirect production and EUR 0.31 induced production.

Throughout the investigation period the companies analyzed spent around EUR 1.9 billion per annum on **research and development (R&D)**. R&D intensity, i.e. internal R&D expenditure compared to the company turnover, totaled around 9.1 percent in 2009. This is a lot higher than the figure for the manufacturing industry (4.3 percent) and almost equal to that of the research-intensive aviation and aerospace industry. According to the international definition, companies do not produce “top technology” until their R&D intensity does not climb above 7 percent.

In 2010 **exports** totaled around EUR 17.4 billion. From 2005 to 2010, the average export rate was 74.1 percent and thus around 29.2 percentage points above that of the manufacturing industry during the same period of time.

With an annual **investment volume** of some EUR 900 million, the companies examined occupy the leading position. This is around EUR 16,600 per employee and year. This volume is around 50.1 percent more than the comparable figure for industry overall and is more than double that of the manufacturing industry.

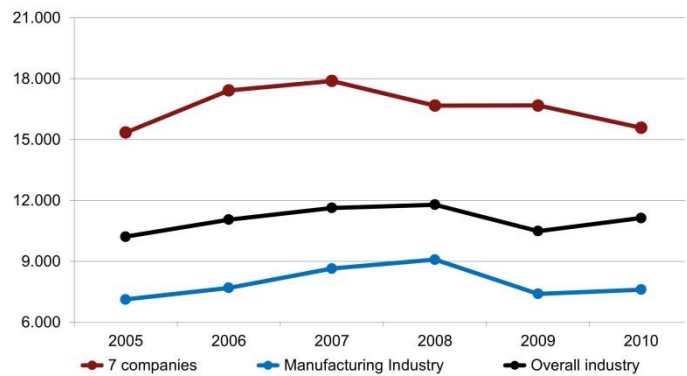


Figure 4: Development of gross plant and facilities investment per employed person (EUR).
Source: authors' calculations; Federal Statistical Office.

In addition to boosting growth, R&D, export and innovation, the seven companies ensure continuous **employment growth**. From 2005 to 2010, direct employment grew by an average of 1.3 percent per annum (national economy 0.8 percent).

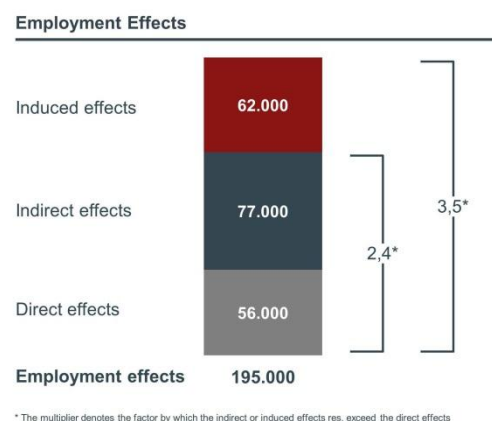


Figure 5: Companies' employment effects, 2010.
Source: authors' calculations.

Taking the indirect and induced impact on employment into account, one new job in a healthcare company generates two and a half further jobs in other sectors of the German economy (multiplication factor 3.5).

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