

Germany – Industries

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No general statistics regarding industrial products are published in Germany. True, such material is carefully collected, but it is placed exclusively at the disposal of the government, to be used in considering the commercial policy of the nation toward foreign countries. It is impossible to give exact statistics, except for the products of mines and foundries; further, for beer, alcohol, and sugar.

For the greater part, the coal and iron deposits of Germany are already in permanent ownership and are being worked. In 1903, a year of depression, the production of coal was 162,500,000 tons, worth \$275,000,000; i.e., 18 per cent of the world's output, or just half as much as the production in the United States, and about two thirds as much as the production in Great Britain. The production of iron ore was 21,200,000 tons (United States, 35,500,000); of pig-iron, 10,000,000 tons, or 21½ per cent of the world's output (United States, 18,300,000; Great Britain, 8,900,000 tons); of steel, 8,800,000 tons (United States 14,700,000; Great Britain, 8,900,000). The exports of coal and other mineral combustibles exceeded the imports by only 5,000,000 tons (export principally to Belgium and Austria, import chiefly from Great Britain), so that the home-consumption was about 157,000,000 tons. In this respect Germany is in contrast to Great Britain, which exports a large part of her coal production. The exports of iron ore exceeded the imports by about 2,000,000 tons, so that about 23,200,000 tons were reduced in German furnaces. According to conservative estimates, the coal beds of Germany contain 120,000,000,000 tons of minable coal. It is further estimated that the coal beds of Upper Silesia, and especially those of Westphalia and the Rhine country, will outlast those of England by five centuries, taking into account the technical mining capacity of the coal and supposing the same rate of progress in both cases. No other country in Europe has similarly lasting coal deposits, except Belgium. In all other European countries the coal-fields are considerably less extensive, as, for instance, in France,

Russia, and Austria; and they will be more rapidly exhausted than those of Germany. The consumption of coal per head is considerably less than in England, and also less than in Belgium or in the United States, but it is greater than in the other European states. The home-consumption of pig-iron was only 98.1 kilograms per head, as against 235 in the United States and 137 in England. These low figures for Germany are accounted for by the fact that in Germany the railway system is essentially already built; though the production of pig-iron per head in Germany has increased more rapidly in recent years than in the United States. In the depression-year of 1903 the production per head was 173.9 kilograms; so that four-ninths of this amount had to find a foreign market. In 1904 imports of iron ore increased; but exports of pig-iron decreased, showing an increase in home-consumption. The ratio of the production of steel to pig-iron in Germany was greatest in 1903, the proportion being 87.3 to 100 (United States, 80.7 to 100; Great Britain, 57.1 to 100). In recent years this proportion has increased more rapidly than in the United States, or in Great Britain.

Thus, as regards coal and the raw materials of the iron industry, Germany does not have to rely upon imports from foreign countries. For the most part, further, Germany consumes such raw materials, instead of exporting them. Only on the coasts and borders is there any exchange with foreign nations. As to the geographical relation of the coal mines and the iron mines to each other, it cannot be said that this is as favorable in every respect as in England or in certain parts of the United States. But since the discovery of the Thomas Martin method of reduction the large percentage of phosphorus contained in many German iron ores rather gives Germany the advantage in this respect, and is even one of the reasons for the rapid development of the iron industry in Germany. Besides, the phosphorus in the slag makes this an excellent fertilizer. Of the other non-precious metals, only copper is principally imported. The imports amount to three fourth of the amount consumed in manufactures, and of this, eleven twelfths come from the United States. Accordingly, the metal industry is an important export industry, especially as regards finished products. Not counting machines, wares, and ships, the exports of semi-manufactured materials in 1903 exceeded the imports by \$46,750,000; but the exports of manufactured articles exceeded the imports by \$104,000,000. The trade-balance against Germany on ores and metals, including precious metals, is almost wiped out by the excess in exports of combustibles alone.

In all modern civilized countries the second typical large industry, next to iron manufactures, is the textile industry. In Germany this industry rests upon a basis quite different from that of the iron industry. In the manufacture of cotton Germany takes the third place, with 8,500,000 spindles, being led by Great Britain, with 47,000,000, and by the United States, with 22,000,000 spindles. The exports of textiles amounted to \$125,000,000, though this was not sufficient to cover the corresponding imports of raw material, which were \$193,750,000. In 1903 Germany imported 344,000 tons of raw cotton, worth \$88,750,000; and in 1904, 357,000 tons, worth \$104,475,000. Between two thirds and three fourths of this came from the United States. The cultivation of flax in Germany has continually decreased, owing of the superiority of the Russian article, which is due to the more favorable conditions of climate in Russia. In 1904 Germany imported 24,000 tons of flax, which is about the average for recent years. Four fifths of this came from Russia. Jute is imported annually to the extent of about 100,000 tons, almost all of it coming from British India; and the annual imports of hemp are from 26,000 to 30,000 tons. As to wool, the excess of imports over exports in 1904 were: raw wool, 138,000 tons; bleached wool, 9,000 tons, and combed wool, 13,000 tons. About half of this came from Argentina, and a third from Australia. Even in 1900 the home production had gone down to about 12,000 tons. The annual imports of raw silk are some 5,300 tons. Despite the limited use of silk in Germany, this is an amount that has been exceeded by the United States only in late years.

In spite of the very considerable stock-raising in Germany, the leather industry is on about the same basis as textile manufactures. In 1904 the imports of hides and skins were 108,000 tons, worth \$50,000,000. To a great extent the wood-working industries have to rely upon foreign material, although Germany has considerable timber-lands. The imports of wood and lumber of all kinds in 1904 amounted to \$30,000,000. In certain industries caonchac and gutta-percha are found indispensable and are imported to the extent of \$20,000,000. Most of the entrails used in putting up sausage, and in other industries, are imported, such imports being 21,000 tons annually, of which 9,000 tons come from the United States. Though tobacco is raised in Germany to a large extent, the tobacco industry has to rely on foreign countries for certain kinds of tobacco. The annual imports of leaf tobacco are some \$22,500,000. Petroleum is likewise imported for about \$22,500,000, partly from Russia, partly