

УДК 338.124.4:621(430)

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## THE GERMAN EMPIRE ABOUT TO FALL: THE AUTOMOBILE CRISIS

Abstract: the article describes the German automobile industry and how the development towards electrification in the future, will force the German car industry to adapt to the new situation and what negative consequences will it entail. The German car mass production helped to monopolize the European economy gradually, but nowadays with climate changes the proportion of electric vehicles increases significantly. It means that the state would have to supervise the industry more closely than it has done in the past. Overall, automotive production was probably down 10% in real terms in 2019. It is also important to note that between 5% and 10% of all jobs in Germany are directly or indirectly linked to the production of vehicles. Given that the automotive industry will change, around 400 thousand people will be unemployed and we may also be wary of GDP bias.

Key words: Germany, automobile industry, electric vehicles, GDP

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## ГЕРМАНСКАЯ ИМПЕРИЯ НА ГРАНИ ПАДЕНИЯ: АВТОМОБИЛЬНЫЙ КРИЗИС

Аннотация: в статье описывается немецкая автомобильная промышленность и то, как развитие в сторону электрификации в будущем

заставит немецкую автомобильную промышленность адаптироваться к новой ситуации и какие негативные последствия это повлечет. Массовое производство немецких автомобилей помогло постепенно монополизировать европейскую экономику, но в настоящее время доля электромобилей значительно возрастает. Это означает, что государство должно будет контролировать отрасль более тщательно, чем это делалось в прошлом. В целом, производство автомобилей, снизилось на 10% в 2019 году. Также важно отметить, что от 5% до 10% всех рабочих мест в Германии прямо или косвенно связаны с производством автомобилей. Учитывая, что автомобильная промышленность изменится, около 400 тысяч человек останутся безработными, что негативно повлияет на ВВП.

Ключевые слова: Германия, автомобильная промышленность, электромобили, ВВП

We are living in the age of German Empire that has reached unimaginable dimensions, spreading across all continents. The German automobile industry marked by its engineering, precision, technology and expertise dominated the economy of the European Union. What turns out to be the most interesting aspect of this titan economy is that it was born in a period of post war, when Germany was destroyed, but one man had an idea that made Germany rise again.

When the Second World War ended, Ivan Hirst, a British engineer moved to one of the 4 zones of divided occupied Germany and started to build cars, which were based on the German car blueprint, the beetle, also known as the car of the population. However, these first cars were far from perfect, but throughout the time, with their obsession in details and determination to produce a masterpiece, they keep fixing the mistakes and therefore today, the Volkswagen industry, among many other German companies with similar background, are known to fabricate the most reliable and high quality cars.

But how is it possible such a rapid ascension of the German industry just after a war that put millions in famine and poverty? Why didn't the British automobile

industry able to compete? It is important to know that in Germany, the workers had good shifts that didn't explore much of their labor capacity, the workers assembly instead of fighting against the industry's administration for more benefits or any other cause, tried to work with the administration to promote a better environment for everyone so that everybody could benefit. The German car mass production worked as smooth and perfect as a swiss watch, and this is the main reason why this country monopolized the European economy gradually [1].

The 21st century is marked by the accession of the car industry that have become much more than only a way of transport, but also a feature to demonstrate someone's wealth. Millions of cars are sold every year in every shape, power and elegance and according to many pools made along the decade in many developed or in development countries, the most common brands of automobile to be purchased with greater preference were Volkswagen, BMW, Mercedes and Audi. These companies maintained their monopoly in the international market for along time, even with rising competition from the Asian and American automobile markets, but due to political and ecological interests, it might be possible that this pillar of German economy could soon collapse. The automotive industry, which lies at the very heart of the German economy, is becoming its new problem child [1].

According to Jochen Flasbarth, German Federal Minister for the Environment, Nature Conservation, Construction and Nuclear Safety, the emissions scandal has fostered mistrust of diesel, being the automotive a big influencer for environment pollution. The importance of economic stability and the sustainability of economic development are high on the political agenda. They are key topics of scientific debate and not only since the financial crisis. Global climate change shows that the current form of economic activity in many industrialized countries is not sustainable. [1] In some European countries (e.g. Great Britain, France, Norway, Austria and the Netherlands) there are concrete political declarations of intent to not rely anymore on the technology of the internal combustion engine in the future. There are also states in the USA, a relevant export market for Germany, that are pushing ahead with the electrification of road traffic with considerable force and this means a

big drop for the German economy. The development towards electrification will continue to increase in the future, forcing the German car industry to adapt to the new situation to achieve the climate protection goals. With every new study, the finding is consolidated: In traffic, the climate protection goals and the goal of decarbonization can only be achieved if the proportion of electric vehicles increases significantly and the proportion of renewable electricity increases. To restore the automotive industry's credibility the state would have to supervise the industry more closely than it has done in the past. It means that these industries will have to cope with the international agreements regarding the protection of the environment that Germany takes part in. It is believed that an active industry policy is the only way to ensure the sustainability of the German automotive industry[2, 3].

It is important to understand that between 5% and 10% of all jobs in Germany are directly or indirectly linked to the production of vehicles. This is mainly due to the dominant position of German manufacturers and the quality of the products. This refers to car brands that are particularly prestigious, which is why buyers are willing to pay more for these brands. The three leading premium brands worldwide are Audi, BMW and Mercedes. So far, no non-German car company has managed to dispute this position with German manufacturers. This has a positive effect on companies' profits and, above all, keeps them safe from competition with low-price offers [3].

The German economy thus has grown for the tenth year in a row. This has been the longest period of growth in united Germany. However, growth lost momentum in 2019. In the previous two years, the price-adjusted GDP grew much more strongly (by 2.5% in 2017 and by 1.5% in 2018). Compared with the average of the last ten years (+1.3%), the German economic growth in 2019 was lower. The price adjusted or real gross domestic product, is a macroeconomic measure of the value of economic output adjusted for price changes (i.e. inflation or deflation) and that means that Germany had a lower output compared to the average of 1,3 %for 10 years [4].

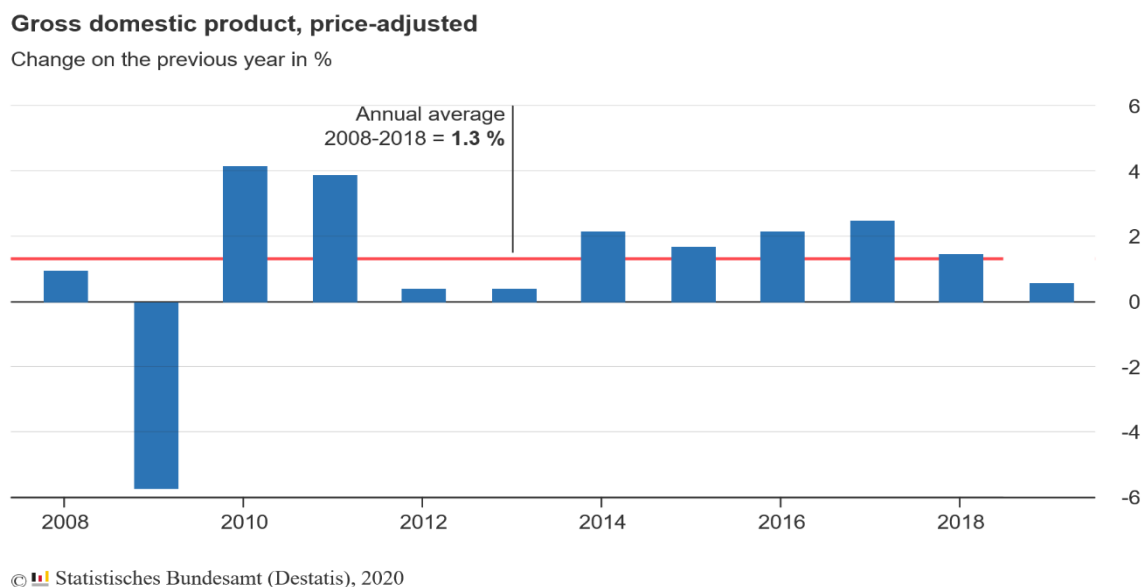
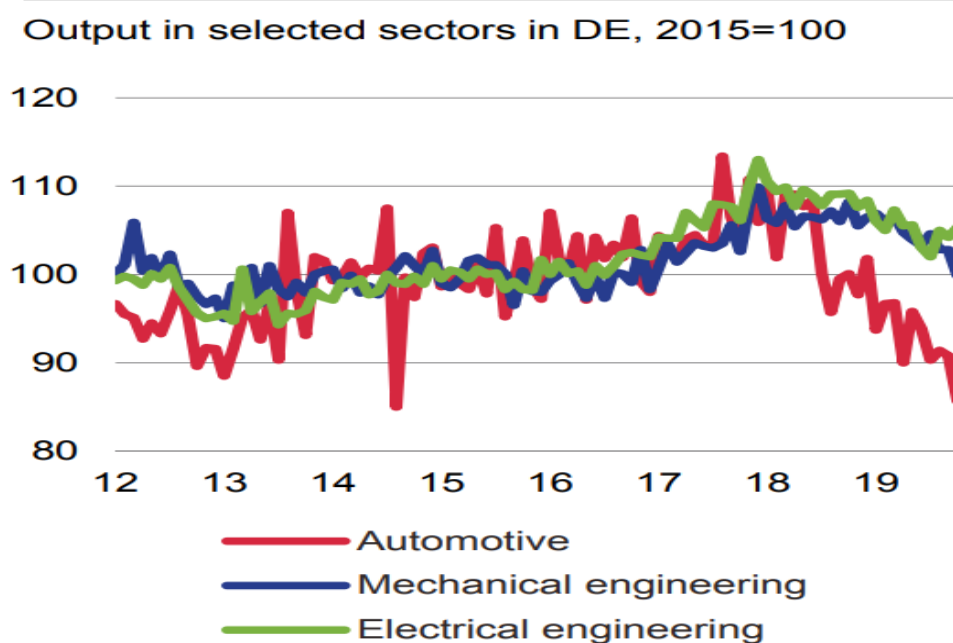


Figure 1 – The changes of adjusted GDP of Germany in percentage between the years of 2008 and 2019[4].

About the Figure 1 is important to understand that on the production sector of the GDP, there were two different economic trends in 2019. On the one hand, the service sector and the construction industry recorded mainly high growth rates. On the other hand, industry (automobile) saw an economic slump. Data shows a scenario of two consecutive quarters in of contraction during 2019 but the last quarter had a positive value, avoiding then a status or economic recension. All these data show Europe's largest economy struggling to generate growth [6].

At the end of 2018, the shift to the brand new WLTP emissions test disrupted the sector. Several models were temporarily no longer available, which brought about both new registrations and domestic output to decrease considerably closer to the end of the year. The negative effect from the WLTP shift persisted into 2019.



Source: Federal Statistical Office

Figure 2 – Decline in output in the automotive industry[7].

Some manufacturing capacities had been not available in 2019 because numerous factories are being refurbished for electric car production. The structural shift in the direction of e-mobility and global demand weakness are key reasons for cost-cutting programmes at many German carmakers and suppliers, to be persevered in 2020. Component suppliers particularly are cautious about their near-term manufacturing plans.

Overall, automotive production was probably down 10% in real terms in 2019 – the second decline in a row (2018: -1.7%) and the strongest since 2009 (-21.7%). Contrary to expectations, output was still down in year-on-year terms towards the end of the year, even though the basis had already been dampened by the WLTP effect in 2018. This was caused by the global weakness in car demand and the one-off effects mentioned above. Output in the automotive industry shrank more strongly than in other capital goods sectors, such as mechanical engineering (2019: c. -3% in real terms) or electrical engineering (-4%). Production in the chemicals and metals sectors probably declined 3-4% in real terms in 2019. Overall, all major industrial sectors

contracted in 2019. The food sector, which is less cyclical, was the only sector that likely registered a small increase in output [8].

There is a threat that Germany turns into less attractive as a commercial location within the long run. For example, costs have risen in the previous couple of years. Labor costs and effective average corporate tax rates are among the highest in an international comparison, as are industrial electricity prices. Energy-intensive industries have been cautious about making an investment in Germany for years now because the long-time period thrust of German and European weather and power policies is unclear.

The auto industry might also shift an even larger percentage of its investments in plants, machinery and equipment abroad to offset price increases (for example, investments in opportunity propulsion systems important to conform with carbon limits or better labor costs). Many German carmakers have introduced or already made investments in Hungary, the USA or Mexico, and capacities in China look set to be expanded further as well. During the previous few years, foreign investments within the auto industry had not eaten into Germany's repute as an automobile-producing country. In almost every year, more than 5 million units were built – a quite satisfactory number. In addition, better capabilities in automobiles have led to good-sized qualitative growth. In 2019, however, vehicle output dropped well under five million units, and it will now not be smooth to push it above this threshold again.

The German labor market is in good shape: unemployment is low, participation rates are high, and wages are increasing moderately. The labor market has also been remarkably robust to policy experiments, such as the introduction of a statutory minimum wage, and to demand side shock. Looking at the big picture, we can say that in the future the German workforce is likely to decline considerably in the long run. Given that the automotive industry will change, around 400 thousand people will be unemployed and we may also be wary of GDP bias. Such changes can cause large changes in the economy and adversely affect its functioning.

In additional, it should be noted, that Germany is Europe's industrial powerhouse and the world's second largest exporter. We should not forget about more

dominate sectors industry in Germany: the mechanical engineering, chemical and electrical industries (the global players are BASF – chemical, and Siemens – electrical. Mechanical engineering is characterized by small and medium-sized enterprises), thanks to which the German economy is considered one of the strongest.

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