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DAX companies receive billions in subsidies

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Abstract

DAX companies receive billions in subsidies from government agencies. It is questionable whether this public money generates added value for society. The data suggests that government money is replacing private investment.

Zusammenfassung

DAX-Konzerne erhalten Milliardenbeträge über Subventionen von staatlichen Stellen. Es ist fraglich, ob mit den öffentlichen Geldern ein gesellschaftlicher Mehrwert erzielt wird. Die Daten legen nahe, dass die staatlichen Gelder private Investitionen ersetzen.



44 billion euros for DAX companies

Over the past eight years, DAX companies have received billions in subsidies from government agencies. Based on the information in the companies' annual reports, the total amount of subsidies totalled 35 billion euros. If information from the EU transparency database is also taken into account, the total for the past eight years rises to 44 billion euros.

The largest recipient of state funds is the energy company E.ON, followed by car manufacturer Volkswagen and energy supplier RWE. The extent to which profitable companies receive public funding has risen dramatically in recent years. In 2023, more than five times as many subsidies were paid out to major German corporations than in 2016.

Political change Change promotes subsidy culture The reason for the massive increase in subsidies is mainly due to the political decisions of the coalition government and the grand coalition. This includes the political plan to transform the economy and support it during the coronavirus pandemic and the war in Ukraine. However, the available data does not provide any evidence that public funds have actually generated added value for society. Rather, it is to be feared that a large proportion of the funds merely replaced private money. Furthermore, the subsidies used lead to large corporations making investments in business areas where it is unclear whether they can even be maintained profitably in the long term. Possible consequences of the subsidy policy are a waste of resources, distortion of competition and a dependence of the economy on state funds.

E.ON and RWE receive more subsidies than they pay in taxes.

Based on the information in the companies' annual reports, subsidies accounted for more than ten per cent of the cumulative pre-tax profit of five companies over the period from 2016 to 2023. In the extreme case of RWE, based on the information in the EU transparency database, the amount of subsidies received corresponded to the pre-tax profit of the past eight years. Without subsidies, RWE would not have been able to report a cumulative profit since 2016. As a result, RWE, like E.ON, has not made any contribution to the public purse over the period under review, as the taxes paid were lower than the subsidies received.

The following will first explain the data used in the study. Next, subsidies for DAX companies both at an aggregate level and at company level are analysed. Finally, the results are categorised in the context of economic theory on the effects of subsidies.

Data collection process

A subsidy is a government benefit without a service in return. A subsidy is a benefit from a government for companies that is not linked to a consideration. In principle, Article 107 of the Treaty on the Functioning of the European Union (TFEU) prohibits subsidies in the EU and therefore also



in Germany. However, Sections 2 and 3 of Article 107 TFEU allow for exceptions, which are used to authorise subsidies.

Subsidies are usually paid in the form of direct financial assistance. However, they can also take the form of tax relief, interest relief, debt relief, guarantees, the provision of land, goods or services at special conditions or indirectly as payments to private households with earmarking.

The best-known sources of information on subsidies in Germany are the federal government's subsidy reports (see e.g. Federal Ministry of Finance 2023) and the subsidy reports of the Kiel Institute for the World Economy (see e.g. Laaser et. al 2023). Both reports are based on information provided by the donors, from which no conclusion can be drawn as to the amounts received by individual DAX companies. Other government information, such as responses to enquiries to the federal government, show considerable qualitative deficiencies in terms of completeness. ¹

In order to gain a reliable picture of the subsidies provided by DAX companies, the following two sources are used to collect data.

Data source 1: Annual reports of DAX companies

Companies must provide information about subsidies in their annual reports.

The first data collection is based on the disclosures on government grants and other government assistance that listed companies are required to make in their annual reports in accordance with accounting standard IAS 20. In this context, performance-related grants as well as grants for assets are collected. Performance-related grants, such as funds for research and development or to offset costs, are usually recognised as "other operating income" in the year in which the expenses to be offset are incurred. In the case of grants for assets, such as additional payments for the construction of production facilities, companies have a choice. They can either recognise the asset at reduced acquisition cost. Alternatively, the grant can be capitalised as deferred income and released to the income statement over the useful life of the asset. While in the first case the subsidy can be charged in full for the financial year of acquisition, in the case of capitalisation it is charged over the useful life of the asset. This results in a different distribution of the subsidy amounts over the financial years for otherwise identical transactions. If no information is provided on the annual amortisation of the deferred income item, the amount of the annual amortisation is estimated on the basis of the information on the proportion of current and non-current items. If this

¹ In the Federal Government's answer of 26 September 2022 (Deutscher Bundestag 2022) to a minor question from the AfD parliamentary group to the Federal Government on the amount of federal funding received by DAX companies for the years 2010 to 2023 is listed at company level, but it can be classified as incomplete, as only amounts that were listed in the project funding information system (profi) of the federal ministries are given.



information is also not available, the annual amount is estimated on the basis of the other available information.

156 annual data points distributed across 29 DAX From the annual reports for the years 2016 to 2023, 156 data points on subsidies were collected for the 40 groups, spread across 29 groups. Explanatory information on the disclosures is extremely sparse in the annual reports. Despite the requirement of IAS 20 to disclose the type of subsidy, only individual uncommented figures are usually published. No information on subsidies in accordance with IAS 20 could be found for the remaining eleven DAX companies.

Data source 2: EU State aid transparency database

Obligation to publish subsidies in the EU transparency database

Regulation (EU) No. 651/2014 of the European Commission requires subsidies granted to be published in the EU's state aid transparency database. The "de minimis rule" (Regulation (EU) No. 1407/2013) applies here, meaning that subsidies of less than EUR 200,000 (EUR 300,000 since 13 December 2023) do not have to be approved by the EU Commission over a period of three years in relation to the entire group of companies and therefore do not necessarily appear in the database.

To compare which DAX companies received subsidies, the complete state aid transparency database as of 22 February 2024 with over 1.7 million entries relating to the period 15 September 2016 to 31 December 2023 was searched for the name of the specified aid recipient. The shareholding lists of the groups for the 2023 financial years, which often include several hundred companies, serve as the basis for the name comparison. No distinction was made here according to the level of shareholding of the subsidiary. The comparison of names is computer-based, taking into account different spellings and abbreviations. An imprecision in the comparison may arise if the lists of shareholdings have changed during the period under review, which was not tracked. It is also possible that subsidy payments could not be allocated to the groups due to complex ownership structures, name changes or name changes. As Spain maintains its own state aid transparency database, this was analysed separately. No information on subsidies from the EU countries Poland, Romania and Slovenia was available in the database.

The transparency database does not always record the exact subsidy amount, but in some cases only an interval, e.g. "EUR 2 to 5 million". In these cases, the average value of the specified interval was recorded as the subsidy received.

5,675 entries from 37 different DAX companies

It was possible to assign 5,675 entries to 37 different DAX companies. Only three companies - Hannover Re, Commerzbank and Deutsche Börse - were not included in the database.



All other information on the companies is taken from the annual reports, information from the companies' investor relations departments or the Refinitiv database.

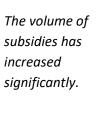
Status and development of subsidies for DAX companies

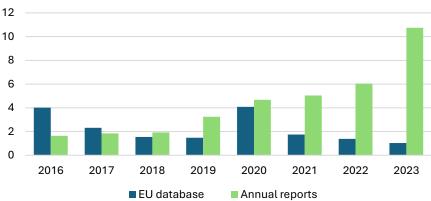
Depending on the presentation, the total amount of subsidies is between 18 and 44 billion euros.

According to the information in the annual reports, the total amount of subsidies received by major German corporations in the period from 2016 to 2023 is €35.1 billion. The EU database, on the other hand, only shows half of this amount at 17.6 billion euros. However, if the higher value from the two data surveys is used for each company, the total amount of subsidies is 43.8 billion euros.

The figures in the annual reports show a clear trend (see Figure 1). While the subsidies received up to 2018 totalled around 2.0 billion euros, the annual amount subsequently rose sharply, reaching 10.7 billion euros in 2023, more than five times as much. This means that half of the total amount is attributable to the last two years. The trend reflects the increase in subsidies documented by the Kiel Institute for the World Economy (Laaser et. al 2023). The reasons for the increase can be found in the state aid provided during the coronavirus pandemic, the support measures in the wake of the war in Ukraine and the plan to accelerate the intended political transformation of the economy. The funds come from the "Climate and Transformation Fund", the "Economic Stabilisation Fund" and subsidy programmes from foreign institutions, among others.

Figure 1: **Subsidies of DAX companies**by source, in billion euros





Source: EU transparency database, annual reports, calculations by Flossbach von Storch Research Institute, as at 28 June 2024.



A comparison with the amounts shown in the EU database reveals significant differences for several years. The maximum funding amounts are shown in the EU database for the years 2016 and 2020.

Significant deviations between the data sources

The differences between the data collections can be attributed to several reasons. The interests of the publishers of the data are fundamentally different. In annual reports, companies provide information about their activities as recipients of subsidies, while the EU database is compiled from the perspective of the donors and is subject to political decisions. Therefore, views vary as to which transactions are considered subsidies and which are not. Also, the EU database only takes into account payments that a government agency considers to require notification and authorisation. Furthermore, there may be discrepancies if the paying institution is not based in the EU. In addition, there may be discrepancies in comparable transactions within one data source, but between companies due to different assessments of the transactions.²

Due to the principle of materiality, companies have the option of not recognising income or assets of minor importance in their reporting (IAS 1), meaning that the disclosures are not included in the annual reports, but may be documented in the EU database. Another possible explanation is that the EU directive is not fully implemented by individual state institutions. In addition, grants from non-EU institutions are not available in the EU database.

A comparison of the two data surveys only provides a lower limit of the actual subsidies. Indirect subsidies, such as the environmental bonus for the purchase of e-cars (Federal Gazette 2020), which was paid to private households, represent an indirect subsidy from the automotive industry, but cannot be linked to the companies in the data collection.

Analysis of subsidies at company level

Concentrated allocation of subsidies

Based on the information in the annual reports, 11 out of 40 DAX companies each received more than one billion euros in subsidies in the period from 2016 to 2023. The three companies with the highest subsidies received 52% of the amounts collected from the annual reports, totalling 18.1 billion euros. While the mean value of subsidies according to the annual reports is just under one billion euros, the median is only 200 million euros. This illustrates how concentrated the allocation of subsidies is.

The EU database also reveals a concentration in the allocation of subsidies.

² Deutsche Bank assesses net interest income from the ECB's TLTRO II and TLTRO III programmes from 2017 to 2023 as government grants. Commerzbank comes to a different conclusion and does not report any government grants despite participating in the programmes.



Three companies account for around half of all subsidies recorded in the EU database. However, as the amount of subsidies collected is lower than in the annual reports, there are only six companies for which more than one billion euros in subsidies were collected from the EU database.

E.ON is the largest Subsidy recipients.

At over €9.3 billion, E.ON is the company with the most subsidies received according to the annual reports. The majority of the amounts originate from the Electricity Price Reduction Act (StromPBG) and the Natural Gas Heat Price Reduction Act (EWPBG) and replace payments from customers or reduce purchase prices. In addition, E.ON received various government investment grants over the period.

Volkswagen is the second largest recipient of subsidies. According to the annual reports, the car manufacturer Volkswagen is the second largest recipient of subsidies among the DAX companies with 6.4 billion euros. Among other things, the company received extensive tax concessions and subsidies for research in the field of drive and digital technology.

RWE follows in third place.

The energy supplier RWE follows in third place with 4.0 billion euros according to the EU database. The majority of RWE's subsidies are direct subsidies for power plants, the construction of wind farms and the combustion of biomass.

The business areas of the three companies occupy key positions in the sectors on which the political transformation intentions and support measures of the German governments focussed during the observation period.

While the highest subsidy amounts are reported in the annual reports, entries on the companies can be found more frequently in the EU database. For eight companies, no information on the amount of subsidies received can be found in any of the annual reports analysed, although there are entries on the companies in the EU database. In both data surveys, however, the entries accumulate towards the end of the period under review, so that an increasing trend in the amount and frequency of subsidies can be observed.

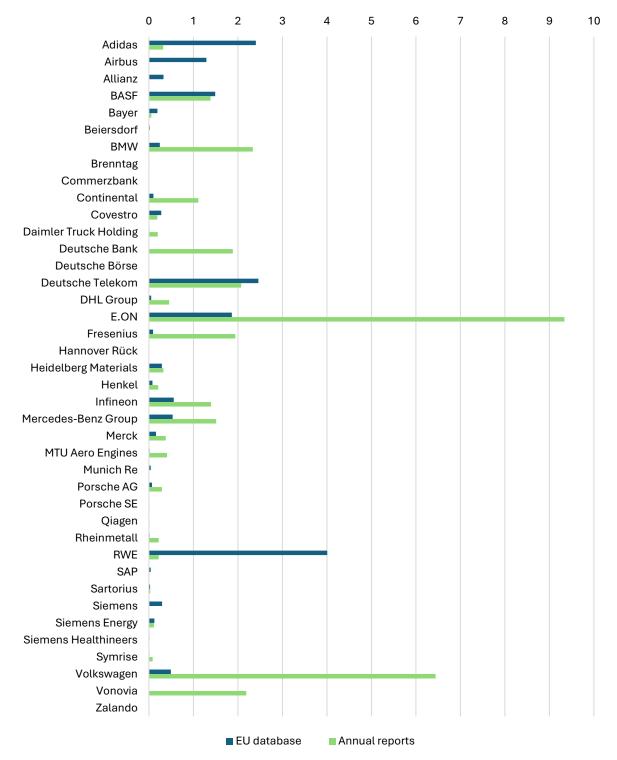
No subsidies could be claimed for three groups.

There are only three companies for which no information on subsidies can be found in either source (Commerzbank, Deutsche Börse and Hannover Re). In the case of Commerzbank, however, the Federal Republic of Germany is the largest shareholder with over 15 %, which also suggests at least indirect subsidisation here.



Figure 2: Subsidies for DAX companies

Period 2016 - 2023, in billion euros



Source: EU transparency database, annual reports, calculations by Flossbach von Storch Research Institute, as at 28 June 2024.



Assessment of the amount of subsidies

In order to assess the financial relevance of the amount of subsidies received by the DAX companies, the higher amount from each of the two surveys is compared below with the cumulative pre-tax profit of the companies for the observation period 2016 to 2023. The cumulative approach was chosen in order to avoid differences in the timing of the subsidy survey.

Subsidies account for a significant share of the pre-tax profits.

For seven of the 40 groups, subsidies accounted for more than ten per cent of pre-tax profit in the 2016-2023 observation period. Five of these observations are based on the information in the annual reports, with the EU database adding two more. On average, the ratio is 7.3%, with a median of just 1.6%.

The two extreme cases are E.ON and RWE. At RWE, subsidies and pre-tax profit are at the same level (100.6 %). The reason for this is, on the one hand, the very high volume of subsidies received mentioned above and, on the other hand, the fact that pre-tax profit was negatively impacted by the need for restructuring and the change in energy policy. At E.ON, the ratio is 53.7% for similar reasons. The high ratio at Adidas (21.3%) is largely due to state liquidity assistance in the form of a loan from the state development bank KfW during the coronavirus pandemic.

In net terms, RWE and E.ON have made no contribution to the public purse over the past 8 years.

From a net perspective, RWE and E.ON have made no contribution to the public purse over the past eight years. The subsidies collected were at least as high as the tax payments published in the annual report. At E.ON, the difference between tax payments and subsidies amounts to -7.5 billion euros, at RWE to -2.4 billion euros. A transfer from the taxpayers to the companies has taken place, although the companies have reported cumulative pre-tax profits of 3.9 billion euros (RWE) and 17.4 billion euros (E.ON) in their annual reports for the past eight years.

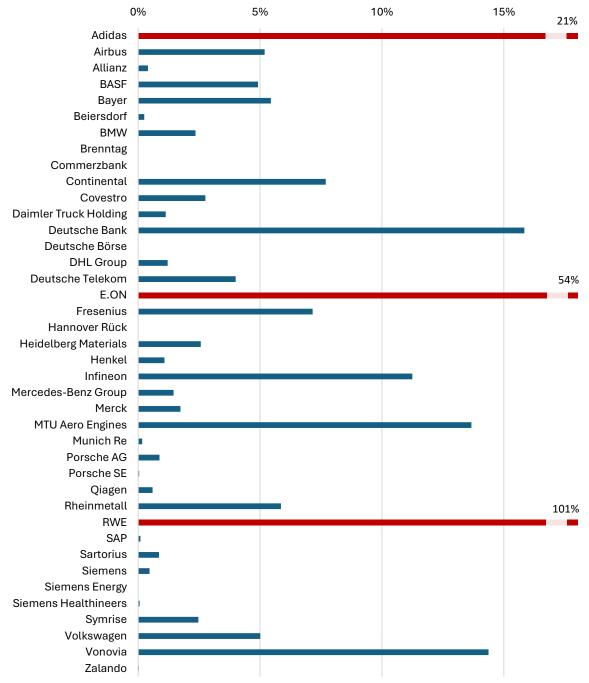
The statistics show that DAX companies, all but one of which were able to report pre-tax profits of more than one billion euros in the period under review, received subsidies that in many cases even amounted to more than one billion euros.

Economically and socially, this raises the question of whether there is an economic necessity to support or subsidise the DAX companies to this extent with taxpayers' money. In view of their financial situation, the vast majority of companies could have financed the amounts from their own resources without fundamentally jeopardising their annual results.



Figure 3:
Subsidies of DAX companies in relation to pre-tax profit

Period 2016 - 2023



Note: No value is shown for Siemens Energy due to a negative pre-tax profit. In each case, maximum subsidy amount from the information in the EU transparency database and the annual reports. Cumulative values for the years 2016 to 2023. Source: EU, Refinitiv, calculations by Flossbach von Storch Research Institute, as at 28 June 2024.



Economic categorisation of the findings

Three arguments in favour of subsidies

If there is a possible market failure, there are three central arguments from a theoretical perspective that justify subsidies from a social point of view. Firstly, such a situation can arise if a company's economic activities result in costs for third parties that are not reflected in market prices, as discussed in the climate and environmental debate. Subsidies can create financial incentives for companies to make investments that reduce costs for third parties (Pigou 1920).

Secondly, a market failure can occur because companies invest less than is socially desirable if income from research and development investments cannot be kept exclusively within the company (Arrow 1962). Subsidies can eliminate this market failure and trigger further private investment, which leads to a broad application of the knowledge gained (Nelson 1959).

A third justification for subsidies stems from Keynesian economic theory (Keynes 1936). Subsidies can support companies and thus preserve jobs, as was the case during the coronavirus pandemic and the war in Ukraine.

The theoretical justifications are set against a complex reality.

However, these theoretical considerations are set against a much more complex reality. When money is transferred without consideration, moral hazard arises. Funds are not used as intended because the company does not bear the full financial risk (Arnott and Stiglitz 1988). The state also has inadequate means of controlling the use of funds, which can lead to a principal-agent problem between the state and the company (Hanke and Heine 2015). It is therefore conceivable that a company could use the state subsidy to replace its own funds. As a result, private investment does not increase as hoped and the financial burden is merely transferred from the private company to the state.

Subsidies replace private funds and therefore bring little added value.

Due to the political will to transform the economy, companies demand state support to implement the political agenda. In line with public choice theory (Buchanan 1968), political decision-makers are inclined to pay subsidies where the prospects of success are favourable. In this case, politicians and civil servants can subsequently boast about the success of their policies. This creates a substitution effect in which public money merely replaces private investment. Lobbying can reinforce this process, as large corporations are favoured when it comes to the allocation of subsidies.

Furthermore, it is to be feared that, given the extent of subsidies for DAX companies, subsidies can lead to misallocations of resources such as labour, energy and raw materials if companies are incentivised to invest in business areas that cannot be operated in an economically sustainable manner



without subsidies. This leads to price distortions and inefficiencies, which in turn depresses real growth (Buchanan (1952), Friedman (1962)). Subsidies can also act as a driver of inflation if the state funds lead to an increased demand for resources and labour (Friedman and Schwartz 1963).

Academic literature cannot provide robust evidence for the benefits of subsidies.

The evidence in the empirical academic literature in favour of the benefits of subsidies is mixed and not very robust, such as in the literature review by David et. al. (2000) and in the meta-studies by García-Quevedo (2004) and Dimos and Pugh (2016). For German companies in the service sector, Czarnitzki and Fier (2002) can only rule out the possibility that state funding completely crowds out private research funding. Czarnitzki and Lopes-Bento (2014) prove that German companies are merely no less innovative than nonfunded companies as a result of government funding.

Principal-agent conflicts and moral hazard predominate.

The data presented in this study indicate that state intervention in the economy does not eliminate any market failures. On the contrary, state funds serve as a substitute for private investment. Principal-agent conflicts and moral hazard favour this substitution effect.

The effect of subsidies is exemplified by the German automotive industry. Due to technical innovations and high international competitive pressure, German car manufacturers have to invest heavily. In turn, the German automotive industry is calling on the state for aid. This shows that there is both a substitution effect and that the intermeshing of business and government in the sense of the public choice theory leads to a waste of taxpayers' money. Companies are already forced to invest even without state intervention (Immenkötter and Kleinheyer 2024).

Conclusion

The political will to transform and support the economy has led to DAX companies receiving a steadily growing volume of subsidies and making significant profits over the same period. Subsidy programmes are often justified by market failure. However, the data shows that the state funds have not helped to promote investment. Rather, it is to be feared that state funds are crowding out private investment and leading to inefficiencies and distortions of competition, thereby failing to fulfil their original social or political objective.

Reducing bureaucracy and regulation instead of subsidies

Fewer subsidies but a reduction in bureaucracy and regulation, both in Germany and in the EU, would probably be the better way to create pressure to innovate with the aim of increasing overall economic productivity and achieving social goals.



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