

Future Social Market Economy



Policy Brief # 2013/05

Federal States, Industries and Education Level– Effects of TTIP in Germany

A purely microeconomic perspective shows that all major industries and states would benefit from a transatlantic trade and investment partnership (TTIP). The greatest manufacturing and employment effects would be seen in the electronics industry as well as metal processing. Baden-Württemberg, Bavaria and North Rhine-Westphalia would benefit most from this. Furthermore, it becomes apparent that new jobs would be created for all education groups – even for relatively unskilled workers. Their real income could increase even more than that of highly qualified workers.

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Focus

Employment effects (due to TTIP) in Germany by sector

Sektor	Total effect on employment
Electrical	24,490
Metal production and fabrication	22,570
Machinery, Nec	12,932
Transport Equipment	12,143
Food, Beverages and Tobacco	4,145
Other manufacturing industries	21,088
Service sector (indirect effects)	62,186
Total	159,554

Source: Ifo Institut.

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A TTIP would benefit the entire German economy. Many new jobs would be created in the manufacturing industry, especially in the electronics industry and metal processing. Non-export oriented industries in the service sector would also benefit indirectly from an agreement through inter- and intra-sector relationships.

1. Initial Situation

The US and the European Union are currently engaged in negotiations on a Transatlantic Trade and Investment Partnership (TTIP). The objective is to increase trade in goods and merchandise by reducing trade barriers. In the first part of this study, on macroeconomics (*Transatlantic Free Trade – Winners, Losers and Necessary Accompanying Measures*) it was already possible to show that a free trade agreement would have positive effects on income and employment in all of Europe and the US. In the present part of the study, on microeconomic aspects, the questions now investigated are: which industries and sectors in Germany would benefit in concrete terms from such a treaty; which regional effects would be associated with it; and how could a treaty affect groups with different skill levels and occupations, and also different German states.

2. Method of Calculation

The present analysis deals with the microeconomic effects of a Transatlantic Trade and Investment Partnership on economic sectors, regions, skill groups, and employment groups in Germany.

In this analysis, gravity equations were used to econometrically estimate potential effects on trade for 16 different sectors in all. Unlike the previously published study on the macroeconomic effects of a TTIP, distinctions were not made between a "tariff scenario" and a "liberalization scenario." Instead, the starting assumption was just that there would be a comprehensive reduction in tariffs and so-called non-tariff trade barriers.

The calculated effects on trade at the sector level were used as a basis for extrapolating corresponding effects on value creation and employment at the regional level. The effects on three different skill level groups as well as on 88 different occupational groups were determined in the same way, in a further analytical step. Using these results, it was possible to draw conclusions about increases in the real wages of these groups.

The calculations undertaken here are limited to consideration of how trade between the US and Germany affects both sides. International effects of trade diversion were not taken into consideration – in contrast with the previous macroeconomic study. In addition, potential effects on exports of services were not considered. On the other hand, the analysis shows not only the potential effects on all branches of the manufacturing industry, but also the indirect effects on all non-exporting service industries.

3. Effects on Industries and Sectors

How would a transatlantic free trade agreement affect the various sectors and branches of industry in Germany? Eliminating tariffs and broadly reducing or adjusting the existing non-tariff trade barriers ("NTBs") with a transatlantic free trade agreement would have positive effects in almost all economic sectors of Germany.

In this regard, the potential trade-generating effect depends very much on the degree to which non-tariff trade barriers are adjusted and eliminated. The potential trade-generating effects are therefore very large particularly in branches of

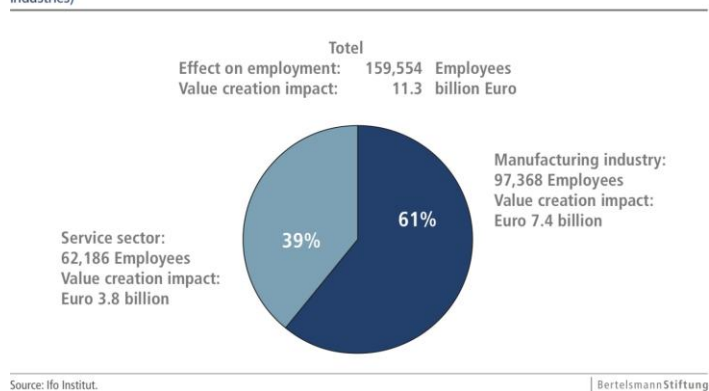
industry in which the level of NTBs is especially high. In some branches – for example, in the chemical industry – non-tariff barriers comprise up to 100 percent of the actual cost of manufacturing the products.

According to the calculations of the ifo Institut für Wirtschaftsforschung (Ifo Institute for Economic Research), the greatest increase in exports would occur in the food industry and tobacco processing (65.9%), metal production and fabrication (52.7%), and in the agricultural, forest and fishing industries (47.4%).

Greater trade activity and greater impact, however, do not mean value creation increases to the same extent (see Fig. 1). A major portion of the anticipated effects on production and employment would be seen in branches where value creation and exports are already quite high. In the manufacturing industry this would be,

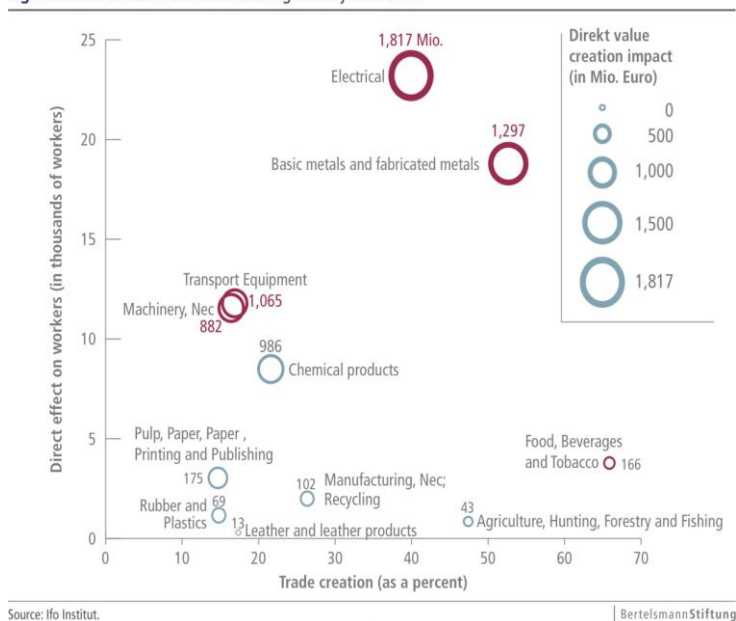
first and foremost, metal production and fabrication, the electronics industry, and motor vehicle and machine construction. The electronics industry is the sector in which the largest number of new jobs (24,500) might be created.

Fig. 2: Employment effects (due to TTIP) in the manufacturing industry and service sector (non-exporting industries)



Small and mid-sized companies in the manufacturing sector would benefit the most from a treaty, because elimination of trade barriers would give them more favorable access to the US market. Thus, the increased volume of trade will result in increased demand for labor, which in turn will affect the labor market, but without altering its structure.

Fig. 1: Sectoral effects in the manufacturing industry due to TTIP



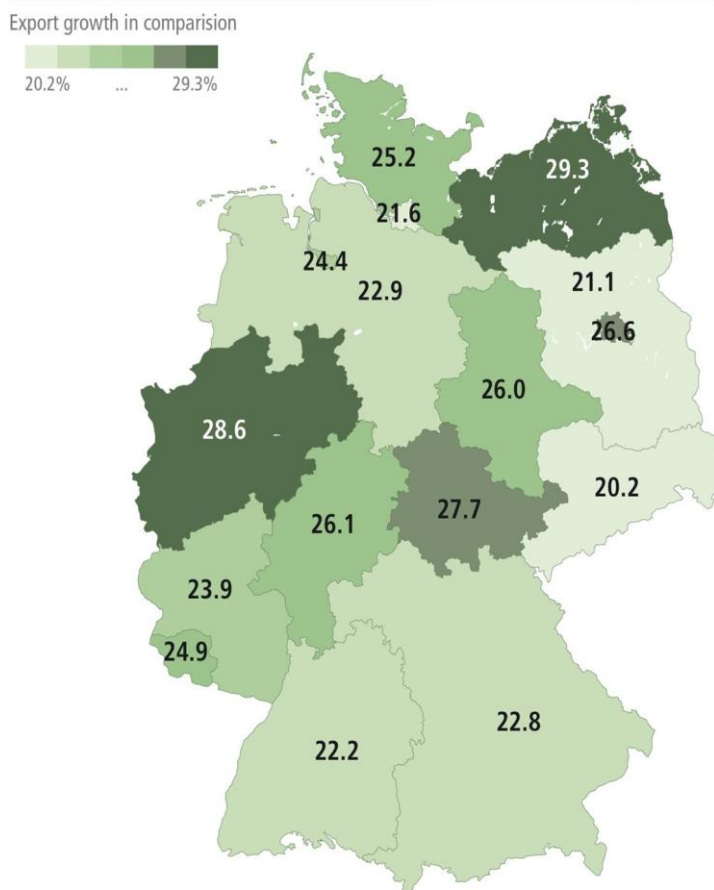
Reducing trading costs in the manufacturing industry would also have an indirect positive effect on other branches of the economy that are not directly involved in exporting. As the result of inter and intrasectoral links, there would also be positive economic effects on numerous service industries. Almost half of the total calculated effect on employment (75,000 jobs) would be indirectly created because of this (see Fig. 2).

4. Effects on the German States

The results for the branches of industry can be used to determine regional effects for all German states.

Here as well, creation of more trade as the result of a TTIP does also not mean that value creation will increase at the same rate. Because when the absolute effects on production and employment are considered, the states that would primarily benefit from a treaty would be North Rhine-Westphalia, Bavaria, and Baden-

Fig. 3: Regional bilateral trade creation effects (export growth) in German states by percentage



Source: Ifo Institut.

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We first take a look at the pure trade-creating effects of a treaty – that is, the effects that would occur solely from potential increases in bilateral trade between the US and Germany. Here, we see that trade-creating effects would be expected in all German states, with increases in exports forecast at 20 to 30 percent, depending on the state (see Fig. 3).

Württemberg, which are already big exporters. This is not surprising, because the branches of the manufacturing industry that have a particularly large presence in these states are the ones that, as previously shown, would generate the biggest value creation effects – in other words, metal production and fabrication, the electronics industry, and machine and motor vehicle construction. In Bavaria and Baden-

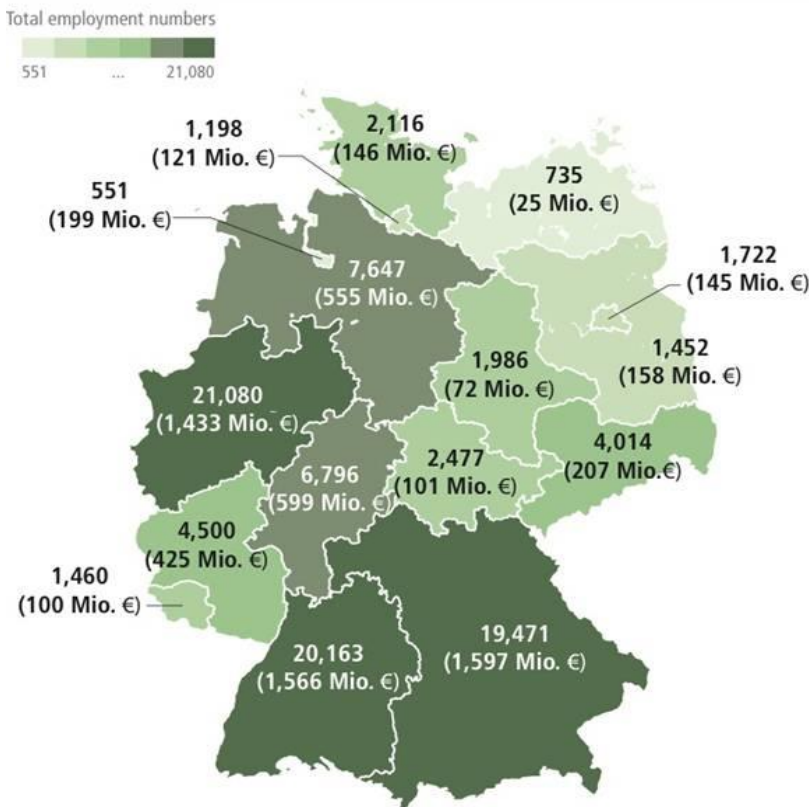
Württemberg, the last-mentioned industry alone comprises almost 20 percent of all exports from those states to the US.

So these three states would account for about 60 percent of the total 7.5 billion euro value creation effect that could be expected in the manufacturing industry. Accordingly, most of the new jobs in the manufacturing industry would be created

in North Rhine-Westphalia (21,000), followed by Baden-Württemberg (about 20,000) and Bavaria (about 19,500) (see Fig. 4).

determine corresponding effects of a treaty on workers with different skill levels. In addition, conclusions about various occupational groups can also be described.

Fig. 4: Employment and value creation effects (due to TTIP) in German states



Source: Ifo Institut.

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These considerations do not include the additional indirect value creation effect in non-exporting branches of industry - including the service sector - which will amount to about 3.8 billion euros. The actual value creation and employment effects should accordingly be significantly higher.

5. Effects on Skill-level and Occupational Groups

Intensifying The calculated results for the branches of industry can also be used to

According to the Ifo Institut's calculations for the manufacturing industry, a free trade agreement would result in new jobs for groups at every skill level. However, low-skilled workers in Germany - in other words, individuals without a secondary school diploma or vocational training - would be particularly affected by an upturn in bilateral trade. The reason for this is that many low-skilled workers

work primarily in the branches of industry in which the effects on trade and growth in trade would be relatively large - such as metal production and fabrication, the food industry, and machine construction.

A greater impact here initially only means that low-skilled workers would encounter comparatively greater changes and not that these changes would affect this group negatively or positively.

On the other hand, if the calculated effects on employment and growth in employment are divided among the three skill groups in the various branches of the manufacturing industry according to the

currently existing sector-specific classifications, then in the entire sector, relatively more jobs would be created for highly skilled individuals. This can be attributed to the fact that the branches of the manufacturing industry that create high value – first and foremost, the electronics industry, but also machine and motor vehicle construction – have relevance for highly qualified employees. For example, almost 20 percent of those working in the electronics industry are highly skilled employees, compared to only 8.8 percent in the manufacturing industry as a whole.

The portion of newly created jobs for highly skilled employees – determined from the combination of the expected creation of trade, the allocation of numbers in the various sectors, and the increase in employment in these sectors – would be about 12.5 percent, compared to 14.2 percent for low-skilled individuals and 73.3 percent for employees with average skills.

But how would the forecast increases in income from a TTIP be distributed in the three different skill level groups? Would a transatlantic trade agreement result in greater wage inequality?

The answer is no. According to the calculations of the Ifo Institut, the 0.9 percent increase in annual real wages for low-skilled individuals would be greater than the increase for average-skilled employees (0.7 percent) and highly skilled employees (0.6 percent). One of the reasons for this has to do with the greater impact on the low-skill group.

It should be noted that the study did not take into consideration a change in prices at the macroeconomic level, which would be about 0.61 percent lower as the result of a treaty (Ifo study, BWT study). Thus, the effects on wages cited here can be re-

garded as lower limits. A transatlantic treaty would therefore not aggravate wage differences.

6. Conclusion

The entire German economy – in other words, all large branches of industry and all federal states in Germany – would benefit financially from a Transatlantic Trade and Investment Partnership between the US and the European Union. In this regard, the calculated positive effects greatly depend on a comprehensive reduction of non-tariff trade barriers.

The greatest value creation effects for Germany would be in the electronics industry, metal production and fabrication, and in machine and motor vehicle construction. From a strategic political perspective, reduction of the non-tariff trade barriers in these areas would therefore be a top priority for Germany in the negotiations.

The study also showed that trade-creation and value-creation effects would ensue not just for the manufacturing industry, but also for non-export-oriented branches in the service sector.

An upturn in trade between the US and Germany would also result in more jobs for individuals with various levels of skill. A TTIP would also not exacerbate the existing wage inequality between the various skill level groups. Instead, real wages would rise at a greater rate for low-skilled employees than for average or highly qualified individuals.

However, because of the relatively high sector-specific impact, low-skilled individuals would also be subjected to more changes than medium or highly qualified

individuals. The question of the extent to which this could have a negative or positive effect on these groups could not be answered in this study.

It should once again be noted that the calculations performed in this study are limited to a bilateral consideration of the forecast effects on trade between the US and Germany, and – unlike the previous macroeconomic study – does not consider the effects of international diversions of trade. Potential effects on exports of services were also not considered. The analysis does include, however, not only potential effects on all branches of the manufacturing industry, but also indirect effects on all non-export-oriented service industries.

Further Reading

- Felbermayr, Gabriel et al, Dimensionen und Auswirkungen eines Freihandelsabkommens zwischen der EU und den USA, Studie im Auftrag des Bundesministeriums für Wirtschaft und Technologie, Endbericht, München 2013 (Dimensions and Effects of a Free Trade Agreement between the EU and the US, a study commissioned by the Federal Ministry for Economics and Labor, Final Report, Munich 2013).
- Felbermayr, Gabriel et al., Die Transatlantische Handels- und Investitionspartnerschaft (THIP) – Wem nutzt ein transatlantisches Freihandelsabkommen Teil 1: Makroökonomische Effekte, München 2013 (The Transatlantic Trade and Investment Partnership (TTIP) – Who Benefits from a Transatlantic Free Trade Agreement, Part 1: Macroeconomic Effects, Munich, 2013).
- Felbermayr, Gabriel et al., Bundesländer, Branchen und Bildungsgruppen – Wer profitiert in Deutschland von einer

Transatlantischen Handels- und Investitionspartnerschaft (THIP)? Mikroökonomische Analyse (Teil II der THIP-Gesamtstudie), München 2013 (States, Branches of industry, and Education Levels –Who Will Benefit in Germany from a Transatlantic Trade and Investment Partnership (TTIP)?, Munich, 2013).

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Policy Brief 2013/03: A European Social Market Economy? - Index Results

The 'highly competitive social market economy' represents the targeted common economic order of the European Union as it is stated as a goal in the Lisbon Treaty. Yet, this endeavor requires a mutual understanding of which institutions constitute a modern social market economy. The results of the Index of Modern Social Market Economies (IMSME) show congruence around a liberal market economy, but great diversity in principles indispensable for a social market economy.

Policy Brief 2013/04: Who Benefits from a Transatlantic Free Trade Agreement?

From a purely economic standpoint, the US and the entire EU will profit from a dismantling of tariffs and non-tariff trade barriers between the two regions in regard to both growth and employment. The public welfare gains of these economies admittedly do stand in contrast with real losses in income and employment in the rest of the world. On balance, however, the beneficial effects on economic welfare prevail.

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