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## The "China Effect": Changes in international trade patterns as reasons for rising "Anti-Globalism"

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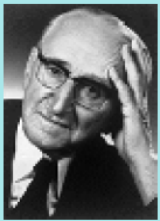
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# Ordnungspolitische Diskurse

## Discourses in Social Market Economy



Ralph M. Wrobel

**The “China Effect”:  
Changes in International Trade Pat-  
terns as Reasons for Rising “Anti-  
Globalism”**

Diskurs 2020 - 1

# The “China Effect”:

## Changes in International Trade Patterns as Reasons for Rising “Anti-Globalism”

Ralph Wrobel

### Abstract

It seems that the “globalization” has failed. Instead, a rising number of people in the Western world prefer old nationalist and protectionist policies. One reason may be the challenge by structural change. Main goal of this paper is to find out if any structural change and any spread of income in the Western World can be traced back to changing trade patterns. Obviously, there is a rising productivity gap between the export-oriented firms and the rest which leads to a rising gap in wages and opportunities for the workers. China is tending towards to trade more human-capital intensively produced goods. That leads to more vertical intra-industry trade with Western countries. While horizontal intra-industry trade brings positive economies of scale and a greater product variety for consumers, vertical intra-industry trade is responsible for more structural change. Especially, unskilled workers in the US and the EU are suffering while highly educated specialists get the gains of the structural change. Therefore, China’s rising vertical intra-industry trade is responsible for – at least a part – of the sectoral changes in Western countries and the discrimination of less skilled workers. As a result, low-skilled workers in the Western countries worse off on a sustained basis. This may be one out of a lot of reasons to explain the rise of populism, nationalism and protectionism in current Western politics.

### Keywords

International trade, inter-industry and intra-industry trade, economic sectors, China, EU, USA

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# The “China Effect”:

## Changes in International Trade Patterns as Reasons for Rising “Anti-Globalism”

Ralph Wrobel

### Introduction

While US president Trump believes in the possibility to win a trade war with China, the UK left the European Union in January 2020. At the same time, bilateral trade agreements are replacing the multilateral trade order of the WTO, step by step. Additionally, more and more nationalist or populist governments are taking office in Europe. New right-wing parties are arising (like AfD in Germany) or already in power (like PIS in Poland or Fides in Hungary). Obviously, the liberal model of market economy is not more satisfactory for a rising part of the population in the Western World. For instance, in 2018, for 38% only of the German population personal freedom is more important than social security. (Menkens 2018) It seems that the rise of personal freedom, the growing international exchange of goods and services – in brief the “globalization” – has failed. Instead, a rising number of people prefer old nationalist and protectionist policies.

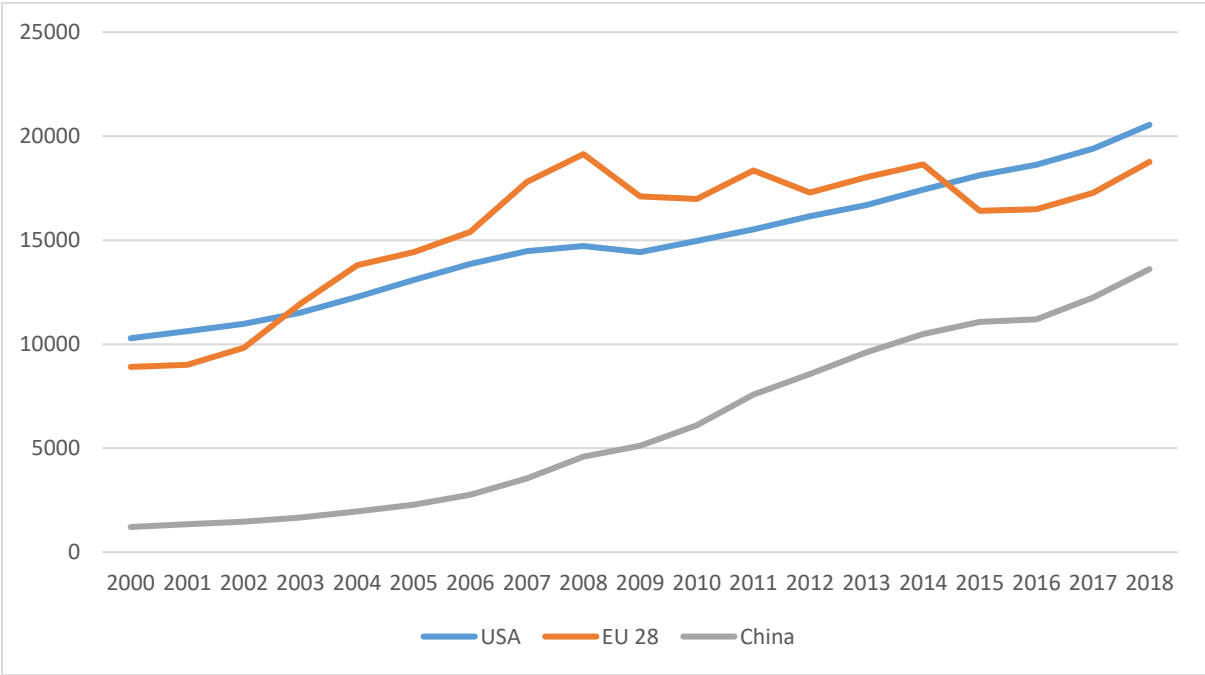
Main goal of this paper is to find out if any structural change and any spread of income in the Western World can be traced back to changing trade patterns. Therefore, in this paper I will ask how basic economic data like GDP, international trade and social inequality changed in the last decades. Additionally, I will ask how trade volumes and structures have changed since the beginning of the new millennium. Therefore, I will focus on trade between the three main trade centers, the US, the European Union and China as well as on the distinction between inter industry and intra industry trade. Purpose is to find economic data, which are able to explain the consequences of international trade and the resulting “Anti-Globalism” in the Western world. As can be shown especially the rise of China is responsible for some part of these developments. Already, more than one decade ago that was called the “China Effect”. (Venables / Yueh 2006) But how important is this effect today? Are we suffering or gaining from China’s economic development and trade policy?

# Fundamental Changes in the World's Economic Centers

## Development of GDP

In economic terms the US, the EU and China are the dominating power houses of the world. For instance, in 2019 the US accounted for 14.93% of worldwide GDP (in purchasing power parities [PPPs]) and the European Union (inclusive the UK) created 15.79% of it. In contrast, the “developing country” China with its 1.4 bn inhabitants was responsible for 19.71% of world GDP (in PPPs) in 2019. (IMF 2020) Together all three centers are creating about 50% of the world’s GDP. But as can be shown in figure 1 the development of the last two decades is very various. While the EU was overtaking the US in 2004 – for sure because of the Eastern Enlargement by eight new members – America was able to take rank 1 again in 2016. Since the Financial and Economic Crisis GDP in the EU is stagnating because of further debt crisis and recession in Southern Europe while in the US GDP was on the rise during this period, again. At the same time, China is catching up continuously while it could not reach the level of the US in current USD.

**Fig. 1: Development of GDP 2000 - 2018 (in current billion USD)**

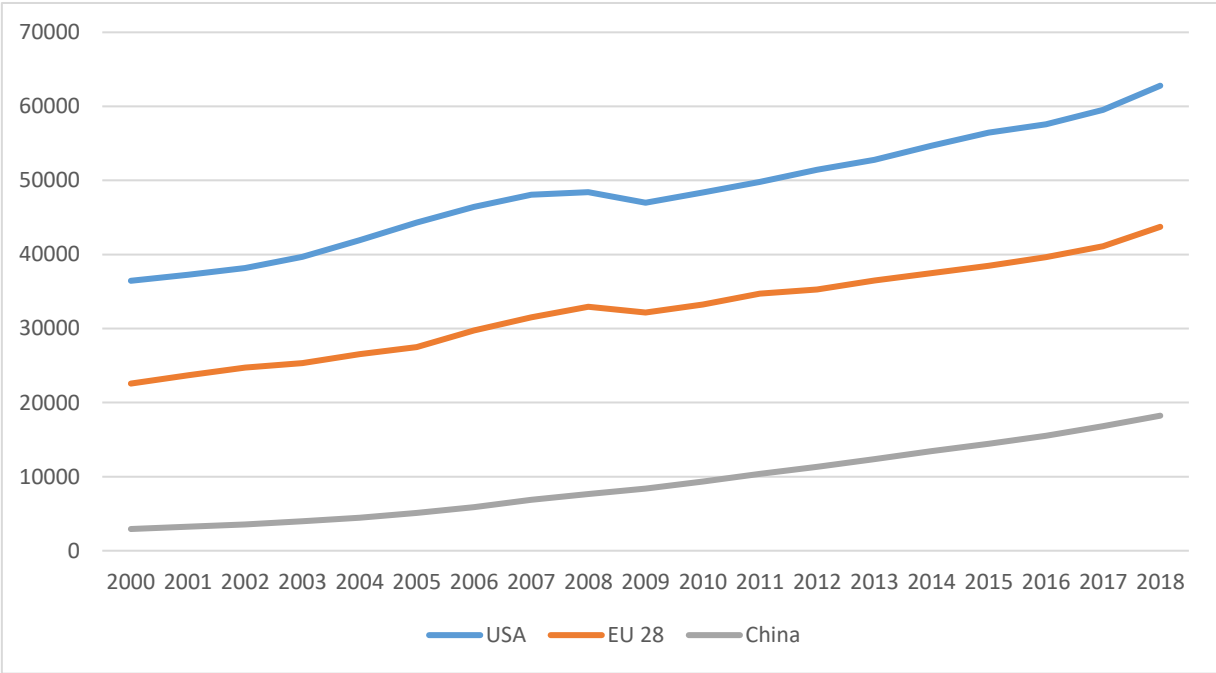


Data: World Bank (2020a) World Development Indicators.

During the period from 2000 to 2018 we can also observe a continuous rise of GDP per capita in all three economic centers of the world. But the development is parallel. While the US is the richest country – measured in PPPs and current international USD – the countries of EU 28 are constantly below that, but on a high level. After a decline in the crisis of 2008/09 in both

regions GDP per capita is on the rise, again. For instance, in 2018 GDP per capita in the US was about 62,794 USD while it accounted for 43,737 USD in average of all EU 28 countries. China could not close the gap to the Western World in the whole period. In 2018, GDP per capita accounted for 18,236 USD, only.

**Fig. 2: Development of GDP per capita in the US, EU 28 and China (PPP, current international USD), 2000 - 2018**



Data: World Bank (2020) World Development Indicators.

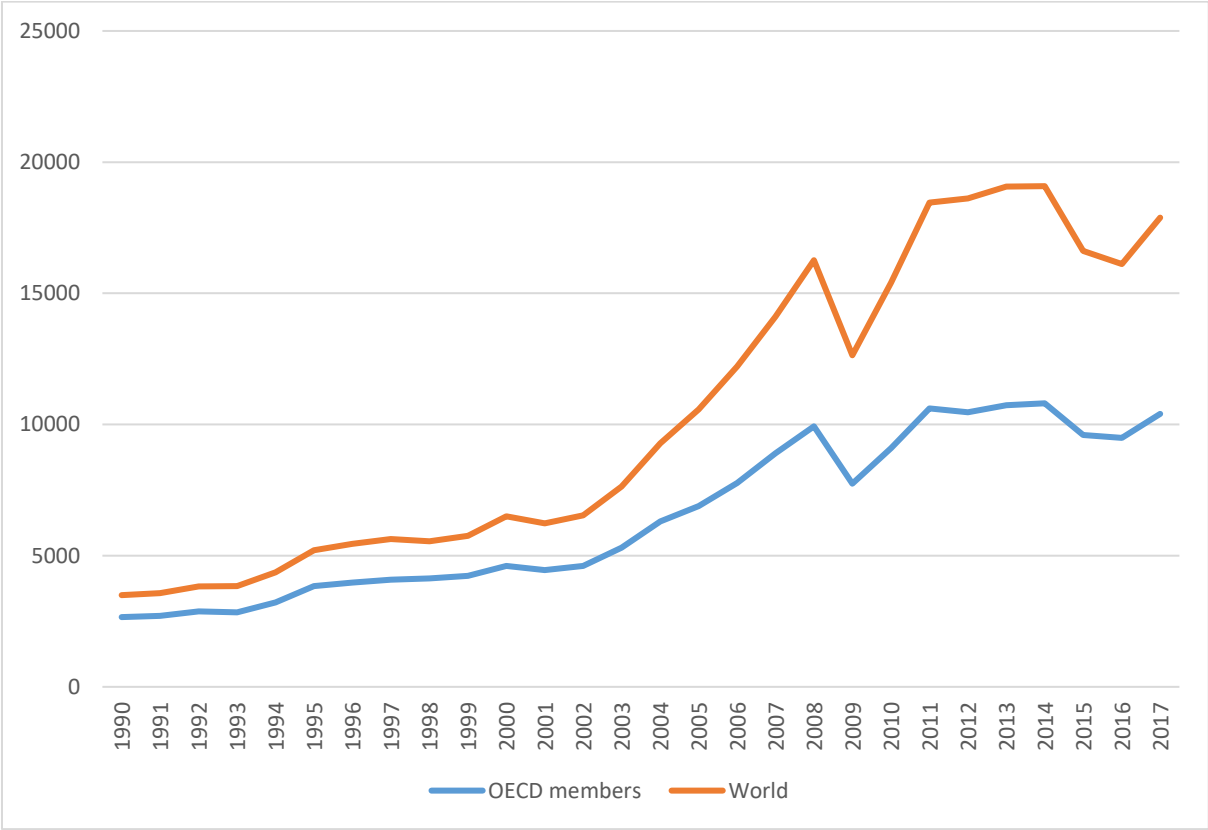
So far, the countries of the Western World are better off than two decades ago while China is catching up in absolute numbers but not per capita. Wealth seems to be concentrated in the Western countries, yet. This may rise confidence but cannot explain the political turbulences in the Western World of the last years.

**Development of international trade**

Since the beginning of the new millennium world trade rose again enormously. Also, the exports of non-OECD members were on the rise, including mainly China. The new abbreviation “BRICs” evolved, taking together Brazil, Russia, India, and China. (O’Neill 2001) But at all, also in terms of international trade the three already mentioned centers are responsible for more than 50% of world exports. In 2018, the US accounted for 10.9% of worldwide exports and 16.6% of its imports. In 2015, the European Union created 15.4% of its exports and 15.9% of

its imports without Intra-EU-Trade. In contrast, in 2018 China was responsible for 16.2% of world exports and 13.6% of its imports. (WTO 2019, 101)

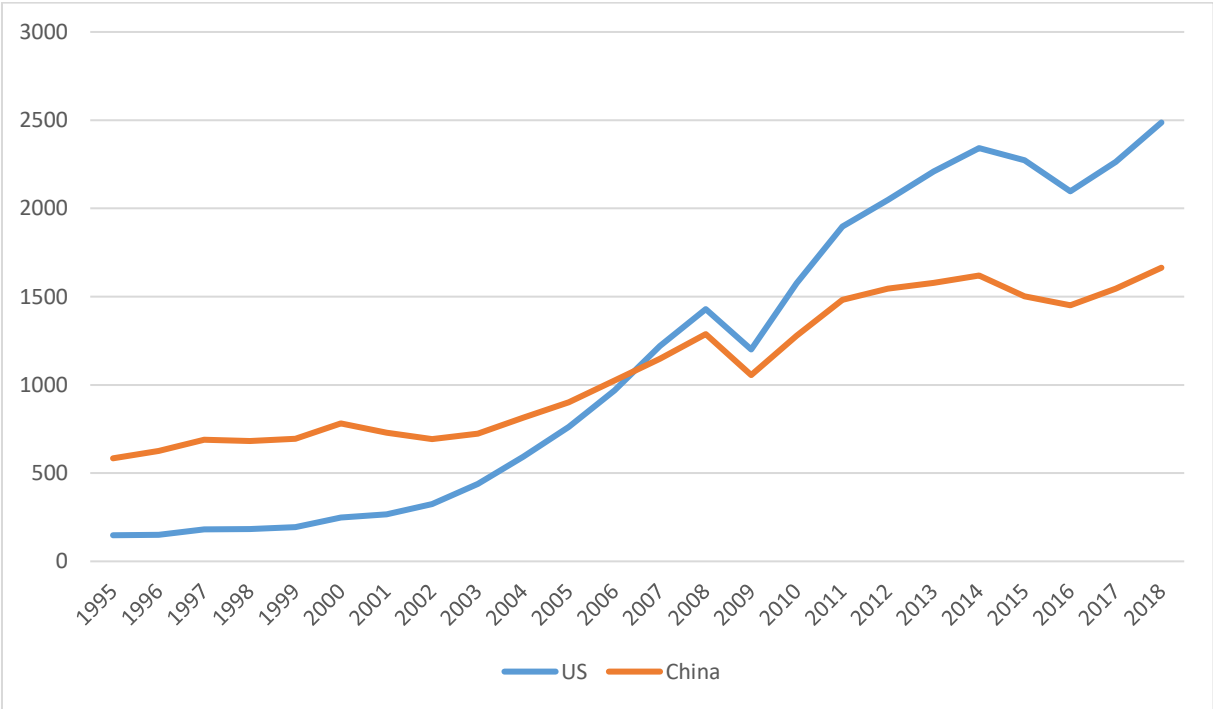
**Fig. 3: Development of Merchandise Trade 1990 – 2017 (in current billion USD)**



Data: World Bank (2020a) World Development Indicators.

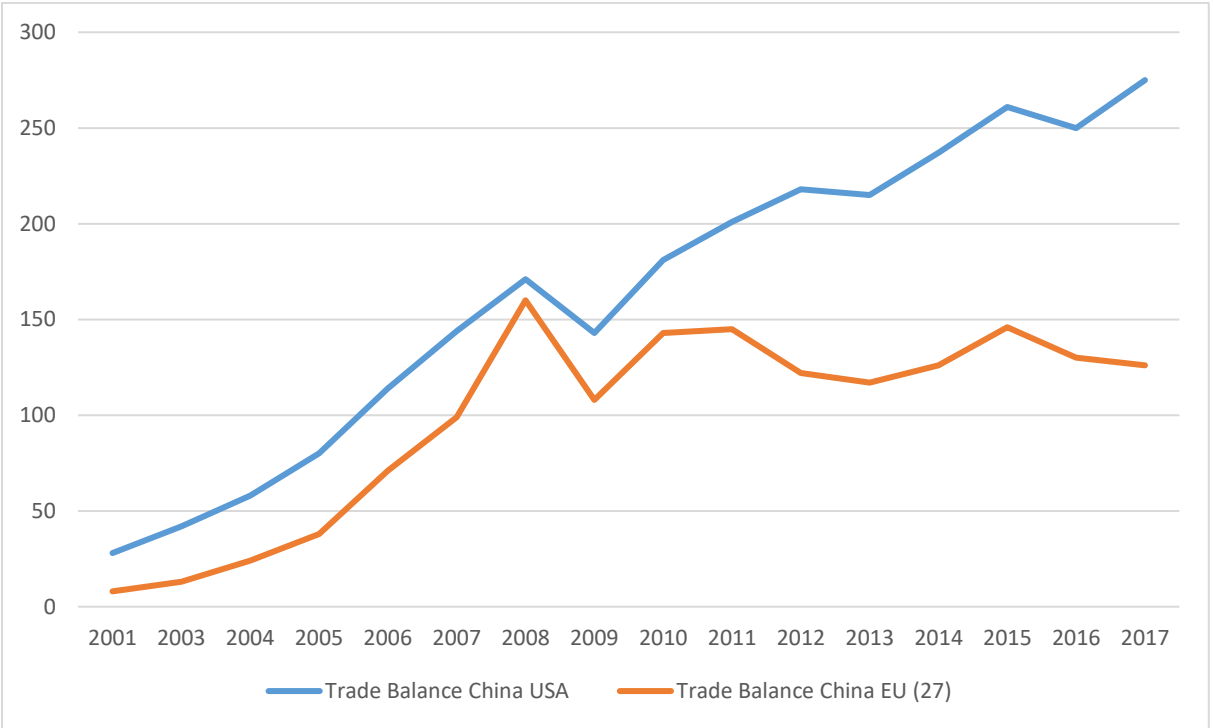
As can be observed in figure 3 from 2001 on – the year of China’s WTO entry – not only merchandise trade of OECD members rose but also of the rest of the world. Till the financial crisis in 2008/09 world exports more than doubled before they collapsed. But since 2011 the exports of Western countries (OECD) stagnated while the rest of the world – BRICs countries and mainly China – are developing variously. A comparison of US and Chinese export developments gives a clearer picture (see figure 4). During the financial crisis China was able to overtake the US as leading export nation in the world. Especially between 2009 and 2016 China’s exports rose much more than of the US. As a result, the trade balance between the US and China rose dramatically from 2009 on. In the same period, the trade balance between China and the EU remained on the same – but also quite high – level. (see fig. 5)

**Fig. 4: Merchandise Exports of the US and China 1995 – 2018 (in current bn USD)**



Data: World Bank (2020a) World Development Indicators.

**Fig. 5: Trade Balance between China and the USA respective the EU in comparison 2001 – 2017 (in current billion USD)**

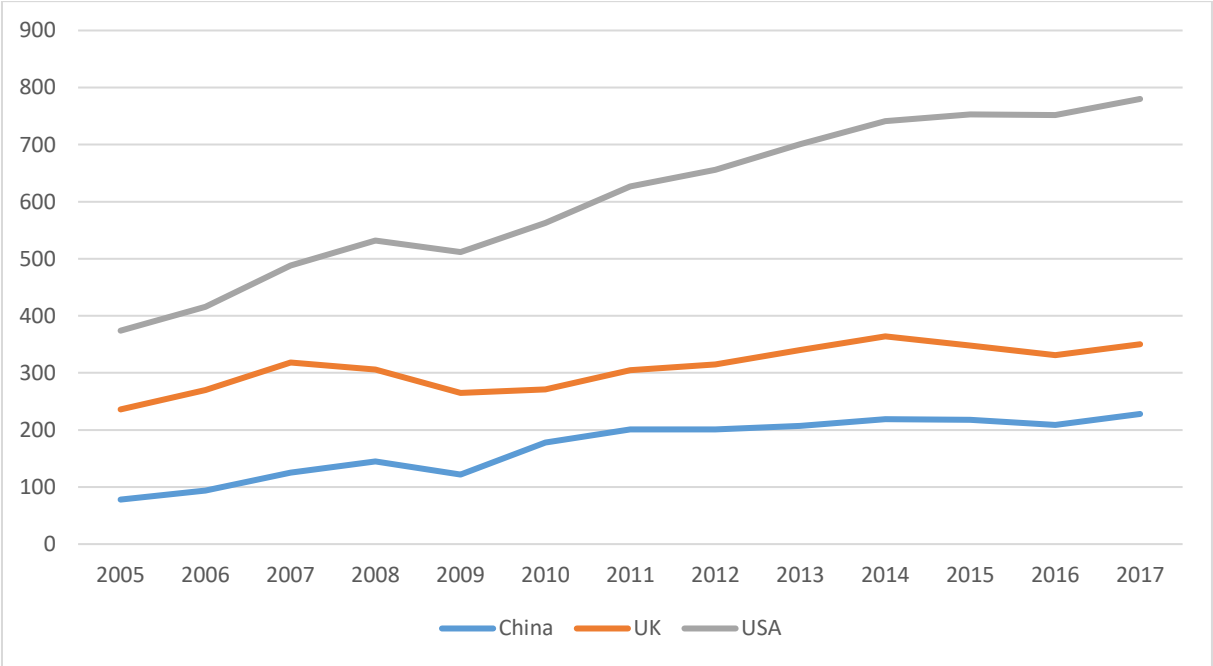


Data: International Trade Centre (2020) ([www.trademap.org](http://www.trademap.org))



US president Trump saw this rise of Chinese exports as well as the expanding imbalance of trade between both countries critically when he mentioned: *“While the United States and many other nations played by the rules, these countries [i.e. China] use government-run industrial planning and state-owned enterprises to rig the system in their favor. They engaged in relentless product dumping, forced technology transfer, and the theft of intellectual property. The United States lost over three million manufacturing jobs, nearly a quarter of all steel jobs, and 60,000 factories after China joined the WTO.”* (Wemer 2019) The same, if numbers are correct, from an American point of view US – Chinese trade is too imbalanced. The result is a new American trade policy focusing on protectionism and bilateral trade agreements instead of multilateral organizations like the WTO and its dispute settlement. It seems that China “matters”!

**Fig. 6: Development of Trade in Services 2005 – 2017 (in current billion USD)**



Data: International Trade Centre (2020) ([www.trademap.org](http://www.trademap.org))

A different picture emerges in the analysis of trade in services. In this field the US is traditionally much stronger than Europe or China. As figure 6 shows, service exports of the US reached the level of almost 800 bn USD in 2017 while China’s service exports remained quite small at about 228 bn USD. Of course, compared to merchandise exports the export of services is on a quite low level worldwide. It accounts for less than 24% of world trade. However, service exports of the US cover more than the trade balance deficit between America and China! But this induces some changes in the development of economic sectors as well as changes of the distribution of wealth within the Western countries, concrete the US.

## Development of economic and social inequality

The results of imbalanced trade on shifts between economic sectors in the last 25 years cannot surprise. A rise of the service sector is accompanied with a continuously deindustrialization in many Western countries. While the industrial sector shrunk in the US from 24% to 19% from 1992 to 2017 it declined in Europe by 10% to 22% in the same period. At the same time, the tertiary sector rose in both regions while the agricultural sector was quite constant on a very low level. In contrast, in China the industrial sector was quite stable in relative terms of the economy, in 2017 at about 27%. By this way, it was overtaking the relative numbers of the US (19%) and Europe (22%). If one adds the rise of China's GDP at all during this period, the absolute rise of the Chinese industrial sector is obvious. During this period China was able to reduce the importance of the agricultural sector from 54% to 18%, only, while the service sector rose from 18% to 56%. (see tab. 1) These data already show a long-term shift in the industrial development of all three observed regions which may include some serious changes for local people. As a result, employment in manufacturing declined in Western societies, too, e.g. in the US from a peak of 39.9% in 1944 to a low of 8.6% in 2015. (Autor et al. 2016, 206)

**Tab. 1: Development of employment by sectors 1992 – 2017**

	US		Europe*		China	
	1992	2017	1992	2017	1992	2017
<b>Primary (agriculture)</b>	3%	2%	7%	3%	54%	18%
<b>Secondary (industry)</b>	24%	19%	32%	22%	28%	27%
<b>Tertiary (services)</b>	73%	79%	60%	74%	18%	56%

\* Europe consisting of North, West and Southern Europe

Data: World Labour Organization (<http://www.ilo.org/wesodata/>)

The results of these sectoral shifts – beside other factors – are tremendous for the social inequality especially in the US. Between 1980 and 2014 the post-tax income growth of the bottom 50% of Americans was 21%, only, while the average was 61% and the rise of the top 10% reached 113%. (Piketty et al. 2018, 578) Surprisingly, at the same time, the Gini-index rose in the US from 0.40 (2000) to 0.42 (2016), only while it remained in Germany on a lower level from 0.29 (2000) to 0.32 (2016). (World Bank 2020b) So far, the Gini-index does not show any fundamental change of inequality. That may result from the fact that it considers incomes after redistribution. But mainly market incomes before redistribution became more unequal in the last years. (Sachverständigenrat 2018, 317) At all, one can observe that Anglo-Saxon countries experienced a sharper rise in inequality since the 1980s while Continental Europe was more successful at containing rising inequality. (Alvaredo 2017, 67)

The reason may be a rising productivity gap between the export-oriented firms and the rest which leads to a rising gap in wages and opportunities for the workers. In some countries they are not any more able to invest into the education of their children which will limit social mobility. Also, regional inequality is rising in OECD countries. One quarter of population is living in regions which are lagging behind the high-productivity regions. Additionally, many workers have not been able to shift from declining into growing sectors making long-term unemployment a rising problem. (OECD 2017, 4-5) It seems that Western societies are dividing into two classes of persons, one gaining from globalization, the other loosing. David Goodhart (2017) put forward the thesis of two meta-classes: On the one hand, are the “anywheres” with a mobile “achieved” identity. They are flexible, well-educated with high skills and – as the result – the winners of globalization and urbanization. On the other hand, are the marginalized “somewheres” with a roots-based identity. Following Goodhart they are inflexible, less educated with lower skills and the losers of globalization and urbanization. Indeed, since 1985 skilled workers gained relative to unskilled workers from globalization as some empirical studies show. (Wood 2017, 23)

## International Trade and Structural Change

### Horizontal Intra-Industry-Trade

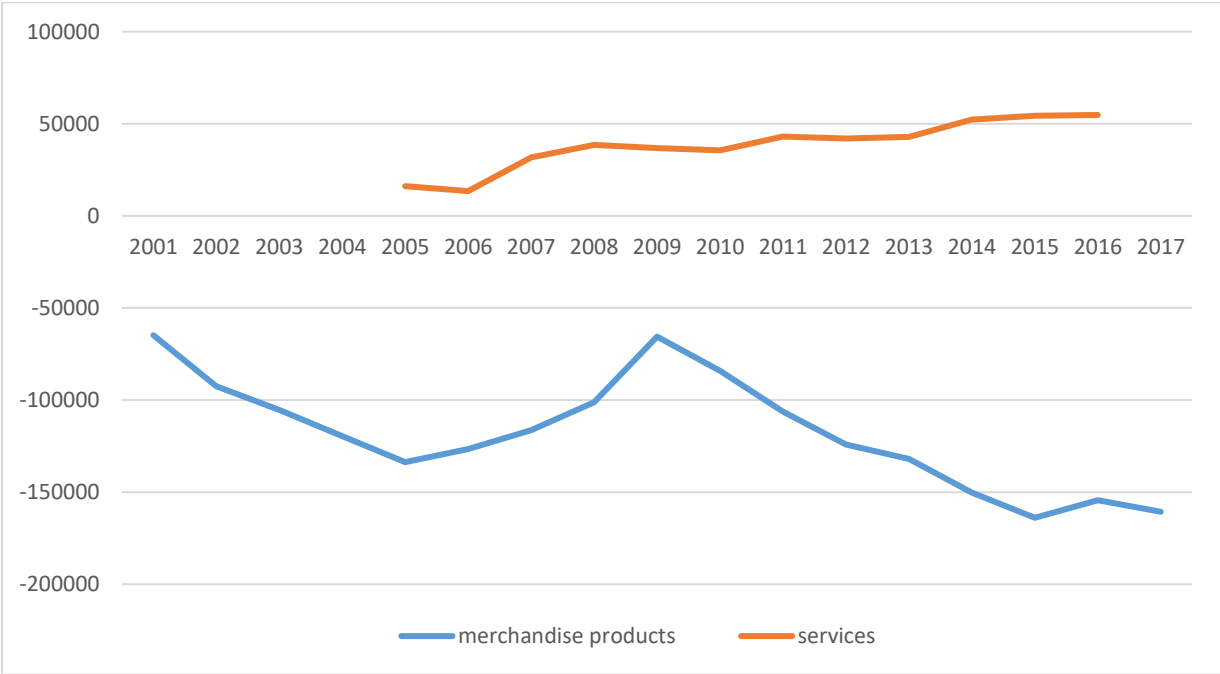
International trade may be responsible for these structural shifts as well as for the rising inequality in Western societies. But at all, gains of international trade have been enormous for all Western societies. Without liberalized trade the level of real income would be 22% less as the Economic Council of Experts calculated for Germany, for instance. (Sachverständigenrat 2018, 315) Additionally, absolute poverty could be reduced in many less developed countries, too. But for a long time, most goods flows were so-called “North-North-Trade”, i.e. trade between nations with relatively similar average incomes, mainly the US and EU member countries. (Autor et al. 2016, 206) This phenomenon is well known as Intra-Industry Trade.

The conception of Intra-Industry Trade was developed in the 1970s and 1980s, already. (see Grubel / Lloyd 1971; Krugman 1981) This kind of trade which occurs mainly between industrialized nations can be divided into horizontal and vertical Intra-Industry Trade. Horizontal Intra-industry Trade can be defined as trade in similar products with differentiated varieties (e.g. cars of a similar class and price range). (OECD 2005) As tables 2 and 3 show – on a simple 2-digit base ICTS group analysis for 2017 - the year before the trade war between the US and China – the US as well as the EU are exporting mainly products from ICTS groups 30 (pharmaceuticals), 84 (machinery), 85 (electrical machinery) and 90 (optical products). Only one

sector out of the five most important ones is different. While the US are exporting aircrafts (ICTS 88) Europe is strong in vehicles (ICTS 87). (see annexes 1 and 2)

In 2012, about 60% of U.S. trade and 60% of European trade was (mainly horizontal) Intra-Industry Trade. For instance, in 2016 the US exported cars worth USD 146 bn while it imported cars worth USD 298 bn. This kind of trade results from economies of scale and an international division of labor leading to innovation and unique skills. (OpenStax 2017, 674) Indeed, the result of this mainly horizontal Intra-Industry Trade is a negative trade balance for the US in merchandise products but the EU is a net importer of US services at the same time. (see fig. 7) This reduces the trade imbalance, at all.

**Fig. 7: Trade Balance US – EU 28 in products and services 2001 – 2017 (in million USD)**



Data: International Trade Centre (2020) ([www.trademap.org](http://www.trademap.org))

As already Grubel / Lloyd (1971) highlighted, such a kind of horizontal Intra-Industry Trade is typical for developed countries with similar economic structures. The products are produced with the same factor intensity. International trade brings positive economies of scale and a greater product variety for consumers (“love of variety”). In contrast, this kind of trade does not require reallocations of labor and capital. Therefore, it is less disruptive than increasing Inter-Industry Trade. (Deese 2017, 3) As a result, there are no structural changes and no changes in relative factor payment in both participating countries.

## Vertical Intra-Industry Trade

Trade in “vertically differentiated” products distinguished by quality and price (e.g. exports of high-quality clothing and imports of lower-quality clothing) can be called vertical Intra-Industry Trade. (OECD 2005) During the last decades China has emerged to a global “manufacturing powerhouse” while vertical Intra-Industry Trade in manufacturing products plays a rising role in the country’s bilateral trade. (Chin et al. 2015, 258) In 2015, about 25% of China’s trade was Intra-Industry Trade. (Deese 2017, 11-13) In concrete, China is focusing on the export of middle-range goods. Therefore, the country became the now dominant producer in medium high-tech industries. In the last decade, its global share was nearly tripling to 32%, surpassing the US in the late 2000s and the EU this decade. (Hancock 2018) China is a special case of modern “North-South-Trade”. The country has developed an advantage in capital-intensive sectors like machines and telecommunications what enabled it to sell the exports to the developed countries. By this way, Intra-Industry Trade between China and the US respective the EU became more important in the last years. (Caporale et al. 2015, 16)

**Tab. 2: Trade Balance China – USA: Sectors in 2017**

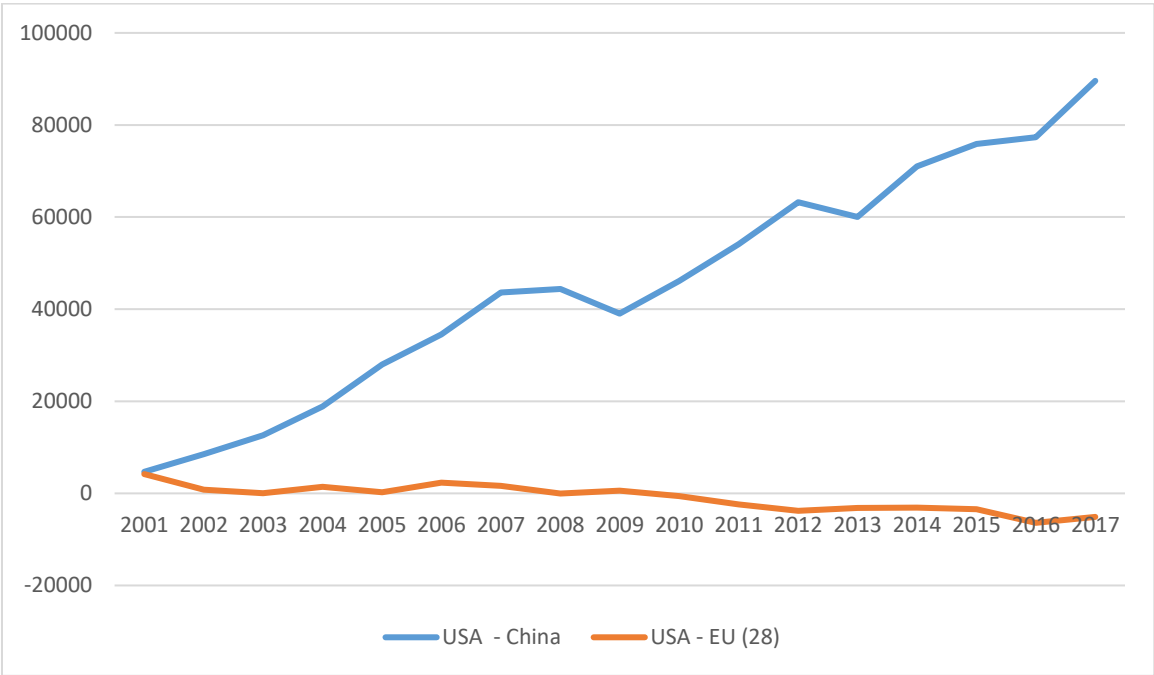
ICTS	Sector (2017)	Chinese Surplus (in USD million)
85	<b>Electrical machinery and equipment</b> and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	89,583
84	<b>Machinery</b> , mechanical appliances, nuclear reactors, boilers; parts thereof	75,252
94	<b>Furniture; bedding</b> , mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated nameplates and the like; prefabricated buildings	28,982
95	<b>Toys, games and sports requisites</b> ; parts and accessories thereof	18,447
61	<b>Articles of apparel and clothing accessories</b> , knitted or crocheted	15,999

Data: International Trade Centre ([www.trademap.org](http://www.trademap.org))

As annexes 3 and 5 show Intra Industry Trade between China and the US respective the EU takes place within the ICTS groups 85 (electrical machinery) and 84 (machinery), mainly. Breaking down these trade data to 8-digit ICTS groups vertical Intra-Industry Trade can also be interpreted as Inter-Industry Trade. Many products from the subgroups machines and electrical equipment are traded without corresponding imports. In addition, the trend shows very large increases in exports as well as large decreases in imports. That implies that China has

increased its domestic capabilities in this area. (Deese 2017, 15) As a result, in both groups the trade imbalances with the US were the hugest in 2017. (see tab. 2) For example, within ICTS group 85 we can observe a rising trade imbalance between China and the US while the relation to Europe is quite balanced since 2001. (see fig. 8) Obviously, WTO membership enabled China to export much more products out of this group of products to the US. After a dent in the years 2008 and 2009 – the financial crisis – this imbalance rose again tremendously.

**Fig. 8: Trade Balance between China and the USA / EU 28 and USA: Sector 85 (Electrical machinery and equipment and parts thereof...) 2001 – 2017 (in current million USD)**



Data: International Trade Centre (2020) ([www.trademap.org](http://www.trademap.org))

Another example for imbalanced vertical Intra-Industry Trade is the iron and steel sector. In 2018, the US imported steel and iron (ICTS 72) worth USD 31 million while it exported the same goods worth USD 16 million. In the same year China imported iron and steel worth USD 22 million but exports accounted for USD 47 million. (International Trade Centre 2020) Because of a continuously declining growth rate in the country China is subsidizing overcapacities in the construction sector to avoid unemployment. This highly subsidized iron and steel from China conquered the world. In 2018 China was the world largest steel exporter twice as much as the second largest exporter Japan. (International Trade Administration 2019) For China the export of iron and steel (ICTS 72) ranks 14<sup>th</sup>, for the US in contrast 19<sup>th</sup> and Germany as European example 13<sup>th</sup>, only. But China produces more than the half of the world’s steel of 1.808 Mio. tones. (World Steel Association 2019, 15) At the same time, Chinese steel shall be

of worse quality than US's or EU's production. However, with its cheap labor force and its subsidized State-Owned-Enterprises China became an unbeatable competitor for the US steel industry till 2018 when president Trump imposed tariffs on foreign iron and steel focusing on the Chinese exports. (see fig. 9)

**Fig. 9: Export of iron and steel: US vs. China (ICTS 72, 2001 – 2017, in million USD)**



Data: International Trade Centre (2020) ([www.trademap.org](http://www.trademap.org))

It must be assumed that China's growing manufacturing sector due to rising productivity as well as the rising trade imbalances would cause employment contraction in competing Western industrial sectors. (Autor et al. 2016, 214) According to Heckscher-Ohlin (1991) and Leontieff (1953) a human capital-abundant country will export the human capital-intensive good (e.g. the US semiconductors or high-quality steel) and the labor-abundant country will export the labor-intensive good (e.g. China laptops or low-quality steel). As a result employment structures tend to become more specialized. And following Stolper–Samuelson (1941) a rise in the relative price of a good will lead to a rise in the return to that factor which is used most intensively in the production of the good conversely, to a fall in the return to the other factor. As a result, we have to expect that a fall of prices for laptops leads to a fall of wages for less skilled labor in the US. (Wood 2017, 1) Also unskilled labor force in US steel mills are suffering while IT specialists in Silicon Valley get the gains of the structural change. Therefore, China's rising vertical Intra-Industry Trade is responsible for – at least a part – of the sectoral changes in Western countries and the discrimination of less skilled workers.

## Inter Industry Trade (Heckscher – Ohlin Trade)

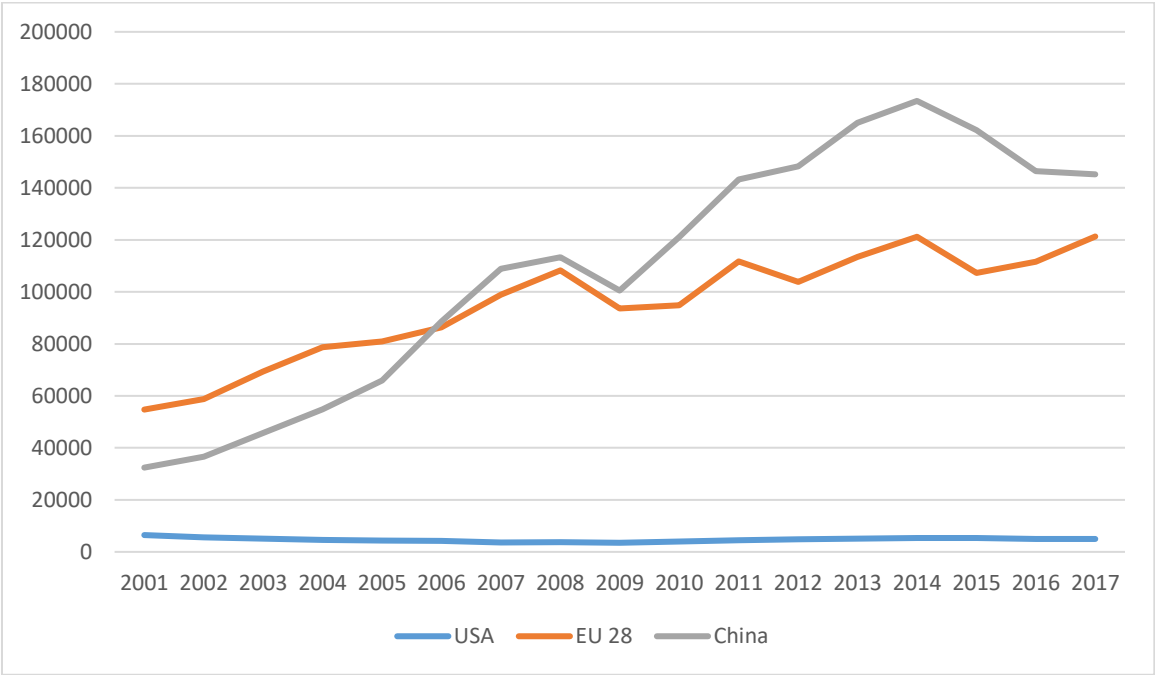
The transition from vertical Intra-Industry Trade to Inter-Industry or “Heckscher-Ohlin” Trade is smooth. As already mentioned, Heckscher-Ohlin Theorem explains the direction of trade and Stolper-Samuelson Theorem the impact of differences in factor endowments on intercountry income distribution and international specialization (e.g. low skill vs. high skill labor). Most of China’s trade is Inter-Industry Trade with a constant share of 75% in the last decades. (Deese 2017, 11-13) In 2017, China exported for instance a lot of products from ICTS groups 61 and 62 (apparel), 94 (furniture), and 95 (toys, games) to the US and Europe. At the same time US exports to China came from the groups 12 (oil seeds), 87 (vehicles) and 88 (aircraft). The EU exported products from groups 87 (vehicles), 88 (aircraft) and 90 (optical products). (see annexes 3 – 6)

For instance, the development of textile exports shows a clear picture. For China exports of ICTS groups 61 and 62 (apparel etc.) ranked 4 and 5 in 2017 while these groups were really unimportant for the EU 28 (ranks 20 and 22) as well as for the US (ranks 55 and 58). As figure 10 shows apparel exports are unimportant for the US continuously since decades while we can observe a small rise in Europe – perhaps according to EU enlargements in 2004 and 2007. At the same time, China’s apparel exports grew till 2014 massively. Since then we can observe a clear fall. (Deese 2017, 15) (see also fig. 10) Obviously Chinese workers became too expensive. Beside China Bangladesh is the world's major producers of apparel products.

A second example is the development of exports of solar cells. After the financial crises in 2008/09 Chinese exports of ICTS group 8541 – including mainly solar cells – rose tremendously while European exports declined and American exports remained on a low level. (see fig. 11) This development could be stopped by the EU in 2013 by “Anti-Dumping-Tariffs” on Chinese solar cells and panels. But while the EU abolished these tariffs in 2018 the US implemented them. Nevertheless, the solar industry was destroyed by the strength of Chinese exports. (Goron 2018, 108-110)

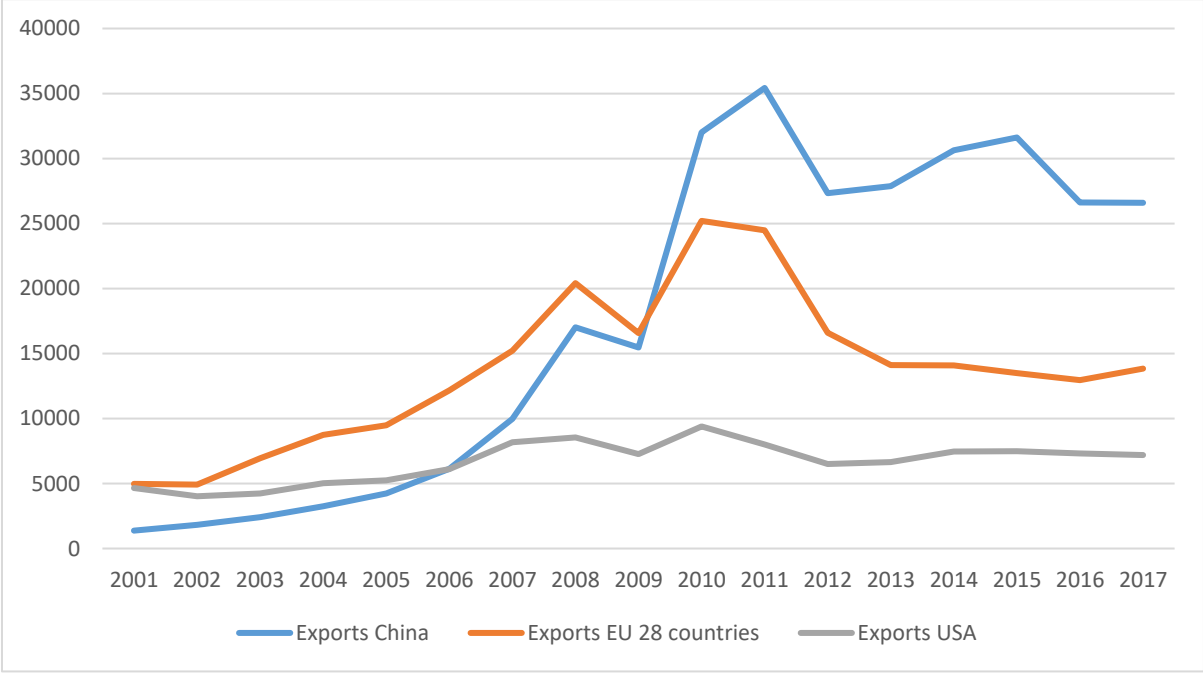


**Fig. 10: Exports of Textiles by US, EU 28, China**  
**(ICTS 61 + 62, apparel.....) in million USD**



Data: International Trade Centre (2020) ([www.trademap.org](http://www.trademap.org))

**Fig. 11: Exports of ICTS-Group 8541: Diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices, . . . (2001 – 2017, in million USD)**



Data: International Trade Centre (2020) ([www.trademap.org](http://www.trademap.org))

As already mentioned in the chapter before, Heckscher-Ohlin trade leads to shifts in the sectoral structure of trading countries. Uncompetitive sectors become smaller and the abundantly used kind of labor in these sectors becomes cheaper. As a result, low-skilled workers in the Western countries worse off on a sustained basis. (Autor 2016, 206) For instance, jobs in the US textile, solar panel and steel industry are declining. The same picture we can observe in Europe, too.

## Conclusion: the “China-Effect”

At all, trade effects do not cause all of the problems that concern so many people in Western countries, today. Beside globalization also digitalization, modernization and urbanization are touching the people in the current Western World. (OECD 2017, 5) But China’s economic rise is challenging national economic structures in the West, indeed. Especially, the vertical Intra-Industry Trade between China and the US respective the EU is rising – bringing more consequences for Western industries and the employed work force.

There are quantity effects in some sectors like steel and iron, machinery etc. which are shrinking in Western countries, while others are expanding (e.g. services). Still, China is specializing in low quality exports based on similar qualitative divisions of labor. But, exports of machines and electrical equipment greatly increased. (Deese 2017, 33) Additionally, China’s labor intensive exports are shrinking, while advanced manufactured product sectors in the West are challenged because China is upgrading its position in global value chains. (Deese 2017, 15) At all, one can say that there has been a shift from resource- and labor-intensive to capital- and technology-intensive Chinese exports in the last years. (Caporale et al. 2015, 16) Some income effects are resulting from that. Not only inflexible, less or unskilled workers in the West loose while flexible and better skilled workers gain. By the rise of vertical Intra Industry Trade also white color workers in the manufacturing sector – the middle class – may be challenged increasingly in the future.

But the decline of the Western manufacturing sectors is not touched by China’s economic rise and export activities as much as expected sometimes. (Jakubik / Stolzenburg 2018, 23) Also digitalization and other factors of technological progress are responsible for this development. As the OECD calculated only 20% of reduced employment in the industrial sector of Western countries can be explained by international trade. (OECD 2017, 6) However, the resulting structural change is a challenge for a rising number of people in the Western world. Economic and social insecurity are the results. “Anywheres” and “somewheres” continue to argue about globalization, political populism is rising and trade wars will replace the regulated trade of the past.

Actually, there is a huge necessity that workers in Western countries are moving from less productive sectors to more productive ones, mainly the exporting sectors. This adaptation process may be costly and hard for some – especially unskilled – workers. But it must be added again that trade with China has overwhelming positive welfare effects for most Western countries, at all. (Sachverständigenrat 2018, 325 – 332) Additionally, the end of cheap labor in China is near. As a result, more horizontal Intra-Industry Trade may re-balance the negative results of free trade for Western countries in the future. But during this adaptation process Western governments have to support the structural change. They cannot stop it. And they have to improve the national competitiveness of their industries.

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## Annexes:

### Annex 1:

	US Exports to EU 28 (2017) – Top 5 Sectors	USD (million)
<b>ICTS</b>	Total	283,899
<b>'88</b>	Aircraft, spacecraft, and parts thereof	39,803
<b>'84</b>	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	32,125
<b>'90</b>	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical ...	26,121
<b>'30</b>	Pharmaceutical products	24,468
<b>'85</b>	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	22,650

Data: International Trade Centre ([www.trademap.org](http://www.trademap.org))

### Annex 2:

	EU 28 Exports to the US– Top 5 Sectors	USD (million)
<b>ICTS</b>	TOTAL	418,923
<b>'84</b>	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	74,650
<b>'87</b>	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	55,219
<b>'30</b>	Pharmaceutical products	53,283
<b>'90</b>	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical ...	31,656
<b>'85</b>	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, ...	31,149

Data: International Trade Centre ([www.trademap.org](http://www.trademap.org))

**Annex 3:**

	<b>China's Exports to the US (2017) – Top 5 Sectors</b>	<b>USD (million)</b>
<b>ICTS</b>	TOTAL	430,328
<b>'85</b>	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	106,971
<b>'84</b>	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	91,726
<b>'94</b>	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; ...	29,253
<b>'95</b>	Toys, games and sports requisites; parts and accessories thereof	18,617
<b>'61</b>	Articles of apparel and clothing accessories, knitted or crocheted	16,008

Data: International Trade Centre ([www.trademap.org](http://www.trademap.org))

**Annex 4:**

	<b>US Exports to China (2017) – Top 5 Sectors</b>	<b>USD (million)</b>
<b>ICTS</b>	TOTAL	129,893
<b>'88</b>	Aircraft, spacecraft, and parts thereof	16,265
<b>'84</b>	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	12,887
<b>'12</b>	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal ...	12,868
<b>'87</b>	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	12,854
<b>'85</b>	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	12,131

Data: International Trade Centre ([www.trademap.org](http://www.trademap.org))

**Annex 5:**

	<b>China's Exports to the EU 28 (2017) – Top 5 Sectors</b>	<b>USD (million)</b>
<b>ICTS</b>	TOTAL	372,338
<b>'85</b>	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	83,634
<b>'84</b>	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	75,016
<b>'94</b>	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; ...	19,172
<b>'62</b>	Articles of apparel and clothing accessories, not knitted or crocheted	17,954
<b>'61</b>	Articles of apparel and clothing accessories, knitted or crocheted	16,259

Data: International Trade Centre ([www.trademap.org](http://www.trademap.org))

**Annex 6:**

	<b>EU 28 Exports to China (2017) – Top 5 Sectors</b>	<b>USD (million)</b>
<b>ICTS</b>	TOTAL	220,685
<b>'84</b>	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	40,642
<b>'87</b>	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	38,828
<b>'85</b>	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	26,868
<b>'90</b>	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical ...	14,405
<b>'88</b>	Aircraft, spacecraft, and parts thereof	11,624

Data: International Trade Centre ([www.trademap.org](http://www.trademap.org))



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