United States and China: Changing in World Economic Positions?

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SUMMARY

Trends in the last decades, such as the rapid development and rising of China or the convergence of its absolute economic indicators to those of the USA, are significant elements of today's world economy. In this paper we analyze the external trade of these two economic powers: the focus of the research is on the openness of trade, the import and export structure and economic interdependence. The main questions are to what extent the external trade of the two examined countries is interdependent and whether the current Chinese economic growth is sustainable.
Key words: external trade openness, world economic positions, position change
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INTRODUCTION

The two countries with the largest economic power in the world – the United States of America and the People's Republic of China – have followed basically different development paths in the past decades. The average annual growth rate of GDP in China was 10% between 1980 and 2009, and as one of the most dynamically developing countries in the world, it has reached an economic growth of more than 10% in 15 years, which led it to become the second largest economy in the world. The economic growth of the USA has been much slower, an average of 2.7% annually between 1980 and 2009. Moreover, fluctuations have also been relatively more significant (in nine years out of the 30, the economic growth was at least 4%) (Worldbank 2011). Due to the "New Economy", it was one of the most rapidly growing developed countries from the beginning of the 1990s to 2008, but even growth occasionally higher than 4.5% lagged significantly behind the Chinese growth rate. The further development of these two nations has a strong influence on the changes of the world economy as well. China has become one of the most important factors in the multipolar world that took shape after the unipolar world (years after the cold war).

By 2009, the GDP of China on purchasing power parity had reached 9,091 billion USD, while that of the USA was 14.119 billion USD, based on Worldbank data. If the data, however, are not examined on the basis of purchasing power parity, the result is different: the GDP of China in current prices is 4,985 billion USD (according to the Worldbank data, the GDP in current prices and the GDP on purchasing power parity are the same in the case of the USA). The largest gap between the two countries is in the GDP per capita: in China it was 6,827 USD on purchasing power parity and 3,744 USD in current prices, while in the USA it was 45,989 USD in 2009.

Table 1. GDP of the United States of America and China throughout the history (1990 Int. GK$)

Year (AC)	USA	China
1	272	26 820
1000	520	27 494
1500	800	61 800
1600	600	96 000
1700	527	82 800
1820	12 548	228 600
1850	42 583	247 200
1870	98 374	189 740
1890	214 714	205 379
1900	312 499	218 154
1913	517 383	241 431
1929	843 334	274 090
1950	1 455 916	244 985
1970	3 081 900	636 937
1990	5 803 200	2 123 852
2000	8 032 209	4 319 339
2008	9 485 136	8 908 894

Source: Angus Maddison: Historical Statistics of the World Economy: 1-2008 AD

The appearance of China as a determining actor is not a new phenonmenon. Earlier in its history, it was a developed, innovative power centre that had a large influence on its neighbourhood for many centuries (Table 1). This situation changed in the second half of the 19th century as China lost some of its importance because of the opium wars. This was the period when China lagged behind the powers that strengthened enormously on the two coasts of the Atlantic Ocean. The data series show a noticeable change in the last decades. China is approaching the USA at a quick pace (leaving behind the other countries of the world as far as the absolute power of the economy is concerned). It is making good progress in absolute terms as the largest market of products such as automobiles and mobile phones and as the largest producer of cars, computers, etc. At the same time, however, it has a huge lag regarding the relative data of development.

A sign of the advance and the world economic expansion of Chinese companies is the fact that while in 2005, 16 out of the world 500 largest companies were Chinese, this value increased to 46 by 2010. An opposite trend can be observed in the case of the USA: in 2005, 176 of its companies were among the top 500 of Fortune Global, while in 2010, only 139 were.

Table 2. Comparison of China and the United States of America based on some basic data

	China	USA	China	USA
	2000		2009	
Population (million people)	1262.6	282.1	1331.4	307.0
Life expectancy at birth (year)	71.30	77.03	73.31	78.66
Balance on current account (% of GDP)	1.71	-4.21	5.96	-2.68
Balance on current account (BoP, current prices, billion US$)	20.5	-416.3	297.1	-378.4
Agriculture, value added (% of GDP)	15.06	1.19	10.35	1.23
Industry, value added (% of GDP)	45.92	23.44	46.30	21.29
Services etc, value added (% of GDP)	39.02	75.37	43.36	77.47
Employment in agriculture (% of total employment)	46.30	2.60	38.1*	1.4**
Employment in industry (% of total employment)	17.30	23.20	27.8*	20.6**
Employment in services (% of total employment)	12.70	74.30	34.1*	78**
External balance (% of GDP)	2.41	-3.86	4.41	-2.74
FDI, net (BoP, million current US$)	37 483.3	162 062	34 294.5	-133 971
FDI, net inflows (% of GDP)	3.20	3.25	1.57	0.95
Internet users (per 1000 people)	1.78	43.94	28.84	78.14
Fixed broadband internet subscribers (per 100 people)	0.00	2.51	7.78	27.78
Arms exports (million constant 1990 US$)	272	7 220	870	6 795
Arms imports (million constant 1990 US$)	2 015	301	595	831
Military expenditure (% of GDP)	1.81	3.05	2.01	4.68
Population of urban agglomerations of more than 1 million (% of total population)	13.68	43.15	17.49	44.64
Rural population (% of total population)	64.20	20.90	56.00	18.00

* data from 2008 Source: CIA World Factbook 2010

** data from 2007

Source: Worldbank

In the case of some measures of development, similar processes can be found. The difference between the USA and China decreases and the Chinese development is more dynamic. At the same time, however, one cannot ignore the fact that it is easier to develop from a lower base, while from a high and developed level it is more difficult to make advances in the case of measures like life expectancy at birth or internet users. Both the balance on current account and the external balance show significant differences. The average of China is one of the highest in the world, while the USA has a huge deficit.

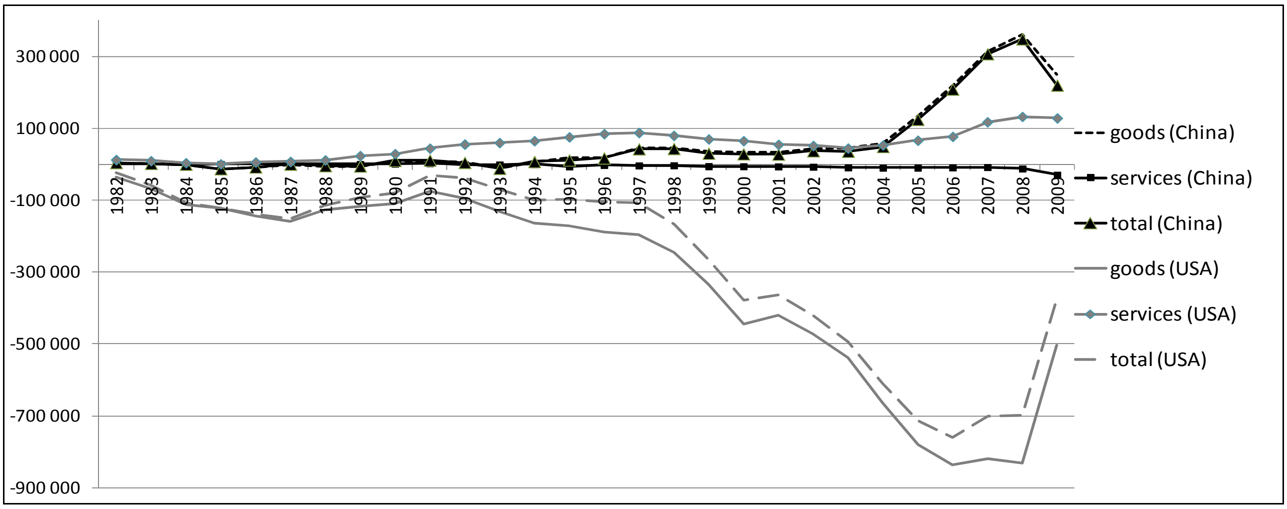
The development of the USA is different in many aspects from that of other action centres, or determining world economic regions, especially from the development of the European Union. In several important fields of the economy and the society, state intervention is much lower than in the developed and welfare countries of Europe and the idea of self-care (such as in the case of the pension and health service) is much stronger. Large state distribution systems are less developed, government regulations are more flexible and at the same time, the opportunities of the private sector and the companies are more diverse. A lower tax burden and the often more permissive regulations have promoted the emergence of market relations more than in Europe. The more mobile, highly qualified labour force, the more flexible organisational structures (with the key role of IT), its developed infrastructural background and its governmental effectiveness have made the USA one of the most competitive economies in the world in the past years. It is in the 1st position at IMD and in the 4th position at WEF (international organisations that rank the competitiveness of the countries), while China has been ranked at the 18th and 27th positions respectively in 2010-2011.

In the past decades, Chine has undergone dynamic restructuring: the emphasis has been moved from agriculture to industry and services. From 2000 to 2009, the share of agriculture in the value added decreased by 4.5 percent, primarily for the benefit of the tertiary sector. Most of the employed (38.1%), however, still work in the rural areas in agriculture, which highlights the underdevelopment of the sector on the one hand and its huge employment potential on the other. Along with the economic development of China, employment restructuring can also be observed. The rate of the employed in agriculture decreased significantly during the period, while the rate of those employed in industry and services increased, which were associated with the reduction of the proportion of the rural population.

External Trade of China and the United States of America

The external balance of the USA has been in deficit since 1976 and the deficit reached 865 billion USD (which is the highest out of the countries of the world) in 2008; the several-decade-long worsening trend, however, reversed in the last two years. With the deepening of the crisis, American imports increased to a larger extent than exports (Figure 1). Because of the economic recession and the decrease of oil prices, the external balance has improved and the external deficit has decreased. Actually it is equivalent to 2.74% of the GDP, a total of 386.3 billion USD. The Chinese external average, however, also decreased: from 2008 to 2009, it diminished by 3.3 percent to 4.41 percent, i.e. to 220.1 billion USD.

The significant deficit in merchandise trade is slightly tinged by the positive processes in services. The USA is the largest exporter in services in the world and due to this, an average of almost 160 billion dollars can be found in the services trade.



Source: own compilation based on Worldbank data

Figure 1. External balance of the USA and China (1982-2009, million US$, current prices)

The deficit of balance on current account and external balance has highlighted unfavourable trends for decades. The indebtedness of the USA is creating increasingly serious problems, and it has exceeded 67% of the GDP (9,471 billion USD) according to the Worldbank database. In contrast, the gross public debt of China was 17% in 2009, according to the IMF database. In spite of the huge economic potential of the USA, this is a warning sign and measures to manage the crisis can keep enlarging this morbid ratio. While the country used to be the largest lender after the Second World War, it has become the largest debtor of the world by now.

In the rank of the main targets of the American working capital, Europe is followed by Latin America, Canada, Eastern and Southeast Asia. Besides, offshore areas (such as Bermuda or Panama) play an even more important role. The bulk of the capital stock invested in the USA comes from Europe (United Kingdom, Netherlands, Germany); the role of Japan and Canada is much smaller. Capital movements that strengthened in the last several decades can be explained by the spread of deregulation and information technologies in the globalized world economy, by the strengthening of the ICT and by the interest policy of the FED. These factors resulted in the fast reaction of the American economy to the changes in the economy and to the cyclical fluctuations up to the crisis of 2008. These reactions were usually supported by the exchange rate of the dollar, which strengthened throughout the 1990s. Since 2001, however, it has weakened as a result of interest rate cuts, which supported exports. The huge external balance deficit that formed in spite of the weakening dollar means that externally financed consumption became extremely large and the savings of the internal actors of the American economy decreased significantly. In spite of all these developments, we can conclude that the bulk (two-thirds) of the net savings of the world is still absorbed by the economy of the USA in the form of outside capital, and investment possibilities of thousand billions are the best here in all over the world. American government securities are among the most secure forms of investment. In spite of the difficulties of the financial sector, foreign investors are still ready to finance the American current account deficit, which still makes the dollar remain in the position of the number one global reserve currency (Magas,2010).

Table 3. Leading exporters and importers in world trade in merchandise trade, 2008

Export			Import		
Rank	Country	Export value (billion $)	Rank	Country	Import value (billion $)
1	Germany	1465	1	USA	2166
2	China	1428	2	Germany	1206
3	USA	1301	3	China	1133
4	Japan	782	4	Japan	762
5	Netherlands	634	5	France	708
6	France	609	6	United Kingdom	632
7	Italy	540	7	Netherlands	574
8	Belgium	477	8	Italy	556
9	Russia	472	9	Belgium	470
10	United Kingdom	458	10	Republic of Korea	435

Source: World Trade Report 2009, p 15

Table 4. Leading exporters and importers in world trade in commercial services, 2008

Export			Import		
Rank	Country	Export value (billion $)	Rank	Country	Import value (billion $)
1	USA	522	1	USA	364
2	United Kingdom	283	2	Germany	285
3	Germany	235	3	United Kingdom	199
4	France	153	4	Japan	166
5	Japan	144	5	China	152
6	Spain	143	6	France	137
7	China	137	7	Italy	132
8	Italy	123	8	Spain	108
9	India	106	9	Ireland	103
10	Netherlands	102	10	Republic of Korea	93

Source: World Trade Report 2009, p 17

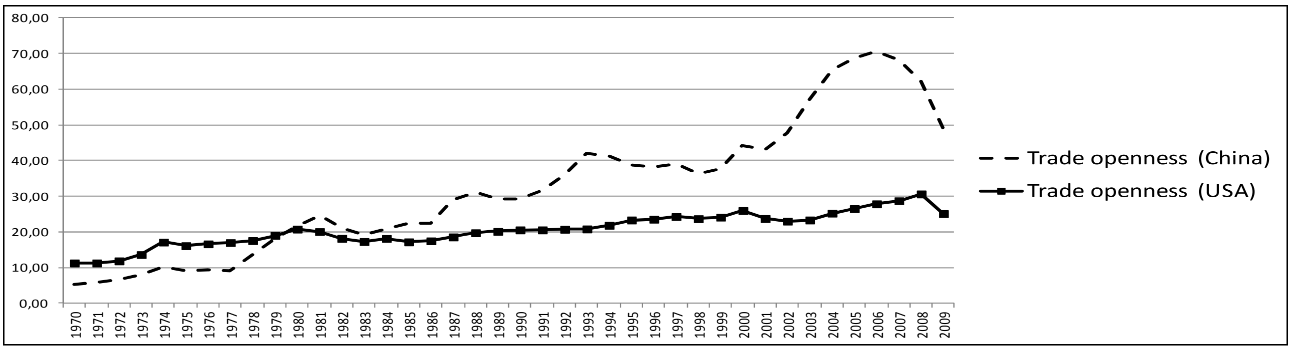
Among the main trade partners of the USA, its neighbours play an important role. After the European Union, Canada and Mexico are the main target countries of exports, preceding China and Japan, while as for imports, these two countries are in the 3rd and 4th position after China and the European Union. The USA established the North American Free Trade Agreement (NAFTA) with its two neighbouring countries, taking effect on 1st January 1994. Within the zone, exemption from customs refers to the goods produced in any of the three countries. A sign of the success of the cooperation is that 25-30% of the external trade of the world's largest economic power are realised with NAFTA countries in the last years, while as far as the two other countries are concerned, trade with the USA can reach as high as 70-80%. It is a significant ratio in the sense that Mexico has 107 million and Canada has 34 million inhabitants, so their population lags considerably behind that of other leading trade partners.

For two decades, the main trade partners of China have been Japan, Hong Kong, the USA and the Asian Tigers in the South Eastern part of Asia. The importance of Hong Kong in trade is related to the tax privileges it provides. The state has belonged again to China since 1997, having the status of "Hong Kong Special Administrative Region of the People's Republic of China". It ensures full tax exemption for each activity performed outside its territory, which many Chinese companies take advantage of by registering their activities in Hong Kong. The increasing value and quantity of the external trade denotes the dynamic progress of some destinations; for instance, the trade of China with Europe has increased almost tenfold since 1998.

OPENNESS

When examining the external trade openness of the countries in the world, the relatively close nature of the USA economy is a general approach, as examining the traditional openness (when the value of the exported and imported goods and services is related to the GDP), this value was around 25% in 2009. This ratio is 76% in Germany and exceeds 150% in Hungary. Certain opinions contradict the relative closeness, such as the trade intensity measure introduced by Squalli and Wilson, which is the ratio of the external trade turnover of the given country to the total external trade turnover of the other countries of the world. This is, practically speaking, the contribution of the given country to the trade of the world. They argue that the more significant the trade of the given country, the more open the country is. Based on the trade intesity measure, the value of openness is 10.81 for the USA; 5.54 for Germany and 0.593 for Hungary. The USA is therefore the most open economy in the world, followed by China, Germany, Russia and Great Britain (Squalli and Wilson 2006). This kind of openness approach, however, is tinctured by the rate of external trade of the USA to its whole economy, its "external trade exposure", the huge internal market and its role in the world economy, which is by far not as outstanding as in points of economic power.

Figure 2 demonstrates the external trade openness of the two largest economies in the world. It also highlights the export oriented economic growth of China. The role of the huge internal market has been dominant throughout the whole period in the USA, while it has become more and more important in China since the world economic crisis of 2008..

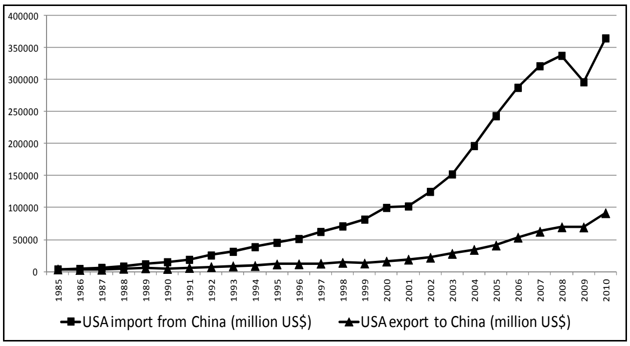


Source: own compilation based on Worldbank data

Figure 2. The openness of the United States of America and China between 1970 and 2009

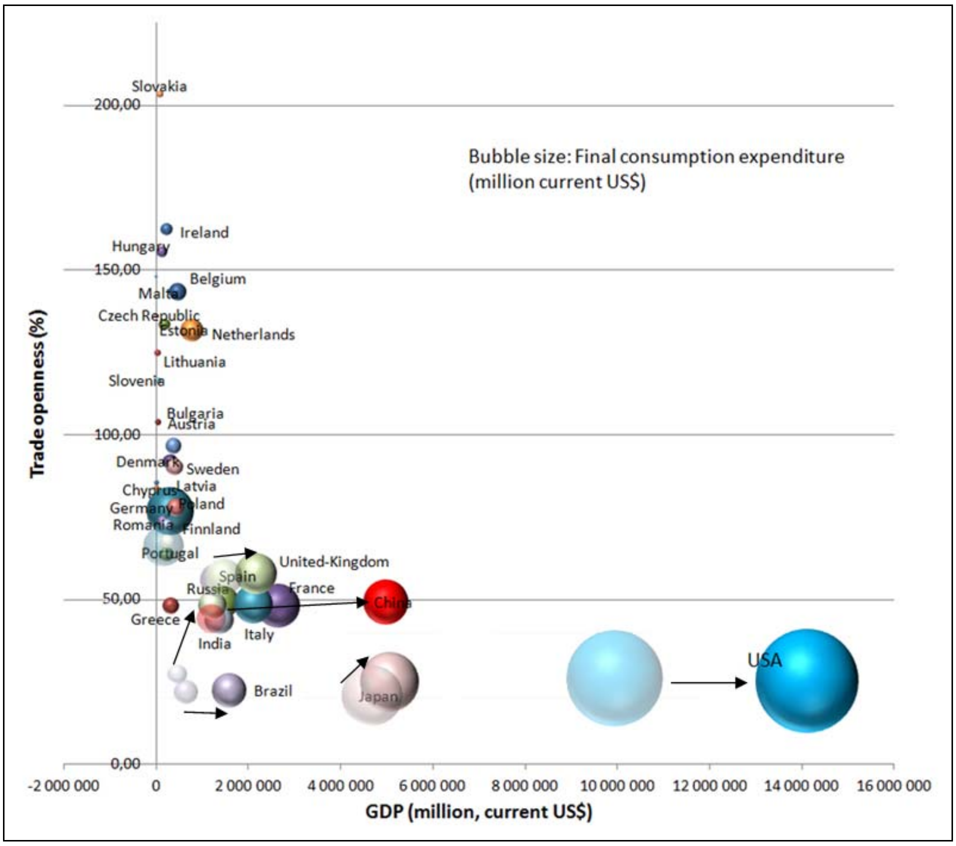
The key element of the Chinese economic model is export orientation, which has been a determinant factor of economic growth since 1979. This makes it unique among the large underdeveloped countries. Other developing countries (such as Brazil, India or Indonesia) aimed at meeting internal demand, then generating economic growth based on the export of the strengthened economy. In contrast, China – despite the huge internal demand potential – chose the "export oriented development path" (Inotai 2011), which made it the number one exporter and the number two importer of the world by 2009. It possesses the world's biggest foreign exchange reserves, which exceeded 3,000 billion dollars in March 2011 (http://www.chinability.com/Reserves.htm). At the same time, the foreign exchange reserves of the USA were 130.8 billion USD in 2009, according to the CIA Factbook. However, one cannot forget about the fact that the bulk of the Chinese foreign exchange reserves are in American bonds, which gives China a strong interest in American economic growth and in its recovery from the crisis.

Figure 3, based on the classical sense of openness (export–import ratio for GDP), well demonstrates how export- oriented growth made China an increasingly important actor of the world economy after the Chinese revolution of 1979. It was "only" because of the incredible rate of economic growth that the data of China did not increase more sharply than that of the USA. The other drop in the curve is the consequence of the accession of China to the WTO in 2001, after the millennium. This made the reform processes speed up and the inflow of FDI and the openness of China increase.



Source: own compilation based on the data of the Foreign Trade US Census Bureau

Figure 3. Trade between China and the United States of America between 1985 and 2010 (million US$)



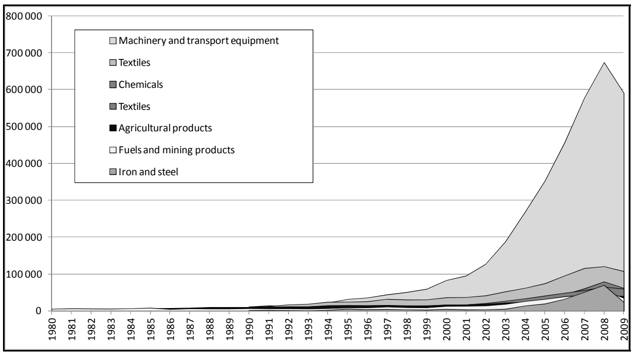
Source: own compilation based on Worldbank data

Figure 4. Position of the examined countries in 2009 (start date of the changes is 2000)

Figure 4 demonstrates the external trade openness of the European Union member states, the BRIC countries, Japan and the USA in a function of GDP in 2009. The size of the bubble is proportional with the internal consumption of the examined countries. In the case of some countries (BRIC countries, United Kingdom, USA), the shift from 2000 is also demonstrated. This is aimed at examining the changes after the crisis. Apart from Japan, internal consumption increased in each country. It is also remarkable that while the main characteristic in India was the increase of openness in the examined nine years, China was rather characterized by the increase of GDP (like in the USA).

STRUCTURE OF EXTERNAL TRADE

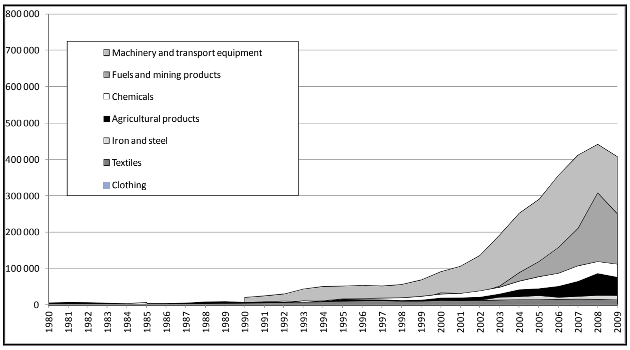
The biggest part of the exports of both China and the USA is characterized by the products of the machinery and transport equipment major product group, ensuring 591 billion USD of export revenue in China and 441 billion USD in the USA. Based on OICA (2011) data, China has the greatest automobile industry in the world: more than 18 million automobiles were produced in 2010, which is twice as high as the production of the second largest superpower of the world, namely Japan. In that year, the USA produced 7.7 million cars, which ranked it in third position. This large growth rate of Chinese automotive production is also due to the investments of the foreign automotive industrial companies and to the strengthening of the Chinese and joint venture automotive factories. The development, organisation and the product quality of the Chinese automotive industry lag behind the countries that have played a leading role for decades (especially Germany, Japan and the USA). The production of the Republic of Korea, Brazil and India also increased significantly and they have moved ahead of some traditional actors like France, Spain, Italy or the United Kingdom. Car and truck production has a determining role within the machine industry of a country. At the same time, however, other sectors of transport machine industry like the manufacturing of rail cars, locomotives, aircraft and shipbuilding also have emphasised importance. They also show high technological development in the leading countries, the group of which is the same as in machine industry. Apart from some exceptions (like China), the production of core countries is dominant in this case. Innovations, patents and developments ensure the dominance of North American, West European and East Asian countries.



Source: own compilation based on WTO data

Figure 5. Chinese export by major product group (1980-2009, million US$, current prices)

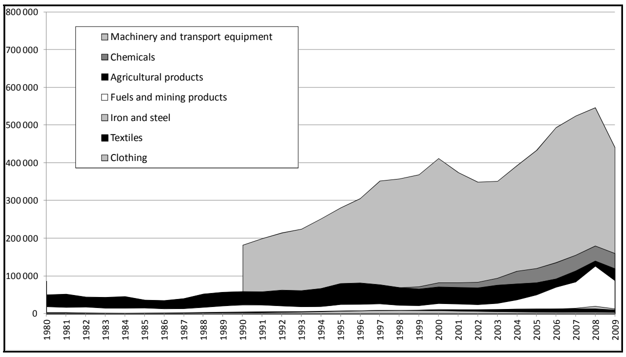
A typical trend in China is that high-tech manufacturing products play an increasingly important role in its exports, while the export of raw materials keeps decreasing (Fig. 5). The main reason for this is the technological development and the raw material and energy needs of its huge economy. The crisis has only slightly affected the trade of China; a major decline only characterized the steel and iron major group in exports.



Source: own compilation based on WTO data

Figure 6. Chinese import by major product group (1980-2009)

The export-oriented growth model of China can be seen in Fig. 6 as well. The value of Chinese imports is about half that of its exports and the internal consumption started to increase at the beginning of the 2000s.

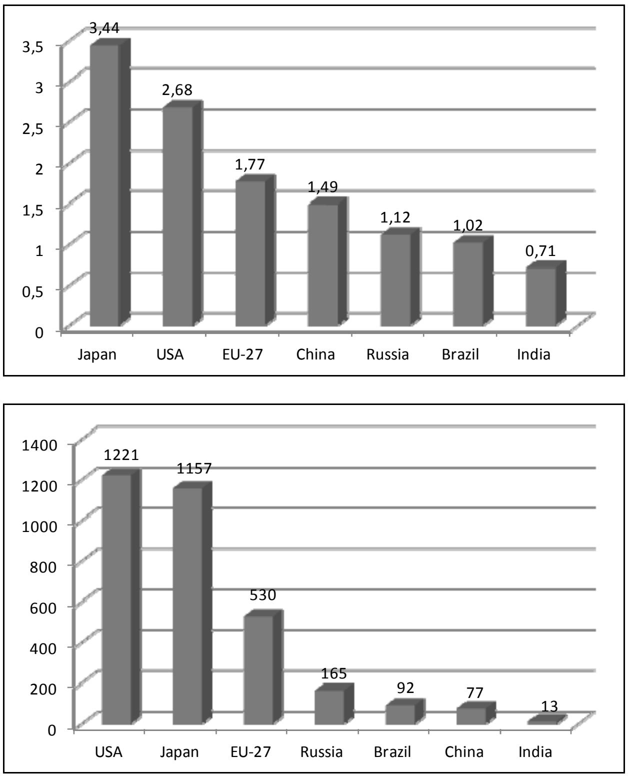


Source: own compilation based on WTO data

Figure 7. Export of the USA by major product group (1980-2009)

There is a significant deficit in the American goods turnover and the structure of the products is similar to that of the other developed countries. Export is made up of technologically high developed goods of high level processes, such as electric devices, parts, automotives (although their export has been decreased by production outsourcing), computers, chemicals and plastics.

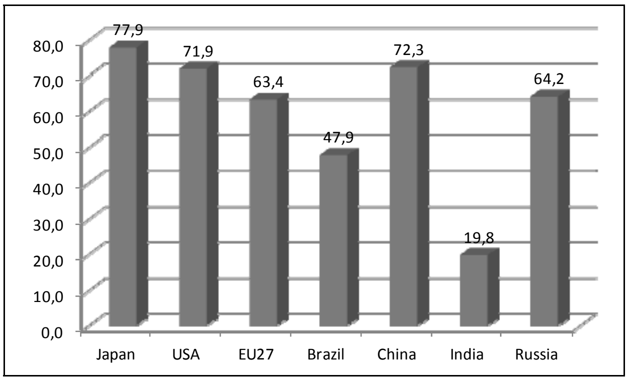
This is partly due to the extremely high productivity and to the high R&D expenditures. Out of the world trade action centres, the USA has a leading role based on both the GDP per employee and the share of employment in services, which highlights the functionality of the "new economy". Typically, an average American employee works more (spends more hours working), more productively and more efficiently than an employee in the European Union. As far as the Chinese GDP per employee is concerned, the difference is more than five-fold. Moreover, the employment rate is also high (more Americans work out of the working age population), which together makes higher development possible.



Source: OECD Factbook 2009

Figure 8. Expenditure on R&D, % of GDP (2007) and the per capita expenditure on R&D in some world economic regions (current US$, PPP, 2007)

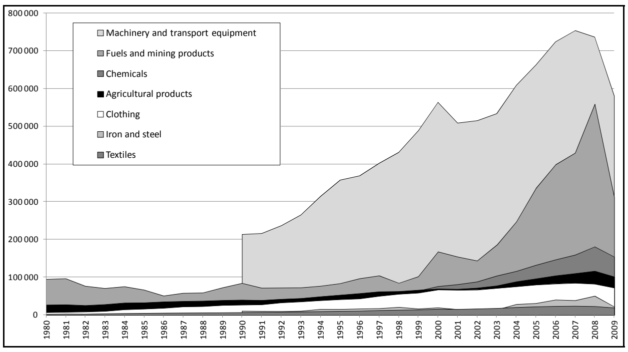
Expenditure Expenditure on R&D made up more than 2.5% of the GDP in the USA (almost 300 billion USD) yearly (OECD Factbook 2010). The main sources of expenditure are the government (25-30%) and enterprises (65-70%); institutes of higher education and non-profit organisations (5%) have a smaller share in the total expenditure. The competitiveness of the American economy is partly supported by high-level research and development and by the illustrious research institutes that are successful even in the strong international competition.



Source: OECD Factbook 2009

Figure 9. Share of entrepreneurship, % of total R&D in some world economic regions (2007, %)

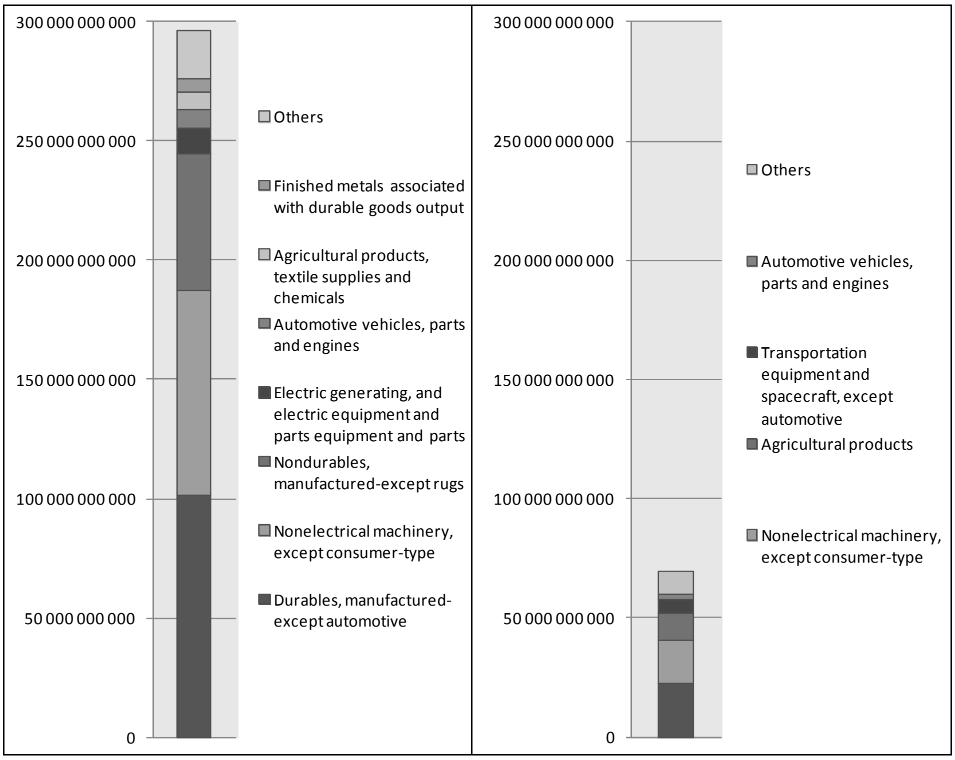
Innovations also create institutional changes: strategic alliances are formed and strengthened that have the objective of joint research and development (know-how transfer, jointly coordinated R&D programs, strategic joint planning).



Source: own compilation based on WTO data

Figure 10. Import of the USA by major product group (1980-2009)

The USA is a core country with developed industry, which is highly represented in its trade by the major product groups. In the import of the USA, the major product group of fuels and mining products has an emphasised role. Although the USA was the third oil exploiter in the world in 2010 based on the IEA (2011) data, it fully converts its production to its own consumption. Moreover, it is also the first oil importer in the world. The huge energy need is typical in each sector of the American economy, as its industrial production is in the first place in the world and as its population is a significant energy consumer because of the high living standard, the lower price levels, the developed infrastructural and transport system, the climate conditions, the large distances and the increased transport and travel needs.



Source: Foreign Trade US Census Bureau

Figure 11. Goods and services from China to the USA and from the USA to China in 2009

When only the goods and services trade is regarded between the two countries, one can conclude that the USA basically exports manufactured products, namely durables and nondurables and nonelectrical machinery. The picture is significantly modulated by the fact that the bulk of this Chinese export is produced by American subsidiaries in China. The value of FDI from the USA to China was 3.6 billion USD in 2009 based on the US-China Business Council data, which made the USA the fifth biggest investor in the country. China imports mainly agricultural products and high-tech technology from the USA.

SUMMARY

Processes of the last decades like the fast development and rise of China or the catching up of its absolute economic measures to those of the USA are determining parts of today's world economy. Many people are concerned about when the "changing of the guard" will happen, when China will become the largest economy in the world. China may have its chance by the end of the next decade or the beginning of the 2030s. At the same time, however, differences in the relative measures and in the economic and employment structure show that even with such a high rate of growth, it may take three to four decades to significantly decrease per capita production and income differences.

The question arises as to whether such a high rate of development and growth are feasible in such a time horizon. Probably not, as internal problems and contradictions (such as huge social, economic and regional differences, high rate of unemployment affecting rural population, low level of qualifications and disproportions of internal consumption) may significantly slow down or even prevent China from taking the leading role of the world economy from the USA. In relation to it, it is problematic in what way China will be able to respond to the challenges and to the changes, how it can create a more competitive economy, and whether its government is ready to follow Western patterns in handling the existing problems and deficiencies, to modify or decrease the role of the state or to develop atin a fast rate by forming successfully an Eastern pattern.

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