

## **MAIN WORLD EXPORTERS OF GOODS IN YEARS 1995-2011 – ANALYSIS BY VALUE ADDED**

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**Abstract:** The specific social division of labour which is characteristic for the modern world economy where enterprises based in different countries specialize not only in the production of particular goods and services, but also in particular stages of such production is the factor of a new pattern of the production processes – a fragmentation on a global scale. As the result of this fragmentation, the final value of the goods and services produced by particular countries contains both domestic and foreign value added content, so it becomes necessary to revise the approach to determining the position of countries in world export. The article aims to analyse the structure of world export of goods by groups of products and by geographical regions based on the concept of measuring foreign trade by value added. The calculations use the OECD-WTO data from the *TiVA* database. Due to the availability of data, the analysis comprised the years 1995-2011. The study shows that in the researched years the world export of goods and services was concentrated in the so-called Triad, i.e. Europe, Asia, and North America. It can be noticed, however, that Europe's and North America's position has weakened against the increasing role of Asia. This is reflected both in the official statistics and, even more distinctly, in the analysis based on value added. According to official data, both in 1995 and in 2011 the top ten listed five European countries, three Asian countries and two North American countries. Yet, in 2011 the European countries generally ranked lower, while the Asian countries ranked higher than in 1995. The real situation (i.e. based on value added) was much worse for Europe. Whereas in 1995 the top ten of the world exporters included six European countries, in 2011 – five and their actual share in the world export of goods was lower than the share of four Asian countries listed in the top ten. On the whole, the European countries ranked lower than in 1995 and lower than based on official statistics.

**Keywords:** international trade, trade in value added, world exporters.

**JEL Classification:** F100, F140, F400.

### **1. Introduction**

Globalisation and the opening of national economies lead to building closer and stronger economic bonds. A characteristic feature of the modern world economy is a social division of labour, according to which entities based in different countries specialise in conducting very specific stages of production, using a number of intermediate goods supplied from abroad. A modern good or final service is hardly ever of domestic origin only. They also tend to contain some foreign value.

As mentioned earlier, the modern world economy is characterized with the fragmentation of production. Many authors present the considerations on this topic, for example: S. W. Arndt (Arndt, 1998), R. Feenstra (Feenstra, 1998), G. M. Grossman, E. Helpman (Grossman &

Helpman, 2005), N. Yamashita (Yamashita, 2008), R. Jones (Jones, 2008), G. Grossman and E. Rossi-Hansberg (Grossman, Rossi-Hansberg, 2008), E. Ng (Ng, 2010), B. Los, M. P. Timer, G. J. de Vries (Los et al., 2015), Y. Chen (Chen, 2016).

When the organisation of production processes involves the division of their subsequent stages between different countries, global value chains (GVCs) are developed (Hummels et al., 2001), (Bems et al., 2011), (Choi, 2015), (Lee, Cheong, 2015), (Amador et al., 2015), (Kwon, Ryou, 2015). It is commonly agreed that the pioneer of research aiming to determine domestic value in exported products was W. Leontief, who created the input-output model to analyse the interdependencies between different branches of an economy as early as in the 1930s (Leontief, 1936). At the turn of the 21st century, his concept was used to produce estimates of the actual domestic content in the value of exported goods and services. The analyses conducted by a number of different authors indicate that foreign value added content in export is gradually growing (Johnson & Noguera, 2012), (Trade, 2012), (Inomata, 2013), (Foster-McGregor, Stehrer 2013), (Banga, 2014) (Koopman et al., 2014), (Su, 2014).

From this point of view the determination of the share of particular countries and groups of countries in world export based on the gross value of goods and services distorts the perception of the real situation, since the position of some countries is overestimated, while of others – underestimated. The study presents the geographical structure of world export trade by continents and compiles the list of the ten most important exporter-countries of particular types of goods according to the ISIC classification by traditional statistics (by gross value) and accounting for their actual contribution to this export, i.e. based on value added.

## 2. Methodology

The study uses the data from the *TiVA* database (*TiVA database*). It contains data on 61 countries which were classified by geographical regions:<sup>2</sup>

- 1) Africa: South Africa, Tunisia,
- 2) Americas: Canada, USA, Chile, Argentina, Brazil, Colombia, Mexico, Costa Rica,
- 3) Asia: India, Brunei Darussalam, Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam, Japan, Korea, China, Hong Kong, Chinese Taipei, Israel, Turkey, Cyprus, Saudi Arabia,
- 4) Australia and Oceania: Australia, New Zealand,
- 5) Europe: Greece, Italy, Portugal, Slovenia, Spain, Croatia, Malta, Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Latvia, Luxembourg, Netherlands, Norway, Poland, Slovak Republic, Sweden, Switzerland, United Kingdom, Bulgaria, Lithuania, Romania, Russia.

The analysis was limited to goods, with the exclusion of services, because goods account for the majority of world trade. Goods were grouped according to the ISIC classification (rev. 3):

- 1) agricultural, hunting, forestry, fishing goods (chapters: 01-05 ISIC),
- 2) mining and quarrying goods (chapters: 10-14 ISIC),
- 3) manufactured goods (chapters: 15-37 ISIC).

Due to the availability of data the analysis comprised the years 1995-2011.

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<sup>2</sup> Other countries, unmentioned by name, were omitted.

Based on the concept of measuring trade in value added, the share of particular countries in world export was estimated using the following formula (Fronczek, 2016):

$$VA_{exi} = DVA_{exi} + \sum_{j=1}^n VA_{exij} \quad (1)$$

Where

$VA_{exi}$  - value added in world export by country  $i$ ,

$DVA_{exi}$  - domestic value added in export of country  $i$ ,

$VA_{exij}$  - value added of country  $i$  included in export of partner country  $j$ .

### 3. Results and discussion

#### 3.1 Structure of world export by groups of products

In the years 1995-2011 the value of world export trade in goods and services increased nearly fourfold from USD 5 746 billion to USD 19 168 billion.

*Table 1: World export by groups of products in years 1995-2011.*

Goods by ISIC	1995		2000		2005		2010		2011	
	in bn USD	in %	in bn USD	in %	in bn USD	in %	in bn USD	in %	in bn USD	in %
Total goods and services (01-95 ISIC)	5 746.1	100.0	7 193.9	100.0	11 327.3	100.0	16 359.1	100.0	19 168.1	100.0
Goods (01-37 ISIC), of which:	3 856.2	67.1	4 879.9	67.9	7 615.2	67.2	10 915.9	66.7	12 990.6	67.8
agricultural, hunting, forestry, fishing goods (01-05 ISIC)	143.3	2.5	127.6	1.8	175.3	1.5	322.4	2.0	401.1	2.1
mining and quarrying goods (10-14 ISIC)	238.3	4.1	480.8	6.7	891.3	7.9	1 347.3	8.2	1 838.4	9.6
manufactured goods (15-37 ISIC)	3 474.6	60.5	4 271.5	59.4	6 548.6	57.8	9 246.2	56.5	10 751.1	56.1

*Source: (TiVA database), author's calculations.*

Trade comprised mainly goods (Tab. 1). In the researched period, they accounted for approx. 67% of gross world export. In 1995, almost 90% fell under the category of manufactured goods, which accounted for 60.5% of gross world export trade in goods and services. In 2011, their share in gross world export decreased to 56% (constituting almost 83% of all goods). The share of mining and quarrying goods in world export increased from 4.1% in 1995 to 9.6% in 2011. Finally, agricultural goods accounted for approx. 2-2.5% of goods exported on an international scale.

#### 3.2 Structure of world export by geographical regions

The geographical structure of world export in goods indicates that three major economic centres existed in the researched period: America (mainly North America), Asia (in particular South-East Asia) and Europe (mainly Northern, Western and Southern Europe). They constitute the so-called Triad (Tab. 2).

The calculations based on gross exports show that in 1995 the European countries were the largest supplier of goods to the world market (47%), the Asian countries ranked second (24.7%) and the American countries – third (20.5%). In 2011, Europe's share in world exports amounted

to 36% (11% less than in 1995), the share of the countries located on the American continent decreased to 17.3% (by 3 percentage points), while the share of the Asian countries increased to 34.4% (i.e. by approx. 10 percentage points).

*Table 2: Share of geographical regions in world export of goods by gross value and by value added (in %).*

Regions*	1995		2000		2005		2010		2011	
	by gross value	by value added	by gross value	by value added	by gross value	by value added	by gross value	by value added	by gross value	by value added
Total goods (01-37 ISIC)										
Africa	0.8	0.8	0.7	0.7	0.8	0.8	0.9	0.9	0.8	0.9
Americas	20.5	20.9	22.9	23.3	18.4	18.8	17.5	18.3	17.3	18.1
Australia and Oceania	1.5	1.6	1.4	1.5	1.5	1.8	2.0	2.3	2.0	2.3
Asia	24.7	24.6	26.3	25.6	29.3	27.6	34.5	32.0	34.4	31.5
Europe	47.0	46.2	39.7	38.6	41.0	40.6	35.9	35.2	36.0	35.1
Goods of agriculture, forestry, hunting and fishing (01-05 ISIC)										
Africa	0.9	0.9	1.0	1.0	1.1	1.1	0.8	0.8	0.7	0.7
Americas	33.3	33.0	30.7	30.5	31.8	31.1	32.6	31.9	33.4	32.5
Australia and Oceania	3.6	3.4	5.0	4.7	5.3	5.0	4.7	4.5	5.3	5.0
Asia	10.8	11.6	11.0	11.8	12.7	13.5	17.0	17.9	17.4	18.4
Europe	33.1	33.4	31.2	31.0	33.2	33.2	28.2	28.0	26.9	26.6
Mining and quarrying goods (10-14 ISIC)										
Africa	2.7	2.5	1.2	1.1	0.9	0.9	1.8	1.6	1.9	1.7
Americas	15.2	15.4	12.4	12.7	13.7	13.6	15.5	15.2	15.4	15.1
Australia and Oceania	4.6	4.3	3.3	2.9	4.8	4.5	8.0	7.3	7.4	6.6
Asia	25.4	25.6	19.8	20.3	22.0	22.5	20.7	21.6	22.2	23.1
Europe	24.2	24.8	20.7	19.9	18.7	21.5	19.4	19.8	18.0	18.5
Manufactured goods (15-37 ISIC)										
Africa	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.8	0.6	0.7
Americas	20.4	20.8	23.9	24.3	18.7	19.2	17.2	18.2	17.1	18.1
Australia and Oceania	1.2	1.4	1.1	1.3	1.0	1.3	1.0	1.5	0.9	1.5
Asia	25.3	25.0	27.5	26.6	30.8	28.7	37.2	34.0	37.1	33.4
Europe	49.1	48.2	42.2	40.9	44.0	43.4	38.6	37.7	39.4	38.3

\* It attributes 61 individuals countries from TiVA database to the regions. Other countries, unmentioned by name, were omitted.

Source: (TiVA database), author's calculations.

The value added based analysis shows that in 1995 Europe's real share in the world export of goods and services was overestimated and actually accounted for about 46.2%, the share of the Asian countries was close to the one indicated in official statistics (24.6%), while the share of the Northern, Southern and Central American countries was underestimated and in reality accounted for 20.9%. The differences deepened during the researched period. In 2011, Europe's real share in world export fell to 35.1% and was lower than it might be inferred from official statistics (by 0.9 percentage points), the share of the American countries decreased to 18.1%, but it was higher than by gross exports (by 0.8 percentage points), while Asia's share increased to 31.5% and, in reality, it was lower than official statistics showed by 3 percentage points.

Similar tendencies can be identified for particular groups of goods. Export trade in agricultural goods was dominated by the countries located on the American continents. In the researched years, their share stayed at 31-33%, both in terms of gross exports and by value added, while the latter was slightly lower than the former, which means that in this case the position of Americas was overestimated. The European countries ranked second, although their share in the world export of agricultural goods decreased from 33.1% to 26.9% (according to official data) and from 33.4% to 26.6% (by value added). In reality then, their position was also

lower than the one based on official statistics. The situation was completely different for Asia. Officially, its share increased from 10.8% to 17.4%, but it was higher by value added, reaching 11.6% in 1995 and 18.4% in 2011.

The Asian countries were, on the other hand, the largest exporters of mining and quarrying goods. Moreover, their real share, just as in the case of agricultural goods, was higher than in official statistics. Asia's share in the world export of mining and quarrying goods accounted for 25.4% in 1995 and 22.2% in 2011. In reality, the respective figures were 25.6% in 1995 and 23.1% in 2011. Europe's share decreased from approx. 24% to approx. 18%, with official statistics slightly underestimated compared to the figures by value added (respectively 24.8% and 18.5%). On the other hand, Americas' share remained stable at approx. 15%, while their real position was slightly lower than by gross exports.

The structure of the world export of manufactured goods was dominated by the European countries. In 1995, they provided the world market with almost half such goods, but based on value added it should be stated that in reality it was 48.2% (i.e. by 0.9 percentage points). In 2011, their share was decidedly lower. Officially, it amounted to 39.4%, but in reality it was lower by 0.9 percentage points (38.3%). The position of the Americas as the suppliers of manufactured goods also deteriorated. Their share decreased from 20.4% to 17.1% (although in reality it was higher and amounted to 20.8% in 1995 and 18.1% in 2011). On the other hand, the Asian countries grew in significance, because their official share rose from 25.3% to 37.1%, although in reality it was lower (25% in 1995 and 33.4% in 2011), which is nonetheless an impressive result.

### **3.3 List of main world exporters by groups of products**

The analysis of the changes in the geographical structure of the world export trade in goods is further supplemented by the list of the world's ten largest exporter-countries exporting particular types of goods. The compilation ranks the countries by the share in world export by gross export and by value added are presented in tables 3-6.3

Taking into account all goods (divisions: 01-37 ISIC; Tab. 3), in 1995 the official top ten world exporters included five European countries (Germany, France, United Kingdom, Italy, Netherlands), two North American countries (Canada and USA) and three Asian countries (Korea, Japan and China). The USA ranked first, Germany second and Japan third. Based on value added, the top three was the same, but six European countries made it to the top ten (in addition to the five above there was also Spain), two North American countries and two Asian countries. the real share of the first five countries in world export was higher than according to official statistics, while the share of the bottom five countries – lower. In total, the real share of the top ten in the world export of goods accounted for 61.6%, whereas officially it stood at 59.4%.

In 2011, China was listed top of the ranking, the USA came second and Germany third. However, the analysis by value added by particular countries to exported goods revealed that the USA ranked first, China second and Germany third. According to official statistics, the top ten listed five European countries (Germany, France, Italy, Russia and the United Kingdom), three Asian countries (China, Japan, Korea) and two North American countries (Canada and USA). The European countries ranked lower than in 1995, with the exception of Russia, absent in the top ten in 1995. Two out of three Asian countries moved up the ranking: China by 8

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<sup>3</sup> The results concerned 61 countries included in *TiVA* Database (as of October 2015).

positions, Korea by 3 positions, while Japan fell by one position. The ranking compiled based on value added is completely different. The top ten includes three countries absent from the ranking for 1995. They were: China, Russia and Saudi Arabia (which did not make it to the official ranking for 2011 either). In total, the ranking listed four Asian countries (China, Japan, Korea and Saudi Arabia), generally higher than in 1995, five European countries (Germany, France, Italy, Russia and the United Kingdom), generally lower than in 1995, and one North American country – the USA, consistently ranking first. Together these ten countries were officially responsible for 53.1% of world exports, while their real share was actually lower and amounted to 52.4%.

*Table 3: List of main world's exporters by gross export and by value added in 1995 and in 2011 - total goods (01-37 ISIC).*

No.	1995				2011			
	by gross export		by value added		by gross export		by value added	
	country	share in world export in %	country	share in world export in %	country	share in world export in %	country	share in world export in %
1.	USA	12.57	USA	13.88	China	11.66	USA	9.81
2.	Germany	10.52	Germany	11.11	USA	8.81	China	8.97
3.	Japan	8.40	Japan	10.39	Germany	7.85	Germany	7.62
4.	France	5.78	France	5.77	Japan	4.80	Japan	5.93
5.	UK	5.14	UK	5.20	Korea	3.82	Russia	4.26
6.	Italy	4.92	Italy	4.84	France	3.48	Saudi Arabia	3.54
7.	Canada	4.09	Canada	3.38	Italy	3.41	France	3.30
8.	Korea	2.80	Korea	2.61	Russia	3.37	Italy	3.16
9.	China	2.59	Netherlands	2.43	Canada	3.00	UK	2.94
10.	Netherlands	2.59	Spain	2.00	UK	2.91	Korea	2.90
Countries from:	Europe – 5	28.95	Europe – 6	31.35	Europe – 5	21.02	Asia – 4	21.34
	Americas – 2	16.66	Americas – 2	17.26	Asia – 3	20.28	Europe – 5	21.28
	Asia – 3	13.79	Asia – 2	13.00	Americas – 2	11.81	Americas – 1	9.81
	Total top 10	59.40	Total top 10	61.61	Total top 10	53.11	Total top 10	52.43

*Source: (TiVA database), author's calculations.*

In the case of agricultural, hunting, forestry and fishing goods (divisions: 01-05 ISIC; Tab. 4), the top ten of the world exporters was dominated by the European and North American countries. In 1995, the official ranking listed three American countries (Canada, USA, Mexico), five European countries (France, Netherlands, Spain, Germany, Italy and, additionally, Australia and China. The USA ranked first, France second and the Netherlands third. The ranking by value added was very similar. It comprised the same countries, with Germany and Italy ranking higher than according to official statistics, while Mexico and China – lower.

*Table 4: List of main world's exporters by gross export and by value added in 1995 and in 2011 – goods of agriculture, hunting, forestry and fishing (01-05 ISIC).*

No.	1995				2011			
	by gross export		by value added		by gross export		by value added	
	country	share in world export in %	country	share in world export in %	country	share in world export in %	country	share in world export in %
1.	USA	18.95	USA	18.97	USA	14.69	USA	14.62
2.	France	7.33	France	7.05	Brazil	5.65	Brazil	5.49
3.	Netherlands	6.25	Netherlands	5.41	Canada	4.74	Canada	4.35
4.	Canada	4.57	Canada	4.25	France	4.38	France	4.00
5.	Spain	3.73	Spain	3.62	Australia	3.98	Australia	3.77
6.	Australia	2.74	Germany	3.41	Argentina	3.79	Argentina	3.58
7.	Germany	2.64	Australia	2.66	Indonesia	3.30	Indonesia	3.34

No.	1995				2011			
	by gross export		by value added		by gross export		by value added	
	country	share in world export in %	country	share in world export in %	country	share in world export in %	country	share in world export in %
8.	Mexico	2.21	Italy	2.36	Spain	3.20	China	3.29
9.	China	2.18	Mexico	2.29	Thailand	3.08	Germany	3.02
10.	Italy	2.12	China	2.14	China	2.86	Spain	2.92
Countries from:	Americas – 3	25.73	Americas – 3	25.51	Americas – 4	28.87	Americas – 4	28.04
	Europe – 5	22.07	Europe – 5	21.85	Asia – 3	9.24	Europe – 3	9.94
	Australia – 1	2.74	Australia – 1	2.66	Europe – 2	7.58	Asia – 2	6.63
	Asia – 1	2.18	Asia – 1	2.14	Australia – 1	3.98	Australia – 1	3.77
	Total top 10	52.72	Total top 10	52.16	Total top 10	49.67	Total top 10	48.38

*Source: (TiVA database), author's calculations.*

In 2011, the USA again ranked first, but it was followed by Brazil, second, and Canada, third (both by gross exports and value added). In total, the top ten compiled according to official statistics listed four American countries (USA, Brazil, Argentina and Canada), three Asian countries (Indonesia, Thailand, China), two European countries (France and Spain) and Australia. Four of them – Brazil, Argentina, Indonesia and Thailand – were absent from the ranking for 1995, Canada and Australia were in higher positions than in 1995, while France, Spain and China – in lower. The list compiled based on value added included four American countries: USA (ranking first again), Canada (one position lower than in 1995), Argentina and Brazil (absent in the top ten in 1995), three European countries: France, Spain and Germany (all in positions lower than in 1995), two Asian countries: Indonesia and China (both ranking higher than in 1995) and Australia (two positions higher compared to 1995).

The most important exporters of mining and quarrying goods (divisions: 10-14 ISIC; Tab. 5) were mainly Asian countries, in particular Saudi Arabia, which supplied approx. 15.5% of these goods (in the case of Saudi Arabia, it was crude oil) to the world market both in 1995 and in 2011, irrespective of the calculation method. In 1995, the official top ten also included Indonesia (Asia), Norway, UK, Russia (Europe), Canada, Mexico, USA (America), Australia and South Africa. The ranking by value added listed the same countries in a slightly different order: Russia and the USA ranked higher, while Canada and Mexico lower.

*Table 5: List of main world's exporters by gross export and by value added in 1995 and in 2011 – mining and quarrying goods (10-14 ISIC).*

No.	1995				2011			
	by gross export		by value added		by gross export		by value added	
	country	share in world export in %	country	share in world export in %	country	share in world export in %	country	share in world export in %
1.	Saudi Arabia	15.48	Saudi Arabia	15.50	Saudi Arabia	15.19	Saudi Arabia	15.38
2.	Norway	6.64	Norway	6.27	Russia	9.22	Russia	9.09
3.	UK	6.09	UK	5.88	Australia	7.31	Australia	6.53
4.	Canada	6.07	Russia	5.66	Canada	5.40	Canada	5.01
5.	Russia	5.97	Canada	5.51	Norway	4.71	Norway	4.56
6.	Indonesia	4.90	Indonesia	4.74	Indonesia	3.38	Indonesia	3.32
7.	Australia	4.49	Australia	4.18	Brazil	3.15	Brazil	2.95
8.	Mexico	2.78	USA	3.56	Mexico	2.53	Mexico	2.50
9.	USA	2.63	Mexico	2.74	UK	2.09	USA	2.19
10.	South Africa	2.52	South Africa	2.34	South Africa	1.82	UK	1.96
Countries from:	Asia – 2	20.38	Asia – 2	20.24	Asia – 2	18.57	Asia – 2	18.70
	Europe – 3	18.70	Europe – 3	17.81	Europe – 3	16.02	Europe – 3	15.61
	Americas – 3	11.48	Americas – 3	11.81	Americas – 3	11.08	Americas – 4	12.65
	Australia – 1	4.49	Australia – 1	4.18	Australia – 1	7.31	Australia – 1	6.53
	Africa – 1	2.52	Africa – 1	2.34	Africa – 1	1.82		

No.	1995				2011			
	by gross export		by value added		by gross export		by value added	
	country	share in world export in %	country	share in world export in %	country	share in world export in %	country	share in world export in %
	Total top 10	57.57	Total top 10	56.38	Total top 10	54.80	Total top 10	53.49

Source: (TiVA database), author's calculations.

In 2011, official statistics did not list the USA in the top ten, but they included Brazil. Russia and Australia moved up to the second and third position respectively, whereas Norway and the UK moved down in the ranking. The remaining countries maintained their positions. The list compiled by value added did not reveal any significant differences compared to the official ranking. It did not include South Africa, but listed the USA.

According to official data, in 1995 the largest exporters of manufactured goods (divisions: 15-37 ISIC; Tab. 6) were: the USA (ranking first), Germany (ranking second) and Japan (ranking third). The remaining countries in the top ten were three other European countries (France, Italy, UK), three other Asian countries (Korea, Chinese Taipei, China) and one American country (Canada). The list by value added was very similar, although it included the Netherlands instead of China. In total the ten largest exporters officially supplied the world market with 62.9% of all manufactured goods. Their real share was, however, even higher and amounted to 65.2%.

Table 6: List of main world's exporters by gross export and by value added in 1995 and in 2011 – manufactured goods (15-37 ISIC).

No.	1995				2011			
	by gross export		by value added		by gross export		by value added	
	country	share in world export in %	country	share in world export in %	country	share in world export in %	country	share in world export in %
1.	USA	12.99	USA	14.38	China	13.91	USA	10.94
2.	Germany	11.51	Germany	12.10	USA	9.80	China	10.60
3.	Japan	9.31	Japan	11.46	Germany	9.32	Germany	8.99
4.	France	6.09	France	6.07	Japan	5.78	Japan	7.10
5.	Italy	5.35	UK	5.28	Korea	4.61	France	3.79
6.	UK	5.22	Italy	5.24	Italy	4.05	Italy	3.72
7.	Canada	3.93	Canada	3.20	France	4.02	Russia	3.52
8.	Korea	3.08	Korea	2.85	UK	3.12	Korea	3.47
9.	Chinese Taipei	2.72	Netherlands	2.38	Canada	2.53	UK	3.16
10.	China	2.70	Chinese Taipei	2.19	Russia	2.44	Canada	2.36
Countries from:	Europe – 4	28.17	Europe – 5	31.07	Asia – 3	24.30	Europe – 5	23.18
	Asia – 4	17.81	Americas – 2	17.58	Europe – 5	22.95	Asia – 3	21.17
	Americas – 2	16.92	Asia – 3	16.50	Americas – 2	12.33	Americas – 2	13.30
	Total top 10	62.90	Total top 10	65.15	Total top 10	59.58	Total top 10	57.65

Source: (TiVA database), author's calculations.

In 2011, the top ten list of the largest exporters of manufactured goods was significantly different from the ranking for 1995. According to official statistics, China ranked first (up by 10 positions), the USA second (down by one position), and Germany third (down by one position). The ranking included also: two other Asian countries (Japan and Korea), four other European countries (Italy, France, UK, Russia) and Canada. Most of them ranked lower than in 1995. These were: USA, Germany, Japan, Italy, France, UK, Canada (so the developed economies of North America, Europe and Asia). The countries that moved up were: Korea, China and Russia (which was absent from the top ten in 1995). In this context, the list by value added looks interesting. Contrary to official data, the USA ranked first, while the official leader,



China, second, and Germany third. Compared to 1995, two new countries entered the ranking: Russia and China (replacing Chinese Taipei and the Netherlands). Three countries kept their positions unchanged: the USA, Korea and Italy, while the remaining five moved down the list: Germany, Japan, France, the UK and Canada. On the other hand, the comparison of the ranking by value added with official statistics shows that, in reality, three countries had higher positions (USA, France, Russia), four ranked lower (China, Korea, UK, Canada), while three kept their position unchanged (Germany, Japan, Italy). In total, the share of these ten countries to the world export of manufactured goods amounted to almost 60%, but in reality it was lower by approx. 2 percentage points and stood at 57.7%.

#### **4. Conclusion**

The data collected lead to the conclusion that in the researched period the world export trade in goods concentrated in the area referred to as the Triad, i.e. Europe, North America and Asia. The results show that the real position of the European and Asian countries (by value added) was overestimated, while the position of the American countries (in particular the North American countries) was underestimated. Irrespective of the method adopted, however, the calculations revealed the weakening position of the European and American countries and the growing significance of the Asian countries in world trade. Statistics show that the European economies found it far more difficult to face the Asian competition.

These observations are confirmed by the detailed rankings of the top ten largest exporters of goods. According to official statistics, in 1995 the list ranked the USA first, Germany second and Japan third. In total, the top ten included five European countries (they had the largest share in the world export of goods), two American countries and three Asian countries. The list by value added ranked the same countries as the top three, but in general Europe's position was higher (the list included six European countries) and Asia's position lower (two countries on the list). In 2011, the top ten of the world exporters of goods was entirely different. According to official statistics, China ranked first, the USA second and Germany third. In reality, by value added, the United States remained the largest exporter of goods and China had the second position. It should be emphasized, however, that the advantage of the USA diminished substantially. Officially, the ranking remained dominated by the European countries (five countries that had the largest share in the world export of goods). In reality, however, their position was weaker since they were generally listed lower than in 1995 and lower than according to official statistics. The countries that moved down were mainly the countries of Western, Northern and Southern Europe, while Russia, seen as part of Eastern Europe, moved up significantly. The top ten included four Asian countries, whose share in the world export of goods was the highest. Two of them were absent from the top ten in 1995 (including China, which moved to the second position). Compared to 1995, the American and European countries, namely Canada, Netherlands and Spain, were replaced by the Asian countries – China and Saudi Arabia – in the top ten. The European countries generally ranked there lower than in 1995 (with Russia as an exception).

The data may imply that this direction of changes represents a permanent tendency, which certainly does not bode well for Europe, but is a favorable trend for Asian countries. Although in 2011 they were not in total the largest exporters of goods yet, it should be noted that when their real share in world export is taken into account, the four Asian countries has a larger contribution than the five European countries. In 2011, the real share of all Asian countries in

the world export of goods was similar to Europe's share (31.5% for Asia compared to 35.1% for Europe) and the difference gradually shrank in the researched period.

Finally, it is worthwhile to emphasize that Asian and European countries do not enjoy such substantial benefits from their share in world export as it might be inferred from official statistics, since their share defined by value added was lower than the one calculated according to the published data. Despite a spectacular growth in the share of Asian countries in international trade in goods, benefits stemming from increasing exports were – in their case – lower than official data might imply. The opposite was true for North America. Its real share in the world export of goods was, in the researched period, higher than according to official statistics, but, irrespective of the calculation method adopted, the figures show that, as in the case of Europe, in 2011 its position on the world market also weakened.

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