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**THE PROCESS OF CHANGES IN LOCATION OF THE ECONOMIC CENTERS, CHANGES IN COMMODITY EXCHANGE AND IN TRANSPORT ON THE WORLD**

**Summary.** This article is intended for the location of the world's economic centers and the hypothetical vision of the Asiatic Region, having the chance to become the world's economic center. This is also intended for the growth of carriages in the basic transport branches all over the world.

**PROCESY ZMIAN W LOKALIZACJI CENTRÓW GOSPODARCZYCH, WYMIANIE TOWAROWEJ I PRZEWOZACH NA ŚWIECIE**

**Streszczenie.** Artykuł poświęcony został lokalizacji gospodarczych centrów świata oraz hipotetycznej wizji regionu azjatyckiego, który za kilkanaście lat ma szansę stać się światowym centrum gospodarczym, jak również rozwojowi przewozów w podstawowych gałęziach transportu na świecie.

**INTRODUCTION**

The integration process of countries both from political and economical point of view was characteristic for the second half of XX century. This process was followed by a number of changes taking place in that time, such as [1]:

- global character of the contemporary international relations,
- military threats exceeding many times the frame of one of the country,
- ecological threats having an international range,
- use up of natural and energetic resources,
- tightening the international cooperation and technological unity
- the world currency-credit and commodity market
- an uniform price system, etc.

In the last decade of the XX century this process has been more intense and it has been considerably enriched with dynamism, so by the end of this period one begun to say about the process of globalisation – in other words - about the connecting of national economies of the countries and about the connecting and mutual dependence of individual branches of economies what caused the change of the world existing so far. There increased the role of international trade as never before. It has led to opening and substantial liberalisation in trade between the countries. The organisations such as GATT, WHO caused the considerable reduction of duty fees and their role. Also technical and engineering progress “has diminished distances” and created the new opportunities for communication

between different places on the Earth. The easiness to move, and liberalisation of law led to the process of moving a production abroad. The trans-national corporations and those having bigger budget than that of Poland are the main beneficiary of this process.

## 1. THE ASSUMED TRENDS OF CHANGES FOR THE WORLD ECONOMY CENTRES

In the present world, apart from the industrialized (developed) countries, such as Japan the newly industrialized countries (i.e. Taiwan, Korea, Singapore, Malaysia) begin to play more role, and also China and India. These two last countries will be playing an extremely important role in a global economy. It will be caused by:

- firstly, because of a huge population potential,
- secondly, with regard to a very dynamic growth and economic development.

China and India are the most populated countries. China's current population is 1 billion 304 bln inhabitants; India's population is 1 billion 100 bln inhabitants. It is worth to illustrate that these countries are occupied by 1/3 of the total number of the world's inhabitants. It decides about a huge potential of markets that is creating by these countries. These are, of course, in the meantime so called "shallow" markets, considering that, e.g. in India the majority of people live for less than 1 USD per day. The similar situation takes place in China. It needs to be explained that just in the period of twenty years (1981-2001), 400 mln citizens were released by the country's authority from destitution [2]. The process of enriching of Chinese society will be still progressing. At present Chinese engineers' earnings are in a certain branches not differing from these of Americans counterparts. It is to be explained by the high and dynamic economic growth (in 2006 – 12% GNP). Moreover, in spite that Chinese people are working "for the future", the authorities take care not only for dynamic economical growth, but also for the growth which takes into account the social aspects (there are this-days 250 000 millionaires in China). However the middle class constitutes currently 12% of the whole society, it is to be foreseen 45% of it in 2020.

The Political-Economic World Centre was situated undoubtedly, in the beginning of XX century (in 1900) in Europe. It was a period of industrialization, so the best indicator to present a position of state in the world is the contribution of a given country in a general industrial production. It failed for Europe 62%, for USA 23,6% , and for the rest of the world only 14,4%, and in this for China 6,2%, Japan 2,4% , India 1,7% [3].

In the result of the First World War, Europe was forced to share a leading position with United States. From the end of World War II (till now) the United States of America have the biggest world economy. From the end of 70's of the XX century the Asiatic countries were developing dynamically, except Japan that aspired for a long time as the second world's economy.

It was created there in 2004 in the world the GNP equalling to 10998,6 bln USD, in this as many as 11679,2 in USA (it constituted 28% in the world's scale) , in China 1649,4 (4%), in India 1,7%. According to *National Intelligence Council*, however, in 2040 the Chinese GNP will "be better" than that of USA. India takes the third position [4]. China is already the third world's export power (7,9% share in the world's export) and it yields only to Germany (10,1%) and to USA (9,4%) outstripping Japan (6,2%) and European countries.

The industrial development and growth of export shows the huge demand for transport demands which will need to be developed. In the reverse case, this will be a braking period for the economical growth – both of China and of India. Both these countries have a weak road and railway networks when taking into account their needs for transport.

In the case of transport infrastructure, Europe and United States have the advantage these days. In the field of motorisation there is observed in China a dynamic growth, confirmation of it is the fact that of the total number of 700 car factories, as many as 120 are located in this country [4].

It is worth to make a degression here that Chinese authority, seeking to make a boom, have imposed high duties for import of buses, thanks to that, in order "to exist" on Chinese market, it is necessary to build a car factory in this country [4].

The country which wants to avoid the situation when the absence of infrastructure becomes a break of an economic growth is undoubtedly Russia. Currently there takes place the dynamic growth of linear and local transport infrastructure. The data in the point two shows, how are systematically increasing the trade turnovers between the countries of Asia (mainly China and of Japan) resulting in the decline of Japan export to USA.

This boom led to the animation of trade exchange and also to the economical exchange between Russia, China, Japan and the countries, as early as in the half of XXI century, may compete for the palm as the Economic World Centre along with the United States.

## 2. THE COMMODITY EXCHANGE – TRENDS AND THE TENDENCIES

There has taken place in 2002-2006 a considerable growth of the world's economy. Assuming as the basis the Gross National Product (GNP) dynamics, the biggest progress has taken place in: China, India, Russia, Republic of Korea, United States of America, the European Union and Japan, i.e. the countries in which the economic potential is deciding on the state of the world's economy. The progressing process of globalisation and liberalisation had considerable influence on the growth of international cooperation in production, on the growth of foreign trade (i.e. exchange of commodities). This exchange has a constant growing tendency. Illustration of it is the dynamic growth of import and export in each countries (see Tables 1 and 2) [7], [8].

Table 1

Foreign trade - import (in mln USD)

	1990	1995	2000	2005	Share in the world			
					1990	1995	2000	2005
<b>World</b>	3549572	5083736	6228031	9868760	100	100	100	100
<b>Belgium</b>	120043	159684	176992	320158	3,4	3,1	2,8	3,3
<b>China</b>	53345	129113	225094	660159	1,5	2,5	3,6	6,7
<b>France</b>	232580	281497	311029	479329	6,6	5,5	5,0	4,9
<b>Spain</b>	87456	113315	152901	287610	2,5	2,2	2,5	2,9
<b>Japan</b>	234799	335991	379491	514988	6,6	6,6	6,1	5,2
<b>Canada</b>	116638	164334	240094	313529	3,3	3,2	3,9	3,2
<b>Mexico</b>	31147	72454	174458	221414	0,9	1,4	2,8	2,2
<b>Holland</b>	125873	176874	198882	309376	3,5	3,5	3,2	3,1
<b>Germany</b>	342608	464366	495450	777531	9,7	9,1	8,0	7,9
<b>Republic of Korea</b>	69844	135119	160481	261238	2,0	2,7	2,6	2,7
<b>Russia</b>	.	46709	33880	98687	.	0,9	0,5	1,0
<b>USA</b>	495259	743444	1218022	1670940	14,0	14,6	19,4	17,0
<b>GB</b>	224024	265322	334371	483064	3,6	5,2	5,4	4,9
<b>Italy</b>	193541	206025	238071	385521	5,5	4,1	3,8	3,9
<b>Poland</b>	9528	29050	48940	101539	0,3	0,6	0,8	1,0
<b>India</b>	23583	34710	51563	125431	0,7	0,7	0,8	1,3

The fourteen countries were taken into account, the share of them in the world's trade was bigger than 2%, and moreover India and Poland – the countries with a specific character (Poland – is the transit country between the East and the West; India – extremely dynamic economic growth). Import in the analysed countries in 1990-2005 (this one measured in mln USD) has created the highest share in the world's import. The highest share in the world's import was represented by the following: USA, Germany, Japan, France and Great Britain, however the import rate was differentiated, i.e. the highest share was shown by China (6,7% of share in the world's import; third position in the world, followed by USA and Germany).

Table 2

## Foreign trade – export (in mln USD)

	1990	1995	2000	2005	Share in the world			
					1990	1995	2000	2005
<b>World</b>	3426340	5045095	6066212	9634157	100	100	100	100
<b>Belgium</b>	118034	175849	187876	334156	3,4	3,5	3,1	3,5
<b>China</b>	62091	148797	249203	762068	1,8	2,9	4,1	7,9
<b>France</b>	209581	284914	300083	436015	6,1	5,6	4,9	4,5
<b>Spain</b>	55357	91040	113348	191021	1,6	1,8	1,9	2,0
<b>Japan</b>	286948	443261	479227	594986	8,4	8,8	7,9	6,2
<b>Canada</b>	127518	191129	278005	360096	3,7	3,8	4,6	3,7
<b>Mexico</b>	27131	79542	166454	213898	0,8	1,6	2,7	2,2
<b>Holland</b>	131406	196276	208889	345994	3,8	3,9	3,4	3,6
<b>Germany</b>	398448	523909	550222	977913	11,6	10,4	9,1	10,2
<b>Republic of Korea</b>	65016	125058	172267	284419	1,9	2,5	2,8	3,0
<b>Russia</b>	.	78217	103093	241019	.	1,6	1,7	2,5
<b>USA</b>	392976	584742	781918	904380	11,5	11,6	12,9	9,4
<b>UK</b>	184508	242036	281525	371406	5,4	4,6	4,6	3,9
<b>Italy</b>	180926	233980	239934	373486	5,3	4,6	4,0	3,9
<b>Poland</b>	14322	22895	31651	89378	0,4	0,4	0,5	0,9
<b>India</b>	17970	30628	42378	85909	0,5	0,5	0,7	0,9

In USA, import rate in the analysed period, was respectively: 14%; 14,6; 19,4; and in 2005 the rate was dropped up to 17%. At the considerable lower level (with a rising tendency in 1990-2000 and a minimal downfall in 2005) was this rate in Great Britain. Import in Germany, Japan and France was at the very stable and high level. The falling down tendency in the world's import has had the share of Italy. In 2000-2005 the very high dynamics (counted in constant prices [5]) reached Russia (287,8). At the same time India noted down the growth equaling to 151, Republic of Korea – 139,8 and Poland – 147,8. In 1995-2005 there was at the low level (in spite of high dynamics) there was the contribution of Russia, in 1995 – 0,9; in 2000 – 0,5 and in 2005 – 0,1.

The similar tendencies like to import there were in export (see Table 2). In the world (without the countries of Central and East Europe) in 2000-2005 the export (counted in stable prices) increased by 21%, whereas the import – at the same time increased by 22%.

The highest contributions in the world export in 2005 reached in turn: Germany (10,2); USA (9,4); China (7,9); Japan (6,2); France (4,5); Great Britain and Italy (3,9). Similarly like in import – also in export – the highest rate in succeeding five-year period (beginning from 1990) reached China: 1,8; 2,9; 4,1; 7,9. A very high and stable level had Germany and USA. The high export rate in 2005 (comparing to 2000) reached Russia – 239. Poland – in the analogical period – reached the export rate at the level of 187,9; Republic of Korea – 177,8; and India 151,8. The visible declining tendency in export took place in: Japan, France, Great Britain and Italy. The most beneficiary balance of foreign trade (counted in USD) in the examined period have noted down: Germany (200382 mln); Russia (142331 mln); China (101909 mln); Japan (79998 mln); Norway (47131 mln); Republic of Korea (23181 mln); Belgium (13988 mln).

### 3. THE DEVELOPMENT OF CARRIAGES (IN MLD TKM) IN THE BASIC TRANSPORT BRANCHES IN THE WORLD

In order to determinate the tendency in the development of carriages in 2000-2005 in basic transport branches and to make a comparative analysis for their formulation in the chosen countries of the world, there was carried out a branch analysis of them. The most important significance in 2005 has the road transport (considering global expression) which was the following:

- in the EU-25 - 1 724 mld tkm
- in Russia - 184 mld tkm
- in USA - 2 172 mld tkm
- in China - 753 mld tkm
- in India - 1 mld tkm
- in Japan - 331 mld tkm
- in Korea - 103 mld tkm

In the analysed period the carriages realised with road transport means were subject to the systematic growth. The highest dynamic of the growth reached in turn: United States – 7%; China – 22%; EU-25 and Korea 15,7%. The substantially lower dynamic shown the road carriages in Japan (5,7%) (see table 3) [5], [9].

Table 3

The carriages realized by the road transport in the chosen countries of the world  
(in mld tkm)

	2000	2001	2002	2003	2004	2005
<b>EU-25</b>	1 487	1 518	1 560	1 572	1 683	1 724
<b>Russia</b>	.	.	.	.	.	184
<b>USA</b>	1 709	1 817	1 926	1 845	2 107	2 172
<b>China</b>	613	633	678	710	784	753
<b>India</b>	1	1	1	1	1	1
<b>Japan</b>	313	313	312	322	328	331
<b>Korea</b>	89	94	98	102	103	103

It is resulting from the data of the table 4 that similarly to the road transport carriages also the railway transport (in mld tkm) in 2000-2005, the highest dynamics there was in China (22,9%) and in United States (19,9%). The high dynamics of carriages was also characteristic to the carriages in India (16,2%). The EU-25 has noted down the dynamics of 4,8%; in Korea the carriages were maintaining at the same level, whereas in Japan in 2005, in relation to 2000, there took place a downfall of railway carriages by 4,5%.

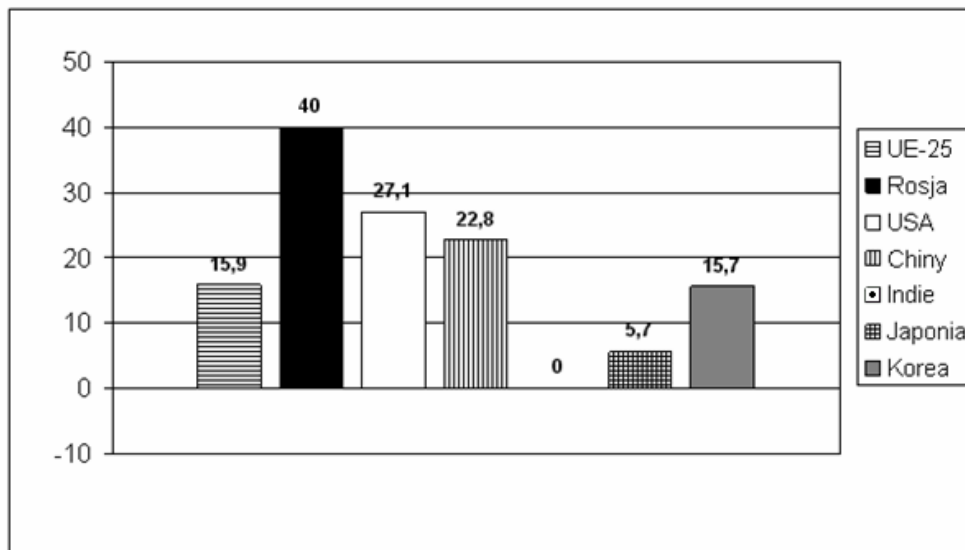


Fig. 1. Dynamics of freight carriages carried out by road transport means in 2000-2005 [9]

Rys. 1. Dynamika przewozów w transporcie drogowym w latach 2000–2005 [9]

Table 4

The carriages of freights carried out by means of railway transport in some chosen countries of the world (in mld tkm) [9]

	2000	2001	2002	2003	2004	2005
<b>UE-25</b>	374	359	358	364	392	329
<b>Russia</b>	1 373	1 434	1 568	1 683	1 788	1 858
<b>USA</b>	2 250	2 322	2 447	2 341	2 650	2 697
<b>China</b>	1 390	1 457	1 552	1 611	1 929	1 708
<b>India</b>	309	319	330	339	353	359
<b>Japan</b>	22	22	22	22	21	21
<b>Korea</b>	11	10	11	11	11	11

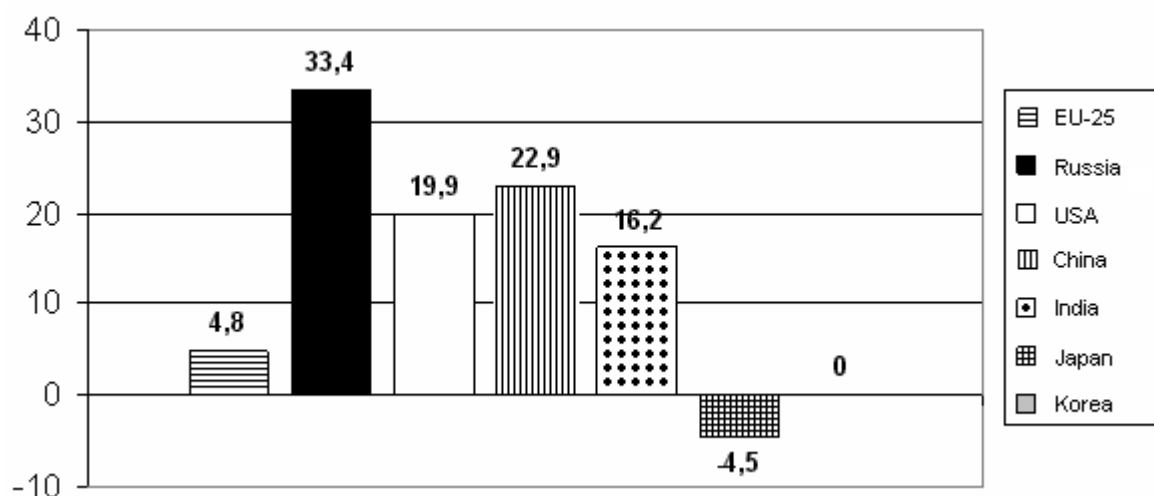


Fig. 2. Dynamics of freights carriages carried out by means of railway transport in 2000-2005 [9]

Rys. 2. Dynamika przewozów w transporcie kolejowym w latach 2000–2005 [9]

The mostly dynamical, in the examined years, in air transport increased there the carriages of freights in the EU-25 (19,0%); in Korea (12,5%) and in China (10,0%). The biggest downfall of carriages had Japan, India, United States – respectively: 35,6%; 80,%; 90,0%. Carriages of freights in Russian Federation were maintained at the same level.

Table 5

The carriages of freights by means of air transport in some chosen countries of the world  
(in mld tkm) [9]

	2000	2001	2002	2003	2004	2005
<b>EU-25</b>	2.1	2.2	2.1	2.4	2.5	2.5
<b>Russia</b>	1	1	1	1	1	1
<b>USA</b>	30	29	29	29	28	27
<b>China</b>	3	4	4	3	3	3
<b>India</b>	0.5	0.5	0.5	0.4	0.4	0.4
<b>Japa</b>	9	7	7	6	6	5
<b>Korea</b>	8	8	8	8	9	9

## CONCLUSIONS

### Economy

The analysis of the economic growth carried out for some chosen regions (states) of the world allows me to draw the following general conclusions:

- Gross National Product (GNP), considered in a global scale in 2004, reached the highest level from 30 years. Formulation of the dynamics for the GNP in the EU-25 and in the chosen countries of the world is shown on Fig. 4 [10].

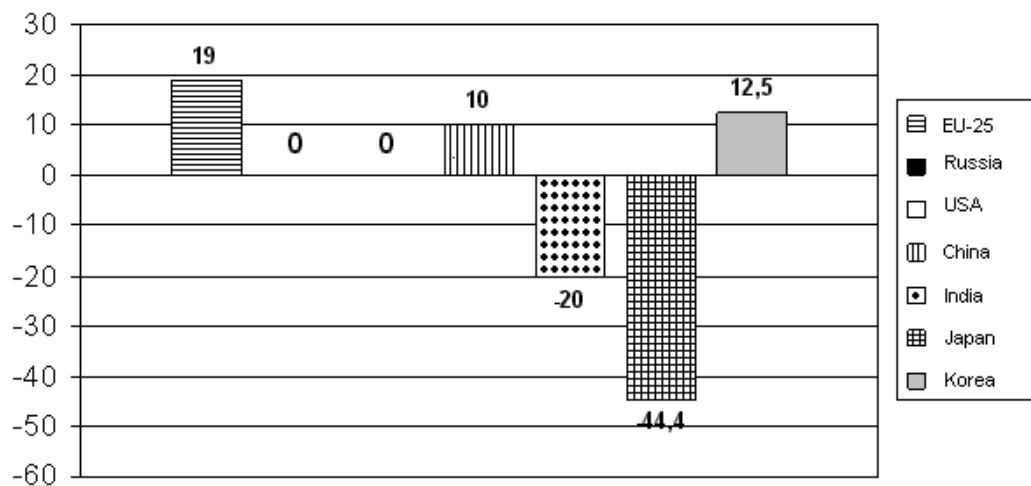


Fig. 3. Carriages dynamics of freights carriages carried out by air transport in 2000-2005 [9]

Rys. 3. Dynamika przewozów w transporcie lotniczym w latach 2000–2005 [9]

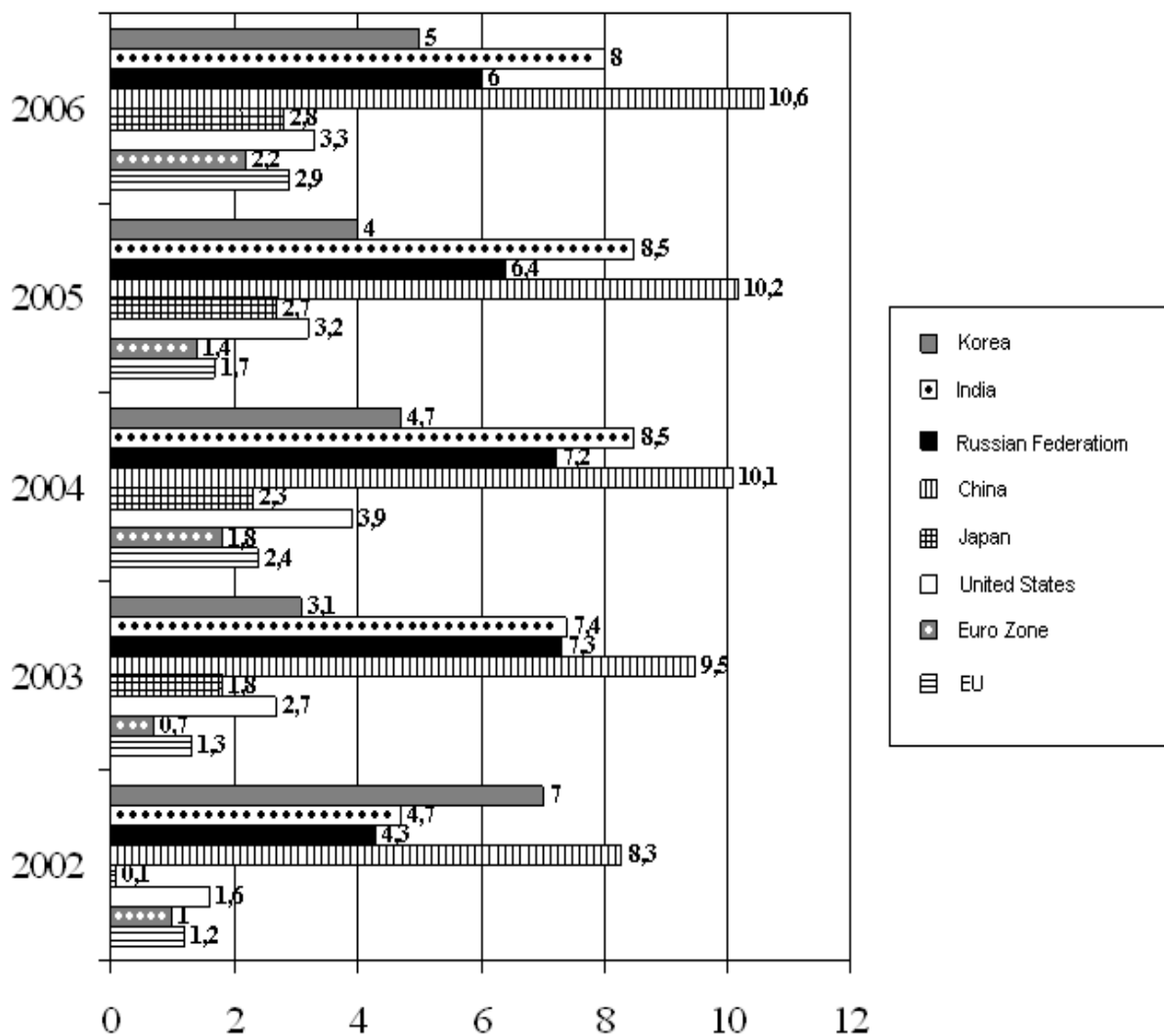


Fig. 4. Comparison of GNP EU-25 with some chosen countries of the world

Rys. 4. Porównanie dynamiki PKB UE-25 z wybranymi państwami świata



High economical growth in majority of regions of the world in the examined period caused more than 20% increase of the world's trade volume. In accordance with the World Bank [6] prognosis, maintaining of the high rate in the next years will be impossible and this rate will drop by approx. 3,0%. The strong economic growth of the world in 2004 was reached thanks to the gained effects by the economies of: United States, Japan, China and India. The more than four-times rate for the growth of dynamics of USA and Japan considerable exceeded the 2% rate for growth of the West Europe countries. The main source of the economic growth of Japan and West Europe was the increase of export thanks to the growing demand from developing countries. United States are indebted the boom to high domestic demand caused by the growth of investments, consumption of households and the export of hi-tech services.

According to the opinion of experts, maintaining of such a dynamic growth of economy in China through the long time creates the threat to the fast exhausting of the world raw material resources. The weakest economic effects among the developed regions of the world in the analysed period were reached by the European Union. According to the experts evaluation, it is resulting mainly from structural conditions, in particular from the weakly proceeding the process of reforms in public and social sector and too little domestic demand.

### **The goods exchange – trends and tendencies**

Commodities exchange in the world in 1990-2005 had the tendency of a stable and dynamics growth. United States had the highest contribution in (five-year intervals – 1990, 1995, 2000, 2005) the world import in the examined period respectively: 4,0; 14,6; 19,4; 17,0. Germany took the second position with its share, respectively: 9,7; 9,1; 8,0; 7,9, and the third position took China with the most dynamic growth of rate, respectively: 1,5; ,5; 3,6; 6,7. The highest share in the world export – with decreasing tendency of shares reached Germany with its shares, respectively: 11,6; 10,4; 9,1; 10,2 and the second position was taken by United States with increasing shares in 1990-2000 equaling to: 11,5; 11,6; 12,9 and the fall down in the last examined five-year period up to 9,4. Also in export, the third position took China, which reached the very high shares: 1,8; 2,9; 4,1; 7,9.

The examination shown that considerable value of trade exchange has taken place in the regions in which there are the countries having the highest shares in the world import and export. The biggest trade exchange of the EU-25 countries outside the Community (in this with the East – mainly with Russia and China) had Germany, France, Great Britain, Italy and Holland.

### **Transport**

The carriages of freights carried out by car transport means in 7 examined countries in 2000-2005 (measured with the value of executed transport work in tkm) had the increasing tendency excluding India which (in the whole analysed period) remained at the same level. The carriages of freights carried out by railway transport shown the increase in Russian Federation, United States and India. The carriages in the EU-25 countries were characterized with considerable fluctuations. In Japan and Korea and India (in the examined period) they maintained at the same level. The carriages of freights carried by air transport in the EU-25 countries and Korea had the increasing tendency, in USA and Japan – the decreasing one, and in Russia, China and India they maintained at stable and equalized level.

The biggest carriage work (in tkm) in the examined period carried by car transport means has been executed in turn in:

United States

EU-25

China

By railway transport means:

United States

Russian Federation

China

By air transport:  
United States  
Republic of Korea  
China

The performed examinations confirm that the dominating role in carriages on the world with a stable increasing tendency in 2000-2005 had the car transport, a branch which is friendly to the environment and man.

### **Economy vs. Transport**

The analysis of the level of increase and the attained dynamic of GNP in the EU countries and the remaining examined countries in context of the carriages structure carried out by the means of each transport branch in these countries shows some relations. The lower trends of the GNP increase has the EU (and Euro zone) and Japan, where the dominating role in the carriage structure is played by a road transport in comparison with United States, China and Russian federation where the deciding role is played by such transport branches as railway, inland and pipeline transport. So, as it is commonly evaluated, the transport branches which are more economical, friendly to the environment and man. The author is far away from drawing the univocal estimations in this scope he considers however that deeper examinations of these relations may allow to get interesting conclusions.

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