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Constantin Brancusi University of Targu Jiu

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Full Length Research Paper

Evolution of national-international trade in the period before the economic and financial crisis for selected economies

Lucia Paliu – Popa* and Ana - Gabriela Babucea

Department of Finance and Accounting, Faculty of Economics and Business Administration, Constantin Brancusi University of Targu Jiu, Victoria Street, no. 24, Targu Jiu, Gorj, Romania.

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The world economy has evolved in recent years amid some obvious inequalities and disparities nationally manifested on different levels, including the participation in international trade. This study took into account the two ways of approach, namely: evaluation and analysis of existing differences between the countries participating in global trade, on the one hand and development of a hierarchy among them, on the other hand, in terms of export, import and trade balance. Therefore, the analysis methodology specific to regional series was used, namely the territorial statistical indicators and multicriteria ranking. We also considered the changes made to the country with the best performance in the period 2002 to 2008, time for which official figures were used at the time of the study. The data used in the study have been taken from on-line databases available on the website of the Romanian National Statistics Institute: <http://www.insse.ro/> and they refer to 41 countries for which information was available, data processed in order to be harmonized by authors, taking into account both the emerging countries (China, Romania, Greece, Bulgaria, Slovakia, Slovenia, Nigeria, Brazil etc.) and the economically developed countries (USA, Germany, Japan, United Kingdom etc.).

Key words: Import, export, trade balance, evolution, ranking.

INTRODUCTION

Given the increasing globalization of world economy and the internationalization of commercial transactions, we may note that the regional subregional and bilateral agreements on free trade are amplified along with the creation of customs union. We can not help noting that the trend of regionalization of the world economy, extremely strong, is accompanied by another trend, not less outstanding and dramatic, that of increasing globalization of international companies (Burciu et al., 2010). In this context, the tension between the two growing trends highlights the tension of decision-making processes:

centralized or decentralized.

In special literature the relationships between rising trade, economic growth, globalization and international disparities is very well reflected. Krugman (1979), Dixit and Norman (1980) and Helpman (1981) have given complete explanations of trade in the "new international economics". Romer (1987) and Lucas (1988) made the same thing in development economics, the "new growth theory". Also, is generally accepted that the free trade increase national economic performance and (Fischer, 2003; Pugel and Lindert, 2000). The globalization has

*Corresponding author. E-mail:- univers_cont@yahoo.com

been associated with a significant increase in trade across the world. Moreover, in many studies the semification of the interaction between trade and regional disparities has become particularly important, but in general, there seems there is not a real relationship between trade and regional disparities (Rodríguez-Pose, 2006). We may say that the regionalization of international trade and globalization are not exclusive processes, as they complement and blend each other, but are complementary in achieving the overall, common objective to liberalize world trade. The latent tensions between regionalization and globalization, between centralization and decentralization, between the government and companies are strongly and progressively reflected in the efforts to harmonize trade policies and to liberalize international trade, which are taking place in the World Trade Organization (WTO) and the General Agreement on Tariffs and Trade (GATT). Referring to our country (Paliu-Popa, 2009), we consider it appropriate to mention that Romania's trade policy (Sută et al., 2000) can not ignore the international situation, plus solid evidence of our country's real economy, affecting the Romanian foreign trade (Blănaru, 2009).

Given the role and importance of foreign trade in the global economy, we will analyze below the evolution of international trade, by groups of countries and regions during 2002 to 2008, overall and per capita, and then we will analyze the foreign trade of each country, considering the share of exports and imports from different countries in the world trade. We will not exclude trade balance from the analysis, both overall and per capita, because it is an important means of knowing the level of development of national economy, plus the efficiency and performance of such country's participation in international economic exchanges. Thus, the analysis made will allow us to achieve rankings and draw conclusions regarding the place and role of trade of each state in the development of international trade.

EVOLUTIVE TRENDS OF INTERNATIONAL TRADE IN THE PERIOD BEFORE THE ECONOMIC AND FINANCIAL CRISIS

The participation of all states in international economic exchange becomes an objective necessity in the contemporary period. We consider that the main arguments that advocate such guideline are closely related to: unprecedented increase in complexity of the global economy, increased dynamism of technical progress, the high degree of diversification of economic processes, increased interdependence of national economies, significant benefits that can be earned on the international division of labor and/or specialization in production, globalization of economic activities, proliferation of doctrines and policies that promote the establishment of the new international political and economic order etc.

A country's foreign trade problems (imports, exports,

intra-Community commercial transactions) can be discussed only in close connection with its trade balance. If we refer to the foreign trade, as part of trade balance and to the values that export and import achieve in a certain period, usually one year, then we can say that the trade balance of a country can be:

- Active or redundant if exports exceed imports;
- Passive or weak, if imports exceed the exports;
- In equilibrium and balanced, if imports and exports are equal.

If the trade balance has the effect of increasing the growth of the economy, we can say that its economic deficit leads to the need to use external credits that can be justified only insofar as they can be reimbursed as a result of increased production achieved by using them (Cerchez, 2007).

Referring to the trade surplus we can appreciate that it is an element of accumulation, which may lead, under a cost-effective export, to increase in the foreign reserves and therefore to the possibility of paying future imports. The absolute level of total FOB¹ export (million USD), in the period under review, 2002 to 2008, for all countries involved in international trade, has generally seen upward trends, Germany and the Republic of China were particularly emphasized (Table 1).

If we focus attention on Germany, placed in 2002 on the 2nd place in the world in terms of exports, with a level of 612,857.00, dollars, we can see that in the next six years it had a linear trend with an annual absolute average increase of 141,837.33 million dollars, that is an annual average relative increase by 60.19%, thus reaching in 2008 the absolute level of exports of 1,463,881 million dollars, 2.39 times greater than in 2002, thus holding the first place in the world.

We can not help noticing the really spectacular progress made by the Republic of China, which, holding the 4th place in 2002, with an export level of only 325,591.00 million dollars, representing 53% of the German exports and 47% of U.S. exports, which held the first place, came in 2008 to increase its export level by 4.39 times, holding the second position, with only 35,221.00 million dollars less than Germany, registering in the 6-year period an average annual increase of 183,844.83 million dollars. Under these conditions, although the U.S. was the major global exporter in 2002, in terms of the volume of value, while maintaining an upward trend, was surpassed by Germany in 2003 and then by the Republic of China in 2007, thus holding the third position in 2008, with a level of exports of 1,301,110 million dollars, that is 91.07% of China's exports and only 88.88% of German exports.

When referring to the 3rd place in the world in 2002,

¹ FOB (Free on Board) is the price at the border of the exporting country, which includes the value of the property, all transport costs to the point of embarkation, and all fees incurred for the property to be loaded on board.

Table 1. Dynamics of FOB exports, CIF imports and foreign trade balance during 2002-2008 for selected countries in international trade (million dollars)

No. COUNTRY	2002			2003			2004			2005			2006			2007			2008		
	FOB	CIF	Balance	FOB	CIF	Balance	FOB	CIF	Balance	FOB	CIF	Balance	FOB	CIF	Balance	FOB	CIF	Balance	FOB	CIF	Balance
1. Austria	70891	72881	-1990	87567	88265	-698	109004	108866	138	117740	119965	-2225	130361	130937	-576	156650	156133	517	173950	172840	1110
2. Belgium	215880	199393	16487	255516	234795	20721	306818	285596	21222	335868	318768	17100	366938	351908	15030	432287	413565	18722	477331	470828	6503
3. Bulgaria	5749	7987	-2238	7540	10887	-3347	9931	14467	-4536	11740	18163	-6423	15101	23270	-8169	18575	30086	-11511	22587	37369	-14782
4. Czech Republic ⁱ	38488	40736	-2248	48715	51245	-2530	67198	68435	-1237	77988	76343	1645	95165	93453	1712	122760	118467	4293	145921	141593	4328
5. Denmark	56230	49288	6942	65280	56227	9053	75568	66845	8723	83569	74265	9304	91705	85102	6603	102863	98860	4003	115785	111326	4459
6. Finland	44671	33642	11029	52513	41600	10913	60916	50677	10239	65240	58474	6766	77287	69447	7840	90091	81756	8335	96879	92125	4754
7. France ⁱⁱ	312436	311240	1196	365720	370699	-4979	417158	440422	-23264	444222	485594	-41372	482768	535663	-52895	550461	623108	-72647	605284	705665	-100381
8. Germany	612857	492112	120745	751824	604729	147095	911859	718269	193590	977970	780514	197456	1122112	922376	199736	1323818	1055997	267821	1463881	1198965	264916
9. Greece	10315	31164	-20849	13195	44375	-31180	14996	51559	-36563	15511	49817	-34306	20180	59121	-38941	23472	75100	-51628	25231	77831	-52600
10. Ireland	87498	51508	35990	92431	53315	39116	104204	61413	42791	109605	69177	40428	104639	83889	20750	122624	85626	36998	126150	82670	43480
11. Italy	254219	246613	7606	299468	297405	2063	353544	355269	-1725	372962	384837	-11875	416199	440828	-24629	499924	509922	-9998	548955	558543	-9588
12. Luxembourg	8585	11554	-2969	9950	13679	-3729	12181	16829	-4648	12699	17565	-4866	14172	19434	-5262	16021	22168	-6147	17857	25044	-7187
13. Netherlands	222406	193784	28622	258915	233091	25824	317936	283734	34202	349844	310600	39244	399635	358510	41125	476806	421084	55722	541445	488960	52485
14. Poland	41032	55141	-14109	53699	68153	-14454	74831	89094	-14263	89214	100759	-11545	110941	127260	-16319	138756	162437	-23681	168705	204926	-36221
15. Portugal	25536	38326	-12790	30714	40843	-10129	33023	49225	-16202	32137	53407	-21270	42890	65605	-22715	50241	76369	-26128	57057	89736	-32679
16. United Kingdom	276315	335458	-59143	304268	380821	-76553	341621	451715	-110094	371406	483064	-111658	428357	547508	-119151	434790	622125	-187335	458760	631526	-172766
17. Romania	13876	17862	-3986	17618	24003	-6385	23485	32664	-9179	27730	40463	-12733	32336	51106	-18770	40471	70414	-29943	49674	84286	-34612
18. Slovakia	14478	17460	-2982	21966	23760	-1794	27605	30469	-2864	31997	36168	-4171	41939	46256	-4317	57766	62102	-4336	70982	74034	-3052
19. Slovenia	10357	10933	-576	12767	13854	-1087	15879	17571	-1692	17896	19626	-1730	20985	23014	-2029	26553	29481	-2928	29233	33937	-4704
20. Spain	123563	163575	-40012	156024	208553	-52529	182156	257672	-75516	191021	287610	-96589	213350	326046	-112696	246752	382651	-135899	277695	417049	-139354
21. Sweden	81298	66717	14581	102405	84222	18183	123306	100792	22514	130205	111324	18881	147236	126610	20626	166834	148977	17857	183093	165124	17969
22. Hungary	34512	37787	-3275	42532	47602	-5070	54893	59636	-4743	62179	65783	-3604	74217	77206	-2989	93379	94373	-994	107466	106380	1086
23. Switzerland	83922	79129	4793	97165	92014	5151	114138	106645	7493	126099	119784	6315	141679	132030	9649	164809	153181	11628	192111	173657	18454
24. Norway	59575	34889	24686	67103	39284	27819	81709	48062	33647	101917	54786	47131	120550	63349	57201	137975	79778	58197	165251	87896	77355
25. Russian Federation	106705	46161	60544	126048	52449	73599	181663	75569	106094	241473	98708	142765	301244	137807	163437	351930	199754	152176	467666	267021	200645
26. Turkey	34561	49663	-15102	46576	65637	-19061	61683	96368	-34685	71928	98998	-27070	81912	133584	-51672	107136	169792	-62656	132003	201823	-69820
27. China, People's Republic of ⁱⁱⁱ	325591	295171	30420	437899	413062	24837	593439	560683	32756	761953	659953	102000	969380	791605	177775	1217815	956284	261531	1428660	1131620	297040
28. China, RAS Hong Cong	200092	207644	-7552	223762	231896	-8134	259260	271074	-11814	289337	299533	-10196	316816	334681	-17865	344629	367864	-23235	362675	388505	-25830
29. Republic of Korea	162470	152126	10344	193817	178827	14990	253845	224463	29382	284419	261238	23181	325465	309383	16082	371554	356648	14906	422007	435275	-13268
30. India	49232	56495	-7263	57086	71239	-14153	71798	94070	-22272	99374	138855	-39481	120862	175243	-54381	145513	215718	-70205	177603	293377	-115774
31. Japan	416730	337209	79521	471999	383085	88914	565743	454592	111151	594986	514988	79998	649948	579609	70339	709668	619845	89823	786434	762575	23859
32. Singapore	125177	116441	8736	144183	127935	16248	198633	173582	25051	229652	200050	29602	271809	238711	33098	299270	263155	36115	338201	319781	18420
33. South Africa	28713	28261	452	35032	39649	-4617	43707	46266	-2559	51640	62325	-10685	58197	-	58197 ²	69787	88450	-18663	84488	-	84488

Table 1. Contd.

34. Nigeria	15107	7547	7560	19887	10853	9034	31148	14164	16984	42277	15200	27077	45403	22222	23181	65133	37576	27557	-	-	0
35. Argentina	25709	8990	16719	29566	13834	15732	34550	22445	12105	40351	28689	11662	46569	34158	12411	55779	44707	11072	70588	57413	13175
36. Brazil	60362	49603	10759	73084	50706	22378	96475	66433	30042	118308	77633	40675	137807	95851	41956	160649	126564	34085	197942	182408	15534
37. Canada ⁵	252408	221961	30447	272696	239083	33613	304456	273084	31372	359421	323361	36060	389513	348958	40555	416431	379792	36639	452170	407169	45001
38. United States of America	693860	1202430	-508570	724771	1303050	-578279	818520	1525680	-707160	907158	1732350	-825192	1038270	1919430	-881160	1162980	2017330	-854350	1301110	2165980	-864870
39. Mexico, U.S. ⁵	160682	168679	-7997	165396	170490	-5094	189083	197347	-8264	213891	221414	-7523	250441	256130	-5689	272055	283264	-11209	291827	310561	-18734
40. Australia	65036	72693	-7657	71548	89090	-17542	86420	109383	-22963	105833	125283	-19450	123316	139279	-15963	141122	165364	-24242	187362	200563	-13201
41. New Zealand	14380	15047	-667	16505	18565	-2060	20344	23195	-2851	21729	26234	-4505	22434	26430	-3996	26946	30885	-3939	30591	34385	-3794

Source: Statistical Yearbook 2009, National Institute of Statistics and Processed Data

namely Japan, surpassed by the Republic of China since 2004, it holds in 2008 only the 4th position in the world with a level of exports of 514,676.00 million dollars lower than that of the U.S., which ranks 2nd (Figure 1).

With similar dynamics, France and Singapore maintain places 5 and 6 in the world throughout the period analyzed, while the gap between them and the holders of the first three positions is widening every year. In fact, for a total export in 2008 of 12,852.610 million dollars compared to only 5,441.504 million dollars in 2002, that is 2.36 higher, the share incumbent on the first three exporting countries, Germany, Republic of China and the U.S. was of over 28%; the other 38 countries covered the difference in percent (Table 2). For an overview of the dynamics evolution of FOB exports in the period 2002 to 2008, by groups of countries, we used the graphical representation in Figure 1, and for its dynamics by contribution of the participating countries in the international trade, the graphical representation in Figure 2.

If we analyze the share in total exports, we can easily see that while the U.S. decreased significantly from 11.40% in 2002 to 8.71% in 2008 and Germany from 10.07% to 9.80%, the

Republic of China registered a significant increase from 5.35% of total exports in 2002 to 9.56% in 2008 (Table 2).

We can not continue our approach of analysis of the evolutionary trend of international trade, in the period preceding the financial and economic crisis, without specifying that Romania, with an absolute level of exports of only 13.876 million dollars in 2002, registering an upward trend specific to all the countries in the period under review, also recorded in 2008 an increase of approx 3.5 times compared to 2002, significant increase for its trade, but the level of only 49 676 million dollars places it well below the share of 0.5% of the total world exports. Using the data from Table 2, in Figure 3 we presented the share that the exports of the countries under study had during 2002-2008 in the international trade.

However, in order to better capture the role and place of the foreign trade of each country in their global development, we believe that the export level in relation to the number of inhabitants of a country, FOB/capita is a more relevant indicator, if we consider that the countries have different sizes and economic forces (Table 3).

From this perspective, the first position throughout the period 2002 to 2008 was held by

Singapore with a FOB export level of 37,035.00 USD/capita in 2002, compared to only 2,384.00 USD/capita, a value recorded by the U.S. or of 7,429.00 USD/capita in Germany, amounting in 2008 to 70,459.00 USD/capita, compared to 4,273.00 USD/capita in the U.S. and 17,809.00 USD/capita in Germany. Although the Republic of China made exports that placed it on the second place in the world, in the year 2008, with a very large population, the same had only 1,078.00 USD/capita in that year. Even if the increase in absolute size was impressive, we can see that in relative size it was only 4.29 times greater. Romania, with a level of exports per capita of 2,310.00 USD/capita in 2008 compared to 637 USD/capita in 2002, registered a growth by 3.6 times (Figure 4).

We can not help noticing that significant levels of FOB exports/capita were registered in 2008 by China RAS Hong Cong (51,811.00 USD/capita) Belgium (44,610.00 USD/capita) Luxembourg (35,714.00 USD/capita) and Norway (34,427.00 USD/capita), while Brazil stands in the opposite side with 1,015.00 USD/capita or India with only 155 USD/capita.

Imports, the second element describing international trade reveals for the period 2002 to 2008

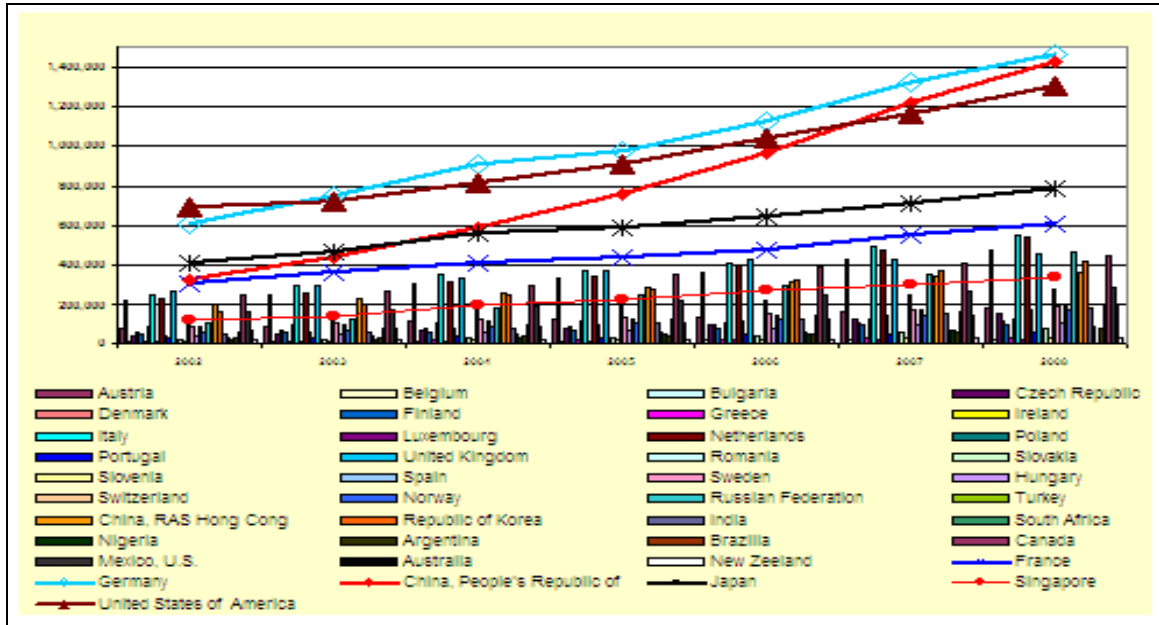


Figure 1. Dynamics of the international trade – FOB export (million dollars)

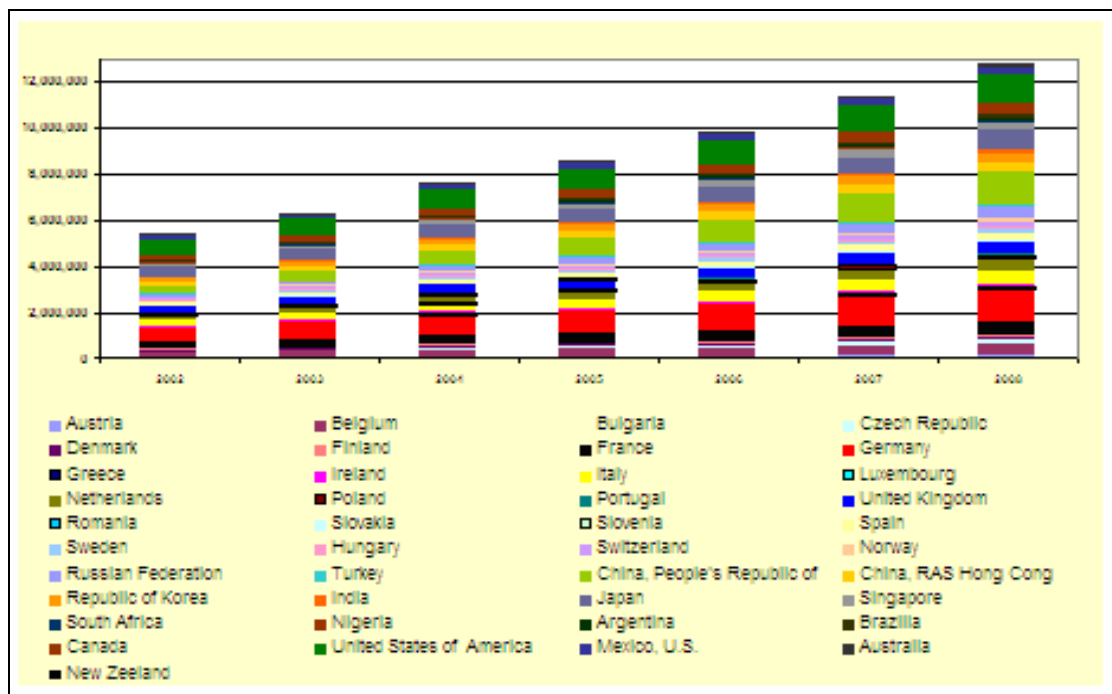


Figure 2. Dynamics of the total volume of – FOB export (million dollars), by contribution of participating countries in the international trade

the U.S. position as the main importer of the world, with a level of CIF imports³ that almost doubled in this period,

³ CIF (Cost, Insurance, Freight) is the price at the border of the importing country, which includes both parts of the FOB price and the costs of insurance and international transport.

rising from 1,202,430 million dollars to 2,165,980 million dollars, a volume that exceeds the German imports by 1.81 times in 2008 (1,198,965 million dollars) and by 1.91 times that of the Republic of China (1,131,620 million dollars), ranked 2 and 3 among the importing countries. If Germany maintained its second position throughout

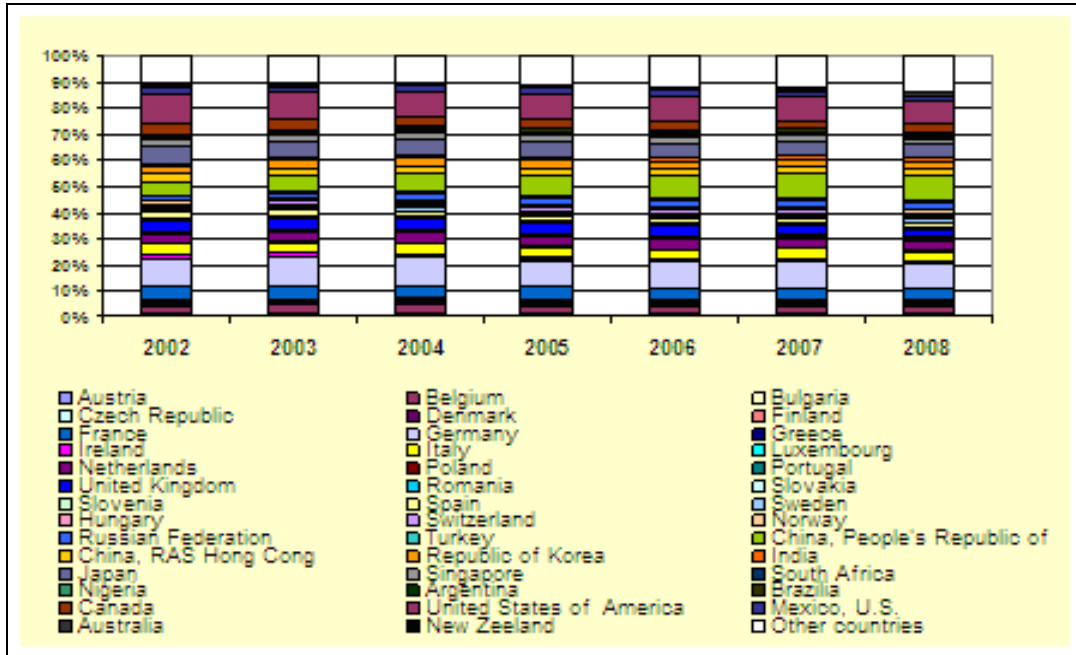


Figure 3. The share of international trade of some countries in the world trade – FOB export (%)

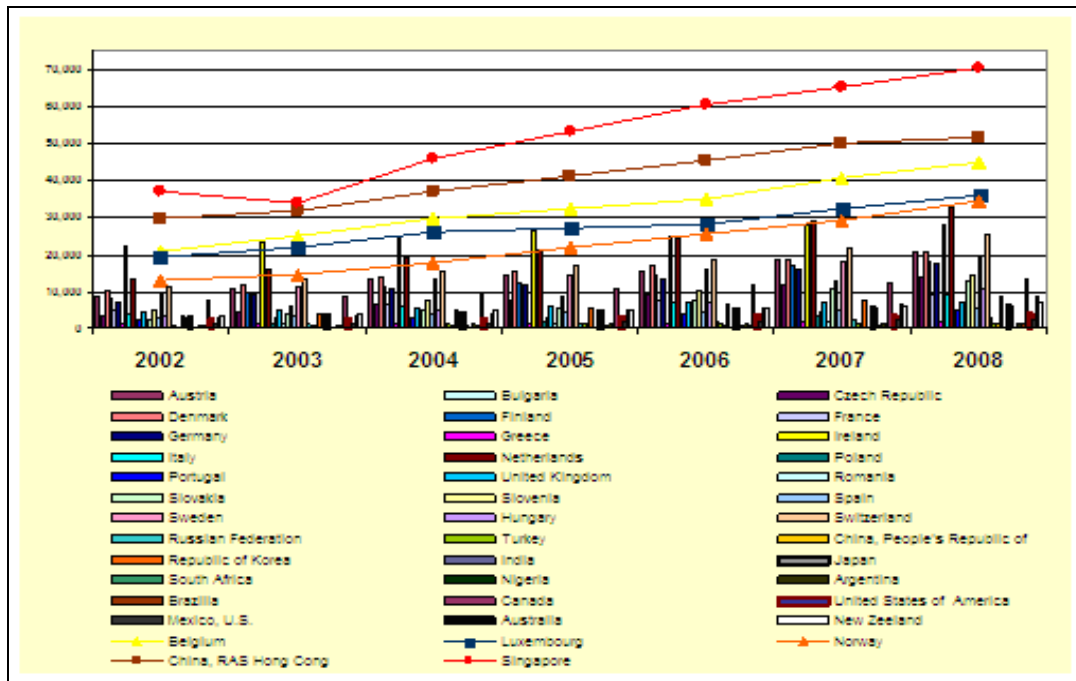


Figure 4. FOB export dynamics, (USD), per capita

the period, and even we can say that it maintained its position compared to the U.S., we can not say the same thing about Singapore, which in 2003 surpassed France and Japan, almost catching up with Germany, by 2008 (Table 1, Figures 5 and 6).

As for the contribution of countries participating in international imports, U.S., Germany and the Republic of China are clearly detached; in 2002 they had together 32.09% of the total global imports, and in 2008 they had 29.64%, while total imports increased by approx. 2.4

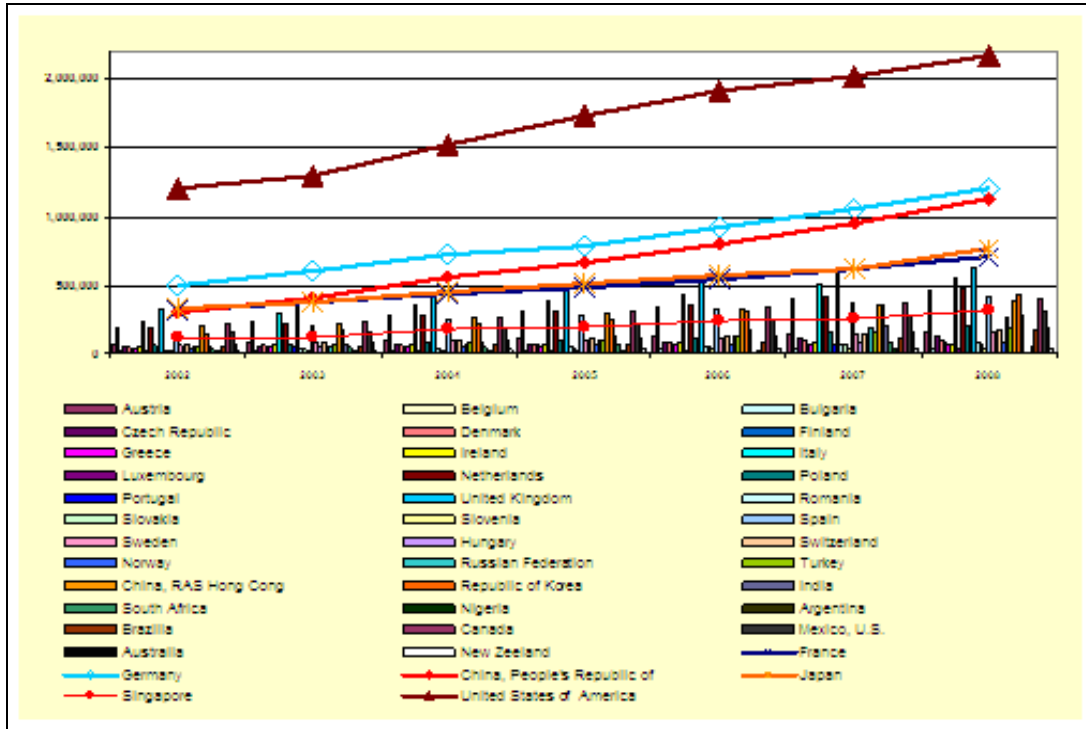


Figure 5. Dynamics of the international trade – FOB import (million dollars)

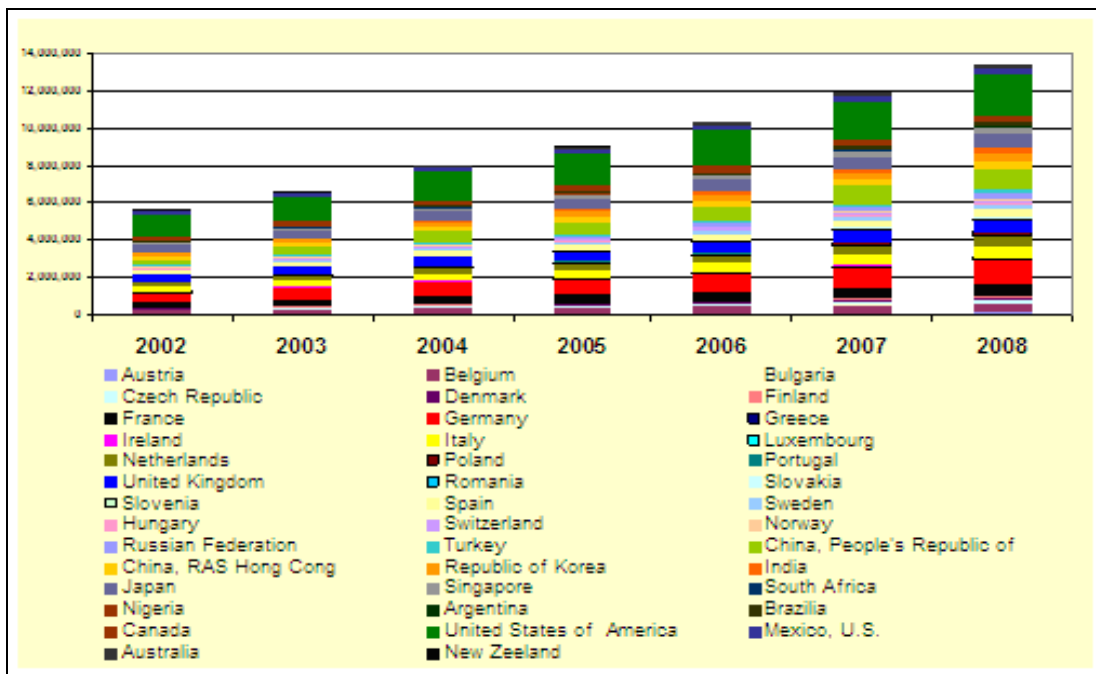


Figure 6. Dynamics of the total volume of – CIF import (million dollars), by contribution of participating countries in the international trade

times during this period of time.

Referring to Romania, we note that its imports have

registered an upward trend, making in 2008 imports amounting to 84,286.00 million dollars, with about 4.72

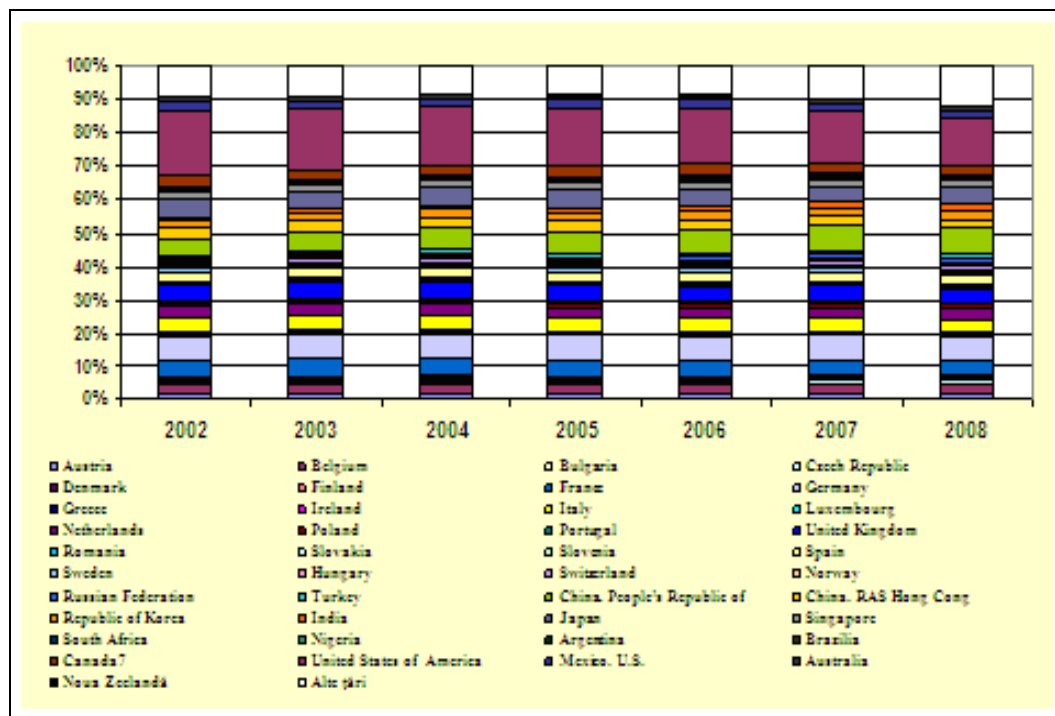


Figure 7. The share of international trade of some countries in the world trade – FOB import (%)

times more than in 2002, when its imports stood at 17,862.00 million dollars, a significant increase, but the level recorded in the year 2008 is 0.56% of the total global imports, while in 2002 it was only 0.29%.

As with exports, the U.S. stands out with 14.28% in total imports in 2008, almost double compared to Germany or the Republic of China, but we must consider that the U.S. has been on a downward trend if we take into account that in 2002 it had 19.39% of total imports.

If Germany maintained its share in total imports, we can not say the same thing about the Republic of China that stands out with an upward trend, rising steadily from 4.76% in 2002 to 7.46% in 2008 (Table 2 and Figure 7).

If we relate the value of annual imports to the number of inhabitants, we see that in general, throughout the period, following similar trends, just like the exports, the following countries had the highest level of annual imports/capita in 2008: Singapore (66,621.00 USD/capita), China RAS Hong Cong (55,501.00 USD/capita), Luxembourg (50,088.00 USD/capita), Belgium (44,003.00 USD/capita) and the Netherlands (29,815.00 USD/capita), basically except Norway which is surpassed by the Netherlands, the top of importing countries, taking into account the number of inhabitants, includes the same countries as in the export/capita (Table 3 and Figure 8). Romania registered the same upward trend; the import growth per capita was about 4.78 times in 2008 (3,919.00 USD/capita) compared to 2002 (820 USD/capita).

Although following the analysis made we captured the evolutionary trends of exports and imports made by the

economies of some countries, from different territorial and development regions, in absolute and relative sizes, overall and per capita, during 2002-2008, we consider that another indicator would better describe the degree of economic development and integration of a country's economy in the world economy in terms of international trade, and it refers to the trade balance, or even more relevant, the propensity to export of that country, which takes into account both the FOB exports and CIF imports. In this context, using the data from Table 1 on the trade balance we carried out the graphical representation in Figure 9, that points out some particular aspects of the U.S.

Although the level of exports and imports situated the U.S. at the forefront during the period under study, as we noted from previous conclusions, since 2002, every year, the U.S. balance was poor, which made that in the period 2002-2006, the cumulative negative difference between the amount of import and the amount of export be more than 500,000 million dollars, reaching in 2006 to over 880,000 million dollars and oscillating in the coming years around 860,000 million dollars, such phenomenon was also registered in the trade balance/capita, which depreciated from – 1,747.00 USD/capita in 2002, to – 2,840.00 USD/capita in 2008, after which in 2006 it reached the level of – 2,946.00 USD/capita (Table 3 and Figure 9). The United Kingdom experienced the same negative phenomenon of deficit balance accumulation in the trade balance in the period 2002 to 2006, with an of a positive balance, ahead of Japan in 2005, the Russian

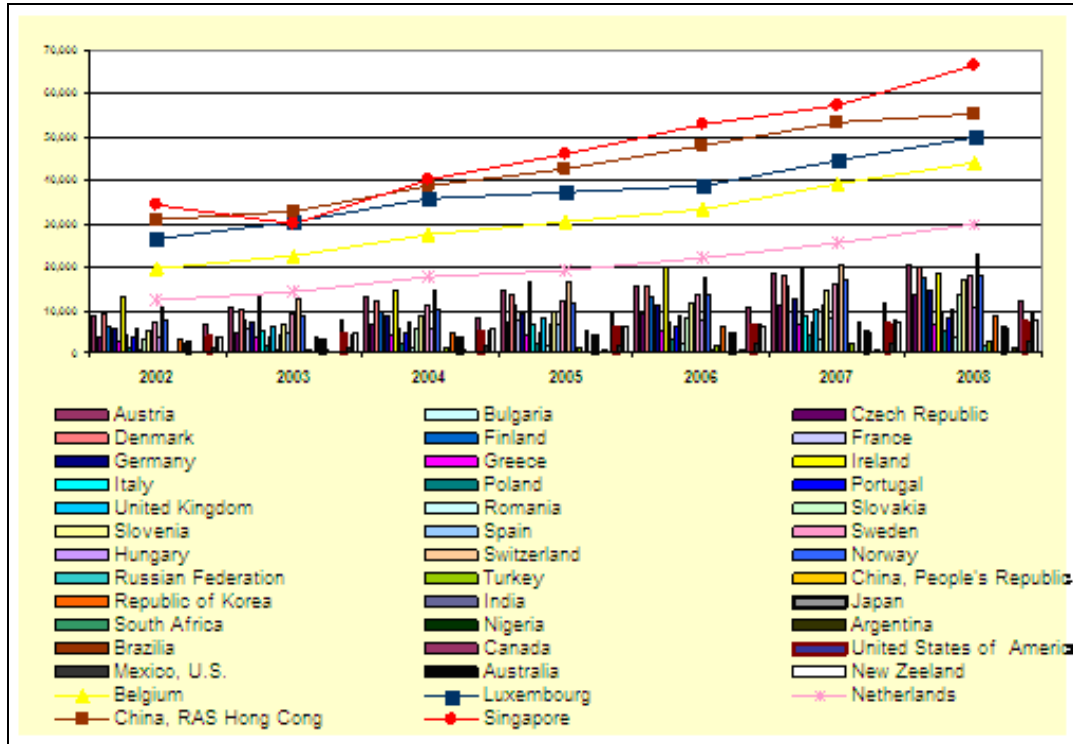


Figure 8. Dynamics of the international trade – CIF import (USD), per capita

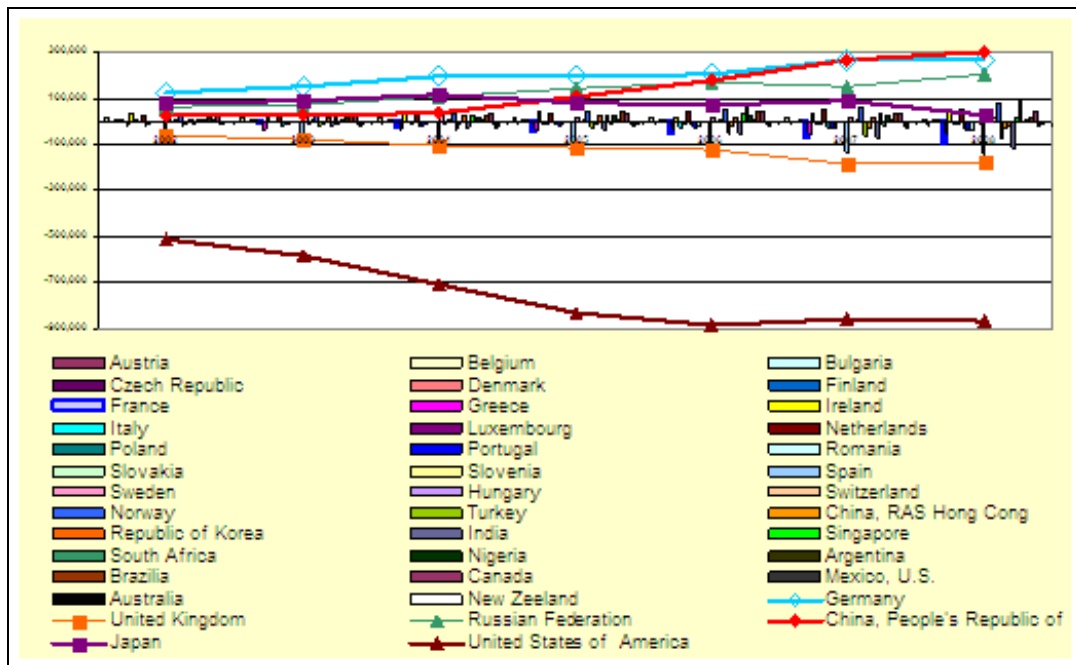


Figure 9. Dynamics of trade balance (million dollars)

increase between 2006 to 2008, even though not to such a worrying extent as the U.S.

Not the same can be said about the Republic of China that, since 2004, is distinguished by an increasing trend

Table 2. The share of international trade of selected countries in the world trade – FOB export, CIF import

No.	Country	2002		2003		2004		2005		2006		2007		2008	
		%FOB	%CIF	%FOB	%CIF	%FOB	%CIF	%FOB	%CIF	%FOB	%CIF	%FOB	%CIF	%FOB	%CIF
1.	Austria	1.16	1.18	1.24	1.22	1.28	1.25	1.22	1.21	1.16	1.15	1.20	1.18	1.16	1.14
2.	Belgium	3.55	3.22	3.61	3.24	3.61	3.28	3.48	3.23	3.28	3.09	3.32	3.13	3.19	3.10
3.	Bulgaria	0.09	0.13	0.11	0.15	0.12	0.17	0.12	0.18	0.13	0.20	0.14	0.23	0.15	0.25
4.	Czech Republic ⁸	0.63	0.66	0.69	0.71	0.79	0.79	0.81	0.77	0.85	0.82	0.94	0.90	0.98	0.93
5.	Denmark	0.92	0.79	0.92	0.78	0.89	0.77	0.87	0.75	0.82	0.75	0.79	0.75	0.77	0.73
6.	Finland	0.73	0.54	0.74	0.57	0.72	0.58	0.68	0.59	0.69	0.61	0.69	0.62	0.65	0.61
7.	France ^v	5.13	5.02	5.17	5.12	4.91	5.06	4.60	4.92	4.31	4.70	4.23	4.72	4.05	4.65
8.	Germany	10.07	7.94	10.63	8.36	10.73	8.24	10.12	7.90	10.02	8.10	10.17	7.99	9.80	7.90
9.	Greece	0.17	0.50	0.19	0.61	0.18	0.59	0.16	0.50	0.18	0.52	0.18	0.57	0.17	0.51
10.	Ireland	1.44	0.83	1.31	0.74	1.23	0.70	1.13	0.70	0.93	0.74	0.94	0.65	0.84	0.55
11.	Italy	4.18	3.98	4.23	4.11	4.16	4.08	3.86	3.90	3.72	3.87	3.84	3.86	3.67	3.68
12.	Luxembourg	0.14	0.19	0.14	0.19	0.14	0.19	0.13	0.18	0.13	0.17	0.12	0.17	0.12	0.17
13.	Netherlands	3.65	3.13	3.66	3.22	3.74	3.26	3.62	3.15	3.57	3.15	3.66	3.19	3.62	3.22
14.	Poland	0.67	0.89	0.76	0.94	0.88	1.02	0.92	1.02	0.99	1.12	1.07	1.23	1.13	1.35
15.	Portugal	0.42	0.62	0.43	0.56	0.39	0.57	0.33	0.54	0.38	0.58	0.39	0.58	0.38	0.59
16.	United Kingdom	4.54	5.41	4.30	5.26	4.02	5.19	3.84	4.89	3.82	4.81	3.34	4.71	3.07	4.16
17.	Romania	0.23	0.29	0.25	0.33	0.28	0.37	0.29	0.41	0.29	0.45	0.31	0.53	0.33	0.56
18.	Slovakia	0.24	0.28	0.31	0.33	0.32	0.35	0.33	0.37	0.37	0.41	0.44	0.47	0.48	0.49
19.	Slovenia	0.17	0.18	0.18	0.19	0.19	0.20	0.19	0.20	0.19	0.20	0.20	0.22	0.20	0.22
20.	Spain	2.03	2.64	2.21	2.88	2.14	2.96	1.98	2.91	1.90	2.86	1.90	2.90	1.86	2.75
21.	Sweden	1.34	1.08	1.45	1.16	1.45	1.16	1.35	1.13	1.31	1.11	1.28	1.13	1.23	1.09
22.	Hungary	0.57	0.61	0.60	0.66	0.65	0.68	0.64	0.67	0.66	0.68	0.72	0.71	0.72	0.70
23.	Switzerland	1.38	1.28	1.37	1.27	1.34	1.22	1.31	1.21	1.26	1.16	1.27	1.16	1.29	1.14
24.	Norway	0.98	0.56	0.95	0.54	0.96	0.55	1.06	0.55	1.08	0.56	1.06	0.60	1.11	0.58
25.	Russian Federation	1.75	0.74	1.78	0.72	2.14	0.87	2.50	1.00	2.69	1.21	2.70	1.51	3.13	1.76
26.	Turkey	0.57	0.80	0.66	0.91	0.73	1.11	0.74	1.00	0.73	1.17	0.82	1.29	0.88	1.33
27.	China, People's Republic of ^v	5.35	4.76	6.19	5.71	6.98	6.44	7.89	6.68	8.65	6.95	9.36	7.24	9.56	7.46
28.	China, RAS Hong Cong	3.29	3.35	3.16	3.20	3.05	3.11	3.00	3.03	2.83	2.94	2.65	2.78	2.43	2.56
29.	Republic of Korea	2.67	2.45	2.74	2.47	2.99	2.58	2.94	2.65	2.91	2.72	2.86	2.70	2.82	2.87
30.	India	0.81	0.91	0.81	0.98	0.84	1.08	1.03	1.41	1.08	1.54	1.12	1.63	1.19	1.93
31.	Japan	6.85	5.44	6.67	5.29	6.66	5.22	6.16	5.22	5.80	5.09	5.45	4.69	5.26	5.03
32.	Singapore	2.06	1.88	2.04	1.77	2.34	1.99	2.38	2.03	2.43	2.10	2.30	1.99	2.26	2.11
33.	South Africa	0.47	0.46	0.50	0.55	0.51	0.53	0.53	0.63	0.52	0.69	0.54	0.69	0.57	-
34.	Nigeria	0.25	0.12	0.28	0.15	0.37	0.16	0.44	0.15	0.41	0.20	0.50	0.28	0	-
35.	Argentina	0.42	0.14	0.42	0.19	0.41	0.26	0.42	0.29	0.42	0.30	0.43	0.34	0.47	0.38
36.	Brazil	0.99	0.80	1.03	0.70	1.13	0.76	1.22	0.79	1.23	0.84	1.23	0.96	1.32	1.20
37.	Canada ⁸	4.15	3.58	3.86	3.30	3.58	3.13	3.72	3.27	3.48	3.06	3.20	2.87	3.03	2.68
38.	United States of America	11.40	19.39	10.25	18.01	9.63	17.51	9.39	17.54	9.27	16.85	8.94	15.27	8.71	14.28

Table 2. Contd.

39. Mexico, U.S. ⁸	2.64	2.72	2.34	2.36	2.22	2.27	2.21	2.24	2.24	2.25	2.09	2.14	1.95	2.05
40. Australia	1.07	1.17	1.01	1.23	1.02	1.26	1.10	1.27	1.10	1.22	1.08	1.25	1.25	1.32
41. New Zealand	0.24	0.24	0.23	0.26	0.24	0.27	0.22	0.27	0.20	0.23	0.21	0.23	0.20	0.23
42. Other countries	10.59	9.10	10.58	9.06	10.04	8.22	11.07	8.65	11.97	8.83	12.32	9.94	14.00	11.74

Table 3. International trade: FOB Export, CIF Import and trade Balance, per capita

No.	Country	2002			2003			2004			2005			2006			2007			2008		
		FOB	CIF	Balance	FOB	CIF	Balance	FOB	CIF	Balance	FOB	CIF	Balance	FOB	CIF	Balance	FOB	CIF	Balance	FOB	CIF	Balance
1.	Austria	8,741	8,987	-246	10,789	10,875	-86	13,309	13,293	16	14,376	14,648	-272	15,706	15,776	-70	18,873	18,811	62	20,708	20,576	132
2.	Belgium	20,959	19,359	1,600	24,764	22,756	2,008	29,445	27,408	2,037	32,233	30,592	1,641	34,946	33,515	1,431	40,782	39,016	1,766	44,610	44,003	607
3.	Bulgaria	721	1,002	-281	955	1,379	-424	1,285	1,872	-587	1,519	2,350	-831	1,961	3,022	-1,061	2,412	3,907	-1,495	2,972	4,917	-1,945
4.	Czech Republic ^{vi}	3,773	3,994	-221	4,759	5,006	-247	6,575	6,696	-121	7,631	7,470	161	9,239	9,073	166	11,918	11,502	416	14,031	13,615	416
5.	Denmark	10,510	9,213	1,297	12,170	10,482	1,688	13,917	12,310	1,607	15,390	13,677	1,713	16,982	15,760	1,222	18,702	17,975	727	21,052	20,241	811
6.	Finland	8,591	6,470	2,121	10,085	7,989	2,096	11,603	9,653	1,950	12,427	11,138	1,289	14,582	13,103	1,479	16,998	15,426	1,572	18,279	17,382	897
7.	France ^{vii}	5,254	5,234	20	5,907	5,988	-81	6,693	7,066	-373	7,127	7,791	-664	7,675	8,516	-841	8,655	9,797	-1,142	9,487	11,061	-1,574
8.	Germany	7,429	5,966	1,463	9,116	7,332	1,784	11,027	8,686	2,341	11,827	9,439	2,388	13,618	11,194	2,424	16,085	12,831	3,254	17,809	14,586	3,223
9.	Greece	940	2,841	-1,901	1,202	4,043	-2,841	1,349	4,637	-3,288	1,395	4,480	-3,085	1,818	5,326	-3,508	2,096	6,705	-4,609	2,253	6,949	-4,696
10.	Ireland	22,321	13,140	9,181	23,365	13,477	9,888	25,109	14,798	10,311	26,411	16,669	9,742	24,14	19,974	4,940	27,869	19,460	8,409	28,033	18,371	9,662
11.	Italy	4,423	4,290	133	5,215	5,179	36	6,086	6,116	-30	6,420	6,625	-205	7,054	7,472	-418	8,430	8,599	-169	9,165	9,325	-160
12.	Luxembourg	19,511	26,259	-6,748	21,965	30,196	-8,231	25,917	35,806	-9,889	27,019	37,372	-10,353	28,344	38,868	-10,524	32,042	44,336	-12,294	35,714	50,088	-14,374
13.	Netherlands	13,780	12,006	1,774	16,033	14,434	1,599	19,505	17,407	2,098	21,463	19,055	2,408	24,368	21,860	2,508	29,074	25,676	3,398	33,015	29,815	3,200
14.	Poland	1,062	1,428	-366	1,392	1,766	-374	1,942	2,312	-370	2,315	2,615	-300	2,912	3,340	-428	3,642	4,263	-621	4,428	5,379	-951
15.	Portugal	2,541	3,814	-1,273	3,052	4,059	-1,007	3,145	4,688	-1,543	3,061	5,086	-2,025	4,046	6,189	-2,143	4,695	7,137	-2,442	5,383	8,466	-3,083
16.	United Kingdom	4,678	5,679	-1,001	5,135	6,427	-1,292	5,725	7,570	-1,845	6,224	8,096	-1,872	7,080	9,050	-1,970	7,128	10,199	-3,071	7,484	10,302	-2,818
17.	Romania	637	820	-183	811	1,105	-294	1,084	1,507	-423	1,282	1,871	-589	1,498	2,368	-870	1,879	3,269	-1390	2,310	3,919	-1609
18.	Slovakia	2,691	3,245	-554	4,066	4,398	-332	5,112	5,642	-530	5,925	6,698	-773	7,766	8,566	-800	10,697	11,500	-803	13,145	13,710	-565
19.	Slovenia	5,205	5,494	-289	6,435	6,983	-548	8,060	8,919	-859	9,084	9,962	-878	10,493	11,507	-1,014	13,277	14,741	-1,464	14,617	16,969	-2,352
20.	Spain	3,015	3,992	-977	3,800	5,079	-1,279	4,230	5,984	-1,754	4,436	6,679	-2,243	4,689	7,166	-2,477	5,447	8,447	-3,000	5,972	8,969	-2,997
21.	Sweden	9,155	7,513	1,642	11,537	9,489	2,048	13,640	11,150	2,490	14,403	12,315	2,088	16,180	13,913	2,267	18,333	16,371	1,962	19,901	17,948	1,953
22.	Hungary	3,397	3,719	-322	4,306	4,819	-513	5,345	5,905	-560	6,156	6,513	-357	7,348	7,644	-296	9,245	9,344	-99	10,747	10,638	109
23.	Switzerland	11,512	10,854	658	13,553	12,835	718	15,743	14,710	1,033	17,393	16,522	871	18,891	17,604	1,287	21,975	20,424	1,551	25,278	22,850	2,428
24.	Norway	13,122	7,685	5,437	14,803	8,666	6,137	17,686	10,403	7,283	22,060	11,858	10,202	25,649	13,479	12,170	29,356	16,974	12,382	34,427	18,312	16,115
25.	Russian Federation	741	320	421	880	366	514	1,269	528	741	1,686	689	997	2,117	968	1,149	2,484	1,410	1,074	3,296	1,882	1,414
26.	Turkey	496	713	-217	653	920	-267	843	1,317	-474	983	1,353	-370	1,111	1,813	-702	1,448	2,294	-846	1,765	2,698	-933
27.	China, People's Republic of ^{viii}	251	228	23	336	317	19	451	426	25	579	502	77	739	604	135	924	726	198	1,078	854	224
28.	China, RAS Hong Cong	29,512	30,626	-1,114	31,744	32,898	-1,154	36,827	38,505	-1,678	41,099	42,547	-1,448	45,259	47,812	-2,553	49,946	53,314	-3,368	51,811	55,501	-3,690
29.	Republic of Korea	3,410	3,193	217	4,063	3,749	314	5,308	4,694	614	5,948	5,463	485	6,711	6,379	332	7,661	7,354	307	8,683	8,956	-273

Table 3. Contd.

30. India	48	55	-7	54	67	-13	65	85	-20	90	126	-36	108	156	-48	129	191	-62	155	255	-100
31. Japan	3,269	2,645	624	3,697	3,001	696	4,417	3,549	868	4,645	4,021	624	5,086	4,535	551	5,557	4,854	703	6,158	5,972	186
32. Singapore	37,035	34,450	2,585	33,901	30,081	3,820	45,874	40,088	5,786	53,037	46,201	6,836	60,402	53,047	7,355	65,059	57,208	7,851	70,459	66,621	3,838
33. South Africa	632	622	10	778	881	-103	922	975	-53	1,089	1,314	-225	1,230	-	1,230	1,457	1,847	-390	1,749	-	1,749
34. Nigeria	125	62	63	160	88	72	237	108	129	321	116	205	338	165	173	451	260	191	-	-	-
35. Argentina	677	237	440	769	360	409	892	579	313	1,041	740	301	1,194	876	318	1,416	1,135	281	1,778	1,446	332
36. Brazil	346	284	62	410	284	126	518	356	162	635	416	219	738	513	225	849	669	180	1,015	935	80
37. Canada ¹¹	8,036	7,067	62	8,654	7,588	126	9,435	8,462	162	11,138	10,020	219	11,948	10,704	225	12,657	11,544	180	13,579	12,227	80
38. United States of America	2,384	4,131	-1,747	2,465	4,431	-1,966	2,745	5,116	-2,371	3,042	5,809	-2,767	3,471	6,417	-2,946	3,848	6,675	-2,827	4,273	7,113	-2,840
39. Mexico, U.S. ¹¹	1,557	1,634	-77	1,599	1,648	-49	1,767	1,844	-77	1,998	2,069	-71	2,312	2,365	-53	2,555	2,660	-105	2,710	2,884	-174
40. Australia	3,300	3,688	-388	3,626	4,515	-889	4,287	5,426	-1,139	5,250	6,214	-964	5,986	6,761	-775	6,720	7,874	-1,154	8,796	9,416	-620
41. New Zealand	3,735	3,908	-173	4,259	4,791	-532	5,048	5,756	-708	5,392	6,510	-1,118	5,472	6,446	-974	6,416	7,354	-938	7,114	7,997	-883

Source: Statistical Yearbook 2009, National Institute of Statistics

Federation in 2007 and Germany in 2008. For the Republic of China trade balance surplus was an element of accumulation, which led, under a profitable export, to increase in the foreign reserves and therefore to the possibility of paying future imports.

Japan, after being distinguished by a steady positive balance on almost the entire period, its level, although positive, was very much diminished in 2008.

We cannot help noticing that there are countries for which foreign trade almost does not matter in comparison with other countries, for example India, which, although with a very small trade deficit in 2008 of only 100 million dollars, had exports of only 155 million dollars and imports of 255 million dollars.

We believe that finding the balance between export and import should be a constant concern of any national economy, each country aiming, in the fullest possible extent, to cover imports by a relatively equal level of exports.

Thus, the coverage rate of imports by exports,

determined as the ratio between the level of exports (expressed in FOB prices) and imports (expressed in CIF prices), indicates the balance position of a country's international trade. From this point of view, in 2008 we can notice the following countries in balance: Austria with a coverage rate of imports of 100.64, Belgium with 101.38 and Hungary with 101.02%, as a strong trade surplus was registered by Norway, 188.01%, the Russian Federation, 175.4% or Ireland 152.59%, and the largest trade deficit, of 32.42% is registered by Greece, followed by Romania with 58.94%, U.S. with a coverage deficit of 60.07%, Bulgaria, 60.44% and India with 60.54%.

NATIONAL DISPARITIES REGARDING INTERNATIONAL TRADE

Given the issues highlighted by the analysis of foreign trade development trends of the 41 participating countries for which data were publicly available at the time of the study, trends that

revealed positive performance or, conversely, negative performance for some of them in terms of export, import and trade balance, with obvious differences, a hierarchy was intended to be achieved, on the one hand, between the countries under study, and on the other hand, to identify the changes that took place in this hierarchy in 2008 compared to 2002.

THE METHOD AND DATABASE

In order to develop territorial hierarchies, the usual multicriteria methods have been used, involving the combination of a set of relevant statistical indicators, allowing a more complete characterization of each territorial unit. For a description of export, in addition to its annual level, its share in total exports (% FOB - Total) has been also used, plus the level of per capita exports (FOB/capita), as, for characterizing national imports, in addition to its level and its share in total world imports, the level of imports per capita for each country has been considered, and for the trade balance, its balance per capita has been used.

The multicriteria methods used are based on

aggregation of the indicators considered in a single synthetic indicator, previously providing their normalization, especially since the indicators are usually heterogeneous, being expressed in different measurement units (Baron and Biji (coord.), (2004)).

The method mostly used in this perspective is the actual rank method which takes into account the relative distances between the individual values of indicators.

The hierarchical process involves building a matrix $X(m \times n)$ of statistical indicators included in the analysis, noted I_1, I_2, \dots, I_m , corresponding to territorial units marked with U_1, U_2, \dots, U_n , matrix defined as follows:

$$X = \begin{matrix} & \begin{matrix} I_1 & I_2 & \dots & I_j & \dots & I_m \end{matrix} \\ \begin{matrix} U_1 \\ U_2 \\ \vdots \\ U_i \\ \vdots \\ U_n \end{matrix} & \begin{bmatrix} x_{11} & x_{12} & \dots & x_{1j} & \dots & x_{1m} \\ x_{21} & x_{22} & \dots & x_{2j} & \dots & x_{2m} \\ \vdots & \vdots & \dots & \vdots & \dots & \vdots \\ x_{i1} & x_{i2} & \dots & x_{ij} & \dots & x_{im} \\ \vdots & \vdots & \dots & \vdots & \dots & \vdots \\ x_{n1} & x_{n2} & \dots & x_{nj} & \dots & x_{nm} \end{bmatrix} \end{matrix} \quad (1)$$

where: x_{ij} – the level of indicator j for the territorial unit i .

In this context, we mention that there are at least two variants of the method for setting the hierarchy, namely for building the rank matrix: ranking method and actual rank method.

In the case of rank method, the rank matrix involves assigning each individual value x_{ij} a partial rank r_{ij} , according to the order relation established: from rank 1 for the best performing unit, up to rank n , for the territorial unit which registers the lowest quality level. The method is easy to apply, but through the double leveling of variable size of differences between units, determined by their replacement with an arithmetic progression whose ratio is 1, the quality of information is impaired, and the different distances between successive units are systematically replaced with difference 1 between the successive ranks.

If we use the actual rank method, the actual partial ranks are first established for each territorial unit i and for each indicator j , depending on the situation, as follows:

a. If the indicator reflects a situation more performing as its values are higher, the **actual partial rank** is calculated by the formula:

$$r_{ij} = n - \frac{x_{ij} - x_j^{\min}}{x_j^{\max} - x_j^{\min}} \cdot (n - 1) \quad (2)$$

where:

x_{ij} = the level of indicator j for the territorial unit i ;

x_j^{\min} = the level of indicator j for the territorial unit with minimum performance;

x_j^{\max} = the level of indicator j for the territorial unit with maximum performance;

n = total number of territorial units analyzed;

m = number of indicators included in the analysis;

b. If the indicator reflects a situation more performing as its values are lower, the **actual partial rank** is calculated by the formula:

$$r_{ij} = n - \frac{x_j^{\max} - x_{ij}}{x_j^{\max} - x_j^{\min}} \cdot (n - 1) \quad (3)$$

Based on the **actual partial ranks** the actual average ranks are determined for each territorial unit i , as the arithmetic mean, as follows:

$$\bar{r}_i = \frac{\sum_{j=1}^m r_{ij}}{m} \quad (4)$$

Thus, the actual final rank of each territorial unit shall be determined from the territorial unit with the lowest average rank, which indicates the maximum performance, namely 1st place, to the territorial unit with the highest average rank, which indicates the minimum performance, respectively the last place, n .

RESULTS

The comparative analysis of the graphical representations of absolute indicators of disparities between the best performing level and the levels of the other countries relative to 2002 and 2008 from the Figures 10 to 12, and their calculated values in Table 4, confirm what could be found intuitively in the first part of the study.

Thus, in 2002 the best performing country in terms of absolute volume of FOB exports was the U.S., with remarkable differences between the same and the other states. It may be noted that more than 60% of the analyzed countries registered in 2002 less than 1% of the value volume of exports made by U.S.; this category also included Romania, even in a slacker position, with a level of FOB export of only 0.2% of the U.S. exports. Moreover, remarkable levels were registered only by Germany, 88% compared to the U.S. exports, Japan, 60%, the Republic of China 47%, France 45% or United Kingdom 40% (Table 4).

In 2008, the best performing country in terms of FOB exports is Germany which, given that the U.S. experienced a relative increase compared to 2002 by almost 90%, it managed to outrun it; the FOB export of the U.S. represented in 2008, 89 % of the German exports. Almost a similar performance was experienced by the Republic of China whose export compared to that of Germany was of 98%. Japan, France and the United Kingdom, while remaining in the first echelon, are losing ground in terms of the relative distance compared to the best performing exporting country. Due to the increase in FOB exports for all the countries, we can say that the countries with insignificant export, less than 1% compared to Germany, fell to approx. 41%.

If we perform the analysis in terms of the absolute volume of CIF imports, we can note again that the best performing country was the U.S., with major differences between it and the other countries participating in the study. We can notice that in 2002, more than 65% of the analyzed countries imported less than 1% of the value volume of the U.S. imports. Again, the above-mentioned category also included Romania, even in a slacker position, with a level of CIF imports of only 0.1% of the U.S. imports, actually, just like other seven countries (Bulgaria, Slovakia, Slovenia, Luxembourg, Nigeria, New

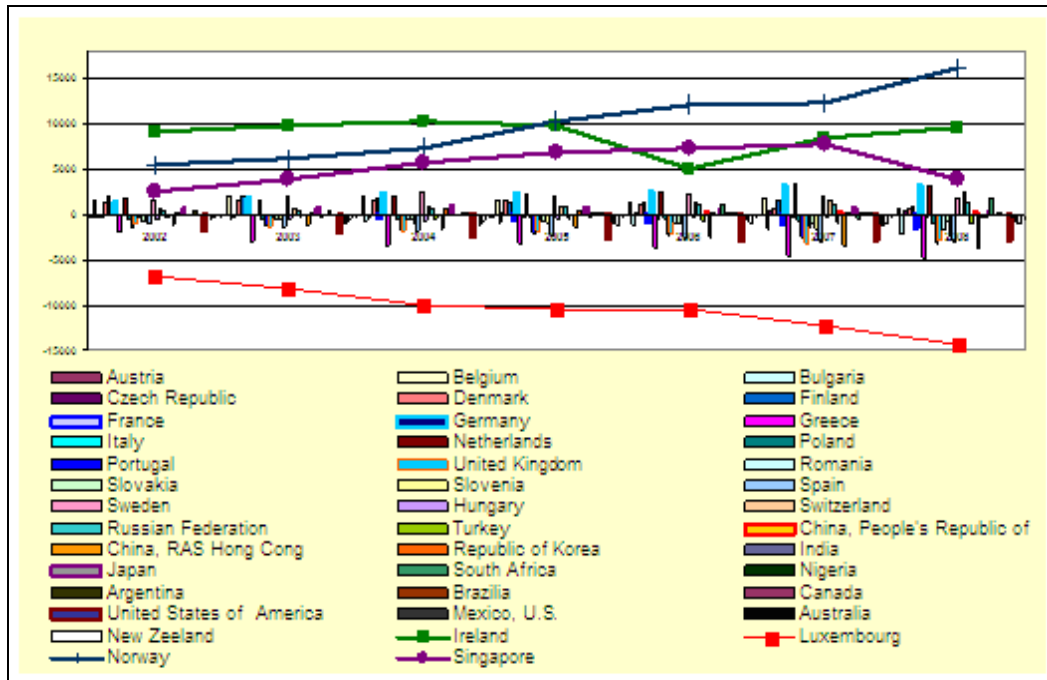


Figure 10. Dynamics of trade balance (million USD), per capita

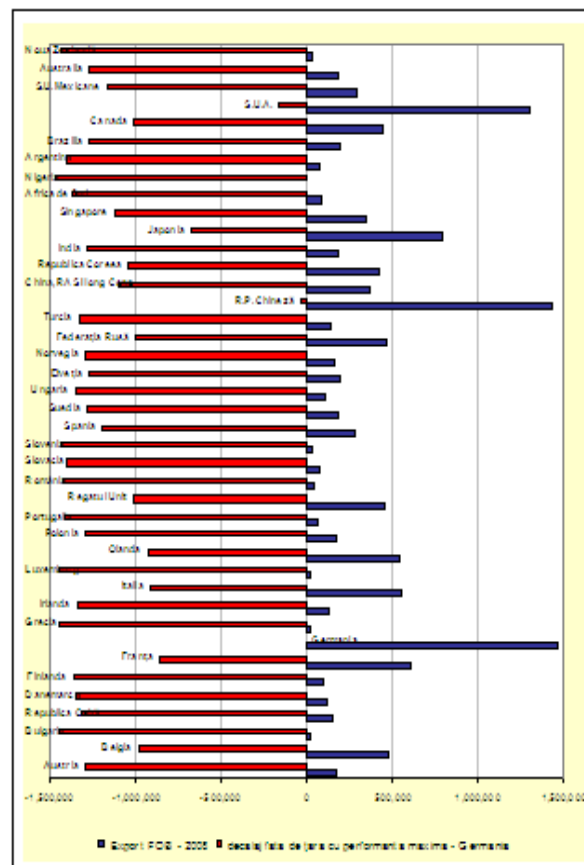
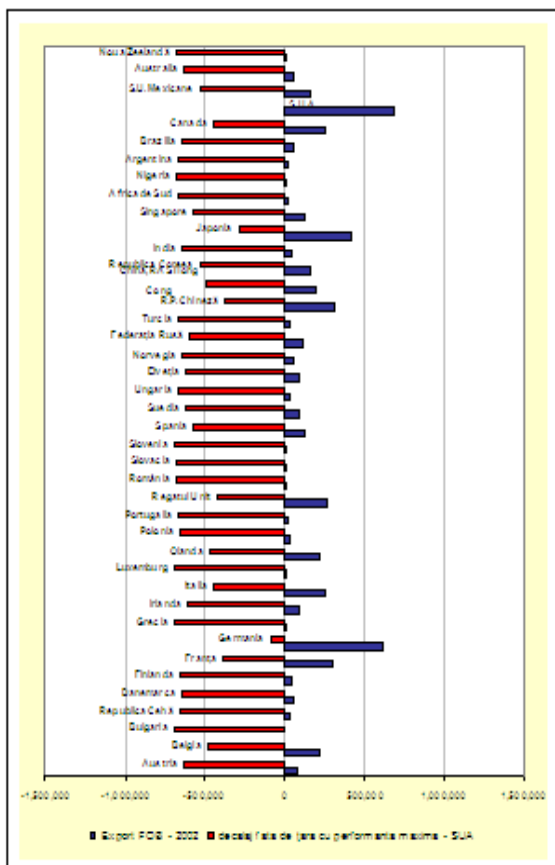


Figure 11. Differences in FOB exports of the countries participating in international trade compared to the country with maximum performance.

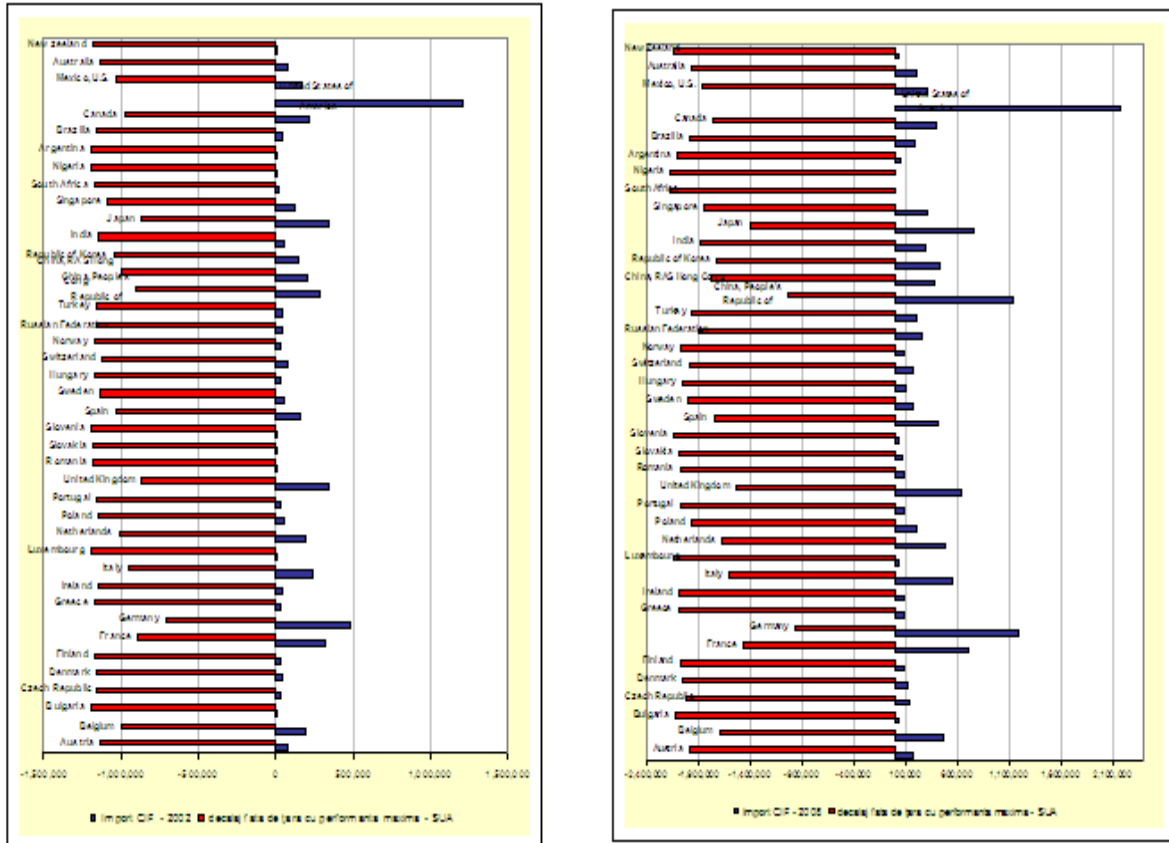


Figure 12. Differences in CIF imports of the countries participating in international trade compared to the country with maximum performance.

Zealand, Argentina). Compared with the U.S., only Germany showed remarkable levels, 41% compared to the CIF imports of the U.S., Japan and the United Kingdom, 28% each, the Republic of China 25% (Table 4).

In 2008, with a level of imports increased by over 80% compared to 2002, the U.S. remains the world market leader, followed far away by Germany, with a level of imports of 55% of U.S. imports; almost a similar performance was experienced by the Republic of China, whose import compared to the U.S. was 52%. Next there comes, in order, Japan with 35%, the United Kingdom with 29% and Belgium with 22% of total U.S. imports. The other countries have insignificant levels of imports, but the share of those with a level below 1% decreased notably.

The multicriteria ranking of the 41 economies selected by aggregating the three categories of indicators deemed to describe the foreign trade activity of the selected countries, namely: export by its annual level (FOB), its share in total exports (% FOB - Total), the level of per capita exports (FOB/capita), import by its level (CIF), its share in total imports worldwide (% CIF – Total), the level of per capita imports (CIF/capita) for each country in part

and the trade balance by the absolute level (Balance) and its per capita balance (Balance/capita) was performed in two stages, because the method of determining the best performing level required the use of different methods in establishing hierarchies.

Therefore, in a first step, hierarchies were made on the categories of indicators establishing ranks and changes recorded in hierarchy in 2008 compared to 2002; the results obtained are shown in Tables 5, 6 and 7.

Looking strictly from the perspective of national exports of the 41 countries in the context of an obvious increase in the export volume, we can see that only 15 countries have surpassed their position in the hierarchy in 2008 compared to 2002; 3 maintained their position, and the rest, totaling 23, lost their position, and in 2008 held an inferior place to that of 2002. The result of the hierarchy from aggregation of the three indicators that describe exports placed Germany on the first place in 2008, which ranked 2nd in 2002; China on the 2nd place, with a remarkable leap from the 9th position held in 2002; the U.S. on the 3rd place after being ranked 1st in 2002, Singapore maintained its 4th position and Belgium the fifth position, up to the sixth place, thus outrunning Japan, ranked 5th in 2002 and ranked only 8th in 2008. When

Table 4. Structural changes in the international Trade volume – FOB Export, CIF Import (million dollars)

No.	Country	2002						2008									
		FOB export			CIF import			FOB export			CIF import						
		mil. \$ U.S.	Differences compared to the country with maximum performance		mil. \$ U.S.	Differences compared to the country with maximum performance		mil. \$ U.S.	Differences compared to the country with maximum performance		Change compared to 2002	mil. \$ U.S.	Differences compared to the country with maximum performance		Change compared to 2002		
			Absolute differences	Territorial index		Absolute differences	Territorial index		Absolute differences	Territorial index			Absolute differences	Territorial index		mil.\$	%
1.	Austria	70,891	-622,969	0.10	72,881	-1,129,549	0.06	173,950	-1,289,931	0.12	103059	145.38	172,840	-1,993,140	0.08	99,959	137.15
2.	Belgium	215,880	-477,980	0.31	199,393	-1,003,037	0.17	477,331	-986,550	0.33	261451	121.11	470,828	-1,695,152	0.22	271,435	136.13
3.	Bulgaria	5,749	-688,111	0.01	7,987	-1,194,443	0.01	22,587	-1,441,294	0.02	16838	292.89	37,369	-2,128,611	0.02	29,382	367.87
4.	Czech Republic ^x	38,488	-655,372	0.06	40,736	-1,161,694	0.03	145,921	-1,317,960	0.10	107433	279.13	141,593	-2,024,387	0.07	100,857	247.59
5.	Denmark	56,230	-637,630	0.08	49,288	-1,153,142	0.04	115,785	-1,348,096	0.08	59555	105.91	111,326	-2,054,654	0.05	62,038	125.87
6.	Finland	44,671	-649,189	0.06	33,642	-1,168,788	0.03	96,879	-1,367,002	0.07	52208	116.87	92,125	-2,073,855	0.04	58,483	173.84
7.	France ^x	312,436	-381,424	0.45	311,240	-891,190	0.26	605,284	-858,597	0.41	292848	93.73	705,665	-1,460,315	0.33	394,425	126.73
8.	Germany	612,857	-81,003	0.88	492,112	-710,318	0.41	1,463,881	0	1.00	851024	138.86	1,198,965	-967,015	0.55	706,853	143.64
9.	Greece	10,315	-683,545	0.01	31,164	-1,171,266	0.03	25,231	-1,438,650	0.02	14916	144.60	77,831	-2,088,149	0.04	46,667	149.75
10.	Ireland	87,498	-606,362	0.13	51,508	-1,150,922	0.04	126,150	-1,337,731	0.09	38652	44.17	82,670	-2,083,310	0.04	31,162	60.50
11.	Italy	254,219	-439,641	0.37	246,613	-955,817	0.21	548,955	-914,926	0.37	294736	115.94	558,543	-1,607,437	0.26	311,930	126.49
12.	Luxembourg	8,585	-685,275	0.01	11,554	-1,190,876	0.01	17,857	-1,446,024	0.01	9272	108.00	25,044	-2,140,936	0.01	13,490	116.76
13.	Netherlands	222,406	-471,454	0.32	193,784	-1,008,646	0.16	541,445	-922,436	0.37	319039	143.45	488,960	-1,677,020	0.23	295,176	152.32
14.	Poland	41,032	-652,828	0.06	55,141	-1,147,289	0.05	168,705	-1,295,176	0.12	127673	311.15	204,926	-1,961,054	0.09	149,785	271.64
15.	Portugal	25,536	-668,324	0.04	38,326	-1,164,104	0.03	57,057	-1,406,824	0.04	31521	123.44	89,736	-2,076,244	0.04	51,410	134.14
16.	United Kingdom	276,315	-417,545	0.40	335,458	-866,972	0.28	458,760	-1,005,121	0.31	182445	66.03	631,526	-1,534,454	0.29	296,068	88.26
17.	Romania	13,876	-679,984	0.02	17,862	-1,184,568	0.01	49,674	-1,414,207	0.03	35798	257.99	84,286	-2,081,694	0.04	66,424	371.87
18.	Slovakia	14,478	-679,382	0.02	17,460	-1,184,970	0.01	70,982	-1,392,899	0.05	56504	390.27	74,034	-2,091,946	0.03	56,574	324.02
19.	Slovenia	10,357	-683,503	0.01	10,933	-1,191,497	0.01	29,233	-1,434,648	0.02	18876	182.25	33,937	-2,132,043	0.02	23,004	210.41
20.	Spain	123,563	-570,297	0.18	163,575	-1,038,855	0.14	277,695	-1,186,186	0.19	154132	124.74	417,049	-1,748,931	0.19	253,474	154.96
21.	Sweden	81,298	-612,562	0.12	66,717	-1,135,713	0.06	183,093	-1,280,788	0.13	101795	125.21	165,124	-2,000,856	0.08	98,407	147.50
22.	Hungary	34,512	-659,348	0.05	37,787	-1,164,643	0.03	107,466	-1,356,415	0.07	72954	211.39	106,380	-2,059,600	0.05	68,593	181.53
23.	Switzerland	83,922	-609,938	0.12	79,129	-1,123,301	0.07	192,111	-1,271,770	0.13	108189	128.92	173,657	-1,992,323	0.08	94,528	119.46
24.	Norway	59,575	-634,285	0.09	34,889	-1,167,541	0.03	165,251	-1,298,630	0.11	105676	177.38	87,896	-2,078,084	0.04	53,007	151.93
25.	Russian Federation	106,705	-587,155	0.15	46,161	-1,156,269	0.04	467,666	-996,215	0.32	360961	338.28	267,021	-1,898,959	0.12	220,860	478.46
26.	Turkey	34,561	-659,299	0.05	49,663	-1,152,767	0.04	132,003	-1,331,878	0.09	97442	281.94	201,823	-1,964,157	0.09	152,160	306.39
27.	China, People's Republic of ^{xi}	325,591	-368,269	0.47	295,171	-907,259	0.25	1,428,660	-35,221	0.98	1103069	338.79	1,131,620	-1,034,360	0.52	836,449	283.38
28.	China, RAS Hong Cong	200,092	-493,768	0.29	207,644	-994,786	0.17	362,675	-1,101,206	0.25	162583	81.25	388,505	-1,777,475	0.18	180,861	87.10
29.	Republic of Korea	162,470	-531,390	0.23	152,126	-1,050,304	0.13	422,007	-1,041,874	0.29	259537	159.74	435,275	-1,730,705	0.20	283,149	186.13
30.	India	49,232	-644,628	0.07	56,495	-1,145,935	0.05	177,603	-1,286,278	0.12	128371	260.75	293,377	-1,872,603	0.14	236,882	419.30
31.	Japan	416,730	-277,130	0.60	337,209	-865,221	0.28	786,434	-677,447	0.54	369704	88.72	762,575	-1,403,405	0.35	425,366	126.14
32.	Singapore	125,177	-568,683	0.18	116,441	-1,085,989	0.10	338,201	-1,125,680	0.23	213024	170.18	319,781	-1,846,199	0.15	203,340	174.63
33.	South Africa	28,713	-665,147	0.04	28,261	-1,174,169	0.02	84,488	-1,379,393	0.06	55775	194.25	0	-2,165,980	0.00	-28,261	-100.00

Table 4. Contd.

34. Nigeria	15,107	-678,753	0.02	7,547	-1,194,883	0.01	0	-1,463,881	0.00	-15107	-100.00	0	-2,165,980	0.00	-7,547	-100.00
35. Argentina	25,709	-668,151	0.04	8,990	-1,193,440	0.01	70,588	-1,393,293	0.05	44879	174.57	57,413	-2,108,567	0.03	48,423	538.63
36. Brazil	60,362	-633,498	0.09	49,603	-1,152,827	0.04	197,942	-1,265,939	0.14	137580	227.92	182,408	-1,983,572	0.08	132,805	267.74
37. Canada ¹⁴	252,408	-441,452	0.36	221,961	-980,469	0.18	452,70	-1,011,711	0.31	199762	79.14	407,169	-1,758,811	0.19	185,208	83.44
38. United States of America	693,860	0	1.00	1,202,430	0	1.00	1,301,110	-162,771	0.89	607250	87.52	2,165,980	0	1.00	963,550	80.13
39. Mexico, U.S. ¹⁴	160,682	-533,178	0.23	168,679	-1,033,751	0.14	291,827	-1,172,054	0.20	131145	81.62	310,561	-1,855,419	0.14	141,882	84.11
40. Australia	65,036	-628,824	0.09	72,693	-1,129,737	0.06	187,362	-1,276,519	0.13	122326	188.09	200,563	-1,965,417	0.09	127,870	175.90
41. New Zealand	14,380	-679,480	0.02	15,047	-1,187,383	0.01	30,591	-1,433,290	0.02	16211	112.73	34,385	-2,131,595	0.02	19,338	128.52

Table 5. Hierarchy of selected countries participating in the international Trade: FOB export by the relative distance method, Comparative situation

No. Country	2002							2008							Final rank		
	FOB	% Total exports	FOB/capita	Relative distances for:			Average relative distance	FOB	% Total exports	FOB/capita	Relative distances for:			Average relative distance	2002	2008	Change 2008/2002
				FOB	% Total exports	FOB/capita					FOB	% Total exports	FOB/capita				
1. Austria	70,891	1.16	8,741	37.21	37.09	31.60	35.30	173,950	1.16	20,708	36.25	41.00	29.24	35.50	21	22	↓
2. Belgium	215,880	3.55	20,959	28.79	28.36	18.39	25.18	477,331	3.19	44,610	27.96	27.98	15.67	23.87	6	5	↑
3. Bulgaria	5,749	0.09	721	41.00	41.00	40.27	40.76	22,587	0.15	2,972	40.38	40.39	39.31	40.03	40	39	↑
4. Czech Republic ^{xii}	38,488	0.63	3,773	39.10	39.03	36.97	38.37	145,921	0.98	14,031	37.01	37.00	33.03	35.68	26	24	↑
5. Denmark	56,230	0.92	10,510	38.07	37.97	29.69	35.24	115,785	0.77	21,052	37.84	37.86	29.05	34.91	20	21	↓
6. Finland	44,671	0.73	8,591	38.74	38.66	31.76	36.39	96,879	0.65	18,279	38.35	38.35	30.62	35.77	23	25	↓
7. France ^{xiii}	312,436	5.13	5,254	23.17	22.59	35.37	27.04	605,284	4.05	9,487	24.46	24.47	35.61	28.18	7	9	↓
8. Germany	612,857	10.07	7,429	5.71	4.54	33.02	14.42	1,463,881	9.8	17,809	1.00	1.00	30.89	10.96	2	1	↑
9. Greece	10,315	0.17	940	40.73	40.71	40.04	40.49	25,231	0.17	2,253	40.31	40.31	39.72	40.11	38	40	↑
10. Ireland	87,498	1.44	22,321	36.25	36.07	16.91	29.74	126,150	0.84	28,033	37.55	37.57	25.09	33.40	13	17	↓
11. Italy	254,219	4.18	4,423	26.56	26.06	36.27	29.63	548,955	3.67	9,165	26.00	26.02	35.80	29.27	12	10	↑
12. Luxembourg	8,585	0.14	19,511	40.84	40.82	19.95	33.87	17,857	0.12	35,714	40.51	40.51	20.72	33.92	16	19	↓
13. Netherlands	222,406	3.65	13,780	28.41	28.00	26.15	27.52	541,445	3.62	33,015	26.21	26.22	22.26	24.90	8	7	↑
14. Poland	41,032	0.67	1,062	38.95	38.88	39.90	39.24	168,705	1.13	4,428	36.39	36.39	38.49	37.09	30	28	↑
15. Portugal	25,536	0.42	2,541	39.85	39.79	38.30	39.32	57,057	0.38	5,383	39.44	39.45	37.94	38.94	32	34	↓
16. United Kingdom	276,315	4.54	4,678	25.27	24.74	35.99	28.67	458,760	3.07	7,484	28.46	28.47	36.75	31.23	11	12	↓
17. Romania	13,876	0.23	637	40.53	40.49	40.36	40.46	49,674	0.33	2,310	39.64	39.65	39.69	39.66	37	38	↓
18. Slovakia	14,478	0.24	2,691	40.49	40.45	38.14	39.70	70,982	0.48	13,145	39.06	39.04	33.54	37.21	33	29	↑
19. Slovenia	10,357	0.17	5,205	40.73	40.71	35.42	38.95	29,233	0.2	14,617	40.20	40.18	32.70	37.70	29	31	↓
20. Spain	123,563	2.03	3,015	34.15	33.91	37.79	35.29	277,695	1.86	5,972	33.41	33.41	37.61	34.81	22	20	↑
21. Sweden	81,298	1.34	9,155	36.61	36.43	31.15	34.73	183,093	1.23	19,901	36.00	35.98	29.70	33.89	19	18	↑
22. Hungary	34,512	0.57	3,397	39.33	39.25	37.38	38.65	107,466	0.72	10,747	38.06	38.06	34.90	37.01	27	27	→
23. Switzerland	83,922	1.38	11,512	36.46	36.29	28.60	33.78	192,111	1.29	25,278	35.75	35.73	26.65	32.71	15	16	↓

Table 5. Contd.

24. Norway	59,575	0.98	13,122	37.87	37.75	26.86	34.16	165,251	1.11	34,427	36.48	36.47	21.46	31.47	17	13	↑
25. Russian Federation	106,705	1.75	741	35.13	34.94	40.25	36.77	467,666	3.13	3,296	28.22	28.22	39.13	31.86	24	15	↑
26. Turkey	34,561	0.57	496	39.33	39.25	40.52	39.70	132,003	0.88	1,765	37.39	37.41	40.00	38.27	34	33	↑
27. China, People's Republic of ^{xiv}	325,591	5.35	251	22.41	21.79	40.78	28.32	1,428,660	9.56	1,078	1.96	1.98	40.39	14.78	9	2	↑
28. China, RAS Hong Cong	200,092	3.29	29,512	29.70	29.31	9.14	22.72	362,675	2.43	51,811	31.09	31.8	11.59	24.59	3	6	↓
29. Republic of Korea	162,470	2.67	3,410	31.89	31.58	37.36	33.61	422,007	2.82	8,683	29.47	29.49	36.07	31.68	14	14	→
30. India	49,232	0.81	48	38.47	38.37	41.00	39.28	177,603	1.19	155	36.15	36.14	40.91	37.73	31	32	↓
31. Japan	416,730	6.85	3,269	17.11	16.31	37.52	23.64	786,434	5.26	6,158	19.51	19.53	37.50	25.52	5	8	↓
32. Singapore	125,177	2.06	37,035	34.06	33.80	1.00	22.95	338,201	2.26	70,459	31.76	31.78	1.00	21.51	4	4	→
33. South Africa	28,713	0.47	632	39.67	39.61	40.37	39.88	84,488	0.57	1,749	38.69	38.67	40.01	39.12	35	36	↓
34. Nigeria	15,107	0.25	125	40.46	40.42	40.92	40.60	0	0	0	41.00	41.00	41.00	41.00	39	41	↓
35. Argentina	25,709	0.42	677	39.84	39.79	40.32	39.98	70,588	0.47	1,778	39.07	39.08	39.99	39.38	36	37	↓
36. Brazil	60,362	0.99	346	37.83	37.71	40.68	38.74	197,942	1.32	1,015	35.59	35.61	40.42	37.21	28	30	↓
37. Canada ¹⁷	252,408	4.15	8,036	26.66	26.17	32.36	28.40	452,170	3.03	13,579	28.64	28.63	33.29	30.19	10	11	↓
38. United States of America	693,860	11.4	2,384	1.00	-0.32	38.47	13.05	1,301,110	8.71	4,273	5.45	5.45	38.57	16.49	1	3	↓
39. Mexico, U.S. ¹⁷	160,682	2.64	1,557	31.99	31.68	39.37	34.35	291,827	1.95	2,710	33.03	33.04	39.46	35.18	18	22	↓
40. Australia	65,036	1.07	3,300	37.55	37.42	37.48	37.49	187,362	1.25	8,796	35.88	35.90	36.01	35.93	25	26	↓
41. New Zealand	14,380	0.24	3,735	40.50	40.45	37.01	39.32	30,591	0.2	7,114	40.16	40.18	36.96	39.10	31	35	↓

Table 6. Hierarchy of the countries participating in the international Trade: FOB import by the relative distance method, Comparative situation 2008-2002

No.	Country	2002							2008							Final rank		
		CIF	% Total imports	CIF/capita	Relative distances for:			Average relative distance	CIF	% Total imports	CIF/capita	Relative distances for:			2002	2008	Change 2008/2002	
					CIF	% Total imports	CIF/capita					CIF	% Total imports	CIF/capita				
1.	Austria	72,881	1.18	8,987	38.81	38.80	30.61	36.08	172,840	1.14	20,576	37.81	37.81	28.65	34.75	17	17	→
2.	Belgium	199,393	3.22	19,359	34.58	34.57	18.55	29.23	470,828	3.1	44,003	32.31	32.32	14.58	26.40	5	5	→
3.	Bulgaria	7,987	0.13	1,002	40.99	40.98	39.90	40.62	37,369	0.25	4,917	40.31	40.30	38.05	39.55	39	38	↑
4.	Czech Republic ^{xv}	40,736	0.66	3,994	39.89	39.88	36.42	38.73	141,593	0.93	13,615	38.39	38.39	32.83	36.54	25	23	↑
5.	Denmark	49,288	0.79	9,213	39.60	39.61	30.35	36.52	111,326	0.73	20,241	38.94	38.96	28.85	35.58	18	19	↓
6.	Finland	33,642	0.54	6,470	40.13	40.13	33.54	37.93	92,125	0.61	17,382	39.30	39.29	30.56	36.38	23	22	↑
7.	France ^{xvi}	311,240	5.02	5,234	30.83	30.83	34.98	32.21	705,665	4.65	11,061	27.97	27.97	34.36	30.10	8	8	→
8.	Germany	492,112	7.94	5,966	24.78	24.77	34.13	27.89	1,198,965	7.9	14,586	18.86	18.87	32.24	23.32	4	2	↑
9.	Greece	31,164	0.5	2,841	40.21	40.21	37.76	39.39	77,831	0.51	6,949	39.56	39.57	36.83	38.65	30	35	↓
10.	Ireland	51,508	0.83	13,140	39.53	39.53	25.78	34.95	82,670	0.55	18,371	39.47	39.46	29.97	36.30	14	21	↓
11.	Italy	246,613	3.98	4,290	33.00	32.99	36.07	34.02	558,543	3.68	9,325	30.69	30.69	35.40	32.26	12	12	→
12.	Luxembourg	11,554	0.19	26,259	40.87	40.85	10.53	30.75	25,044	0.17	50,088	40.54	40.52	10.93	30.66	6	10	↓
13.	Netherlands	193,784	3.13	12,006	34.77	34.75	27.10	32.21	488,960	3.22	29,815	31.97	31.98	23.10	29.02	8	7	↑

Table 6. Contd.

14.	Poland	55,141	0.89	1,428	39.41	39.40	39.40	39.40	204,926	1.35	5,379	37.22	37.22	37.77	37.40	31	30	↑
15.	Portugal	38,326	0.62	3,814	39.97	39.96	36.63	38.85	89,736	0.59	8,466	39.34	39.35	35.92	38.20	27	33	↓
16.	United Kingdom	335,458	5.41	5,679	30.02	30.02	34.46	31.50	631,526	4.16	10,302	29.34	29.35	34.81	31.17	7	11	↓
17.	Romania	17,862	0.29	820	40.65	40.65	40.11	40.47	84,286	0.56	3,919	39.44	39.43	38.65	39.17	38	37	↑
18.	Slovakia	17,460	0.28	3,245	40.67	40.67	37.29	39.54	74,034	0.49	13,710	39.63	39.63	32.77	37.34	32	27	↑
19.	Slovenia	10,933	0.18	5,494	40.89	40.88	34.67	38.81	33,937	0.22	16,969	40.37	40.38	30.81	37.19	26	26	→
20.	Spain	163,575	2.64	3,992	35.78	35.77	36.42	35.99	417,049	2.75	8,969	33.30	33.30	35.61	34.07	16	15	↑
21.	Sweden	66,717	1.08	7,513	39.02	39.01	32.33	36.78	165,124	1.09	17,948	37.95	37.95	30.22	35.37	20	18	↑
22.	Hungary	37,787	0.61	3,719	39.99	39.98	36.74	38.90	106,380	0.7	10,638	39.04	39.04	34.61	37.56	28	31	↓
23.	Switzerland	79,129	1.28	10,854	38.60	38.59	28.44	35.21	173,657	1.14	22,850	37.79	37.81	27.28	34.29	15	16	↓
24.	Norway	34,889	0.56	7,685	40.08	40.09	32.13	37.43	87,896	0.58	18,312	39.38	39.38	30.01	36.25	22	20	↑
25.	Russian Federation	46,161	0.74	320	39.71	39.71	40.69	40.04	267,021	1.76	1,882	36.07	36.07	39.87	37.34	36	27	↑
26.	Turkey	49,663	0.8	713	39.59	39.59	40.23	39.80	201,823	1.33	2,698	37.27	37.27	39.38	37.98	33	32	↑
27.	China, People's Republic of ^{viii}	295,171	4.76	228	31.37	31.37	40.80	34.51	1,131,620	7.46	854	20.10	20.10	40.49	26.90	13	6	↑
28.	China, RAS Hong Cong	207,644	3.35	30,626	34.30	34.30	5.45	24.68	388,505	2.56	55,501	33.83	33.83	7.68	25.11	2	4	↓
29.	Republic of Korea	152,126	2.45	3,193	36.16	36.16	37.35	36.56	435,275	2.87	8,956	32.96	32.96	35.62	33.85	19	14	↑
30.	India	56,495	0.91	55	39.36	39.36	41.00	39.91	293,377	1.93	255	35.58	35.59	40.85	37.34	34	28	↑
31.	Japan	337,209	5.44	2,645	29.96	29.96	37.99	32.64	762,575	5.03	5,972	26.92	26.91	37.41	30.41	10	9	↑
32.	Singapore	116,441	1.88	34,450	37.35	37.35	1.00	25.23	319,781	2.11	66,621	35.09	35.09	1.00	23.73	3	3	→
33.	South Africa	28,261	0.46	622	40.31	40.29	40.34	40.31	0	0	0	41.00	41.00	41.00	41.00	37	40	↓
34.	Nigeria	7,547	0.12	62	41.00	41.00	40.99	41.00	0	0	0	41.00	41.00	41.00	41.00	41	41	→
35.	Argentina	8,990	0.14	237	40.95	40.96	40.79	40.90	57,413	0.38	1,446	39.94	39.94	40.13	40.00	40	39	↑
36.	Brazil	49,603	0.8	284	39.59	39.59	40.73	39.97	182,408	1.2	935	37.63	37.64	40.44	38.57	35	34	↑
37.	Canada ²⁰	221,961	3.58	7,067	33.82	33.82	32.85	33.50	407,169	2.68	12,227	33.48	33.49	33.66	33.54	11	13	↓
38.	United States of America	1,202,430	19.39	4,131	1.00	1.00	36.26	12.75	2,165,980	14.28	7,113	1.00	1.00	36.73	12.91	1	1	→
39.	Mexico, U.S. ²⁰	168,679	2.72	1,634	35.61	35.60	39.16	36.79	310,561	2.05	2,884	35.26	35.26	39.27	36.60	21	24	↓
40.	Australia	72,693	1.17	3,688	38.82	38.82	36.77	38.14	200,563	1.32	9,416	37.30	37.30	35.35	36.65	24	25	↓
41.	New Zealand	15,047	0.24	3,908	40.75	40.75	36.52	39.34	34,385	0.23	7,997	40.36	40.36	36.20	38.97	29	36	↓

referring to Nigeria, Bulgaria, Greece and Romania, we see that they hold the last places in the hierarchy (Table 5).

Aggregating the three indicators that describe imports we can see that their evolution has also produced changes in the hierarchy. Thus, 19 countries have surpassed the position held in 2002, eight countries have maintained the same

position, and the rest were reduced to a lower rank. From this perspective, the U.S. holds the first position in both 2002 and 2008, Germany reaches the 2nd position in 2008, while in 2002 it was ranked 4th, Singapore remains on the same third position, China falls from the second position to the 4th position in 2008 and Belgium maintains its 5th position (Table 6).

Analyzing the results of multicriteria ranking by the two indicators of trade balance, it appears that 17 countries increased their trade balance and went up on higher positions than those held in 2002; four countries maintained the same position, and the remaining 20 deepened the gap between exports and imports, being reduced to lower ranks (Table 7).

Table 7. Hierarchy of the countries participating in the international Trade: Trade balance by the rank method, Comparative situation 2008-2002

No.	Country	2002					2008					Final rank		
		Balance	Balance /capita	Ranks for:		Score	2008/2002 Balance	Balance /capita	Ranks for:		Score	2002	2008	Change 08/02
				Balance	Balance /capita				Balance	Balance /capita				
1.	Austria	-1,990	-246	24.0	28.0	52.0	1,110	132	19	17.0	36.0	23.5	19.0	↑
2.	Belgium	16,487	1,600	10.0	7.0	17.0	6,503	607	15	12.0	27.0	8.5	14.,0	↓
3.	Bulgaria	-2,238	-281	25.0	29.0	54.0	-14,782	-1,945	29	33.0	62.0	27.0	30.0	↓
4.	Czech Republic ^{xviii}	-2,248	-221	26.0	27.0	53.0	4,328	416	18	13.0	31.0	25.5	17.0	↑
5.	Denmark	6,942	1,297	18.0	9.0	27.0	4,459	811	17	11.0	28.0	14.0	15.0	↓
6.	Finland	11,029	2,121	12.0	4.0	16.0	4,754	897	16	10.0	26.0	6.5	12.0	↓
7.	France ^{xix}	1,196	20	20.0	20.0	40.0	-100,381	-1,574	37	31.0	68.0	20.0	35.0	↓
8.	Germany	120,745	1,463	1.0	8.0	9.0	264,916	3,223	2	4.0	6.0	2.0	1.5	↑
9.	Greece	-20,849	-1,901	38.0	40.0	78.0	-52,600	-4,696	35.0	40.0	75.0	40.0	38.5	↑
10.	Ireland	35,990	9,181	4.0	1.0	5.0	43,480	9,662	8.0	2.0	10.0	1.0	3.0	↓
11.	Italy	7,606	133	16.0	15.0	31.0	-9,588	-160	26.0	23.0	49.0	18.0	23.0	↓
12.	Luxembourg	-2,969	-6,748	27.0	41.0	68.0	-7,187	-14,374	25.0	41.0	66.0	34.5	34.0	→
13.	Netherlands	28,622	1,774	7.0	5.0	12.0	52,485	3,200	6.0	5.0	11.0	4.0	4.0	→
14.	Poland	-14,109	-366	36.0	32.0	68.0	-36,221	-951	34.0	30.0	64.0	34.5	31.0	↑
15.	Portugal	-12,790	-1,273	35.0	38.0	73.0	-32,679	-3,083	32.0	38.0	70.0	37.0	36.5	↑
16.	United Kingdom	-59,143	-1,001	40.0	36.0	76.0	-172,766	-2,818	40.0	35.0	75.0	39.0	38.5	↑
17.	Romania	-3,986	-183	30.0	25.0	55.0	-34,612	-1,609	33.0	32.0	65.0	28.0	32.5	↓
18.	Slovakia	-2,982	-554	28.0	34.0	62.0	-3,052	-565	22.0	26.0	48.0	31.0	22.0	↑
19.	Slovenia	-576	-289	22.0	30.0	52.0	-4,704	-2,352	24.0	34.0	58.0	23.5	28.0	↓
20.	Spain	-40,012	-977	39.0	35.0	74.0	-139,354	-2,997	39.0	37.0	76.0	38.0	40.0	↓
21.	Sweden	14,581	1,642	11.0	6.0	17.0	17,969	1,953	12.0	7.0	19.0	8.5	10.0	↓
22.	Hungary	-3,275	-322	29.0	31.0	60.0	1,086	109	20.0	18.0	38.0	30.0	20.0	↑
23.	Switzerland	4,793	658	19.0	10.0	29.0	18,454	2,428	10.0	6.0	16.0	16.0	8.5	↑
24.	Norway	24,686	5,437	8.0	2.0	10.0	77,355	16,115	5.0	1.0	6.0	3.0	1.5	↑
25.	Russian Federation	60,544	421	3.0	13.0	16.0	200,645	1414	3.0	9.0	12.0	6.5	5.5	↑
26.	Turkey	-15,102	-217	37.0	26.0	63.0	-69,820	-933	36.0	29.0	65.0	32.0	32.0	→
27.	China, People's Republic of ^{xx}	30,420	23	6.0	19.0	25.0	297,040	224	1.0	15.0	16.0	13.0	8.5	↑
28.	China, RAS Hong Cong	-7,552	-1,114	32.0	37.0	69.0	-25,830	-3,690	31.0	39.0	70.0	36.0	36.5	↓
29.	Republic of Korea	10,344	217	14.0	14.0	28.0	-13,268	-273	28.0	25.0	53.0	15.0	25.0	↓
30.	India	-7,263	-7	31.0	22.0	53.0	-115,774	-100	38.0	22.0	60.0	25.5	29.0	↓
31.	Japan	79,521	624	2.0	11.0	13.0	23,859	186	9.0	16.0	25.0	5.0	11.0	↓

Table 7. Contd.

32. Singapore	8,736	2,585	15.0	3.0	18.0	18,420	3,838	11.0	3.0	14.0	10.0	7.0	↑
33. South Africa	452	10	21.0	21.0	42.0	84,488	1,749	4.0	8.0	12.0	21.0	5.5	↑
34. Nigeria	7,560	63	17.0	16.0	33.0	0	0	21.0	21.0	42.0	19.0	21.0	↓
35. Argentina	16,719	440	9.0	12.0	21.0	13,175	332	14.0	14.0	28.0	11.0	16.0	↓
36. Brazil	10,759	62	13.0	17.5	30.5	15,534	80	13.0	19.5	32.5	17.0	18.0	↓
37. Canada ²³	30,447	62	5.0	17.5	22.5	45,001	80	7.0	19.5	26.5	12.0	13.0	↑
38. United States of America	-508,570	-	41.0	39.0	80.0	-864,870	-2,840	41.0	36.0	77.0	41.0	→	
39. Mexico, U.S. ²³	-7,997	-77	34.0	23.0	57.0	-18,734	-174	30.0	24.0	54.0	29.0	26.5	↓
4. Australia	-7,657	-388	33.0	33.0	66.0	-13,201	-620	27.0	27.0	54.0	33.0	26.5	↑
4. New Zealand	-667	-173	23.0	24.0	47.0	-3,794	-883	23.0	28.0	51.0	22.0	24.5	↓

We can not overlook the fact that the U.S. holds the last place in this hierarchy in both 2002 and 2008; Spain, the United Kingdom and Greece also had slacker positions, which means that all these countries made imports uncorrelated with exports that led to major trade balance deficits and thus to resort to bank loans in order to cover external debts, unprofitable loans, unless they lead to increased production following their use. Based on the hierarchies obtained for the three categories of indicators, the average ranks were calculated in the second stage, based on such ranks the hierarchy was established for the entire foreign trade activity and the changes in rank in 2008 compared to 2002, as shown in Table 8.

Thus, the analysis above relating to external trade reveals that Germany is on the first place, both in 2002 and 2008, given that it optimized its situation for all the three categories of indicators used in the analysis and relating to exports, imports and trade balance, overall and per capita; Singapore retains its second place due to improving the position held in the hierarchy regarding the trade balance and maintaining its

position on the export and import.

We can not help noticing that the Republic of China had one of the most spectacular evolutions, climbing 6 positions from the 9th place in 2002 to the 3rd place in 2008, and the Netherlands which improved its position on export and import and maintained its position on the trade balance, climbed from the 5th position in 2002 to the 4th place in 2008. Although Belgium was placed the 3rd in 2002, due to weaker trade balance, it ranks 5th in 2008. We should also note the positive evolution of Slovakia that climbed 9 steps in the hierarchy, from position 36 in 2002 to position 27 in 2008, and the Russian Federation that climbed 7 positions in the same period, from position 22 to 15.

At the same time we realize that there are countries that have significantly impaired their position, such as: France from the 8th position in 2002 to position 16 in 2008, or New Zealand that fell 6 positions, from number 29 in 2002 to the 35th place in 2008. Referring to our country, we can see that in 2008 it is ranked 40, holding the penultimate position in the rankings, compared to

the 39th place held in 2002.

Conclusion

The study conducted on the evaluation and analysis of existing differences between the countries participating in international trade in terms of export, import and trade balance revealed that there are strong differences between them, which are maintained when the indicators' analysis was conducted taking into account the number of inhabitants; this situation has sometimes led to change of hierarchies between the countries under research.

Since the dynamic analysis of the evolution of these indicators did not lead to results allowing us to perform classifications regarding the entire foreign trade activity, in addition to the analysis specific to territorial series, the multicriteria ranking was used, which gave us the opportunity to appreciate that Germany ranks first in the world, based on the international trade activity conducted in the period under study, followed by Singapore,

Table 8. Hierarchy of some selected countries, by international trade activity

No.	Country	Rank										Change in rank 2008/2002				
		2002					2008									
		FOB	CIF	BALANCE	average	final	FOB	CIF	BALANCE	average	final	FOB	CIF	BALANCE	final	$\Delta_{2008/2002}$
1.	Austria	21	17	23.5	20.50	21	22	17	19.0	19.33	19	↓	→	↑	▲	+2
2.	Belgium	6	5	8.5	6.50	3	5	5	14.0	8.00	5	↑	→	↓	▼	-2
3.	Bulgaria	40	39	27.0	35.33	40	39	38	30.0	35.67	39	↑	↑	↓	▲	+1
4.	Czech Republic ^{xxi}	26	25	25.5	25.50	25	24	23	17.0	21.33	23	↑	↑	↑	▲	+2
5.	Denmark	20	18	14.0	17.33	17	21	19	15.0	18.33	18	↓	↓	↓	▼	-1
6.	Finland	23	23	6.5	17.50	18	25	22	12.0	19.67	20	↓	↑	↓	▼	-2
7.	France ^{xxii}	7	8	20.0	11.67	8	9	8	35.0	17.33	16	↓	→	↓	▼	-8
8.	Germany	2	4	2.0	2.67	1	1	2	1.5	1.50	1	↑	↑	↑	▶	0
9.	Greece	38	30	40.0	36.00	41	40	35	38.5	37.83	41	↑	↓	↑	▶	0
10.	Ireland	13	14	1.0	9.33	6	17	21	3.0	13.67	10	↓	↓	↓	▼	-4
11.	Italy	12	12	18.0	14.00	11	10	12	23.0	15.00	12	↑	→	↓	▼	-1
12.	Luxembourg	16	6	34.5	18.83	19	19	10	34.0	21.00	22	↓	↓	→	▼	-3
13.	Netherlands	8	8	4.0	6.67	5	7	7	4.0	6.00	4	↑	↑	→	▲	+1
14.	Poland	30	31	34.5	31.83	34	28	30	31.0	29.67	32	↑	↑	↑	▲	+2
15.	Portugal	32	27	37.0	32.00	35	34	33	36.5	34.50	38	↓	↓	↑	▼	-3
16.	United Kingdom	11	7	39.0	19.00	20	12	11	38.5	20.50	21	↓	↓	↑	▼	-1
17.	Romania	37	38	28.0	34.33	39	38	37	32.5	35.83	40	↓	↑	↓	▼	-1
18.	Slovakia	33	32	31.0	32.00	36	29	27	22.0	26.00	27	↑	↑	↑	▲	+9
19.	Slovenia	29	26	23.5	26.17	26	31	26	28.0	28.33	28	↓	→	↓	▼	-2
20.	Spain	22	16	38.0	25.33	24	20	15	40.0	25.00	25	↑	↑	↓	▼	-1
21.	Sweden	19	20	8.5	15.83	15	18	18	10.0	15.33	13	↑	↑	↓	▲	+2
22.	Hungary	27	28	30.0	28.33	30	27	31	20.0	26.00	27	→	↓	↑	▲	+3
23.	Switzerland	15	15	16.0	15.33	14	16	16	8.5	13.50	9	↓	↓	↑	▲	+5
24.	Norway	17	22	3.0	14.00	12	13	20	1.5	11.50	7	↑	↑	↑	▲	+5
25.	Russian Federation	24	36	6.5	22.17	22	15	27	5.5	15.83	15	↑	↑	↑	▲	+7
26.	Turkey	34	33	32.0	33.00	37	33	32	32.0	32.33	36	↑	↑	→	▲	+1
27.	China, People's Republic of ^{xxiii}	9	13	13.0	11.67	9	2	6	8.5	5.50	3	↑	↑	↑	▲	+6
28.	China, RAS Hong Cong	3	2	36.0	13.67	10	6	4	36.5	15.50	14	↓	↓	↓	▼	-4
29.	Republic of Korea	14	19	15.0	16.00	16	14	14	25.0	17.67	17	→	↑	↓	▼	-1
30.	India	31	34	25.5	30.17	32	32	28	29.0	29.67	32	↓	↑	↓	▶	0
31.	Japan	5	10	5.0	6.67	4	8	9	11.0	9.33	6	↓	↑	↓	▼	-2
32.	Singapore	4	3	10.0	5.67	2	4	3	7.0	4.67	2	→	→	↑	▶	0
33.	South Africa	35	37	21.0	31.00	33	36	40	5.5	27.17	29	↓	↓	↑	▲	+4
34.	Nigeria	39	41	19.0	33.00	38	41	41	21.0	34.33	37	↓	→	↓	▲	+1
35.	Argentina	36	40	11.0	29.00	31	37	39	16.0	30.67	34	↓	↑	↓	▼	-3
36.	Brazil	28	35	17.0	26.67	27	30	34	18.0	27.33	30	↓	↑	↓	▼	-3
37.	Canada ²⁶	10	11	12.0	11.00	7	11	13	13.0	12.33	8	↓	↓	↑	▼	-1

Table 8. Contd.

38.	United States of America	1	1	41.0	14.33	13	3	1	41.0	15.00	12	↓	→	→	▲	+1
39.	Mexico, U.S. ²⁶	18	21	29.0	22.67	23	22	24	26.5	24.17	24	↓	↓	↓	▼	-1
40.	Australia	25	24	33.0	27.33	28	26	25	26.5	25.83	26	↓	↓	↑	▲	+2
41.	New Zealand	31	29	22.0	27.33	29	35	36	24.5	31.83	35	↓	↓	↓	▼	-6

the Republic of China, Netherlands and Belgium. Without resuming the conclusions issued during the study, we consider it appropriate to mention that after the ranking performed, the U.S. was placed the 13th in 2002, going up a position in 2008, although the level of the exports and imports made placed it on top of the ranking, which place was also held in 2008, except the exports that ranked it on the 3rd position. Under these conditions, the trade balance had a major influence; this indicator situated the U.S. on the last place, both in 2002 and in 2008.

Commenting on this situation, we must say that the trade deficit required the use of foreign loans for the payment of debts incurred from the massive imports made, that can be justified only in so far as they may be reimbursed as a result of increased production obtained by their use. And as this did not happen, we consider that the U.S. trade deficit was one of the factors that led to the installation of the financial and economic crisis in this country, in 2008, and such crisis has subsequently spread worldwide.

We believe that the positive results registered by Germany have their origin in the slacker positions of other countries, especially from Europe, with which it has business relationships and in which it exports most goods so that the trade balance was permanently in surplus, situation which led to unbalanced trade of other countries. We can not help noting that the Republic of China has a substantial contribution to this imbalance,

which is why we propose to focus our research in the future on the adverse influences that a country has, through exports, on the economy of other states.

In our view, a favorable situation does not necessarily imply a trade balance permanently in surplus, but rather a trade balance balanced in dynamics; such balance is a requirement for the operation of the world economy.

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ⁱ Imports FOB

ⁱⁱ Including French Guiana, Guadeloupe, Martinique and Reunion

ⁱⁱⁱ Data for China, People's Republic of, excludes those for Hong Kong SAR, Macao SAR and Taiwan Province of China

⁸ Imports FOB

^{iv} Including French Guiana, Guadeloupe, Martinique and Reunion

^v Data for China, People's Republic of, excludes those for Hong Kong SAR, Macao SAR and Taiwan Province of China

^{vi} Imports FOB

^{vii} Including French Guiana, Guadeloupe, Martinique and Reunion

^{viii} Data for China, People's Republic of, excludes those for Hong Kong SAR, Macao SAR and Taiwan Province of China

^{ix} Imports FOB

^x Including French Guiana, Guadeloupe, Martinique and Reunion

^{xi} Data for China, People's Republic of, excludes those for Hong Kong SAR, Macao SAR and Taiwan Province of China

^{xii} Imports FOB

^{xiii} Including French Guiana, Guadeloupe, Martinique and Reunion

^{xiv} Data for China, People's Republic of, excludes those for Hong Kong SAR, Macao SAR and Taiwan Province of China

^{xv} Imports FOB

^{xvi} Including French Guiana, Guadeloupe, Martinique and Reunion

^{xvii} Data for China, People's Republic of, excludes those for Hong Kong SAR, Macao SAR and Taiwan Province of China

^{xviii} Imports FOB

^{xix} Including French Guiana, Guadeloupe, Martinique and Reunion

^{xx} Data for China, People's Republic of, excludes those for Hong Kong SAR, Macao SAR and Taiwan Province of China

^{xxi} Imports FOB

^{xxii} Including French Guiana, Guadeloupe, Martinique and Reunion

^{xxiii} Data for China, People's Republic of, excludes those for Hong Kong SAR, Macao SAR and Taiwan Province of China