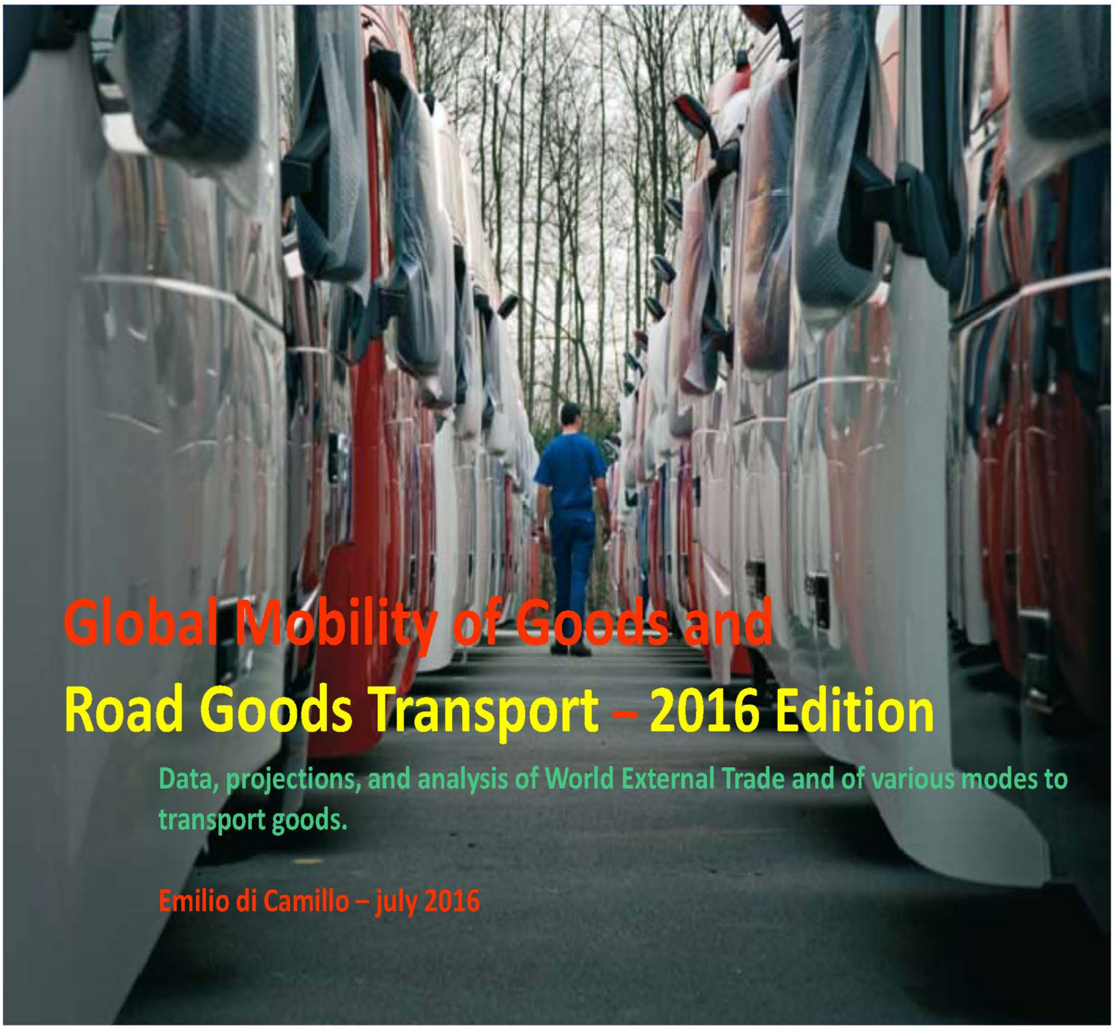
CENTRO STUDI SUBALPINO



Like every year, and we are now in their sixth consecutive!, our Studies Centre faces in great detail the analysis of the Global Mobility of goods, providing a factual overview of an essential argument for those interested in transport, be they logistics operators or experts on the subject.

Following a rather institutionalized tradition again this year we started from the data on the global movement of goods: the best approximation comes clearly from the value of the World External Trade, and in particular from the volume of total exports.
Last April the data updated to 2015 have been published by the WTO (World Trade Organization) and the IMF (International Monetary Fund), and on those very detailed and authoritative basis, as well as on Eurostat data (for freight transport in Europe) we prepared the 2016 edition of the publication "the global mobility of goods and the role of the road", this year, as already mentioned, in its sixth year.

According to the WTO, "the very modest growth in 2015 has been characterized for the fifth consecutive year of growth below 3% in volume (2.8%). The same low rate of growth is expected for this year and a recovery only in 2017 when the Foreign Trade is expected to grow by 3.6%.

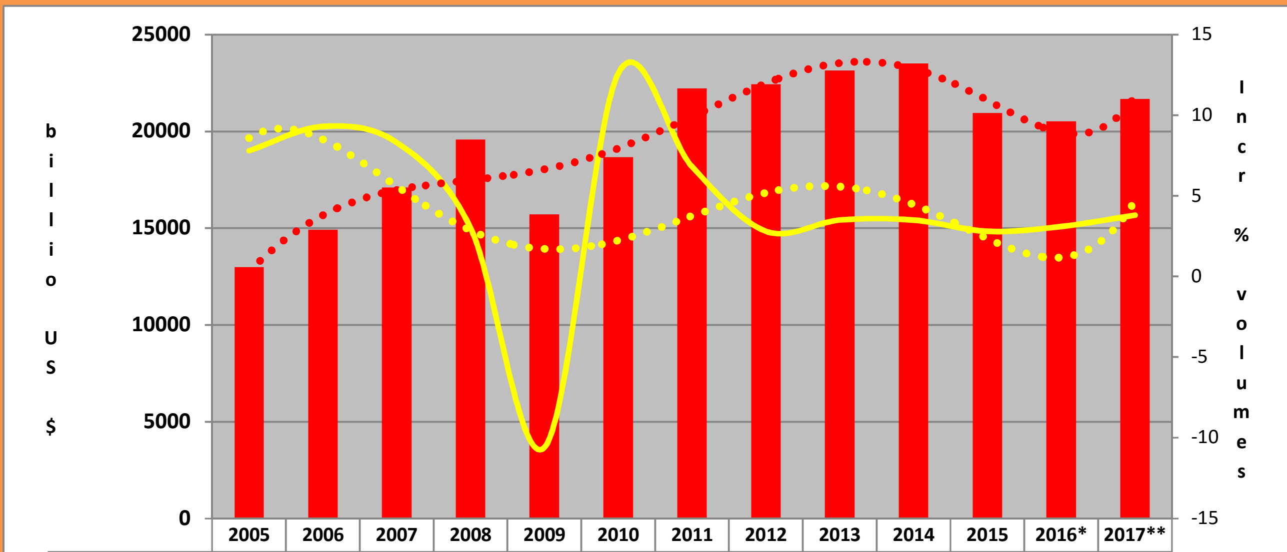
Word Esports of goods and services in values - 2010-15

billion US $ and annual change in % Source WTO 2016

Exports	Values		Yearly change in %			
	2015		2013	2014	2015	2010-15
Goods	15985		2,3	0,3	-13,5	5,5
Commercial Services	4675		6,2	5,5	-5,4	4,1
Total	20660		3	2	-11,3	4,4

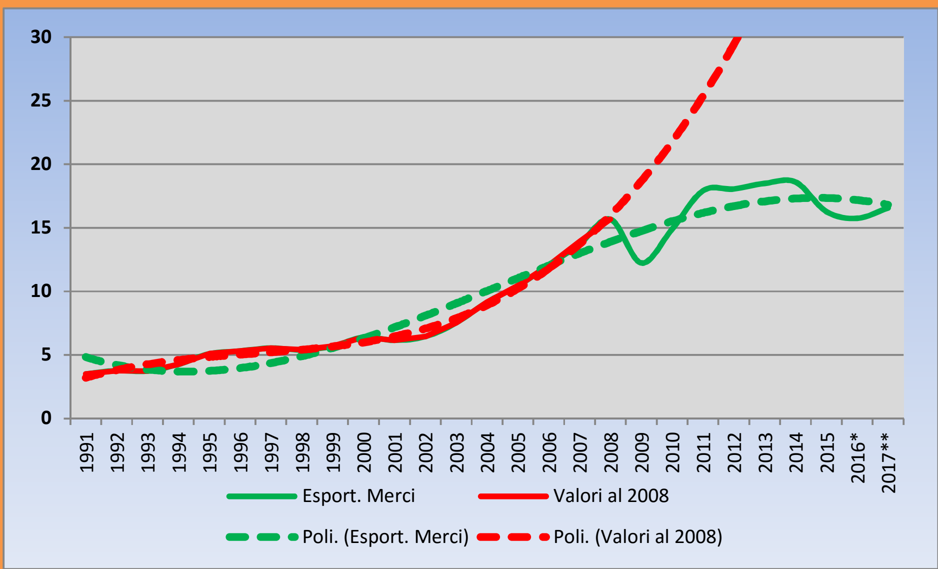
However, although at discouraging rates, trade volumes recorded positive rates, "said the Director General of the WTO Roberto Azevêdo." At the same time, while the volume of trade has risen it fell dramatically in value by more than 11 % (see adjacent figure) because of exchange rate and the fall in commodity prices.
This could undermine the fragile economic growth in developing countries. It also remains the threat of a creeping protectionism, as many governments continue to apply restrictions to trade and the number of these barriers continues to grow. "However, we should try to see things in perspective. The WTO member countries can make progress in using the trade to increase global economic growth, the reduction of the restrictive measures applying to the WTO Trade Facilitation Agreement. This agreement will reduce conspicuously the trade costs in the world, potentially increasing trade up to $ 1 billion a year. Even more could be done by acting on the remaining restrictions, tariffs and non, on agricultural and manufacturing export products”.
The table below, which is reproduced on the basis of data provided by the IMF, shows the trend since 2005 of world export volumes, including trade services, with indications for the coming years based on IMF forecasts. The export values are in US $ billion and changes in the overall World trade as a percentage of the World Trade volumes. Source: IMF 2016, Outlook April 2016

Despite everything is clear, however, that the global transport system continues to provide large volumes of cargo and to stress the great role played by transport systems in ensuring the development of the economies.



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*	2017**
Export	12981	14917	17103	19580	15725	18662	22208	22443	23144	23494	20942	20532	21663
W.T. Var %	7,8	9,3	8,3	3	-10,6	12,6	6,8	2,8	3,5	3,5	2,8	3,1	3,8

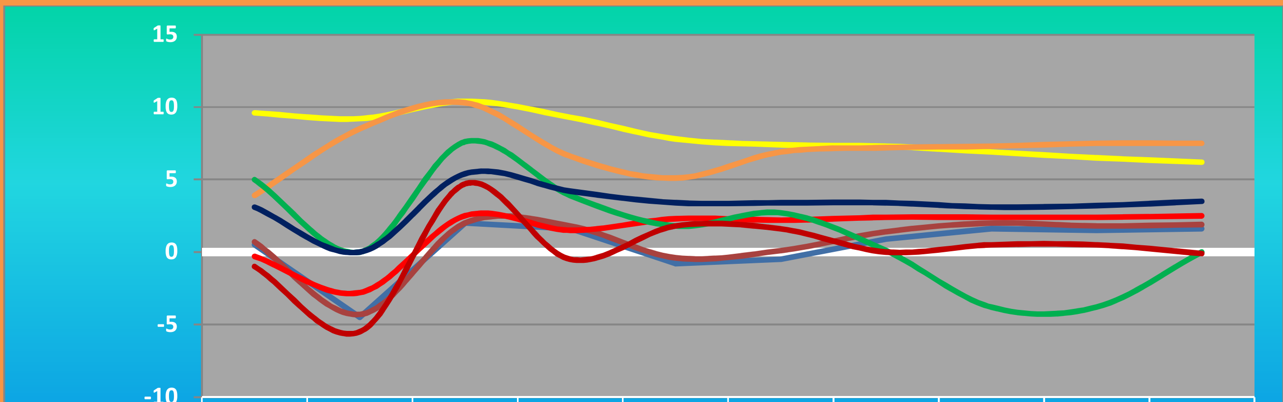
In 2015 about 21 trillion worth of goods and services, more than 28% of global GDP, have been exported worldwide. Ships, aircraft, trucks, and trains have handled these goods from production areas to consumer markets.



After the good recovery in exports of goods that took place in 2010, following the heavy fall of 2009, already in 2012 the trend of increase had dimmed, then to maintain substantially the same level until 2014. A substantial drop occurred last year and the recovery is expected only next year.

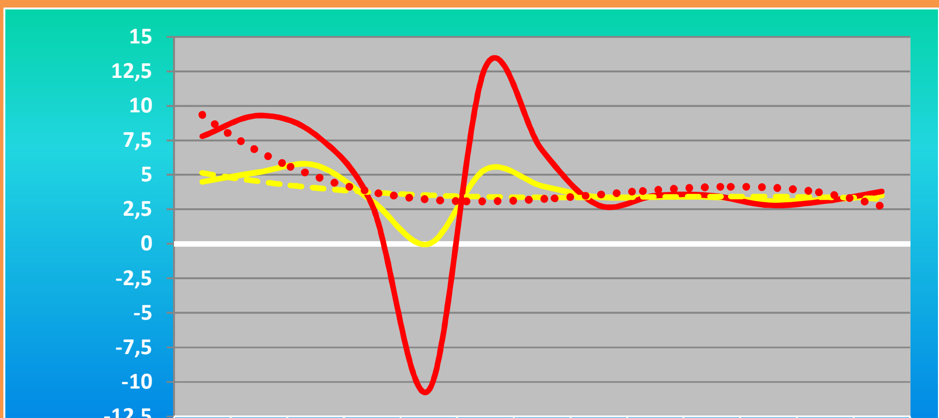
It seems evident that since 2009 the trend (green curve) is structurally lower than it appeared as interpolation of data until 2008. The slowdown is certainly attributed to repeated difficulties in the world economy. Looking at the latest **estimates of the revenue growth in the coming years, published by the IMF in April,** you realize that the exit from the crisis is very slow and difficult, and that now the gap between the trends shown until 2008 and the current has expanded to the point that it is difficult to return to the average growth of the past-

Also for this year the trend appears weak, with a modest recovery in the growth rate in 2017 also in light of the revenue growth projections.



	2008	2009	2010	2011	2012	2013	2014	2015	2016*	2017**
Euro area	0,5	-4,5	2	1,6	-0,8	-0,5	0,9	1,6	1,5	1,6
EU 28	0,7	-4,3	2	1,8	-0,4	0,1	1,4	2	1,8	1,9
USA	-0,3	-2,8	2,5	1,5	2,3	2,2	2,4	2,4	2,4	2,5
Cina	9,6	9,2	10,4	9,3	7,8	7,4	7,3	6,9	6,5	6,2
India	3,9	8,5	10,3	6,6	5,1	6,9	7,2	7,3	7,5	7,5
Brasile	5	0	7,6	3,9	1,8	2,7	0,1	-3,8	-3,8	0
Giappone	-1	-5,5	4,7	-0,5	1,8	1,6	0	0,5	0,5	-0,1
World	3,1	0	5,4	4,2	3,4	3,4	3,4	3,1	3,2	3,5

To emphasize in particular that continued even in 2015 the weakening of China's growth, which should continue in the current year, and India's recovery expected to remain at a good level this year and has exceeded the rate China's growth since last year. Also Brazil is very far from pre-crisis values, and travels from last the year on very negative values, foreseen to continue also this year. Even Russia, whose GDP fell by 3.7% GDP last year, is not expected to return to positive territory until next year. Europe has traveled on values definable as development zero until 2013, but showed then, in 2014 and 2015, encouraging signs of recovery values, in slight decrease this year, with a slight economic recovery only next year . Very stable progress rate of GDP in the US, which still travels on higher values to the Euro. Also Worldwide revenue



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*	2017**
PIL	4,5	5,2	5,7	3,1	0	5,4	4,2	3,4	3,4	3,4	3,1	3,2	3,5
Trade	7,8	9,3	7,9	2,8	-10,6	12,8	6,8	2,8	3,5	3,5	2,8	3,1	3,8

growth remained flat until 2014, to go down last year. Expected recovery, especially next year.

Then comparing the trend of annual increases of Foreign Trade (Trade) and global GDP (GDP World) it is clear that the Word Commerce trends in progress much higher than the gross domestic product in the years before the crisis, has suffered much more the global crisis, as amply demonstrated by the collapse of the freight, as we shall analyze in detail below. Since 2011 the trends of the two variables tend to move in parallel, but with values much lower than in 2010 and the years before the global crisis. The correlation index between the two series is very high (0.97).

Let us now examine in detail the GDP figures and exports by volume, beginning with:

Shares exports of goods and services and GDP for the Geographical areas (Source IMF 2016)

	GDP	Export			GDP	Export
Advanced Economies	**42,4**	**63,3**		**Emerging economies**	**57,6**	**36,7**
USA	15,8	10,6		Europe Central& Eastern	3,3	3,5
Euro Area	11,9	25,5		Russia	3,3	1,9
Germany	3,4	7,5		China	17,1	11,4
France	2,3	3,6		India	7,0	2,1
Italy	1,9	2,6		Others Asia	6,5	4,9
Spain	1,4	1,9		Brasil	2,8	1,1
Japan	4,3	3,8		Mexico	2,0	1,9
U. K.	2,4	3,7		Middle East and Nor. Africa	7,6	5,3
Canada	1,4	2,3		Africa subsaariana	3,1	1,7
Others	6,6	17,4		Others	4,9	2,9

It is noted that in terms of gross domestic product (GDP), the situation in 2015 has changed only marginally compared to 2014, but has seen continued moving towards the area of emerging economies in the production of income, especially for the contribution of China. However the share of international trade in emerging economies slightly decreased, despite the increase of the share of China.

In terms of income

• The area of emerging and developing economies now produces a much higher-income than advanced economies, representing over half of the income generated in the World (57.6%): the US (still declined as share in 2015) and the 'Euro area (also declined marginally as a share) together accounted in 2015 for 27.7% of the total (1.5 points less than the previous year), and together with China (instead increased by 0.8 points) accounted for 44.8% of world GDP.

• China, which has already passed in 2012 the euro area, and in 2014 even the United States, continues to increase its share of world income, along with India that has stood for the fourth consecutive year over Japan and all the individual economies of the EU.

• Italy has dropped to eleventh place in the world.

In terms of Export

• Advanced Economies abundantly maintain leadership, and their share has risen slightly (+1.3 points last year), with the euro area that also increased its share of foreign trade in 2015 and represents more than ¼ of the total (Germany alone accounts for about 30% of the Euro area).

• China, which has still increased its share of exports and has already passed since six years Germany as an exporter, also passed in 2015 the United States and is the first exporting country in the world.

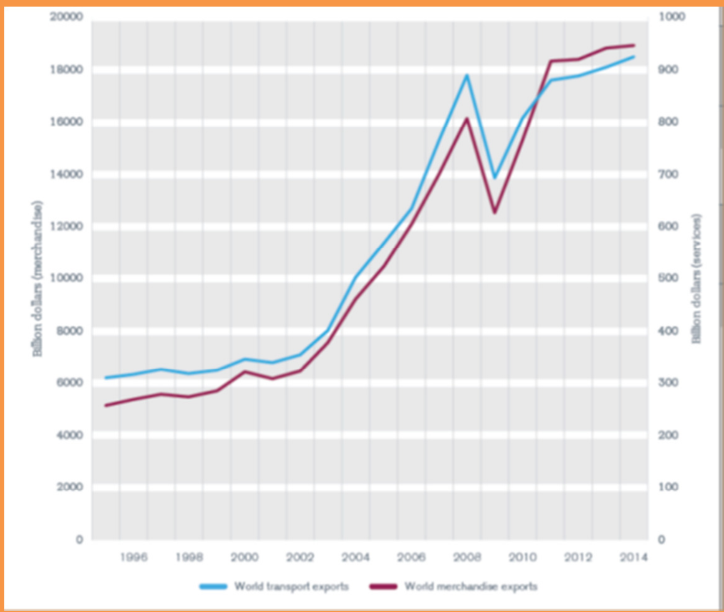
• Italy has risen to 7th place as exporting country, albeit with a slight decline in both exports volume and share worldwide. .

It 'also interesting to point out, on the basis of data provided by the WTO, that the last year has increased the share of foreign trade, which refers to services, declined much less than the goods (-5.4% compared to -13.5 % of goods) and now steadily at 22.6% of the total, compared to 77.4%to which dropped the export of goods. Among the services the transport of goods, which is instead one that has suffered most of the crisis of recent years, and decreased in a greater proportion of the total exports of commercial services. According to the data and the analysis of the WTO:

• From 1995 to 2014, the Transport Services have grown on average a little 'less than the total growth in commercial services, especially before 2000.

• Since the early 2000s, the expansion of trade of goods and passenger air traffic have been the cause of significant growth of the transport sector. In 2008 the world export of transport services reached US $ 891 billion.

• Transport and financial services were the sectors most affected by the global



economic crisis. In 2009, the export of transport services fell by 22% reflecting the lower demand for freight transport for the descent of the goods trade. All major exporting countries have seen revenues fall dramatically. In Asia, exports fell by 28%, 21% in Europe and 18% in the United States.

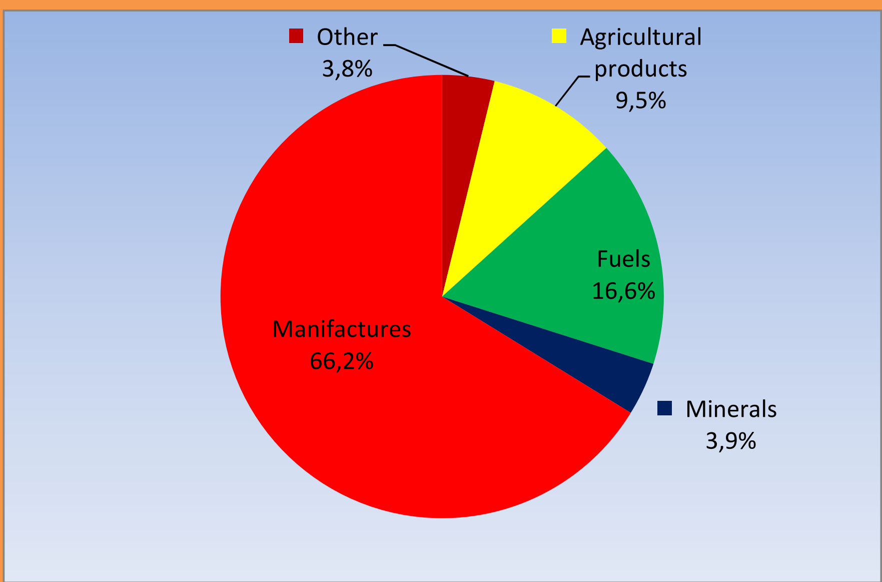
• The Transport sector globally has started to resume in 2010, with growth of 16%. However, the pre-crisis levels were not achieved until 2013, with a total of US $ 906 billion. Slight increase in 2014 to US $ 955. In the chart above, taken from the 2015 report of the WTO (with the values of trade to the left and to the right exports of transport services), you may also notice that until 2010 transportation (blue curve) grew more than the commerce of goods.

World External Trade of services – Source WTO – values in billion US $ and shares

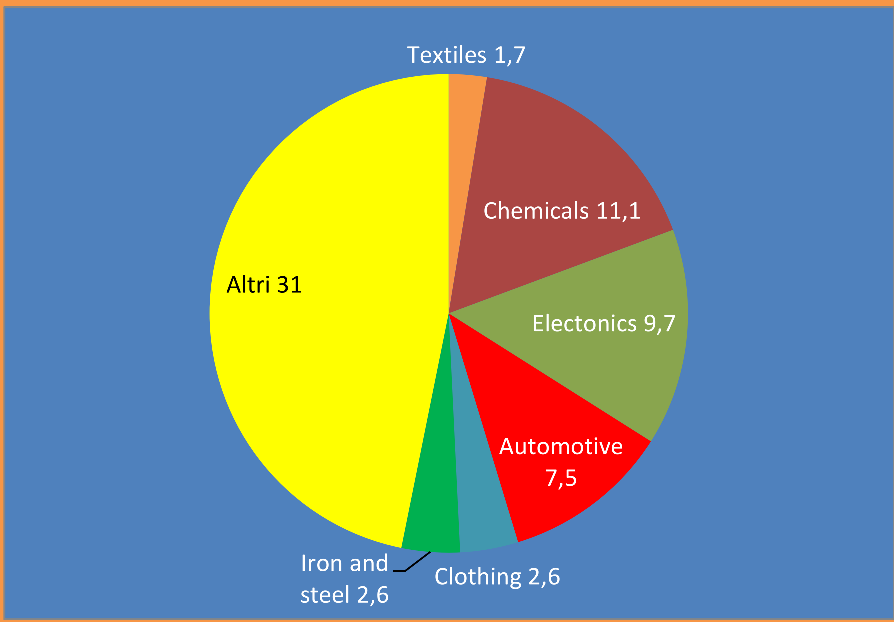
	Value 2014			**Quote**		
Exports		2005	2010	2012	2013	2014
Services connected to goods	160	3,6	3,2	3,5	3,2	3,2
Transport	955	22,4	21,3	20,5	19,9	19,3
Travels	1240	26,4	24,7	24,8	25,2	25,1
Others	2585	47,7	50,7	51,2	51,7	52,4
Total	4940					
Imports	**Value2014**					
Services connected to goods	105	2,5	2,1	2,1	2,2	2,1
Transport	1225	27,3	26,5	26,9	26,1	25,6
Travels	1165	25,9	23,1	23,3	23,8	24,4
Others	2290	44,2	48,3	47,6	47,8	47,9
Total	4780					

Also from the above table one can note that the relative importance (share %) of transport and partly also of travel, has steadily fallen over time, in favor of other commercial services.

Turning to the World Trade of goods and in particular to its composition, whose latest available data relate to 2014, the manufacturing sector, which accounts for two thirds of exports, has still slightly increased (+1.5 points) compared too previous year. In parallel decreases significantly the export of fuels (-1.2 points), following the reduction in international oil prices. Given the additional and significant

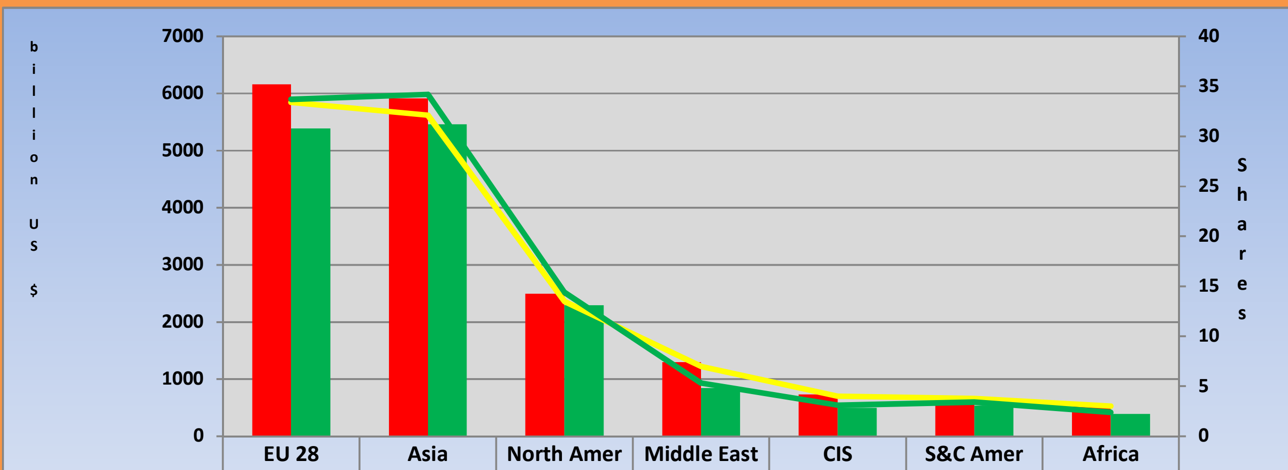


reduction of crude oil last year one has to anticipate a further reduction in 2015 of that value. Stable the share of agricultural products.



Among the artifacts increase the electronic products, the construction of motor vehicles and textiles...

As to movements of goods exports in value, at macro-level areas, all are significantly down, (on



	EU 28	Asia	North Amer	Middle East	CIS	S&C Amer	Africa
2014	6161	5916	2495	1293	735	695	557
2015	5387	5464	2294	841	500	540	388
2014share	33,4	32,1	13,5	7	4	3,8	3
2015 share	33,7	34,2	14,4	5,3	3,1	3,4	2,4

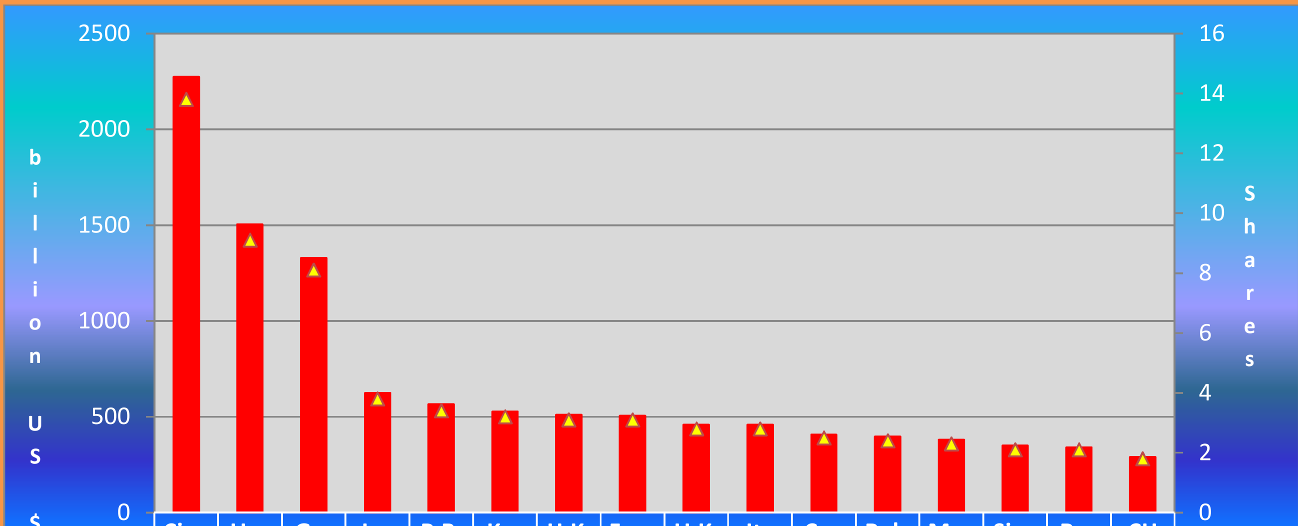
average the descent on 2014 was 13.5%); the European Union loses its leadership to Asia that also increases its share in total together with North America. In the year decreased further Middle East and Africa, for the diminished value of oil exports. CIS also come down, both for the crisis of Russia for sanctions linked to the Ukraine crisis, and South and Central America for the heavy economic crisis, especially in Brazil.

Analyzing the data by country

In the export of goods China remains the largest exporter, ahead of the USA, Germany and Japan. The four together account for more than 1/3 of total exports of goods.

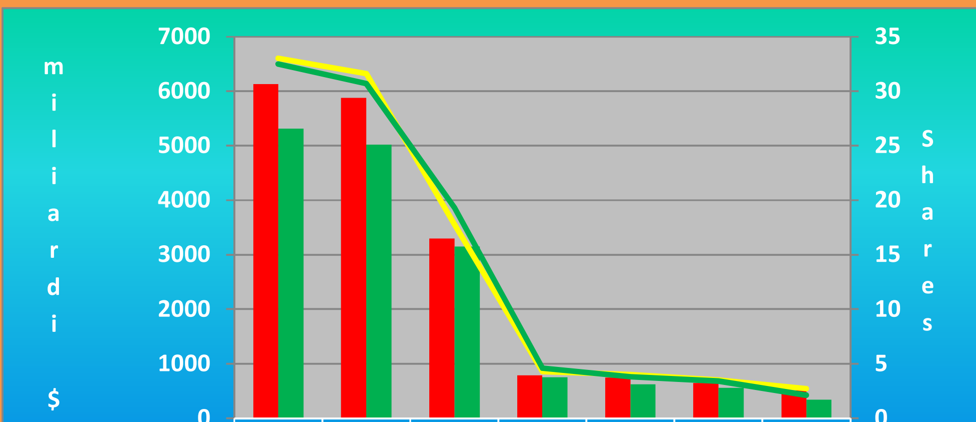
In the analysis by country, with volumes all down compared to 2014, increased its relative share especially China, followed by the USA and Japan. Basically stable Germany. South Korea and Hong Kong surpass France.

Italy takes the tenth position in the ranking of the major exporting countries, while maintaining the relative share of last year.



	Cina	Usa	Ger	Jap	P.B.	Kor	H.K.	Fran	U.K.	Ita	Can	Belg	Mex	Sing	Rus	CH
Value	2275	1505	1329	625	567	527	511	506	460	459	408	398	381	351	340	290
Share	13,8	9,1	8,1	3,8	3,4	3,2	3,1	3,1	2,8	2,8	2,5	2,4	2,3	2,1	2,1	1,8

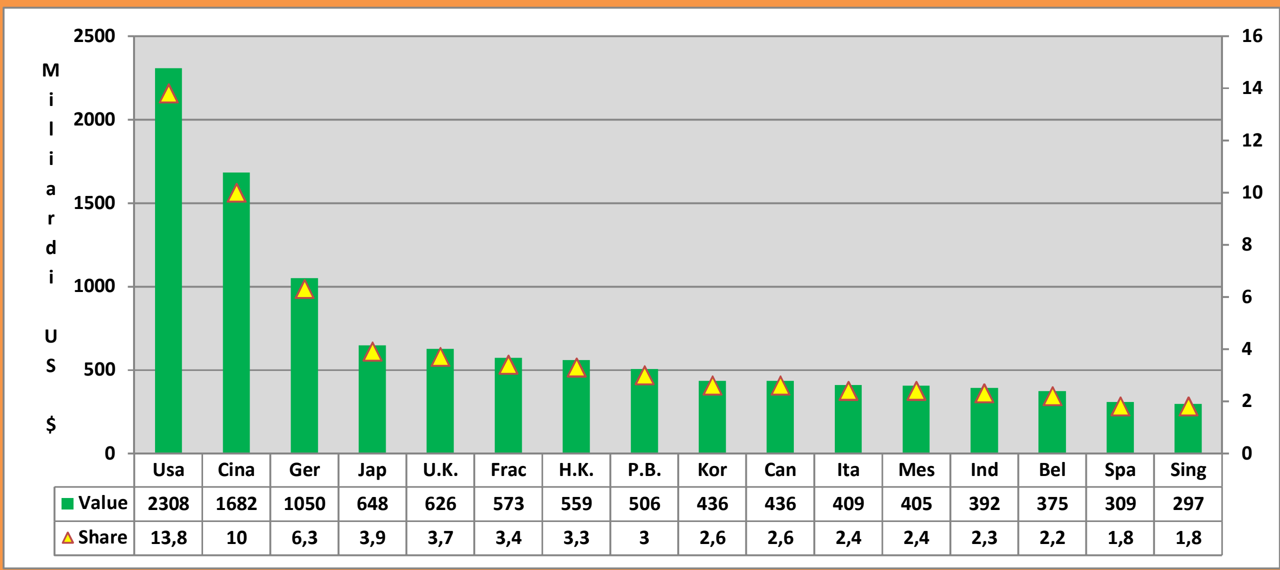
With regard to the import of goods, which fell by 12.2% in total, the EU loses 13.4% but maintains its global leadership with a share slightly decreased to 32.5% in front of the 'Asia who loses 14.6 % and a point of share. North America limited losses to 4.7% and increases its relative share to 19.3%. The Middle East limited losses to



	EU 28	Asia	North Amer	Middl e East	S&C Amer	Africa	CIS
2014	6129	5874	3297	790	742	647	506
2015	5316	5018	3151	747	622	559	345
2014share	33	31,6	17,8	4,3	4	3,5	2,7
2015 share	32,5	30,7	19,3	4,6	3,8	3,4	2,1

4.5%, and increases share to 4.6%. Heavy losses of the CIS, mainly because of the crisis in Russia, which drops by 37%. Loses 15.9% Central and South America, especially for the descent of Brazil losing 25.2%. On average the loss of imports of Africa.

In the analysis for individual countries the US remain the largest importers of goods, whose imports



	Usa	Cina	Ger	Jap	U.K.	Frac	H.K.	P.B.	Kor	Can	Ita	Mes	Ind	Bel	Spa	Sing
Value	2308	1682	1050	648	626	573	559	506	436	436	409	405	392	375	309	297
Share	13,8	10	6,3	3,9	3,7	3,4	3,3	3	2,6	2,6	2,4	2,4	2,3	2,2	1,8	1,8

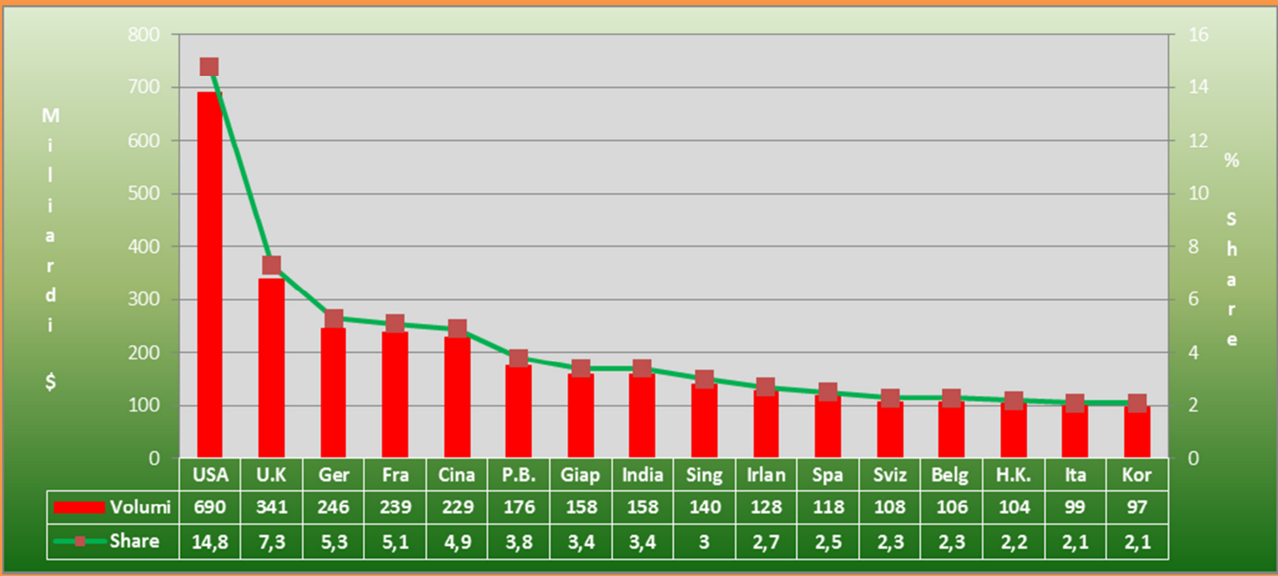
declined however in 2015 by 4.3%, followed by China which instead has seen them fall by 14.2%. Germany last year fell by 13% and 9.4% the UK. Mexico has only lost 1.5%. Italy has reduced imports by 13.8% and is placed eleventh among the importing countries, even exceeded by Canada. Among the most glaring losses those of Russia, fell by 37%.

Regarding exports of commercial services by macro-areas, decreased last year by 6.4% in total, the leadership remains largely to Europe, which holds over 47%, although in 2015 its exports of trade services fell by 9.8%, followed by Asia which increased its representation to 26.1% while decreasing the volume of exports by 3.4%. North America fell by

	Europa	Asia	North Amer	S&C Amer	Altre Regioni
2014	2349	1236	793	156	340
2015	2205	1220	790	140	320
2014share	48,2	25,4	16,3	3,2	6,9
2015 share	47,2	26,1	16,9	3	6,8

only 0.9% and increased to 16.9% its total share.

Absolute dominance of the United States in exports of commercial services by country: the US retains



leadership maintaining substantially the volume of last year and increasing its share of the total, followed by the UK, down by 4.7%, from Germany (-9.8%) and France (-13.1%). They are followed by China which lost only 0.7% in the year. The Netherlands exceeds Japan. Italy loses 12.7% and is down in 15th place, also topped by Switzerland and Hong Kong. .

Also on import of commercial services the US remain at the top, increasing them by 3.5%, but China has the highest absolute increase (+14.7), it improves its relative position and approaches the values of the US, detaching Germany and France that instead reduce their volume of imports. Another significant increase in that of Ireland (+4.5%). Russia lost 28.3% on 2014 and is down to 16 in the standings, just after Switzerland. Italy goes down in 13th position with a drop of 13.7%.

To sum up we publish below a table drawn up by our Centro Studi, based on data published by the WTO and presented above in detail. (In billion $)

Import and Export of the major countries and regions worldwide and Trade balances

	Export	%	Import	%	Saldo
EUROPA	8163	39,5	7779	37,2	384
Unione Europea	7345	35,6	7023	33,6	322
Germania	1575	7,6	1342	6,4	233
Gran Bretagna	801	3,9	831	4	-30
Francia	745	3,6	797	3,8	-52
Paesi Bassi	743	3,6	672	3,2	71
Italia	558	2,7	507	2,4	51
Belgio	504	2,4	479	2,3	25
Spagna	400	1,9	372	1,8	28
Altre UE	2019	9,8	2023	9,7	-4
Altri Europa	818	4	756	3,6	62
Russia	389	1,9	279	1,3	110
Altre C.I.S.*	203	1	183	0,9	20
ASIA	6684	32,4	6398	30,6	286
Cina	2504	12,1	2119	10,1	385
Giappone	783	3,8	822	3,9	-39
Korea	624	3	548	2,6	76
India	425	2,1	518	2,5	-93
Altre Asia	2348	11,4	2391	11,4	-43
NORD AMERICA	3084	14,9	3746	17,9	-662
USA	2195	10,6	2777	13,3	-582
Canada	484	2,3	531	2,5	-47
Messico	405	2	438	2,1	-33
CENTRO E SUD AMERICA	680	3,3	792	3,8	-112
Brasile	224	1,1	248	1,2	-24
Altre	456	2,2	544	2,6	-88
MEDIO ORIENTE	936	4,5	943	4,5	-7
AFRICA	441	2,1	615	2,9	-174
Altre non classificate	80	0,4	175	0,8	-95
TOTALE MONDO	20660	100	20910	100	-250

Europe, which saw a decline of 10.1% of its exports in value and 10.6% of its imports, has kept the positive value active of its trade balance: always represents about 40% of World External Trade. Germany is the most important country with a significant surplus of Trade Balance, decreased compared to last year by 46% due to the contraction of its exports, while maintaining virtually unchanged imports. Positive balances for the Netherlands, Italy, Belgium, and Spain. Slightly worsens the negative balance of Britain that, however, becomes the second European country for foreign trade volume, surpassing France, which slightly improves the negative value of its trade balance. Decreased by 31.2% the exports of Russia that still managed to maintain a good surplus in its trade balance for the simultaneous reduction of imports by 34.7%. So appears evident the crisis impact in the value of fuel exports, given the heavy decline in prices, and the effect of sanctions on imports. The decrease in oil prices weighed on the Middle East that has seen a decrease of 34% of the value of its exports, eliminating the strongly positive surplus of its trade balance. The same fate has befallen Africa.

Asia has seen its exports fall less than Europe (-6.5%), but a little more than Europe its imports (-11.4%) still increasing its share in the World Trade, and improving significantly the balance of trade, that went from a negative balance of 71 billion to a surplus of 286 billion dollars. This is mainly due to China which improved its share of total world trade, especially in exports, and increasing by 73% the positive balance of its Trade Balance. It also improves the positive balance of South Korea. It reduces by 77% its imbalance Japan, especially for the strong decline in imports. India's balance remains negative.
China is the first nation for exports and the second for imports.

Continue to grow the high US trade deficits that remain the first importing country and the second in exports.
Also Central and South America worsen the overall negative balance, both for the worsen economic crisis in Brazil and for the decrease in exports of oil producing countries.
Italy slightly reduces the surplus in its trade balance and ranks 6th in the world for the value of its surplus, surpassed in 2015 from South Korea.

Goods transport in the World.

After analyzing the movement in the volume/value of goods and services worldwide in the year just past, indirectly stressing the importance of transport in the development of global economies, in the second part of the study instead we analyze the role played by the various mode of transport in ensuring effective freight handling.

As already pointed out in previous reports on the subject the trend of mobility of goods in the most important areas of the world, and the role played by the various modes, are conditioned by:

• Size and level of economic development of the country with particular reference to advanced economies or developing

• Relative role of the Industry and Services

• Characteristics of the region.

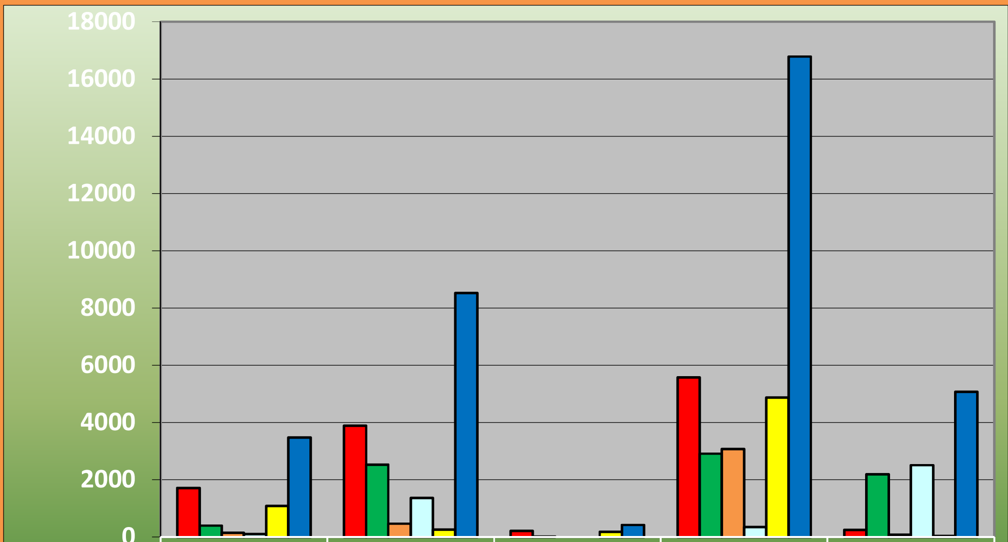
• Availability of raw materials.

• Importance of flexibility in use, timely deliveries and movements, with respect to volume, weight and value of the loads.

• The role of logistics and just in time.

Comparable data used this year are the latest published by Eurostat at the beginning of the year and relative to 2013 (2012 for the USA), but they are sufficiently representative of the size of the freight traffic in the most significant areas of the world.

Freight Transport in the World in 2013 – Inland traffic in Major countries **(Usa 2012)**
billion t/km Source: Eurostat 2016



	EU28	USA	Giappone	Cina	Russia
Strada	1720	3886	211	5573	250
Ferrovia	406	2536	21	2917	2196
Navig.Int	153	470		3073	80
Oleodotti	112	1368		350	2513
Mare	1089	263	185	4871	39
Totale	3480	8523	417	16784	5078

Strada = Road

Ferrovia = Rail

Nav. Interna = Inland Navigation

Oleodotti = Pipelines

Mare = Sea

In light of the above analysis of world trade it seems obvious that by far the largest freight volumes, exposed from now on in tonnes / kilometers, are in China, US, Russia and Europe.

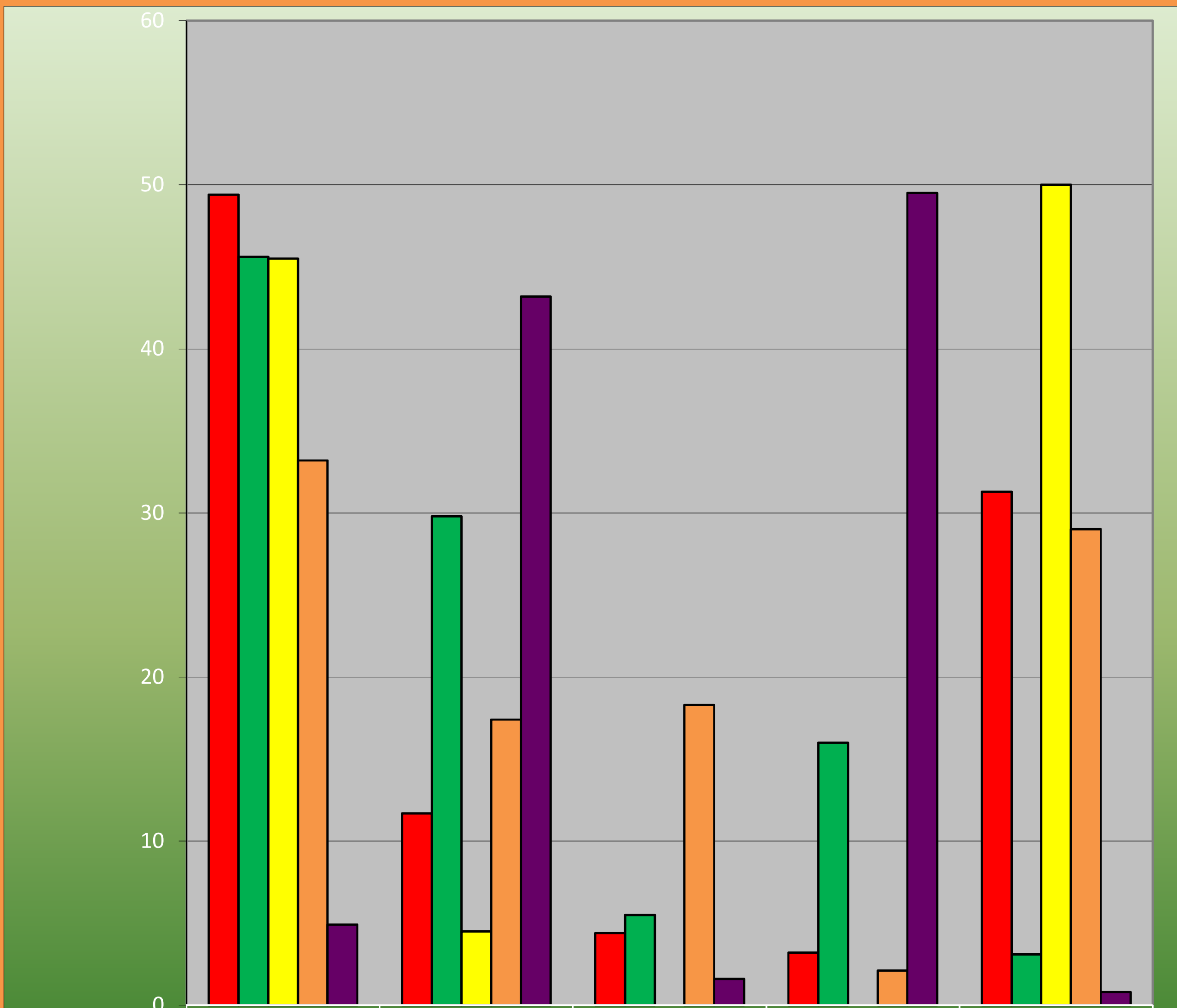
Compared to last year's survey, which reported the 2012 figures (2011 for the US and Japan) we can notice: a further fall in total transport volumes in Europe, mainly related to the reduction of maritime transport, with only a slight recovery of road transportation, because of the economic crisis in that area; a dramatic increase in the United States, on average 33% per year, an increase especially in road transport, almost doubled, where in fact the economy was recovering; and a slight decrease in China, especially in road transport, as a result of the cooling of the economy. Slight progress in Russia, especially related to oil pipelines.

The modal split underlines the absolute prevalence of

- ✓ the road in Europe and Japan, and from 2012 also in the USA. In China road became the first mode for freight transport since 2012.
- ✓ Railway in the US and Russia.
- ✓ the transport by sea in Japan and inland waterway in China
- ✓ Pipelines in Russia.

The following table shows the relative importance of the various modes.

Freight Transport in the World – Major Countries – 2013 values – Modal split (in %) – Ton/km

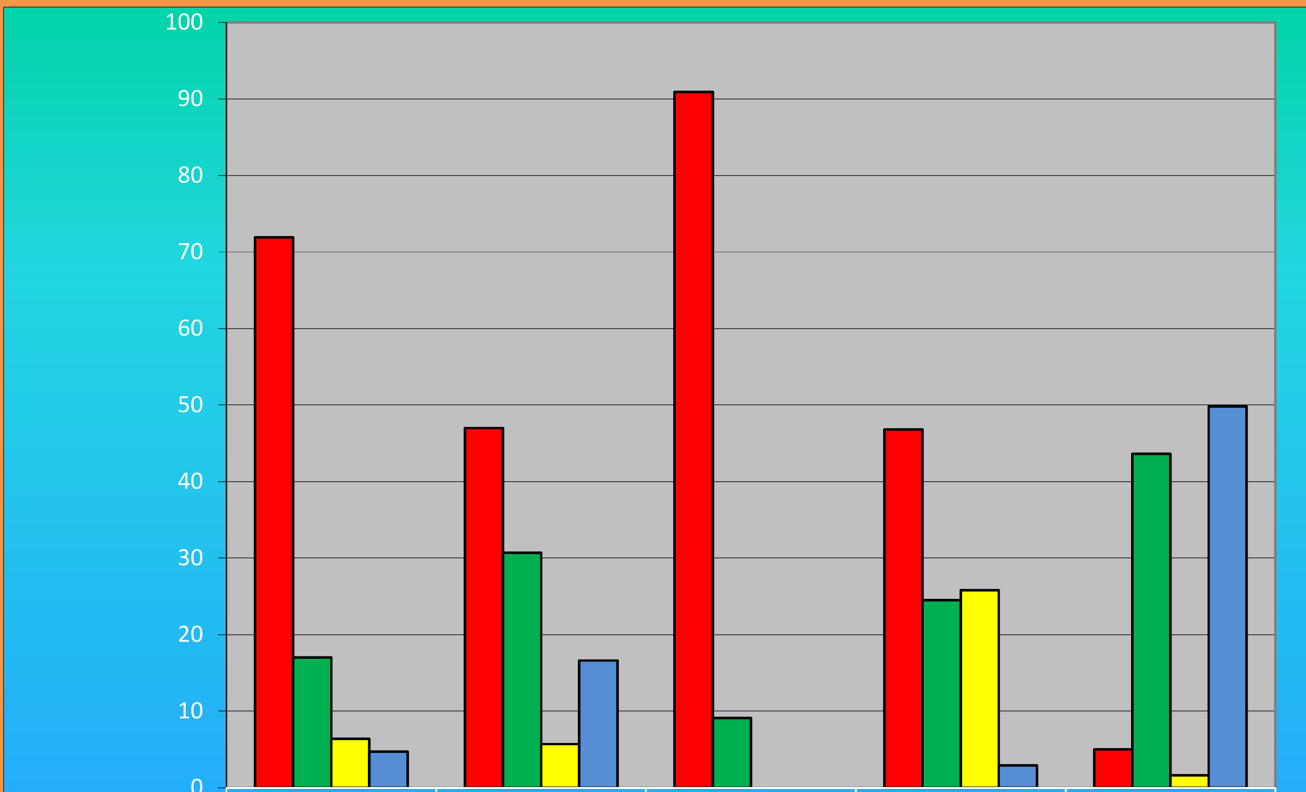


	Strada	Ferrovia	Navig.Int	Oleodotti	Mare
EU28	49,4	11,7	4,4	3,2	31,3
USA	45,6	29,8	5,5	16	3,1
Giappone	45,5	4,5			50
Cina	33,2	17,4	18,3	2,1	29
Russia	4,9	43,2	1,6	49,5	0,8

If we exclude the sea, as is usually done in the official statistics, considering only the movements inside the territories, the role of the road emerges with great evidence in virtually all areas analyzed, with the exception of Russia. Since 2009 it has become the main mode in China, and travels today to 47% of the total. Marginal role of the railway in Japan and Europe. In Russia prevails by far the pipeline, but the railway also has a great importance; almost no use of road transportation. In the US the railroad has lost its dominant role due to the vastness of the territory and the large distances involved. The road now covers almost half of the total.

Have little relevance inland navigation (river or lake), with the exception of China, and pipelines, fundamental mode instead as in Russia, given the great importance that have in the country oil and natural gas, but with a significant role also in the USA.

These data are obviously affected by the level of development of road infrastructures and the motorization to suggest a marked increase in the next years of road mobility in many areas in the developing world**.**



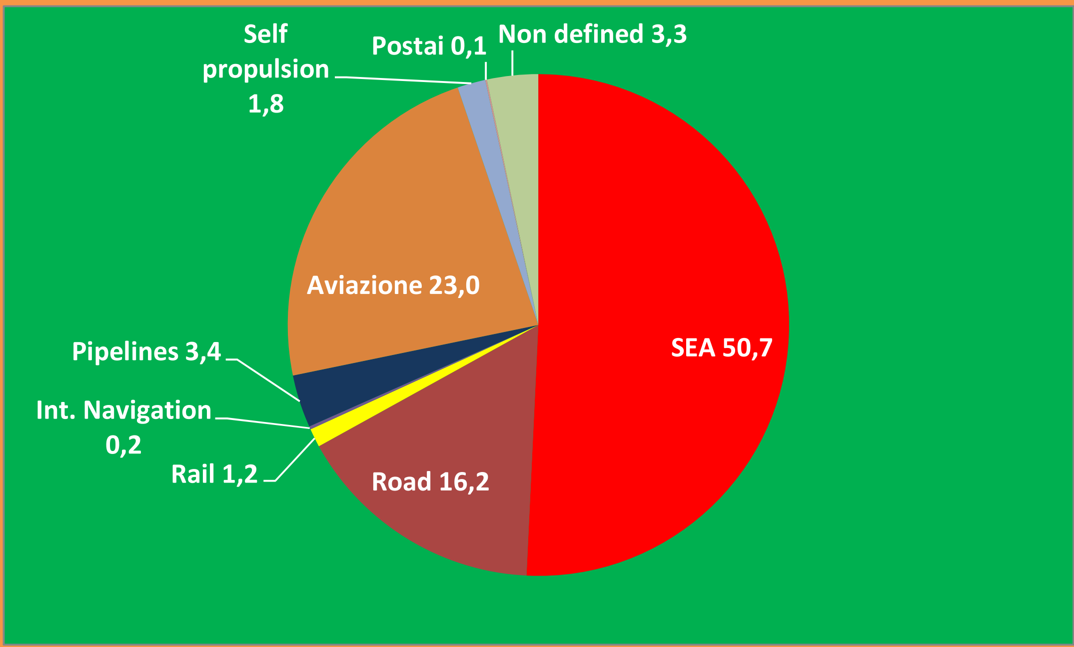
	EU27	USA	Giappone	Cina	Russia
Strada	71,9	47	90,9	46,8	5
Ferrovia	17	30,7	9,1	24,5	43,6
Navig.Int	6,4	5,7		25,8	1,6
Oleodotti	4,7	16,6		2,9	49,8

Foreign trade of the EU-28 by Transport Mode

In the previous chapter we analyzed the size and the relative importance of the major modes of transport for the internal mobility of goods.
But it would be interesting at this point analyze also which methods were used for the movement of goods in the Foreign Trade worldwide.

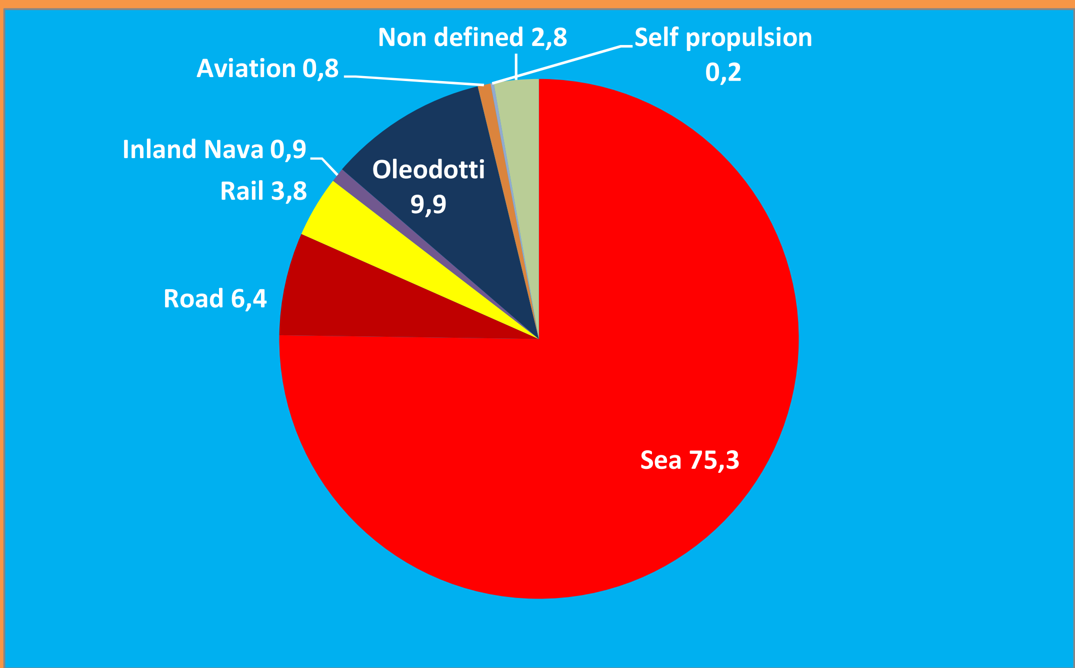
Unfortunately in this regard there are only the statistics of the European Communities (Eurostat) that still give some significant food for analysis on the method used to import and export.

Shares in value of the various transport modes



The following two tables, on Eurostat data referring to 2013 and published this year, show the role of maritime transport that in addition to handling over 70% of heavy goods over which it has no competition, also moves the 50% by value of goods where aviation is the ideal competitor. In the latter case also the road is very much used and it leaves at a great distance railway, which also has greater use when the transport operation involves heavy goods...

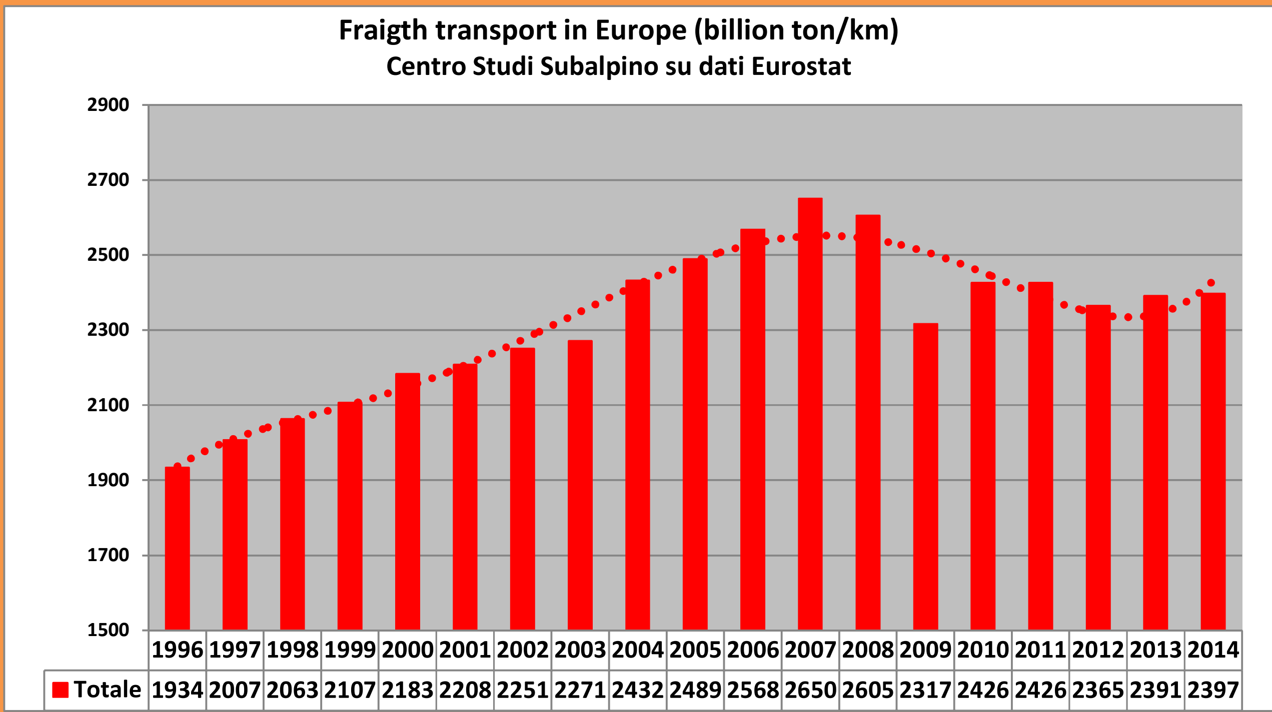
Shares in volume of the various transport modes



To underline the role of pipelines in the transport of heavy goods: they area in fact in second place

In 2013 it decreased the relative importance of sea transport in value (€ billion) and pipelines in volume, but increased the aviation share in value.

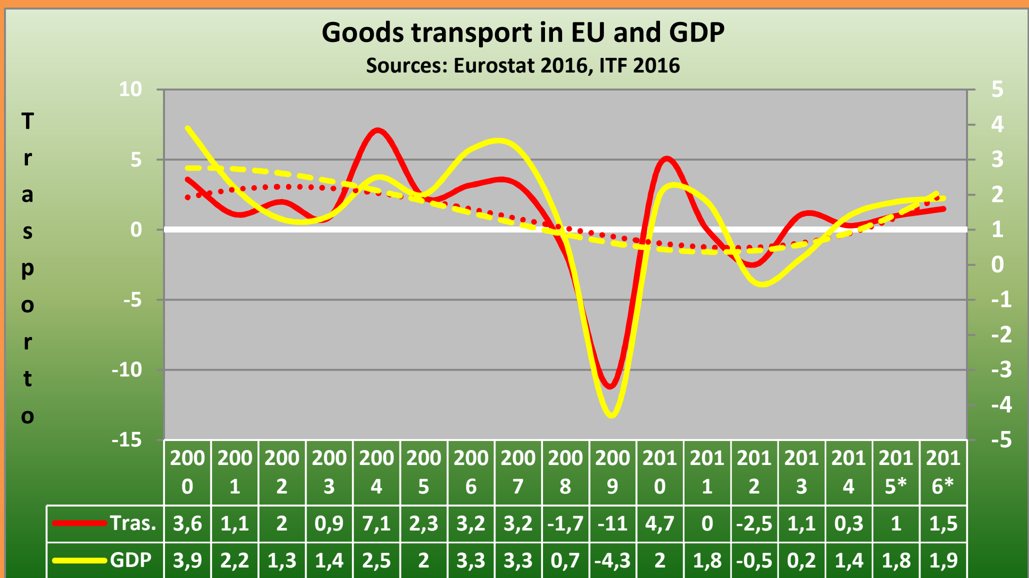
Freight transport in Europe



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Totale	1934	2007	2063	2107	2183	2208	2251	2271	2432	2489	2568	2650	2605	2317	2426	2426	2365	2391	2397

The latest figures from Eurostat for 2014 indicate a substantial stability compared to 2013, mainly thanks to a marginal increase of 0.35 %% to road transport, and 1% of the railway. In total, the volume of freight traffic rose by 0.25% compared to the low volume of 2013. They go down marginally inland waterways and oil pipelines. Consequently rise the shares of the road and of the railway.

Looking at the chart above you can see that freight transport in Europe had gradually been expanding until 2007, and had suffered a heavy setback in 2009 due to the global crisis. It went up in 2010 but did not recover the heavy losses of the previous year. New setback in 2012 and a slight recovery in 2013. A modest recovery has taken place in 2014 and a more significant one, according to the IRU and Confetra, is anticipated for last year and forecasts point to further economic recovery and most significant recoveries.in transport.

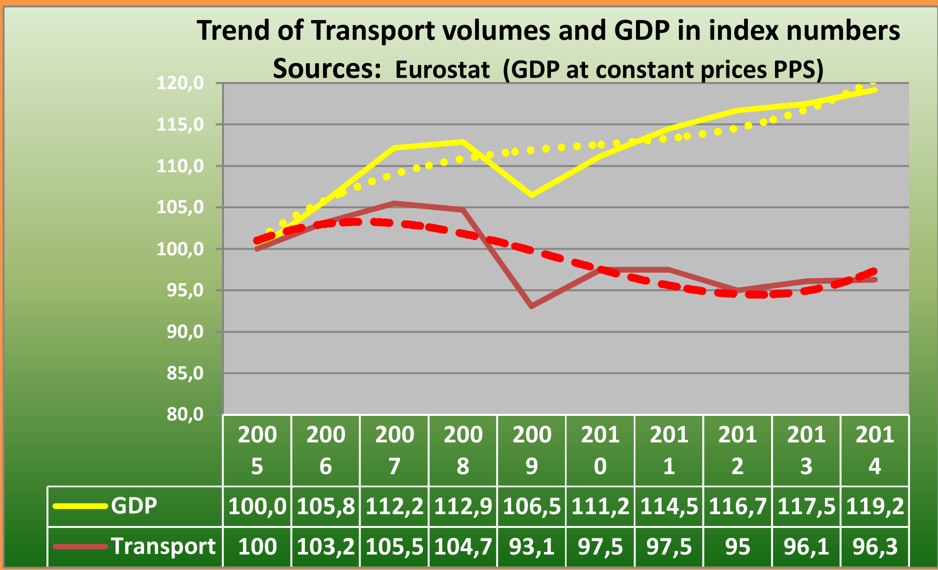


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*	2016*
Tras.	3,6	1,1	2	0,9	7,1	2,3	3,2	3,2	-1,7	-11	4,7	0	-2,5	1,1	0,3	1	1,5
GDP	3,9	2,2	1,3	1,4	2,5	2	3,3	3,3	0,7	-4,3	2	1,8	-0,5	0,2	1,4	1,8	1,9

It should be added that until 2007 the transport had grown at rates higher or at least equal to the gross domestic product (GDP), but after that year things were reversed and today on average transport grows at lower rates, such as to open a wide gap that It will not be easy to close in a few years, especially in an economy that only from 2013 began to grow again. (Correlation coefficient of 0.93)

The table below shows a comparison of the index numbers of the transport volumes and those of the Gross Internal Product (GDP) at current prices (Purchasing Power Standard).

It seems clear that while moderating the pace of growth at the end income has increased between 2004 and 2014 (its values between 2005 and 2015 grew by almost 20% at current prices, and by nearly 6% at market prices), thus exceeding the levels of the crisis moments. The values for the transport went gradually reducing since 2007 and have now returned to the values previous before 2004. **Only a strong economic recovery that raises incomes and consumption will reverse this dangerous reality.**



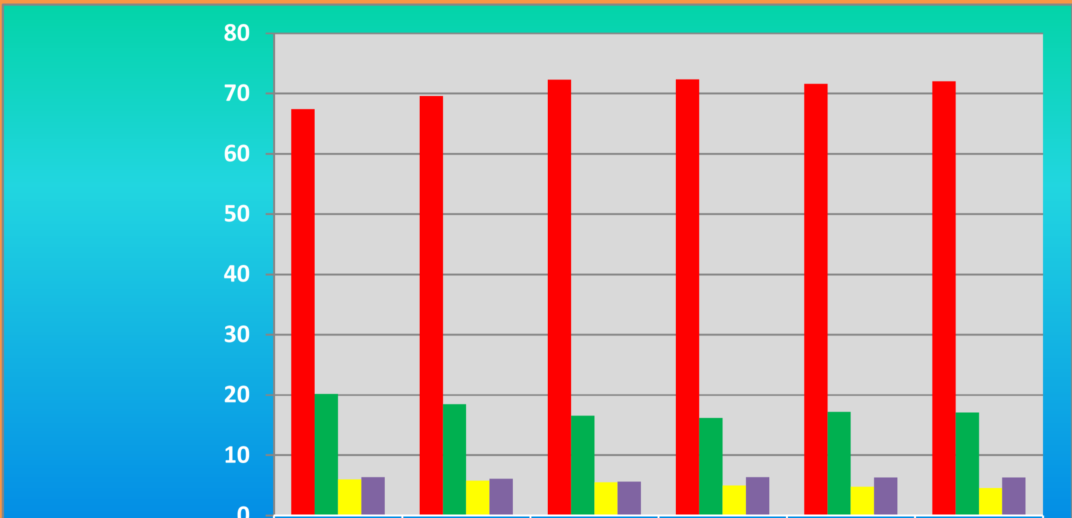
But moving to a more detailed analysis of the latest data on transportation, while 2011 had maintained

Years	Road	Rail	Inland Nav.	Pipelines	Total
2007	1925	452	145	128	2650
2008	1891	443	146	125	2605
2009	1700	364	131	122	2317
2010	1755	394	156	121	2426
2011	1744	422	142	118	2426
2012	1693	407	*150*	*115*	2365
2013	1719	407	153	112	2391
2014	1725	411	151	110	2397

substantially the same previous year, 2012 has seen shrinking the volume again with a drop of 2.5%, in particular for the reduction of road traffic, fell 3%, and of railway (-3,5%) worsening the distance with 2007 to -9.5%, with losses in all modes, with the exception of inland navigation.

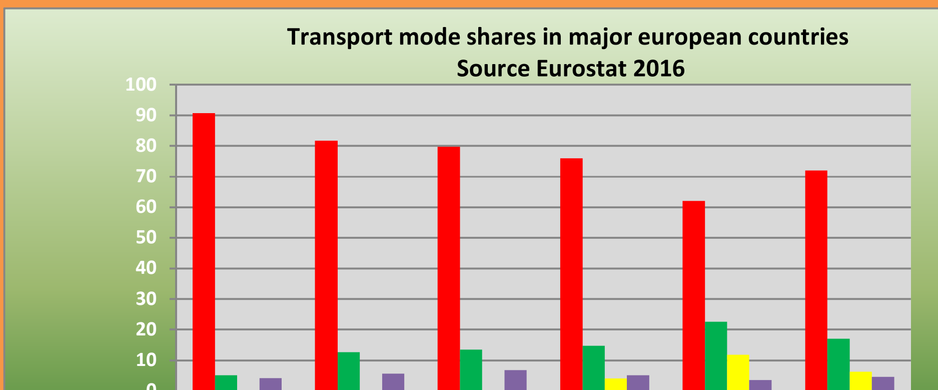
In 2014, things have improved only marginally, with an increase of 0.25%, spread on road and rail, with a slight decline in both inland waterway that pipeline.

As for the shares of the main modes, the road continues to increase its relative importance, even going slightly downhill from 2011 to 2013 and rising to 72% of freight transport in 2014. The railway, increased in 2012, remains a bit 'above 17%. In 2014 slightly down the pipelines and it is leveling the river and lake navigation.



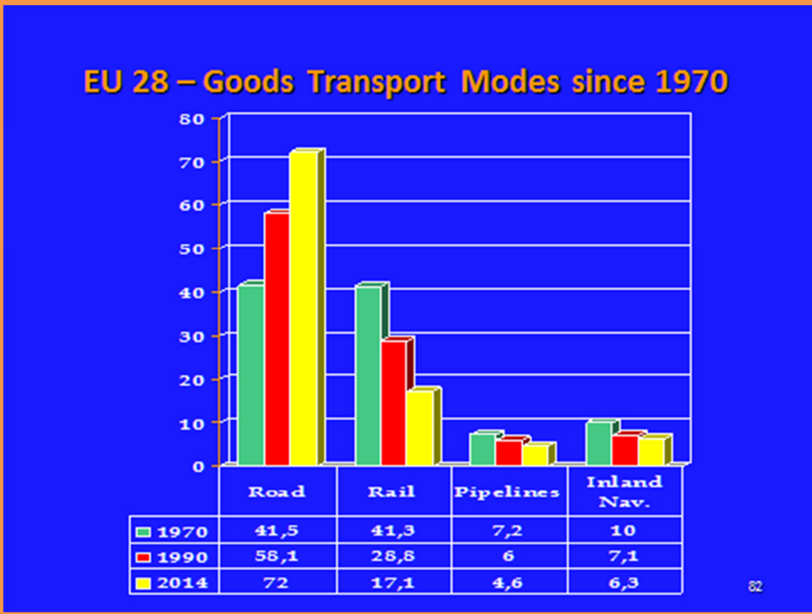
	1995	2000	2005	2010	2012	2014
Road	67,4	69,6	72,3	72,4	71,6	72
Rail	20,2	18,5	16,6	16,2	17,2	17,1
Pipelines	6	5,8	5,5	5	4,8	4,6
Inland Navigation	6,4	6,1	5,6	6,4	6,3	6,3

Also interesting to note allocation of the various modes in major European countries, which shows that the road remains the undisputed leader in transportation, with a European average of 72%, and with very high peaks in Spain, but also in Great Britain and in Italy. Downhill almost everywhere the railway in 2014 (especially for the improvement of road transport), which still retains an average acceptable only for its good use in Germany and the new countries of the European Community. Germany also maintains high share of inland waterway transport, virtually absent in most of the EU countries.

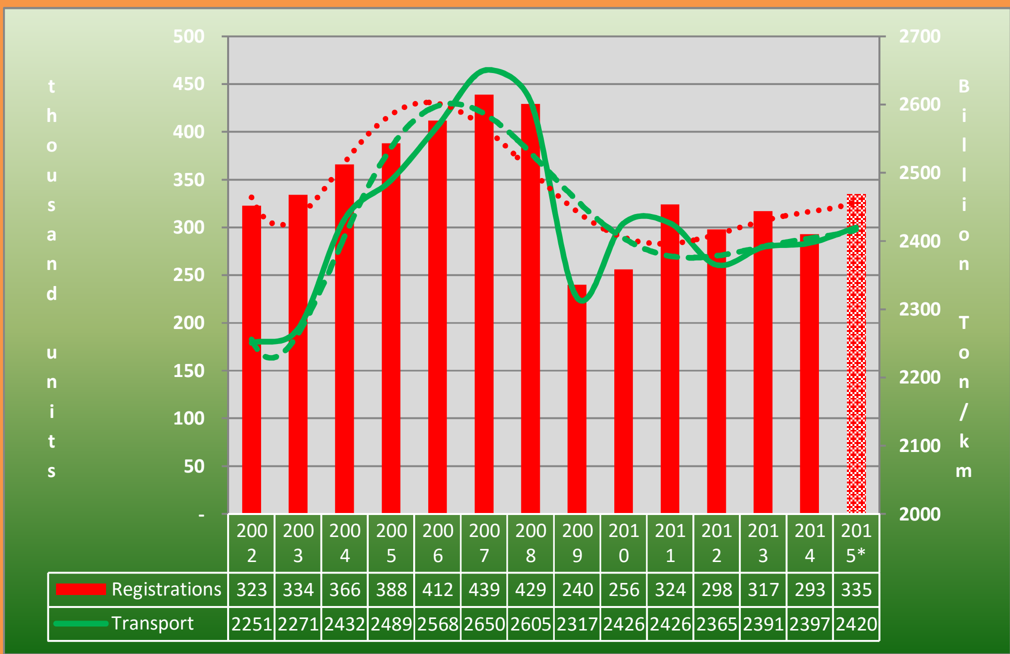


	Spagna	U.K.	Italia	Francia	Germania	Media UE
Strada	90,7	81,7	79,7	76	62	72
Ferrovia	5,1	12,6	13,5	14,8	22,6	17,1
Nav. Interna				4,1	11,8	6,3
Oleodotti	4,2	5,7	6,8	5,1	3,6	4,6

As we will see later for Italy, which in the official ranking has lost since 2011 a place in favor of Britain for the dramatic decline in transport volume on the road, actually has a higher value than what appears in the graph : a 85.2% that would place it immediately after Spain, if one includes cabotage and vehicles under 3.5 t., not considered in the Eurostat data relating to transport, both domestic and international, carried in vehicles registered in country of which they publish data of 3.5 tons.



Looking to the history of the last 44 years we can not but reiterate our thinking on the long awaited shift in freight transport from road to rail, on which focuses the latest White Paper on Transport of the European Commission: it seems a truly titanic undertaking that the wishes can truly be realized, at least in time indicated. It would already be a success if the modal split were to remain at current quotas, no further gains of the road, which instead gained also in 2014. In fact, to earn a share point should happen that for a few years road will decrease by half, what is out of reality as well as undesirable.



Before closing this chapter I will try to point out the strong correlation (0.93 between 2005 and 2015 *) between the trends in registrations of trucks (> 3.5 tonnes) and the volume of road transport in billion t / km.

The chart published alongside underlines precisely, (although a priori the assertion of the close link between market performance and volumes of transport might seem obvious): in fact the two variables move in parallel. Note, however, that the trend of the transport gradient is less pronounced than that of the volume of registrations, which can only mean that the renewal of the fleet is not limited by the low increase in the volume of goods to be transported.

This bodes well for the progress of the market demand for the current year. (Transport volumes in 2014 estimated)

The transport of goods in Italy

According to provisional figures published by Eurostat (see table below) transport volumes in 2014 year in Italy furtherly decreased : -8.4%, mainly for the further losses of the road, decreased in the year by 9.4%. Slight recovery of rail transport, that rose by 5.3%.

Italy - freight traffic - provisional EUROSTAT since 2015 - Billions ton / km

	Year				*Differences*	
	2013	*Share %*	2014	*Share%*	2014/2013	*Diff.%*
Modes						
Trucks	127,2	81,4	117,8	*79,7*	-9,4	*-7,4*
Rail	19	12,2	20	*13,5*	+1	*+5,3*
Pipelines	10	6,4	10	*6,8*	0	*0*
Total	156,2		147,8		-8,4	*-5,4*

In addition, when comparing the Italian data with those of 2014 with those of 2000 the result is an image that contrasts with the rest of Europe, with an evolution of transport that would be as much as 32.1% negative, while in the same period in Europe the volume of transport increased by 9.8%.

Goods transport in Italy (Eurostat data) in billion ton / km

	2000	2005	2006	2007	2009	2011	2012	2013	2014
Road	184,7	211,8	187,1	179,4	167,6	142,8	124	127,2	117,8
Rail	22,8	22,8	24,2	25,3	17,8	19,8	20,2	19	20
Pipel.	10,3	11,4	11,4	11,4	11,6	10	10,1	10	10
Total	217,8	246	222,7	216,1	197	172,6	154,3	156,2	147,8

Compared to 2005, the situation is even worse, as shown in the table below, based on official Eurostat data for 2014, and showing a freight decline by as much as 35.8% (even -44.4% in Road transport), compared to a -3.7% of the EU (-3.8% on the road).

Italy – Freight Transport
Official Eurostat Data - Billion ton/km

			Years			
	2005	Share %	2014	Share %	2014/2005	Diff.%
Modes						
Road	211,8	86,1	117,8	79,7	-94	-44,4
Rail	22,8	9,3	20	13,5	-2,8	-12,3
Pipelines	11,4	4,6	10	6,8	-1,4	-12,3
Total	246		147,8		-98,2	-40

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It seems to us therefore that the decline reported by official statistics is conditioned by the growing volume of the internal cabotage, done with vehicles registered in other countries. Following then, as in previous years, the suggestion of Prof. Rocco Giordano, as is evident from his article in the journal of Logistics Systems in June 2010, (Year III n. 2), if to the Eurostat data are added cabotage, whose incidence for 2007 Prof Giordano evaluated in about 30 billion tons / km, but in the meantime is certainly increased, and transport of vehicles under 3.5 t., excluded from Eurostat statistics, the situation would be for Italy somewhat different, emphasizing also how much transport is subtracted from the Italian carriers by the infamous cabotage, which started around the 2006/2007.

This loss cannot but be reflected also in lower sales of industrial vehicles in Italy.

Here then, according to our calculations, what would be the situation by adding to the Eurostat data on cabotage and transport of vehicles <3.5.

	2000	2005	2006	2007	2009	2011	2012	2013	2014
Road	196,0	230,0	230,0	*227,0*	206,0	183,0	164,0	167,0	162,0
Rail	22,8	22,8	24,2	25,3	17,8	19,8	20,2	19,0	20,0
Pipelines	10,3	11,4	11,4	11,4	11,6	10,0	10,1	10,0	10,0
Total	229,1	264,2	265,6	263,7	235,4	212,8	194,3	196,0	192,0

The decline would be still consistent but justified also by the recession in which Italy has fallen from 2011 to 2013, and the volume of traffic on our roads would be better reflected by our estimates.

On the same basis we then calculated the impact the crisis would have had on the Freight Transport in Italy, starting from 2005 (the year before the Directive on cabotage), which still shows a less negative trend than the framework that would result from the official Eurostat data shown above.

Italy – Freight Traffic (ricalculated)

Billion ton/km - Elaborations CSS on Eurostat Data

			Years			
	2005	%Share	2014	%Share	2013/2005	Diff.%
Modes						
Road	230	87,1	162	84,4	-68	-28,7
Rail	22,8	8,6	20	10,4	-2,8	-12,3
Pipelines	11,4	4,3	10	5,2	-1,4	-12,3
Total	264,2		192		-72,2	-15,8

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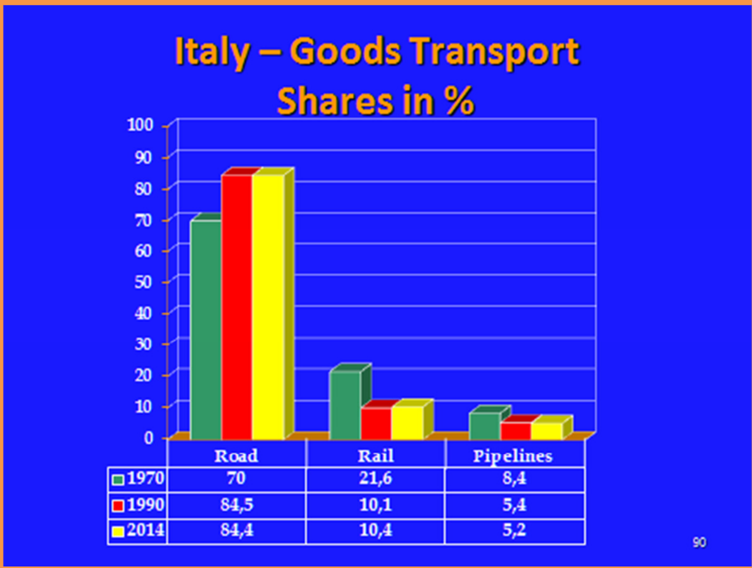
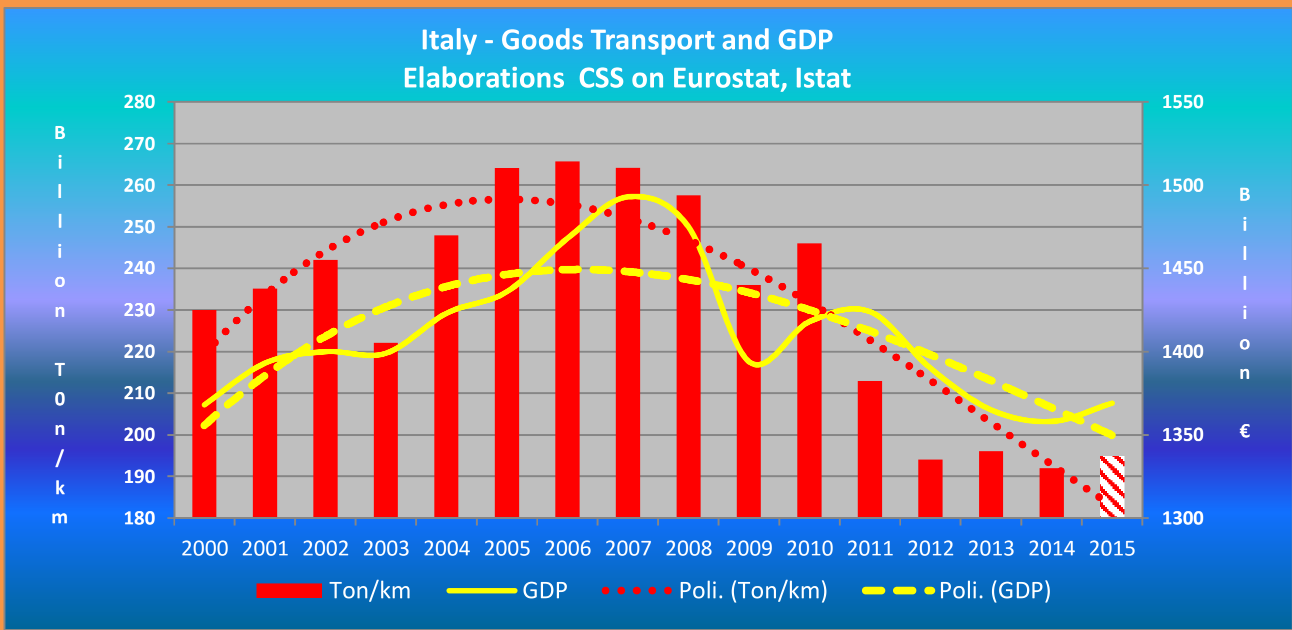
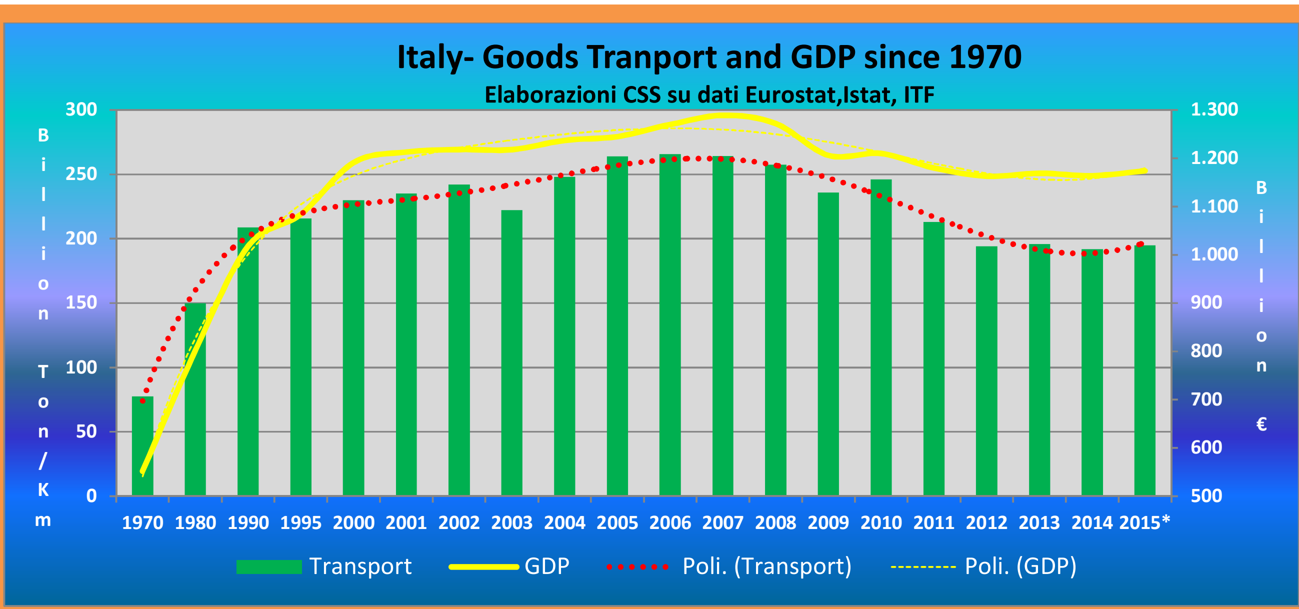
To sum up the Italian situation we report annual data as processed by us since 2001 that show how the road transport trend is one that has suffered most of the various crises that have occurred in our country since 2008, and especially from that of 2011- 2014, from which it would appear that Italy is out with the end of last year. Compared to the year previous to the global crisis (2007) the recorded loss was - 28.6%, compared to -10.4% of the European average.
The railway has also suffered the repercussions of the crisis, in addition to lower efficiency, losing 22.8% of its volume, more than double the European downturn (which is limited to -9.1%) -
Basically stable in recent years the trend of the pipelines, which also was affected by seasonal factors.
Compared to 1970, then, the road has virtually absorbed more than half of rail traffic, down from a 21.6 share to a modest 10.1% in the nineties and to remain broadly stable at those values.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Road	203,0	210,0	191,0	215,0	230,0	230,0	227,0	222,0	206,0	215,0	183,0	164,0	167,0	162,0
Rail	21,76	20,68	20,30	22,18	22,76	24,15	25,29	23,83	17,80	18,60	19,80	20,20	19,00	20,00
Pipelines	10,69	10,69	10,66	10,70	11,42	11,45	11,39	11,62	11,60	11,10	10,00	10,10	10,00	10,00



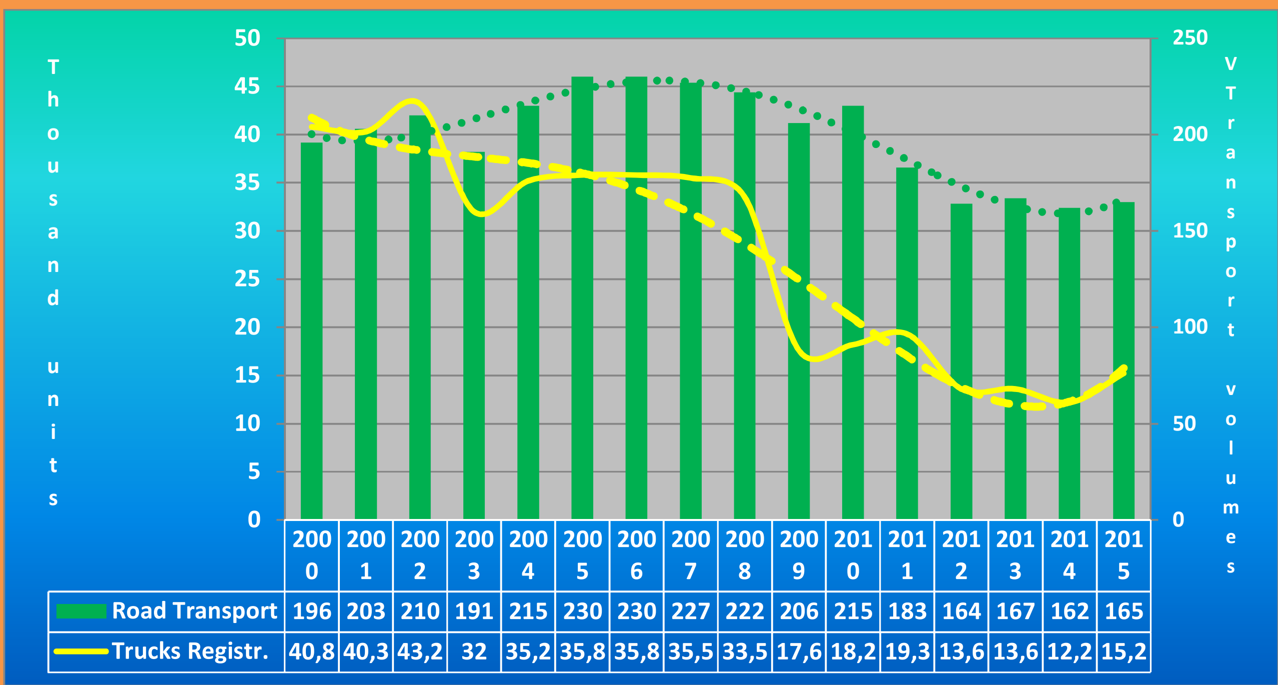
It should be emphasized that in the last 25 years the shares have remained virtually stable, which leads to the conclusion that it is now an institutionalized situation in the light of existing infrastructure and market needs. Finally we updated our table that shows the time evolution of the transport goods in Italy from 2000 onwards, in billion ton / km, compared to GDP, (Coeff. Corr. 0.81 - Sources: CSS, OECD, ITF, Istat), trend that show the impact of the global crisis on both the income and on transport volumes that for next year are anticipated at the level of 1990, and even to those of 1980 if we used the official Eurostat values ... , as shown by the graph below.





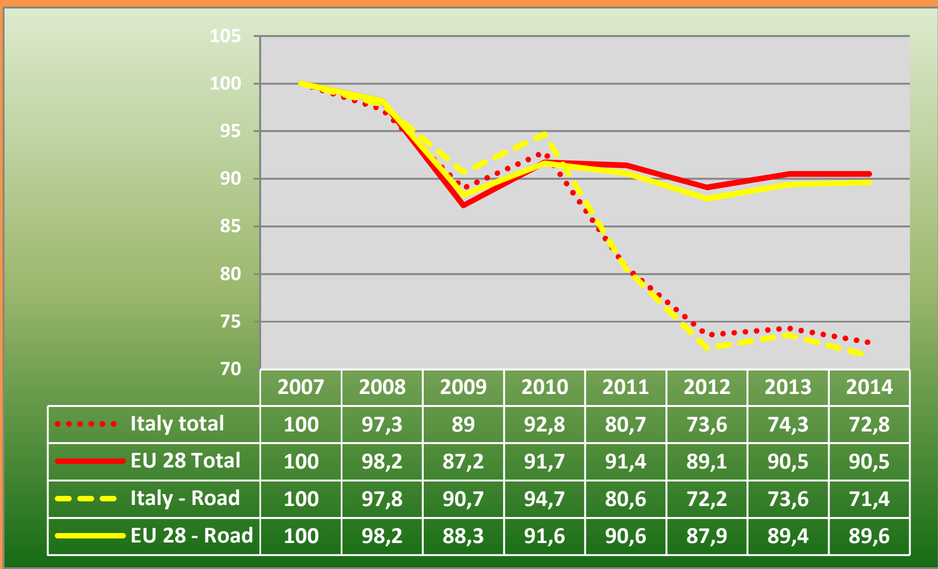
Among other things the two curves have a high degree of correlation (0.92) which on one hand makes us predict a modest turnaround for the current year, on the basis of the increase in GDP expected for this' year, on the other are a dramatic representation of the painful situation in which has fallen in only seven years a fundamental and strategic activity such as transport.

But back to more recent years **we have then compared the performance of the registration of trucks with transport volumes (Registration Truck Source Unrae**).



From the Analysis of the graph you can see that from 2003 to 2008 the market had stabilized over 35,000 units per year, indirectly pointing out a pure substitution in the framework of the Great Fleets. The owner-operators, who represent the majority of trucking companies, instead maintain longer their vehicles and park tends to grow gradually. In 2009, the market demand was reported back on fifteen years before, the time of the previous crisis that hit the whole of Europe at that time, and was then maintained around those values in 2010 and 2011, but fell literally in 2012 with a further decrease in 2013 and 2014.

The poor correlation with the GDP series throughout the period (0.33) probably indicates that registrations in Italy were still influenced by the availability of products on the Italian market, or by moving abroad of part of the purchases ...) more than by economic factors that directly influence the demand. As evidence of this, we measures instead the correlation between registrations and GDP between 1993 and 2002 and the value is very high (0.96), confirming that at that time the demand for trucks (> 3.5 t) was directly influenced by factors almost exclusively economic.
The same can be said for the period 2007-2015, when the relationship settles at a significant value (0.83).
Added to this is a structural factor entirely new: since sometime especially the fleets have moved operational locations and purchases in markets with lower labor costs, relying on cabotage for their transport within the Italian market, reducing so the shipping volume ascribed to Italy from the European Institutions and the registration of vehicles in Italy.
That something structural has gradually occurred from 2008 onwards can be well noticed in the table above, where only for transport volumes changes relating to cabotage have been made. For registrations instead the calculation is quite complicated and deserves an accurate ad hoc investigation.



	2007	2008	2009	2010	2011	2012	2013	2014
Italy total	100	97,3	89	92,8	80,7	73,6	74,3	72,8
EU 28 Total	100	98,2	87,2	91,7	91,4	89,1	90,5	90,5
Italy - Road	100	97,8	90,7	94,7	80,6	72,2	73,6	71,4
EU 28 - Road	100	98,2	88,3	91,6	90,6	87,9	89,4	89,6

Finally we propose a direct comparison between the trends of the total freight traffic by road in Europe and Italy, from the pre-global crisis in 2014: it is evident that while up to 2010 the respective curves were substantially moving in parallel, from 2011 in Italy they were dramatically separated from developments in the rest of Europe, plummeting to values of the late 80's, early 90's of the last century. But a pattern of this kind cannot, in our opinion, be attributed only to an economic crisis that has hit Italy more than the rest of the EU. The collapse of Italy also implies structural changes, such as the explosion of illegal cabotage.

But on this subject we refer to our other study "Collapse of Truck Market and the Freight Transport on the road in Italy, which are the causes? Report 2016 ", which invite you to read carefully

Emilio di Camillo - Centro Studi Subalpino, September 2016