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WORLD SEABORNE TRADE IN THE 1990-2019 PERIOD AND ITS PERSPECTIVE IN COVID ERA

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Abstract: In the period 1990-2019 the world economy grew and declined with good and bad periods, with smaller and stronger crises (such as the 2009 one), which seems to have not ended. World seaborne trade, directly related to international world and merchandise trade followed their upward and downward trends, but with much higher amplitudes. The comparative analysis of global economic developments in 2005-2018 period shows a declining trend of all economic indicators, accentuated in the covid and post-covid 19 era.

Keywords: world, seaborne trade, evolution, covid 19

1. Introduction

This paper continues previous works of the authors, validated by the subsequent evolution of the world economic phenomenon.

The evolution of maritime trade in the last 30 years has been directly influenced by the evolution of the world economy. For analysis we chose three groups of countries: developed countries, transition countries, developing countries, and China, compared to the world economy.

World seaborne trade remain strongly linked to the world economy, the development of the current production areas and outlets, as well as new ones, with differences from one region to another; world economy growth in 2018 (2.7%) was less than 1.4 % compared to 2017 (4.1%), compared to an average annual growth rate of 3.5% estimated over the 2019-2024 period.

In 2018, the world economy growth, decreasing, was 3.0% compared to 3.1% in 2017, and for 2019 the increase estimated was 2.3%. This trend is confirmed by the economic situation of entire group of economies: developed economies, developing countries, transition economies and also China.

2. Data and Method

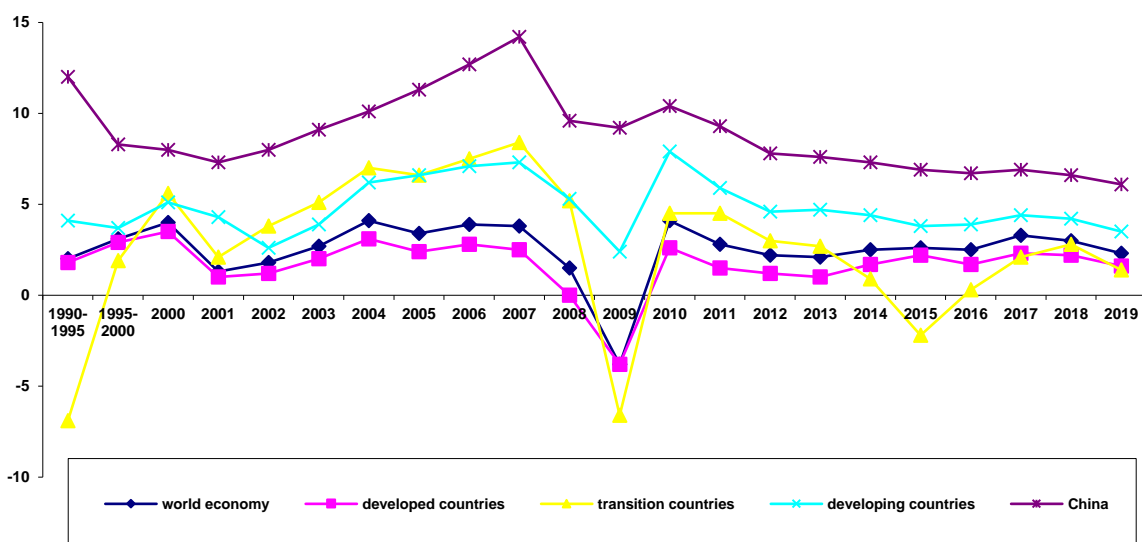
The Analysis of official bibliographic sources (UNCTAD, World Bank, IMF), and previous published analyzes of the authors, although they show slightly different information on the world economy in the period 1990-2019, see Table 1 and Graph 1, and Graph 2:

- 2009 was the worst year in terms of economic growth (with negative growth for the world economy, developed economies and transition economies), and 2008 and 2001 (though with positive growth);
- 2000, 2004, 2006, 2008, 2010, and 2017 were the best years in terms of economic growth;
- the last decade of the twentieth century registered an increasing trend of economic growth, ended with a peak of 4% in 2000;
- for the period 2000-2004 there was a decrease of more than two percent and a return to growth of 4.1% in 2004;
- in the next four years 2004-2007 the growth of the world economy remains (a slight decrease) around one in 2004, and because of the emergence of the global crisis, in 2008 and 2009 there was a drastic reduction in the world economy growth (from 3.8% in 2007 to -2.2% in 2009);
- it followed a strong recovery of the world economy in 2010, by 6.3 percent, from -2.2% (2009) to 4.1% (2010);

- in the 2010-2013) period, world economy decreases steadily to a value similar in growth with the '90s (estimated growth of 2.1% for 2013);
- in the period 2014-2017 it was a period of relative stability with a good growth in 2017;
- after 2017 it was registered a downward trend that will increase in 2020 due to the crisis COVID -19.

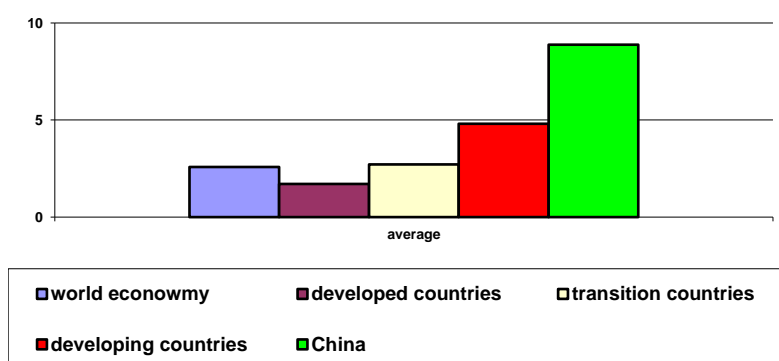
Table 1. Evolution of the world economy during 1990 to 2019 [in %]

| Period | World economy | Developed economies | Transition economies | Developing economies | China |
|-----------|---------------|---------------------|----------------------|----------------------|-------|
| 1990-1995 | 2,0 | 1,8 | -6,9 | 4,1 | 12,0 |
| 1995-2000 | 3,1 | 2,9 | 1,9 | 3,7 | 8,3 |
| 2000 | 4,0 | 3,5 | 5,6 | 5,1 | 8,0 |
| 2001 | 1,3 | 1,0 | 2,1 | 4,3 | 7,3 |
| 2002 | 1,8 | 1,2 | 3,8 | 2,6 | 8,0 |
| 2003 | 2,7 | 2,0 | 5,1 | 3,9 | 9,1 |
| 2004 | 4,1 | 3,1 | 7,0 | 6,2 | 10,1 |
| 2005 | 3,4 | 2,4 | 6,6 | 6,6 | 11,3 |
| 2006 | 3,9 | 2,8 | 7,5 | 7,1 | 12,7 |
| 2007 | 3,8 | 2,5 | 8,4 | 7,3 | 14,2 |
| 2008 | 1,5 | 0,0 | 5,2 | 5,3 | 9,6 |
| 2009 | -2,2 | -3,8 | -6,6 | 2,4 | 9,2 |
| 2010 | 4,1 | 2,6 | 4,5 | 7,9 | 10,4 |
| 2011 | 2,8 | 1,5 | 4,5 | 5,9 | 9,3 |
| 2012 | 2,2 | 1,2 | 3,0 | 4,6 | 7,8 |
| 2013 | 2,1 | 1,0 | 2,7 | 4,7 | 7,6 |
| 2014 | 2,5 | 1,7 | 0,9 | 4,4 | 7,3 |
| 2015 | 2,6 | 2,2 | -2,2 | 3,8 | 6,9 |
| 2016 | 2,5 | 1,7 | 0,3 | 3,9 | 6,7 |
| 2017 | 3,3 | 2,3 | 2,1 | 4,4 | 6,9 |
| 2018 | 3,0 | 2,2 | 2,8 | 4,2 | 6,6 |
| 2019 | 2,3 | 1,6 | 1,4 | 3,5 | 6,1 |
| average | 2,58 | 1,7 | 2,71 | 4,81 | 8,88 |



Graph 1. Annual evolution of the world economy and economies categories in the period 1990-2019 by UNCTAD [in %]

- an increase of growth of the developed economies with a lower value compared to the growth of world economy (1.7 % vs. 2.58 %);
- a higher rate of growth of developing economies compared to the world economic growth (4.81%), countries which, after 2000, experienced only positive growth, even during the current global economic crisis;
- a higher rate of growth of transition economies compared to the world economic growth (2.71%), countries, after the crisis they went through during the years 1990 - 1995 (-6.9 %) experienced positive growth, however, were affected by the global crisis (2009 with negative growth - 6.6%), and with a negative growth in the 2014-2016;
- a high growth rate of the Chinese economy (8.88%), almost four times higher than the world economy in the same period), with peaks in 2006, 2007 (14.2%), and 2010, but with a slowdown growth after 2014 (6.1% in 2019).



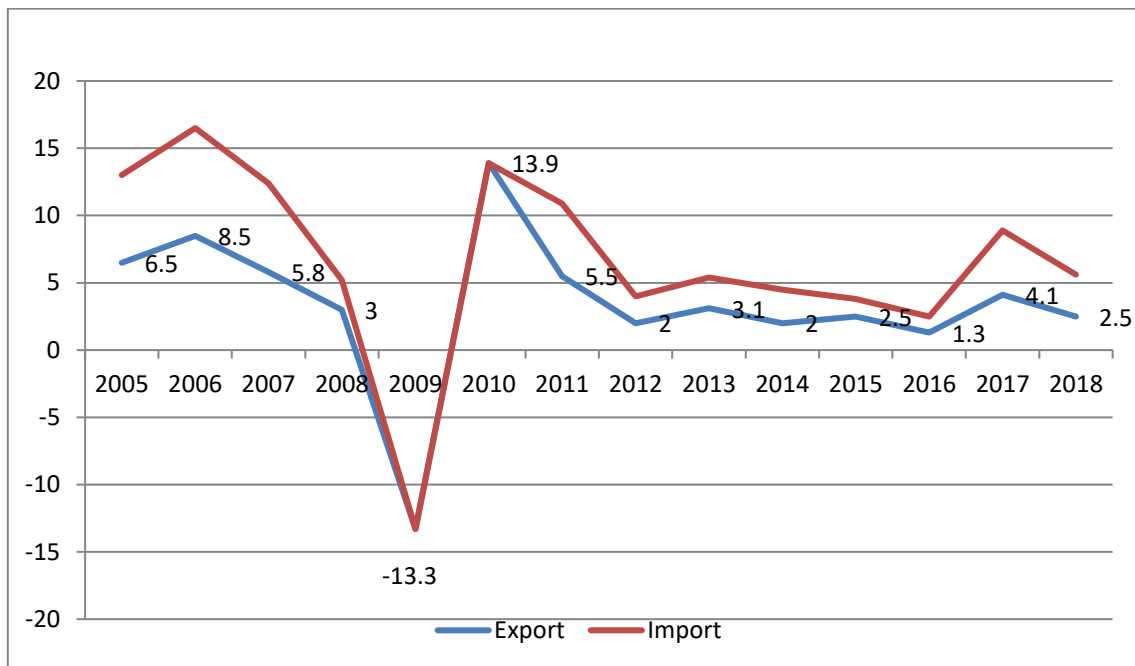
Graph 2. Representation of world economic growth by types of economies in the 1990-2019 period

The analysis of the world merchandise trade in the 2005-2018 period was based on the annual reports published by UNCTAD, World Bank, IMF, etc. These official information relates to changes (in percent) of exports and imports of goods by sea, the world economy, developed economies, transition economies, developing economies and China in the period 2005-2018 (table 2 and graph 3, 4, 5, 6, 7):

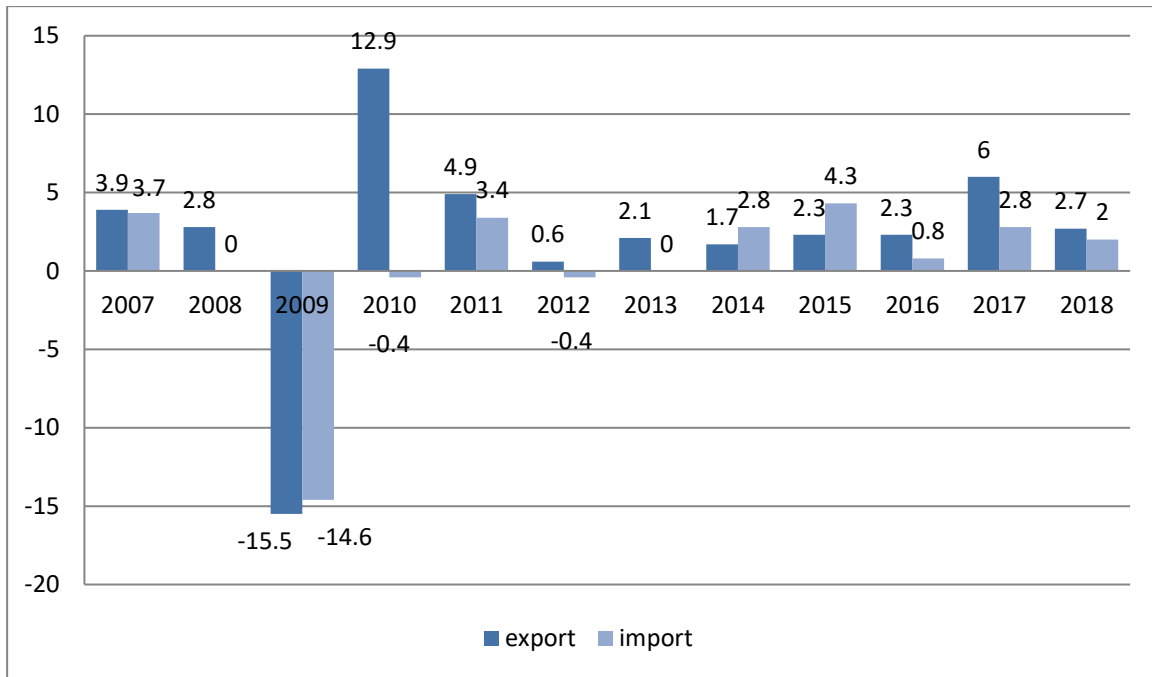
Table 2. Annual evolution in the volume of merchandise trade in the 2005-2018 period [in %]

| Period | Annual % | World economy | Developed economies | Transition economies | Developing economies | China |
|--------|----------|---------------|---------------------|----------------------|----------------------|-------|
| 2005 | export | 6,5 | | | | 25,0 |
| | import | 6,5 | | | | 11,5 |
| 2006 | export | 8,5 | | | | 22,0 |
| | import | 8,0 | | | | 16,5 |
| 2007 | export | 5,8 | 3,9 | 8,6 | 8,7 | 21,8 |
| | import | 6,6 | 3,7 | 26,1 | 10,6 | 14,1 |
| 2008 | export | 3,0 | 2,8 | 0,8 | 4,2 | 10,5 |
| | import | 2,2 | 0,0 | 16,0 | 5,3 | 2,4 |
| 2009 | export | -13,3 | -15,5 | -14,4 | -7,4 | -14,1 |
| | import | -13,6 | -14,6 | -28,2 | -17,9 | -1,1 |
| 2010 | export | 13,9 | 12,9 | 11,3 | 8,3 | 29,1 |
| | import | 13,8 | -0,4 | 15,9 | 22,5 | 25,4 |

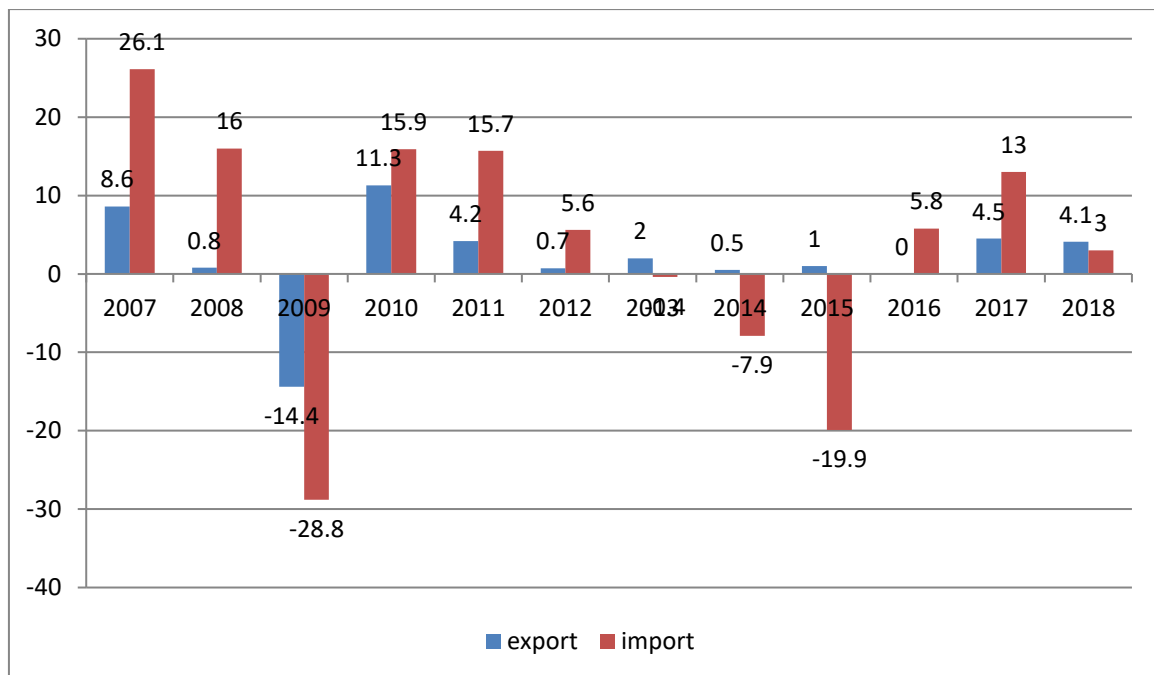
| | | | | | | |
|------|--------|-----|------|-------|------|------|
| 2011 | export | 5,5 | 4,9 | 4,2 | 6,7 | 13,4 |
| | import | 5,4 | 3,4 | 15,7 | 7,7 | 10,7 |
| 2012 | export | 2,0 | 0,6 | 0,7 | 4,0 | 6,2 |
| | import | 2,0 | -0,4 | 5,6 | 5,1 | 3,6 |
| 2013 | export | 3,1 | 2,1 | 2,0 | 4,4 | 7,7 |
| | import | 2,3 | 0,0 | -0,4 | 5,5 | 9,9 |
| 2014 | export | 2,0 | 1,7 | 0,5 | 2,5 | 6,8 |
| | import | 2,5 | 2,8 | -7,9 | 2,7 | 3,0 |
| 2015 | export | 2,5 | 2,3 | 1,0 | 2,4 | -0,9 |
| | import | 2,5 | 4,3 | -19,9 | 0,6 | -2,2 |
| 2016 | export | 1,3 | 2,3 | 0,0 | 2,0 | 1,4 |
| | import | 1,2 | 0,8 | 5,8 | -0,4 | 3,7 |
| 2017 | export | 4,1 | 6,0 | 4,5 | 5,2 | 7,1 |
| | import | 4,8 | 2,8 | 13,0 | 6,8 | 8,9 |
| 2018 | export | 2,5 | 2,7 | 4,1 | 2,9 | 4,1 |
| | import | 3,1 | 2,0 | 3,0 | 4,0 | 6,4 |



Graph 3. Annual evolution in the world economy volume of merchandise trade in the 2005-2018 period [in %]



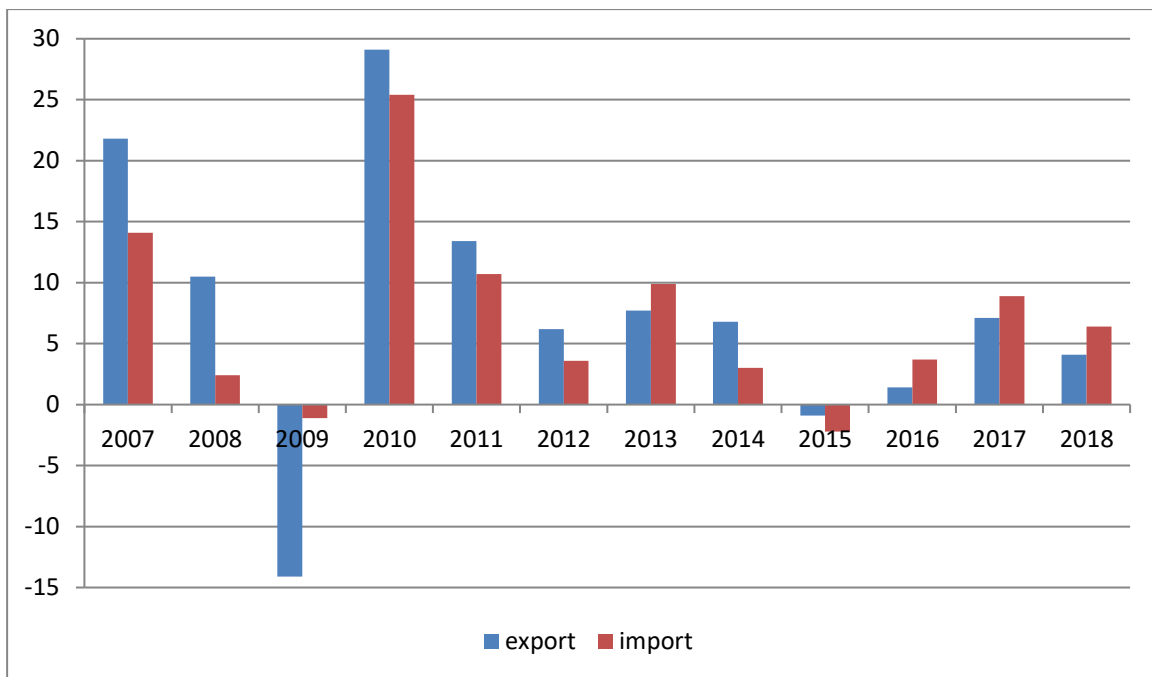
Graph 4. Annual evolution in the volume of developed economies merchandise trade in the 2007-2018 period [in %]



Graph 5. Annual evolution in the volume of transition economies merchandise trade in the 2007-2018 period [in %]



Graph 6. Annual evolution in the volume of developing economies merchandise trade in the 2007-2018 period [in %]

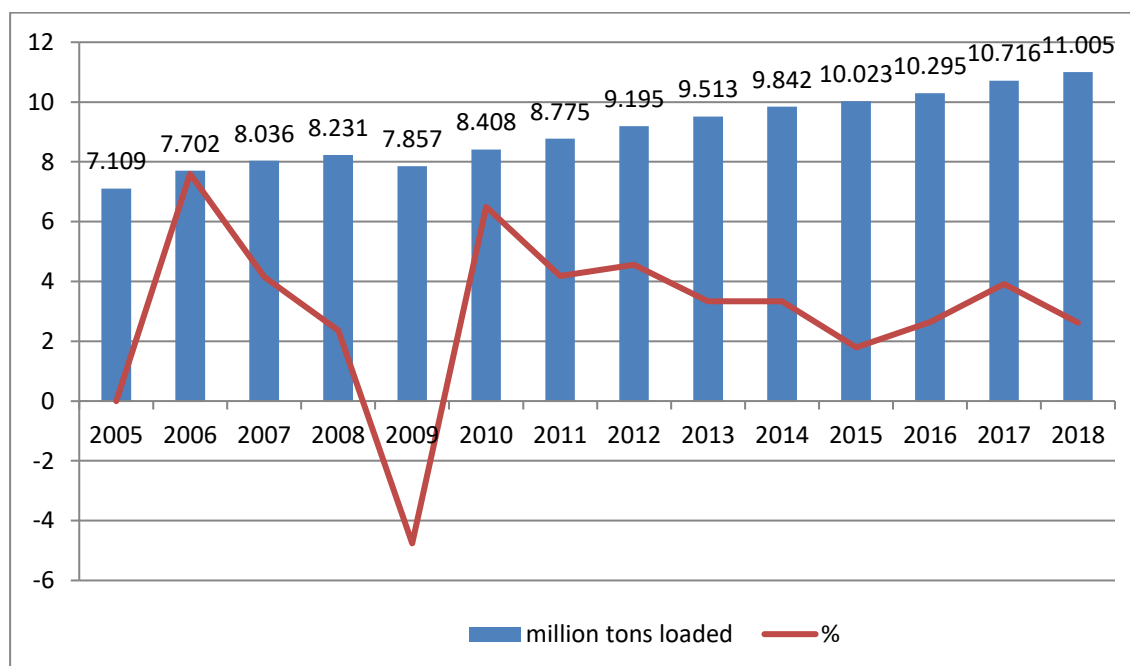


Graph 7. Annual evolution in the volume of China merchandise trade in the 2007-2018 period [in %]

In the same period 2005-2018 the value of the international maritime trade increased from 7,109 to 11,005 millions of tons loaded (+35.4%)(Table 3 and graph 8).

Table 3 International maritime trade in the 2005-2018 period (in millions of tons loaded and %)

| Year | Millions tons loaded | % |
|------|----------------------|-------|
| 2005 | 7,109 | |
| 2006 | 7,702 | 7,6 |
| 2007 | 8,036 | 4,15 |
| 2008 | 8,231 | 2,36 |
| 2009 | 7,857 | -4,76 |
| 2010 | 8,408 | 6,5 |
| 2011 | 8,775 | 4,18 |
| 2012 | 9,195 | 4,56 |
| 2013 | 9,513 | 3,34 |
| 2014 | 9,842 | 3,34 |
| 2015 | 10,023 | 1,80 |
| 2016 | 10,295 | 2,64 |
| 2017 | 10,716 | 3,92 |
| 2018 | 11,005 | 2,62 |



Graph 8. International maritime trade in the 2005-2018 period (in millions of tons loaded and %)

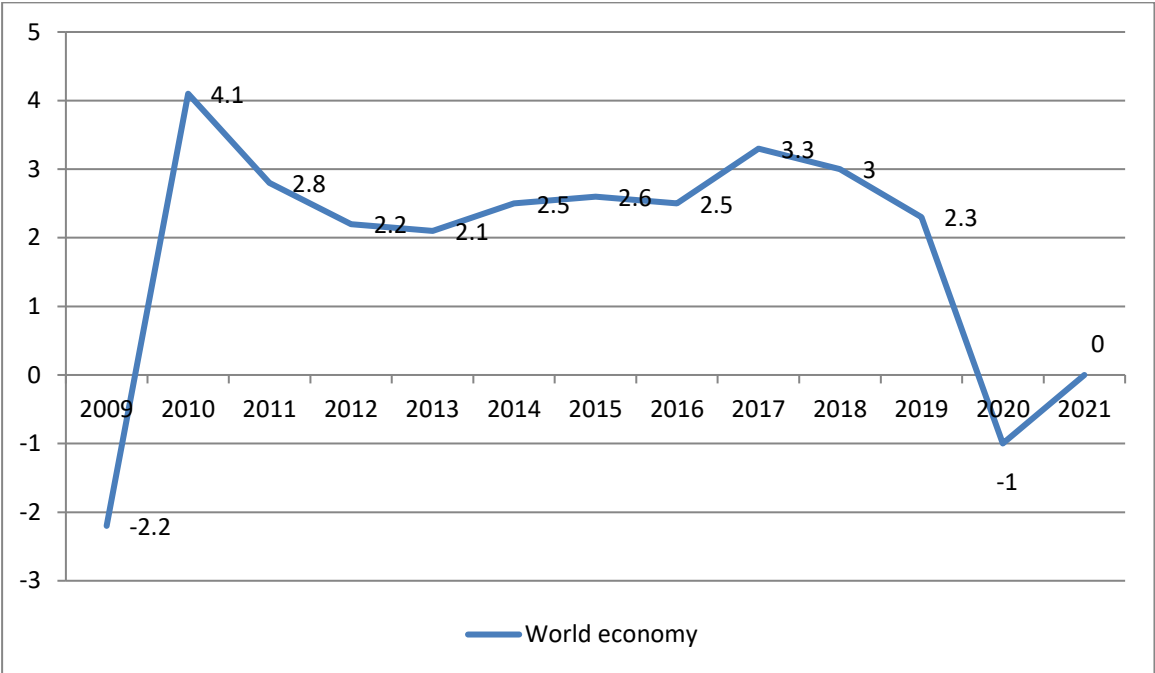
3. Results

The analysis of economic data compiled by various international institutions UNCTAD, OECD, World Bank, world shipping organizations shows a strong fear of the decline of the world economy in the short and medium term, in a gap, so far quite wide, between 3 and 30%, compared with the year 2019 and with the period of the last 5 years, with direct negative implications on the maritime trade in the same time interval.

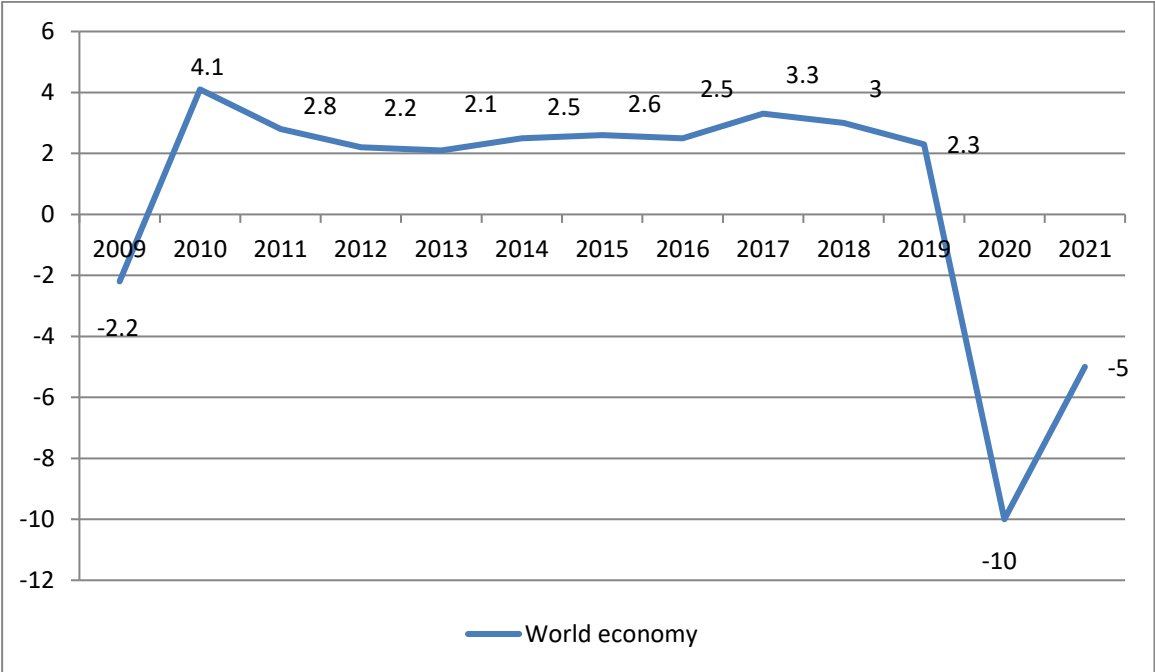
From the point of view of the authors, the analysis of the evolution of the international maritime trade was made taking into account three working hypotheses:

- a. Soft Hypothesis 1: the decrease of the world economy in the next 2 years by 2 ... 3% compared to 2019 (Graph 9);
- b. Acceptable Hypothesis 2: the decrease of the world economy in the next 2 years by 10 ... 5% compared to 2019 (Graph 10);

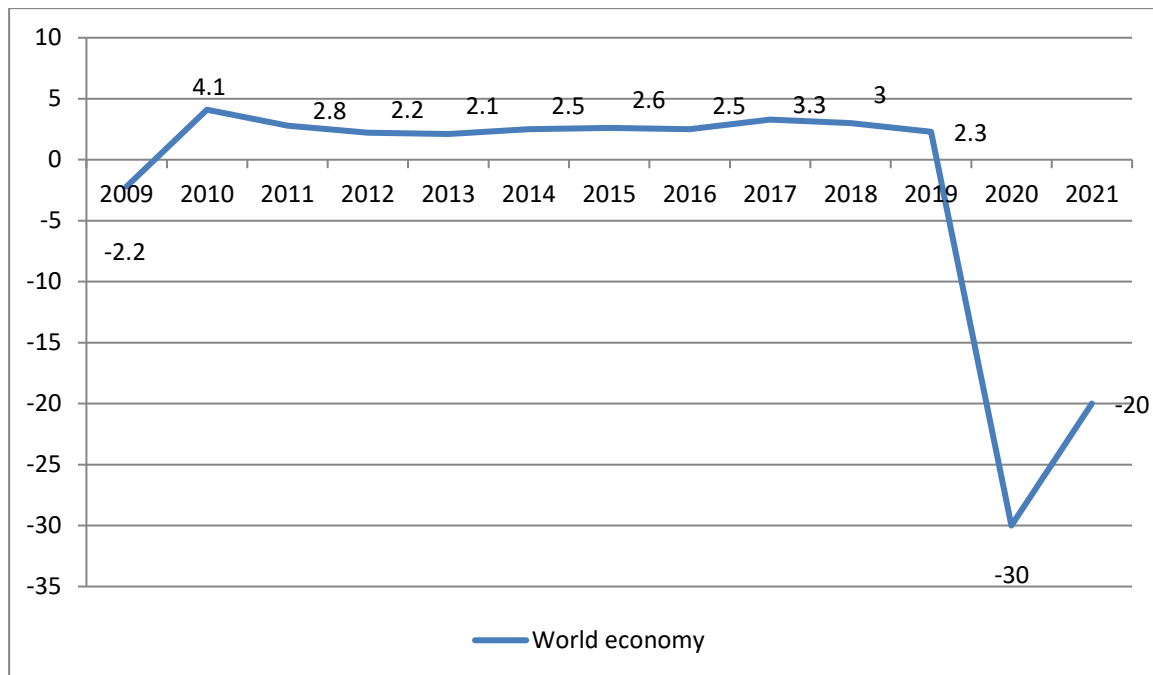
c. Catastrophic Hypothesis 3: the decrease of the world economy in the next 2 years by 30 ... 20% compared to 2019 (Graph 11).



Graph 9. Hypothesis 1



Graph 10. Hypothesis 2



Graph 11. Hypothesis 3

4. Conclusion

The analysis and interpretation of the official data to which we had access shows that:

1. The world economy had a declining trend since 2017, which will be accentuated by the Covid crisis 19.
2. World trade also had a declining trend since 2017, which will be aggravated by the Covid crisis 19.
3. The volume of seaborne trade, although increasing, from 8,408 million tons loaded in 2010 to 10,005 million of tons loaded in 2018 (insured with a number of 95,000 ships, with a displacement of 2,000,000 thousand dwt, and over 1,700,000 seafarers) its trend was decreasing, from 6.5% to 2.62%.
4. For a 3% of increasing in the world economy, and export of 2.5%, and import of 3.1%, in 2018 compared to 2017, the volume of international maritime trade increased by 289 million tons of cargo loaded, a decrease in the volume of freight transported by sea of approximately 100 million tons of cargo loaded for each negative percentage.
5. Thus, it is possible to estimate a decrease in the volume of the world seaborne trade by approximately 300 million tons in Hypothesis 1, between 1,000...1,100 million tons in Hypothesis 2 and 3,000...5,000 million tons in Hypothesis 3, for the next 2 years.
6. If these scenarios prove viable, the reduction of the maritime transportation activity will affect a number of approximately 1,000 to 3,000 ships, on which approximately 18,000 ... 54,000 seafarers work (average is approx. 18 seafarers / ship).
7. Port activity will also decrease by 5 to 30% (example: containerized trade in 20 TEU increased at 2.6 % in 2018, down from 6 % in 2017, with a total of 152,000,000 TEUs. This range of growth is a dramatic change compared to the double-digit growth rates of the 2000s, and less than half the 5.8 % average annual growth rate recorded over the past two decades, and due to the COVID crisis 19 a decrease of 30% would mean a total volume of about 50,000,000 TEUs for 2021.

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