International trade of goods as a determinant of GDP growth in Croatia

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Abstract: The main purpose of this paper is to determine an impact of international trade, mainly the exports on the GDP growth in the Republic of Croatia in the period between 2001 and 2010. The paper analyses the influence of the exports of goods on the real GDP growth. The results show that the exports of goods have the lowest positive contribution to the GDP growth rate in the Republic of Croatia in comparison to other countries in the region. The paper explores the level of international trade of goods, imports dependency, exports propensity, degree of openness and involvement of the Republic of Croatia in the international trade of goods. The paper indicates that for the growth and development of the Croatian economy it is necessary not only to increase the exports but also to stress the importance on exports with a higher value added.

Keywords: international trade; exports; gross domestic product; GDP growth; Croatia.

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1 Introduction

Presently almost all national economies are internationalised to a large extent. Globalisation and free flow of capital, goods and services are the results of the internationalisation of corporate operations according to Albaum et al. (1989) who consider it as the evolutionary process of development of exports activities of business enterprises. A more comprehensive integration into the international division of labour should be the primary goal for each national economy. Internationalisation of business in national economies is determined by the level of internationalisation of their economic entities, especially those largely involved in total exports and imports, i.e. in the international trade of a specific country. All countries find themselves to the certain degree immerged into global economy. The importance of international trade to a nation's economic welfare and development has been the topic of great interest in the economics research since Smith's (1999(1776)) pioneering work about the wealth of nations. Smith's main underlying principle was the need of economies to export goods and services in order to generate revenues to finance imports. Gross domestic product (GDP) is one of the key indicators for a nation's economic strength since it represents an estimation of the value of goods and services produced by an economy in a given period. The principle that international trade can influence GDP growth has been the topic of research for many theoretical economists culminating in the export-based growth thesis. This means that as export sales increase the GDP of a nation will rise too, provided other variables remaining equal. This relationship suggests that export performance has a stimulating effect on a nation's economy (Marin, 1992). The export-led growth thesis predicts export growth will cause economy-wide productivity gains in the form of higher levels of GDP (Temple, 1994) as well as improved balance of payments.

The success of any country on the international market is determined by the competitive ability of all its entrepreneurial subjects involved in the international trade. It is crucial, in all that, to assume competitive advantage which means greater profitability (Grant, 2010). Only companies that are able to create greater economic value in comparison to their competitors can achieve competitive advantages on a global level (Barney, 2008).

In the last three decades many studies have been conducted on the relationship between internationalisation and business performance of business enterprises. As Hayes and Abernathy (1980) pointed out the nation's trade deficit cannot always be well explained by the macro-economic phenomena. The behaviour of enterprises might also play a significant role. In contrast to the international trade and FDI theories, internationalisation theories endeavour to explain how and why the companies engage in international activities and how the dynamic nature of such behaviour can be

conceptualised. Recent literature which covers topics of international ventures and international business entities, recognises the inherent complexity of operating business in a global market environment, and indicates the factors which enable faster internationalisation (Loane et al., 2007). Most of the authors highlight the emergence of new communication technologies and processes, increased trade liberalisation, regional economic integration and growth of international networks (Knight, 2000; Knight and Cavusgil, 1996; Petersen et al., 2002). It is generally accepted that the internationalisation of activities can significantly benefit the business entity engaged in it and as such it is the main initiator of their international expansion, and consequently international expansion of global national economy it belongs to (Gomes and Ramaswamy, 1999).

Internationalisation is an important pathway through which new and small ventures can achieve their growth potential (Pangarkar, 2008). In addition to increasing the profitability it can achieve benefits of specialisation and flexibility in the development of economies of scale and scope, stimulating the production efficiency, faster compensation of investment, access to foreign marketing, technological and managerial skills. It is not surprising that politicians at national level and beyond (e.g., EU), promote and encourage new and small international ventures (OECD, 2000). Internationalisation is vital for further growth and development of new and small investments in transitional countries of middle and east Europe, particularly since they have a relatively small domestic demand (Manolova et al., 2010).

Specialisation is the most common strategy, and often a success guarantee of each national economy on international market. It is necessary to emphasise the significance and importance of international specialisation as a crucial precondition for initiating and developing of the internationalisation of national economy. In terms of strong globalisation, economic success of each national economy is closely related to its global market integration, and thus their success in the exchange of goods, services, capital, technology and knowledge on the global market.

Globalisation has been one of the dominant themes in both the academic and business circles in the last few decades along with internationalisation. The fact that global business is constantly growing and is characterised by complexity and diversity leads to an increase in scientific research for businesses entities operating internationally (Fahy, 2002).

2 Research objectives and methodology

The objective of the research was to identify the impact of exports of goods, which are mostly industrial products, on the GDP growth in the Republic of Croatia in the period between 2001 and 2010 and to compare it to the selected European countries for the same time period. In other words the export-led growth hypothesis has been tested in the Croatian context.

Although, the export-led growth hypothesis has been the subject of considerable research and empirical scrutiny in the last several decades, the link between exports and economic growth hasn't been confirmed without a doubt. There are numerous arguments in literature about the validity of export oriented economic strategies such as

1 relocation of resources to more productive export sector

2 increased specialisation based on comparative advantage, access to advanced technologies, know-how and better management practices that may result in productivity gains

3 faster growth because of export earnings that allow for import of essential goods important for development (Mahadevan, 2007).

The focus of most researches has been on the relationship between exports and GDP, while some studies have looked at the relationship between exports and total factor productivity (TFP) growth, or the relationships between exports and labour productivity growth.

In literature that deals with the international economy stresses out a strong cause-effect relationship between the growth of a GDP and foreign trade. This primarily refers to the importance and significance of the level of competitiveness of the exports sector of each country. Econometric models that aim at determining the effect of exports on GDP growth are often found in literature (Kravis, 1970). Among different authors there are different levels of the calculated coefficients determining the relationship between export revenues and the GDP growth depending on the sample size, selection of different variables and their number (Balassa, 1978).

There are numerous factors determining the role and contribution of international trade to economic prosperity of a country's economy. Many analyses indicate that the rapid growth of GDP in the case of a country which is very open to foreign trade is the result of a big share of exports in GDP, assuming that exports grow more progressively than the growth of imports. Michalopoulos and Jay (1973) in their paper calculated that the exports growth by 1% leads to growth of gross national product between 0.58% and 0.77%. However, the positive correlation between economic growth and exports has been found only when exports contributed to the technological development, inflow of foreign capital and higher general productivity of national economy (Islam, 1998).

This study investigates direct linkage between exports of goods and GDP growth in Croatia and as such adds valuable contribution to the testing of export led growth hypothesis. According to the export-led thesis the main research hypotheses were:

H1 Export of goods significantly and positively contributes to the growth of GDP in Croatia.

H2 Export of goods contribution to the Croatian GDP is similar to that of the Central European Countries such as Slovenia, Check Republic and Slovakia.

In order to calculate results regarding export contribution to GDP, data on the aggregate Croatian economy in the period 2001 to 2010 on value-added GDP were obtained from the Croatian Bureau of Statistics. Publications such as *Statistical Yearbook of Republic of Croatia, First Release – Foreign Trade in Goods for Relevant Years*, *First Release – Export and Import Price Indices of the Republic of Croatia for Relevant Period*, as well as GDP and export price indices were obtained from the Croatian Bureau of Statistics. Data regarding other European countries have been obtained from EUROSTAT database and Europe in figures – Eurostat yearbook. Data on trade variables such as export and import price indices, total exports, and total imports were downloaded from the World Development Indicators CD-ROM. All variables are expressed in constant prices.

The importance of international trade of goods in the Republic of Croatia is analysed in order to better understand the structure and trends of the Croatian international trade in the Section 3 of the paper. The fourth section entitled 'The contribution of exports of goods to the real GDP growth in the Croatian context' presents results of calculations of export of goods contribution to the GDP of Croatia and several selected countries. Hypothesis validation and brief discussion about results are placed in the concluding remarks at the end of the paper.

3 International trade of goods in the Republic of Croatia during period 2001–2010

The Republic of Croatia in the economic sense belongs to a group of small countries, and in terms of its resources it is a medium-rich country. Consequently, international business, above all exports of goods and services on international market, represents the utmost importance for its faster and stronger economic growth and development. However, it should not be forgotten that several aggravating circumstances are still present in the Croatian economy in terms of exports, mainly: fragmented production of the Croatian economy, insufficient production capacities, more difficult access to global capital, problems associated with the transfer of new technologies and knowledge, etc. According to the literature the success of export mostly depends on access to financial resources (Ling-yee and Ogunmokun, 2001). However, the dominant issue related to the Croatian international trade is its low level of competitiveness on international markets. For many years one of the strategic goals of Croatian policy has been to strengthen export as well as the overall competitiveness of the Croatian economy. Exports are undoubtedly among the most important and fastest growing activity with a growth rate greater than production in the international economy (Lee and Habte-Giorgis, 2004).

In terms of export structure of the Croatian economy it is very important to emphasise the share of products with high value added in relation to exports of raw materials, lohn production, and products of lower value added. Only a large share of exports of products whose value added is high would ensure the benefits for Croatian economy. They generate income, provide long-term competitiveness, employment, and thus contribute to the welfare of the general Croatian economy. For growth and development of Croatian economy in terms of international trade it is extremely important to increase exports with favourable structure related to products with high value added as well as greater coverage of imports by exports.

To achieve export growth, it is essential that every business entity develop its own competitive strategy on the international markets based on its own potentials, which represents a long-term comparative advantage, and thus provide an increase of value-addition to its products and services. By using different modalities of international marketing, business entities learn effectively how to successfully export to international markets, and how to gain international experience (Grbac, 2009; Root, 1987). When analysing the value added of export products, the most important factors are related to the application of knowledge and innovation and the use of new technologies. Equally important is the application of the latest knowledge related to marketing, sales and distribution. For the success of the Croatian economy as a whole, in terms of international

trade, the most significant factor represents the transfer of knowledge and technologies and strategic links with international business entities.

The main focus of this study is foreign trade of goods, not services as a way of analysing the development and competitiveness of Croatian industry and its integration in the international specialisation. Such approach significantly facilitates the analysis of the exports capabilities of Croatian industry. In Croatian foreign trade analysis it is necessary to distinguish international trade of goods from international trade of services because exports of services made up a larger part of international trade in period from 2001 to 2010, which is displayed in Table 1. The biggest and most important part of exports of services is tourism, which comprises 72.3% of total exports. Within the framework of international trade in the last 10 years, along with transportation, tourism and insurance service, some new types of services have become more important, especially those related to modern telecommunications. Comparing the Croatian structure of exports with the structure of the world trade in 2003 it is possible to observe that the share of services is around 20% in the total world trade. Goods, on the other side, make up 80% of total world trade, amongst which dominate products of manufacturing industry (Krugman and Obstfeld, 2009). This emphasises the main difference between the world's and Croatian exports structure.

Table 1 Share of exports of goods and services in GDP in Croatia for the period 2001–2010 (%)

Year	*Exports of goods and services*	*Exports of goods*	*Exports of services*	*Imports of goods and services*	*Imports of goods*	*Imports of services*
2001	43.4	20.7	22.8	47.4	38.5	8.9
2002	40.9	18.8	22.1	49.3	39.9	9.4
2003	42.6	18.4	24.1	50.4	41.5	9.0
2004	42.9	20.0	22.9	49.3	40.3	9.0
2005	42.3	20.0	22.2	48.7	40.9	7.9
2006	42.7	21.3	21.4	49.8	42.3	7.5
2007	42.1	21.2	21.0	49.8	42.9	6.8
2008	41.7	20.5	21.1	49.9	43.1	6.8
2009	35.4	16.9	18.6	39.4	33.1	6.3
2010	38.3	19.8	18.5	38.8	32.8	6.1

Source: Authors' calculation based on different data sources (CBS, First release, 'Revision of annual gross domestic product, 1995–2007', CBS, First release, 'Quarterly gross domestic product estimate since first quarter 2000 until fourth quarter 2010', Newsletter of Croatian National Bank, No. 171, Table H-6, exports-imports of services 2008–2010, authors' calculation of exports-imports of services for period 2008–2010)

The structure of total exports indicates that exports of services make up for more than half of total export, except in years 2007 and 2010. This type of export registers a constant decline since 2003. On the contrary, imports of goods are far more prevalent than imports of services (more than 80% of total imports is import of goods), and they grew slightly during the whole observed period until the beginning of the recession.

As already outlined in the text, the level and growth of exports is not the only important issue. The structure of exports in terms of share of products with high value added, raw materials, lohn businesses and products with low value added should also be observed. Table 2 shows the share of export of 56% after internal production in 2001, which mainly presents lohn businesses, while this share in 2008 dropped to 31.8%. That indicates positive trend in exports structure, but on the other side, it shows that the lohn businesses share is still very high in the total Croatian exports structure, what is, certainly, still very adverse compared with other countries which are more successful in international trade.

Analysing the imports of goods (Table 3) in the period since 2001 when it value reached 9.1 billion USD and 2008 when it was 30.7 billion USD, it is evident that in contrast to the exports which in this period increased by 202%, imports grew by as much as 235%. However, this is not a rare phenomenon. It can be observed for example in the case of the United States where, since 1980, exports as well as imports have steadily increased as a share of GDP. After this period US exports highly varied in relation to imports and had a lower growth (Krugman and Obstfeld, 2009).

In years 2009 and 2010 there was a decrease in imports by more than 30% compared to the year 2008, which also, as well as for exports, indicates the reduction in economic activity caused by the global economic crisis. Comparing the trends in exports and imports it is evident that imports, as opposed to exports, have not returned to the levels before the crisis, meaning the level of exports in 2007 and 2008.

International trade of goods of Croatian economy in 2001 (exports + imports) amounted to 60.45% of GDP, which represents the level of involvement of the country, or the involvement of the national economy to international trade. Such involvement grew through the time and in year 2008 rose to 64.17% of GDP. With the appearance of the global economic crisis, the degree of involvement of Croatian economy in international trade fell to 49.83% and in 2010 again started to rise and reached 52.36% of GDP. For each country, especially for small countries such as Croatia, involvement and better integration into the global economy through international trade is extremely important. However, the relationship between exports and imports and achievement of a positive trade balance are even more important.

Despite a relatively successful process of convergence towards the developed countries in the region, Croatian industry which makes products for most of the analysed international trade in the observed period, continually decreased its share in gross value added (GVA – difference between gross output and intermediate consumption) so the increase of international trade of goods is more the result of an import growth than export growth. Import of goods recorded a high growth levels until 2008, while in year 2009 recession had a strong impact on reducing the volume of foreign trade as well as in the case of other European countries.

During 2010 a recovery in Croatia was slower than the international trade recovery in other EU countries. This was confirmed by comparison of Croatian international trade in 2009 with similar countries. Namely, Croatia had the smallest overall international trade (31.7 billion USD) compared to Slovenia (46.1 billion USD) and Czech Republic with 217.7 billion USD (World Statistics Pocketbook, 2010). Low Croatian export represents a consequence of lower competitiveness of Croatian companies, while on the other side lower imports represent a slow recovery as a result of still weak domestic demand, both for the consumer and investment goods.

Table 2 Exports of goods of Croatia according to statistical procedures (million USD)

		2001	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Total exports		4,666	4,904	6,187	8,024	8,773	10,377	12,364	14,124	10,492	11,811
11	Normal exports	1,743	2,018	2,902	4,218	4,985	6,240	7,629	8,903	7,096	7,710
13	Exports for outward processing	182	119	346	297	309	440	587	739	153	242
15	Exports after inward processing (suspension system)	2,636	2,760	2,938	3,508	3,478	3,697	4,147	4,482	3,242	3,857
16	Exports after inward processing (drawback system)	104	5.7	1.3	1.3	0.7	0.03	-	-	0.7	0.9

Source: Author's calculation based on CBS data

Table 3 Imports of goods of Croatia according to statistical procedures (million USD)

		2001	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Total imports		9,147	10,722	14,209	16,589	18,560	21,502	25,839	30,727	21,205	20,067
11	Regular imports	7,469	9,320	12,402	14,536	16,393	19,099	23,091	27,529	19,270	18,127
13	Imports after outward processing	56,025	34,485	36,866	39,107	63,912	60,406	64,504	94,725	61,056	77,406
15	Imports for inward processing (suspension system)	1,620	1,367	1,770	2,013	2,103	2,343	2,683	3,104	1,873	1,862
16	Imports for inward processing (drawback system)	1.29	0.49	0.25	0.52	0.20	0.04	0.06	-	0.62	0.52

Source: Author's calculation based on CBS data

In terms of economic growth the most important role in the Croatian international trade belongs to the exports of goods since it presents a picture of competitiveness of Croatian economy in relation to the overall level of the competitiveness of the global economy. Analysing the exports in the period 2001-2010 it is evident that they were constantly growing since year 2001 when they reached the value of 4.6 billion USD, until year 2008 when it was 14.1 billion USD. The exports in the observed eight years grew by more than 200%. When recession hit Croatia the decrease in exports followed by 25.8% in 2009 in comparison with the previous year. For example, the Czech Republic (22.7%) and Slovenia (22.1%) recorded a lower decrease (Monthly Bulletin of Statistics). The Croatian exports in year 2010 compared to 2009 rose by 12.5%, which may indicate a gradual recovery of export.

For many years the Croatian economy has recorded a negative trade balance, which implies that exports demand is not a generator of economic growth in Croatia, but rather a domestic demand that for many years has been financed with debt. This indicates a negative contribution of the international trade to GDP growth in the Croatian case. The degree of coverage of imports by exports is less than 1. When the coverage of exports by imports of Croatian economy is compared to strong export-oriented economies of other countries such as China, whose exports coverage by imports in 2002 amounted to 2.11, then 1.85 of Indonesia, Malaysia 1.48 and Thailand 1.38, it is obvious that Croatian economy has a low export orientation (Mikic and Gilbert, 2008). In 2009 the exports of the Republic of Croatia amounted to 2,376 US$ per capita, while the exports in Czech Republic amounted to 10,887 US$ and in Slovenia amounted to 11,062 US$ per capita. This indicates a low level of Croatian exports per inhabitant in comparison to those two countries (Monthly Bulletin of Statistics).

The level of openness of a country in relation to the international trade is measured by various indicators. Most often the share of exports of goods and services in GDP is observed as an indicator that determines exports propensity of the national economy. Another typical indicator is imports dependency, which is calculated as the share of imports of goods and services in GDP, and an indicator of the level of involvement of each country in the international trade. It is calculated as the share of exports and imports of goods and services in GDP.

In the period before 2008, the Croatian economy has recorded an increased share of imports in the GDP. However, exports did not follow the dynamics of imports, which led to an increased deficit in the balance of payments. The recession has led to a significant reduction in imports dependency, but it should be viewed in the context of the reduction of the total international trade of goods. The index of imports dependency in the Republic of Croatia ranged from 32.97% (2010) to 43.97% (2007).

The last two observed years (2009 and 2010) recorded a significant decrease in imports dependency (from 43.94% 2008 to about 33% in 2009 and 2010). However, this decline should not be attributed to the reduction of imports dependency of the Republic of Croatia, but the overall decline of the international trade of goods of the Croatian economy in those years. Exports propensity of goods ranged from the low 16.49% in 2009 to the high 21.11% in 2006. In general, the share of exports in the GDP places Croatia on the global market among the countries with lower exports growth, unlike for example the Netherlands, where the exports of goods amounted to mostly over 50%, in 2008 and over 60% in 2010. In the past 10 years Hungary has significantly improved its share of exports in GDP which grew from 51.2% in

2003 to 71.7% in 2010. Switzerland and Austria have also progressed in this area well – before the recession. Among the selected countries only the Republic of Croatia had exports propensity of goods below 25% in the whole analysed period (http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction).

The average share of exports in GDP in the Republic of Croatia amounted to 19.48%, while the average imports dependency in the same period was twice as large (40.26%). All the above indicates the extreme import orientation of the Croatian economy as a whole. The share of exports in the GDP in the period from 2001 till 2008 fluctuated around the same level until the emergence of a recession, and as a result of decrease in the overall international trade there has been a significant reduction in the share of exports in the GDP. Average openness of the Republic of Croatia in the analysed period amounted to 59.74%. This is far from the best countries in the field such as Singapore which has an openness of more than 300%, followed by Malaysia with openness of more than 170% and Thailand with 120% (Mikic and Gilbert, 2008).

4 The contribution of exports of goods to the real GDP growth in the Croatian context

One of the fundamental macroeconomic questions is how much the real growth of exports of goods contributes to the rate of real GDP growth. GDP by the expenditure approach consist of the sum of final consumption expenditure of households, final consumption expenditure of general government, gross fixed capital formation, plus the exports of goods and services, minus the imports of goods and services. Considering the fact that for each listed category real growth is calculated and the sum of all categories (minus imports) makes the real GDP growth, it is possible to calculate the contribution of exports of goods to the real GDP growth rate, which is done in this paper.

To calculate the contribution of individual categories on GDP growth rate the following formula has been applied (Lequiller and Blades, 2006)

$$\frac{\Delta GDP}{GDP_t} = \left(\frac{C_t}{GDP_t}\right) * \left(\frac{\Delta C}{C_t}\right) + \left(\frac{X_t}{GDP_t}\right) * \left(\frac{\Delta X}{X_t}\right)$$

Using a simplified example, let us assume there are only two aggregates in GDP: household consumption, denoted by C_t and exports, denoted by X_t. GDP_t will denote GDP in year t. Δ will be used to indicate the variation in an aggregate, so that ΔGDP will signify the variation of GDP between t and $t + 1$. Using this notation, the GDP growth rate can be written as $\Delta GDP / GDP_t$. Contribution of a component to GDP growth has been calculated as the real growth rate of this component weighted by the share of this component in the GDP in the previous year for current prices. Thus, contributions reflect two effects: the speed with which a component changes and the relative importance of the component in total GDP. The contributions of individual demand components to GDP growth depend on their shares in GDP in the previous year and their growth rate in the current year (Havlik et al., 2011).

$$\frac{\Delta GDP}{GDP_t} = \left(\frac{X_t}{GDP_t}\right) * \left(\frac{\Delta X}{X_t}\right)$$

Table 4 Real GDP growth of selected countries in the period 2001–2010 (%)

Country/year	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Belgium	0.8	1.4	0.8	3.2	1.7	2.7	2.9	1.0	–2.8	2.2
Czech Republic	2.5	1.9	3.6	4.5	6.3	6.8	6.1	2.5	–4.1	2.3
Denmark	0.7	0.5	0.4	2.3	2.4	3.4	1.6	–1.1	–5.2	1.7
Hungary	3.8	4.1	4.0	4.5	3.2	3.6	0.8	0.8	–6.7	1.2
Netherlands	1.9	0.1	0.3	2.2	2.0	3.4	3.9	1.9	–3.9	1.8
Austria	0.9	1.7	0.9	2.6	2.4	3.7	3.7	1.4	–3.8	2.3
Slovenia	2.9	3.8	2.9	4.4	4.0	5.8	6.9	3.6	–8.0	1.4
Slovakia	3.5	4.6	4.8	5.1	6.7	8.5	10.5	5.8	–4.8	4.0
Switzerland	1.2	0.4	–0.2	2.5	2.6	3.6	3.6	2.1	–1.9	2.7
Croatia	3.7	4.9	5.4	4.1	4.3	4.9	5.1	2.2	–6.0	–1.2

Source: Available at http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database (19 September 2011)

Table 5 Contribution of exports of goods to the real GDP growth rate for selected EU countries (in percentage points)

Country/year	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Belgium	0.2	2.0	0.9	4.5	2.7	3.5	2.2	0.5	–7.8	7,8
Czech Republic	7.6	3.0	4.9	14.1	7.3	11.0	11.1	3.8	–8.5	12,9
Denmark	0.8	1.4	–0.6	1.3	1.8	1.4	–0.2	–0.2	–3.1	1,6
Hungary	4.1	3.1	4.9	10.2	6.4	11.6	11.3	3.9	–7.7	12,0
Netherlands	1.0	0.6	1.1	4.8	3.3	5.1	3.9	1.5	–4.8	7,8
Austria	2.2	1.8	0.3	4.8	2.5	3.0	4.3	0.1	–5.9	4,2
Slovenia	3.2	2.9	1.9	6.1	5.2	7.3	8.0	0.3	–8.3	5,7
Slovakia	3.9	3.1	13.8	5.1	6.4	16.5	11.7	2.7	–9.6	13,9
Switzerland	0.5	0.5	0.0	2.5	2.0	4.2	3.3	1.0	–4.0	3,6
Croatia	0.8	–0.2	1.3	2.5	1.4	2.2	0.6	0.03*	–3.7*	2.5*

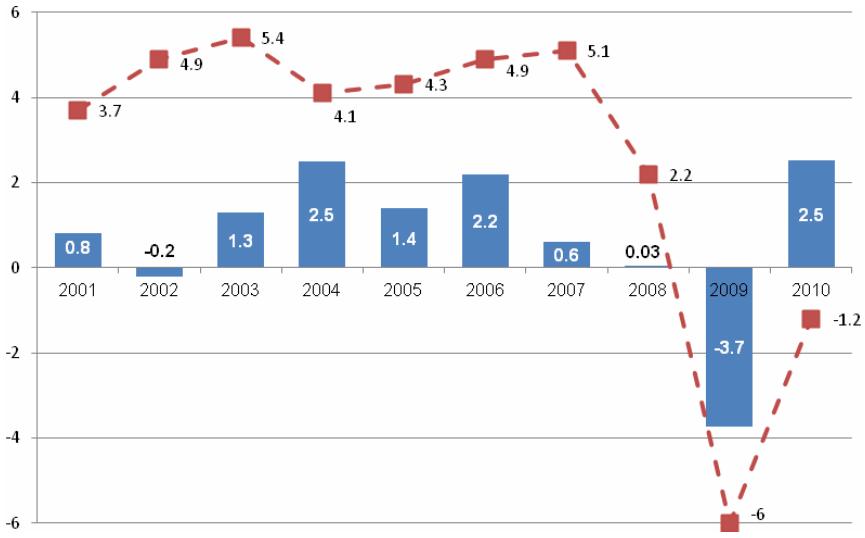
Notes: *Croatian GDP for the years 2008, 2009 and 2010 has been approximated from the addition of quarterly reports.

Source: Authors' calculations

The above formula shows the contribution of GDP growth rate which is result of changes in export if other components remain unchanged. We used a simplified formula with assumed only one aggregate in GDP: exports, denoted by X_t. GDP_t denoted GDP in year t. Δ was used to indicate the variation in an aggregate, so that ΔGDP signified the variation of GDP between t and $t+1$.

Figure 1 presents results of contribution of exports of goods to the real GDP growth rate in Croatia. The highest contribution was in years 2004 and 2010 with 2.5 percentage points, while the lowest contribution was in 2009 with –3.7 percentage points which was due to the strong recession of that time.

Figure 1 Contribution of exports of goods to the real GDP growth rate in Croatia (in percentage points – bars) vs. GDP growth rate (in % – line) (see online version for colours)



For the research purpose of this paper several EU countries (from Table 4) were selected in order to analyse the impact of exports of goods on the real GDP growth rate for each of these countries. After calculating the contribution of exports of goods to the rate of real GDP growth in Croatia, the data have been analysed and compared.

To get an idea of the ten years period of economic developments in these countries, Table 4 shows the rates of real GDP growth of selected countries in the period 2001 to 2010, since not only the amount of the contribution rate of exports of goods to the GDP growth is important, but also the height of the real rate of GDP growth.

Table 5 displays the results of a calculation regarding contribution of exports of goods to the real GDP growth rate for the selected countries. It shows that in a decade long period the Croatian export of goods had the smallest contribution to the realised growth rate of GDP compared to the selected countries. If Croatia is compared to Slovenia, it is obvious that the real growth of Slovenian exports of goods contributes much more to the real GDP growth rate than in the Croatian case. The average rate of real GDP growth for Slovenia in the period 2001–2007 amounted to 4.4%, while the average contribution of exports of goods in the same period amounted to 4.94 percentage points. The same negative indicators were present when Croatia was compared to Hungary which in the period 2001–2007 recorded an average real GDP growth of 3.4%, while the

average contribution of exports to real GDP growth amounted to 7.4 percentage points. During the same period, the average real growth rate of the Croatian GDP amounted to 4.6%, while the average contribution of exports of goods to the real growth rate amounted to 1.2 percentage points. When the average growth rate of GDP of selected countries in the period 2001–2007 is compared, it can be observed that countries which have the highest average growth rate of GDP (6.2% of Slovakia, Czech Republic 4.5%, Slovenia 4.4%, Hungary 3.4%), also have the highest average contribution rate of exports of goods to the GDP real growth rate. The exception is Croatia, which in the period from 2001 till 2007 with relatively high average growth rate of 4.6% had one of the lowest average contributions of exports of goods to the GDP growth which amounted to 1.2 percentage points. The explanation lies in the fact that in this period, the largest positive contribution to the realised growth rate of GDP was contributed by a real growth of households (4.9%). The contribution of households amounted to 3.0 percentage points on average, and the real growth of gross fixed capital formation with the average growth rate of 12.3% and the average contribution of 2.9 percentage points.

The lowest result of contribution to the realised GDP real growth rate in Croatia comes from very high import rate with the average real growth rate of 8.6% which represents an average negative contribution of 4.1 percentage points. In the period 2001–2007 the contribution of domestic demand to the GDP real growth rate amounted to 6.4 index points, while the contribution of net external demand (exports of goods and services minus imports of goods and services) was negative and amounted to 1.7 percentage points. From the above it can be concluded that in the observed countries, which had high rates of GDP growth, exports of goods were certainly one of the components that positively contributed to the high growth of GDP in the period 2001 to 2007. On the other hand, the Croatian exports of goods, in comparison to the countries in the region, had significantly smaller positive contribution to the real GDP growth (1.2 percentage points). The following figure shows a ten-year average contribution of exports of goods to the real GDP growth rate displayed for selected countries. As it can be observed Denmark and Croatia had the lowest contributions while the Czech Republic and Slovakia had the highest.

Figure 2 Contribution of exports of goods to the real GDP growth rate for selected EU countries (in percentage points) – 10 year average (2001–2010) (see online version for colours)

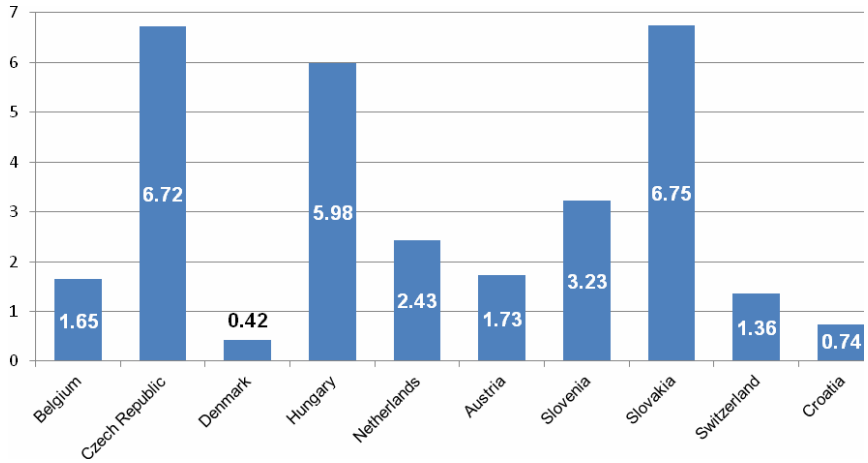


Table 6 Percentage of the contribution of exports of goods to the real GDP growth rate (%)

	2001	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Belgium	23.3	144.8	111.5	142.2	159.5	131.1	75.9	54.3	279.4	356.5
Czech Republic	304.4	158.1	137.4	312.8	115.3	162.5	181.6	152.5	206.3	559.8
Denmark	112.5	280.3	–151.8	55.5	76.1	41.8	–12.1	18.3	58.7	93.0
Hungary	108.6	75.1	121.6	227.4	198.5	321.9	1409.4	487.1	115.4	998.0
Netherlands	50.1	648.6	358.7	218.0	167.4	149.8	99.8	77.8	122.3	434.2
Austria	240.3	104.1	38.5	182.9	104.7	80.0	115.9	9.2	154.3	184.3
Slovenia	110.2	76.0	67.1	138.1	130.9	126.7	115.4	7.5	103.6	407.9
Slovakia	112.8	67.5	287.1	100.9	95.2	194.2	111.1	46.0	200.2	348.0
Switzerland	39.6	115.6	16.2	99.1	78.6	116.7	92.7	49.3	212.9	133.3
Croatia	21.8	–4.6	23.9	61.0	31.7	44.8	11.6	1.6	62.2	–211.0

Source: Authors' calculations

Table 6 shows the share of the contribution of exports of goods to the rate of real GDP growth from which it is obvious that the Republic of Croatia had one of the smallest share of the contribution of exports of goods to the rate of real GDP growth in the observed period.

The research results and the conducted analysis point toward several important conclusions:

- Exports of goods do not significantly contribute to the growth of the GDP in Croatia (and sometimes it is actually negative). This leads to the rejection of the first proposed hypothesis. From the presented data it seems that Croatia deviates from the dominant export-led GDP growth theory of international trade.
- As such Croatian export of goods contribution to the GDP growth is not similar to that of the comparable European countries such as Slovenia, the Czech Republic and Slovakia which leads to the rejection of the second proposed hypothesis in this paper.
- The reasons for Croatian deviation from the export-led GDP growth theory can be found in the fact that low competitiveness of the Croatian exporters resulted with a low-value added of exported goods. At the same time Croatian growth model has been based on domestic consumption demand that was in large part satisfied through ever increasing imports in comparison to the other observed countries in this paper. The impact of global recession on international trade has been negative and strong but the recovery speed of national economies has been in correlation to their export strengths and growth. Croatia had also a negative GDP growth in 2010 as a result of a significantly lower contribution of exports to the real GDP growth rate than the other observed countries (with exception of Denmark).

5 Conclusions

The paper focuses on the last decade which is characterised by the global economic crisis and the rising importance of international trade as an instrument of a faster recovery from the recession. Consequently, exports of goods are extremely important for Croatia's stronger economic growth and development.

International business or international trade of each country affects the dynamics of its economic growth and development. The paper showed that the exports of goods were certainly one of the components that had a high positive contribution to real GDP growth in the analysed countries. On the other hand it was also established that Croatian exports of goods, compared to the observed countries had significantly less positive contribution to real GDP growth (1.2 percentage points or 0.7 if recession years are added into calculation).

In order to obtain a true image of the international trade trend from 2001 till 2010 the paper separately analyses the period before the economic crisis (2001 to 2008), the year of crisis (2009) and the year of recovery (2010). The analysis of the Croatian international trade in the period 2001–2010 indicates a low commodity export propensity of the Croatian industry. At the same time the average goods import dependency was twice as large compared to export dependency. It is evident from the above mentioned that there is the low coverage of imports by exports, which on average amounts to 0.49 in

the period from 2001 till 2010. All of the above indicates the extreme import orientation of the Croatian economy as a whole. In the period from 2001 till 2007 the contribution of domestic demand to the GDP real growth rate amounted to 6.4 percentage points, while the contribution of net external demand (exports of goods and services minus imports of goods and services) was negative and amounted to 1.7 percentage points.

The recession has led to a significant reduction in import dependence, but not as a result of positive changes but rather as a consequence of the reduction of trade in the total international trade of goods. In the Republic of Croatia there are several factors that brought about the poor competitiveness of the Croatian economy in the international market. Those are for example the fragmented production of the Croatian economy, inadequate horizontal and vertical links of interest business entities, insufficient production capacity, lack of foreign investment and weak technological development. Namely, imports of products of high technological level result in an increase of the technological base of the domestic economy and in a rise in domestic competitiveness and exports. In the case of the Croatian economy, the process of technology transfer was slow in comparison to the new EU member countries. The exports did not follow the pace of import growth, which led to an increase in the deficit in the balance of payments.

One of the main strategic objectives of the Croatian economy in recent years has been associated with export growth, and hence higher competitiveness of the economy. In order to promote growth and development of Croatian economy it is necessary to increase exports (especially products with high value added), and thus the higher coverage of imports by exports. Only such continuous export orientation can lead to GDP growth, which will lead to long-term growth of the living standards and thus positively affect the further development of Croatian economy. The results of the conducted research indicate the need for faster development of the Croatian economy and society through more effective integration into the international specialisation and overall globalisation of the Croatian economy.

References

Albaum, G., Strandskov, J., Duerr, E. and Dowd, L. (1989) *International Marketing and Export Management*, Reading, MA, Addison Wesley, Wokingham, UK.

Balassa, B. (1978) 'Export and economic growth: further evidence', *Journal of Development Economics*, North-Holland Publishing Company, Vol. 5, No. 2, pp.181–189.

Barney, J.B. (2008) *Strategic Management and Competitive Advantage*, 2nd ed., Pearson Prentice Hall.

CBS, First release 'Quarterly gross domestic product estimate since first quarter 2000 until fourth quarter 2010'.

CBS, First release, 'Revision of annual gross domestic product, 1995–2007'.

Data on the Real GDP Growth, available at http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction.

Fahy, J. (2002) 'A resource-based analysis of sustainable competitive advantage in a global environment', *International Business Review*, Vol. 11, No. 1, pp.57–78.

Gomes, L. and Ramaswamy, K. (1999) 'An empirical examination of the form of the relationship between multinationality and performance', *Journal of International Business Studies*, Vol. 30, No. 1, pp.173–198.

Grant, R.M. (2010) *Contemporary Strategy Analysis*, 7th ed., Wiley & Sons, UK.

Grbac, B. (2009) 'Izazovi međunarodnog tržišta', Faculty of Economics Rijeka, Rijeka, pp.161–169.

Havlik, P. et al. (2011) Economic Prospects for Central, East and Southeast Europe: Recovery in Low Gear across Tough Terrain, The Vienna Institute for International Economic Studies.

Hayes, R.A. and Abernathy, W.J. (1980) 'Managing our way to economic decline', *Harvard Business Review*, July–August, pp.67–77.

Islam, M.N. (1998) 'Export expansion and economic growth: testing for cointegration and causality', *Applied Economics*, London, Routledge, Vol. 30, No. 3, pp.415–424.

Knight, G. (2000) 'Entrepreneurship and marketing strategy: the SME under globalization', *Journal of International Marketing*, Vol. 8, No. 2, pp.12–32.

Knight, G. and Cavusgil, S.T. (1996) 'The born global firm: a challenge to traditional internationalization theory', *Advances in International Marketing*, JAI Press, Greenwich, CT, Vol. 8, pp.11–26.

Kravis, I. (1970) 'Trade as a handmaiden of growth: similarities between the nineteenth and twentieth centuries', *Economic Journal*, Vol. 80, No. 320, pp.870–872.

Krugman, P.R. and Obstfeld, M. (2009) *Međunarodna Ekonomija*, 7th ed., Mate, Zagreb.

Lee, J. and Habte-Giorgis, B. (2004) 'Empirical approach to the sequential relationships between firm strategy, export activity, and performance in U.S. manufacturing firms', *International Business Review*, Vol. 13, No. 1, pp.101–129.

Lequiller, F. and Blades D. (2006) *Understanding National Accounts*, OECD, Vol. 61.

Ling-yee, L. and Ogunmokun, G.O. (2001) 'Effect of export financing resources and supply-chain skills on export competitive advantages: implications for superior export performance', *Journal of World Business*, Vol. 36, No. 3, pp.260–279.

Loane, S., Bell, J.D. and McNaughton, R. (2007) 'A cross-national study on the impact of management teams on the rapid internationalization of small firms', *Journal of World Business*, Vol. 42, No. 4, pp.489–504.

Mahadevan, R. (2007) 'New evidence on the export-led growth nexus: a case study of Malaysia', *The World Economy*, *Journal Compilation*, Blackwell Publishing, pp.1069–1083.

Manolova, T.S., Manev, I.M. and Gyoshev, B.S. (2010) 'In good company: the role of personal and inter-firm networks for new-venture internationalization in a transition economy', *Journal of World Business*, Vol. 45, No. 3, pp.257–265.

Marin, D. (1992) 'Is the export-led growth hypothesis valid for industrialized countries?', *The Review of Economics and Statistics*, Vol. 74, No. 4, pp.678–88.

Michalopoulos, C. and Jay, K. (1973) 'Growth of exports and income in the developing world: a neo-classical view', AID Discussion Paper, Washington, DC, No, 28.

Mikic, M. and Gilbert, J. (2008) *Trade Statistics in Policymaking: 'A Handbook of Commonly Used Trade Indices and Indicators*', available at http://www.scribd.com/doc/57309387/9/Export-Import-Coverage.

Monthly Bulletin of Statistics, Vol. LXV, No. 1081, No. 7.

Newsletter of Croatian National Bank No. 171.

Organization for Economic Cooperation and Development (OECD) (2000) 'Enhancing the competitiveness of SMEs in transition economies and developing countries in the global economy and their partnership with SMEs of OECD countries', OECD, Paris, France.

Pangarkar, N. (2008) 'Internationalization and performance of small-and-medium sized enterprises', *Journal of World Business*, Vol. 43, No. 4, pp.475–485.

Petersen, B., Welch, L.S. and Liesch, P.W. (2002) 'The internet and foreign market expansion by firms', *Management International Review*, Vol. 42, No. 2, pp.207–221.

Root, F.R. (1987) *Entry Strategies for International Market*, Lewington Books, Lexington MA.

Smith, A. (1999 (1776)) *The Wealth of Nations Books I-III*, Penguin Classics, London.

Temple, P. (1994) 'Overview: understanding Britain's economic performance: the role of international trade', in Buxton, A. Chapman, P. and Temple, P. (Eds.): *Britain's Economic Performance*, Routledge, London, pp.31–56.

World Statistics Pocketbook (2010).

Appendix

Exports of goods of Croatia according to statistical procedures (thousand USD)

		2001	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Total exports		4,665,908	4,903,584	6,186,630	8,024,157	8,772,553	10,376,964	12,363,930	14,123,675	10,491,835	11,810,676
11	Normal exports	1,743,386	2,018,119	2,901,781	4,218,307	4,984,616	6,239,963	7,629,343	8,903,311	7,095,866	7,710,119
13	Exports for outward processing	182,333	119,523	345,791	296,741	309,068	439,859	587,152	738,661	152,804	242,250
15	Exports after inward processing (suspension system)	2,635,909	2,760,255	2,937,750	3,507,854	3,478,164	3,697,112	4,147,435	4,481,703	3,242,434	3,857,416
16	Exports after inward processing,(drawback system)	104,280	5,687	1,308	1,256	705	30	-	-	731	891

Source: Author's calculation based on CBS data

Imports of goods of Croatia according to statistical procedures (thousand USD)

		2001	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Total imports		9,147,130	10,722,045	14,209,035	16,589,172	18,560,367	21,502,494	25,838,828	30,726,987	21,204,851	20,067,005
11	Normal imports	7,469,465	9,320,364	12,401,917	14,536,410	16,392,845	19,099,398	23,091,278	27,528,713	19,270,291	18,127,153
13	Imports after outward processing	56,025	34,485	36,866	39,107	63,912	60,406	64,504	94,725	61,056	77,406
15	Imports for inward processing (suspension system)	1,620,352	1,366,702	1,770,001	2,013,132	2,103,405	2,342,655	2,682,985	3,103,548	1,872,885	1,861,925
16	Imports for inward processing (drawback system)	1,289	494	250	523	204	35	61	-	620	520

Source: Author's calculation based on CBS data

Calculation results	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
European Union (27 countries)	1.5848	2.9898	1.52	0.3744	–3.807	3.978
European Union (25 countries)	1.6131	2.9596	1.52	0.3744	–3.834	3.9345
European Union (15 countries)	1.4575	2.7156	1.3185	0.2408	–3.7296	3.6918
Euro area (17 countries)	1.49	2.9072	2.1384	0.2282	–4.0572	4.1265
Euro area (16 countries)	1.485	2.9072	2.1384	0.2282	–4.0572	4.1265
Euro area (15 countries)	1.4455	2.8574	2.0865	0.1938	–4.0278	4.043
Euro area (13 countries)	1.4504	2.8574	2.093	0.1938	–4.0278	4.056
Euro area (12 countries)	1.4455	2.8483	2.0544	0.1932	–4.0131	4.043
Belgium	1.9424	3.6598	2.6814	0.7908	–9.6192	6.54
Bulgaria	–7.47	43.4478	2.7218	1.7589	–3.819	8.9631
Czech Republic	5.9064	8.05	6.7032	1.644	–5.85	9.7983
Denmark	1.824	1.419	–0.1938	0.333	–2.9205	1.1359
Germany	2.698	5.0048	3.4595	0.9476	–5.7213	6.0344
Estonia	12.3889	3.9546	0.9702	0.679	–9.6096	17.0877
Ireland	0.508	–0.1389	2.0378	–0.135	–2.6082	2.9792
Greece	0.6678	0.5457	0.4387	–0.0428	–1.3659	0.54
Spain	0.1914	1.1748	1.3725	–0.3186	–1.95	2.4888
France	0.5616	1.333	0.3408	–0.1704	–2.3892	2.3718
Italy	0.7488	1.887	1.6685	–0.351	–3.5144	2.8122
Cyprus	2.5576	–1.1704	–0.3468	0.595	–1.003	0.9174
Latvia	6.9759	0.9856	2.3738	0.285	–3.0388	7.5042
Lithuania	6.7044	6.2578	2.262	6.6825	–5.2717	10.224
Luxembourg	–0.8085	3.8907	–0.362	0.4048	–5.82	2.9328
Hungary	6.1149	11.41	10.7231	3.8248	–8.2268	11.5893
Malta	–0.7776	7.2787	2.9323	–1.9964	–5.31	11.3004
Netherlands	3.3489	5.0895	3.8935	0.732	–4.77	7.725
Austria	2.5152	2.9592	4.2867	0.1287	–5.8598	4.2401
Poland	2.6628	4.7334	2.38	2.5896	–2.7795	4.6243
Portugal	–0.1484	2.2932	1.3328	–0.1428	–2.48	2.1922
Romania	1.4787	1.8815	1.7301	0.9158	–0.8856	6.0501
Slovenia	5.2324	7.3432	7.9647	0.2685	–8.2898	5.709
Slovakia	6.384	16.5308	11.6874	2.6748	–9.6368	14.0238
Finland	2.0374	5.3424	2.3424	0.7455	–6.552	3.1719
Sweden	1.8309	2.9406	1.35	0.266	–5.6898	5.0315
United Kingdom	1.4534	2.379	–1.3502	0.3344	–1.968	1.8746
Croatia	*1.36*	*2.1939*	*0.5936*	*0.0342*	*–3.73383*	*2.532251*