Assessing the export performance in transition countries: the case of the Republic of Moldova[1]

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Abstract. *Despite their common legacy of central planning and of a new beginning in the '90s, transition countries have achieved different export performances. Although there is not a consensus among economists on the dimension of exports impact on economic growth, the non-performance or poor performance of exports may indicate inadequate policy reforms that by consequence do hinder economic growth. The purpose of this paper is to make an assessment of performances that Republic of Moldova's exports have achieved after 20 years of transition compared to other countries in Eastern Europe and Central Asia.*

Keywords: transition, export performance, competitiveness, export concentration, trade specialization, Lafay index, medium and high-tech exports

JEL Classification: F13, F14, F43, O11, O57

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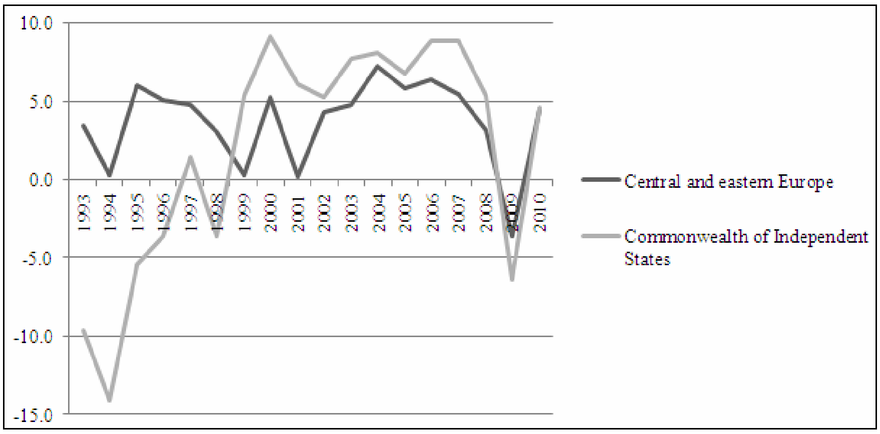
1. INTRODUCTION

After 20 years of transition, we have to state that discrepancies between the countries of Central and Eastern Europe and the CIS block have increased strongly. The majority of countries of the first block have completed the transition process. At present, some have even joined the European Union, while many CIS countries have achieved modest and uneven progresses to carry out efficient market-oriented reforms. The countries that have started immediately reforms at the beginning of the transition and have not hesitated to carry out radical reforms have progressed more; others that delayed reforms have achieved less progress.

Figure 1. Real Economic growth in CEE and CIS during the transition period, %



Source: IMF, World Economic Outlook Database, September 2011 (http://www.imf.org/external/pubs/ft/weo/2011/02/weodata/).

The economic theory as well as empirical analysis in this area has proven that the economic growth is a very complex process, being determined by a series of factors such as: capital accumulation, increased productivity, quality of business environment, economic infrastructure, political conditions, general geographical conditions (factors endowment, geographical location), culture, etc. Another important variable influencing economies' development is external trade, and particularly export performance.

Although there is not a consensus among economists about the level of export impact on economic growth, it is largely accepted that export performance is beneficial for boosting development for many reasons. Through exports firms may take advantage of economies of scale; they bring about technological progress; they create employment and increase labour productivity; they improve allocation of scarce resources throughout the economy; they relax the current account pressures on foreign capital goods by increasing the country's external earnings and attracting foreign investment; and they increase the TFP and consequently the well-being of the country (Emilio J. Medina-Smith, 2001).

The aim of this paper is to provide evidence on the level of the transition countries, for example, the Republic of Moldova, that have succeeded to increase export performance in terms of quantity and quality and transform it into a growth engine. Taking into account the initial condition of these countries at the begining of the transition process from planned economy to market economy, trade rethinking and exports restructuring was an important task for national authorities. Reforms in this area had required most attention, especially in the new independent countries, that after Soviet Union dissolution have had to rebuild from "zero" their external trade links. The analysis of the Republic of Moldova's export performance compared to other countries in the region, including its immediate neighbors (for comparison, Hungary, Romania, Ukraine) is confirming this statement.

Although since the transition outset the external trade has increased significantly in absolute terms in the countries that followed this process, not all of them managed to make qualitative changes. Exports in most CIS countries still are geographically concentrated and the commodity structure is dominated mainly by primary or low value goods, which determined a limited effect on economic growth.

The evolution of external trade in these countries is a good indicator of the quality of the reforming process in these economies. It speaks about the competitiveness of enterprises, their capacity to compete in a free market and to create welfare.

2. OVERVIEW OF EXTERNAL TRADE EVOLUTION OF COUNTRIES IN EASTERN EUROPE AND CENTRAL ASIA

The transition economies have become more open to the international market since the beginning of the '90s, the openness index increasing for CEE countries from 46% in 1992 to 96%, and for CIS, from 18% to 52%. The general trend of exports in both CIS and CEE regions show a significant increase as concern their nominal value, the exports share in GDP, exports per capita.

Despite their common legacy of planned economy, the countries from Eastern Europe and Central Asia suffered an uneven collapse of external trade at the beginning of the '90s and a post crisis recovery respectively.

Table 1. Regional profile of exports development in 2010 compared to 1992

	Exports		Imports coverage by exports		Exports/GDP		Exports per capita		Exports share in world exports	
Group of countries/ Country	*mil. USD*	*% (index)*	*%*		*%*		*USD*	*% (index)*	*%*	
	2010	2010/ 1992	1992	2010	1992	2010	2010	2010/ 1992	1992	2010
Central and Eastern Europe	621830	1004	90.7	91.9	22.1	45.8	4933	1035	1.65	4.10
Bulgaria	20646	527	87.8	81.4	45.5	43.1	2755	609	0.10	0.14
Estonia	11593	2611	107.8	94.7	10.4	60.4	8644	2974	0.01	0.08
Hungary	95345	894	96.0	108.3	28.0	73.7	9550	927	0.28	0.63
Poland	155602	1168	84.9	89.7	14.4	33.2	4065	1167	0.35	1.03
Romania	49353	1131	69.7	79.7	22.1	31.0	2297	1215	0.12	0.33
Commonwealth of Independent States	585863	979	107.2	135.4	9.3	30.1	2100	994	1.59	3.86
Russia	400424	953	103.3	146.3	8.6	27.2	2801	992	1.12	2.64
CIS, excluding Russia	185439	1041	117.6	116.6	11.4	39.2	1364	1028	0.47	1.22
Belarus	25284	710	101.8	72.5	20.0	46.5	2635	763	0.09	0.17
Republic of Moldova	1542	328	73.4	40.0	19.1	26.7	431	402	0.01	0.01
Ukraine	51478	640	113.3	84.5	10.2	37.7	1133	727	0.21	0.34

Source: UNCTAD statistics database (http://www.unctad.org/Templates/Page.asp?intItemID=1584&lang=1).

The CEE region, that has managed to achieve faster a sustainable growth, due to better initial conditions and the market-oriented policy reforms, have performed better than the CIS countries. Except Albania and Montenegro, imports coverage by exports exceeds in these countries 50%. For most countries already members of the EU this share is about 80% or even more. This is a good indicator because the revenues from exports let to finance, if not totally, a large part of imports. In 2010, CEE exports accounted for almost 622 billion USD, which is ten times more compared to 1992. 94.9% of them or 590 billion represent the exports of 10 countries that have already joined the European Union – the Czech Republic, Poland, Hungary, Estonia, Latvia, Lithuania, Slovenia, Slovakia, Romania and Bulgaria. Also a good indicator is the increase of about 10 times in per capita exports, accounting for 4.9 thousand USD. By consequence the presence of these countries in world exports increased from 1.65% to 4.1%.

Taking into account that the CIS countries, unlike the countries from Central and Eastern Europe, had to start from scratch to restructure their external links at the outset of transition, lacking experience as independent states, the exports registered not a bad evolution in the region as a whole during the transition period: nominal value increased 9.8 times accounting for 585.9 billion USD in 2010, exports per capita representing 2.1 thousand USD. The exports share in world exports is comparable to that of the CEE countries, representing 3.86%, increasing from 1.59% in 1992. However, these high developments are mostly due to Russia's performance.

The exports development in this region differs strongly among countries. There are countries with an abundance of natural resources that go ahead. The leader is Russia, which is one of the richest countries in mineral resources. Its exports represented 400.4 billion USD in 2010, or 2.6% of world exports, exceeding more than two times the other ten CIS member countries' aggregated weight in world exports. To mention that if Russia is maintaining its status of one of the main export partners for many CIS countries - Belarus (38.5%), Ukraine (26%), Republic of Moldova (26%), Kirghiz Republic (17%), Armenia (15.8%), Tadjikistan (10%), the share of CIS countries in Russia's external trade is very small: 14% of exports and 13% of imports. Other countries like Kazakhstan, Azerbaijan, Ukraine and Belarus[1], in which mineral resources are also an important component of the national wealth, have registered good evolutions of exports, gaining a greater share of international market and increasing the volume of exports per capita. Unlike the above - mentioned countries, there is another category of countries in the CIS area, like Georgia, Armenia, Tadjikistan, Kyrgyzstan[2], that do not have any special natural resources reserves and have performed more poorly. The level of per capita exports of these countries may be compared to countries from CEE region such as Albania, Montenegro.

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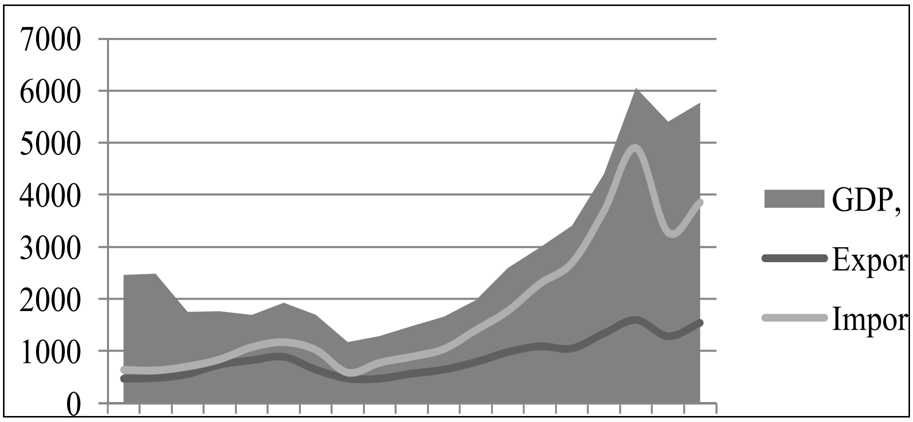
[1] Exports of these countries have increased 41 times, 17 times, 6 times and 7 times respectively since 1992.

[2] Exports of these countries have increased 23 times, 12 times, 11 times, 6 times.

3. EXPORTS PERFORMANCE OF THE REPUBLIC OF MOLDOVA

The Republic of Moldova is a small country that is rather filling up the group of countries with the smallest level of exports per capita from the CIS region. National authorities have adopted a series of measure to liberalize its external trade after the declaration of independence. Moldova is a member of a series of free trade agreements with countries from Central Europe, from the CIS region, and it benefits from autonomous trade preferences offered by the European Union. Since 26 July 2001 the country joined the World Trade Organization (WTO). However, despite these efforts, Moldova's exports did not succeed to achieve high performance.

Figure 2. External trade of the Republic of Moldova, 1992-2010, mil. USD



Source: UNCTAD Stat database.

In the last decade, which coincides with Moldova accession to WTO, the external trade growth accelerated. Average yearly growth rate tripled, the external trade achieving 5397 million USD in 2010, that is 4.9 times more than the amount registered in 1992. However, the trend was mainly determined by fast growth of imports on the background of emigration development and remittance inflow sharp increase[1] (imports increased by about 6 times since 1992, reaching 3.8

[1] Imports increased at a yearly average growth rate of 20% since 2002, compared to 13% for exports, while till then the grow rates were about 6% for imports and 4% for exports.

billion USD in 2010), exports performances remain very modest (increasing three times – 1.5 billion USD).

These evolutions have exerted a high pressure on the trade balance of the Republic of Moldova, whose deficit increased strongly, rising up to 40% GDP. Imports coverage by exports in the Republic of Moldova represents one of the lowest values among the transition countries (indicator comparable to countries such as Georgia, Albania and Montenegro) accounting for about 40%. While most of the other countries succeeded to maintain high level of imports coverage by exports or even to increase it during the transition period, in Moldova it decreased about two times, from 73% in 1992.

Now the Republic of Moldova ranks among the transition countries with the smallest export performance. Its per capita exports that amounted to 431 USD in 2010 is three times below the average registered in CIS countries, except for Russia and even lower compared to the CEE countries.

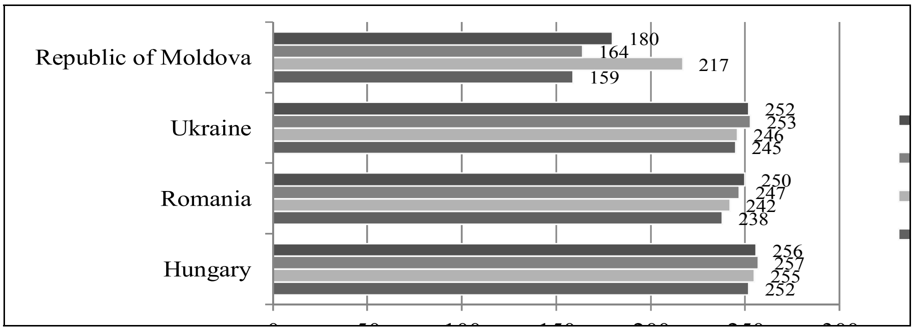
These modest export developments and increasing disparity compared to other countries can be explained by the fact that despite many measures taken to liberalize exports in the last two decades, the national economy is facing a shortage of competitive products on external markets, due to the uncompetitive exports' structure: export concentration on several markets and specialization on low value goods.

Moldovan export diversification

The existing literature states that once the degree of one economy's openness increases, its trade growth became more volatile. An important strategy that can influence volatility, i.e. to reduce it, is export diversification (Monna Haddad, 2010). Diversification allow to reduce imported shocks associated with fluctuation in world prices, external demand slump for several products or from several markets, etc. Thus export diversification can stimulate development, but the impact of such approach will vary at different stages of development. Diversification may have a bigger importance, especially for developing countries that specialize in exports of primary products and other low value products. According to structural models of economic development, countries should diversify from primary exports to manufactured exports in order to achieve sustainable growth (Heiko Hesse, 2008). At the second stage, when a certain level of capital has been accumulated and export structure has shifted to capital-intensive manufactured goods – high value products, countries may follow an export concentration.

Over the transition period[1], Moldova has not suffered significant changes in terms of export commodity diversification, calculated as number of positions exported according to the SITC. Despite of general increase trend, the number of exported positions remains very low compared to other countries in the region (Figure 3).

Figure 3. Number of products exported according to SITC classification disagregated at three digit level



Sourse: UNCTAD Stat database.

Note: The graph included products whose exports exceed 100000 USD or 0,3% of total value of exports.

The analysis of exports concentration according to the Herfindahl Hirschman Index (HHI)[2] reveals that in the last five years, the Moldavian exports have seen

[1] The indicators have been calculated since 1995, due to lack of data for the period before.

[2]The HHI is an index usually used to measure concentration. The index is computing according the following formula:

$$H_j = \frac{\sqrt{\sum_{i=1}^{n}\left(\frac{x_i}{X}\right)^2} - \sqrt{1/n}}{1-\sqrt{1/n}}$$

where:

Hj = concentration index;

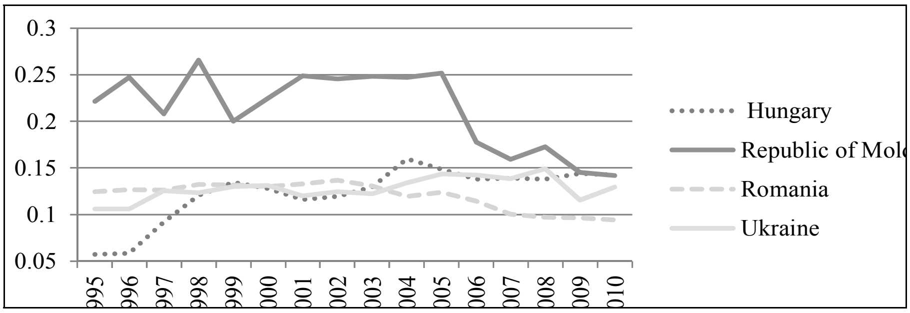
xi = exports of product i ;

n = number of products (SITC Revision 3 at 3-digit group level)

The index value ranks from 0 to 1 (maximum concentration). A value less than 0.1 reveals a high diversification; a value between 0.1-0.18 indicates a moderate concentration; and an index greater than 0.18 represents a highly concentrated degree.

significant improvements, the value of the index reducing from 0.25 in 2005 to 0.15 in 2010, being in line with other countries like Romania, Ukraine and even Hungary.

Figure 4. Exports concentration in products (HHI)



Sourse: UNCTADStat database.

In the context of the above analysed trends a question appears: "Has Moldova really undergone qualitative changes in the export commodity structure that have determined the decrease in exports concentration?" The answer seems to be negative and it may be explained by the following arguments:

- The exports diversification has been determined mostly by a significant drop in wine exports in 2006, due to external shocks. Following the Russian ban on Moldavian wines in 2006, exports of this product reduced from about a quarter to about 9% of Moldova's total exports. The main cause determining this trend is the high geographical concentration of Moldavian exports. The HHI index computed to determine geographical concentration of Moldova's exports represents a 0.27, which reveals a high concentration degree[1];
- Inappropriate structural changes in exports.

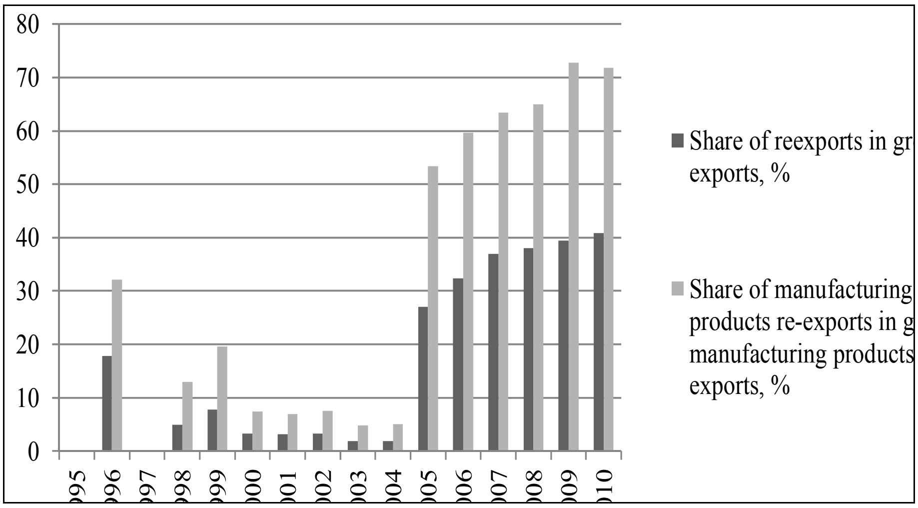
Dinamics of structural changes in Moldova's exports

Despite some changes in the export commodity structure during the transition, it is still at some extent uncompetitive. On the one hand, the share of agricultural

[1] Institute of Economy, Finance and Statistics, Moldovan Economic Trends, Nr. 1 (Q 1) 2011 available on http://www.iefs.md/ro/activitatea-iefs/publicacii/met/106-relansarea-publicaiei-imoldovan-economic-trends.html

and food products remains high enough (Figure 6) and, on the other hand, the slight shift towards manufactured goods was stimulated mainly by re-exports of these products (Figure 5).

Figure 5. Re-export development in the Republic of Moldova, 1995-2010, %

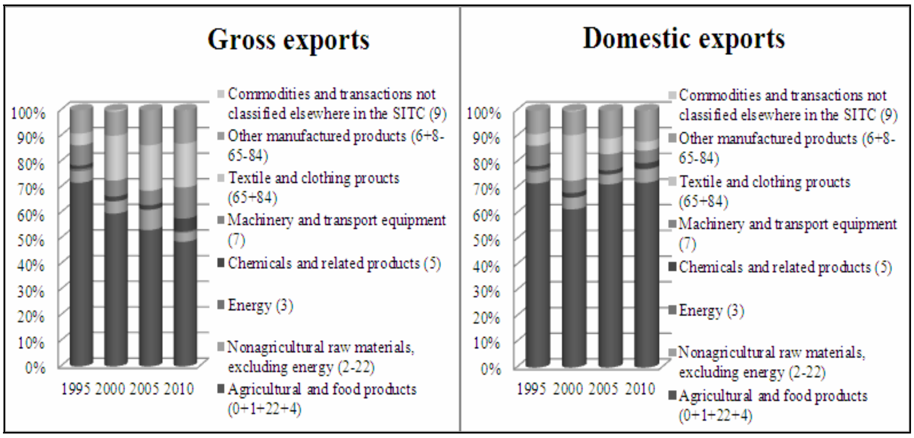


Source: World Integrated Trade Solutions database.

Re-exports have become an important component of the Moldavian exports, especially in the last five years registering a faster increase than domestic exports (lower drop during the crisis). In 2010, the re-exports share in gross exports reached a high level of 41%, and even greater for manufactured products, 72%. This significant share of re-exports is not a frequent phenomenon, among other transition countries some re-exports have been registered only in such countries like Albania, Armenia, Georgia and Kyrgyzstan.

Looking at the general picture of gross export commodity structure, there was registered a slight shift to manufactured products, however the share of agricultural and food products remaining enough high, about half of total exports. Taking into account the fact that almost 70% of manufactured products represent re-exports, the quota of agricultural and food products became even higher. Thus, the domestic exports seem to have kept their structure since 1995.

Figure 6. The commodity structure of the Republic of Moldova's exports, 1995-2010, %



Source: National Bureau of Statistics of the Republic of Moldova and World Integrated Trade Solutions database.

Moldova's failure to perform in diversifying its exports towards high value products can be confirmed by the analysis of dynamics of its international trade specialization that have been realized using Lafay index[1]. During the transition period, the computation of the number of products according SITC rev 3 desegregated at a 3-digit level, by each external trade specialization of Moldova has reduced significantly, keeping the greatest levels of specialization for such product groups as agricultural and food products and labor-intensive products, especially apparel industry.

The regional profile shows a big discrepancy between Moldova and other countries in the region. Hungary and to some extent Romania show a great

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[1]The specialization Lafay index (LFI_i) for a country j and for a group of products i, has been computing according the following formula:

$$LFI_i = \left(\frac{X_i - M_i}{X_i + M_i} - \frac{\sum_{i=1}^{N}(X_i - M_i)}{\sum_{i=1}^{N}(X_i + M_i)} \right) \frac{X_i + M_i}{\sum_{i=1}^{N}(X_i + M_i)} * 100 , \quad i = 1, \dots , N$$

Where X_i and M_i are exports and imports of the product i by country j, and N - total number of products.

A positive value of the index reveals a comparative advantage, and its growth - a higher level of specialization. On the contrary, a negative value indicates a comparative disadvantage.

degree of specialization in several groups of products in section 7 - “Machinery and transport equipment”. Since 1995 these countries managed to produce qualitative changes in export commodity structure, moving towards a higher specialization in high-manufactured products, keeping also a relative comparative advantage in agricultural and food products as well. Ukraine’s main specializations rely mainly on metalliferous products and machines for metal processing.

Table 2. Items of top specialisation in some transition countries
(Lafay index of international specialisation)

	1995		2010	
Hungary	012-Other meat and edible meat offal, fresh, chilled or frozen	1.9	761-Television receivers, whether or not incorporating radio-broadcast receivers or sound- or video-recording or reproducing apparatus	2.7
	041-Wheat (including spelt) and meslin, unmilled	1.3	713-Internal combustion piston engines, and parts thereof, n.e.s.	2
	842-Women's or girls' coats, capes, jackets, suits, trousers, shorts, shirts, dresses and skirts, underwear, nightwear and similar articles of textile fabrics, not knitted or crocheted	1.2	781-Motor cars and other motor vehicles principally designed for the transport of persons, including station-wagons and racing cars	1.3
Romania	842-Women's or girls' coats, capes, jackets, suits, trousers, shorts, shirts, dresses and skirts, underwear, nightwear and similar articles of textile fabrics, not knitted or crocheted	3.4	781-Motor cars and other motor vehicles principally designed for the transport of persons	0.9
	841-Men's or boys' coats, capes, jackets, suits, blazers, trousers, shorts, shirts, underwear, nightwear and similar articles of textile fabrics, not knitted or crocheted	3	773-Equipment for distributing electricity, n.e.s.	0.8
	821-Furniture and parts thereof; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings	3	821-Furniture and parts thereof; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings	0.6
Ukraine	673-Flat-rolled products of iron or non-alloy steel, not clad, plated or coated	3.8	672-Ingots and other primary forms, of iron or steel; semi-finished products of iron or steel	5.1
	676-Iron and steel bars, rods, angles, shapes and sections (including sheet piling)	3.4	673-Flat-rolled products of iron or non-alloy steel, not clad, plated or coated	3.3

	1995		2010	
	679-Tubes, pipes and hollow profiles, and tube or pipe fittings, of iron or steel	2.6	676-Iron and steel bars, rods, angles, shapes and sections (including sheet piling)	2.9
Moldova	112-Alcoholic beverages	10.9	112-Alcoholic beverages	4.4
	61-Sugars, molasses and honey	3.9	57-Fruit and nuts (not including oil nuts), fresh or dried	3.8
	59-Fruit juices and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter	3.2	222-Oil-seeds and oleaginous fruits of a kind used for the extraction of "soft" fixed vegetable oils	2.5
	011-Beef, fresh/chilld/frozn	2.28	842-Women/girl clothing wven	1.52
	122-Tobacco, manufactured	2.04	844-Women/girl wear knit/cro	1.44
	057-Fruit/nuts, fresh/dried	2.01	773-Electrical distrib equip	1.43
	056-Veg root/tuber prep/pres	1.56	041-Wheat/meslin	1.41
	121-Tobacco, raw and wastes	0.97	841-Mens/boys wear, woven	1.35
	288-Nf base metal waste nes	0.91	421-Fixed veg oil/fat, soft	1.26
	742-Pumps for liquids	0.79	845-Articles of apparel nes	1.25

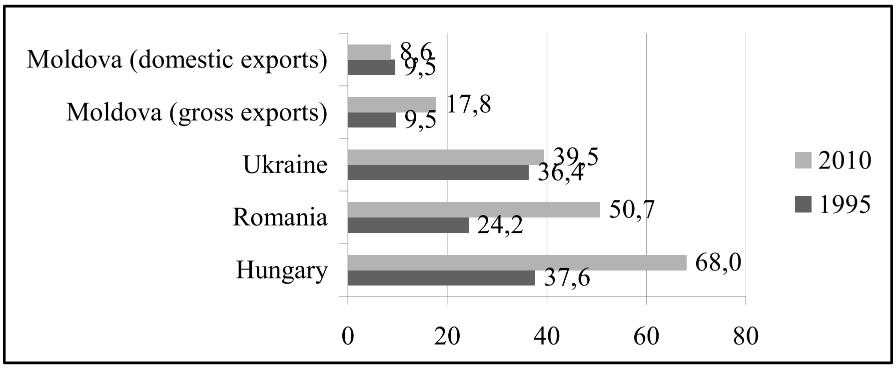
Source: Authors calculations based on World Integrated Trade Solutions database.

Note: The Lafay index has been computed at the 3-digit SITC classification.

The analysis of dynamics of medium and high-tech exports[1] higlights once again this gap between Moldova and these countries. Looking at the evolution of gross exports, Moldova has registered low performance in increasing this category products exports, the share of which in total exports represents only 17.8%, compared to almost 40% for Ukraine, half of Romania's exports total value, and about 68% in Hungury. The situation is even worst if taking into account only the domestic exports, their share reducing since 1995 from 9.5% to 8.6%.

[1] Medium and high-tech exports include exports of the following SITC Rev.3 products: 266, 267, 512, 513, 525, 533, 54, 553, 554, 562, 57, 58, 591, 593, 597, 598, 629, 653, 671, 672, 679, 71, 72, 731, 733, 737, 74, 751, 752, 759, 76, 77, 78, 79, 812, 87, 88 and 891. The indicator has been computed according to the methodology presented in the report "Innovation Union Scoreband 2010: The Innovation Union's performance scoreboard for Research and Innovation", February 2010 available at http://www.proinno-europe.eu/inno-metrics/page/innovation-union-scoreboard-2010

Figure 7. Medium and high-tech exports share in total exports, %



Source: Authors calculation based on World Integrated Trade Solutions database.

These trends can be explained by Moldova's national production poor development, which in conditions of economy liberalization and fast growth of import was unable to ensure an appropriate export supply. During 1995-2010, industrial and agricultural production in real terms (at constant 2000 prices) has grown at quite a modest annual average rate. Manufacturing industry, including food, beverages and tobacco industries, has even registered a negative trend, if compared to their value in 2010 and 1995. Thus, during this period, agricultural production grew by an average of only 2.4% and industry by 0.5%, while manufacturing industry decreased by 0.9%. Although in nominal values food and beverages industry grew on average by 11.5%, in real terms, it registered a negative average growth rate of 1.6%.

The quality and speed of reforms during the transition period is an important driver for generating an attractive business climate, for attracting new investments and boosting exports that can stimulate economic growth. Although over the transition period in Moldova have been taken many steps to facilitate the conditions for doing business and promote exports, there still exist a lot of barriers that exert pressure on business development. According to one of the international reports that analyze the extent of reform process in the world's economies "Doing business reports", the process of business facilitation in the Republic of Moldova advances very slow if compared to other country.

4. CONCLUDING REMARKS

The long transition process and high vulnerability of the Moldavian economy to external shocks reveal a deficient model of development the country has adopted. Although the Republic of Moldova has achieved a certain increase in the GDP per capita (from 400 USD in 1995 to 1615 USD in 2010), this level remains very small compared to other countries in the region that passed from planned to market economy. While many countries from the CEE region have finished the transition process, Moldova seems to be in full process.

Despite the fact that economic liberal reforms should have enabled foreign investments and external trade to become important stimulants of economic growth in the Republic of Moldova, their evolution prove to be very slow and less performing. This becomes more evident if we compare it with export development registered in other transition countries.

The poor export performance in Republic of Moldova is determined by the following trends:

- One of the smallest levels of export per capita among the transition countries and its insignificant export share in world exports, representing only 0.01%;
- High trade deficit due to low import coverage by export representing only 40%;
- High export volatility caused by high geographic concentration of export;
- Uncompetitive export structure characterised by an important share of agricultural and food products, high re-export of manufactured products and an insignificant diversification towards medium and high-tech products.

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