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QUANTIFYING AGRI-FOOD EXPORT POTENTIAL AND EAST-WEST ORIENTATION APPROACH: EVIDENCE FROM MOLDOVA

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Abstract

This research reflects the agri-food export potential of the Republic of Moldova, measured by different methodological ways - production outputs, experienced exported amounts. It was established a potential related comparative study on the agri-food export dynamics and analyzed specific indicators for European Union and CIS oriented export flows.

***Key words*:** *agri-food, export, flows, potential*

INTRODUCTION

For Moldova, as other Central and Eastern European countries, many changes had occurred during the transformation process to a market economy in the agricultural and food trade environment. An important part of the transformation process is trade liberalization.
Agri-food potential showed different levels of its manifestation in the resulted indexes, including export aggregation, on EU and CIS directions.

MATERIALS AND METHODS

This study approaches dynamic and evolutionary issues in setting potential and its reflection on export activity. For the analysis of agri-food trade indicators were used the data from National Bureau of Statistics and International Trade Center (ITC) during 2001-2012, including commodity groups, divided in agricultural products and foodstuffs. [7]

RESULTS AND DISCUSSIONS

Primary calculations proved that quite different percentage shares of exports in domestic agricultural production volume [6] implies a serious fragmentation over 2006-2012 period. Percentage share revealed in Figure 1 demonstrates the expression of export potential. Assuming that, once registered, the exported quantities show *a priori* the current development of export potential, the percentage share of values intended for the external market should emphasize the dynamic component.

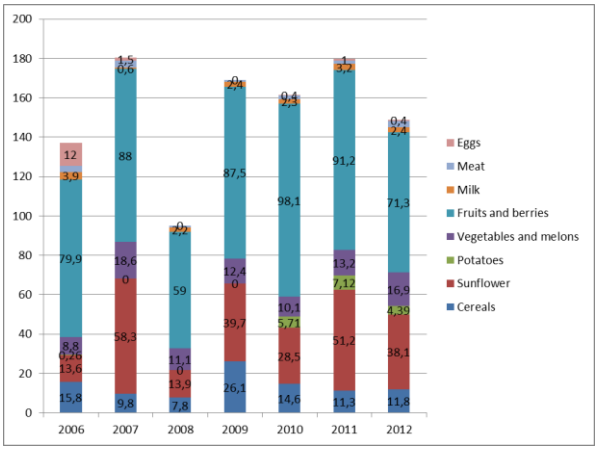

Fig.1 Evolution of exports share in gross agricultural output volume, by categories, 2006-2012 years, %
Source: based on data from the National Bureau of Statistics

Analyzing the share of exports in gross agricultural output we see that cereals had a component of the export in that period which never fell below 7%, but not exceed 27%; as the mean of the period, 13.8% figure would be realistic. Sunflower position, compared to the previous item, is more open to the external market, with values between 13.6 and 58.3% (in 2007), having thus an average of 34.7% or more than 2.5 times higher than that of the grain. Potatoes, however, does not present a relevant source for export (the consumption being

involved), with export share values of a maximum of just over 7%; during the years 2006-2009 they recorded insignificant or null values.

Vegetables experienced constant developments of increasing the share of exports starting in 2010 (10.1%), also registering a maximum of 18.6% in 2007, and the average per period is little over 13%. Last vegetable item, and the most important of all as the openness to export are fruits and berries that have not values across the period under 50 percent. Although reflect fragmented developments - with pairs "decrease-increase" in the period 2006-2009, there is a fairly significant declining of the share of export in the years 2010-2012 and that in conditions of constant consumption and production increase, which attests most likely the issues related to market conditions and other factors of competitiveness, especially lately.

However, fruits and berries remain the strong point in national agricultural production export, reflecting an average of share of over 82 percentage points.

In the category of animal products, we can't highlight some leaders compared to the rest of the items analyzed, since the share of export of these products is quite diminished. In analyzing the group, then we can observe that milk records 2-3% of export orientation of the total domestic production, reaching an average that barely exceeds 2.4 percentage points. An even worse situation is found at meat, which has quite significant disparities between production and consumption _ in respect of deficit, this product having a maximum of export share of only 3.6% (in 2007) and an average per period slightly exceeding 2.2%. In turn, the eggs have periods when there have not been registered exports (such as 2008-2009) or it is about some fairly small quantities, with an upper limit of 12% in 2006, these had manifested themselves in the conditions under which the domestic consumption uses 89-90% of the total domestic production.

These connotations are arising from the interpretation of the objective reality of the national agricultural sector, without (until now) achieving a reference to the historical reference - thus allowing to assess "the lost potential", highlighted from the historical and economic circumstances. That way since statistics considers that the maximum value of agricultural production in the national territory was obtained in 1985-1990 [7], we can support the idea of the possibility of repeating such economic and agricultural experiences in this regard using those references (table 1).

Table 1. Scenario for estimating the untapped/lost export potential

Item	1	2	3	4	5
	Production 000 tons 1971-1980/ 1981-1990	Production 000 tons 2011	Production difference 000 tons (2-1)	Percentage export share % 2011	Export difference, 000 tons, 2011 Compared to 1971-1980/ 1981-1990 (on the basis of the indices 4 and 1)
Cereals	2554.5	2457.1	-97.4	11.3	-11
Sunflower	318	427	+109	51.2	+55.8
Potatoes	409.9	350.8	-59.1	7.12	-4.2
Vegetables	1289.3	361.5	-927.8	13.2	-122.4
Fruits, berries	950.7	378.4	-572.3	91.2	-521.9
Milk	1511	560	-951	3.2	-30.4
Meat	530	159	-371	1.7	-6.3
Eggs, million units	1129	705	-424	1	-4.2

Source: based on data from the National Bureau of Statistics

To quantify the effects of a certain volume of production (as well as areas exploited on crops) on untapped potential, we used the compared diagnosis to the present period of the values recorded in the historical highs - from Soviet times, whether during the years 1971-1980 or 1981-1990 - these values demonstrate the possibility of achieving these based on the resources capabilities and the use of export share may be classified as a constraint limiting in value terms the references used.

In this way, of plant yields only sunflower in the exposed historical conditions, may present a potential exploited, because the cultivated area, as well as quantity of volume exceed those of the reference period. Among other cultures, however, the situation is exactly reversed. The least valued potential we see at fruits and berries, which currently expose a

production of over 2.5 times lower than that in the reference data; this is reflected upon the significant productions untapped for the export and the amount is reaching over 520 thousand tons. This position is followed by vegetables, which showed significant reduction at the cultivated area (over 47,000 ha) and harvested production quantity (over 927 thousand tons), thus occupying the second place after the fruit and berries at export "lost" potential - over 122 thousand tons. Next are cereals, which although have more area than in the reference period (with over 137 thousand ha) due to reduced productivity, the production difference relative to the reference is negative, with values of over 97 thousand tons, which is directly reflected in the quantity of export, which decreased by 11 thousand tons. In loss was found to be potato crops, with productions of almost 60 thousand tons less than the reference and export losses slightly over 4000 tons.

Reference to animal products is noticed the large decrease at milk production, it reaches to over 950 thousand tons and, finally, to more than 30 thousand tons of untapped export. Also important are the decreases in production of meat and eggs, with 371 thousand tons, and respectively, with 424 million units. So meat is not exploiting over 6 thousand tons annually for the export, and taking into account the slightly but growing trend of export share in its production, the lack of export exploitation may be more significant, and in the case of eggs is equivalent to missed opportunities of more than 4 million units annually.

It is important to note that agri-food products have a large share in country's trade activity. During 2008-2012 the share of agri-food products in the total trade was about 40% [4]. During the same period, the share of agri-food imports was about 12%. The agri-food trade balance of Moldova is so far positive, 135541,4 mio US dollars in 2012 (table 2).

In Moldova's agri-food exports about 80% belongs to agricultural products (commodity group 01-15) and only 20% to food processing industry products.

Table 2. Evolution of Moldova's agri-food trade flows, 2008-2012

	2008	2009	2010	2011	2012
Agri food exports, mio US dollars	594996	604745.7	732211	917103.1	878881.1
Agri food imports, mio US dollars	631390.5	513583	591522.2	687784.6	743339.7
Agri-food trade balance, mio US dollars	-36394.5	91162.7	140688.8	229318.5	135541.4
Share of agri food exports in the total amount of exports, %	37.3	47.1	47.5	41.3	40.6
Share of agri food imports in the total amount of imports,%	12.8	15.6	15.3	13.2	14.2

Source: based on data from the National Bureau of Statistics

Main exported products are vegetal products, vegetable or animal fats and oils, foodstuffs. The exports of vegetable products mostly increased in the analyzed period, except from the sharp decrease in 2012 caused by the severe drought that affected the production and as result the exports. From this group of products a higher share belongs to edible fruits and oil seeds, exports of both increasing in the last years.

Being however a very complex aspect, agri-food export potential is manifested very different at the level of economic partners, the respective rankings bring new perspectives to track this potential. With the help of tops, we can thus determine the most competitive food products on the CIS and EU market, also to determine Moldova's global ranking for each of these products [9].

The respective agri-food exports ranking for the CIS orientation are represented below:

After developing a cumulative ranking on periods, we can clearly highlight that of the food products exported to the CIS in 2009-2012, the wine of fresh grapes is the product positioned as leader, reaching values higher than 112 thousands USD in 2012 ; simultaneously, this product decreases its global position (Republic of Moldova decreased its world rank from 16 to 20 places only in 4 years) in front of more competitive wines, as volume, price and positioning, such as

those of South Africa, Chile , Australia, etc.

Table 3. Ranking of items in the agri-food exports value to CIS, global positioning on top products of the Republic of Moldova, 2009-2012, thousand USD

Agri-food exports to CIS on top, years, value thousands USD					World rank for top 5, 2009/2010 2011/2012
Product/HS Code	**2009**	**2010**	**2011**	**2012**	
1.Wine of fresh grapes/ 2204 (S1)	107,659	115,460	104,854	112,642	16/17/19/20
2.Apples, pears and quinces, fresh/ 0808	44,687	50,252	57,032	40,048	21/23/22/25
3.Prepared or preserved vegetables/ 2005	20,952	16,479	18,804	14,464	x
4.Spirits, liqueurs, other spirit beverages/ 2208	20,924	31,499	34,804	49,863	45/44/42/39
5.Cane or beet sugar and chemically pure sucrose, in solid form / 1701	19,284	25,233	1,964	3,629	x
6.Safflower,sunflower/cotton-seed oil&fractions / 1512	19,094	10,670	2,340	1,625	x
7.Apricots, cherries, peaches, nectarines, plums & sloes, fresh/ 0809	13,560	22,676	23,440	28,898	25/25/25/21
8.Grapes, fresh or dried / 0806	12,993	12,730	16,535	13,018	x
9. Tobacco unmanufactured; tobacco refuse / 2401	9,872	13,783	14,187	10,503	x
10. Sunflower seeds, whether or not broken / 1206 (S2)	8,856	10,441	30,500	19,574	14/12/9/12

Note: S_1, S_2 show similar commodities for CIS and EU oriented exports that are analysed for top 5 rank
Source: based on ITC data

Of the group of fruits, apples, pears and fresh quince are the most competitive products on the CIS market, cumulating an export value of more than 40 thousands USD, and at global level they show a fluctuating trend, the state of 2012 year positioned Moldova on 25th place worldwide on the exports of these products. Position spirits, liqueurs and other spirituous beverages showed basically the best performance in the value dynamic of exports to CIS countries, thus becoming one of the most competitive products on this market. In 4 years, the value export of this item has increased more than 2.4 times, and on the global market Moldova climbed 6 positions in 2009-2012. Sugar suffered a very unstable dynamic, with value decreases over 5.3 times and vegetable oil on the CIS market has continuously decreased its export, with reductions of over 11.7 times in 2012 compared to 2009. Adverse effects were recorded on fresh apricots, cherries, peaches, nectarines, plums and sloes, fresh, which showed a very good potential on CIS market, the values of 2012 (28.8 million USD) are 2.1 times higher than those of 2009, positioning Moldova on the 21th place in the world on the export of this production in 2012 (with a growth trend). Grapes, like vegetable preparations showed sinusoidal developments, with points of decreasing towards 2010 and 2012. Tobacco position, although it showed a positive trend in 2009-2011 (from 9.8 to 14.1 thousands USD of export value), 2012 is the period when the trend seems to go towards decline on the CIS market; and Moldova's leader on the world market is the item sunflower seeds, ranking the country on the 9th place of all exporting countries as export value in 2011, period during which the country recorded the most important export to CIS countries - 30.5 thousands USD.

The same ranking taking into account the EU orientation is presented below:

Table 4. Ranking of items in the agri-food exports value to EU, global positioning on top products of the Republic of Moldova, 2009-2012, thousand USD

Agri-food exports to EU on top, years, value thousands USD					World rank for top 5, 2009/2010 2011/2012
Product/HS Code	**2009**	**2010**	**2011**	**2012**	
1. Nuts / 0802	35,145	46,239	55,937	70,047	21/20/20/18
2. Sunflower seeds, whether or not broken / 1206 (S2)	21,920	25,706	66,038	33,827	14/12/9/12
3.Safflower,sunflower/cotton-seed oil&fractions / 1512	20,226	29,518	65,174	77,762	22/23/23/18
4. Wine of fresh grapes / 2204 (S1)	19,407	18,333	20,676	20,852	16/17/19/20
5. Wheat and meslin / 1001	18,382	16,692	9,301	5,297	x
6. Fruit & vegetable juices, unfermented / 2009	13,985	14,274	28,835	29,012	51/47/42/43
7. Rape or colza seeds, whether or not broken / 1205	11,675	8,095	27,748	736	x
8. Cane or beet sugar and chemically pure sucrose, in solid form / 1701	10,486	5	7,346	25,691	x
9. Barley / 1003	10,169	13,399	14,418	1,473	x
10. Bread, biscuits, wafers, cakes and pastries / 1905	4,928	5,662	9,088	11,178	x

Note: S_1, S_2 show similar commodities for CIS and EU oriented exports that are analysed for top 5 rank
Source: based on ITC data

Orientation of flows towards the European Union generated specific developments of some product groups which do not have top positions in the country's exports to the CIS. This is the case of nuts, which have become a clear leader in the ranks of export value in the years 2009-2012 to the EU, doubling in this period its value from 35.1 thousands USD in 2009 to 70 thousands USD in 2012. These developments have led to the lifting of Moldova in the world rankings on the export of these products, positioning the country on the 18th place in 2012. Major export values also had sunflower seeds, which reached an important peak in 2011 - over 66 thousands USD of export value (defeating this item 1.7 times to the CIS oriented export in 2012) and vegetable oil has shown very good export dynamic to EU market, with the values above 3.8 times higher in 2012 (77.7 thousands USD) compared to 2009 (20.2) positioning the country, as in the case of nuts, on the 18th place worldwide in 2012. Wine of fresh grapes, leader in the range of agri-food products exported to the CIS, ranks an average position for the export to EU, with values of 5.4 times lower in 2012 compared to the values oriented for CIS, however with a positive trend, showing an export of 20.8 thousands USD in 2012. Although quite well positioned in 2009, wheat and meslin has significantly decreased their export by 2012, period during which they recorded an export of only 5.2 thousands USD, instead fruit and vegetables unfermented juices have made an important contribution to the increase of agri-food exports to the EU, having increasing values (in 2012 - more than double compared to 2009), and the contribution on the global market was an important one, raising Moldova with 8 positions in just 4 years (more than any other product specified here from the top of agri-food export to EU and CIS) and they are along with oil, ones of the most competitive domestic agri-food products, particularly that they felt such dynamics namely on the EU market - demanding in terms of promotion, quality and standards requirements, health aspects. Rapeseed and sugar showed very fragmented trends, with a maximum of 27.7 thousands USD (rapeseed in 2011) and a minimum of 5 thousand USD (sugar in 2010, period when sugar export value maximum to CIS had been recorded - over 25.2 thousands USD). However, more pronounced is the trend of barley, which had export with increasing values, from 2009 to 2011, from 10.1 to thousands USD, but that decreased more than 10 times in 2012, counting only 1.4 thousands USD; a category with a clear export potential is bread, biscuits, wafers, cakes and baked goods that during the reference period have showed consistently positive developments, from exports of 4.9 mln. USD in 2009 to over 11.1 thousands USD in 2012.

For the purposes of a synthesis enunciation that would involve the export potential and competitiveness ranking aspects at the level of worldwide exporters, it reveals the diminishing order below that ranks agri-food groups as follows:

1.*Sunflower seeds* - the position of the reference period- 14/12/9/12
2.*Wine of fresh grapes* - 16/17/19/20
3.*Nuts* - 21/20/20/18
4.*Vegetable oil*- 22/23/23/18
5.*Fresh apples, pears and quinces*- 21/23/22/25
6.*Fresh apricots, cherries, peaches, nectarines, plums and sloes*- 25/25/25/21
7.*Spirits, liqueurs, other spirituous beverages* - 45/44/42/39
8.*Fruit and vegetable unfermented juices*- 51/47/42/43

These tariff headings (8 in total), having positive dynamics in export value and ranking on relatively high positions in the world top, they proved to be quite efficient and competitive in the context of agri-food export, and some of them (such as nuts, for example, on the EU market and wine, spirits on the CIS market) demonstrated growing dynamics and market shares on the markets that became traditional for some agri-food groups to be exported.

For the appreciation of the country's comparative advantage (or a particular sector) Bela Balassa [1, p.99-123] elaborated the method that reveals the "Revealed

Comparative advantages" (RCA). This method is based on the assumption that the implicit comparative advantages find their reflection directly in the trade flows. According to Balassa, comparative advantages are manifested in relatively high shares of a particular product/sector in the structure of exports. In the same time the relative limitations are reflected through low shares of a product/sector.

The RCA index or Balassa index is an indicator that characterizes the ratio of a commodity *i* in the total amount of country's exports and the share of this commodity in the total amount of world's exports. This index is based on observed trade patterns. This index is defined as:

$$B = (X_{ij}/X_{it})/(X_{nj}/X_{nt}) \quad (1)$$

where:

X – export; *i* – a country; *j* – a commodity; *t* – a set of commodities; *n* - a set of countries.

If B>1, then a comparative advantage is revealed. The standard deviation of this index across products can be used as measure of the comparative importance of inter-industry specialization or intra-industry trade.

An alternative specialization of revealed comparative advantage was developed by Vollrath [10, p.265-280] and was called Relative Trade Advantage (RTA). The RTA index is calculated as the difference between relative export advantage (RXA) or Balassa index and relative import advantage (RMA):

$$RTA = RXA - RMA \quad (2)$$

Where, RXA $= B = (X_{ij}/X_{it})/(X_{nj}/X_{nt})$;

RMA = $(M_{ij}/M_{it})/(M_{nj}/M_{nt})$;

M – import.

The positive value of RTA indicates comparative trade advantages, while negative value indicates comparative trade disadvantages. When RTA is greater than zero, then a comparative advantage is revealed, which means that a sector of the country is relatively more competitive in terms of trade.

To evaluate the competitiveness of Moldavian agri-food products on EU markets was calculated the Revealed Trade Advantages index (RTA) as a measure for inter-industry trade.

Moldova has relative trade advantages on the EU market for 7 of 24 agricultural commodities and foodstuffs. The highest RTA index values in 2012 were registered for preparations of vegetables, fruit, nuts or other parts of plants (10.68), Edible fruit and nuts; peel of citrus fruit or melons (7.71), live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage (5.54). comparative trade disadvantages in 2012 were observed on the following commodity groups: live animals (-1.4), Fish and crustaceans, molluscs and other aquatic invertebrates (-2.13), Edible vegetables and certain roots and tubers (-1.53), cereals(-0.54), Preparations of cereals, flour, starch or milk; pastrycooks' products (-1.14), Tobacco and manufactured tobacco substitutes (-2.09). Overview is reflected in table 5 below.

Table 5. Moldova's Relative Trade Advantages with EU, by agri-food products

RTA > 1	RTA < 1	RTA switching values
06.Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage 08.Edible fruit and nuts; peel of citrus fruit or melons 15.Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes 20.Preparations of vegetables, fruit, nuts or other parts of plants 22.Beverages, spirits and vinegar	02.Meat and edible meat offal 07.Edible vegetables and certain roots and tubers 10.Cereals 17.Sugars and sugar confectionery 19.Preparations of cereals, flour, starch or milk; pastrycooks' products 21.Miscellaneous edible preparations	04.Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included 11.Products of the milling industry; malt; starches; inulin; wheat gluten 12.Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder 24.Tobacco and manufactured tobacco substitutes

Source: own calculations based on data from the National Bureau of Statistics

Beside the commodity groups with revealed trade advantages and comparative trade disadvantage, we can observe that a number of products during the analyzed period have

switching values for RTA index. The commodity group HS 05 (Products of animal origin, not elsewhere specified or included) and HS 12 (Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder) increased their relative trade advantages on the EU market. Therefore, the RTA index for these commodity products had increased during 2001-2012 from -0.68 to 4.11 for HS 05, and from -1.15 to 2.05 for HS 12. An opposite tendency was observed for the commodity group HS 24 (Tobacco and manufactured tobacco substitutes) whose values decreased from 0.19 to -2.09.

For assessing the intra industry trade there were developed some indicators, from which the most used is the Grubel-Lloyd index (GL) [2]. According to it, intra industry trade is determined as the trade between countries, where the costs of exports of particular sector is corresponding to the costs of imports of same sector. The GL index determines the share of intra industry trade in the total amount of exports of a particular sector. For computing this index is needed to sum particular trade flows. The index is changing in values from 0 to 100.

$$GL_i = \frac{[(X_i + M_i) - |X_i - M_i|]}{X_i + M_i} \times 100\%, \quad (3)$$

Where, GLi – index of intra industry trade;

X_i - value of export in industry i;

M_i - value of import in industry i;

$X_i + M_i$ - total value of trade;

$|X_i - M_i|$ - trade balance of industry i.

The closer the GL value is to 100, the more important is intra industrial trade, and the closer is GL value to 0 the more important is inter-industry trade. In order to establish an average level of intra-industry trade, Grubel and Lloyd proposed the weighted index to arrive at an overall measure of intra industry trade.

The traditional measure of intra industry trade is used and the Grubel Lloyd index is calculated as:

$$GL_i = 1 - \frac{|X_i - M_i|}{(X_i + M_i)} \quad (4)$$

Where, *Xi* is the export in a certain line of goods and *Mi* is the import in the same commodity group.

The value of *GLi* index can vary between 0 and 1. The higher the value of this index, then the higher is the level of intra industrial trade.

The analysis of Moldova's intra-industry trade with agri-food products is based on the Grubel-Lloyd index (GL). The intra-industry trade index for Moldova was calculated by commodity groups, as well as by trading partners (CIS countries, EU countries), and by agricultural and foodstuffs.

Concerning the agri-food trade during 2001-2012 by main trading partners the high level of intra-industry trade is common for both EU and CIS countries. If for CIS countries the index was increasing during this period, for EU countries the level of intra-industry trade basically did not changed (table 6).

Table 6. GL index results for Moldovan agri-food products, by country groups

Country groups	2008	2009	2010	2011	2012
CIS countries	0.99	0.96	0.93	0.95	0.96
EU countries	0.99	0.97	0.97	0.94	0.97
Total	0.99	0.98	0.97	0.96	0.98

Source: own calculations based on data from the National Bureau of Statistics

A high level of intra-industry trade might be based on factors as: geographical closeness, shared border, same level of development, similar preferences, language, institutional conditions and transport routes [3]. Such situation is specific for the increasing values of GL index in CIS countries, particularly for nearest neighbours as Ukraine.

At the same time, a diagnosis of export flows to the most important destinations of national agri-food products must be combined with the growth criteria, which will reveal the future development potential and present arguments in favor of certain policies of geographical orientation identification [5]. The overall picture (reflected in table 7) alleges a quite important positive trend, with an average growth of Moldova's agri-food export of + 10.1% during the reference period (2008-2012).

CIS oriented flows and reported to total agri-food export showed steadily declining weights, which show a gradual loss of this market that recorded an average negative growth (-4.5%) and it can be categorized as a destination "**losing <5%**".

Russia's share amounted in most years (except in 2008) more than half of exports to CIS and shows a dynamic "**growing <5%**" (+3.9%) which reveals a potential, but a fairly reserved one.

A second important partner of the CIS- *Ukraine*, shows a general trend as export destination in decline "**losing >5%**" (-12.1%), which also contributed to the negative dynamics of CIS.

The other key partner for Moldova - *European Union* has, unlike CIS, an average overall increase of national agri-food export of +5.1%, which allows us to classified it as "**growing>5%**" potential, especially that all agri-food categories have been on a positive dynamic.

Table 7. Geographical dynamics of agri-food exports on the most important markets, 2008-2012

Destinations	Average growth (2008-2012), %	Potential characteristic
CIS total	**-4,5**	**losing < 5%**
Russia, total	+3,9	growing < 5%
Ukraine, total	-12,1	losing > 5%
EU total	**+5,1**	**growing > 5%**
Romania, total	-4,1	losing < 5%
Other countries	**+3,5**	**growing < 5%**

Source: own calculation based on ITC data

Abstracting *Romania*'s situation as a very important partner for Moldova (this country deals the 3rd - the 4th part of the whole agri-food export to the EU), we estimate a negative dynamic context, bringing arguments for cataloging Romania as presenting a "**losing <5%**" potential issue (-4.1%).

Geographic group "*Other countries*" sums up fragmented shares of national total agri-food export and the overall increase average in the reference period is +3.5%, close to the dynamic of Russia (+3.9%), which reserves a potential, although a moderate one - "**growing <5%**".

Meanwhile, agri-food export competitiveness can be relevantly quantified by Herfindahl export concentration index (resultative and for diversification) as shown in table 8, which presents the market orientation share analysis and thus reveals the performance and flexibility of exports [8].

Table 8. Geographical dynamics of agri-food exports on the most important markets, 2008-2012

Product	Importers, top 3, 2012	Share of destination country in exports of product, %	Export concentration index (Herfindahl)
Wine of fresh grapes	1.Russia	28.5	**0.17**
	2.Belarus	25.6	
	3.Kazakhstan	10.4	
Spirits, liqueurs, other spirituous beverages	1.Russia	31.5	**0.22**
	2.Ukraine	25.9	
	3.USA	16.2	
Nuts	1.France	26.2	**0.11**
	2.Irak	14.2	
	3.Greece	8	
Apples, pears and quinces	1.Russia	93.5	**0.88**
	2.Belarus	3.5	
	3.Kazakhstan	2.2	
Apricots, cherries, peaches, nectarines, plums and sloes	1.Russia	93.9	**0.89**
	2.Belarus	5.8	
	3.Macedonia	0.1	
Grapes	1.Russia	75.5	**0.60**
	2.Belarus	14.1	
	3.Romania	9.5	
Sunflower seeds	1.Ukraine	22.5	**0.14**
	2.Nee Zealand	20.6	
	3.Great Britain	16.8	
Sunflower oil	1.Italy	60.1	**0.40**
	2.Romania	16.1	
	3.Spain	9.6	
Fruit and vegetable juices, unfermented	1.Poland	38.1	**0.25**
	2.Austria	25.9	
	3.Germany	17.7	
Vegetables prepared or preserved otherwise than by vinegar	1.Russia	70.3	**0.53**
	2.Belarus	15.5	
	3.Kazakhstan	9.8	
Cereals	1.Nee Zealand	26.3	**0.14**
	2.Turkey	13.1	
	3.Belarus	12.6	
Sugar	1.Romania	51.9	**0.35**
	2.Poland	20.2	
	3.Bulgaria	15.5	
Meat and edible offal	1.Russia	99.5	**0.99**
	2.Kazakhstan	0.3	
	3.Belarus	0.2	
Vegetables	1.Russia	90.2	**0.82**
	2.Belarus	5.1	
	3.Romania	2.5	
Dairy, eggs, honey	1.Russia	33.8	**0.24**
	2.Kazakhstan	32.6	
	3.Germany	11.3	

Note: USA Federal Trade Commission considerations for Herfindahl index level of concentration limits
CIS –CIS countries, EU –EU countries, Other states – other countries

Source: own calculations based on ITC data

Assessment in the table 8 reveals some quite interesting trends. First of all it is about the structure of top markets share for national agri-food products. Analysis of the major products export reveals an important domination of CIS countries (marked in red), especially in the export of wines, spirits, apples, pears and quinces, grapes and other fruits with high share in agri-food export.

An example of performance would be, in this respect nuts, which on the one hand, has an important place in export, they managed selling of production to the EU (France, Greece - as top destinations) and also other countries (Iraq) and on the other hand, they showed a very good performance to export concentration index, reflecting its lowest value of all products analyzed - 0.11.

From the respective description we can deduce two summaries:

• Within *CIS*, the most important partners for Moldova proved to be Russia, Belarus, Kazakhstan and Ukraine, which are absolute leaders in 4 of 15 top agri-food categories (wine, apples, pears and quinces, prepared or preserved vegetables and meat), that rank absolute positions in about 23.5% of said items. *EU* countries are leaders in their turn at 3 positions out of 15 - sunflower oil , fruit and vegetable juices and sugar. Union partners showed a greater geographical diversification for top countries, such as Romania, Great Britain, Poland and Germany, but also Italy, Portugal, France, Austria, Bulgaria, Spain and Greece. From the group "Other countries" important partners for our products were New Zealand, USA, Iraq, Turkey and relatively Macedonia.

• Out of total 15 positions of significant agri-food products, only 4 recorded a moderate concentration (and diversification) - wine, nuts, sunflower seeds and cereals, rest of the products showed high or very high concentrations, such as meat, fruit and vegetables.

CONCLUSIONS

The study showed that the recovery of lost potential, relative to the major values during 1970-1990, will be an important challenge in situation of capacity loss for most agri-food products (except only sunflower), thereby affecting the production export.

In Moldova's agri-food exports about 80% belongs to agricultural products (commodity group 01-15) and only 20% to food processing industry products.

Main exported products are vegetal products, vegetable or animal fats and oils, foodstuffs.

Geographically, the reorientation of Moldovan exports defined itself since 2006, when the EU share in total exports of Moldova exceeded for the first time the CIS share, and in terms of tariff classification in the period 2006-2012 the top positions of agri-food export were held by beverages, fruits, vegetables, animal and vegetable fats.

According to the obtained results for RTA index we can notice some advantage in certain agri-food products with EU countries. These are: edible fruits and nuts; animal or vegetable fats and oils; preparations of vegetables, fruit, nuts; beverages. Nowadays, the comparative advantages of Moldova are not fully used. This is explained by decreasing or switching values of RTA index for some commodities groups.

Market perspective analysis revealed the CIS losing potential, with a slight increase for Russia and a large increase (more than 5% of average growth in 2008-2012) of the EU. As products, concentration on tops, but also within groups, it is characteristic for national agri-food export.

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