Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development
Vol. 16, Issue 2, 2016
PRINT ISSN 2284-7995, E-ISSN 2285-3952

MOLDOVAN AGRI-FOOD EXPORT POTENTIAL ASSESSMENT IN THE CONTEXT OF COMPETITIVE PERFORMANCE

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Abstract

The paper aimed to present the assessment of the agrifood export potential of the Republic of Moldova. The data involved came from Moldavian balance sheet, as well as international trade data like Comtrade, UNCTAD Statistics. During the analyzed period the national agrifood export potential suffered crucial downturns in terms of performance and volume (value) diminutions. The most affected were the High Value Added products, such as fruit, milk, meat. This transposed in major revenue losses from performing export.Internally, reserves confirming Moldova's agrifood export potential are still untapped and export performance still low compared to Moldova's competitors in the regional agrifood markets.

Key words**:** *agrifood production, competitive performance, export potential*

INTRODUCTION

Positioned between two major water arteries - the rivers Prut and Dniester, Moldova has exceptional resources inclined towards agri-food production. Temperate - continental climate allows the growth of early crops and relatively skilled labor and cheap land emphasize the competitive advantage that can capitalize on foreign markets.

At the same time, farmers have important practices in the cultivation of a wide enough variety of crops.

National competitiveness can be ensured by involving the export of high value added products which provide increased profits and respectively allow increasing wages.

Also, emphasis should be placed not only on price but on quality parameters too, which would allow exported products to maintain retail market even under a strong national currency. Currency appreciation leads to higher prices of exports relative to imports.

In these circumstances, the income received from exports can increase the volume of imports, including modern technologies, and thus having a positive effect on the trade balance, even with reduced exports.

MATERIALS AND METHODS

In order to characterize the agri-food export potential of Moldova, the following indicators were used: export volume, import volume, related domestic market, inclination to export, inclination to import, the degree of trade openness.

There were used data from international organizations, national statistics and analysis reports.

The methodology used allowed the analysis, synthesis and comparison of various indicators related to agri-food export potential.

RESULTS AND DISCUSSIONS

It is considered that the export potential of agriculture could be assessed on the basis of natural resources and the ability to supply products concerned [3].

The author's vision on assessing export potential includes a proposal of the complex methodology, that elucidates both export potential based on internal resource (production, self-sufficiency), as well as the external resource (foreign markets). This view is illustrated in Figure 1.

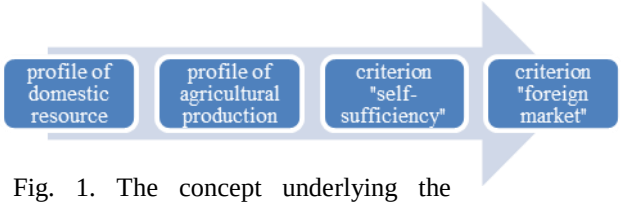

Fig. 1. The concept underlying the methodology for determining the export potential of the agri-food sector
Source: Own determination.

In the national agri-food sector that is performing poorly, involved resources correspond to the context. The large share of people employed in agriculture, large areas of eroded land, as well as outdated agricultural machinery intake resource poor quality. Furthermore, Coser and Litvin [3] argue that the background of the region and Moldova's similar to that territory and potential there is a poor condition of human resources and national land.
Relationally, it will complete the definition of agri-food export potential by determining methodological convergence of potential export competitiveness.
On the one hand, the openness of trade [7] relies on competitive positioning in the market and from another point of view, derived from (and has relationships with) internal food market. Used in the European Union, this technique can be developed, as in Table 1.
It is obvious that Romania's agri-food sector has a degree of commercial opening much higher than in Moldova, which is at least two times higher.
Internally, reserves confirming Moldova's agri-food export potential are untapped, given that Romania has a propensity to export 2-3 times higher, and the self-sufficiency of them is smaller than in the case of Moldova.
In the continuation of internal resources, we apply the concept of "propensity to export" (PE) to determine the revealed particular crop export potential.
The relevant method in this regard is related to applying propensity to export on the balance of food resources [7].
From these calculations can be deduced the highest values of PE and products with export potential (Table 2).

Table 1. Indicators on trade potential and openness, agri-food sector of Moldova

Indicator	2009	2010	2011	2012	2013
Total agri-food production, million MDL	22.556	31.610	36.818	35.509	40.036
Agri-food import, mln MDL	6.317	7.186	8.053	8.964	10.228
Agri-food export, mln MDL	7.438	8.896	10.739	10.599	13.252
Agri-food domestic market (ADM),million MDL	21.435	29.901	34.133	33.874	37.012
Self-sufficiency rate, %	105.23	105.71	107.86	104.82	108.17
Propensity to import	0.294	0.240	0.235	0.264	0.276
Propensity to export	0.347	0.297	0.314	0.312	0.358
Degree of trade openness, Moldova	0.64	0.53	0.55	0.57	0.63
Degree of trade openness, Romania	1.65	2.07	1.62	2.48	2.47

Source: Own calculation based on [2,5,8]

Table 2. Export potential on quantitative approach, based on the balance of resources, 2013

Product	ADM, thous tons	PE	Position on export potential
Wheat	771.4	0.423	**5**
Corn	1288.4	0.103	**9**
Barley	115.0	1.089	**3**
Sunflower	229.7	1.197	**2**
Potato	272.0	0.003	**14**
Field and covered terrain vegetables	295.1	0.146	**7**
Tomato	65.1	0.190	**6**
Watermelons	54.6	0.014	**12**
Fruits, berries, nuts	110.1	3.363	**1**
Grapes	591.7	0.064	**10**
Table grapes	53.2	0.703	**4**
Meat, including offal	164.3	0.008	**13**
Mutton and goat meat	6.4	0.140	**8**
Dairy, including butter	606.5	0.027	**11**

Source: Own calculation based on [2,5,8]

For a number of crops, export potential indicators can't be calculated, since these items are missing.
The largest export potential of the products analyzed was found to be present in fruits, berries and nuts (3363), which have ranked first. PE for these crops is about 9.3 times bigger than sector PE (Table 2).

These crops are followed by sunflower (1197), barley (1089), table grapes (0.703), wheat (0.423).

In terms of value aspect, determining export potential may involve also the internal resource.

This refers rather to an untapped theoretical export potential (UTEP). We introduce this variable to quantify the lost export of agrifood value, with reference to yields recorded decades ago, during the years 1971-1995, depending on the maximum amounts that were collected within that period.

Methodologically we see UTEP as an indicator that can be derived from the relationship:

$PETN = [(Pa - P_{a-1}) * P_{exp}] * PC$

where:

Pa - crop production, current year

P_{a-1} - crop production, the reference period

P_{exp} - the share of exports in output this year

Pc - the export price of item.

UTEP expresses the lost revenues from agro-food exports that could be exploited, based on historical yields.

In this sense, whether $Pa - P_{a-1} \geq 0$ then UTEP existence is not justified and vice versa if $Pa - Pa\text{-}1 \leq 0$.

Using national statistics and data deriving from international statistics one can calculate UTEP for crop plant and animal products.

It has resulted that corn, grain crops and sunflower had attested the relationship:

$Pa - P_{a-1} \geq 0$ (Table 3).

In value terms and relative to historical harvest, the export potential untapped revenue expressed above shows that tobacco products are the largest losers (-290,6 million USD), fruit and berries (-258,4 million USD), milk (-97,9 million USD), vegetables (-42,8 million USD) and barley (-23 million USD), i.e., the vast majority of intensive crops, which inhibits the development of potential and competitiveness.

On external resource the modernist method of the potential in export refers to the recommendations of International Trade Centre (ITC) (UNCTAD STAT, 2015.) underpinning its assessment by comparing the current trade between the partners, the demand for import and export capacity.

Table 3.Untapped theoretical export potential (UTEP) on vegetable crops and animal products, 2013

Product	Revenue from export potential, untapped, thousand USD	Rank on lost revenues from export
Wheat	-3,663.17	**9**
Barley	-23,059.07	**5**
Corn for bean	X	**X**
Sunflower	X	**X**
Tobacco	-290,657.81	**1**
Potato	-216.41	**10**
Vegetables	-42,850.21	**4**
Watermelons	-2.53	**11**
Fruits and berries	-258,424.80	**2**
Grapes	-17,220.78	**7**
Milk	-97,957.31	**3**
Eggs, million pieces	-4,751.89	**8**
Meat	-18,109.74	**6**

Source: Own calculation based on [2,5,8]

In the author's view, this methodology is useful in assessing potential products.

Regarding his own vision, an assessment of the export potential should meet the following components that form, in our opinion, Method of External Resources (MER), consisting of 2 approaches:

I) approach on untapped export potential:

• analyzes the dynamics of global imports by product (top 10 countries), but with an increase of not less than 20% - it here identifies potential markets to boost national exports;

• the average import tariff analysis, market data.

II)partially redeemed export potential approach:

• states important share partners of Moldova (top 10) in the global demand for this product and import dynamics - analysis of the existing partners.

Subsequently, an analysis of share highlights destinations with the greatest potential to attract agrifood exports.

However, initially it is necessary to identify the product in the magnitude and dynamics of export and trade balance.

Once identified, these products will be analyzed by MER.

Table 4 summarizes and reveals both approaches to external resources method.

For most products, there are potential markets– these are concentrated particularly in the Middle East and Central Asia countries. Subsequently, those markets are to be analyzed from the perspective of domestic consumption etc.

Table 4. Representation of MER results on markets with export potential agri-food, 2014

Product, HS code	**Top destinations, unused**	**Top current destinations that have a perspective**
2204 Wine	Georgia, Iran, Oman	China, Poland, Kazakhstan
0802 Nuts	Nicaragua, Cuba, Cambodia	Germany, Italy, Spain
1206 Sunflower	Myanmar, Oman, Tajikistan	Turkey, Ukraine, Pakistan
1005 Corn	Nigeria, Finland, Congo	Great Britain, Italy, Turkey
1512 Sunflower oil	Myanmar, Mozambique, Rwanda	Italy, Egypt, Spain
2208 Spirits, liqueurs	Libya, Mozambique, Iran	USA, Kazakhstan, Germany
2009 Fruit and vegetables juice		
0808 Apples, pears, quinces	Japan, Myanmar, Belarus	Belarus, Romania, Egypt
0809 Apricots, cherries, peaches, nectarines, plums	Kyrgyzstan, Kazakhstan, Nepal	Belarus, Romania, Kazakhstan
0806 Grapes	Libya, Myanmar, Yemen	Belarus, Romania, Iraq
0409 Natural honey	Bulgaria, Libya, Kyrgyzstan	France, Romania, Italy
0201 Beef	Kazakhstan, Venezuela, Belarus	Belarus

Source: Own calculation.

At the enterprise level, those responsible for foreign economic activity may have a number of very useful tools in assessing the export potential for their products and destinations to be approached.

International Trade Centre (Geneva) proposes the structured information, which can stand at the basis of export decisions (product and market).

However, we consider appropriate to perform an algorithm of clear stages that would help economic entities to:

• assess the potential export on product and markets;

• identify external partners at the country level and the enterprise;

• understand the import markets.

Overall, Moldova must determine the development paradigm, at least in two aspects:

• the model of economic growth - currently it is underperforming, based on consumption boosted by remittances, but should be driven by exports, investment and innovation;

•how to position the country on the international market - here we have only two options: either try to be competitive against the "giants" that drive the factor of labor cheap, i.e. China, India and countries in South-Eastern Asia, having fundamentally clear strategy on export development, involving other structural elements - infrastructure, export performance, investment in quality etc.

Since the first option is not sustainable, but also practically impossible to implement with such economies of scale, Moldova has to formulate and achieve clear action points to become competitive and progressive.

Lack of sustainability on first model derives from the convergence of national exports on world food commodity prices, which most likely will be increasing.

But this does not ensure a dynamic perspective, since exports should focus on broadening the range of products and prospecting new markets and products of quality.

Methodologically this analysis involves assessing commercial performance by using Commercial Performance Index - CPI [6]. It is calculated this way:

CPI = (growth rate of agrifood exports) / (growth rate of agrifood imports)

An index higher than 1 shows a relative commercial expansion, while an index below 1 - a relative contraction.

That period, we evaluated the years 2005-2006 and 2013-2014, and as a reference, calculations were made for states in the region. The analysis results are shown in Table 5.

At regional level, in the period of 2005-2006, Moldova has a quite favorable position for CPI of food sector, second after only Georgia.

This explains, to some extent, the sector's

weight in the national economy and a constant positive trade balance of agricultural products. Serbia (1.17), Romania (1.05) and Poland (1.01) proved to be the most efficient.
In the recent period, there are already indexes above unit in Moldova, Ukraine and Russia. The biggest losers were Belarus (0.83) and Bulgaria (0.90).
Osadcii [7], Albul [1] argues the dynamic issues by using a series of indicators in relation to GDP, price etc. that reveals business performance. Authors believes that the most relevant indices take into account opening should be dynamic economy and foreign trade elasticity coefficient of Moldova.

Table 5. Agri-food trade performance of Moldova and regional countries, 2005-2006, 2013-2014

	CPI, agri-food sector	
	2005-2006	2013-2014
Moldova	0.70	1.14
Regional states:		
Romania	1.05	1.009
Ukraine	0.93	1.32
Russia	0.99	1.25
Belarus	0.94	0.83
Poland	1.01	1.02
Hungary	0.99	0.93
Serbia	1.17	1.07
Bulgaria	0.82	0.90
Georgia	0.55	1.04
Turkey	0.96	0.95

Source: Own calculation based on [2,5,8]

Trade opening dynamics (TOD) derived from the relationship:

$$TOD = (X + IM) / Y$$

where:
X – exports, mln MDL
IM - imports, mln MDL
Y - Gross Domestic Product (GDP), mln MDL.
This index can be calculated as the share of foreign trade in GDP and as a share of exports and imports in GDP (Table 6).
It believes that the openness of the economy has an impact on national economic system when it reaches at least 25% of GDP.
In Moldova's case, this indicator is far exceeded, indicating, however, the national economy and vulnerability to global developments and regional.
In Romania, for example, foreign trade index was 82% in 2014, while in Ukraine has never descended below 100% in 2010-2012, 2014.

Table 6. Dynamics of trade openness in Moldovan and in regional countries, 2010-2014 (% to GDP)

	2010	2011	2012	2013	2014
Foreign trade, Moldova	92.83	105.58	101.24	99.22	93.62
Exports, Moldova	26.51	31.59	29.67	30,41	28.60
Imports, Moldova	66.32	73.99	71.56	68.80	65.01
Foreign trade,Romania	77.0	85.0	85.0	85.0	82.0
Foreign trade, Ukraine	104.0	106.0	104.0	95.0	102.0

Source: Own calculation based on [2,5,8]

Generally, a deeper analysis of agrifood export performance implies, in our opinion, consequential indices of export growth, the general market positioning, increasing global imports or exports competitiveness.
National data indicate that export growth from 2009 to 2013 by 87% was generated by external factors such as world trade growth and less export performance, such as competitiveness and specialization in certain products or in certain markets. Such clarifications are extremely valuable to argue sectoral policies.
At product level, the actions of Moldovan exporters have reflected poor performance and export growth was driven by the growth of traditional products in traditional markets, while increasing the market share of new products on the same traditional markets generated only 7% of export growth.
The most important element here is that the assimilation of national exports are very strongly linked to traditional markets and traditional products.
New products in new markets are not basically a generator of growth in Moldova and prospecting new markets with traditional products reflected only 0.7% of growth.
Based on these data we note that Romania, in most product groups is more powerful than Moldova.
This is seen especially in the number of

products exported per each group - a significant disparity we see in oil, grain, oil, meat and edible offal, vegetables, dairy.
Moreover, Moldova is losing the very limited diversification of beverages, cereals, oil crops, oil, sugar, meat, dairy and eggs.
As for the retail market, the smallest diversification is encountered in meat, vegetables, tobacco and oil.

CONCLUSIONS

Low trade performance is characteristic for Moldova compared to regional countries.
A series of other indicators like trade openness show relative improvement in Moldovan agri-food exports taking into account the positive trade balance with agri-food products. However, high-value added products amount a large trade potential loss, in terms of quantity and value.

ACKNOWLEDGEMENTS

This article was written within the project "Sustainable development of the horticultural sector in the context of economic security of the Republic of Moldova" under the state program "Economic security in the context of regional and European integration of the Republic of Moldova".

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