MARKET GAP ANALYSIS: UNTAPPED POTENTIAL FOR EXPORT-ORIENTED AGRICULTURAL PRODUCTS IN AZERBAIJAN

Saadat HAJIYEVA,
Head of Department,
Agrarian Economic Research Center under the Ministry of Agriculture,
Azerbaijan, Baku
https://orcid.org/0000-0002-7843-2423, haciyevaseadet@gmail.com,
Phone: (+99451) 576 83 28
DOI: https://doi.org/10.36004/nier.cecg.IV.2022.16.30

Summary

The purpose of the article is to examine the market gaps in order to determine the untapped export potential of agricultural products, where Azerbaijan has a comparative advantage. First of all, the import-export balance of agricultural products of Azerbaijan was analyzed and the main export products were determined. The export geography of the main export products and the volume of demand for those products in the world market were analyzed. Taking into account the production potential of Azerbaijan and the ratio of demand and supply, the possibilities of increasing exports have been evaluated. Descriptive methods, comparative analysis and predictive methods were used during the gap analysis conducted in order to study the untapped export potential of agricultural products. In total, 28 types of agricultural products were examined, and the export potential of 15 products was evaluated.

Keywords: *market gap analysis, agricultural products, agrarian market, supply-demand ratio, untapped export potential.*

JEL: *D47, J43, L11, Q13, Q17, O13.*

UDC: *338.439.5 (479.24)*

Introduction

GAP analysis is one method used to compare current performance with potential performance. GAP analysis studies the gap between the situation that could be in the optimal allocation and use of resources and the current situation. This helps to identify areas where development is possible (Chobanov, 2013).

During the literature review, it is known that gap analysis has been applied in many different fields. Depending on the field of application, there are different approaches to gap analysis in the existing literature. The main differences here are related to the types of gaps depending on the purpose of the research. Depending on the main objectives of each field, many different types of gaps have been identified: market gap, product gap, usage gap, performance gap, knowledge or information gap, technology gap, etc. However, gaps, regardless of their type, are indicators of obstacle to achieve a goal or potential (Kim & Ji, 2018).

Market gaps are expressed as differences between target market share (potential consumer needs) and current market share (existing consumer base).

Market gaps represent opportunities to expand market penetration (Kim & Ji, 2018). In other words, market gap analysis is a method of studying sales opportunities where demand exceeds supply (Weller, 2018). The term "gap" refers to the gap between "where we are" (current state) and "where we want to be" (target state). GAP analysis can also be called need analysis, needs assessment or need-gap analysis (QuestionPro, 2022). Gap analysis is widely used by most companies as a strategic management tool (Lamich, 2018). However, different types of gap analysis are used by international organizations and individual countries for more in-depth research.

Gap analysis basically consists of 4 steps: i) defining the area, ii) assessing the current situation, iii) defining the target or potential and iv) identifying the differences between the current situation and the target/potential situation. Based on the results of the analysis, an action plan is prepared, and the identified gaps are eliminated over time. It also allows for evaluation of performance on the way to the goal. Gap analysis at country level can be used in strategy development and monitoring process.

Materials and methods

The material of the study is based on official statistical data on production, productivity, import-export indicators of Azerbaijan's agricultural products, foreign trade indicators of partner countries on relevant products, and international trade data on the volume of demand in the world market. Also, the data of Agrarian Economic Research Center of Azerbaijan field studies were used in the calculation of potential productivity indicators (Agriculture, forestry and fishing, 2022) (The foreign trade of Azerbaijan, 2022) (Trademap, 2022) (Farm data monitorıng system, 2022).

Descriptive methods, comparative analysis and predictive methods were used during gap analysis of agricultural products.

In the article, gap analysis was used to determine "untapped potential". First, the main exported and imported products were determined based on the export and import balance of the main agricultural products of Azerbaijan. Then, the volume of supply and demand for products with export potential, the demand-payment ratio of local production, as well as the volume of demand in partner countries and the global market were determined. The "untapped potential" of exports for the main products with high comparative advantages of Azerbaijan was calculated. In the article, the potential was calculated only for the products where the supply exceeds the domestic demand due to local production. At this time, the focus of additional production was on export.

The orientation of additional production to export is taken as a basis. The export potential was not calculated in the article, taking into account that the additional production of other products for which a certain part of the domestic market demand is covered by imports may be directed to the domestic market, not to export, and also cotton, olives and some other products with high export potential may be directed to the raw materials of the domestic processing industry.

Result and discussion

The trade balance was calculated taking into account the average import and export volume of the main agricultural products of Azerbaijan over the last 3 years.

Processing products for cotton, hazelnuts, grapes, sugar beet, corn, olives, soybeans and sunflower products are given by conversion to raw material equivalent. The volume of import of the considered products was 803 million USD, and the volume of export was 778 million USD (Chart 1). As can be seen from the data of Chart 1, the main imported products of Azerbaijan are wheat, sugar raw materials, soy raw materials, sunflower raw materials, corn raw materials, rice, oranges, lemons and walnuts. According to the average of the last 3 years, the difference between export and import for these products is -323 million USD, -100 million USD, -58 million USD, -54 million USD, -40 million USD, -37 million USD, -15 million USD, respectively, -12 million USD and -12 million USD. The export-import balance of pulses and barley, which have better local production possibilities than the above-mentioned products, was negative compared to the last 3 years. Also, the import volume of potato, olive, almond, mandarin and apricot products, which have high comparative advantages, was higher than export.

The main export products of Azerbaijan are tomatoes, cotton, hazelnuts, dates, cherries, apples, pomegranates, peaches, grapes, plums, melon products and onions. The difference between exports and imports according to the average of the last 3 years for the respective products is +180 million USD, +160 million USD, +115 million USD, +107 million USD, +40 million USD, +36 million USD, +32 million USD, +14 million USD, +7 million USD, +3 million USD, +2 million USD and +2 million USD.

The difference between the total export and import of the main import and export products was -25 million USD.

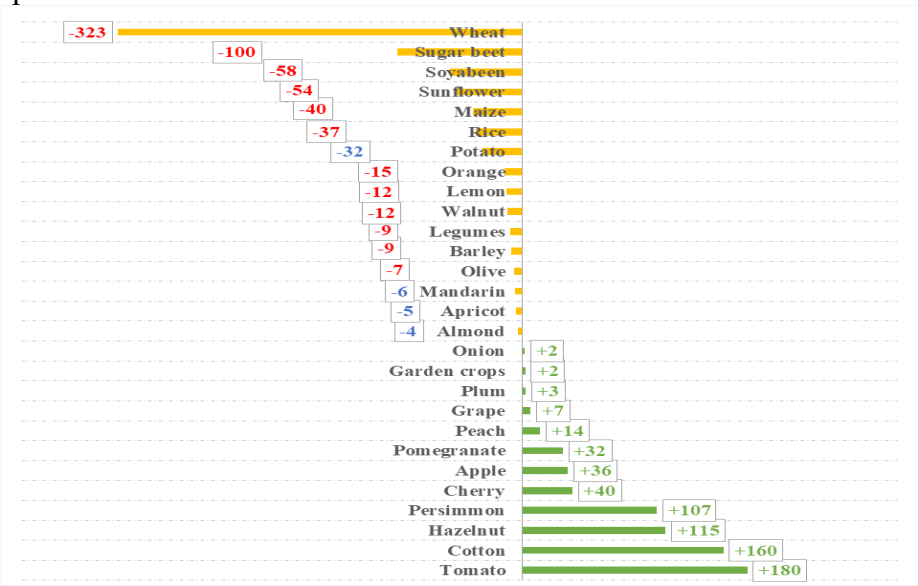

Chart 1. According to the average indicator of 2019-2021, the balance of export and import of the main agricultural products of Azerbaijan, million USD

Source: It was calculated by the author based on the data of the State Customs Committee of the Republic of Azerbaijan

The volume of local production, demand and supply in the domestic market for products with a positive balance of Azerbaijan's main export and import, as well as potatoes, almonds, apricots and mandarin products with high prospective production potential, is given in table 1.

Table 1. Volume of domestic demand and supply for products with export potential of Azerbaijan

	Local production, thousand tons	Domestic market demand, thousand tons	Demand, thousand tons	Supply/ domestic demand due to local production	Supply on account of imports / domestic demand
Tomato	760.0	607	777	125%	3%
Hazelnut	57.0	20	60	292%	17%
Persimmon	185.0	36	185	510%	0%
Cherry	54.4	29	55	185%	2%
Apple	300.8	222	302	135%	0.5%
Pomegranate	182.8	149	183	123%	0.4%
Peach	30.6	19	32	162%	8%
Grape	206.6	206	222	101%	7%
Plum	37.8	33	38	113%	1%
Garden crops	451.9	446	453	101%	0.2%
Onion	276.2	267	286	103%	4%
Almond	1.8	3	3	61%	41%
Apricot	29.2	33	35	87%	16%
Mandarin	41.4	50	50	84%	18%
Potato	1,034.6	1,160	1,239	89%	18%

Source: Calculated by the author based on the data of the State Statistics Committee and the State Customs Committee of the Republic of Azerbaijan.
Note: Products with export potential in Azerbaijan do not include the products in Table 1. Only the main products reviewed by the author are listed in the article.

The ratio of supply (production+import) to domestic demand (production+import-export) for these products is greater than 100%. Supply exceeding demand means export opportunities.

Except for potatoes, almonds, apricots and tangerines, as can be seen from Table 1, the production of other products is higher than the domestic market demand. Products with the highest ratio of supply to domestic demand due to local production are dates (510%), hazelnuts (292%), cherries (185%), peaches (162%), apples (135%), tomatoes (125%) and pomegranates (123 %). In the last 3 years, the supply of grapes, plums, garden crops and onions with local production was higher than 100%. 89%, 61%, 87% and 84% of the demand for potatoes, almonds, apricots and mandarins are covered by local production, respectively. The share of import of these products in the domestic market was 18% for potatoes, 41% for almonds, and 16% for apricots, according to the average of the last 3 years.

The volume of demand from Azerbaijan in the main importing countries (import of these countries) and the volume of global demand in the world market (global import) were calculated for the products with high export potential of Azerbaijan.

A comparative analysis of the import-export of Azerbaijan in 5 main importing countries and the volume of global demand is given in table 2.

Table 2. Volume of global demand for Azerbaijan's export potential products

	The demand of the top 5 countries importing this product from Azerbaijan		**Global demand**		**Import of Azerbaijan**		**Export of Azerbaijan**	
	thou-sand tons	**million USD**	**thou-sand tons**	**million USD**	**thou-sand tons**	**million USD**	**thou-sand tons**	**million USD**
Tomato	835	785	7,900	10,400	17.3	5.4	170.6	185.2
Hazelnut	290	1,040	550	2,000	3.4	6.9	40.9	121.4
Persimmon	290	218	580	630	0.0	0.0	148.7	107.4
Cherry	125	180	1,000	5,100	0.6	0.6	25.5	40.8
Apple	710	510	8,600	8,460	1.0	1.1	79.6	37.4
Pomegranate	-	-	460	380	0.6	0.8	34.7	33.2
Peach	300	347	1,680	2,670	1.5	1.9	13.2	16.3
Grape	550	540	5,400	10,700	15.2	12.5	16.3	19.1
Plum	80	63	750	1,100	0.5	1.0	4.9	3.6
Garden crops	110	48	7,700	2,100	0.7	0.5	7.0	2.6
Onion	716	127	8,600	3,900	9.9	3.9	19.1	5.5
Almond	60	140	2,200	6,200	1.2	3.7	0.1	0.1
Apricot	64	65	290	486	5.4	6.4	1.1	1.3
Mandarin	830	588	3,750	3,740	8.7	6.3	0.5	0.3
Potato	800	275	14,000	3,980	204.0	66.1	78.6	33.8

Source: Calculated by the author based on the data of the State Customs Committee of the Republic of Azerbaijan, trademap.org and https://www.volza.com/p/pomegranate/export/export-from-iran/

Note: Since the HS code for pomegranate is different in different countries, the volume of global demand was calculated taking into account the export volume of Turkey, Spain, India, Iran, Tunisia and Morocco, and the import volume of Pakistan.

According to the data of Table 2, the share of Azerbaijan in the demand for tomatoes of the top 5 countries that import tomatoes from Azerbaijan is 20%. Accordingly, the share of Azerbaijan in the demand of the top 5 importing countries was 14% in hazelnuts, 50% in dates, 20% in cherries, 11% in apples, 10% in potatoes, 4% in peaches, 3% in grapes, 6% in plums, 6% in melons, and 3% in onions. . Looking at the global demand, the demand of the main partner countries is about 2 times more for dates and nuts, and more for other products.

Table 3 shows the actual and potential cultivated area and production indicators for the respective crops. The potential planting area was determined on the condition that all orchards for other fruits, except for apples, reach the fruiting age, and for one-year tomatoes, onions and melons remain at the actual level. As the area of apples decreased and the weight of intensive orchards increased, only the increase in productivity was taken as a basis. Potential production indicators were determined by the author using data from field studies of the Agricultural Economic Research Center.

Table 3. The volume of potential additional export of Azerbaijan's export potential products

	Total area, thousand ha	*At fruit bearing age*	Average productivity, tons/ha	Potential producting area, thousand ha	Potential productivity, tons/ha	Additional production, thousand tons	Potential additional exports, million USD	
							Azerbaijan's actual export, with price	Top 5 import countries, with price
Tomato	20.2	*17.6*	20.4	18	30	185	201	174
Hazelnut	80.4	*49.0*	1.4	80	1.5	57	169	204
Persimmon	13.1	*11.7*	16.4	13	20	72	52	54
Cherry	7.2	*5.5*	8.0	7	13	55	87	79
Apple	31.4	*29.9*	10.3	25	25	245	115	176
Pomegranate	22.6	*21.1*	8.8	22	15	150	143	124
Peach	7.2	*5.6*	6.4	7	8	23	28	26
Grape	16.0	*15.1*	9.8	16	15	96	113	95
Plum	5.3	*4.7*	8.3	5	13	28	20	22
Garden crops	20.2	*20.2*	22.8	20	25	39	14	17
Onion	11.6	*11.6*	24.6	12	40	201	58	36
Almond	2.8	*1.4*	2.2	3	4	11	25	25
Apricot	4.1	*3.5*	8.3	4	13	25	29	26
Mandarin	3.0	*1.9*	23.5	3	25	32	20	23
Potato	56.1	*56.1*	18.4	56	25	367	158	126
Total							**1233**	**1205**

Source: Calculated by the author based on the data of the State Statistics Committee of the Republic of Azerbaijan and trademap.org.
Note: The indicator in the area column that gives the tomato bar indicates the open area, excluding the greenhouse area.

When determining the potential additional production, the increase in area was calculated at the level of potential productivity, and the increase in productivity was calculated taking into account the potential area.

Thus, additional export potential for relevant products, in other words untapped export potential, was estimated at 1.2 billion USD (Table 3).

Conclusion

In the article, the import and export of 28 main agricultural products of Azerbaijan were considered, and the untapped export potential of 15 products was assessed. The additional export potential of Azerbaijan is approximately 1.2 billion USD at actual export prices, due to the fact that the existing gardens are at full producing age without increasing the planting area for these crops while increasing the productivity due to intensive factors. Taking into account the current export volume of USD 778 million, this means an increase in exports of those products by approximately 2.5 times. Taking into account that Azerbaijan has high comparative advantages in fruit and vegetable products, measures should be continued in the direction of increasing the use of export opportunities by increasing the production of these products. It is recommended that the specialization of the country in the field of agriculture be ensured in these sectors that create high added value.

REFERENCES

Agriculture, forestry and fishing (2022). https://stat.gov.az/source/agriculture/?lang=en (accessed September, 2022)

Chobanov E. (2013). "GAP Analizi"

Farm data monitorıng system (2022). https://atm.gov.az/en/activity/8/fermer-teserrufati-melumatlarinin-monitorinqi-sist/

Kim S. & Ji Y. (2018). "Gap Analysis", Pg. 1 and 3, https://www.researchgate.net/publication/327879112

QuestionPro (2022). "What is Gap Analysis: Definition, Method and Template with Example", internet resources. https://www.questionpro.com/blog/gap-analysis/

Lamich K. (2018). "Demand-supply gap analysis report", pg 11

The foreign trade of Azerbaijan (2022). https://stat.gov.az/source/trade/ (accessed September, 2022)

Trademap (2022). https://www.trademap.org/ (accessed September, 2022)

Weller J. (2018). (Smartsheet Contributor), "The Complete Guide to Gap Analysis", Pg. 4. https://www.smartsheet.com/gap-analysis-method-examples#:~:text=for%20a%20product%3F-,What%20Is%20a%20Market%20Gap%20Analysis%3F,market%20facts%2C%20rather%20than%20opinion