

THE VALUE CHAIN PERFORMANCE AND THE INCREASED COMPETITIVENESS IN THE AGRICULTURAL SECTOR - WITH A PARTICULAR SIGNIFICANCE ON THE FRUIT AND VEGETABLE SECTOR IN KOSOVO

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Abstract

This study presents a framework for the development of the value chain of agricultural products in Kosovo, in particular in the fruit and vegetable sector, as a sector with the potential to replace import and increase export. Value chain analysis plays an important role in understanding efficiency in the chain as well as the competencies of the stakeholders influencing the chain, to avoid competing challenges and to increase the potential for improving the value chain performance. The barriers to value chain development such as, poor infrastructure, lack of resources and difficulties in reformist policies in the sector must first be identified in order to improve chain performance. Second, identifying opportunities for performance improvement across all value chain leads to competitiveness increase.

Keywords: Value chain performance, increased competitiveness, import substitution, increased exports.

Summary

The Republic of Kosovo needs to continue with institutional, legal and logistical reforms to integrate their economies into the export chain. Agricultural development is one of the main priorities of the government. However, farmers have struggled financially and professionally to open up the economy, resulting in increased food import. So, although domestic production has increased, annual import has remained high as a result of increased demand per capita. Farmers have mainly exported some products at the peak of production, but this export has not been the result of production over the needs of the country. Unconsolidated farms, with little equipment and low support, with poor management of market demands, have not met local demands for food consumption and have faced competition from imported goods.

According to the recommendations of the IMF (2019), a greater commitment is needed to build policies which would stimulate the transformation of technology and knowledge, also to increase competitiveness and to reach a higher level in the value chain.

Literature Review

The value chain performance and the increased competitiveness in the agricultural sector have long been the main subject of study by agricultural economists. Their objective was to determine the performance of the food system that affects the well-being of society. In order to achieve these objectives, the focus has been on the analysis of the entire value chain such as: production capacity, sector potential, marketing strategies, product safety, labor and capital, business environment and in particular agricultural policies as components with an impact on performance and competitiveness. Also, economists and policy makers are focused on the studies of value chain trends in agriculture, which contribute to GDP, employment and trade balance improvements (Miftari and Gjonbalaj, 2019). The value

chain development plays a great role in the development programs of developing countries which aim economic growth and competitiveness increase of the agricultural sector (Humphrey & Aleman 2010; Trienekens, 2011; Staritz 2012).

The value chain in agriculture significantly contributes to create gross value added, to produce lower cost products, and to improve competition in national and international markets. The value chain concept includes value creation activities in the production-distribution process as well as the interconnection between these activities (Trienekens, 2011; Danovan et al., 2016; Vroegindewey and Hodbod, 2018; Tardi, 2020). According to Trienekens, (2011), the main purpose of a value chain is to produce value-added products or services for a market, to transform resources and to use infrastructure - within the possibilities and limitations of its institutional environment. "A value chain comprises the steps that involve bringing a product from conception to distribution, and everything in between—such as procuring raw materials, manufacturing functions, and marketing activities" (Tardi, 2020). According to Vroegindewey & Hodbod, (2018) the value chain includes the totality of activities that create value by processing the raw material into the final product as well as the institutions and rules that link the various production activities.

The value chain is defined as:

1. *Group of activities* (the entire activities to increase the value of products through stages of production, purchase of raw materials and other inputs, production, processing and distribution);
2. *Group of actors* (producing goods or services for consumers, involved in carrying out value-added activities);
3. *Strategic network* (cooperation of a number of independent business organizations at the national and international level throughout the process, in order to improve the efficiency of the production process, supply, sales, regulatory framework of the whole process) (Danovan et al., 2016).

Value chain analysis in the context of accelerated globalization has been deemed necessary for countries which are designated for free trade as well as for firms which become part of international markets. Such an analysis is particularly important for young producers and poor countries trying to enter global markets, as a means of understanding the policy environment for efficient resource allocation within the country's economy, in order to ensure growth of steady income (Kaplinsky and Morris, 2000). At this point, the sustainability of the agricultural value chain is essential for the results of the whole system, especially for developing countries, to have access to domestic and international markets. Value chain analysis has an important role in identifying chain inefficiencies, the competencies of chain influencing stakeholders, understanding the competitive challenges and potentials for improving chain performance and increasing competitiveness.

Fruit and vegetables production and the opportunities to increase competitiveness

The production of fruit and vegetables in the Republic of Kosovo has a long tradition, due to favorable climatic and geographical conditions. This sector has gradually improved, but most of the farms are survival ones which face high cost of fuel, costly fertilizers and low-quality seeds. Such factors lead to difficulties in order to compete with imported products. Vegetable production in Kosovo in some regions represents the main economic activity, but it is still seasonal and the market is not supplied throughout the year (European Commission, 2013). Domestic production covers the domestic market during the production season, but not during the winter months, due to the lack of appropriate conditions that enable the storage of fruit and vegetables. The Republic of Kosovo has the potential to meet the demands of domestic consumers, but also to increase exports. However, Kosovo is a great importer of fruit and vegetables starting from planting material to the final products. The sector has the potential to be developed, but needs more investment in human capacity and equipment, in irrigation system improvements, in increasing investments in farms as well as increasing investments in post-harvest services also in refrigerated rooms for fruit preservation.

The support given in the recent years through subsidies and grants in agriculture has increased the expansion of the planted areas with fruit and vegetables and increased productivity (table no.1), but has not affected the fulfillment of consumer demands throughout the year unable to maintain them. According to MAFRD statistics, (2019) the area planted with fruit and vegetables and the production for the period 2014-2018 has increased by 6 234 ha, from 19 574 ha, to 25 808 ha, while the production has increased by 71 793 tons, from 247 233 tons, to 319 026 tons.

Tabela 1. Planted areas and the production of fruit and vegetables 2014-2018

Viti	Vegetables		Fruit	
	Planted Areas	Production	Planted Areas	Production
	(ha)	(t)	(ha)	(t)
2014	15,854	221,330	3,720	25,903
2015	14,656	246,096	4,930	44,674
2016	17,395	335,467	5,668	54,836
2017	19,643	358,394	6,422	34,207
2018	17,886	265,420	7,922	53,606

Source: MAFRD. Green Report 2019, elaborated

Even though, free trade and free trade agreements (CEFTA, SAA) have been a good opportunity for the development of agriculture and the economy in general, have also been quite challenging because they have not improved the competitiveness of the sectors that are dealing with local production. Under such circumstances, the low level of production in comparison to the needs for consumption of agricultural products is expressed through the high trade deficit of a large number of agricultural products, which are complemented by high import. Such import often surpasses the real needs thus endangering local production (Gjonbalaj and Gjergjizi, 2008). Domestic production faces the competitiveness of products imported from the countries of the region and the EU in which there has been greater support for domestic production through various support schemes for agriculture. The lack of financial incentives for some sectors and the lack of market information system makes it impossible to use the country's human and capital potential (NDS, 2016). Kosovo is one of the largest importers of food, because the agricultural sector faces various challenges which reduce competition and make it difficult to use the potential for food production (MTI, 2016). Given the fact that the Republic of Kosovo has comparative advantages for the production of fruit and vegetables, on the other hand faces a large import of these products, in this study we focus on the analysis of the difficulties and opportunities to improve the production chain and trade of fruit and vegetable products.

The aim of the study

The improvement of the value chain is very important in developing countries, especially for Kosovo and countries that are committed to a free market and European integration. Value chain performance analysis in Kosovo requires a scientific approach for two reasons:

First of improve the performance of all value chain links, to increase competitiveness, taking into account the potential of the agricultural sector to replace import and increase export.

Then, the definition of a free market and access to the global value chain requires the adaptation of production systems to overall value chain strategies institutional and regulatory harmonization, and reform policies for access to development programs and global chain integration of values.

Research methodology and hypotheses

In order to test the hypotheses and answer the research questions, the study is focused on qualitative and quantitative information on factors related to competition, efficiency and performance of the sector.

Primary value chain data was collected through a questionnaire. The questionnaire contains questions organized in a logical way which have essentially addressed the characteristics of the actors in the chain. Through the questionnaire, 50 agricultural experts were interviewed (one questionnaire was eliminated due to the answers that deviated from the data, while the sample of 49 respondents (agricultural experts) are the main subject of this research.

The questionnaire which was addressed to the experts was structured according to the Likert scale in order to evaluate the performance of the value chain of fruit and vegetables and the degree of the importance with the rating from 1-5. The processing was done through the computer program SPSS (Statistical Package for the Social Sciences), through which statistical models were built.

Hypotheses and research questions

Based on the purpose of the study and the abovementioned objectives, the following hypotheses are tested and verified:

H1. Safety standards are a challenge to value chain performance and competitiveness of agricultural products.

H2. Insufficient technology and financial resources affect value chain performance and competitiveness.

The research provides answers to research questions:

1. Do macroeconomic policies have an impact on the value chain?
2. Do food safety standards have an impact on determining the competitiveness and growth of the agricultural sector and in particular the fruit and vegetable sector?
3. Which factors are the most challenging ones for the growth of the fruit and vegetable sector chain?
4. What changes must occur in the structure of the food sector in order to affect the growth of domestic production?

Findings, analysis and discussions

49 agricultural experts were included in this research. 40.8% of respondents were women and 59.2% of respondents were men. 42.86% of the respondents are with a superior qualification. 34.69% of the respondents have a master's art degree, whereas 4.82%, PHD, and 4.1%. master of science.

A questionnaire may not be valid if it is not reliable. The general rule of reliability is: If Cronbach's Alpha is 0.70 or better, 0.80 or better, 0.90 or higher is best. The reliability of this questionnaire is acceptable because Cronbach's Alpha equals 0.934.

Reliability Statistics

Cronbach's Alpha	N of Items
.934	75

The importance of macroeconomic factors of the value chain in agriculture

The experts' opinion is that macroeconomic policies have an impact on the development of the agricultural sector in the medium term. According to them, macroeconomic policies affect the sustainability of the sector. 63.3% of them claim that such policies affect the economic stability, 30.6% declare that they moderately affect growth and 6.1% have stated that they do not affect growth but have a moderate decline impact.

Table 2. Can you please indicate how you assess the impact of macroeconomic policies on the development of the sector in the next three years?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderate growth	15	30.6	30.6
	Stability	31	63.3	93.9
	Moderate decline	3	6.1	100.0
	Total	49	100.0	100.0

Safety standards

The low level of safety standards and the quality of products has been identified by the experts as one of the biggest challenges affecting the performance of the agricultural sector chain, in particular the fruit and vegetable processing

sector. According to them, the poor performance of safety standards has affected the competitiveness of local farmers. Domestic products have had a disadvantage in quality compared to imported products, making imported products more acceptable to consumers. Ensuring safe and quality products is a challenge in the future for a sustainable growth of agricultural production based on expert assessment (average 4.20). They considered the HACCP safety regulations as very important for determining the competitiveness and growth for the fruit and vegetable processing sector (average 4.02), as well as the ISO standards with an average (3.98), and less important for determining the competitiveness have been the Global Gap (average 3.31) and BIO (average 3.37) standards.

Table 3. The impact of food safety regulations on the agricultural sector, in particular the fruit and vegetable sector

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
HACCP	49	2	5	4.02	.901	-.575	.340	-.459	.668
ISO	49	2	5	3.98	.968	-.389	.340	-1.058	.668
GLOBAL GAP	49	1	6	3.41	1.290	-.274	.340	-.611	.668
BIO	49	1	6	3.37	1.468	-.181	.340	-1.283	.668

In the medium term, the increase of the quality of agricultural products is considered very important; emphasizing that the certification policies according to the standards have an impact on the moderate growth of the sector where they are declared (59.2%), while 24.5% stated that the certification policies according to the standards will affect sustainable growth.

Table 4. Could you please indicate how you assess the impact of certification policies according to the abovementioned standards on the development of the sector in the next 3 years

	Frequency	Percent	Valid Percent	Cumulative Percent
Fast growth	6	12.2	12.2	12.2
Moderate growth	29	59.2	59.2	71.4
Valid Stability	12	24.5	24.5	95.9
Moderate decline	2	4.1	4.1	100.0
Total	49	100.0	100.0	

The increase of production and competitiveness in the medium term

Competitiveness requires adequate management as well as organizational culture that promote change (Varga, 2017). To promote change it is necessary to measure the determinants of increased competition, with government policies which play a key role. The increase of productivity has been considered as the main factor with the average (4.73) according to agricultural experts, in order to achieve the increase of local production and competition. Experts have estimated that in order to increase productivity, changes which affect the increase of efficiency (average 4.63), the increase of investments in research and knowledge (average 4.59), the specialization of production (average 4.43), the increase of competition and local products (4.39), as well as the consolidation of companies (average 3.98) must be done. These changes are central for the transformation of the agricultural sector and the increase of the comparative advantage which is considered very important by specialists (average 3.94).

Table 5. Significant changes to increase domestic productivity in the medium term

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Consolidation of the companies	49	1	5	3.98	.901	-.849	.340	1.119	.668
Foreign capital inflows	49	2	5	3.69	.871	.061	.340	-.802	.668
The increase of investments in research and knowledge	49	2	5	4.59	.643	-1.830	.340	4.306	.668
Product specialization	49	2	5	4.43	.791	-1.206	.340	.629	.668
Import increase	49	1	4	2.33	.922	.121	.340	-.787	.668
The increase of comparative advantage	49	2	5	3.94	.922	-.374	.340	-.821	.668
Import replacement	49	3	5	4.53	.680	-1.151	.340	.110	.668
Export increase	49	2	5	4.47	.793	-1.331	.340	.866	.668
Productivity increase	49	3	5	4.73	.531	-1.926	.340	3.000	.668
Efficiency increase	49	3	5	4.63	.602	-1.435	.340	1.095	.668
Increase of competitiveness between local products	49	2	5	4.39	.759	-1.094	.340	.727	.668

Growing the fruit and vegetable sector chain

Insufficient financial resources, the land quality and high interest rates remain the main limiting factors for carrying out activities and increasing the performance of the value chain. Insufficient financial resources have hampered the expansion of farms and increased investment (average 4.43), which impacts the poor performance of the sector. Small land area and small agricultural farms are challenging for fruit and vegetable production, becoming an obstacle for local and foreign investments (average 4.41). Obsolete assets in industry hinder the full utilization of raw products which reduce the efficiency and the quality competition of products in the domestic and foreign market (Gjokaj et al., 2015). The lack of technological equipment, refrigeration rooms, specialized equipment for transporting products that are sensitive and perishable, insufficient conditions for fast distribution, markets without refrigeration equipment, are listed as the most challenging factors (average 4.37).

Table 6. The most challenging factors in the value chain of fruit and vegetables

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
The lack of technological equipment (refrigeration rooms, specialized equipment for products transportation)	49	2	5	4.37	.782	-1.034	.340	.383	.668

The quality of human capital (qualification, experience)	49	2	5	4.29	.816	-.821	.340	-.248	.668
Quality management	49	3	5	4.18	.782	-.340	.340	-1.271	.668
Decision-making	49	3	5	4.00	.866	.000	.340	-1.686	.668
Insufficient financial resources	49	3	5	4.43	.645	-.692	.340	-.477	.668
Farm size and soil quality	49	3	5	4.41	.610	-.496	.340	-.589	.668
Infrastructure (road and water)	49	2	5	3.80	.979	-.126	.340	-1.137	.668
Ensuring safe and quality products	49	1	5	4.20	.957	-1.173	.340	1.238	.668
Lack of a functioning agricultural market	49	2	5	3.90	.770	-.106	.340	-.630	.668
Quality of inputs	49	2	5	4.00	.890	-.370	.340	-.862	.668
Inspection service system (sanitary and phytosanitary)	49	2	5	4.31	.713	-.888	.340	.911	.668
Low investment in development	49	2	5	4.22	.872	-.856	.340	-.127	.668
Legal regulations (difficulties in implementation, constant changes)	49	2	5	3.86	.957	-.445	.340	-.688	.668
Legal regulations (difficulties in implementation, constant changes)	49	1	5	3.67	.875	-.462	.340	.635	.668
Competition from imported products	49	2	5	4.20	.790	-.914	.340	.765	.668
High interest rates	49	3	5	4.45	.738	-.953	.340	-.482	.668
Horizontal coordination in the sector (cooperation)	49	1	5	3.90	.895	-.882	.340	1.234	.668
Product marketing	49	2	5	4.12	.807	-.726	.340	.241	.668
Property rights	49	2	5	4.20	.866	-1.019	.340	.579	.668

The role of the government in the development of the fruit and vegetable sector chain

Clear programs to support agriculture through grants and subsidies (average 4.80) are considered as contributors to the value chain to meet the competition coming from the countries of the region and other countries which subsidize agriculture and increase competition in relation to local products. Abolishing the import tariff on raw materials and equipment (average 4.18) and changing the mechanisms for access to credit is very necessary (4.49), as Kosovo is dominated by small and medium-sized businesses which find it more difficult to invest being unable to meet criteria to access the government's funding and credit.

Table 7. The Government's Impact on Fruit and Vegetable Sector Growth

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Abolishment of the import tariff on raw materials and equipment	49	1	5	4.18	1.185	-1.626	.340	2.016	.668
Simplified business registration procedures	49	2	5	3.71	1.000	-.168	.340	-1.040	.668
Reducing administrative control over the business	49	1	5	3.16	.986	-.070	.340	-.340	.668
Facilitate bankruptcy proceedings	49	1	5	3.33	1.088	.214	.340	-.825	.668
Public budget investments in agriculture (subsidies, grants)	49	3	5	4.80	.456	-2.180	.340	4.307	.668
Private investment support	49	2	5	4.49	.711	-1.415	.340	1.994	.668
Changing mechanisms for a better approach to credit	49	2	5	4.43	.736	-1.214	.340	1.220	.668
Low interest rates	49	3	5	4.69	.548	-1.633	.340	1.868	.668
Agricultural guarantees (credit support)	49	3	5	4.73	.491	-1.636	.340	1.876	.668
Agricultural insurance	49	4	5	4.73	.446	-1.097	.340	-.832	.668

Hypotheses verification

H1. Safety standards are challenging to value chain performance and competitiveness of agricultural products.

Based on the conducted research, security standards are very important to increase competitiveness. Safety standards have been identified as the most challenging factors of competitiveness and remain a challenge in the future for the sustainable growth of agricultural production based on expert assessment (average 4.20). The hypothesis has been proven.

H2. Insufficient technology and financial resources affect value chain performance and competitiveness.

Insufficient financial resources have hampered the expansion of farms and increased investment (average 4.43) which has impacted on the poor performance of the sector. The hypothesis has been proven.

Conclusion

In order to create a functioning market economy capable of facing competition, Kosovo must continue its efforts. Small farms being structured as family farms, also having insufficient resources have been accompanied by low level of technology with a few opportunities to invest in the purchase of equipment at high prices. As a result, these farms have produced products intended mainly for the local markets, without having access to international markets.

Public policies should create a beneficial environment for small farmers; government grants should be oriented towards growth-generating investments in order to strengthen competitiveness that would also have positive effects in reducing external imbalances, by replacing import with domestic products and export growth.

Safety standards determine competition for local farmers. Consumers are demand product quality and safety. Security standards increase the image of domestic products with an impact on the growth of the domestic market with access to international markets through exports. Strengthening the institutions that have the obligation to control and

build capacity in relation to the quality and safety standards of local products will increase improve the performance of the value chain and increase the competitiveness of farmers in local and international markets.

References

- Boehlje, M. D., Hofing, S. L., & Schroeder, R. C. (1999). *Value chains in the agricultural industries* (No. 1239-2016-101542).
- Donovan, J., Franzel, S., Cunha, M., Gyau, A., & Mithöfer, D. (2015). Guides for value chain development: a comparative review. *Journal of Agribusiness in Developing and Emerging Economies*.
- Gjokaj, E., Gjonbalaj, M., Halimi, K., & Alishani, A. (2015). Review of cross sectorial developments of agribusiness in Kosovo. In *Agrimba Network Congress "Smart agribusiness for the society of tomorrow" Porec, Croatia, 17 and 18 June 2015* (p. 221)
- Gjonbalaj, M., Gjergjizi, H. (2008). *Bilanci i produkteve agroushqimore si bazë e politikave qeveritare*. Vol. L. Nr.2.pp.57-70 marrë nga http://alpa.mali-it.eu/journal/aktet/vol/vol1/Aktet_Vol_I_Nr_2_pp_57_70.pdf
- Humphrey, J., & Navas-Alemán, L. (2010). Value chains, donor interventions and poverty reduction: A review of donor practice. *IDS Research Reports, 2010*(63), 1-106.
- Kaplinsky, R., & Morris, M. (2000). *A handbook for value chain research* (Vol. 113). Brighton: University of Sussex, Institute of Development Studies
- Komisioni Evropian (2013). Dokument strategjik për Kosovën (2014-2020). http://eeas.europa.eu/archives/delegations/kosovo/documents/press_corner/20131025_draft_csp_for_kosovo_241013_sq.pdf
- MBPZHR, (2020). *Raporti i gjelbër 2019*. Prishtinë: MBPZHR.
- Miftari, I. Gjonbalaj, M. (2019). *Zinxhirit i vlerës në sektorin e përpunimit të pemëve dhe perimeve*, CETEP-GIZ, PEPEKO
- MTI, 2016. *Benificionet e MSA-së në sektorin e Bujqësisë*. Prishtinë: MTI
- Qeveria e Republikës së Kosovës, (2016). *Strategjia kombëtare për zhvillim 2016-2021*, Prishtinë, 2016
- Staritz, C. (2012). *Value chains for development? Potentials and limitations of global value chain approaches in donor interventions* (No. 31). Working Paper.
- Tardi, C. (2020). Value Chain. Business essentials <https://www.investopedia.com/terms/v/valuechain.asp#what-is-a-value-chain>
- Trienekens, J. H. (2011). Agricultural value chains in developing countries a framework for analysis. *International food and agribusiness management review, 14*(1030-2016-82778), 51-82
- Varga, J. (2017). Bases For Organizational Competitiveness: Organizational Competitiveness Status Report In Hungary. *Economy & Business Journal, 11*(1), 345-358.
- Vroegindewey, R., & Hodbod, J. (2018). Resilience of agricultural value chains in developing country contexts: A framework and assessment approach. *Sustainability, 10*(4), 916.