How Cold Storage Expansion Drives Market Development in Albania (Case of Apple Sector)

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Abstract: - The main objective of this research study was to determine the effect of cold storage investments on market developments of agriculture products in Albania. The study also examined how the increase in cold storage capacity and the loss reduction because of these investments would stimulate the increase in production and sales of agricultural products. The required data were gathered mainly from primary but also from some secondary sources through surveys and semi-structured interviews. The data gathered through the survey were processed and analyzed. There will be a summary of the respective findings regarding the profile of surveyed entrepreneurs, their investment trend in cold storage facilities, cold storage capacities, loss reduction due to increasing refrigerator rooms, their business activity, sectors involved, market segmentation, strategies, and other developments. We tested the research hypotheses using techniques like the Multiple Linear Regression method. The findings revealed, among other things, a significant positive relationship between sales of agricultural products and investments in cold storage capacities. It's been statistically evidenced that such variables as Investments, Capacity, and Loss Reduction of Cold Storage are important in increasing Sales of Agriculture Products. Regarding the research findings, the authors recommended increasing investments in refrigerator rooms as it will make it possible to extend agricultural product consumption time. It is vital for agriculture enterprises focused on fruits and vegetables to have a scope of better understanding of these investments and their impact on the market drivers. By knowing better this component, these farmers and entrepreneurs will increase their investments in cold storage capacity, resulting in an extended product consumption time, and as a consequence expanding their internal and external markets in case of exporting. These findings are really important for the agriculture entrepreneurs, but more important for the governmental agencies, because this evidenced relationship will serve as a formula to drive different incentives and support schemas in cold storage investments, generating more contribution from the agriculture sector in the country's GDP.

Key-Words: - Cold storage, investments, value chain, sales, market development, loss reduction.

1 Introduction

Cold storage is an infrastructure investment that helps producers of fruits and vegetables keep their products cool for a specific time to meet market demand with high-quality and competitive offers.

A refrigerator room helps farmers minimize product waste and is very important for agriculture and other sectors, such as the beverage and biopharmaceutical sectors.

A cold chain is more than a simple cold storage room; it includes refrigerated trucks, railway

wagons, warehouses, insulated shipping containers, and other cold spaces.

According to some reports, refrigerated and frozen food products comprise the majority of cold storage revenues, comprising 88% of the total. The remaining 12% of revenues come from pharmaceuticals, flora, and fur products. Within the 88% share, retailers, wholesalers, and food manufacturers play significant roles, with retailers accounting for 22%, wholesalers for 33%, and food manufacturers for another 33%. The intense focus on food-related revenue makes cold storage facilities resilient to economic downturns, increasing their prospects for long-term success. Furthermore, cold storage facilities directly impact the food industry's growth and operational capabilities, serving as a crucial link in the food supply chain. Despite being commonly perceived as mere storage facilities, their importance to the food system cannot be overstated.

Despite being primarily labeled as storage facilities, they play a vital role in the food supply chain. These facilities provide more than just storage, offering value-added services such as processing, labeling, and logistics support, including import and export facilitation. Moreover, modern cold storage facilities are equipped with advanced tracking systems that provide real-time information about inventory and its movement, contributing to the efficiency and transparency of the entire supply chain.

Despite food, beverage, and pharmaceutics, the fruit and vegetable sectors are another sector depending on cold storage space. Considering the characteristics of these products, it has been challenging for many farmers in Albania to deal with the yearly extended market demand when such products are only produced seasonally.

An increasing number of Albanian farmers have started investing in cold storage capacities to keep their production cool for months and sell them when the products are out of season. These cold storages have increased the total production of fruits and vegetables since they reach more markets, including foreign markets for fruits, especially the apple market.

Following the privatization of land in 1991, the prevailing business model in Albanian agricultural production has been the family (household) farm. While there are a few cooperative associations and state enterprises, their presence and significance are minimal.

Two primary factors influence the development of the household farm in Albania: a) the small size of individual land parcels and b) the significant fragmentation of farms. Despite a decline in its contribution to the GDP, agriculture remains a crucial sector in the Albanian national economy, accounting for an estimated 20% of the GDP. However, the potential for growth in the agricultural sector still needs to be fully realized at the national level. Rural families continue to play a dominant role in the economy, with over 55% of the population residing in rural areas.

Agriculture is the primary source of employment for people living in rural areas, with over 50% of the labor force engaged in agriculture and related activities. The sector's importance is evident in the employment it generates, its contribution to livelihoods in rural communities, food security, sustainability, and exports, [1].

This research will be focused on the agriculture sector of Albania, taking the apple sub-sector as a case study to investigate how the increase of cold storage capacity along with the level of loss reduction, due to investments, would stimulate the increase of production and sales of apple products.

Nearly 14 million fruit trees are in total in Albania. With 3,2 million trees, or nearly ¼ of all the trees in the nation, Korça is the most tree-rich region. The areas of Fieri and Dibra (which have a high concentration of apple orchards similar to Korca), come next. Not all of these trees are in production, and the latest figure estimates the volume to be slightly above 11,5 million trees, [2].

With roughly 23% of all fruit trees and 30% of all fruit produced in Albania, the region of Korça is the epicenter of fruit production. Another relatively crucial fruit-producing area is Dibra, with a total production of more than 9,000 tons in 2016, [3].

They primarily direct their production to the local market and export smaller quantities to neighboring countries.

2 Literature Review

The first global Supply Chain was the trade of spices from Africa to the rest of Europe by the monopoly company Dutch East India Company. Supply Chain Management (SCM) encompasses a network of facilities involved in various stages of the production and distribution process. This network includes suppliers, manufacturing units, assembly centers, distribution centers, and logistics facilities. SCM oversees the entire journey of materials, from their procurement to the transformation into finished products and, ultimately, the distribution of these products to customers.

Supply chain management is defined as the systematic and strategic coordination of traditional business functions and tactics within a company and across businesses within the supply chain. The goal is to enhance the long-term performance of individual companies and optimize the overall performance of the entire supply chain, [4].

SCM encompasses the management of material, financial resources, human resources, and information flow within and across the supply chain to maximize customer satisfaction and gain a competitive edge. It involves effectively managing relationships with suppliers and customers to deliver superior customer value while reducing costs, [5].

Furthermore, SCM aims to optimize performance and add value to the supply chain while minimizing costs. Its main goal is to develop a strategy that reduces costs and maximizes customer satisfaction, leading to a sustainable competitive advantage.

Agriculture is an industry that has adopted SCM, as it relies on the specific characteristics of each region to produce different products. Any failure in the procurement, transportation, storage, and retail processes can have severe consequences, potentially causing large-scale famine in affected regions. SCM in agriculture enables effective management of both routine and exceptional situations.

However, the quality of any fresh food is at its peak when it is harvested or produced. But, as we know, most of our products are not made for immediate consumption; therefore, finding a method to stop or slow down their deterioration process while they are transported from production to distribution to the client was mandatory. Deterioration can occur due to natural processes, such as water loss, changes in temperature, physical damage, or invasion by microorganisms.

When the products are stored, the increase in the temperature of the environment interacts with and influences all these factors. Therefore, cooling is necessary to slow the metabolic process within and without the product.

Due to this necessity, a different branch of SCM came to light when the first refrigerators for trucks were invented in 1940 by Jones, a self-taught mechanic, who invented a roof-mounted cooling device for trucks that received a patent. Soon after, his invention was modified for use on trains and ships. With Clarence Birdseye's flash-freezing invention, Jones's refrigeration system revolutionized the availability of fresh and frozen foods worldwide, regardless of the season.

The main distinction between the supply chain for non-perishable goods and the cold chain lies in the potential deterioration of product quality and value throughout the journey, starting from the farms and extending to the end customer, [6].

Transporting goods using vehicles equipped with refrigeration units to regulate the temperature inside the vehicle compartment is recognized as the oldest method within the cold supply chain, [7].

The goal of this research is to analyze the cold supply chain impact on agriculture production sustainability, in terms of extending the consumption time of agriculture products, which in turn will generate an increase in market demand and as a consequence this will lead to more production of these products.

The cold storage facility is a specialized room with machinery and equipment to maintain low temperatures. Its purpose is to prolong product shelf life and preserve fresh produce quality, thus reducing waste through temperature control. The facility safeguards fresh items from deterioration and moisture, ensuring they remain frozen, fresh, and chilled, [8].

The cold chain involves the distribution of goods under specific temperature control, encompassing transportation and storage. However, this approach is the costliest and is typically employed solely for susceptible and valuable products, [9].

Some other authors concluded that implementing a cold chain helps protect fresh produce from deterioration, humidity, and inadequate temperature exposure, thereby preserving their freshness, frozen state, and chilled condition, [10], [11].

The freshness of products is one component of cold storage facilities, while on the other side, waste reduction is very important, because this issue is becoming not just costly for businesses involved, but also very sensitive regarding the environmental impact.

The cold supply chain does not differ significantly from the traditional supply chain's structure. However, they highlight the importance of maintaining appropriate temperature and humidity conditions for product distribution within the cold supply chain, [7].

Minimizing transportation expenses and ensuring the safety of transported goods are vital within cold supply chains. This is because any loss of the physicochemical properties of the products results in inefficient material losses, negating the savings achieved through transportation.

Regarding international supply chains, the fluctuating transportation conditions necessitate properly safeguarding cargo against damage. Certain goods transported and stored have specific requirements that demand temperature monitoring throughout the process. The concept of the cold supply chain is associated with effectively managing the movement of goods that require temperature monitoring, [12].

According to a group of authors, most products are susceptible to temperature fluctuations and experience a decline in quality, even with slight damage during transportation, reloading, or storage. This decrease in quality subsequently leads to a decrease in market demand, [7].

Another researcher further supports this notion and provides specific temperature ranges for different product groups. Of particular interest in this study is the temperature range of 12°C to 14°C, allowing for effective fruit ripening monitoring, [13].

The cold supply chain associated with fruits and vegetables (F&V) is more intricate than other supply chains. This complexity arises from factors such as the perishable nature of the products, significant fluctuations in demand and prices, growing consumer emphasis on food safety and quality, [14], and, notably, its reliance on climate conditions, [15].

Another group of authors concurs with the previous research and emphasizes that safety is a highly delicate aspect within this particular category. Failure to meet the necessary safety conditions during the logistics process can result in the rapid deterioration of food products, potentially rendering them unsafe for consumption by customers, [16].

To succeed in cold chain management, it is crucial to continuously monitor the temperature of products at every stage of the supply chain. Additionally, implementing suitable measures and action plans is essential to minimize costs, preserve product quality, enhance customer satisfaction, and reduce waste and returns of expired stock. These critical factors should be emphasized for effective cold chain management, [8].

All these impact elements resulting from the investments in cold storage facilities can be considered as evidence of the positive relationship between cold supply chain capacities and better performance in delivering the final products in the agriculture sector. It can be further analyzed as an indirect impact on incentivizing farmers to produce more agricultural products, since the demand side will have a better reflection towards their products.

Consequently, there will be an increase in sales volume because of this increased investment and capacity of cold storage facilities.

Consequently, the cold chain has become an essential component of supply chain management, particularly for storing and transporting temperature-sensitive fresh produce, such as fruits and vegetables, [17].

Part of the Cold Supply Chain is cold storage rooms which are storage facilities constructed to keep products, like apple fruits, cool for a determined time to deliver them at a required time by the supply chain members, such as wholesalers, retailers, or final consumers. In Albania, many farmers are investing in these cold storage rooms, especially for keeping apple fruits cool for months, as domestic and foreign markets require.

Based on the above empirical studies, which analyze different aspects of cold supply chain facilities, it can be inquired regarding the specific impact of investments, capacity, and waste reduction on the sales volume of agriculture products, especially the apple fruits sub-sector.

3 Methodology

This study aims to measure the effect of cold storage investments in market developments of agriculture products in Albania, investigating how increasing the cold storage capacity along with the level of loss reduction is associated with the increase of production and sales in the agriculture industry.

We have used detailed Multivariate Analysis, respectively and multiple Regression Analysis for this study. The basic idea of multiple regression analysis is similar to simple regression, often in business research.

Multiple regression analysis begins with the analysis stage, wherein more than one independent variable is employed to explain the variation in the dependent variable. It is a multivariate technique that relies on the conceptual model, including the hypotheses derived from that model, which the researcher has established during the earlier stages of the research process, [18].

Multiple regression analysis offers an objective method to evaluate the strength and nature of the relationship between independent variables (Investments, Capacity, and Loss Reduction) and the dependent variable (Sales). The regression coefficients provide insights into the relative significance of each independent variable in predicting the dependent variable.

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Precisely through the formulated model, we want to prove the hypothesis:

Ho: The effect of Investments, Capacity, and Loss Reduction of Cold Storage is unimportant in Sales of Agriculture Products.
H1: The effect of Investments, Capacity, and Loss Reduction of Cold Storage is essential in the Sales of Agriculture Products.

The reviewed model in our study is the relationship between Sales of Agriculture Products and three other independent variables: Investments, Capacity, and Loss Reduction.

By using this methodology, it can be evidenced any relationship between these variables, specifically the effect of predicting variables in determining the behavior of the dependent variable.

The question to be answered by using this methodology is: Are sales volumes of apple fruits dependent on cold storage investments, and their capacity and loss reduction derived from these investments in the cold supply chain?

Theoretical model specification is:

$$\text{Sales}_t = \beta_0 + \beta_1 \text{Investments}_t + \beta_2 \text{Capacity}_t + \beta_3 \text{Losses Reduction}_t + \mu_t$$

Where:
Sales - Total Sales of Apple product
Investments - Total amount of Investments in Cold Storage
Capacity - Total Capacity of Cold Storage
Losses reduction - The percentage of Losses Reduction

During 2021, a specific category of rural entrepreneurs was surveyed to collect data by using face-to-face interviews. The survey utilized a structured questionnaire and targeted a sample of 35 rural enterprises that have invested in cold storage and are engaged in apple tree cultivation. We surveyed two pre-selected districts of Albania, specifically Dibra and Korca.

The researchers selected the sample of enterprises upon arrival in pre-selected villages/towns from the respective economic sectors (Entrepreneurs in the Agriculture Sector who invested in cold storage and cultivating apple fruit trees) to represent the regional pattern of the economy.

Fig. 1: Sample location

It is composed of Rural Entrepreneurs (49.0%), Sub-Urban Entrepreneurs (40.0%), and Urban Entrepreneurs (11.0%) to represent the whole target group (Figure 1).

We based the sample choice for respondents on the criterion that they should be rural, suburban, or urban entrepreneurs who have invested in cold storage rooms and are actively involved in cultivating apple trees.

The sample selection process did not include any additional criteria. The decision to include only two districts, Dibra and Korca, was made to encompass the most significant apple-cultivating regions of the country with high potential for expanding the cultivation of this fruit beyond subsistence farming.

This decision is supported based on the evidence that these two districts hold the most potential for apple production in Albania and that in these areas we can find the most consolidated agriculture businesses dealing with apple fruit trees.

On the other side, in these regions, the farmers have invested in cold storage facilities, so that we can gather data about all study variables including their apple fruit production and supply chain investments, based on which any relationship can be evidenced.

4 Research Findings
The data gathered through the survey was processed and analyzed, and below is a summary of the respective findings regarding the profile of surveyed entrepreneurs, their investment trend in cold storage facilities, cold storage capacities, loss reduction as a result of increasing refrigerator rooms, their business activity, sector involved, market segmentation and strategies and their other developments.

4.1 Profile of Surveyed Entrepreneurs

We surveyed 35 entrepreneurs operating in the agriculture sector and focused on fruit culture who have invested in apple trees. Also, these entrepreneurs have invested in expanding the cold storage facilities, making it possible to keep their for-sale fruits cool for months to better meet market demand for this product with just one season offer.

Regarding their education, most of these entrepreneurs were high school professionals; respectively, out of the surveyed sample, 17.1% had a university diploma, 65.7% had a high school diploma and 17.1% had just a primary diploma (Figure 2).
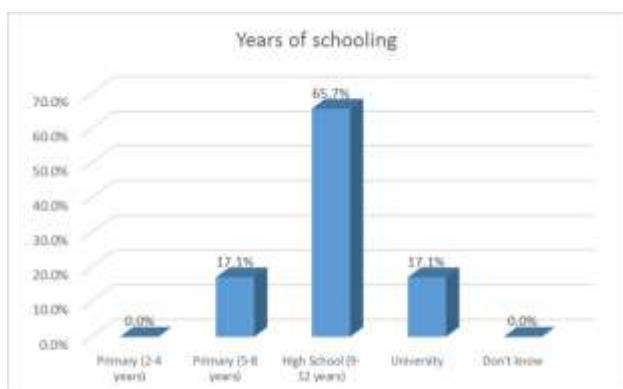
Fig. 2: Education of Entrepreneurs

Following the data provided by the survey, we can find out that the majority of entrepreneurs were male (97.0%), while females were only a few of them (3.0%) (Figure 3).
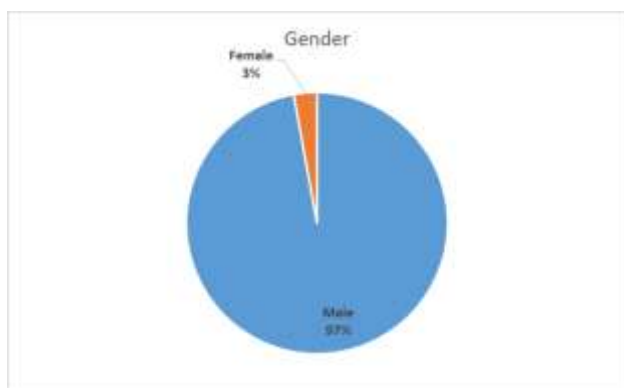
Fig. 3: Gender of Entrepreneurs

As per the age structure of investors in refrigerator room facilities, the survey showed that most of them are middle-aged 45-55 years old entrepreneurs (48%).

The rest is divided between older and younger ages, respectively 36-45 (26%) and 56-65 (23%), as shown in Figure 4.
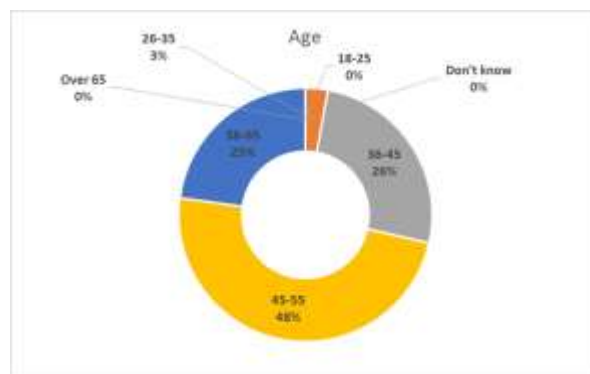

Fig. 4: Age of Entrepreneurs

Almost all of them were married (91.4%), with very few (8.6%) single, and no other status category can be found among them, as evidenced in Figure 5 below.
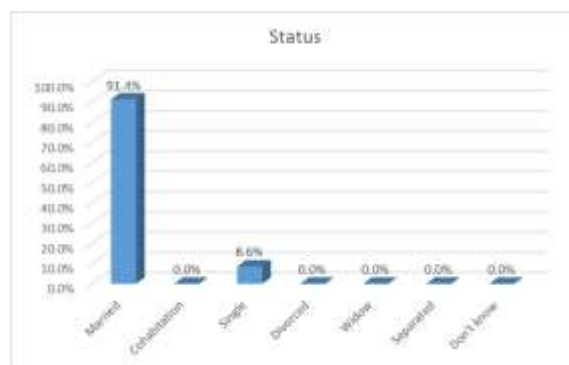

Fig. 5: Status of Entrepreneurs

It is unsurprising to find such entrepreneur profiles of investors in cold storage facilities since it is the most common profile of a rural entrepreneur in Albania.

4.2 Survey Analysis

About 70 percent of surveyed investors produce or process fruit products such as apples, for example, while about 16% deal with agricultural products such as vegetables, and 14% produce and/or process livestock products such as milk or meat (Figure 6).
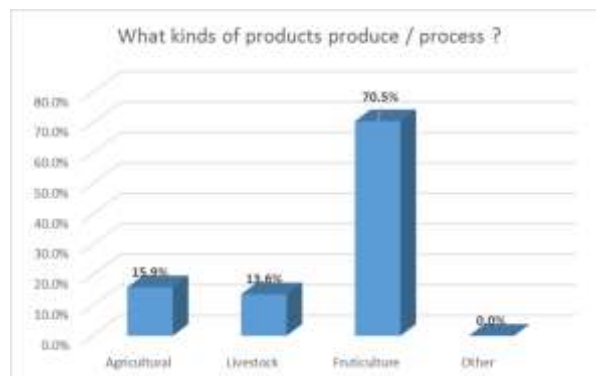

Fig. 6: Products/services processed by the enterprise

The fruit culture in Albania is a sub-sector increasing every day based on the tradition of cultivating different fruits and having a favorable climate suitable for many of them as apples, for example, in Korca, Dibra, and other mountainous regions of the country.

The apple production is one of Albania's most important fruit tree crops in volume and value. With over 1,5 million apple trees, the region of Korça produces more than half of all apples grown in Albania, [19].

Not all of these trees are in production, and the latest figure estimates the volume to be slightly above 11.5 million trees, [2].

The apple tree is the most common fruit tree in the area of Korça. This area has become a leader in apple production, something that customers also acknowledge thanks to favorable soil, climate, and production expertise.

Out of this region, there are roughly a million apple trees in the district of Korca, followed by Devolli, Pogradeci and Kolonja having lesser apple-growing areas. Furthermore, the apple, which accounts for 43% of all the trees, is the most important fruit in Dibra, [2].

Considering the experience of these entrepreneurs, the survey figured out that about 71% of them have more than five years in this business activity, while 29% have less experience in the respective sector (precisely one to five years), as shown in Figure 7.
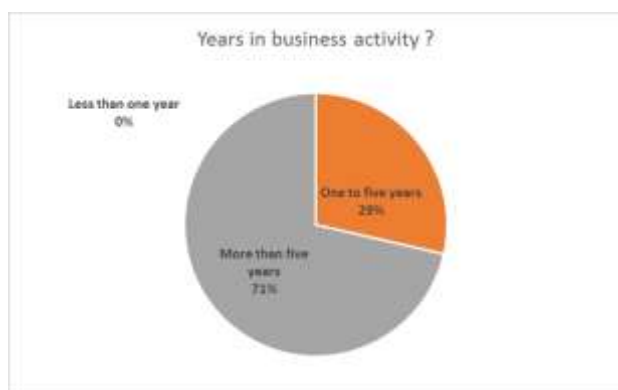

Fig. 7: Years in business activity

About 77.1% of surveyed enterprises are sole ownership (like most business investments in Albania, especially in rural areas), and only 22.9% are joint ownership (Figure 8).
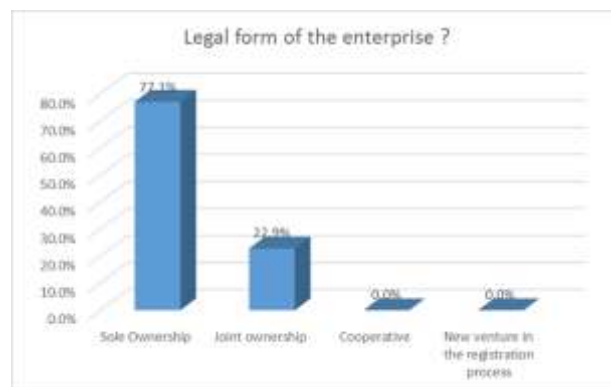

Fig. 8: The legal form of the enterprise

Regarding the type of business, 39.8% of surveyed enterprises are producing fruits, 6% are producing vegetables, about 31.3% are operating wholesale, and 8.4% of them in retail, as shown in Figure 9.
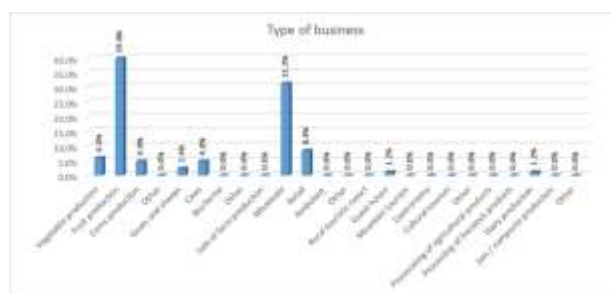

Fig. 9: Type of business activity

As referring to the sector of the economy, about 48% of surveyed enterprises are in Agri-business/Agriculture Farming, 39% of them are operating in the Trade of Agricultural and Livestock products, 9% of them are in Agri-business/Livestock Farming, and only 2% in Agro-tourism and Agro-processing (Figure 10).
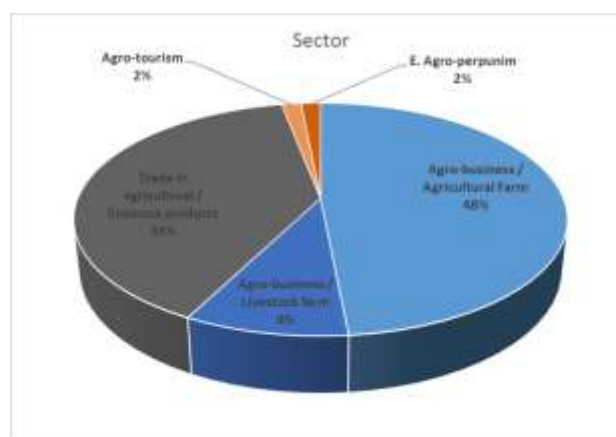

Fig. 10: Economic sector involved

When asked about processing progress, 54.3% of the surveyed enterprises reported an increase,

while 28.6% stated that it remained the same. On the other hand, 17.1% mentioned a decrease, and none reported a significant increase or decrease (Figure 11).
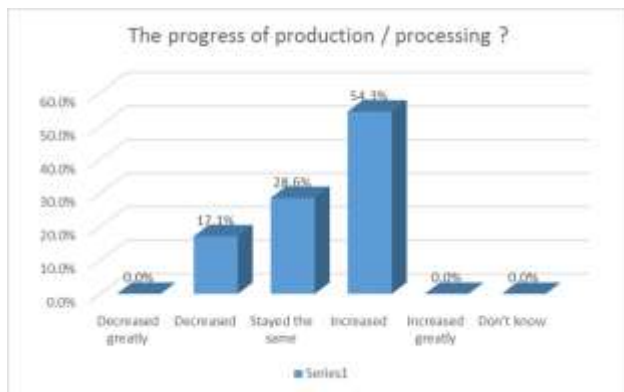

Fig. 11: The process of production/processing

Regarding the market served in the value chain, about 70% of surveyed enterprises said it was the wholesale market, 24% said it was retail, 4% said it was cooling rooms, and 2% said it was the final customer (Figure 12).
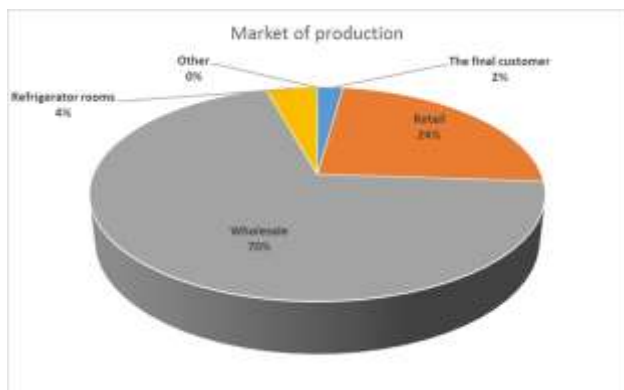

Fig. 12: The market served in the Value Chain

When asked about the sales tendency, 45.7% of the surveyed enterprises reported an increase, while 31.4% stated that it remained the same. In contrast, 17.1% mentioned a decrease, and 5.7% reported a significant increase. None of the respondents reported a significant decrease in sales (Figure 13).
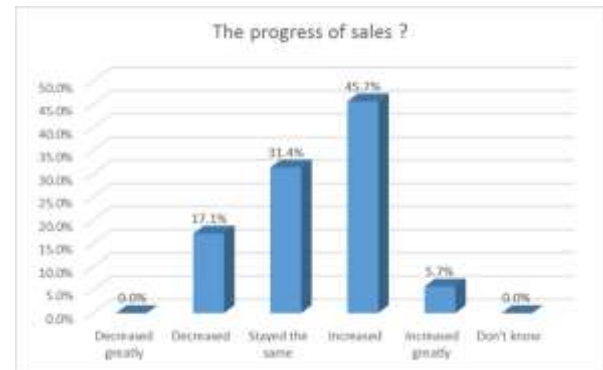

Fig. 13: Sales trend

Approximately 59.4% of the surveyed enterprises reported an increase in profit when asked about changes in profit. Additionally, 28.1% stated that it remained the same, while 6.3% mentioned a decrease in profit. Furthermore, 6.3% reported a significant increase in profit, while none indicated a significant decrease (Figure 14).

Fig. 14: Profit trend

The survey data regarding investments in cooling rooms provide us with the following evidence: approximately 48.5% of the surveyed enterprises reported an increase in investments. In comparison, 51.5% stated that the investments remained the same. None of the respondents reported a decrease in investments, nor did any indicate a significant increase or decrease (Figure 15).
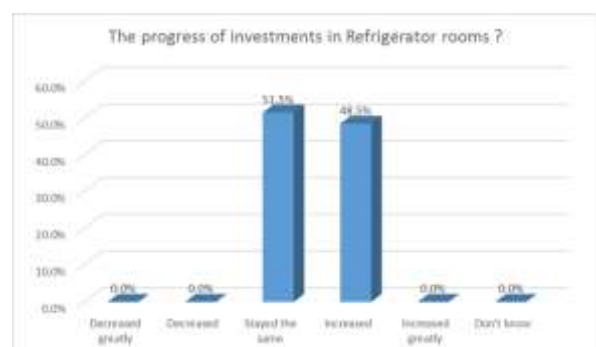

Fig. 15: Investments in Cold Storage Rooms

Regarding the Entrepreneur's opinion about Cold Storage investments, about 97% of surveyed enterprises said it has stimulated the production of agricultural and livestock products, and only 3% of them said it had not had such an impact (Figure 16).
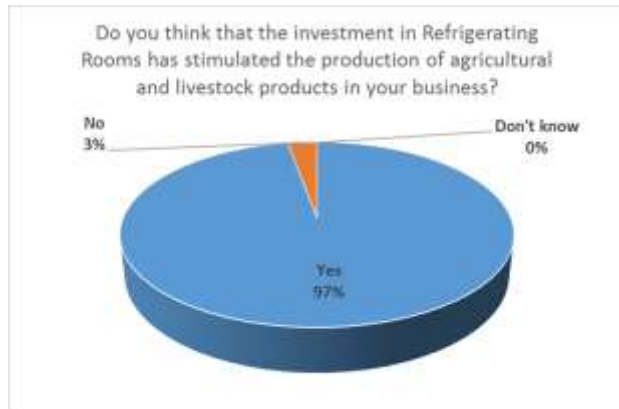

Fig. 16: Entrepreneur's opinion about Cold Storage investments

4.3 Regression Analysis

As described in the methodology chapter, the reviewed model in our study is the relationship between Sales of Agriculture Products and three other independent variables: Investments, Capacity, and Loss Reduction of Cold Storage.

Regression

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	X3, X2, X1[a]		Enter

a. All requested variables entered.

Dependant Variable:
Y (Sales) - Total Sales of Apple product

Predictors:
X_1 (Investments) - Total amount of Investments in Cold Storage
X_2 (Capacity) - Total Capacity of Cold Storage
X_3 (Losses reduction) - The percentage of Losses Reduction

Table 1. Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.999[a]	.998	.998	2471803.124	.998	5344.183	3	31	.000	1.675

a. Predictors: (Constant), X3, X2, X1

b. Dependent Variable: Y

The R^2 value of 99.8%, as shown in Table 1, indicates that the behavior of three independent variables, namely X_1 (Total amount of Investments in Cold Storage), X_2 (Total Capacity of Cold Storage), and X_3 (The percentage of Losses Reduction), explains 99.8% of the variance in Y, which represents the Total Sales of Apple products.

Table 2. ANOVA

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.796E16	3	3.265E16	5344.183	.000[a]
	Residual	1.894E14	31	6.110E12		
	Total	9.815E16	34			

a. Predictors: (Constant), X3, X2, X1

b. Dependent Variable: Y

Table 2 above shows that F (3.31) = 5.344, p-value = 0.000a < 0.05, R^2 = 0.998, which means that the Regression Model is Statistically Important.

Table 3. Coefficients

Coefficients

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	95.0% Confidence Interval for B Lower Bound	Upper Bound	Collinearity Statistics Tolerance	VIF
1	(Constant)	163761.519	763029.704		.215	.831	-1392447.822	1719970.860		
	X1	529.508	100.164	.533	5.286	.000	325.222	733.793	.006	163.431
	X2	95140.855	20449.601	.463	4.652	.000	53433.619	136848.091	.006	158.838
	X3	1814307.682	3115644.207	.006	.582	.565	-4540090.572	8168705.937	.558	1.793

a. Dependent Variable: Y

In Table 3 above are shown data regarding the Individual tests of Independent Variables;
P-value = 0.000 < 0.05 Variable X_1 is statistically important for Y, unique and perfect correlation.
P-value = 0.000 < 0.05 Variable X_2 is statistically important for Y, unique and perfect correlation.
P-value = 0.565 > 0.05 Variable X_3 is not statistically important for Y.

Regression Model:
Y = 163,761 + 530 * X1 + 95,141 * X2 + 1,814,308 * X3

Where:
Y (Sales) - Total Sales of Apple product
X_1 (Investments) - Total amount of Investments in Cold Storage
X_2 (Capacity) - Total Capacity of Cold Storage
X_3 (Losses reduction) - The percentage of Losses Reduction

$$Sales_t = 163,761 + 530 * Investments_t + 95,141 * Capacity_t + 1,814,308 * Losses\ Reduction_s$$

Based on the above findings, it can be evidenced that a positive relationship between Sales volume, Cold storage investments, Capacity, and Losses reduction, stressing the effect of the last predicting variables in determining the behavior of the first dependent variable.

It means that sales volumes of apple fruits are dependent on cold storage investments, and their capacity and loss reduction derived from these investments in the cold supply chain.

Table 4. Collinearity Diagnostics

Model Dimension		Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	X1	X2	X3
1	1	3.349	1.000	.02	.00	.00	.01
	2	.526	2.522	.29	.00	.00	.02
	3	.123	5.215	.68	.00	.00	.92
	4	.002	42.097	.01	1.00	1.00	.04

a. Dependent Variable: Y

Eigenvalues and condition index values are displayed in the Collinearity Diagnostics Table 4.

Table 5. Residual Statistics

Residuals Statistics	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	750224.06	2.53E8	43068571.43	5.368E7	35
Std. Predicted Value	-.788	3.903	.000	1.000	35
Standard Error of Predicted Value	468600.063	2007537.250	774424.964	318477.623	35
Adjusted Predicted Value	769020.56	2.58E8	43306553.94	5.443E7	35
Residual	-7338610.000	6240981.000	.000	2360235.103	35
Std. Residual	-2.969	2.525	.000	.955	35
Stud. Residual	-3.912	2.572	-.037	1.111	35
Deleted Residual	-1.274E7	6473643.000	-237982.516	3333793.952	35
Stud. Deleted Residual	-5.407	2.852	-.067	1.306	35
Mahal. Distance	.251	21.456	2.914	4.086	35
Cook's Distance	.000	2.814	.144	.531	35
Centered Leverage Value	.007	.631	.086	.120	35

a. Dependent Variable: Y

A summary of Residual Statistics of the model is shown in the above Table 5.

5 Conclusion

The cold storage investments affect market developments of agriculture products in Albania. The study found that increasing cold storage capacity is associated with increased production and sales of agricultural products.

Using the Multiple Linear Regression method proved the alternative hypothesis H1: The effect of Investments, Capacity, and Loss Reduction of Cold Storage is important in the Sales of Agriculture Products. Evidence showed a significant positive relationship between sales of agricultural products and investments in cold storage capacities.

What comes out from research findings makes the authors recommend increasing investments in cooling rooms as it will stimulate the production and sales of agricultural products. It is significant for agriculture enterprises focused on fruits and vegetables to better understand the investments in refrigerator rooms and their effect on the market drivers.

Farmers and entrepreneurs will insist on increasing their investments in cold storage capacity, by knowing that this will result in extending product consumption time, and as a consequence expanding their internal consumption markets and in cases of exporting their fruits and vegetables, in their export markets.

Also, it should be a strong signal for different government bodies and agencies as their programs and policies should be focused on stimulating investments in cooling rooms and getting an outcome in developing the agriculture sector.

These findings are really important for the agriculture entrepreneurs, but more important for the government, because they can now have an evidenced relationship to apply for different incentives in cold storage investments, generating an increased contribution of the agriculture sector in the GDP of the country.

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Conflict of Interest

The authors have no conflicts of interest to declare.