



The economics of marketing the apricot crop and measuring marketing efficiency and the factors affecting it in Salah al-Din - Al-Alam District as a model for the 2022 production

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ABSTRACT

The high marketing margin and low marketing efficiency of apricots in Salah al-Din Governorate were the main goals of studying this crop, as well as estimating marketing costs and measuring marketing efficiency. A random sample was chosen in this research, consisting of 75 farmers in Al-Alam District, and the total number was 22 questionnaires, and retail stores 46. The results showed that the retailer's profits came in first place, reaching, on average, for the year (2022) about 296.900 dinars. The results also showed the total production costs per dunum and per ton for the apricot crop (389.000, 572.000) dinars, respectively, and marketing efficiency was measured in the study area. The study showed poor performance of the marketing system for the apricot crop along the marketing channels, which is low when compared with the marketing systems of the rest of the countries of the world. The most important variables affecting marketing efficiency, as the results that could be obtained indicate that the linear formula The independent variables are the best according to economic and statistical standards. It can be noted that (the costs of boxes and packing bags, the costs of packing and loading, the costs of transportation, and the distance of the marketing center) are linked to the amount of marketing efficiency in an inverse relationship. Either production costs and the variable of experience in agriculture are linked to a direct relationship with the amount of marketing efficiency, and this is consistent with the logic of economic theory. This study continued to open new wholesale outlets and expand wholesale offices, as the study showed that there is scarcity and scarcity in wholesale markets, and this in turn leads to many wholesalers monopolizing apricot fruits and selling them at prices that suit them.

Keywords: Marketing economics, influencing factors, Marketing efficiency.

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INTRODUCTION

The agricultural sector suffers from production and marketing obstacles and problems that limit its ability to grow and perform its required role in achieving food security and a better standard of living for its workers. [1]. Marketing plays an important role within society, and it represents one of the important activities that must be carried out and practiced by business organizations. Marketing also provides important professional opportunities within its business fields [2]. Agricultural marketing, from a physical standpoint, begins directly when agricultural producers sort, grade, and package agricultural products and transport them to the markets to find someone to deliver them to the consumer's table, through marketing routes [3]. In general, it has a comprehensive and continuous function before producing the commodity, by studying the final consumer's needs, desires, habits, traditions, motivations, and purchasing power. Therefore, it requires providing data to draw conclusions and work to produce the goods in the appropriate place, time, and price [4]. Studying marketing margins is important in understanding the marketing problems facing the parties to the marketing process. Marketing margins increase as individual income increases because the income elasticity of demand for marketing services is higher than that of demand for agricultural products. Therefore, the more the economic structure grows [5], the success of the marketing process also gives an image through marketing efficiency, which is defined as the percentage of the output of marketing activities expressed in satisfying the consumer's desire for agricultural products. [6]. Therefore, efficiency is one of the most important economic criteria used to measure market performance and improve marketing efficiency [7]. Thus, marketing is a social and administrative process through which individuals and organizations obtain what they need, create value, and exchange it with others [8]. This is done by creating, displaying and exchanging products and services of value with

Others freely create shared value among consumers. [9]. Because Al-Ilm District is famous for growing fruits in large areas and in large numbers, it was chosen as an applied model for the study, and because the most popular and desirable fruits that are in wide demand by consumers are apricots. The nutritional value of dried apricots is higher than that of fresh apricots. The lack of awareness among most Salah al-Din farmers in the field of fruit marketing has made studying the marketing of

apricot fruit an urgent necessity in order to deliver the product in a way that meets the desires of local markets and local consumers, or through studying the commodity approach and tracking the marketing of the apricot crop under study from the beginning of production until reaching the final consumer. [10]. Production and marketing costs were explained, including measuring the marketing margin and marketing efficiency, and then marketing efficiency was studied. As well as knowing the factors affecting marketing efficiency through using econometrics and mathematical formulas in analysis.

Research problem:

The research problem centres on the low marketing efficiency of the apricot crop due to the high marketing margins resulting from increased marketing costs and middlemen's profits, which leads to an increase in the price paid by the consumer and a decrease in the amounts received by the producers.

Research importance:

The importance of the research comes from the importance of marketing the apricot crop to Al-Alam District and Salah al-Din Governorate, and its many obstacles and problems that cause difficulty in delivering the crop to the last consumer in the shortest time and cost.

Research objectives:

1-Estimating and calculating the production and marketing costs, marketing margins, and profits for the marketing course of the apricot crop in Al-Alam District for the 2022 production season. 2- Calculating marketing efficiency and the most important factors affecting it for the apricot crop.

Research hypothesis:

The study assumes that there is a significant weakness in the performance of the actual and facilitating marketing functions, as well as a decrease in the preparation of grades and ranks of apricot fruit that producers market in wholesale markets, which negatively affects the sale of these products, and also an increase in the marketing margin, which leads to the difference between the consumer price and the producer price being less than in favor of mediators.

Material and methods:

The study relied on the commodity approach in studying the marketing of the apricot crop, and the use of mathematical equations and formulas in measuring and estimating marketing margins, marketing efficiency, etc. The descriptive approach was used to achieve the research objectives, as this approach is considered appropriate for accessing detailed data and facts about the targets' needs at a specific time [11].] The standard model was used for the factors affecting the marketing efficiency of the apricot crop. A multiple regression analysis was conducted for the factors affecting the marketing efficiency using the least squares (OLS) method through a number of variables (costs of boxes and packing bags, packing and loading costs, transportation costs, experience in agriculture, Marketing Center Dimension) and then the data and facts were classified, processed, and carefully analyzed. The correlations were shown to extract their implications and reach comprehensive and accurate results and generalizations about the phenomenon in question [12]. And using statistical analysis to measure the time trend, and using the statistical program (SPSS), the primary data was obtained through personal interviews and through questionnaire forms that were designed for each of the (producer, wholesaler, and retailer). Where product-specific data was collected on (75) farms as a stratified random sample that represented (10%) of the study population consisting of (754) farms of Apricot crop in Al-Alam district, data on the wholesaler was collected on (22) wholesale offices and a merchant. Retail (46) as a random sample from the study population.

Results and discussion:

Estimating the total production costs of the apricot crop in Al-Alam District.

Agricultural costs are the costs of agricultural production requirements, and agricultural costs differ from costs in other economic sectors, as the largest part of those costs is fixed and does not change, and is called fixed costs. [13]. The concept of costs in general means the costs of services and marketing operations, including the costs of transportation, storage, sorting, grading, assembly, and selling, whether wholesale or retail, and financing, in addition to the fees charged by intermediaries. Marketing costs and their analysis are considered one of the most important areas of marketing studies. [14]. Table 1 shows the items of estimated variable production costs per dunum and per ton of apricot crop in Salah al-Din Governorate - Al-Alam District during the 2022 production season. It is clear from the table mentioned below that the total variable production costs per dunum and per ton of apricot crop was (183.000) , 269.07 dinars, respectively.

First :Variable cost items:

1. **Plowing and land preparation costs:** This means (plowing, leveling, hoeing, and clearing the land). Fruit orchards require these operations, but they are not correctly performed every season. The costs of plowing and preparing the land for one dunum and one ton for the apricot crop are estimated at approximately (25.000, 36.760) dinars. Respectively, it constituted (13.66%) of the total variable costs .
- 2- **The costs of sprinkler operations and maintenance:** The costs of sprinkler operations and maintenance per dunum and per ton were (12.000, 17.640) dinars, respectively, for the apricot crop, and constituted a percentage of (6.56%) of the total variable costs.
- 3- **Fertilization costs (animal and chemical):** The costs of fertilization operations per dunum and ton amounted to about (42.000, 61.760) dinars for the apricot crop, and fertilization costs constituted about (22.95%) a percentage of the variable production costs, and thus it ranked first in terms of relative importance. Regarding variable costs, it must be noted here that all animal manure is added in one batch, while chemical fertilizer is added in different batches.

4- Costs of pesticides of all kinds: The costs of adding pesticides of all kinds per dunum and per ton are (15.000,22.050 dinars.) for the apricot crop and constituted a percentage of (8.19%) of the total variable production costs. Control is carried out twice or more, according to the need for the crop.

5-Orchard renewal costs: meaning the costs of planting new seedlings (to compensate for old, damaged or infected trees). The orchard renewal costs per dunum were approximately (31000, 45580) dinars for the apricot crop and constituted a percentage of (16.94%) of the total variable production costs.

6- Fuel and oil costs: The costs of using fuel and oils per dunum and per ton were about (19.000, 27.940) dinars for the apricot crop, respectively, and constituted (10.38%) of the total variable production costs.

7-Irrigation water and electric pump costs: The costs of water and electricity per dunum were approximately (13.000, 19.110) dinars for the apricot crop, respectively, and constituted a percentage of (7.10%) of the total variable production costs.

8-Costs of maintaining and repairing equipment: The costs of maintaining and repairing agricultural equipment used per dunum and ton were approximately (4000, 5880) dinars, respectively, for the apricot crop, and constituted a percentage of (2.19%) of the total variable production costs.

9-Rented labor costs: Rented labor means workers who are hired to carry out farm work, and include wages for (fertilization and pesticide spraying, hoeing and cleaning, irrigation, and harvesting). The costs of rented labor per dunum and ton were approximately (18.000, 26.470) dinars for the apricot crop, respectively, and constituted a ratio of (9.84%). of total production costs.

10-Other costs: These costs were represented by a group of items, namely (fees collected from farms, guarding, and purchasing some supplies). Other costs per dunum and per ton were (4000, 5880) dinars, respectively, for the apricot crop, and constituted a percentage of (2.19%) Of the total variable production costs.

Table (1) Items of estimated production costs per dunum and per ton of apricot fruit in Salah al-Din Governorate - Al-Alam District during the 2022 production season.

Variable cost items	Costs per dunum	Costs per ton	Relative importance
Plowing and land preparation costs	25000	36760	13.66
The costs of sprinkler operations and maintenance	12000	17640	6.56
Fertilization costs (animal and chemical):	42000	61760	22.95
Costs of pesticides of all kinds	15000	22050	8.19
Orchard renewal costs	31000	45580	16.94
Fuel and oil costs	19000	27940	10.38
Irrigation water and electric pump costs	13000	19110	7.10
Costs of maintaining and repairing equipment	4000	5880	2.19
Rented labor costs	18000	26470	9.84
Other costs	4000	5880	2.19
the total	183000	269070	100

Source: collected and calculated by the researcher based on the questionnaire

Second: Fixed cost items:

Table (2) shows the estimated fixed production costs per dunum and one ton of apricot crop in Salah al-Din Governorate—Al-Alam District during the 2022 production season. The total fixed production costs per dunum and one ton of apricot crop (206000, 302930) are dinars, respectively.

The most important items of fixed production costs are:

1. Family labor costs: The family labor costs per dunum and per ton were approximately (130.000, 191.170) dinars, respectively, for the apricot crop. They constituted a percentage of (63.11%) of the total fixed production costs, and thus, they occupy first place in terms of the relative importance of fixed cost items. They ranked second in terms of the relative importance of fixed cost items.
2. Orchard rental costs: The orchard rental value has been calculated according to the difference in ownership. It may be ownership, agricultural contract rent, or orchard rent. The orchard rental costs for one dunum and one ton were approximately (33.000 and 48.530) dinars, respectively, for the apricot crop, and constituted a percentage of (16.02%) of the total fixed costs.
3. Interest on capital: The alternative costs of invested capital were calculated, which are the interest rates in the markets. The interest rates in agricultural banks ranged between (8-10). The interest rate was calculated as approximately (10%) on the total payments spent by the farmer. On production requirements and production processes, these costs per dunum and per ton were approximately (40.000, 48.530) dinars, respectively, for the apricot crop, and constituted a percentage of (19.41%) of the total fixed production costs.
4. Depreciations: Depreciation costs were calculated for some equipment that the farmer uses in his agricultural (productive) operations, such as (water pumps and control sprayers). The average depreciation costs per dunum and ton were about (3000, 48530) dinars, respectively, for the apricot crop, and constituted a percentage of (1.46%) of

the total fixed production costs.

Table (2) Components of the average fixed costs per dunum and ton and the relative importance of the apricot crop for the 2022 agricultural season.

fixed cost items	costs per dunum	costs per ton	Relative importance
Family labor costs	130000	191170	63.11
Orchard rental costs	33000	48530	16.02
Interest on capital	40000	58820	19.41
Depreciations	3000	4410	1.46
the total	206000	302930	100

Source: It was collected and calculated by the researcher based on the questionnaire

Table (3) shows that the total production costs per dunum and per ton for the apricot crop are (389.000, 572.000) dinars, respectively. We can summarize that fixed costs constitute the largest proportion of the total costs.

Table (3) shows the items of the average total costs of cultivation per dunum and ton of apricot crop and their relative importance

cost items	costs per dunum	costs per ton	Relative importance
variable costs	183000	269070	47.04
Fixed costs	206000	302930	52.96
Total cost	389000	572000	100

Source: It was collected and calculated by the researcher based on the questionnaire.

Development of economic indicators for apricot crop prices in Salah al-Din Governorate - Al-Alam District for the 2022 production season. Price development for the apricot crop in Salah al-Din Governorate - Al-Alam District for the year (2022).

1. **Prices at the farm level:** It was found that the average prices for the (apricot) crop were around (730) dinars/kg during the productive season, and the lowest price at the farm level was around (460) dinars/kg. The highest price at the farm level during the productive season (12 weeks) was about (985) dinars/kg for the (apricot) crop.
2. **Prices at the wholesale level:** It was found that the average prices of the apricot crop were around (845) dinars/kg during the production season. The lowest price at the wholesale level during the period was (520) dinars/kg. As for the

highest price at the wholesale level during the same period, it was about (1290) dinars/kg for the (apricot) crop.

3. **Prices at the retail level:** It was found that the average prices of the apricot crop were around (1195) dinars/kg, respectively and during the production season. The lowest price at the retail level during a 12-week period was around (910) dinars/kg. The highest price at the retail level during the same period (12 weeks) was about (1750) dinars/kg for the (apricot) crop.

Distribution of the share of the producer, wholesaler and retailer from dinars to the consumer

- 1- The producer's share of the consumer's dinar.

Regarding the price and share of the product in the consumer's dinar, given that it is sold at the farm gate, it amounts to (730 and 61.08%), respectively.

- 2- The wholesaler's share of the consumer's dinar: With regard to the price of the wholesaler's share of the consumer's dinar, the average for each of them during the production season was (845, 9.62%), respectively.
- 3- The retailer's share of the consumer's dinar: With regard to the price and the retailer's share of the consumer's dinar, the average for each of them, respectively, and during the study period amounted to about (1195, 29.28%), respectively.
- 4- The share of intermediaries in the consumer dinar: As for the share of intermediaries in the consumer dinar from the apricot crop on average, during the study period, it amounted to about (38.9%), and it becomes clear to us that the share of wholesale and retail traders was high, which represented a somewhat high percentage of the consumer dinar.

Table (4) Prices and distribution of the consumer dinar share of the apricot crop in Salah al-Din Governorate - Al-Alam District for the 2022 production season.

the week	Prices are dinars/kg			Distribution of consumer dinars			
	Farm gate	Wholesale offices	Retail markets	Product share	Wholesaler's share	Retailer share	The share of intermediaries
Average	730	845	1195	61.08%	9.62%	29.28%	38.9%

Source: Prepared by the researcher based on questionnaire forms.

Estimating the marketing margins between the different marketing stages of the apricot crop in Salah al-Din

Governorate - Al-Alam District during the study period.

Studying the marketing margin is important as it is considered one of the most important criteria that helps to identify marketing differences, as well as to identify the marketing problem and judge the efficiency of the marketing activity. The marketing margin is

Defined as the difference between the price paid by the consumer and the price received by the producer [15]. Marketing margins are expressed either in absolute value, which represents the difference between the selling and buying prices in two stages known as monetary units, or in relative value (percentage), which is the absolute difference divided by the selling price and multiplied by *100. [16]. Table (5) Marketing margins between the different marketing stages of the apricot crop in Salah al-Din Governorate - Al-Alam District for the 2022 production season.

the crop	Marketing margins					
	Wholesale – Producer		Retail - Wholesale		Retail – product	
	Absolute	relative	absolute	relative	absolute	Relative
Apricot	115	13.60	350	29.28	465	38.91

Source: Prepared by the researcher based on the data contained in Tables 3 and 4

We note from the table above that the highest percentage of expenses paid by the consumer goes to the retailer (the stage between the retailer

and the producer), where the average percentage was (38.91%). This means that (38.91) of the consumer dinars that he paid to obtain one kilogram of the products that to meet his desires, profits go to intermediaries, marketing operations, transportation, etc., then the next step is (the stage between the retailer and the wholesaler), and its percentage was (29.28%). As for the producer's share of consumer expenditures, it was estimated at 13.60%, which is the lowest calculated value.

Estimating the marketing costs of the apricot crop in Salah al-Din Governorate - Al-Alam District during the study period.

There are three levels of marketing costs in the field of agricultural marketing. About the costs of marketing the apricot crop, we can follow the commodity according to the commodity approach from the producer (farmer) to the final consumer [17]. and through the details of the following marketing costs:

First: Marketing costs between the farm and the wholesale markets: Marketing costs for the farmer are the costs incurred by the farmer while transporting the crop from the farm to the place of sale [18].

Table (6): Total marketing costs incurred by the producer per ton and per kilogram in Al-Ilm district during the study period.

Total marketing costs borne by the farmer	Apricot Value in dinars
Total costs incurred by the farmer per ton	32750
Total costs incurred by the farmer per kilogram	32.75

Source: Prepared by the researcher based on questionnaire forms.

Second: Marketing costs between the wholesale market and the retail market

These are the costs borne by the wholesaler and retailer in the wholesale market. Through field visits and collecting information through questionnaire forms, it was found that the commission that the wholesaler adds to the farm price is a percentage of the wholesale price estimated at approximately (10%). The wholesaler adds this commission to the selling price, as well as the amount of (500) dinars on each box, including The average loading fee is the retailer bears (250) dinars per box, and all of this as the buyer.

Its cost was collected through questionnaire forms designed for this purpose and collected from the central wholesale markets in Al-Alam district during the production season. The average marketing operations costs for the wholesaler were approximately (4.8) dinars/kg. The average quantities sold during one month were about (95.000) kg, and the average costs of marketing operations in wholesale stores were about (4.800) dinars, distributed among the costs mentioned later, and Table (7) shows this.

Table 7: Total marketing costs incurred by the wholesaler per ton and per kilogram in Al-Alam district during the study period.

The total marketing costs borne by the wholesaler	Apricot Value in dinars
The total marketing costs borne by the wholesaler is JD/ton	5200
The total marketing costs borne by the wholesaler is JD/kg	5.2

Source: Prepared by the researcher based on questionnaire forms.

Third: The costs incurred by the retailer in his store

The average costs of marketing operations the retailer bears in his store were about (53.1) dinars/kg. The costs borne by the retailer

in his store, the costs of damaged quantities in his store, the costs of transportation to the retail store, and the costs of damaged

quantities, constituted approximately (29.38%, 49.34%, 11300%) of the total costs, respectively, borne by the retailer, and Table No. (8) shows this.

Table (8) Paragraphs of marketing costs requested by an independent trader per ton and one kilogram for the 2022 apricot crop.

Retailer cost items	Apricot crop	
	Value in dinars	Relative importance
Transportation costs to the retail store	26200	49.34
The costs incurred by the retailer are in place	15600	29.38
Costs of damaged quantities	11300	21.28
Average retailer's marketing costs per ton	53100	100
Average retailer's marketing costs per kilogram	53.1	

Source: Calculated by the researcher based on questionnaire forms.

Wholesaler and retailer profits:

It is clear from Table (9) that the highest profits earned were the profits of the retailer, which amounted to about (296.900) dinars per

kg, while the profits of the wholesaler amounted to (109.800) (dinars/kg), and the profits of the producer amounted to (139.250) (dinars/kg), and it appears that the largest A percentage of profits goes to the retailer.

Table (9) Components of the marketing margin for the apricot fruit crop in Salah al-Din Governorate - Al-Alam District for the production season.

Product price (dinars)	Total production costs	Total marketing costs for farms	Total marketing costs for the wholesaler (dinars)/kg	Wholesale price (dinars)	Product profits	Wholesaler profits (dinars)	The total costs of the retailer's marketing operations (dinars)/kg	Retailer price (dinars)	Retailer profits (dinars)
730	5720	18.750	5200	845	139.250	109.800	18.750	1195	296.900

Source: Prepared by the researcher based on data from tables (1,2,3,4,5,6).

Measuring marketing efficiency:

Measuring marketing efficiency is difficult given the problem of measuring the consumer benefit of the final outputs of the marketing process. If we are able to measure marketing costs, it is difficult to measure the performance of marketing services. However, some economists have developed some standards based on which an approximate picture of marketing efficiency has been measured. [19] We mention the following formulas: First, we measure the marketing efficiency of the apricot fruit crop in Saladin Governorate - Al-Ilm District through the formula that reflects the ratio between the total costs. Marketing and total costs (production and marketing) as follows.

Table (10): Calculating marketing efficiency using the three metrics that link marketing costs, production costs, and the total value of the marketed product of apricot fruit.

Marketing competence	
Marketing efficiency %(1)	96.82
Marketing efficiency %(2)	83.26
Marketing efficiency %(3)	50.56

The researcher approved the questionnaire form.

Using the scale, the results of marketing efficiency for the fruit crop (apricots) were as follows, respectively (96.82%, 83.26%, and 50.56%). It is clear from Table (10) that there is a clear variation in marketing efficiency, and the reason for this is due to the variation in selling prices to the consumer. There is also a variation in Marketing and production costs. The difference between the three standards is the method of comparison. The first reflects the ratio between marketing costs and total costs (marketing and production), where marketing efficiency is high because marketing costs are included in its calculation with production costs, and the reason for the decrease in total costs (marketing and production) in this study compared to marketing costs is This leads to a decrease in marketing efficiency. The second measure reflects the ratio between marketing margins and production costs, and marketing margins include marketing costs + profits. Due to the increase in brokers' profits, this leads to an increase in marketing margins, which leads to a decrease in marketing efficiency.

The third measure reflects the ratio between Costs (marketing and production) and the quantitative value of the marketed product. Because of the low marketing and production costs, marketing efficiency is high compared to the second measure.

Analyzing and interpreting the model's results and measuring the factors affecting the marketing efficiency of the apricot crop.

A multiple regression analysis was conducted for the factors supposed to influence the marketing efficiency of the apricot crop, and the analysis results shown in the table below were obtained. It became clear that all variables had a significant impact on economic efficiency at the 1% and 5% significance levels, and the signs of the parameters were consistent with the logic of economic theory.

$$Y = 93.68 + 0.0004X_1 - 0.005X_2 - 0.006X_3 - 0.008X_4 - 0.101X_5 + 0.021X_6$$

$$t = (286.82) (26.514) (-22.440) (-13.551) (-18.510) (-2.415) (2.976)$$

$$R^2 = 0.88 \quad F = 199.662 \quad D.W = 1.833$$

The marketing efficiency of the apricot crop in Al-Alam District and the factors affecting it for the 2022 production season

Variable	Coefficient	S.E	t.statistics	P.value
Constant	93.68	0.326	286.82	0.000
X ₁	0.0004	1.080	26.514	0.000
X ₂	- 0.005	0.000	-22.440	0.000
X ₃	-0.006	0.000	-13.551	0.000
X ₄	-0.008	0.000	-18.510	0.000
X ₅	-0.101	0.042	-2.415	0.016
X ₆	0.021	0.007	2.976	0.003
$R^2 = 0.88 \quad F = 199.662 \quad D.W = 1.833$				

Source: Prepared by the researcher based on the outputs of the Reviews 12 program

Through the value of (R^2) of (0.88), it was shown that the explanatory variables included in the model were able to explain 88% of the changes occurring in marketing efficiency, while the remaining percentage of 12% is due to other variables not included in the model that are attributed to The random variable, and the (F) value of (199.662) showed the significance of the estimated model as a whole at a significance level of 1%. For the standard model to be acceptable and to know the extent of consistency and applicability of the assumptions regarding random error, standard tests must be conducted to detect standard problems, so the autocorrelation problem was revealed. (Auto correlation) using the (D.W) test, which showed that the model is free of this problem through its value of (1.833), as it turned out to be larger than the value of (du) of (1.722) and smaller than the value of (4-du) of (2.248). Using the Heteroskedasticity Test: Breusch-Pagan-Godfrey to detect the problem of non-stationarity of homogeneity of variance, which also showed that the estimated model does not suffer from the problem of homogeneity of variance through the value ($F = 2.715$).

As for the problem of multicollinearity, it was detected using the variance inflation factor (VIF) test, which when applied showed that the model

does not suffer from the problem of multicollinearity, as its value reached = (3.275).

The values of the parameters of the estimated model show that the parameter of the production costs variable came with a positive sign that is consistent with the logic of economic theory and is statistically significant at the 1% level of significance, as the increase in production costs in turn leads to an increase in the quantities produced from the cucumber crop, which reflects positively on marketing efficiency, as it If production costs increase by one unit, it leads to an increase in marketing efficiency by 0.0004%. As for the variable costs of boxes and packing bags, it turns out that the sign of the variable is negative, reflecting the inverse relationship between the independent variable and marketing efficiency, which reached (-0.005). Through the (t) test, the value of which reached (22.440) It turns out that the variable is statistically significant at the 1% level, which indicates that increasing these costs by one unit leads to a decrease in marketing efficiency by 0.005%. The same applies to the variable packing and loading costs, which had a value of (0.006) and a negative sign showing the inverse relationship with Marketing efficiency: This is consistent with economic theory, as increasing packing and loading costs by one unit leads to a decrease in marketing efficiency by 0.006%. The variable is statistically significant by (t) amounting to (13.551) at the significance level of 1%. As for the transportation costs variable, it is also an inverse variable with marketing efficiency, as its parameter was consistent with economic logic with a negative sign amounting to (-0.008). Statistically, through the t-test, it was found that the variable was significant at the 1% level of significance. This means that the transportation cost increased by one unit. It leads to a decrease in marketing efficiency by 0.008%. The distance of the marketing center: This variable is one of the important factors that negatively affect marketing efficiency. The farther the marketing centres are from the farms, the higher the costs the farmers bear. The parameter of the variable had a negative sign, reflecting the negative relationship between the dependent variable and the explanatory variable, as it reached (-0.101) and is significant. A statistic at a significance level of 5%, which indicates that the farther the marketing centers are from the productive farms, the lower the marketing efficiency. As for the variable of experience in agriculture, which is represented by years of experience in agriculture, which is associated with a positive relationship with marketing efficiency, as the

parameter of the variable reached (0.021), and the sign confirms The logic of economic theory, through the value of (t), shows the significance of the variable statistically at a significance level of 1%, which indicates that increasing years of experience by one unit leads to an increase in marketing efficiency by 0.021.

Conclusions:

1. The apparent increase in production costs. This is due to the increase in the prices of production inputs and the lack of government support, which leads to an increase in the prices of the fruits under study.
2. As for the absolute importance of the marketing margins for retailers, they were very high due to the difference in prices between the wholesale market for the two aforementioned crops and the retailer's price, and without making the highest percentage of expenses paid by the consumer go to the retailer (the stage between the retailer and the producer), where it was The average percentage is (38.91%). This means that (38.91) of the consumer dinars that he paid to obtain one kilogram of products that satisfy his desires, the profits go to the intermediaries, marketing operations, transportation, etc., and then comes after that (the stage between the retailer and the wholesaler). It was Its percentage is (29.28%). As for the producer's share of consumer expenditures, it was estimated at (13.60%), which is the lowest calculated value.
3. The decrease in the producer's share of the consumer dinar. The increase in the intermediaries' share at a level approaching the producer's share of the consumer dinar is due to the ability of the intermediaries to sell without providing marketing services parallel to the services provided by the producer.
4. The most important factors affecting marketing efficiency through variables showed an inverse effect with the production variable. We conclude that the variables (costs of boxes and packing bags, packing and loading costs, transportation costs, and the distance of the marketing center) are associated with the amount of marketing efficiency in an inverse relationship, either production costs and the variable experience in agriculture. It is directly related to the amount of marketing efficiency, and this is consistent with the logic of economic theory.

Recommendations:

- 1- Opening new wholesale outlets and expanding wholesale offices, as the study showed that there is scarcity and scarcity in wholesale markets, and this in turn leads to many wholesalers monopolizing fruits and selling them at prices that suit them, as well as the necessity of owners of wholesale offices performing the necessary marketing functions of (sorting, grading, and classifying). Packing...etc.
- 2- Encouraging retailers to have a refrigerated pavilion in their offices that provides appropriate temperatures for the crops to limit damage that may occur, which may lead to an increase in their prices, as the consumer bears the increase in these prices.
- 3—The study recommends that the producer use modern cultivation methods, care for the crops, and combat pests and diseases that could affect them. It also recommends that the producer classify his crops into grades and ranks to increase selling prices and achieve a reasonable and fair profit.

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اقتصاديات تسويق محصول المشمش وقياس الكفاءة التسويقية والعوامل المؤثرة لها في صلاح الدين_ قضاء العلم انموذجا للموسم الانتاجي 2022

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الخلاصة

إن ارتفاع الهامش التسويقي وانخفاض الكفاءة التسويقية المشمش في محافظة صلاح الدين كان الهدف الرئيسي من دراسة هذه المحصول كذلك تقدير التكاليف التسويقية وقياس الكفاءة التسويقية، تم اختيار عينه عشوائية في هذا البحث مكونة من (75) مزارعاً في قضاء العلم، والجملة عددها (22) استمارة، ومن محلات التجزئة (46). وظهرت النتائج ان إرباح تاجر التجزئة جاءت بالمرتبة الاولى حيث بلغت كمتوسط لسنة (2022) حوالي (296.900) دينار. كما اظهرت النتائج إجمالي تكاليف الإنتاج الكلية للدونم والطن الواحد لمحصول المشمش (389000, 572000) ديناراً على التوالي وتم قياس الكفاءة التسويقية في منطقة الدراسة، وبينت الدراسة ضعف أداء النظام التسويقي لمحصول المشمش على طول القنوات التسويقية وهي منخفضة عند مقارنتها مع النظم التسويقية لباقي دول العالم اما وجاءت اهم المتغيرات المؤثرة على الكفاءة التسويقية اذ تشير النتائج التي أمكن الحصول عليها ان الصبغة الخطية في المتغيرات المستقلة هي الأفضل وفقاً للمعايير الاقتصادية والاحصائية ويمكن ملاحظة ان (تكاليف الصناديق و اكباس التعبئة تكاليف النقل وبعُد مركز التسويق) ترتبط مع مقدار الكفاءة التسويقية بعلاقة عكسية إما تكاليف الإنتاج ومتغير الخبرة في الزراعة ترتبط بعلاقة طردية مع مقدار الكفاءة التسويقية وهذا ما يتفق مع منطق النظرية الاقتصادية. واوصى الباحث على فتح منافذ جديدة للبيع بالجملة وتوسيع مكاتب الجملة حيث أظهرت النتائج أن هناك شح وقلّة في أسواق الجملة وهذا بدوره يؤدي إلى احتكار الكثير من تجار الجملة لثمار فاكهة المشمش وبيعها بأسعار تناسبهم.

الكلمات المفتاحية: اقتصاديات التسويق، العوامل المؤثرة، كفاءة التسويق .