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Using flexible customer pricing strategies in the B2C market for vegetable products

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Abstract: *This article examines the role of price in the vegetable market. Directions for using flexible pricing strategies are based on the customer in the B2C market of vegetable products.*

Keywords: *сабзавотлар, нарх, модель, нархлар стратегияси, дўконлар ва деҳқон бозорлари.*

Introduction

Increasing consumption of organic food products and vegetable retailing and consumer choice of vegetables in countries around the world, health, sustainability, naturalness and convenience trends are seen as important factors. The global fresh vegetable market is projected to expand at a compound annual growth rate (CAGR) of 2.8% from 2022 to 2028. In this trend, organic vegetable trade consumption is expected to be 95 percent in developed countries and 75 percent in developing countries. Rising health issues and increasing consumption of fresh and organic vegetables among people in developing and developed countries are emerging as major driving factors of the market.

Decree No. PF-5853 of the President of the Republic of Uzbekistan dated October 23, 2019 "On approval of the strategy for the development of agriculture of the Republic of Uzbekistan for 2020-2030" prioritizes the "development and implementation of the state policy on food security"[1] . Also, to keep the prices of vegetables stable in the domestic consumer market, to systematically deliver to consumers, to control the sharp increase in prices and to use effective market mechanisms in it, to provide the population with vegetable products, the balance of supply and demand in the world markets, to evaluate the expected positive and negative economic changes and it is required to carry out research in the direction of further improvement of the system of assessment of emerging risks. Keeping the prices of vegetables stable, carrying out their cultivation taking into account the increasing demand, as well as increasing the quantity and efficiency of trade enterprises engaged in the sale of vegetables are among the urgent problems of this sector.

One of the decisive directions for the economic stability and competitiveness of trade enterprises is the introduction of an effective price and pricing mechanism, and the establishment of factors influencing the determination of product prices. The concept of product value is very subjective depending on the individual and the human factor. Undoubtedly, the competitive environment has its main influence on the formation of the price strategy, and in any market economy, the price is regulated on the basis of competitive mechanisms. However, these mechanisms cannot be applied to all types of products. In the countries that organize the market economy in a socially oriented way, different procedures are defined for such systems.

Since vegetable products are considered the main and primary products of consumers, a serious consideration of pricing strategies in this market is a very important issue, and it is appropriate to set them on the basis of customer orientation and social orientation.

Methods

This study on the use of flexible pricing strategies in the vegetable B2C market examines the pricing requirements of B2C entities in the vegetable trade. A value proposition created for customers has been implemented in vegetable procurement. Based on the results of the research, appropriate conclusions and suggestions were developed.

Results and Discussion

Results

About 60 percent of the population in Uzbekistan lives in rural areas, therefore, income from agriculture is a priority for developing the potential of the population living in this area. In particular, special attention is being paid to the cultivation and processing of fruits and vegetables in the Republic of Uzbekistan. Administrative and legal regulations in the country are aimed at increasing the competitiveness of horticultural products in international trade markets. Special attention is also being paid to the establishment and development of greenhouses for the cultivation of fruits and vegetables [7].

It is known that vegetables are products with a limited shelf life. Today, this factor plays a key role in the development of an effective price strategy in the retail trade of vegetables. In general, most food products have a limited shelf life. For example, according to research conducted in the USA in 2009, it was found that almost 81% of food products in retail trade and 61% of them are vegetables [8].

Pricing strategies have been widely studied in perishable industries (eg, cost-plus pricing strategies, Value-based pricing strategies, and inventory-sensitive pricing strategies)[9]. Related studies have shown that factors such as price, uncertain demand, competition, and perishable

characteristics play an important role in determining price[10]. Customer preferences (eg, quality of perishable products, distance to retailers, and price of perishable products) have been recognized as important factors in modeling people's economic behavior that are important for retailers' pricing strategies[11]. These characteristics mean that the problem of pricing perishable products is a complex, large-scale statistical modeling problem. Chang et al.'s research[12] proposed an agent-based incentive model to develop a best-practice dynamic pricing strategy for retailers. In this model, retailers change their pricing strategy based on their current circumstances. However, their model does not have the ability to perceive customer preferences or analyze the competitive environment and therefore may lead to incorrect pricing policies for local optimization. To solve this problem, an incentive model should be created that can indirectly learn the preferences of customers and optimize the pricing strategy for perishable products.

The research work takes advantage of the model-free environment provided by the multi-agent system. It uses the Q-learning algorithm to model optimal pricing strategies for perishable products, taking into account uncertain demand and customer preferences. Due to competition, retailers in the market have to adjust their prices to attract more customers. One retailer uses a Q-learning algorithm to adjust prices based on the agent's learning experience, while other retailers use traditional pricing strategies based on their circumstances. These retailers compete with each other to maximize profits. Shortcomings are allowed, but they cannot be filled. Experiments show that the dynamic pricing strategy formed by the Q-learning mechanism can be adopted as an effective dynamic pricing approach in the competitive market of perishable products that does not provide advance customer behavior.

There is usually a price difference between stores and farmers markets. This difference, if not high, has a direct impact on customer behavior. The price elasticity of consumers in purchasing vegetables is related to the following factors:

Customers usually buy their vegetables from the grocery store next door or farmers' markets. In rural areas, most are purchased from farmers' markets. But cities have two choices. Shopping at the market or store. When buying from a store, the customer mainly focuses on the price of vegetables. It evaluates the following factors:

quantity of vegetables to be purchased;

time spent in the purchase process;

total consumption amount (weekly or daily);

cost of getting to market;

costs in the purchase process in the market;

number of bila members.

If the amount of vegetables to be purchased is high, it is purchased from the markets. Based on this, it is difficult for customers to make a decision on which markets to go to. This is exactly what the proposed model will do.

Statistics on the average prices of vegetables are published by the Statistics Committee. These statistics provide an opportunity to determine price dynamics in stores and markets.

Analysis. From the results of the analysis, it is known that there is a higher price difference in farmers' markets compared to stores. In particular, compared to the average price of cabbage in stores, it is 6.08 percent cheaper in the market, greens are 8.9 percent, eggplant is 18.6 percent, and potatoes are 12.5 percent cheaper.

Average prices of some goods in farmers' markets and stores in the Republic of Uzbekistan, 1 kg. in soum[13]

Products (at D-stores/B-markets)	**2021 y**	**2022 y**	**Average price for 2021-2022 (19 observations)**	**Difference, %**
Karam-D	2143,5	3221,1	3212,0	6,08
Karam-B	1983,3	3090,9	3027,9	
Green-D	10422,4	10974,4	12340,4	8,91
Green-B	10412,5	9868,3	11330,7	
Cucumber-D	20131,3	4636,0	10350,8	12,45
Cucumber-B	18582,3	3976,4	9204,4	
Tomato-D	11586,0	4578,2	11149,9	15,05
Tomato-B	10322,8	3665,8	9691,4	
Eggplant-D	22619,6	4267,5	17448,4	18,69
Eggplant-B	13890,5	3825,3	14700,9	
Bulgarian pepper-D	23334,2	7231,5	17884,2	13,67
Bulgarian pepper-B	19353,6	6114,3	15733,9	
Pumpkin-D	2450,0	4818,2	4018,4	10,07
Pumpkin-B	2308,7	4129,4	3650,6	
Beet-D	2804,1	3652,9	4089,2	7,52
Beet-B	2586,0	3503,8	3803,4	
Carrot-D	2228,1	3212,4	3805,0	14,37
Carrot-B	1935,1	2817,9	3326,9	
Turnip-D	2615,3	3891,6	3668,9	12,54
Turnip-B	2346,8	3442,7	3260,0	
Garlic-D	-	16737,6	25261,8	21,97
Garlic-B	21819,1	14729,1	20711,7	
Onion-D	2265,2	4563,1	2539,7	12,30
Onion-B	1922,9	4012,9	2261,5	

Rediska-D	-	7898,9	9892,0	14,92
Rediska-B	9771,6	7220,5	8607,7	
Stand-D	2444,2	3030,4	3302,6	8,80
Stand-B	2175,5	3495,3	3035,4	
Potato-D	4279,1	3983,0	4416,3	12,05
Potato-B	3838,8	3548,2	3941,4	

The high discrimination of these price levels increases the desire for customers to purchase from farmers' markets. However, this behavior is limited by the following factors:

quantity of vegetables to be purchased;

travel expenses;

time of purchase;

market conditions;

product quality requirements;

quality and certificates of products;

options for obtaining information on products, etc.

On the general average level, the average price dispersion of vegetables between store and market prices per kg is 3.1 percent. According to the analysis of variance, the difference between the store and market price is 3.1 percent, and the market price is 3.1 percent cheaper than the store price.

Table 2

The value proposition created for customers in purchasing vegetables[14]

Indicators	**Current market price**	**Current store price**	**Market, kg**	**Store, kg**	**Market, check**	**Shop, check**	**the difference**
Amount of vegetables to buy			23	23	14089,5	16062	1972,5
carrot	2817,9	3212,4	5	5	20064,5	22815,5	2751
onion	4012,9	4563,1	5	5	3090,9	3221,1	130,2
cabbage	3090,9	3221,1	1	1	7331,6	9156,4	1824,8
tomato	3665,8	4578,2	2	2	35482	39830	4348
potato	3548,2	3983	10	10	10800	1800	-9000
Road expenses, km/thousand soums	1800	1800	6	1	90858,5	92885	2026,5

Based on the results of the analysis, the value created for the customer based on the choice of the place of purchase of the product is shown in Table 3.6. If customers buy a total of 23 kg of products from the store, the total cost, including the actual amount of travel expenses, is 92,885 soums.

If the customer does not take into account the influence of time and other factors, he will save a total of 2026.5 soums for 23 kg of products when buying from farmers' markets.

Discussion

The development of vegetable growing in the Republic of Uzbekistan is considered one of the most important directions of agriculture, and special attention is being paid to the directions aimed at achieving economic growth based on the coordination of trade-logistics, sale and storage processes of fruit and vegetable products, conducting price policy based on market demand, and using effective marketing strategies in business. Also, taking into account that a significant share of food products delivered to the population is mainly borne by consumer markets, aspects of the marketing approach to this issue arise from the requirements of the present time.

Considering the fact that vegetable products are the main and primary products of consumers, it is very important to seriously consider pricing strategies in this market, and it is appropriate to set them on the basis of customer orientation and social orientation. Taking into account the above circumstances, it is an urgent task to develop the market of vegetable products and its retail trade, and to use consumer-oriented price strategies.

Conclusion

this study underscores the critical importance of pricing strategies within the vegetable market, particularly within the context of the B2C segment. The examination of flexible pricing strategies highlights the necessity of aligning pricing tactics with customer preferences and social considerations. As vegetable production emerges as a pivotal sector within the agricultural landscape of Uzbekistan, the coordination of trade-logistics, sales, and storage processes assumes paramount importance for fostering economic growth. By leveraging market demand and employing effective marketing strategies, stakeholders can optimize their approach to pricing, thereby enhancing consumer satisfaction and market competitiveness. Moving forward, further research should delve into the efficacy of specific pricing strategies in driving consumer behavior and shaping market dynamics within the vegetable sector. Additionally, exploring the intersection of pricing strategies with broader economic policies and consumer welfare considerations could provide valuable insights for policymakers and industry practitioners alike.

References

[1] Decree No. PF-5853 of the President of the Republic of Uzbekistan dated October 23, 2019 "On approval of the strategy of agricultural development of the Republic of Uzbekistan for 2020-2030". (National database of legal documents, 24.10.2019, https://lex.uz/docs/4567334).

[2] Lee Y. et al. Assessing the role of access and price on the consumption of fruits and vegetables across New York City using agent-based modeling //Preventive medicine. - 2018. - T. 106. - S. 73-78.

[3] Glanz K., Yaroch A. L. Strategies for increasing fruit and vegetable intake in grocery stores and communities: policy, pricing, and environmental change //Preventive medicine. - 2004. - T. 39. - S. 75-80.

[4] Usmanova D.M. Methodological aspects of using marketing strategies in increasing the export capacity of vineyard enterprises. Galaxy International Interdisciplinary Research Journal. (GIIRJ) ISSN (E):2347-6915/ Vol. 10, Oct. (2022)

[5] Ergashkhodjaeva Sh.D. Formirovanie normative-pravovoy bazy razvitiya kooperatsii v Uzbekistane. // Voprosy ekonomicheskikh nauk, 2006.

[6] Sobiroa A.A. Development trends of the market of fruit and vegetable products in Uzbekistan//Journal of Economy and Education. No. 3, 2022 - p. 259-263.

[7] Umarov S.R. et al. Greenhouse vegetable market development based on the supply chain strategy in the Republic of Uzbekistan // International Journal of Supply Chain Management. - 2019. - T. 8. – no. 5. - S. 864-874.

[8] LI, Y., Cheang, B., & Lim, A. (2012b). Grocery Perishables Management. Production & Operations Management, 21(3), 504–517. [doi:10.1111/j.1937-5956.2011.01288.x]

[9] CHANG, X., Li, J., Rodriguez, D., & Su, Q. (2016). Agent-based simulation of pricing strategy for agri-products considering customer preference. International Journal of Production Research, 54(13), 3777-3795. [doi:10.1080/00207543.2015.1120901]

[10] Soni, H.N., & Patel, K.A. (2012). Optimal pricing and inventory policies for non-instantaneous deteriorating items with permissible delay in payment: fuzzy expected value model. International Journal of Industrial Engineering Computations, 3(3), 281-300. [doi:10.5267/j.ijiec.2012.02.005].

[11] Feldmann, C., & Hamm, U. (2015). Consumers' perceptions and preferences for local food: A review. Food Quality & Preference, 40, 152-164.

[12] CHANG, X., Li, J., Rodriguez, D., & Su, Q. (2016). Agent-based simulation of pricing strategy for agri-products considering customer preference. International Journal of Production Research, 54(13), 3777-3795. [doi:10.1080/00207543.2015.1120901]

[13] Prepared by the author based on the information of the Statistics Committee of the Republic of Uzbekistan.

[14] Calculated based on the current prices of vegetables in July 2022.