

## Consumer feedback in Ratnapura district related with the marketing mix theory to improve the present vegetables markets

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### 1. Introduction

Sri Lankan economy was based on agriculture until the later part of 20th century. Still in most rural areas the key income generates through agriculture field. Vegetable cultivation is a major part of that. A range of people are engaged in vegetable supply from farm gate to the ultimate consumer. The country was 91% self sufficient in vegetables with a production of 2962000 metric tons at 2017 (Department of Census and Statistics of Sri Lanka, 2017). Though this production was increased extensively enhancing its supply, the demand from consumers has been remained less. The per capita vegetable consumption was 112g/day which was far below the recommended level of 200g/day (Marambe et al., 2020). One of the root causes identified for this situation was decreased purchase of vegetables from the markets. This less purchase leads to severe breakdown of the economic and social condition of most of the parties involved in vegetable supply chains. Therefore, a study has been conducted to collect consumer feedbacks in accordance with four P's of marketing mix theory about present vegetable markets. This study was planned to collect suggestions regarding the improvements to be done in present situation. The objectives of the study were to discover the expectations of consumers to be improved in vegetable markets related to marketing mix components and inform them to respective parties, to upgrade the current system to that attract consumers back to the market and secure the sustainability of whole sector.

### 2. Materials and Methods

This study was conducted as a part of a survey that had done in Ratnapura District. According to geographical and socio economical positioning of the district, a good variation of household establishment from urban to rural areas is existed with a significant diversification of socio economic backgrounds. That was important to collect data from consumer segments with a broad diversification. The estimated population of the district by 2017 was 1151451 (Sabaragamuwa Provincial Council, 2018). Sample size was calculated using the standard Yamane Formula.

$$n = N / 1 + N (e)^2$$

Under a confidence level of 95 % and level of precision as 5%, the sample size was 399.86 which has rounded up to 400. Respondents, each from a single household were selected by convenience sampling technique Data collection was done at the first quarter of 2018. A structured type self-administered questionnaire was used to collect data. From one part of the questionnaire collected the respondents' expectations and suggestions to be upgraded or reformed further in the vegetable markets. The resulted suggestions then categorized according to the marketing mix theory. Marketing mix is not a scientific theory, but merely a conceptual framework that identifies the principal decisions taken by managers while organizing their offerings to suit consumers' needs (Londhe, 2014). A business should plan targeted approach

on four different components as product, price, and place & promotion to fulfil the targeted consumer segment requirements (Law, 2012).

### 3. Results and Discussion

Suggestions were expressed by 318 respondents or 79.5% of the sample. They were allowed to express 1-3 suggestions each. Total number of feedbacks were 722. They were categorized under four groups as their relevance to four marketing mix categories. As these results were taken from a sample at a selected district, to check whether they are based on pure chance a hypothesis test was conducted at first.

H0 – Results are based on pure chance

H1 - Results are not based on pure chance

A chi square test has conducted for suggestions in product category as a sample. Degree of freedom 5, significance level 0.05 and chi square table value was 11.071. All the suggestions included in the product category (105.21124, 20.9612403, 1.98449612, 21.7751938, 26.9844961, 40.746124) exceeded that table value.

The suggestions in each category and their frequency of occurrence was mentioned in below table both as in numeric value and percentage.

**Table 01. Consumer suggestions to improve the vegetable markets**

Suggestion	Frequency	Percentage
<b>Product</b>		
1 Maintain freshness and cleanliness of the vegetables	135	39.24
2 Use proper containers for packing and transportation	92	26.74
3 Vegetables should be chemicals free	68	19.74
4 Discard damaged vegetables	22	6.39
5 Introduce value added products	18	5.24
6 Provide several standards and package sizes	9	2.62
Total	344	100
<b>Place</b>		
1 Properly arrange the vegetables to secure the hygiene	72	35.29
2 Take actions to reduce unnecessary middlemen involvement	37	18.13
3 Increase the availability of vegetables in the market	27	13.23
4 Improve direct marketing to buy at the farm gate	23	11.27
5 Apply strict rules on weight measurement	21	10.29
6 Widen the area for fresh vegetables	20	9.8
7 Display the price list, nutrients values of the vegetables	4	1.96
Total	204	100

Price			
1	Arrange a process to keep a constant price range throughout the year	80	73.39
2	Make a fair price according to the quality	29	26.61
	Total	109	100
Promotion			
1	Easy and time saving strategies at purchasing	25	38.48
2	Friendly staff	13	20.00
3	Promote the sales of native vegetables	9	13.84
4	Facilities for one stop purchase everything	7	10.76
5	Market place is open on every day	6	9.23
6	Mobile or home delivery service	5	7.69
	Total	65	100

At first according to the chi square value  $H_0$  has rejected and it indicated the results were not based on pure chance. Then in both product and place categories consumers' major expectation was the hygienic level of the vegetables. They have proposed various methods to keep it as usage of proper containers at transport and packing, discard the damaged ones and maintain a clean market place. In price category consumers dominantly expected to have a constant price range. Therefore, it engaged with proper management of vegetables supply also. If it could not be solved then this threat lies all through the supply chain which directs to a drastic uncertainty. Moreover encouraging the sales of native vegetables in promotion category and reduction of unnecessary middlemen consumers have expected the government to implement restricted rules and regulations on marketing places regarding the hygiene and weight measurements.

#### 4. Conclusions

Two basic expectations of consumers were arisen as changes to be practiced in the vegetable markets. They are secure the hygiene of the vegetables and keep a constant price range. According to them the whole supply process of vegetables must preserve a firm sanitation level in every possible step to produce a safe outcome for consumers. Above discussed consumer suggestions will be effective on controlling the price range. Those steps should initiate from the ultimate farmer level as the applicability. Home delivery system of vegetables would be a potential business opportunity furthermore.

## 5. References

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