

Sustainability of Agricultural Marketing System in Hadabima Sales Centre at Gannoruwa Road-Side-Market

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Introduction

Agriculture systems are subjected drastic changes locally and internationally due to income growth, globalization, technological advancement and consciousness in food quality and safety. Therefore, farmers can no longer remain only as subsistence producers of traditional products. As a family unit, they have to take on the additional role of entrepreneurs in order to improve their livelihoods and move beyond subsistence farming into market oriented farming. However, as widely known, most farmers face various internal constraints and external barriers hindering their development. Marketing of agricultural produce is one of the major issues that hinder the development of the agricultural sector and the livelihoods of the farming community in Sri Lanka. Exploitation of the producers and consumers by the middlemen in the agricultural supply chains and the low quality of the products in the market that cannot adequately satisfy the needs of the local consumers are recognized as two major problems that pertaining to this issue.

“Road-side Market” (RSM) is a direct producer-consumer meeting place. While helping producers to gain a fair price for their produce and consumers to have access to quality agricultural products at a reasonable price, it has been recognized as a sustainable solution to protect both the producer and the consumer. According to producers get benefited by RSM from several ways as it helps supplement their incomes, provides employment for family members, and disposes of extra produce. Large volume agricultural stores require producers to possess more management skills and to select locations that can accommodate larger businesses, thus external support for establishment of such RSM is necessary. Besides possible financial benefits from establishing an outlet for produce, producers may also enjoy the customer exchange process, receive a sense of personal pride and independence from the operation, information on consumer requirements, and gain satisfaction from growing and selling quality crops. Consumers shop at RSMs in order to purchase fresh, flavorful, high quality produce in a convenient, friendly atmosphere at a reasonable price. In addition, in RSMs in countries like Japan, one also finds various food preparations and processed food from locally available fresh raw materials directly coming from the farmers. When promoting local food items, not only farmers to get additional income, but consumers also learn new recipes to prepare local food¹.

¹ World Bank, (2004) Guidelines for Road-Side Stations, Transport and Urban Development Department, World Bank

Sri Lanka has been attempting to find sustainable development strategies to improve the livelihood of rural farmers. However, difficulties faced by those farmers are still remaining as many of these approaches have failed to: 1. build sufficient capital sources, 2. Transform them into sustainable farming enterprises, and thus 3. Create an overall favorable impact in the rural farmers (Bandara and De Silva, 2010²). There are five capitals that help people to survive and keep long term sustainability (Cutaran, 2008³). The five capital assets are human, social, physical, natural and financial (Kleih *et al.*, 2003⁴). So, the fundamental requirement for livelihood improvement is the ability to enhance these capitals of rural people (Kleih *et al.*, 2003). A successful RSM facilitate to make finally an impact on livelihood outcomes such as reduction of unemployment and poverty, food security, and improvement of living standards of the rural poor (Salam, 2009⁵). If it can attract loyal customers, the benefits will treacle down to the producers in the value chain. As revealed by many studies, customer satisfaction is critical in determining how well a RSM, can strive to retain and prosper in a competitive market by gaining customer loyalty (Parasuraman *et al.* 1988⁶). Service quality and marketing mix of product, price, place and promotion are two broad factors affecting their attraction, satisfaction and loyalty.

Hadabima Authority, established the Hadabima Sales Centre (HSC) at a road side in Gannoruwato sell fresh vegetables, fruits and other farm and cottage industry products in 2006. HSC gets its supplies mostly from Hadabima farmers through farmer organizations attached to Hadabima Authority. The Department of Agriculture (DoA) maintains Hela Bojun Hala (i.e. Local Food Stall in English) restaurant, in adjoining building to sell traditional food prepared by the women entrepreneurs who are the housewives of local farming community. Both are government organizations under the Ministry of Agriculture. Can the combined HSC and HBH road side market model (Gannoruwa HSC/HBH), be effectively used to address the issues of agricultural producers and customers in Sri Lanka. This study was conducted to evaluate the strengths and weaknesses of the HSC at Gannoruwa RSM. It aimed at measuring the livelihood development of Hadabima farmers as well as service quality and marketing strategy of HSC.

Methodology

²Ratnayake, P. (2008). A sustainable approach towards self-reliant rural development: Lessons from practice in Sri Lanka, Saga University, Japan

³ Cutaran, E. (2008). "Sustainable Local Development through One Town One Product (OTOP): The Case of Mindanao, Philippines" [Research Note], Graduate School of Policy Science, Ritsumeikan University. 8: 89-96

⁴ Kleih, U., P. Greenhalgh and Oudwater, N. (2003). A Guide to the Analysis of Fish Marketing Systems Using a Combination of Sub-sector Analysis and the Sustainable Livelihoods Approach. National Resources Institute, Chatham. pp. 34-46

⁵ Salam, S.A.A.B. (2009). Sustainable Livelihood Approach in Rural Development, Economic and Social Commission for Western Asia (ESCWA), Expert Group Meeting on Adopting the Sustainable Livelihoods Approach for Promoting Rural Development in the ESCWA Region, Beirut, United Nations Economic and Social Council

⁶ Parasuraman, A., Zeithmal, V.A and Berry, L. (1988), 'SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality', Journal of Retailing, 64, No. 1, pp. 12-40.

The study was conducted at the Gannoruwa HSC/HBH RSM. These two sales outlets are located in adjoining buildings at Gannoruwa in the new main road leading to Kandy city. The outlets are about 5km away from Kandy city and surrounded by many government institutions related to agriculture. The design of the research is a cross sectional study. The main focus in this study is on HSC to find out its strength in agricultural marketing system. The methodology adopted to reach the study objectives can be broadly divided into two: 1. The livelihood development of farmers using the five capital sources model and impact on farmers; and 2. Customer satisfaction using service quality and marketing strategy.

Based on the notion that the extent of service quality is determined by the degree of meeting the before-service expectations (expectation) of customers with their actual service experience (perception), Parasuraman et al. (1988) developed a generic instrument to measure service quality, which is popularly known as SERVQUAL. Research employed SERVQUAL instrument measure service quality which include five main quality dimensions; tangibles, reliability, responsiveness, assurance and empathy. According to this, perceived service quality and antecedent of customer satisfaction can be expressed in the following equation: Perceived service quality = Perceived service (P) – Expected service (E)

According to the above equation, customer may consider a firm's service is excellent, if perceptions exceed expectations; it will be regarded as good or adequate, if it only equals the expectations; the service will be classed as bad, poor or deficient, if it does not meet them (Vázquez et al., 2001 as cited in C.N. Krishna, et al., 2010⁷). Since different dimension give different level of contribution to satisfy customer, it is importance to calculate the weights for each of the five dimensions constituting the SERVQUAL scale (Daniel, et al., 2010)⁸. SERVQUAL will help managers to identify the areas of service delivery that need special attention and decide action to be taken to tackle these issues (Jyotsna, 2012)⁹.

The marketing strategy was measured through four independent variables in the marketing mix namely Product, Price, Place and Promotion. While service quality and product quality being the intervening variables the final dependent variable was the customer satisfaction, which results in more loyal customers ultimately helping the HSC to develop the livelihoods of the farmers.

The sample respondents were selected randomly and consisted of a total of 72 entrepreneurs (producers and suppliers) attached to HSC and 59 customers of HSC. Two pre-tested questionnaires were used to collect data from these producers and customers. In addition, key informant discussions were conducted with the other primary stakeholders of the marketing model including the management staff and employees of the Hadabima Authority and DoA. Quantitative as well as qualitative data were collected for analyses. Findings of the study were backed by secondary data. Descriptive statistics (frequency, mean and percentages)

⁷C.N. Krishna, N., Swapna, B. G. & Gantasala, V. P., 2010. Service Quality (Servqual) and its Effect on Customer Satisfaction in Retailing. *European Journal of Social Sciences*, 16(2), pp. 231-243.

⁸Daniel, C. N., Berinyuy, L. P. & Isberg, S., 2010. *Using the SERVQUAL Model to assess Service Quality and Customer Satisfaction.*, Umea: Umeå School of Business.

⁹Jyotsna, H., 2012. Measuring Internal Customers' Perception on Service Quality Using SERVQUAL in Administrative Services. *International Journal of Scientific and Research Publications*, , 2(3), pp. 1-6.

gave a quantitative support besides qualitative information from key informants and researchers' observations.

Results and Discussion

Livelihood Development of Hadabima Farmers

The aim of HSC is to give a better price for the rural farmers, provide agricultural products to the urban consumers at lower prices, promote the traditional food crop consumption, minimize the postharvest losses, and provide employment opportunities specially to farming families. In addition, it also tries to promote organic agriculture and organic products, provide high quality fresh and uniform products, and provide farmers training (Hadabima Authority, 2014¹⁰). More than 50,900 farm families have been empowered by the Hadabima Authority during the period from 2007 to 2012 (up to October). Table 1 presents sales, purchases and profit increase in the same period. Accordingly, the HSC has resulted in better income for the farmers and profits to the HSC. A considerable number of employment opportunities have also been created, which increased from 15 in 2007 to 26 by 2011.

Table 1: Last five years progress of the marketing project.

| Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012* | Total |
|-----------------------------|------|------|------|------|------|-------|-------|
| Sales (Rs. Mn.) | 43.7 | 63.4 | 70.6 | 83.4 | 97.0 | 69.5 | 427.6 |
| Purchase (Rs. Mn.) | 36.2 | 53.8 | 58.2 | 69.2 | 78.2 | 64.9 | 360.5 |
| Gross Profit (Rs. Mn.) | 7.5 | 10.0 | 12.6 | 14.1 | 18.3 | 14.3 | 76.8 |
| Other expenditure (Rs. Mn.) | 6.8 | 10.0 | 11.1 | 12.5 | 13.6 | 7.3 | 61.3 |
| Net Profit (Rs. Mn.) | 0.7 | 0.05 | 1.5 | 1.8 | 5.1 | 6.4 | 15.5 |
| No. of Employees | 15 | 28 | 25 | 29 | 33 | 26 | |

Note: * Up to October; Source: Hadabima Authority

The selected sample respondents were 72 farmers who supply agricultural products to HSC at *Gannoruwa*. The results revealed that majority of the respondents (59%) were males. All most all the farmers are Sinhala and they have been resettled in the Central Province under the *Mahaweli* development project. Out of the sample, majority of them (68%) are in the labor force within the age group (20 – 60 years) who could actively participate in farming. The rest are elderly farmers of 61 years and above. Since majority are in the middle and age old categories, they are well experienced farmers. Majority of the farmers (75%) of farmers had more than 16 years experience, while 37% had more than 30 years experience in farming. Majority of the farmers (52%) have got education GCE Ordinary Level or more in the

¹⁰ Hadabima Authority of Sri Lanka, various issues, Annual Report, Hadabima Authority of Sri Lanka, Gannoruwa

sample. Only 14% had only primary level education. So, the respondent have a better education standard as about half of the group has passed GCE Ordinary Level examination (44%).The following section looks at the perception of Hadabima famers on the impact of HSC on their livelihood and socio-economic development.

The following discussion is on the contribution of HSC to capital formation and impact on livelihoods of rural farmers. The farmers were requested to express their views on capital formation in a Likert scale ranging from 1 (Highly Satisfied) to 5 (Highly Dissatisfied). Table 2 presents the mean scores for the statements on formation of five capitals. Some statements were not applicable to certain respondents thus they were treated as missing values when calculating the mean scores. As a result of the HSC, Hadabima farmers have received many benefits.

Table 2: Farmer perception on HSC contribution to capital formation

| Statement | N | Mean Score |
|---|----|------------|
| Human capital | | |
| Quantity of labour available at household level | 51 | 2.78 |
| Education of family members | 51 | 2.27 |
| Skills of family members | 51 | 2.43 |
| Health and physical fitness to do hard work | 51 | 2.24 |
| Family members have positive attitude towards farming activities | 49 | 2.10 |
| Social capital | | |
| Help of the neighbours is readily available for farming activities | 51 | 2.65 |
| Community support is assured during crisis situation | 46 | 2.85 |
| Farmer organization is a big strength to farming activities | 49 | 2.84 |
| Membership of other CBO/s provides social benefits | 48 | 2.60 |
| Support from the local politicians and the local government agents | 50 | 3.24 |
| Natural capital | | |
| Size of land available for farming is enough to make the living | 49 | 2.27 |
| Livestock unit provides guaranteed and satisfactory additional income | 33 | 2.39 |
| Home garden provides additional income during crisis situation | 50 | 2.82 |
| Climate is favorable for the production of vegetables | 52 | 3.15 |
| Water is adequate for farming needs | 50 | 3.54 |
| Soil if fertile enough without having to add excessive amount of fertilizer | 48 | 3.37 |
| Physical capital | | |
| Infrastructure facility (roads, irrigation, electricity, improved equipment and housing) available in the village | 46 | 3.17 |
| Access to machinery needed in farming | 49 | 3.08 |
| Availability of inputs | 49 | 2.96 |
| Financial capital | | |
| Stocks of money or other savings | 49 | 2.94 |
| Access to credit | 45 | 2.69 |
| Returns from selling vegetables to HSC gives satisfied income | 43 | 2.23 |

Human capital: Human capital could be measured by the availability of human resources as well as their skills, knowledge, ability to work and good health. When explore their living

standards it is seemed that they have a favorable living conditions with their available resources and present farm practices. Majority of them are satisfied with the number of family labour, education level of the family members, skills on farming with in the family members, health condition for farming activities, and attitudes of the family members towards farming. Hadabima authority has conducted many training and awareness programs on farming. The training sessions not only included increasing crop production but also quality improvement, postharvest control, packaging, financial management, environmental conservation etc. Hadabima is providing various support services for farmers related to inputs, machinery and tools, information, financial services, marketing facilities etc. in order to improve their farming business. Hadabima farmers are using various farming practices in order to get a higheryield. Soil management, crop diversification, integrated pest management, bio dynamics and organic agriculture are also practiced by the respondent farmers. As they are practicing farming for a long period they are using their field experience as well as traditional knowledge for these practices.

Social Capital: Development of social capital was measured by the improvement of relationships, networks and collective action, which exist within the families and in groups. Such social capital is used in activities such as procurement, farming, and processing, transporting, marketing and other social activities. This social capital has facilitated the farmers to gain other capital assets also. Although some farmers are purchasing their inputs individually, they have gained advantage of the collective behavior in groups. They have also engaged in social activities such as *shramadana* (offering free labour) for village development work, and organizing community festivals. Due to this, community has identified with a special name as *Hadabima* farmers, and they could join with different activities and programs collectively. Hadabima programs have influenced to change their social conditions in many ways. Some of the aspects are social status, participation for social activities, relationship with neighbors, ability to withstanding food scarce period etc (Table 2). Hadabima has also linked government institutions and officials such as Agriculture Instructors (AI) and Agriculture Research and production Assistant. (ARPA) to the Hadabima farmers. The sample respondents were satisfied with help of the neighbours for farming activities, community support during crisis situation, strength of the farmer organization in supporting their farming activities, and social benefits receive through the CBOs. However, they had a moderatly dissatisfied view about support from the local politicians and the local government agents.

Natural Capital: With respect to farming there are several advantages in the village in terms of natural resources. Hadabima farming communities were resettled in rural areas some in marginal tea lands and others in undisturbed natural vegetation and forest covers. The appropriate climatic conditions along with proper soil management have helped the farmers to convert their lands to *Kandyan* Forest Gardens, which are rich in biodiversity having a variety of perennial crops. The farmers live in places where many natural resources could be found, either in their own home gardens or nearby forests, they accessed many non-timber products for home consumption and sell in the HSC.

According to the respondents, majority are satisfied with their lands available for crop production. According to the land distribution among farmers, majority of them (93.1%) have a home garden. Not only the home gardens but farmers also own low lands (79%) and up lands (65%). Some of the farmers were engaged in animal husbandry too. Of them, income from the animal husbandry is in a satisfactory level for most of the farmers. *Kandyan Forest Gardens* give them an extra income that can be used particularly during difficult time periods. Majority of them are satisfied about this extra income generated from their home gardens. However, regarding the statement of suitability of climatic conditions on vegetable production, majority of the farmers have a neutral view. According to them the present rainfall pattern is highly unpredictable, and it has changed a lot with the climate change. Binomial rainfall pattern existed for centuries is not clear. Due to that they have to face unexpected drought periods and or too much rain resulting crop losses. Majority of the sample farmers view that water is not sufficient for them. Rain water is not enough for their cultivations. While some farmers are satisfied with the soil fertility in their lands other are not satisfied. The farmers who are not satisfied belong to the groups who have resettle in marginal tea lands and the soil has degraded as a result of repeated cultivations on the same land. Hadabima Authority has conducted many soil conservation and management programmes (e.g. SALT technique, terracing, drainage systems, etc.) to bring their soils back to fertility. While some farmers have adopted such practices and improved their lands, others have not.

Physical Capital: Physical capital is the basic infrastructure such as transport, shelter, sanitation, water, energy and communication facilities as well as the production equipment that enable people to pursue their livelihoods. In the selected farming communities almost all (99%) farmers are having their own houses. In most of those houses (52%) asbestos are used as a roofing material. Majority of farmers are using plastered brick houses (48%). When considering the toilet facilities, majority (88%) are using properly constructed latrines. Thus it can be assumed that majority of them have proper housing conditions. The results also revealed that almost all the respondents own radios (96%) and televisions (98%), thus have access to mass media. About one fifth of the sample has motorized transportation means either motor cycle (16%) or three wheeler (20%). Thus it can be assumed that most of the respondents fall into middle income category having necessary household assets and equipment.

However, according to Table 2, majority of the farmers are either neutral or dissatisfied with infrastructure facility (roads, irrigation, electricity, improved equipment and housing) available in the village as well as access to machinery needed in farming. Especially roads have not properly constructed and maintained thus, transportation is difficult. It affects their livelihood by creating postharvest losses due to damaged roads and not having suitable vehicles to transport their harvests. Only about 40% of the farmers are satisfied with the physical support given by the Hadabima Authority. They are satisfied with the availability of farm inputs. They include financial inputs, planting materials, fertilizers etc. Fertilizer is given by the government at subsidized rates and it is a big support for the farmers.

Financial Capital: Financial capital is the financial resources available to people, which provide them with different livelihood options. The results revealed that majority of the farmers (51%) receive a net monthly income of Rs. 10,000 to 20,000, from their farming activities which is usually underreported in this kind of surveys. About 10% of the farmers receive an income between Rs. 20,000 to 50,000, while the rest receive less than Rs. 10,000. It is important to understand that, there are many rural people around this area engaged in farming as a part time employment and their main income source is different. The results revealed that they have satisfied to moderate view towards stocks of money or other savings and access to credit they have.

Table 3: Impact of HSC on livelihoods of Hadabima farmers

| Impact | Decreased | No change | Increased |
|---|-----------|-----------|-----------|
| Economic development and income security | | | |
| Income gain from farming activities | 2.3 | 22.7 | 75.0 |
| Acquisition of property | 0.0 | 74.4 | 25.6 |
| Acquisition of farming tools and machines | 2.4 | 35.7 | 61.9 |
| Savings | 2.4 | 48.8 | 48.8 |
| Loans | 40.5 | 45.9 | 13.5 |
| Mortgage of jewelries | 35.1 | 62.2 | 2.7 |
| Change of economic situation | 2.3 | 25.0 | 72.7 |
| Social development | | | |
| Social status | 2.4 | 28.6 | 69.0 |
| Participation from social activities | 0.0 | 11.9 | 88.1 |
| Relationship with neighbours | 0.0 | 26.2 | 73.8 |
| Health and nutrition | | | |
| Ability of withstanding food scarcity | 2.6 | 53.8 | 43.6 |
| Family health | 0.0 | 58.5 | 41.5 |
| Family nutrition | 0.0 | 42.9 | 57.1 |
| Knowledge and spiritual development | | | |
| Knowledge on farming | 0.0 | 4.7 | 95.3 |
| Satisfaction gain from farming activities | 0.0 | 21.4 | 78.6 |
| Quality time spent with family members | 0.0 | 40.5 | 59.5 |

Table 3 shows their opinion on social and economic impact of HSC on their families. The results revealed that impact on economic and income security, social conditions, health and nutrition, and knowledge and spiritual conditions have developed significantly as a result of the HSC.

Satisfaction of HSC Customers

The sample consisted of 59 randomly selected customers of the HSC. In the sample, both genders were included in a more or less equal proportions, as there were 46% male and 54% female customers. The mean age of the HSC respondents was 40 years where as the minimum age and the maximum age were recorded as 22 and 68 respectively (SD – 11.99). Purchasing behavior of the customers depend on income level. Most of the customers visiting this market place are found to be from the middle income earning households having a monthly income between 50,000 to 100,000 (38.8%). The households having less than Rs. 50,000 per month constituted 36.7%. Purchasing behavior of the customers is highly affected by their level of education as well (Abdul, et al., 2014¹¹). Majority of the customers who visited the HSC had higher education level. From the total customers 50% has obtained higher education (degree, diploma, etc.). The results revealed that HSC customers are highly educated as about 88% of the respondents, had education equal or above the GCE (A/L) qualifications.

Majority of the customers of the HSC are found to be the employees attached to the hospitals, DoA and other government departments, University of Peradeniya, schools and business organizations centered around Peradeniya and Kandy municipality (60%). The rest of the customers come from various parts of the island including Mathale, Nuwara Eliya and Colombo districts. Forty nine respondents had stated their occupations and they were representing 19 different occupation categories which were almost from specialized fields such as education, medical, engineering, business etc. There were significant proportions of university students (20%), teachers (18%) and business people (10%) among the customers.

In the close proximity to Gannoruwa road side market, there are other different business units such as plant nursery and Agro Park of the DoA and other government offices along with HSC and HBH. Thus consumers' main purpose of visiting Gannoruwa road side market was questioned. Among customers, 88% of the HSC customers indicated that purpose of their visit was to purchase goods from HSC. Other purposes of visiting HSC was while visiting HBH, the plant nursery, and the official work in the surrounding area. The results also reveals that, 25% of the HSC consumers' main purpose is visiting both HSC and HBH. This finding indicates the complementary nature of the two market places, that both entities could be benefited from each other which includes a great growth potential for both the HSC and the HBH. If it is difficult for the HSC and the HBH to enter into an administrative level of integration, it would still be worthy for them to work out a functional level integration to expand their business by enhancing operational efficiency through resource sharing.

Figure 1 shows the consumers' perception on the special benefits expected from the HSC. The respondents were asked to select their responses from a list of statements - (developed from the goals of the HSC and general customer reviews) which have been given in the Y axis of the Figure 1 and ranked on a Likert scale ranging from 1 (Strongly Disagrees) to 7 (Strongly Agree). The respondents have positively responded to the statements whereas the mean scores for all the statements lie between "neutral" to "strongly agree" levels. As

¹¹Abdul, W., Syeda, S. M. & Moeed, A. S., 2014. Factor That Affects Consumer Buying Behavior: An Analysis of Some Selected Factors. *Middle-East Journal of Scientific Research*, 19(5), pp. 636-641.

indicated by the highest mean score, customers perceive HSC as a different type of shop among competitive firms. One of the special features of HSC is availability of small quantities of organically grown home garden products. It also has traditionally grown vegetables and fruits difficult to find in other commercial retail outlets. These special benefits can be the comparative advantages for the HSC to compete with other similar firms.

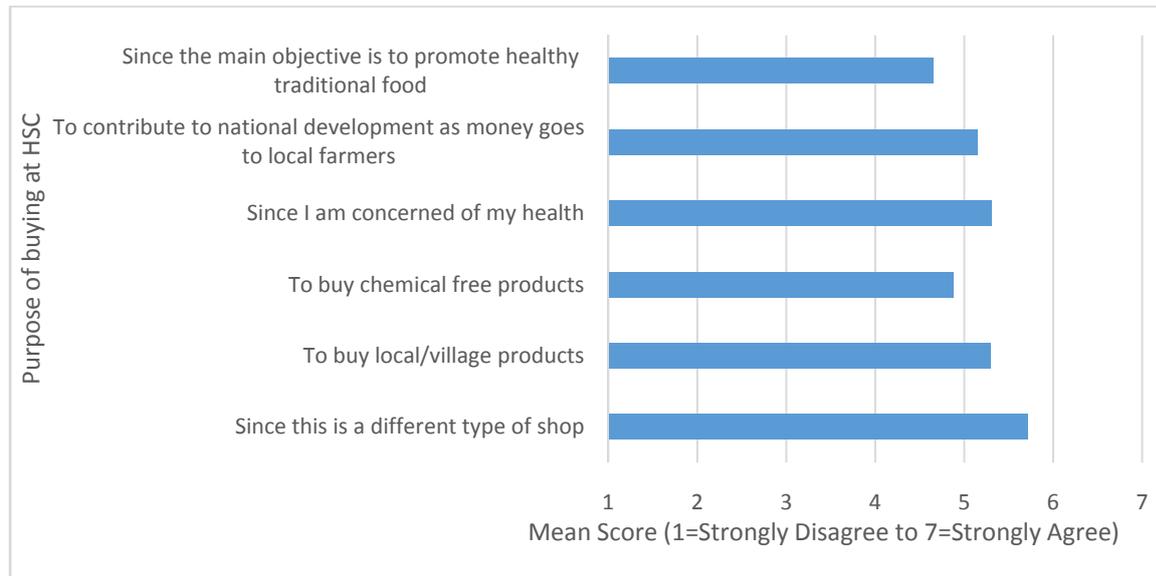


Fig. 1: Purpose of buying at HSC

Service quality of HSC

Perceived service quality of HSC, and antecedent satisfaction can be measured through the gap between customer expectations of service of an ideal vegetable store (E) and perceived service quality of HSC (P). Researchers have also concluded that the customer base assign different levels of importance to five dimensions of customer service quality. Thus, of a 100 points scale, respondents were asked to assign most points to the most important dimension and fewer points to the least important dimensions. The results, revealed the importance ranking of the SERVQUAL dimensions from most important to least important as: Responsiveness (22.82%), Assurance (Assurance), Reliability (21.18%), Tangibility (19.27%) and Empathy (15%). The average importance score was used to weigh the gap scores for each dimension. Weighted scores were established by multiplying the dimension weight and the dimension gap score. The weighted score helps to clarify the significance of the perception/expectation gaps that were measured during this study. Results were analyzed according to the SERVQUAL dimensions weighted and unweight gap scores(Figure 2).

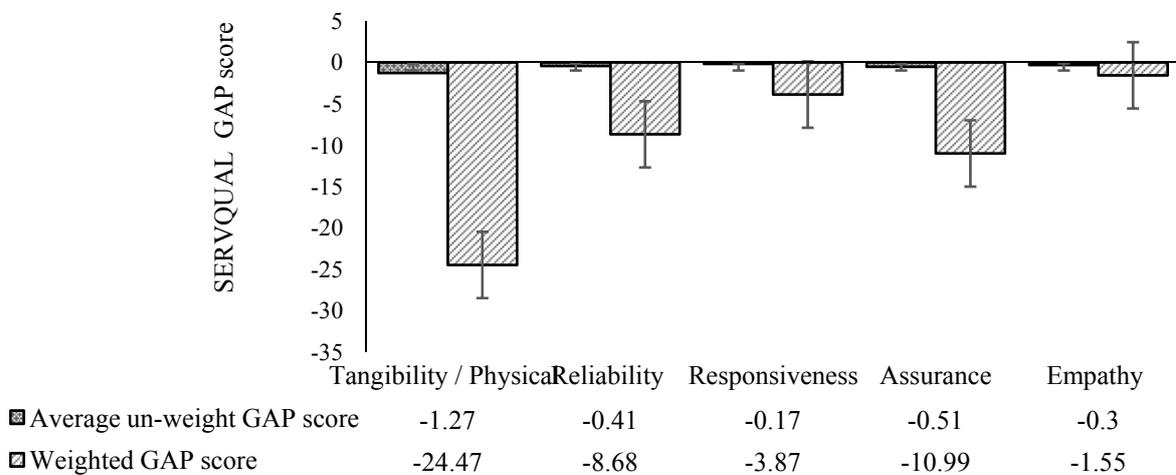


Fig. 2: Weighted Gap Scores of SERVQUAL dimensions of HSC

Tangibility: Physical environment, in which the service is delivered and where the firm and the customer interact, as well as any tangible commodities that facilitate performance or communication of the service play an important part in service quality. Tangibles refers to the tangible elements of a service and includes aspects such as the appearance of physical facilities, tools and equipment, personnel, and communication material.

The tangibility dimension of the SERVQUAL customer perception tool is comprised of the first four questions which assess perceptions of the tangible appearance aspects (i.e. Modern equipment and physical facilities; Clean and visually appealing physical facilities (e.g. shelves, counters, fridges, lights); Well dressed and neatly appearing employees; Visually appealing materials (e.g. product & price displays, baskets, bills). In each of the four factors making up the tangibility dimension of service quality, the expectations of an ideal retail store (E) exceeded their perceptions of HSC (P) having P-E gaps ranging from -0.45 to -2.45. That was clear each and every aspect have a negative value so people satisfaction is low. The average un-weighted gap score (P-E) for the tangibility dimension of customer satisfaction is -1.27. When applying the tangibility weight score 19.27 of to the gap score, the weighted gap score jumps to -24.47. The customers have the experience of shopping at modern supermarket chains including Food City, Keells Super, Royal Mall and Arpico Super Center located within two kilometers of Gannoruwa HSC, and naturally compare with them. They comprised of modern equipment and physical facilities which are clean and visually appealing (e.g. refrigerators, coolers, shelves, counters, lights). The employees are well

dressed and neat. The product and price displays, baskets, bills are also visually appealing materials.

Reliability: Reliability is the ability to perform the promised service dependably and accurately. The reliability dimension of the modified SERVQUAL customer perception tool is comprised of four questions (Market promises to do something by a certain time, it will do so; When a customer has a problem, retailer should show a sincere interest in solving it; Retail outlet should perform the service right the first time; Should keep records (price lists, billing) accurately; and Reliability due to the affiliation to a reputed organization). Except for reliability due to the affiliation to a reputed organization (gap score of 0.22), all other five factors making up the reliability dimension of service quality, had negative P-E gaps ranging from -0.24 to -0.74. These negative values indicate customer dissatisfaction. When applying the reliability weight score 21.18 of to the gap score, the weighted gap score amounts to -8.68. Unlike the high end supermarkets in the area, HSC do not have well trained staff. The sales helpers are basically from the families of Hadabima farmers coming from rural areas. Employees are selected based on Corporate Social Responsibility of Hadabima Authority rather than the true talents of the employees. The lack of adequate number of well trained staff creates a major bottleneck in providing a reliable service to the customers. However, customers perceive a positive gap in reliability due to the affiliation to a reputed organization. HSC is a government organization run by Hadabima Authority.

Responsiveness: Responsiveness is the tendency and willingness of service providers to help clients and satisfy their needs, immediately reply to their inquiries, and solve their problems as quickly as possible. Responsiveness and reliability classified as technical dimensions of service quality. The responsiveness dimension of the SERVQUAL customer perception tool was comprised of the four questions (Inform customers exactly when services will be performed; Provide prompt service to customers; Always willing to help customers; Employees never be too busy to respond to customers' requests). In each of the four main factors, P-E gaps were negative but small. When applying the responsive weight score 22.82 of to the gap score, the weighted gap score increased -3.87. Responsiveness is also related to the inadequate number of qualified staff.

Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence are the major factors in assurance dimension. Assurance has a significant relationships with service quality and customer satisfaction. The assurance dimension of the SERVQUAL customer perception comprised of the four questions (Behavior of employees instill confidence in customers; Customers feel safe in their transactions; Employees are consistently courteous and polite; Employees have the knowledge to answer customers' questions). Except behavior of employees instill confidence in customers, all other statement had negative values. The weighted gap score was -10.99.

Empathy: Empathy is the extent to which caring individualized service is given. When a firm exhibits consistent empathy, it creates unique, sustainable customer relationships that are difficult for its competitors to replicate. Of the four questions on empathy (Provide individual attention to customers; Understand customers' specific needs; Has convenient operating

hours; Has the best interest of the customers at heart), the customers had negative gap for first two factors. However, the gaps on having convenient operating hours and having the best interest of the customers at heart were positive. The HSC operates at litter earlier and later than the usual office hours. The particular customer base, people who come to purchase vegetables and fruits, this time period seems satisfactory.

The overall weighted average total SERVQUAL score was calculated as -9.912. When consider the total SERVQUAL scores, paired wise t- test was applied to comper the expected and perceived total SERVQUAL scores. It shows that the significant difference between expected and perceived situations related to service quality. The t- test was significant at 95% confidant level, $p= 0.000$ and the t-value was 4.154. Accordingly, as perceived by the customers, HSC service quality is not up to the standards thus their satisfaction is low.

Marketing Strategy

Marketing is everything you do on a daily basis to sell a product or provide a service to a customer. In order to create brand equity and customer loyalty, in any product or service related organization, should manage and shape product, place, price and promotion strategies (Sadıç, 2010)¹². Organizations need to find the best way to access the customers and make sure that they are satisfied with products and services. The Marketing Mix model (also known as the 4 P's) is used by marketers as a tool to assist in implementing the marketing strategy. Research done on marketing mix and customer satisfaction indicates that four element in marketing mix and customer satisfaction have significant relationship. Therefore, any gap in the product, price place or promotion could effect on the customer satisfaction directly. Table 4 indicate the gaps in the marketing mix of HSC.

Product: Products are the primary motive why people go to make purchases in retail stores and so that cannot be neglected when measuring customer satisfaction. According to the respondents, majority of the customers use HSC as their main place of purchasing vegetables (75%). Fruits were the next highest demanding item (37%) which was main purchasing place of many customers. People do not use HSC as the main market much to purchase grains (17%), traditional food items (14%), spices (19%) and livestock products (10%). The main reason is that those are not the major target product categories of the HSC, and are kept in small qualities and limited varieties.

Since product quality is a much important factor for customer satisfaction, it is a must to keep product quality at least minimum expected level to retain customers if not they move away from a relevant market or product. In the traditional supply chain product quantity gets high priority rather than quality. No proper packaging is done and products are packed in poly sacks by compressing them. It results in mechanical damages the produce. In HSC, measures have been taken products reach fresh to the store. Farmers are encouraged to grow

¹²Sadıç, Ş., 2010. Determining the Weights of Marketing Mix Components Using Analytic Network Process, Istanbul, TURKEY: Istanbul Technical University.

organically or use minimum amounts of agrochemicals and inorganic fertilizer. Products are careful handed and packed in plastic craters and transported as early as possible. Transportation is done mainly through ventilated trucks without overloading them. The produce is not exposed to hot sun and rain and care is taken to during loading and unloading. This helps to reduce postharvest losses to about 10 to 20% from the traditional supply chain of 20 to 40%. The products are sorted for quality at the presence of the farmers thus providing quality signals to the farmers.

Table 4 analyzes the product quality in the HSC to check whether those are up to the customer expected level. Then it clearly indicates that product dimension has a negative score, and it indicate a gap in the product. Customers' level of expectation dose not met in the HSC. This gap is perhaps due to the high quality products available in the high end super market chains as already mentioned, in which they have their own supply chains and high quality standards. HSC has not been able to reduce the damages fully as some products are still come through the traditional supply chain and poor quality transportation and handling. As explained, HSC do not maintain a large variety of products except vegetables, thus customers are not satisfied. There is a perception among customers that HSC sells only organic products. However, although HSC is promoting organic products, most of the products sold at the HSC is not organic and there is no organic certification system.

Table 4: Marketing mix gaps in HSC

| | E | P | P-E |
|--|------|------|-------|
| Product | | | |
| The products in retail store should be of good quality (hygiene and freshness) | 6.54 | 5.81 | -0.73 |
| The products in retail store should be free of damages | 6.33 | 4.89 | -1.44 |
| Retail store should have enough variety of products (diversity) | 6.21 | 5.46 | -0.75 |
| Retail store should have organic products | 5.98 | 4.93 | -1.05 |
| Place | | | |
| Customer should be able to purchase any quantity (small or large amounts) | 6.25 | 6.00 | -0.25 |
| Location of the retail shop should be conveniently accessible | 6.31 | 5.86 | -0.45 |
| Ample and convenient parking should be available | 6.36 | 3.91 | -2.45 |
| Price | | | |
| Products and services of a retail store should give best value for money | 6.46 | 5.90 | -0.56 |
| Profit should be distributed among all stakeholders | 4.98 | 4.69 | -0.29 |
| Promotions | | | |
| Retail store should give out seasonal offers and conduct other promotions | 4.86 | 3.59 | -1.27 |
| Retail store should display the products available & daily prices outside the outlet | 5.68 | 3.83 | -1.85 |

Note: E – Expectation and P - Perception

Place: This refers to distribution system of where can the customers could buy products or services, and what are the different methods they can buy. This includes number of intermediaries; control of the distribution channels; geographical factors; use of limited resources, etc. Place of the product sell have strong influence on the customer satisfaction and product purchasing by customers. The supply chain of HSC is much shorter than the traditional vegetable supply chain where products are transferred from producers, to collectors, to wholesales and then to retailers. In the HSC supply chain, famers' produce is supplied directly to the retailer (HSC) through farmer organizations. The vegetables are collected from nearby villages having shorter transportation distances and time periods.

According to literature, merchandising and store atmosphere also influence consumer satisfaction (Ganesh and Kuksov, 2009)¹³. Accessibility for customers and distant like factors could affect the suitability of place. Table 4 shows the gaps in the place related to the marketing mix analysis. This indicates the place also have some negative customer feedback. However HSC was not up to the expected level to fully satisfy the customers. The space available inside is inadequate especially during the rush times. In addition, retail shop should be conveniently accessible and ample and convenient parking should be available. However, HSC has no parking slots thus the customers park their vehicles in the HBH parking or along the road sides of both sides. It has created problem since this is the new Kandy-Colombo main road with lot of traffic.

Price: To sell a product for a particular price, value must be created. Value is the consumer's estimate of the product's overall capacity to satisfy his/her needs (Ronald, 2005)¹⁴. "Price" refers to how much you charge for your product or service. Price is a very critical factor which affect not only the customer satisfaction but also the buying behavior. According to the price dimension of marketing aspect there was a negative gap so it shows the perceived price level was not good as customers aspect level but that was also not much high as the product related gap. In the traditional supply chain there is no proper pricing system. The price is decided by the wholesalers and when there is excess supply producers get very low price. In HSC price is decided by a committee comprising members of the farmer organizations. The committee meets once a week and price paid to farmer in weekly basis. It is apparent that the price decision is more favourable towards the farmers but not the customers. Customers do not see a big price advantage in shopping at HSC. In the traditional supply chain both producer and consumers are price takers, where as in the HSC, at least the producers are better off.

Promotions: Promotion is the process of marketing communication to inform, persuade, remind and influence consumers or users in favor of product or service, sales promotions are further elaborate as a specifically focused efforts. Table 4 shows the gap in the promotion in

¹³Ganesh, I. and Kuksov, D., 2009. *Consumer Feelings and Equilibrium Product Quality*, Berkeley: Haas School of Business, University of California

¹⁴Ronald, B. C., 2005. *Marketing, Strategy, and Competitive Analysis*. New York: American Management Association

studied organic retailing outlet. Accordingly, there is a negative gap or customer expectation is higher than the customers' perceived situation. Accordingly to the findings, customers got aware about HSC mainly through friends (through informal contacts), which was 34% of the total sample. No one got aware about the HSC through sale promotion or advertisements, which are abundantly used by the super market chains at present. Other means of awareness include while travelling (61%), knew it from the beginning (10%) while small proportions through their work place, and agro park.

Conclusions

The objective of this study was to analyze the strengths and weaknesses of HSC, a part of the Gannoruwa RSM, in developing livelihoods of the farmers and satisfying the customers. The study revealed that, HSC has helped the farmers to improve their human, social, natural, physical and financial capitals, and positively impacted on their socio-economic lives. Being at Gannoruwa RSM, HSC gets a significant customer base, which has helped the HSC to generate profits and contribute to the Hadabima farmers' livelihood improvement. However, there were negative gaps for both service quality and marketing mix of HSC customers. The study could distinguish priority areas within the service quality and marketing mix dimensions that need improvement to overcome shortfalls and unveil growth opportunities. The HSC can conduct frequent customer surveys to find what their customers really expect from their services. It can help generating more profits thus contribute more to rural farmers, by attracting new customers, while retaining the current loyal customers. The study concludes that further comparative studies on the HSC/HBHRSM with similar successfully models in the world (i.e. Japanese Roadside Stations) can give more insight into the expansion and firm upgrading efforts. The findings revealed the enormous growth potential of HSC which can be realized through infrastructural development and enhancement of the service quality and marketing strategy. Both HSC and HBH can garner more benefits, if they can integrate their services into one model at least on certain functional levels.