VALUE CHAIN ANALYSIS (CALAMANSI): ITS CONTRIBUTION TO THE LOCAL ECONOMY OF GUIMARAS

Erwin D. Dumagpi
erwin.dumagpi@gsc.edu.ph
ORCID No. 0000-002-1178-8919

Joe Russel G. Arensol
joerussel.arensol@gsc.edu.ph

ABSTRACT The calamansi (Citrus madurencis) is considered as one of the major fruit crops in the Philippines, which is indigenous to the country. Introduced by the Batangueños in 1961, Calamansi growing in Oriental Mindoro where initially established in the towns of Naujan, Victoria, and Sorro then later spread to other municipalities when production demand had increased. This study aimed to determine the extent of the supply, value and market chain of the calamansi products and their contribution capability to the local economy of Guimaras. The descriptive survey method was used in the study. The respondents of this study were the calamansi vendors of Buenavista, Guimaras. The data gathering instrument used was a researcher-made questionnaire. The validated research questionnaire was reproduced and personally administered to the respondents. After the survey procedure was completed, the data were encoded and computed through the use of a computer in Excel format. The same data was analyzed using the Statistical Package for Social Sciences (SPSS) and interpreted using the appropriate statistical tools. Results revealed that most of the respondents are Roman Catholic, aged 56-65 years old, male, elementary graduate, married, and have a monthly gross income of below Php 1,000. Moreover, the Value Chain and Value-adding practices were slightly practiced by the calamansi vendor. Further, the contribution capability of the calamansi vendor is slightly practiced.

Keywords: Calamansi, value chain, economy, Guimaras

INTRODUCTION

Background of the Study

Value chain analysis (VCA) is a management concept that aims to identify and evaluate the processes, cost and values, area of competitive advantage for industries and come up with a strategic plan, program and projects to address issues and constraints in the development of industry (Department of Trade and Industry, 2008).

In the Philippines, Calamansi (spelled kalamansi in native Tagalog orthography) is a small, very round citrus fruit that's ubiquitous in the Philippines. The fruits are often used when the thin rind is still green on the outside, and that is the color associated with it. Kalamansi is often combined with soy sauce, the mixture of which is used as a marinade or dipping sauce. The Philippines grows more calamansi than any other citrus fruit. Its sour taste constitutes the main ingredient of the locally popular beverage known as calamansi juice. On January 15, 2013, a group consisting mainly of calamansi processors came together to form The Philippine Calamansi Association, Inc. (Benedict, 2015).

For the second quarter of 2016, production of calamansi declined by 9.2% to18.49 thousand metric tons from 20.37 thousand metric tons last year. If this will be developed in a sustainable manner, it has a potential to be an economic growth engine of the country. The product of the calamansi does not only contribute to the economy of the country but it also maintains the cultural of integrity and in the life support system for the vendors. With all of this, one can realize the essence of the calamansi vendors and their contribution to the local economy, specifically, the Municipality of Buenavista, Guimaras (Tagalog Lang, 2016).

According to Dorfman, the theory of production is an effort to explain the principles by which a business firm decides how much of each commodity that it sells (its "outputs" or "products") it will produce, and how much of each kind of labor, raw material, fixed capital good, etc., that it employs (its "inputs" or "factors of production") it will use. The theory involves some of the most fundamental principles of economics. These include the relationship between the prices of commodities and the prices (or wages or rents) of the productive factors used to produce them and also the relationships between the prices of commodities and productive factors, on the one hand, and the quantities of these commodities and productive factors that are produced or used, on the other (Dorfman, 2016).

Buenavista is the oldest municipality in Guimaras. It was established in 1775, during the Spanish colonial period. A Spanish governor general was reputedly impressed by the place Buenavista, in Spanish called for "beautiful view". With 36 barangays, Buenavista envisioned to develop the economy through town-building, and agricultural crops are most considered to realize this vision.

The researchers conducted this research to gather empirical data of calamansi vendor's capability to contribute to the economy of the municipality, as well as the extent of the supply, value and market chain of their products. This study further aimed at determining the marketing flow and the corresponding expenses incurred by marketing participants in distributing calamansi from the producers to the consumers.v

Statement of the Problem

This study aimed to determine the extent of the supply, value and market chain of the calamansi products and their contribution capability to the local economy of Guimaras. This study sought answers to the following question: (1) What is the value, supply and market chain of calamansi; (2) What are the value-adding activities that can be produced using calamansi; and (3) What are the contributions of calamansi in the local economy of Guimaras?

METHODOLOGY

The research design used in this study was a descriptive method to determine the practices of the calamansi vendors with an interpretation of the findings. In the study, the descriptive survey method is directed toward the conditions that prevail in a group of cases chosen for the study. Calmorin & Calmorin (2012) said that in descriptive design, the study focuses on the present condition. The purpose is to find out new truth. The study was conducted in the province of Guimaras. The specific location of the study was limited to the four barangays of the municipality

of Buenavista, only considering the limited time of the researchers to complete the study and financially they are constrained to finance an island wide study. Hence, the four selected barangays were chosen based on the list taken from the Municipal Agriculture Office, namely: Agsanayan, Piña, San Nicolas and San Fernando. The respondents of this study were the calamansi vendors of Buenavista, Guimaras. They were the ones who sell calamansi product in the locale or nearby towns and provinces. They were determined by actually knowing them by means of being in Buenavista Public Market and Buenavista Wharf and other possible exits from the town. Also, the barangay captains of each barangay identified these calamansi farmers and vendors. Using purposive sampling, a total of 36 farmers and vendors were included as respondents of the study.

Before the questionnaire was administered to the respondents' inter-rates validity determine the reliability of the item. The item was considered reliable when 80 of the jury have signified that a particular item was appropriate. The data gathering instrument was a researcher-made questionnaire. The questionnaire was composed of two parts: Part I–Profile of the Respondents and Part A of Part 2-Value Chain Analysis of Calamansi. The validated research questionnaire was reproduced and personally administered to the respondents. After all the filled-in questionnaires were gathered, the same were coded and tabulated for data analysis through the use of computer in Excel format. The same data was analyzed using the Statistical Package for Social Sciences (SPSS) and interpreted using the appropriate statistical tools. Statistical tools used in this study were frequency count, percentage distribution, and mean.

RESULTS AND DISCUSSIONS

Profile of the Respondents

Table 1 presents the profile of the calamansi vendors. As to age, result revealed that 6 or 16.67% were 35–45 years old, 10 or 27.78% were 46–55 years old, 17 or 47.22% were 56-65 years old, and 3 or 8.33% were 66 years old and above, as to sex, 23 or 63.9% were male and only 13 or 36.1% were female. As to educational attainment, 2 or 5.6% were college graduates, 5 or 13.9% were college level, 10 or 27.8% were high school graduates, 5 or 13.9% were high school level, 13 or 36.1% were elementary graduates, and 1 or 2.8% were Elementary Level. As to civil status, 2 or 5.6% were single, 32 or 8.9% were married, 1 or 2.8% were separated, and 1 or 2.8% were widowed. As to monthly gross income, 8 or 22.2% has a monthly gross income of Php 1,000 and below, 6 or 16.7% has a monthly gross income of Php 1,000-Php 2,000, 3 or 8.3% has a monthly gross income of Php 2,001–Php 3,000, 7 or 19.4% has a monthly gross income of Php 3,001–Php 4,000, and Php 4,001–Php 5,000, respectively, while only 5 or 13.9% has a monthly gross income of above Php 5,000. This implies that the majority of the respondents were married males with ages ranging from 56 to 65 years old, elementary graduates and have below Php 1,000 monthly gross income.

Table 1. Profile of respondents

Particulars	frequency	percentage
Age		
35 – 45 years old	6	16.67
46 – 55 years old	10	27.78
56 - 65 years old	17	47.22
66 years old and above	3	8.33
Total	36	100.0
Sex		
Male	23	63.9
Female	13	36.1
Total	36	100.0
Educational Attainment		
College Graduate	2	5.6
College Level	5	13.9
High school Graduate	10	27.8
High School Level	5	13.9
Elementary Graduate	13	36.1
Elementary Level	1	2.8
Total	36	100.0
Civil Status		
Single	2	5.6
Married	32	88.9
Separated	1	2.8
Widowed	1	2.8
Total	36	100.0
Monthly Gross Income		
Below Php 1,000	8	22.2
Php 1,000 – Php 2,000	6	16.7
Php 2,001 – Php 3,000	3	8.3
Php 3,001 – Php 4,000	7	19.4
Php 4,001 – Php 5,000	7	19.4
above Php 5,000	5	13.9
Total	36	100.0

Value Chain

Table 2 presents the value chain of the calamansi vendors. Result showed that the overall mean for the value chain of calamansi was M=3.09, described as slightly practiced. Moreover, results revealed that majority of the respondents moderately practice decreasing the sales because of many competitors (M=81), owning plantation of calamansi (M=3.64), selling the calamansi at a lower price (M=3.53), easily adapt the changing conditions of the sales (M=3.36), and the number of buyers was just and/or what they have expected (M=3.28). Moreover, they slightly practiced on monthly sales of the calamansi products are decreasing (M3.25), inventory of calamansi is easily disposed (M=3.22), having trouble adapting to the changing conditions of sales (M=3.08), renting a booth to sell the products (M=2.83), and the profit is still increasing even if they have many competitors (M=2.81). However, they fairly practiced owning a booth at the market to sell the products (M=2.56), the booth rent is high (M=2.53), pay the rent of the booth in a low price (M=2.53) and not having their own plantation (M=2.44). The results imply that vendors sell their calamansi products at a lower price and their sales decrease due to many competitors.

Table 2. Value Chain

Statement	Mean	SD	Interpretation
1.Have own plantation of calamansi.	3.64	1.39699	Moderately practiced
2.Do not have own plantation of calamansi.	2.44	1.29713	Fairly practiced
3.Vendor booth's rent is high.	2.53	1.25325	Fairly practiced
4.Pay the rent of the booth in a low price.	2.50	1.10841	Fairly practiced
5.Renting a booth to sell the products.	2.83	1.23056	Slightly practiced
6.Own a booth at the market to sell the products.	2.56	1.15745	Fairly practiced
7.The inventory of calamansi is easily disposed.	3.22	0.98883	Slightly Practiced
8.The number of buyers was not what expected.	3.50	0.65465	Moderately Practiced
9.The number of buyers was just what had expected.	3.28	0.91374	Moderately Practiced
10.Having trouble adapting to the changing conditions of the sales of the calamansi products.	3.08	0.76997	Slightly Practiced
11.Easily adapt the changing conditions of the sales of the calamansi products.	3.36	0.89929	Slightly Practiced
12.Have many competitors that the sales decrease.	3.81	0.66845	Moderately Practiced
13.Sell calamansi at a low price.	3.53	0.81015	Moderately Practiced
14.Monthly sales of calamansi products are decreasing.	3.25	0.84092	Slightly Practiced
15.The profit is still increasing even if they have many competitors in selling calamansi products.	2.81	1.09073	Slightly Practiced
Overall Mean	3.09	0.92854	Slightly Practiced

Scale: 1.00 – 1.79 (Not Practiced); 1.80 – 2.59 (Fairly Practiced) 2.60 – 3.39 (Slightly Practiced); 3.40 – 4.19 (Moderately Practiced); 4.20 – 5.00 (Highly Practiced)

Value Adding Practices

Table 3 presents the value-adding practices of the calamansi vendors. Result showed the overall mean of M=3.38, described as slightly practiced. Moreover, results revealed that the vendors highly practiced on knowing the product very well (M=4.33). Vendors moderately practice ensuring the products have no defects (M=4.03), creating their own way to sell their products (M=3.89), estimating the cost of their products (M=3.86), innovating new products out of the calamansi to sell in the market (M=3.50) and selling other kinds of fruits to go with the calamansi product (M=3.50). However, they slightly practiced doing the same strategy as competitors (M=3.22), ensuring that the calamansi products is up to the buyers' expectation, do not know how the competitors work with their products (M=3.17), sorting their calamansi fruit into kilogram or half kilogram to reduce the waiting time of buyers (M=3.00), and only sell calamansi fruit (M=2.69). However, they fairly practiced not estimating the cost of products (M=2.58) and selling calamansi juice in bottles and other calamansi products (M=2.31). The results imply that vendors have enough knowledge about their products and ensure the quality meets customer satisfaction.

Value Adding Practices	Mean	SD	Interpretation
1. Know the product very well.	4.33	0.53452	Highly Practiced
2. Estimates the cost of their products.	3.86	0.68255	Moderately Practiced
3. Knows how their competitors sell their products.	3.86	0.68255	Moderately Practiced
4. Creates their own way to sell their calamansi products.	3.89	0.62234	Moderately Practiced
5. Innovate new products out of the calamansi to sell in the market.	3.50	1.08233	Moderately Practiced
6. Ensure that the calamansi products have no defects.	4.03	0.69636	Moderately Practiced
7. Ensure that there is someone with them to accommodate the buyers immediately.	3.61	0.87105	Moderately Practiced
8. Sort my calamansi fruits into kilogram and/or half kilogram to reduce the waiting time of the buyers.	3.00	0.86189	Slightly Practiced
9. Do not need to estimate the cost of the product.	2.58	0.87423	Fairly Practiced
10. Choose to do the same strategy as competitors. We sell the same product, anyway.	3.22	0.63746	Slightly Practiced
11. Don't know how competitors work with their products.	3.08	0.76997	Slightly Practiced
12. Only sell calamansi fruit.	2.69	1.03701	Slightly Practiced
13. Also sell other kinds of fruits to go with the calamansi products.	3.50	1.08233	Moderately Practiced
14. Also sell calamansi juice in bottles and other calamansi products.	2.31	0.92023	Fairly Practiced
15. Ensure that the calamansi product that I sell is up to the buyers' expectation.	3.17	0.81064	Slightly Practiced
Overall Mean	3.38	0.81103	Slightly Practiced

Scale: 1.00 – 1.79 (Not Practiced); 1.80 – 2.59 (Fairly Practiced) 2.60 – 3.39 (Slightly Practiced); 3.40 – 4.19 (Moderately Practiced); 4.20 – 5.00 (Highly Practiced)

Contribution to the Local Economy

Table 4 presents the extent of the contribution of the calamansi vendor to the local economy in the Municipality of Buenavista, Guimaras. Result revealed the overall mean was M=3.20, described as slightly practiced. Contribution to the local economy being was moderately practiced with a mean of M=3.64, followed by aware of the contribution to the local economy (M=3.58), contributing to the local economy is decrease the sales in calamansi (M=3.53), can still meet the required contribution to the local economy (M-=3.44), and gross income every month can still give a high contribution to the local economy (M=3.42), all described as moderately practiced. Moreover, vendors slightly practiced on not knowing where the contributions will go (M=3.39), required contribution to the local economy affects the income in selling calamansi (M=3.36), contribution to the local economy is low (M=3.25), contribution to the local economy benefits the business (M=3.22), do not agree with the amount of the contribution to the local economy (M=3.14), fully agree with the amount of contribution to the local economy (M=3.00), the required contribution to the local economy does not affect the income in selling calamansi (M=2.97), do not have money left after they give the contribution to the local economy (M=2.94), and profit is enough for the family to live that they cannot contribute to the local economy at all (M=2.44). The results imply that the vendors have a significant contribution to the local economy of Guimaras. However, their contribution resulted in decreasing the sales of calamansi.

Table 4. Contribution to the Local Economy

Statement	Mean	SD	Interpretation
1.Contribution to the local economy is high.	3.64	0.89929	Moderately Practiced
2.Gross income every month can still give a high contribution to the local economy.	3.42	0.80623	Moderately Practiced
3.Can still meet the required contribution to the local economy.	3.44	0.90851	Moderately Practiced
4.Aware of the contribution to the local economy.	3.58	0.64918	Moderately Practiced
5.Fully agree with the amount of contribution to the local economy.	3.00	1.01419	Slightly Practiced
6.The required contribution to the local economy affects the income in selling calamansi.	3.36	0.86694	Slightly Practiced
7.Contributing to the local economy is decreasing the sales in calamansi.	3.53	0.77408	Moderately Practiced
8.The contribution to the local economy benefits the business	3.22	0.89797	Slightly Practiced
9.Don't know where the contributions will go.	3.39	0.90326	Slightly Practiced
10.Do not agree with the amount of the contribution to the local economy.	3.14	0.79831	Slightly Practiced
11.The required contribution to the local economy does not affect the income in selling calamansi.	2.97	1.02779	Slightly Practiced
12.Contribution to the local economy is low.	3.25	0.69179	Slightly Practiced
13.Have enough money left after they gave the contribution to the local economy.	2.75	0.99642	Slightly Practiced
14.Profit is enough for the family to live that they cannot contribute to the local economy at all.	2.44	0.99841	Slightly Practiced
15.Do not have money left after they give the contribution to the local economy.	2.94	0.86005	Slightly Practiced
Overall Mean	3.20	0.87282	Slightly Practiced

Scale: 1.00 – 1.79 (Not Practiced); 1.80 – 2.59 (Fairly Practiced); 2.60 – 3.39 (Slightly Practiced); 3.40 – 4.19 (Moderately Practiced);4.20 – 5.00 (Highly Practiced)

CONCLUSION

Most of the respondents are Roman Catholic, aged 56-65 years old, male, elementary graduate, married, and with monthly gross income of below Php 1,000. The Value Chain and Value-adding practices was slightly practiced by the calamansi vendor. The contribution capability of the calamansi vendor was slightly practiced. The Calamansi vendors of Buenavista must develop more strategies in selling their calamansi products to boost up their income, like innovation of new product out of calamansi.

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