



Accessibility of Transportation as Determining Factor on the Income of Small-Scale Farmers in Cebu Philippines

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ABSTRACT

This paper was to test whether or not there is a significant relationship between the strategies used in the daily conduct of business in terms of sales and distribution and the rate of transport accessibility to the income earned by the respondent farmers. Additionally, this paper attempted to discover whether or not professional selling principles apply to the context of small-scale farmers. The data revealed that the selling strategies utilizing principles of professional salesmanship and the frequency of using intermediaries as a mode of distribution have no significant relationship with income among small-scale farmers. The conclusion was that the use of principles of selling does not necessarily apply to the field of small-scale farming. Furthermore, the means used in the distribution have no significant relationship with the increase or decrease of farmers' income. However, transportation accessibility does have a significant relationship with income. Hence, it was recommended to the local government units to adopt a framework that enables efficient and accessible transportation line with proper infrastructures that helps small-scale farmers in the delivery of farm harvests.

Keywords: Marketing Strategies, Farming, Sales, Distribution, Income

1. INTRODUCTION

Profit is the universal goal of every business venture (Davidson et al., 2009). It is the lifeblood upon which businesses rely everything. When profit fails to meet the desired target, a corresponding impact to the totality of the organization's operation is almost always expected (MSG, 2018). In this particular context, selling plays an indispensable role in the arrival of the desired profit goal (Paesbrugge et al., 2017). Selling became a professional discipline categorized under the promotional elements of the marketing mix. The distribution element also plays a significant role in the assurance that the product arrives at the designated place without delay.

Marketing is a general concept that develops products, sets the price, determines distribution strategies, and provides promotional means, all for customer satisfaction (Rafiq & Ahmed, 1995). The 4P's of Marketing or the Marketing Mix is a profound concept that encompasses the most critical aspect of Marketing. It should be noted, however, that the organization upon which these principles are applied is on an industrial scale. Established corporations use these principles in the conduct of business primarily (Marcos Cuevas, 2018).

In the context of this paper, the selected element of the Marketing Mix is tested whether or not it has a corresponding bearing on the farmers in the disposal of its farm products. Transportation accessibility, distribution means, and Selling Strategy is tested whether or not it has something of an effect on farmer's income. The aim of this paper is to present the applicability of these variables in the context of small-scale farming and contribute to the existing literature on Marketing Mix as an encompassing principle in the field of business and management.

The assumption is that demographic profile, Sales and Distribution Strategies, and Transportation Accessibility has a significant correlation with farmers' income. The more farmers will use the established strategies, the more that there will be increase in income. However, relying on

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the mere observation of facts and drawing conclusions without dealing with the details of the matter is but a crime against the pursuit of knowledge. Hence to ensure that observations and common sense meet with empirical data, the researcher conducted this study.

2. METHODOLOGY

2.1. Respondents

The respondents in this study are farmers in the mountain villages in the City of Cebu, Philippines. The researcher utilized a multistage pure random sampling technique in the selection of the respondents. There are 64 people's organizations, farmers' organizations in the area, duly registered and legally organized in each village. Each of the People's Organization (PO) was coded with different number identification. With the use of a randomizer software available online, twenty-six (26) POs were selected randomly. The researcher then listed all the members of each of the selected POs and randomly selected six respondents each of the PO's chosen, which comprise the 156 total participants/respondents in this study.

2.2. Gathering of Data

The gathering of data was done among farmers, selected through multistage random sampling. The respondent responded through a survey questionnaire which was formulated using the principles of personal selling, with reference to the sales process, distribution strategies in accordance to the principle of channel management and logistics, and the respondents' perceived level of access to transportation. Each of the questions in the research questionnaire was translated to the local language in order to make sure that the respondents understood the questions.

2.3. Analysis

This study is primarily descriptive, with the preliminary data analysis involving the determination of frequency distributions, simple percentages, and the mean of each of the items in the survey questionnaire. The descriptive analysis was used in demographic profiling and the responses in the items of each element of the sales and distribution strategies in Likert scale format. Further analysis was conducted to determine a significant relationship between the utilization of sales and distribution strategies, respondents' perceived level of access to transportation, and the income of farmers. In this case, this research used a simple linear regression to estimate the relationship between two quantitative variables, that is, the mean of the responses with respect to the selling strategies, use of intermediaries or distribution methods, and the level of accessibility of transportation against the respondents' level of income.

3. RESULT AND DISCUSSION

Sales and Distribution strategies have been the backbone of business at an industrial scale. However, there has been no concrete study done to determine whether or not such strategies do affect small-scale businesses. In the context of this paper, it will be discussed whether or not selling, distribution, and transportation accessibility have something to do with the increase or decrease of income among small-scale farmers. Presented below are the different demographic profiles of the respondents, the respondents' utilization of the fundamental selling principles, the use of the different modes of distribution, respondents' perceived level of transportation accessibility, and income.

3.1. Demographic Profile

The determination of respondents' profiles is an essential means of understanding the totality of the entire picture of this study. With the maximum of 74, minimum of 20, and the mean age of 45.66, it can be interpreted that the respondent farmers are indeed aging. This is in line with the Philippines Statistics Authority, as they published the profile of farmers in the Philippines to be in danger due to the old aged farmers (Guo et al., 2015). According to the said publication, the farmers' age is approximated at 45-60 years old, slightly higher than that of the mean age of the respondents of this study. This means that the farmers of Cebu City are considered within the range of PSA's published age bracket (Villar, n.d.). This could have an implication in the method of selling and distribution since as people get older, they tend to be lesser connected to people and reduce the level of stress and travel. The use of selling strategies and distribution will most likely have a corresponding impact according to age category (Terho et al., 2015).

The aging farmers are a mere reflection of how long the farmers are farming in the Cebu City area, as the highest frequency in the number of years in farming is at 41-45 years. This means that a considerable number of the respondents are already in the field of small-scale farming for quite a long period of time (Guo et al., 2015). As per observation during the conduct of the study, it is indeed clear that the respondents exhibit expertise in farming with the method used during the planting and harvesting of crops.

Table 1 – Correlation between demographic profile and income

	P-value	Decision
Age	.029	Reject the null hypothesis
Years in Farming	.067	Fail to reject
Educational Attainment	.160	Fail to reject

$\alpha=0.05$

The majority of the respondents are high school graduates with a frequency of 68 or 43.6 %, followed by elementary graduates with the frequency of 52 or 33.3 %, and No Education with the frequency of 25, or 16%. Education is a necessary element of progress; it is a means to determine the course of a country. An uneducated citizenry simply means a doomed country(Haig, 2014). It is precisely the reason why the government of the Republic of the Philippines focuses a huge portion of the entire annual budget on emphasizing the importance of education. Based on the data gathered, there is 16% with absolutely no formal education whatsoever. Interpreting from this reality, it could mean that the country's effort on education has questionable efficiency, for it allows a significant many to have no opportunity of being educated(Meijer et al., 2015). On sales and distribution, where communication is highly required, it is also almost always necessary to have enough educational background. The knowledge in communicating sales strategies requires amore profound understanding assumed to be attributable to higher educational attainment. In general, the demographic distribution presented in this paper, more often than not, is representative of the farmer's demographic distribution of the entire country; there is limited education, fewer young blood entering the agriculture sector, and farmers are aging.

Table 1 shows the correlation between the demographic profile and income. The data revealed, at $\alpha=0.05$, that the number of years in farming and the level of educational attainment does not have a significant relationship with income, with the number of years in farming and educational attainment at .067 and .160 respectively is greater than the $\alpha=0.05$. This means that concerning the farmers in this specific study, income is indifferent to the farmers' level of education and the length of experience in farming. In some other industries, income is dependent on the level of educational attainment, most especially in the field of academe, where compensation packages are dependent on educational attainment. Promotions, which also lead to changes in income, are also determined by the number of years in the company or a specific field. However, in farming, it does not really matter since education and length of experience in this context are immaterial to the respondents' income. While it is true that length experience in farming and educational attainment is not a determinant factor of income, age is. Age at a P-value of .029, which is lesser than $\alpha=0.05$, has a significant relationship with income. This supports the literature that age is a determining factor of income. It can be interpreted in the sense that age brings with it wisdom about human life and how to make things in proper order in a way that is beneficial to oneself, hence an increase in income.

3.2. Selling Strategy

The selling strategy in the context of this paper is the use of the personal selling process: The opening, Need and Problem Identification, Presentation, and Demonstration, Dealing with Objections, Negotiations, Closing the sales, and follow-up. The mentioned element is the universal flow of selling(Andzulis et al., 2012). Taking into consideration the following elements of the selling process, with a 5-point Likert-scale survey questionnaire formulated on the same measure, and using the following range, 1.0-1.8, Never; 1.80-2.60, Rarely; 2.60-3.40, Sometimes, 3.40-4.20, Often; and 4.21-5.0, Always. In Table 2, the data revealed that the farmers only use the said strategies sometimes, with a weighted mean of 3.03. The respondents, in this case, utilizes some of the methods in a non-permanent manner. The industrial application of the formula in selling is not applied at all times in the small-scale and micro-level perspective(Oh et al., 2012). To gain clearer a understanding on the data result, each of the elements above is given through two different questions with the following results: The opening, 2.89; Need and Problem Identification, 2.57; Presentation and Demonstration, 2.43; Dealing with Objections, 2.68; Negotiations, 3.38; Closing, 3.11 and 3.46; and Follow Up, 3.07 and 3.37, except for Negotiations and Closing which the respondent use often, all else is interpreted as sometimes and rarely, or it means that they have used the method mentioned but have not done it permanently during the selling process. The frequency in the use of the selling strategy in the small-scale scenario of farmers in the marketplace does not have a significant relationship with the farmers' income, with r at .007 and the significance level at p -value 0.9. This simply means that the use of a formal selling format does not have a bearing on the farmers' income, at least with respect to the respondent in this study(Panagopoulos & Avlonitis, 2010).

The totality of the data in selling strategy could be interpreted in several ways: First, it could mean that the standards of the selling process in the industrial market do not necessarily apply in the small scale and micro level as discussed above; Second, that the respondent farmers do not know exactly the entirety of the sales process or perhaps the farmers do not have enough idea that there exists such a formal selling process; Third, that the formalities of the selling process are unnecessary when dealing with negotiations in the informal marketplace.

Table 2 – Selling Strategy

STEPS	CODE	MEAN	MEAN	INTERPRETATION
The Opening	SSQ1	2.89	2.89	Sometimes
	SSQ2	2.90		
Need and Problem Identification	SSQ3	2.14	2.57	Rarely
	SSQ4	3.00		
Presentation and Demonstration	SSQ5	1.95	2.43	Rarely
	SSQ6	2.91		
Dealing with Objections	SSQ7	2.20	2.68	Sometimes
	SSQ8	3.17		
Negotiation	SSQ9	3.46	3.48	Often
	SSQ10	3.51		
Closing	SSQ11	4.03	3.79	Often
	SSQ12	3.54		
Follow Up	SSQ13	3.30	3.33	Sometimes
	SSQ14	3.37		

SSQ=Selling Strategy Questions

3.3. Distribution Strategy

Distribution is an element of marketing (Hilletoft & Hilmola, 2010). This element focuses on how can the manufacturer, or in this case, farmers, deliver the same to the target market. In the 4 Ps of marketing, distribution is within the ambit of place or placement. In the context of this paper, the distribution means the reliance of the respondent farmers on the third-party distribution and transportation agent. Reliance on the third party in the distribution process means that the respondent farmers do not utilize direct distribution but an indirect one, under the principles of distributions. Through the use of the Likert scale and the range of 1.0-1.8, Never; 1.80-2.60, Rarely; 2.60-3.40, Sometimes, 3.40-4.20, Often; and 4.21-5.0, Always; it was found out that the respondent farmers sometimes use the availability of third-party distributions with the mean of 3.03. The items of distributions are the following: The use of government aid, 2.79; The use of intermediaries, 2.84; Neighbors' assistance, 2.99; Purchasers and Agents, 3.35; Retailers, 3.53; Wholesalers, 2.87; and Other Third Part distribution means, 2.87; except the reliance of the respondent farmers often on the means of distributions using retailers, the rest of the listed items are utilized by the respondents only sometimes.

MODE	MEAN	INTERPRETATION
Government Distribution Means	2.79	Sometimes
Supermarket Contractors	2.84	Sometimes
Neighbors Assistance	2.99	Sometimes
Purchasers and Agents	3.35	Sometimes
Compradors/ Retailers	3.53	Often
Direct to Wholesalers	2.87	Sometimes
Other forms of intermediaries	2.87	Sometimes

The data means that the respondent farmers are relying on third-party distributors, more specifically, the reliance on retailers—this particular characteristic in the market is not new to the agri-business landscape in the city. In fact, retailing is historically the primary method of distribution in the agri-business sector, only in the time of modernity where people have the power to acquire personal transportation vehicles that the roles of Agri-retailers are becoming narrower. The act of subjecting to the retailer concept implies a considerable amount in the reduction of profit on the side of the respondent farmers due to the reduced mark-up value that has to be shared with the retailing agents. Instances have been reported where the retailers, especially during the time of the pandemic, have purchased the farm produced considerably low in the mountains and farms, then selling it in metropolitan cities with remarkably high prices. Some reports have a mark-up of five to ten times the farmgate prices. The country declared a national emergency that froze the price of basic commodities during the onslaught of COVID 19; however, to no avail, many retailers took the opportunity of profit.

New models in business marketing reveal that reducing the participation of intermediaries in the delivery of goods and services to the target customers effectively reduces the prices of products and indirectly induces healthy competition among manufacturers. In fact, online shops in the Philippines have become so viral that from the smallest of the herd in business to the whales join the bandwagon in the quest of making direct contact with the consuming public. The implication of this heavy reliance on intermediaries to the field of agriculture in the Philippines is the threat of continuous deterioration of the agriculture sector in the country. The challenge, therefore, in the hands of the governing authority in the country is to induce technological advancement in the agriculture sector, not only in harvest and post-harvest technologies but also in creating a legitimate and timely way of connecting the farmers directly to the consumers.

3.4. Transportation Availability

Availability of transportation, especially in the rural areas of the country, is undoubtedly one of the most significant aspects to consider if one seeks to engage in farming. There are several elements in the availability of transportation, and that includes the availability of farm-to-market roads, road distance to the actual farmland, availability of the actual bus, truck, motorcycle, jeepneys, and other vehicles used in transporting goods and services to the cities. The researcher explained these things to the respondent farmers during the actual interview and asked them to rate the availability of transportation based on their individual perspectives. The respondents were asked rate 1 to 10, 10 being the highest, which means that transportation is very much and readily available, and one being the lowest, which means that there is no means of transportation except manual carrying of the farm produce to the village centers or to the cities. The respondent ratings, together with its declared monthly income, were then analyzed using Pearson's Correlations, and the data revealed, with $r = .806$, that there is a high positive correlation. The researchers then conducted a simple linear regression analysis to determine the significance of such correlation, and the data revealed that the correlation is significant at a p-value of .000, which implies a very strong and statistically sound positive relationship between the availability of transportation means and the respondents' income.

This result is not trivial, as it collides with the basic common sense that the more accessible transportation is, the more straightforward farmers will get their produce to the market, hence higher income opportunities (Logan, 2020). This is as far as business is concerned. This data result strengthens the evidence that is already in place and validates why all governments in the world have to prioritize infrastructures, farm-to-market roads, and all forms of access to transportations, as these things heavily affect people's lives living within the country. While it is true that there is nothing new with the result of a survey, and it can be easily predicted that the result will be so. There is, however, a political and leadership implications of this result to the management structures of the government, the effectiveness of government programs that seek to alleviate poverty (Logan, 2020), and the political will to impute considerable positive changes in the countryside on the part of the governing authority. Farmers are the most impoverished sector in the Philippines. It is one of the most vulnerable sectors of the Philippines society, yet for the many decades of political promises and propaganda, nothing has changed (PSA, 2017).

4. Conclusion:

The use of selling strategies in the context of the industrial market does not necessarily affect the income of small-scale farmers. Income is indifferent when using or not using the said established and well-formulated selling strategies. The respondent farmers have to rely on their own delivering capabilities, and that the same has to reduce the reliance on third-party distributors. The data provides that when the respondent farmers rely so much on the third-party distributors, there is a corresponding reduction in the income. Accessibility of transportation of whatever means has a significant impact on the farmers' income. The more accessible transportation is, the higher the income of farmers. Access to transportation means is a factor to consider in improving farmers' lives in the countryside.

5. Recommendation:

This paper recommends to the City of Cebu, Agriculture Department, the Department of Agriculture, and the Department of Trade and Industry, to devise a means by which the respondent farmers could acquire established transportation means that reduce the cost of distribution and the exploitation of the intermediaries. Devise a comprehensive transportation plan that caters to the farmers' transportation needs in the City of Cebu and the provision of initial capitalization that aids in the delivery of farm products to the market. The purpose of such a transportation plan is to enable small-scale farmers to reach the full potential of their income under the Sustainable Development Goals of Ending Poverty and the Universal Progress of the Community. Additionally, with the advent of e-commerce as the primary means of exchanging goods and services in the country, it is highly recommended that the government initiates steps that enable the small-scale farmers to enter into cyberspace, including the provision of a platform, digital infrastructure, applications and the like to empower the farmers, the most neglected and impoverished sector of the country.

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