A Model of Trust and Collaboration in a Fresh Vegetable Supply Chain in Central Philippines

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ABSTRACT

It has been asserted that farmers are the most disadvantaged group among all members of the supply chain for fresh vegetables in the Philippines. This paper attempts to refute such claim by presenting a model of a mountain barangay in Central Philippines and identifying the different economic, socio-cultural and environmental factors present that enable farmers to enjoy optimal prices for their produce. The trust participants in the supply chain have for one another enables them to collaborate, resulting to benefits for all parties. Key informant interviews and participant observation were the main research methods used in data gathering. The author found that trust is necessary for effective collaboration and aided by efficient access to market information, and a minimum of government participation, can result in favorable outcomes for all participants in the supply chain. Farmers are able mitigate much uncertainty, attain higher income, and enjoy recreation during market days.

KEYWORDS

Agriculture and Community, Fresh Vegetables, Supply Chain Management, Team Work

INTRODUCTION

The supply chain management (SCM) of agri-fresh produce (FSCM) constitutes the processes from production to delivery of the agri-fresh produce from the farmers to the customers (Shukla and Sanjay, 2013, p115). FSCM is more complex as compared to other kinds of SCMs. The products are perishable, have high fluctuations in demand and. In recent times, consumers are becoming more demanding in health and the food, including the vegetables they consume (Van der Vorst and Beulens, 2002). And by their inherent uniqueness, the growing of vegetables is dependent on climatic conditions (Salin, 1998).

FSCM is one area which had minimal interests in the past, and only in recent times have interest been aroused. According to (Shukla and Jharkharia, pp. 123-125), Operations Management (OM) journals, agricultural journals and other journals have negligible publications on FSCM. There is also no single journal devoted to FSCM. Furthermore, most of the researches done in FSCM were in developed countries rather than developing ones.

There are some major concerns in FSCM that is not typical in other kinds of supply chains. One is the issue of post-harvest wastes. The amount of post-harvest waste ranges from 20 to 60 percent of the total production across countries (Widodo et al, 2006). Other researchers, including

DOI: 10.4018/IJAIE.2017070104

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Veena, Nagendra and Venkatesha (2011) estimated the losses in post-harvest of produce to be about 30%. Among the different probable causes of post-harvest losses is transportation. Transportation in developing countries like the Philippines often covers poor infrastructure and the use inadequate and dilapidated vehicles.

Another issue is the lack of planning and management practices in the FCSM, especially among the farmers (Shukla and Sanjay, 2013, p 117). Majority of the farmers are small land holders and they have little schooling and had learned agriculture simply from the elders. They are not knowledgeable enough to practice more modern ways of agriculture, and they would not also have enough financial resources. The farmers are often more preoccupied with the different tasks of farming; from seeds preparation, to planting, maintenance of plants, and harvesting. They do not know much about marketing. Micro and small time farmers do not employ outside labor and have to engage in the farming activities using the available members of the household. This is why a good number of researchers believe that the small scale farmers receive only a small fraction of the price of the produce that was sold.

Still another issue is on the transactions costs and the (need for) emergence of the appropriate governance structures (Escobal and Cavero, 2012). Transactions costs include costs for transportation from the farm site to the marketplace. It can also include the costs for the service of other supply chain participants, including the vegetable brokers and government taxation. If transactions costs are high, some farmers, specially the poor, may not be able to participate in the market. Chong and Calderon (2000) also argued that without the proper institutional governance present, transaction costs may affect severely the poor farmers, and thus creating unintended distribution outcomes. Put in another context, there is a need for the local population to institutionalize governance structures and practices in the FSCM in order to make it efficient.

Lastly, the presence of information is most critical. Zhou, Benton Jr. (2007) showed that effective information sharing significantly enhances effective supply chain practice and effective supply chain practice becomes more important when the level of information sharing increases. The authors concluded that both effective information sharing and effective supply chain practice are critical in achieving good supply chain performance.

It is without a doubt that unless solutions are found in the post-harvest waste reduction, that proper planning can be resorted to, that information is shared in timely and accurate ways, and that transaction costs can be lowered, there will remain inefficiencies in the supply chain ((Shukla and Sanjay, 2013) p. 139). This paper explores how some of the factors above are addressed.

The daily vegetable everyone in the Philippines consumes is a product of a supply chain that covers great distances and often with insufficient and poor farm to market roads. It also involves farmers who labor long hours under the sun and bearing risks from unpredictable harvests and sale prices due to unfavorable weather conditions. Competition is always present, from fellow farmers, those in near localities and even in areas located in other Philippine provinces. It has been a common perception that farmers are the final and biggest losers in the supply chain, as cost is a major consideration for the retail sale of vegetables.

In this study, the supply chain for vegetable production starts from the farmers, who in turn rely on the transporters to bring the vegetables to the local marketplace. In the marketplace, the brokers sell the vegetables in the farmers’ behalf, to the buyers who come from cities and neighboring provinces. The buyers purchase the vegetables and have them transported to dealers or retailers with the help of the truckers. It is observed that at each stage of the supply chain, the cost of vegetables increases, but since retail prices can be so competitive, farm prices have to be kept at their lowest. It is a common perception that farmers are grossly disadvantaged in the chain. Vlachopoulou, Manthou & Manos (2007) found that collaboration in the supply chain is often limited to operational issues and to logistics-related activities. But in her study, Russel (1987) argued that social relationships among small scale farmers with their middlemen are to the detriment of the farmers. Bignebat & Lemeilleur (2009) believes that if farmers are able to take a more active role in their own supply chains, it should be possible to change their position as price takers.
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