

BIBLIOGRAPHY

SALCEDO, GLORY MEL Q. APRIL. 2011. Coordination Mechanisms and Attributes Between Actors in the Spot Market Chains for Potato. Benguet State University, La Trinidad, Benguet.

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ABSTRACT

The study was conducted in various places in La Trinidad, Benguet, Metro Manila and Urdaneta City, Pangasinan to identify the different chains of potato and to determine the coordination mechanisms and attributes adopted in the different spot market chains.

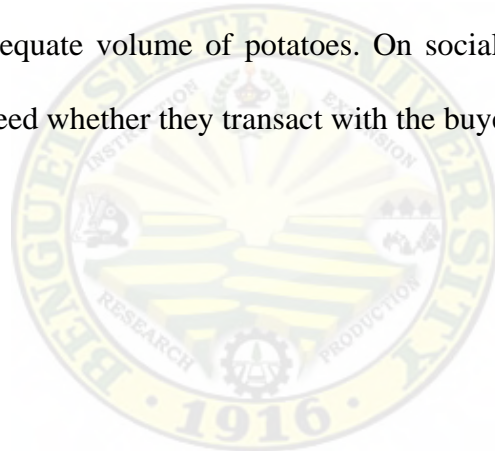
One hundred ninety-three serves as respondents in the study. Majority have an age bracket of 21-30 years old. Majority of the actors were male. Majority of them attended formal education. Most of the different respondents were engaged 1-5 years in business. And almost all the respondents were not members of any organization.

On the resource sharing, majority of the respondents were undecided as to sharing of investments, strategies to achieve the business goals and sharing operation information. Thus, respondents often share to the buyers the investments/strategies and information to improve the business operation. This falls to no resource sharing at all of the respondents.

Along the risks and reward sharing, buyers derived more benefits from the business operation than the different chain actors particularly the farmers, wholesaler-retailers and retailers.

In the decision style, majority of the respondents have their own decision and never the buyer dictates in making the decision.

As to the chain actors always monitor the buyers on the production/procurement and marketing schedules, the farmers and retailers disagreed. On the comprehensive selection procedures, most of the chain actors select their buyers who were trustworthy and at the same time, the buyer usually chooses the sellers that offer lower price, with good quality and adequate volume of potatoes. On socialization, majority of the chain actors extremely agreed whether they transact with the buyer mainly for business.



INTRODUCTION

Rationale

The potato (*Solanum tuberosum L.*) plays an important role in our economy and country's effort to attain self-sufficiency in food. Among the best of land-based agriculture priority commodity of the Department of Agriculture, potato ranks second (Personal Communication with Patricio Ananayo, 2010). It remains to be a high value crop because of its local and export potential and growing market demand. Rapid urbanization and the emerging importance of potato processing will generate additional demand. This could be stimulated by growth requirements of the fast food chain and the snacks industry (BNCRDC, 2007).

Supply chain actors such as suppliers, farmers and traders play an important role within the chain. This is because they serve as the agent in providing service to the ultimate consumers (Paloan, 2007). Fresh potatoes usually pass through agents, assemblers, wholesalers, financier-wholesalers, wholesalers-retailers, retailers and consumers. In general, potato traders employ a chain of middlemen who are based in the province. Agents considered buyers, are usually employed by Manila traders (assembler-wholesaler). The financier-farmers or commonly called supplier-farmers and the financier-wholesalers or commonly called the supplier-traders are the large farmers who give loans to farmers before planting season. Farmers then are committed to sell their produce to the financier-wholesalers at an agreed price. Wholesalers based either in Baguio or Manila to buy the produce in big volumes. Retailers are the end points in the marketing system prior to the consumer (BNCRDC, 2007). These actors work



independently but interdependent with each other. They interact and coordinate with each other through different mechanisms for transactions.

Coordination mechanism is employed along the chain. Xu and Beamon (2006) defined coordination mechanism as a set of methods used to manage interdependence between organizations. Thus, coordination within supply chain is strategic responses to the problems that arise from inter – organizational dependencies within the chain.

Statement of the Problem

Studying the coordination mechanisms along potato supply chain aimed to answer the following questions:

1. What are the different chains of potato in the spot market?
2. What are the coordination mechanisms and attributes adopted in the different spot market chains?
3. What are the differences and similarities in the coordination mechanisms and attributes between and among the actors in the spot market chains

Objectives of the Study

The research aimed:

1. To identify the different chains of potato in the spot market.
2. To determine the coordination mechanisms and attributes adopted in the different spot market chains in terms of: resource sharing, risks and reward sharing, decision style, level of control, comprehensive selection procedure and socialization.
3. To determine the differences and similarities in the coordination mechanisms and attributes between and among the actors in the spot market chains.



Importance of the Study

Since most literatures in supply chain management were in the field of manufacturing and logistics, the research given fact of the expected contribution to the present literatures in supply chains for agriculture, hence an avenue for future research and development in the fresh vegetables sector supply chain is inevitable.

In the Philippines, agricultural commodity supply chains researches become a research priority agenda for industry development. Hence, this research would contribute in some ways information about potato in the spot market.

Owing the changing market environment in the fresh vegetable sector, analyzing the coordination mechanisms in the spot market chains is a prime consideration. Supply chain management research and development is a growing concern for industry development particularly in fresh vegetables. Interests on this endeavor gained grounds to deal as the market competition increases and to improve the marketing share. Responding to this, the expected research results would in one way or another could be a source of information to explain the behavior of actors in the spot market. That is the knowledge about the association of coordination mechanisms and attributes in the spot market transactions for potatoes.

Scope and Delimitation

The scope of this study focused on the coordination mechanisms of actors of potato in the informal market. This was conducted on the major trading areas such as La Trinidad Trading Post, Urdaneta City and Metro Manila area.



REVIEW OF LITERATURE

Supply Chain

Folkerts and Koehorst (1998) define supply chain as “a set of interdependent companies that work closely together to manage the flow of goods and services along the value-added chain of agricultural and food products, in order to realize superior customer value at the lowest possible cost”. Supply chain is a network of physical and decision making activities connected by material and information flows that cross organizational boundaries (Van der Vorst, 2000). According to Lambert and Cooper, (2000), there are four main characteristics of a supply chain: First, it goes through several stages of increasing intra- and inter- organizational, vertical coordination. Second, it includes many independent firms, suggesting that managerial relationship is essential. Third, a supply chain includes a bi-directional flow of products and information and the managerial and operational activities. Fourth, chain members aim to fulfill the goals to provide high customer value with an optimal use of resources. Supply chain means the process of planning, implementing and controlling the efficient, cost effective flow and storage of raw materials, in-process inventory, finished goods and related information from the point-of-origin to point of final consumption for the purpose of conforming to customer requirements (Council of Logistics Management, 1986).

Supply chain is a dual flow of products and information. It is the drive to meet the central needs of the consumer and it stresses the importance of the relationships between participants in the marketing system. However, the tendency is often focus solely on the immediate economic aspects when firms are building supply chains (Champion and Fearn, 2001). Hongze Ma (2005) pointed out that supply chain is a network of



organizations from suppliers with the purpose to improve the flow of material and information. Drabenstott (1999) discusses the increasing move toward the development of supply chains and describes supply chain structures where all stages of production, processing and distribution are bound together tightly to ensure reliable, efficient delivery of high quality products.

Coordination Mechanisms and Attributes

In integrated systems or managed coordination, firms work with mutual interest in mind, build long-term relationships, work towards shared benefits, share information openly, and thrive for stability and show independence. The ability to respond quickly to the needs of the market is a key factor in ensuring the survival of the firm over time. Related to the difficulty of spot markets conveying accurate information is the speed of information flows and the rate of adoption with different coordination mechanisms. Negotiated coordination results in more rapid transmission of information between economic stages and consequently enhanced ability of the system to adjust to changing consumer demands, economic conditions, or technological improvements (Schrader and Boehlje, 1996).

Wathne and Heide (2000) gave a clear description about the different coordinating mechanisms that facilitate valuable cooperation, and emphasized the importance of understanding the causes and forms of opportunism before identifying the specific governance strategy to attenuate the negative effects of such behavior. Depending on the underlying conditions under which the specific transaction occurs, different coordinating devices contribute unequally well to the optimization of the exchange relationship.



McCann and Galbrath (1981) analyzed coordination strategies on the bases of three dimensions: 1. formality (from informal personal meetings to more formal arrangement; 2. level of control; and 3. decision localization (centralized or decentralized). According to the authors, an increase in dependency will cause an increase in formality, level of control, and centrality. Malone (1987) pointed out that there are two attributes associated with different coordination structures: 1. information structure (how members share, perceive, and communicate information) and 2. decision function (how members decide what actions to take). Within the decision function, there are two classes: centralized and decentralized. The centralized decision, one firm has primary control and decentralized style, each firm makes its decisions autonomously. Another important dimension to consider in supply chain coordination, where risks and benefits define the need for coordination, is how to allocate the benefits arising from coordination and which parties absorb the risks. Each organization seeks to implement coordination mechanisms that increase benefits and reduce risk. A framework utilizing four attributes will be used to differentiate the various coordination mechanisms: resource sharing structure; decision style; level of control and; risk/reward sharing (Xu and Beamon, 2006).

Xu and Beamon (2006) defined coordination mechanism as “a set of methods used to manage interdependence between organizations”. By definition, there are a number of people, entities and processes that interact in order to execute supply chain. Coordination mechanisms then, provide tools for effectively managing these interactions.

Resource sharing structure. Malone (1987) limited consideration to information sharing. Since there are other resources to be shared and communicated within the



context of coordination, the information sharing is extended to include all other resources shared. This dimension is defined as resource sharing structure, and follows the classification given by Varamaki and Vesalainen (2003) as: (1) no resource sharing; (2) operational resource sharing, such as communications between operational levels, sharing operational information such as point-of-sale (POS) data, or pooling operational resources in group problem solving; (3) tactical resource sharing, such as communication between managers in the same function from different firms, to achieve consistency or jointly developing inventory and production plans; and (4) strategic resource sharing, such as forming strategic alliances, forming strategic level meeting, jointly creating strategic plans, sharing strategic information, or jointly investing resources to make strategic advances, especially in the area of research and development.

Risk and reward sharing. Risk and reward sharing describes the characteristics of the selected incentive system. There are two main types of sharing methods: fair and unfair. A fair condition occurs when one firm undertakes more risk than do other firms in the relationships, but receives more benefits from coordination. An unfair condition arises when one firm undertakes less risk but enjoys greater benefits, or when one firm undertakes greater risks with fewer benefits (Xu and Beamon, 2006).

Decision style. For the decision function, there are two main styles: centralized and decentralized. The centralized decision style, one firm has primary control and decentralized style, each firm makes its decisions autonomously (Xu and Beamon, 2006).

Level of control. Control is the process of monitoring activities to ensure they are being accomplished as planned and to correct any significant deviations (Robbins, 1988). Control has two levels: high and low. A high level of control corresponds to strict activity



monitoring and control. In this case, the coordinating firms develop detailed and strict rules, routines, and monitoring systems to control other firm's behavior, for the purpose of detecting opportunistic risk. A low level of control corresponds little to no monitoring and control (Xu and Beamon, 2006).

Communication is “the formal as well as informal sharing of meaningful and timely information between firms” (Anderson and Narus, 1990). Frequent and timely communication is important because it assists in resolving conflicts and aligning perceptions and expectations (Morgan and Hunt, 1994).

Schroder and Mavondo (1995) suggested that current communication mechanisms within the food system are inadequate to meet the changing needs of buyers of agricultural commodities. Consequently food processors and distributors are increasingly bypassing open market systems in favor of more direct linkages with agricultural producers.

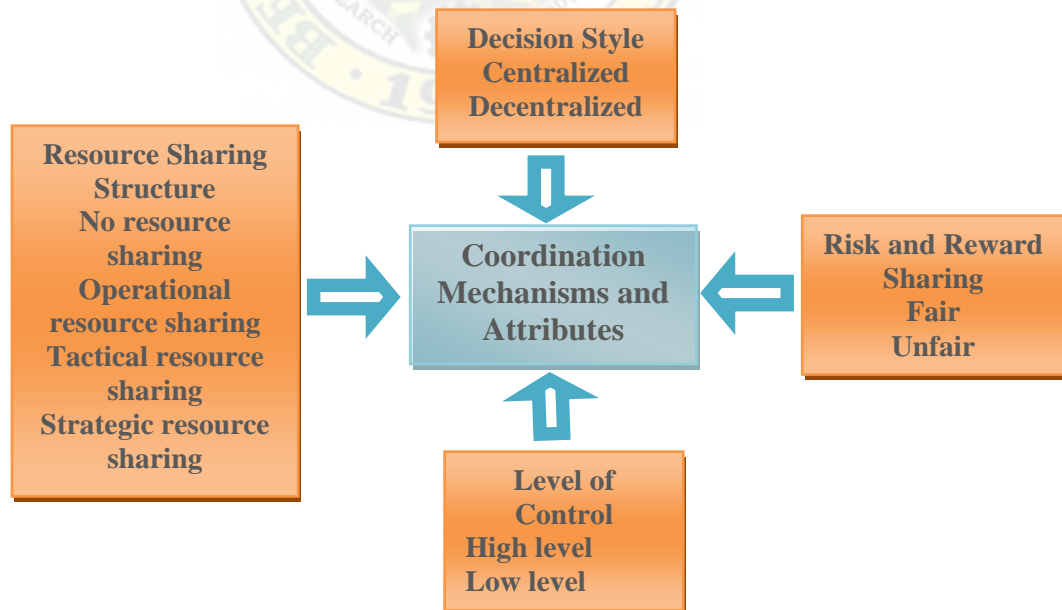


Figure1. Coordination mechanisms and attributes



Definition of Terms

Farmer - they are the one who produces the commodity.

Wholesaler - refers to middleman who directly sells commodity to retailers in wholesale price.

- middleman who buys good to farmers in large quantities and sell them especially to retailers for resale.

Retailer - one who sell the commodities to the regular customer in small amounts rather than in bulk.

Trucker - the one who's in charge of carrying the commodity to put it in the different market.

Spot Market - market in which commodities are being delivered and sold.

Chain Actors - persons involved in the process of the supply chain.

Conceptual Framework

The literatures implied several coordination mechanisms and attributes; however the research shall deal mainly on the resource sharing structure, risk and reward sharing, decision styles and level of control. Thus, the frame of the study is to analyze the coordination mechanisms and attributes among actors and its expected outcome employing this mechanisms.



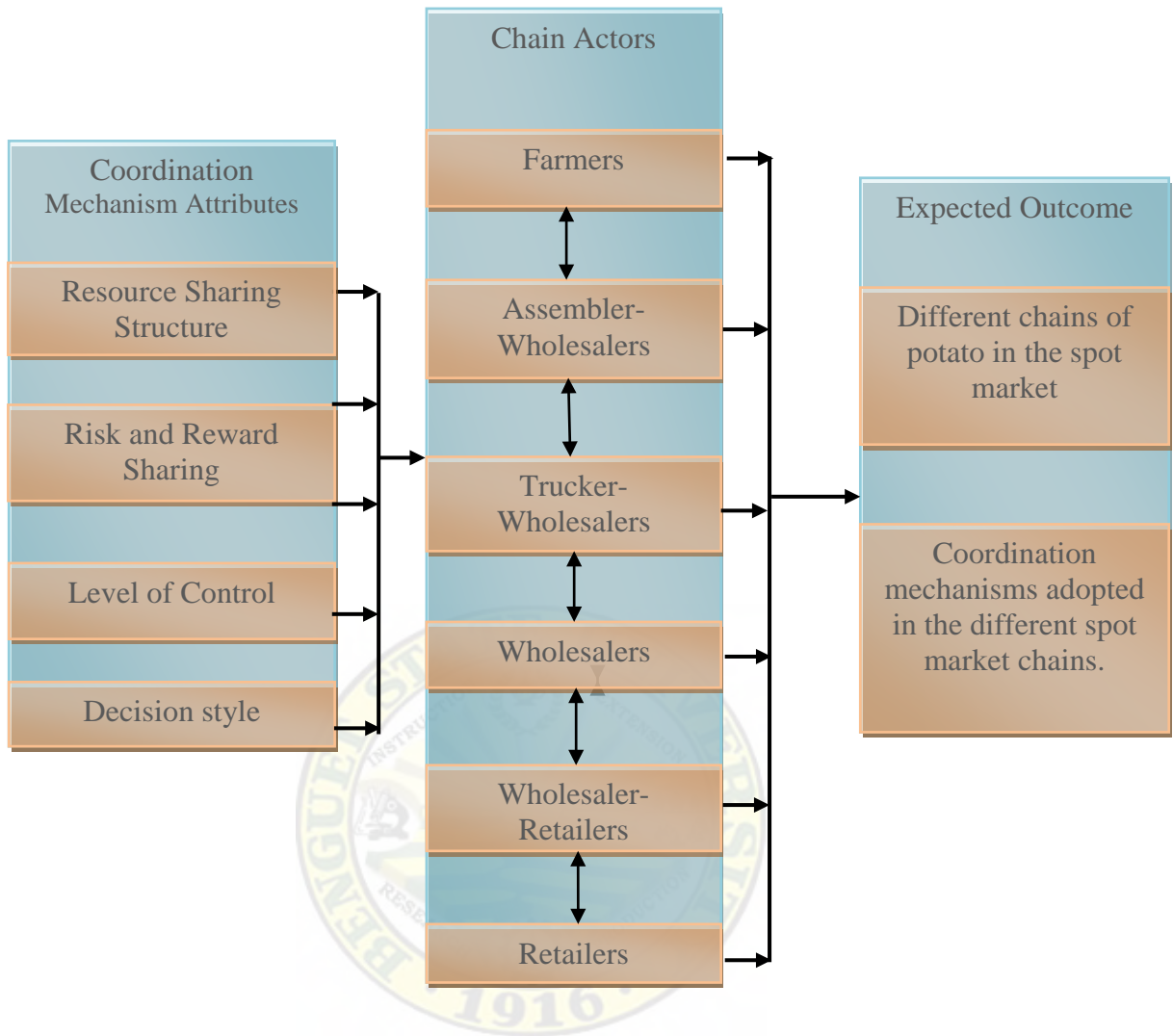


Figure 2. Conceptual framework

METHODOLOGY

Locale and Time of the Study

The research locations were following the geographic flow of fresh potatoes from the major source (production) to the major market assembly and collection, and the geographic distribution markets. The research coverage areas are limited to selected production and marketing areas.

The primary market (assembly/collection) was concentrated in La Trinidad, Benguet. Secondary markets (distribution) were the major vegetables trading centers (commonly called “bagsakan”) in Metro Manila such as Balintawak markets. While the tertiary markets are the retailing group within these trading centers and other retail market outlets such as Novaliches, Kamuning, Nepa-Q Mart, Mega-Q Mart, Blumentritt, Basilio and Urdaneta City. The research was conducted on November 2010.

Respondents of the Study

The respondents represent the major actors in the fresh potatoes supply chain. The table below shows the distribution of samples by respondent groups. The total production group was 43. From the responses of farmers to whom the vegetables were sold, the assembly group was identified but a limited number were interviewed due to difficulty in locating them. Thus, the assembly group is 37. Similarly, the same approach used to identify respondents in the distribution group and a total of 59 were interviewed. The last group was interviewed comprises 54 retailers in the wet market. Overall, the research has a total sample of 193 respondents.



Table 1. Distribution of sample size according to respondent groups

RESPONDENTS	TOTAL SAMPLE SIZE
Producers/ Farmers	43
Assemblers	
• Assembler- wholesalers	19
• Financier- assembler- wholesalers	18
Distributors	
• Trucker- wholesalers	12
• Wholesalers	10
• Wholesaler- retailers	37
Retailers	54
TOTAL	193

Data Gathering Procedures

A prepared structured interview schedule was used by the researcher for data gathering. Pre-testing was applied also to validate the questionnaire. The data collections were followed.

Data Gathered

The data gathered were the following: a) profile of the chain actors; b) coordination mechanisms of these actors along resource sharing in terms of operational, informational and strategy, decision style in the area of production and marketing, level of control in terms of monitoring the operations and risk/reward sharing.



Data Analysis

The data gathered were tabulated in the excel program and analyzed using the statistical package for the social sciences (SPSS) version 16. For descriptive analysis, frequency counts and percentage was used while for the statistical test, the Kruskal-Wallis was used.



RESULTS AND DISCUSSION

Demographic Profile of the Respondents

Table 2 presents the demographic profile of the different classification of the respondents as to their age, gender, marital status, religious affiliation and educational background.

Age. Majority of the respondents, farmers (40%), assembler-wholesalers (32%), trucker-wholesalers (42%) and wholesalers (40%) are in the age bracket of 21-30 years old, while the financier-assembler-wholesalers (39%) and wholesaler-retailers (38%) belong to age bracket of 31-40 years old. Majority of the retailers (39%) however belong to older age bracket of 41-50 years old. It could further observe that there were farmers and retailers with an age of over 60 years old. Result implies that age does not influence any person to engage in vegetable business.

Gender. There were an unequal number of males and females. Most of the farmer (91%), assembler-wholesaler (68%) and trucker-wholesaler (67%) are males, while most of the financier-assembler-wholesaler (72%), wholesaler (60%), wholesaler-retailer (68%) and retailer (83%) are females. Result shows that majority of hard, difficult work or activities really involved males over females. Similarly, the simpler and ease of activity involves more females than male individuals.

Marital status. Most of the respondents involved in this business are married, followed by single and least numbers are either separated or widowed. This implies that most of the actors involved despite of marital status, engaging in this business would not just a work but also a source of living for themselves or their family.



Table 2. Demographic profile of respondents

PARTICULARS	PRODUCTION		ASSEMBLY				DISTRIBUTION				RETAILING			
	F		A-W		F-A-W		T-W		W		W-R		R	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Age														
20 and below	4	9	2	10	0	0	0	0	3	30	3	8	2	4
21-30	17	40	6	32	4	22	5	42	4	40	13	35	10	19
31-40	9	21	6	32	7	39	4	33	1	10	14	38	10	19
41-50	9	21	4	21	4	22	2	17	1	10	3	8	21	38
51-60	3	7	1	5	3	17	1	8	1	10	3	8	9	16
61 and above	1	2	0	0	0	0	0	0	0	0	1	3	2	4
TOTAL	43	100	19	100	18	100	12	100	10	100	37	100	54	100
Gender														
Male	39	91	13	68	5	28	8	67	4	40	12	33	9	17
Female	4	9	6	32	13	72	4	33	6	60	25	67	45	83
TOTAL	43	100	19	100	18	100	12	100	10	100	37	100	54	100
Marital Status														
Single	14	33	2	11	1	7	5	42	6	60	16	43	10	18
Married	29	67	17	89	16	87	7	58	4	40	20	54	42	78
Separated	0	0	0	0	1	7	0	0	0	0	0	0	1	2
Widow	0	0	0	0	0	0	0	0	0	0	1	3	1	2
TOTAL	43	100	19	100	18	100	12	100	10	100	37	100	54	100
Religious Affiliation														
Catholic	32	74	14	74	12	67	12	100	9	90	27	73	47	87
Protestant	6	15	3	16	4	22	0	0	1	10	7	19	6	11
Others	5	11	2	10	2	11	0	0	0	0	3	8	1	2
TOTAL	43	100	19	100	18	100	12	100	10	100	37	100	54	100
Educ. Background														
Elementary	12	28	1	6	2	12	2	17	1	10	4	11	10	19
High School	18	42	9	47	8	44	4	33	3	30	17	46	31	57
College	13	30	9	47	8	44	6	50	5	50	14	38	11	20
Vocational	0	0	0	0	0	0	0	0	1	10	2	5	2	4
TOTAL	43	100	19	100	18	100	12	100	10	100	37	100	54	100

F- farmer

A-W- assembler-wholesaler

F-A-W- financier-wholesaler-assembler

T-W- trucker-wholesaler

W-wholesaler

W-R- wholesaler-retailer

R- retailer



Religious affiliation. The table shows that most of the respondents are Catholic, some are Protestants and only few are affiliated to other religious denomination.

Educational background. Majority of respondents have finished high school and college. Some of them attended elementary and least number attended vocational particularly the distribution and retailing group. This implies that most of the respondents had finished secondary and tertiary level of education.

Number of Years Engaged in Business

Table 3 indicates the number of years engaged in business by the different chain actors. Most of the respondents are engaged 1-5 years in business. Some claimed to be in business 6-10 years, few stated they are engaged 16-20 years. Specifically, majority of the respondents: farmers (37%), assembler-wholesalers (42%), wholesalers (50%) and retailers (28%) were in the business for one to five years old, while majority of the wholesaler-retailers (30%) and financier-assembler-wholesalers (39%) were engaged in vegetable trading for six to ten years and 11-15 years respectively. The results revealed the variations in the number of years the different actors engaged in vegetable business. The lesser number of years engaged but greater number of respondents implies that more and more people are getting interested to this kind of endeavor.



Table 3. Number of years engaged in business

YEARS	PRODUCTION		ASSEMBLY				DISTRIBUTION				RETAILING			
	F		A-w		F-a-w		T-w		W		W-r		R	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Below 1 year	0	0	1	5	0	0	0	0	4	40	0	14	2	4
1-5 years	16	37	8	42	6	33	4	33	5	50	10	27	15	28
6-10 years	5	12	6	32	3	17	3	25	1	10	11	30	9	17
11-15 years	5	12	3	16	7	39	4	33	0	0	5	14	5	9
16-20 years	9	21	0	0	0	0	0	0	0	0	1	3	11	20
21-25 years	2	5	1	5	2	11	1	8	0	0	1	3	2	4
26-30 years	2	5	0	0	0	0	0	0	0	0	1	3	9	17
31 and above	4	9	0	0	0	0	0	0	0	0	3	8	1	2
TOTAL	43	100	19	100	18	100	12	100	10	100	37	100	54	100

Organizational Affiliations

Majority of the actors especially farmers (91%), assembler-wholesalers (74%), financier-assembler-wholesalers (61%), trucker-wholesalers (42%), wholesalers (76%) and retailers (87%) are not associated to any organization (Table 4). However, few have claimed to be members of cooperative and other organization like vendors association. Result implies that the respondents may never appreciate the relevance of organization in the business operation.

Table 4. Organizational affiliations

ORGANIZATIONS	PRODUCTION		ASSEMBLY				DISTRIBUTION				RETAILING			
	F		A-W		F-A-W		T-W		W		W-R		R	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Farmer's Assoc.	0	0	0	0	0	0	0	0	2	20	0	0	0	0
Cooperatives	1	2	2	11	4	22	3	25	0	0	8	16	2	4
Others	3	7	3	16	3	17	4	33	0	0	3	8	5	9
None	39	91	14	74	11	61	5	42	8	80	25	76	47	87
TOTAL	43	100	19	100	18	100	12	100	10	100	36	100	54	100



Spot Market Chain and Location for Potato

Figure 3a illustrates the different chain actors involved in the production, procurement and selling of potato in the spot market. It shows the flow of potatoes from its point of production up to the end user/consumer. In general, it describes the different chains that the potato goes to, from the point of production from the different channels up to the end consumer.

Most of the production group from La Trinidad, Benguet sold their produce to the assembly group of the different spot markets such as in Urdaneta City, Pangasinan, La Trinidad, Benguet and Metro Manila. Majority of these assembly groups sold their potatoes to the trucker-wholesalers while there are some selling also to the distribution and retailing groups. The distribution groups specifically the trucker-wholesalers from La Trinidad delivers the potatoes to Urdaneta City, Pangasinan and Balintawak, Quezon City and distributes the products to the buyers such as the wholesalers, wholesaler-retailers and retailers within these trading center. The buyers of these trucker-wholesalers in Balintawak may come from the different spot markets of Metro Manila. The distribution groups ultimately sold their potato to the retailing group however, the trading of potato also happen among the different actors within the distribution groups. Lastly, the retailing group from the different spot markets sold their potatoes to the consumers of these different trading centers.



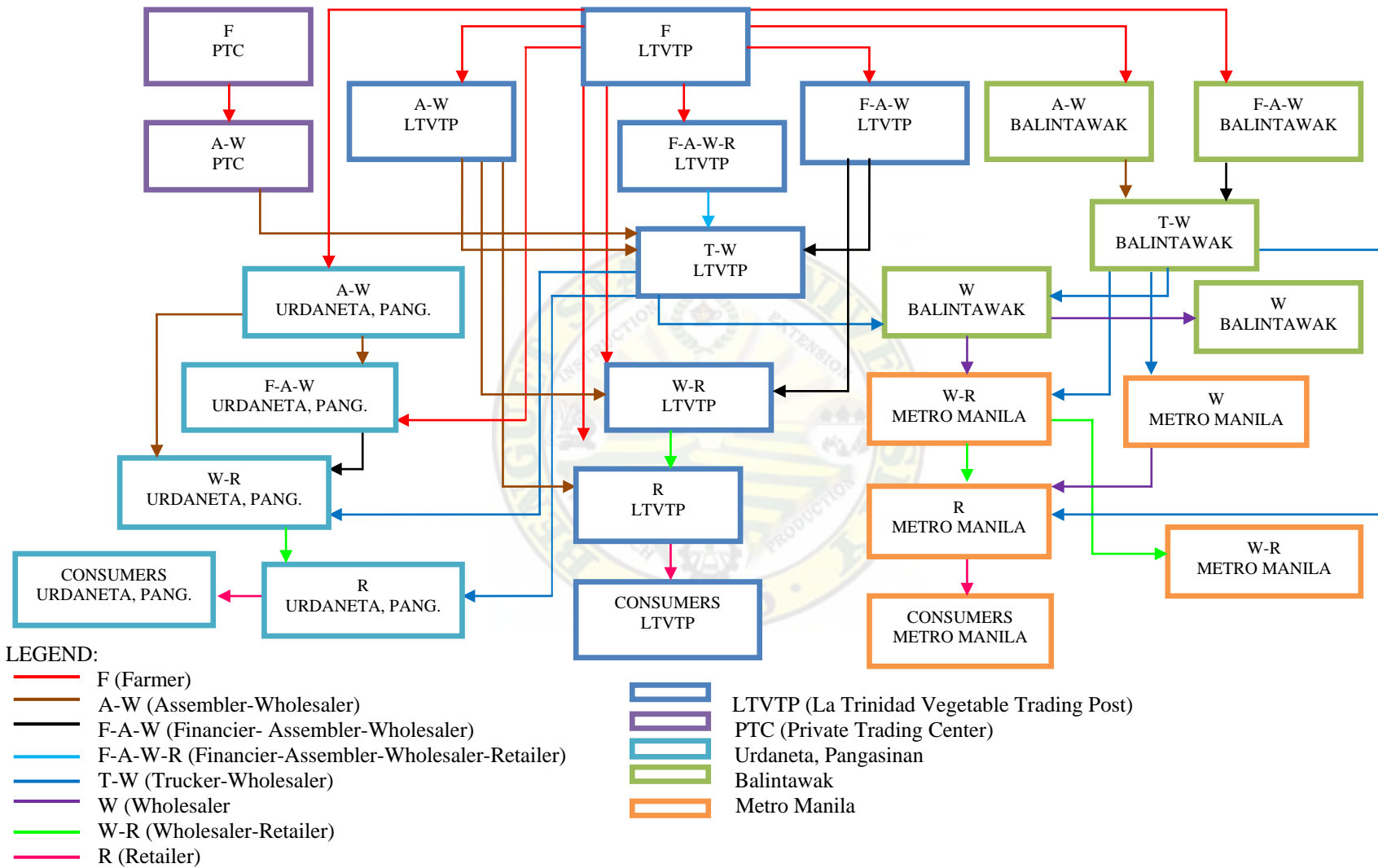


Figure 2. Spot market chain and location for potato

On the other hand, Figure 3b illustrates a more detailed product flow (different chain in specific) of potato spot market.

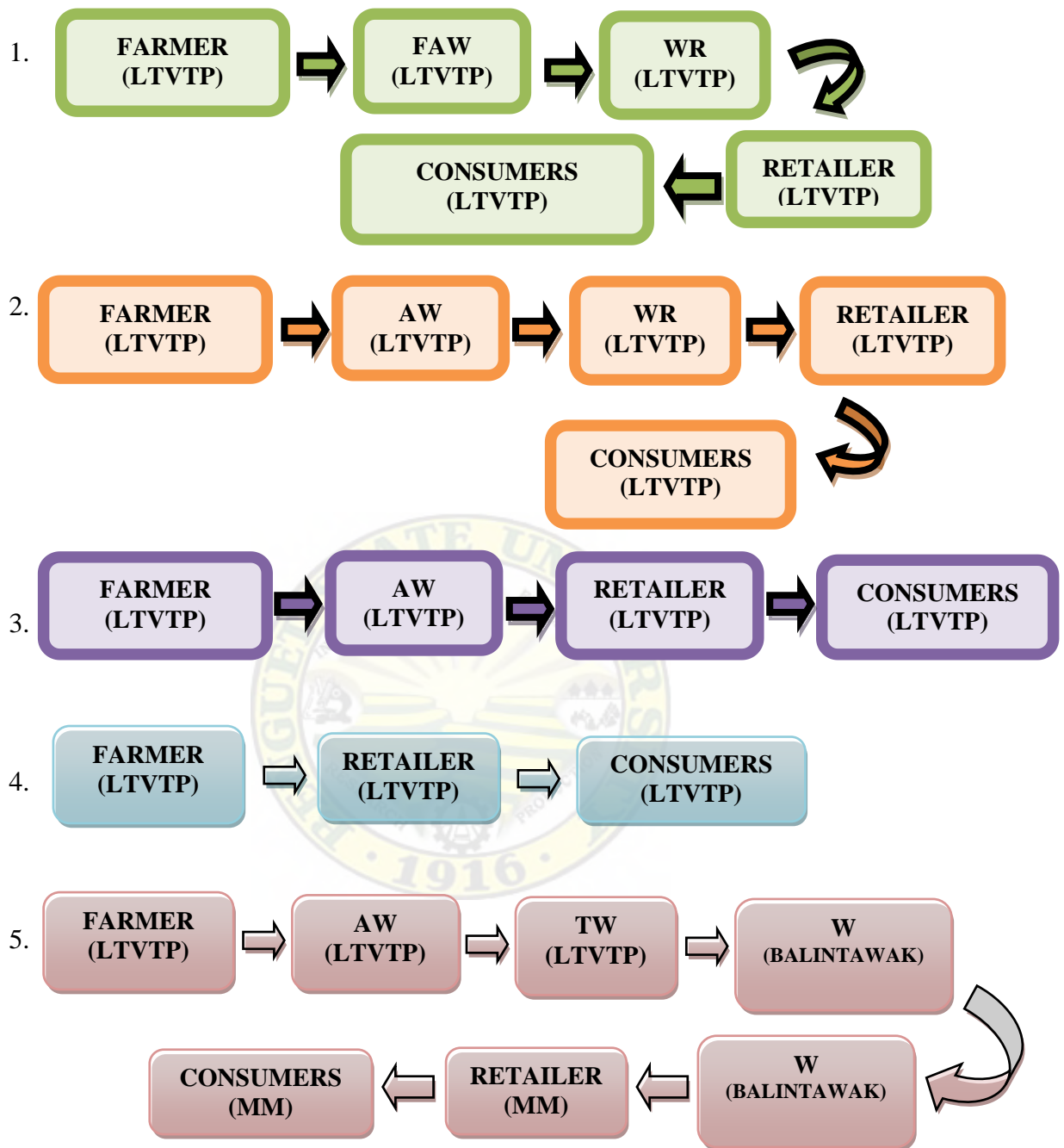
In La Trinidad trading post, from the farmer (Chain 1) the product is passed to the financier-assembler-wholesaler who supplies the seller farm inputs or some capital/loan for the business operation. The farmer then delivers their produce to the financier-assembler-wholesaler (F-A-W) as payment. From the F-A-W, the vegetables are sold to the wholesaler-retailer in the same area and then sell it to the retailer. From the retailer it goes to the ultimate consumer which either the households or restaurants.

In La Trinidad Vegetable Trading Post (LTVTP), Chain 2 shows similar to the previous chain. The difference is that from the farmer, they directly sell it to the assembler-wholesaler which sometimes their “suki” (regular buyer). And sell it to the wholesaler-retailer. With negotiated price, the retailer buys product to the assembler-wholesaler and sell it to the end consumer.

In LTVTP to Balintawak market, Chain 6 is similar to the first chain, the difference is that from financier-assembler-wholesaler directly sell the product to the trucker-wholesaler from Balintawak and deliver then to the designated market. The same procedure is followed in the Chain 1. From the trucker-wholesaler, the potatoes are delivered to the wholesaler-retailers then to retailers and to the ultimate consumer.

In LTVTP to Urdaneta, Pangasinan, Chain 8 is similar to the second chain, the difference is that from assembler-wholesaler sell the potatoes to trucker-wholesaler of La Trinidad then deliver to the “bagsakan” at Urdaneta. The same procedure is followed in Chain 2.





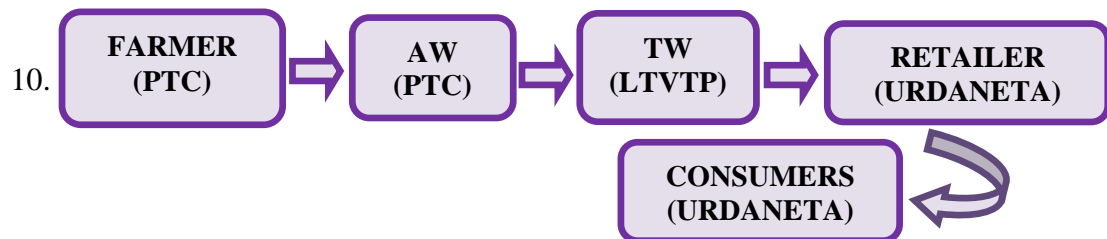
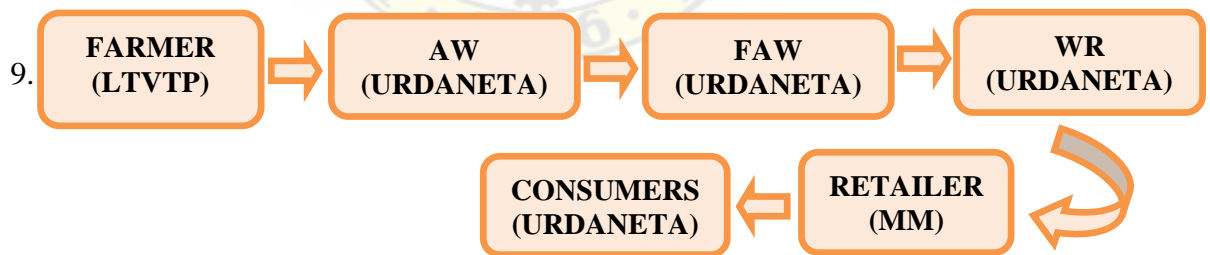
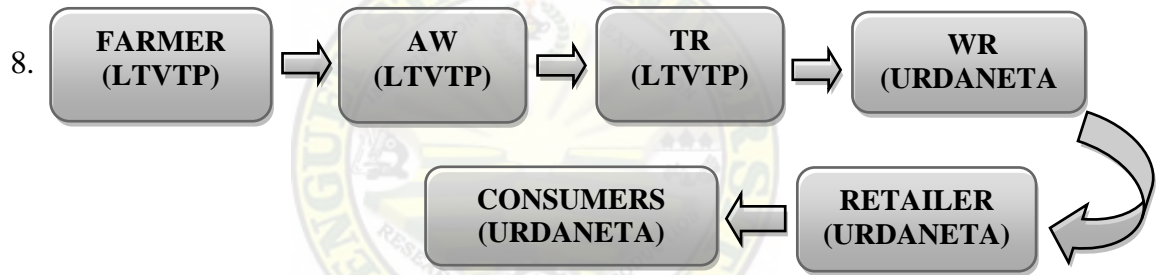
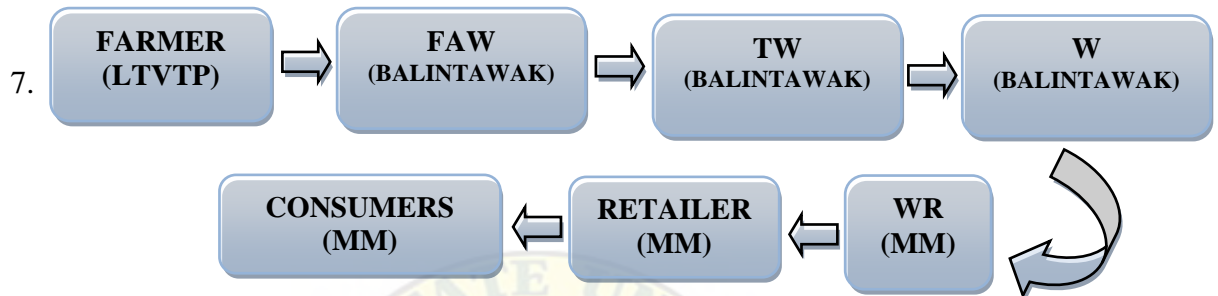
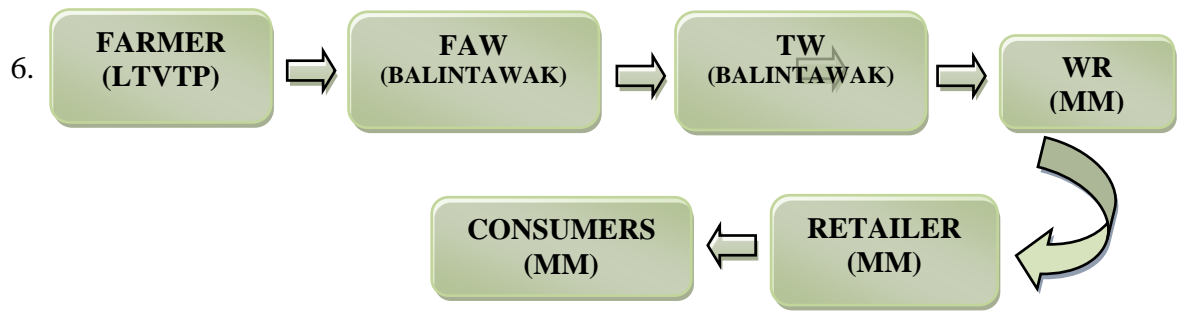
LEGEND:

FAW- Financier-assembler-wholesaler
 AW- Assembler-wholesaler
 TW- Trucker-wholesaler
 WR- wholesaler-retailer

LTVTP- La Trinidad Vegetable Trading Post
 MM- Metro Manila
 PTC- Private Trading Center

Figure 3 b. Spot market chains for potato





Resource Sharing

Table 5 presents the distribution according to resource sharing as to operational resource sharing, strategic resource sharing and information resource sharing of the different respondents in the supply chain.

Operational resource sharing. Resources shared are capital, facilities, equipment in the business operation. Given the responses of the different respondents on buyer supports me for specific production/procurement investments, financier-assembler-wholesaler (28%), trucker-wholesaler (33%), wholesaler (60%), wholesaler-retailer (32%) and retailer (56%) have extreme response of strongly disagree however assembler-wholesaler (37%) and farmer (28%) disagree and undecided respectively. Looking into the average it was undecided to moderately disagree. Moreover, based on the descriptive statistics of 3, implied that buyers do not support them for investments. This finding further support the result of the test statistic of 0.157 not significant which implies that the different actors have the same understanding on this statement.

Majority of the responses of the different actors, farmer (34%), financier-assembler-wholesaler (33%), trucker-wholesaler (83%), wholesaler (50%), wholesaler-retailer (46%) and retailer (65%) strongly disagree as they share with the buyer investment in production/procurement operation. This further explained by the average of which moderately disagree to undecided. Moreover, based on the descriptive mean statistic of two, implies that respondents disagree to sharing investment with the actors. The test statistics of 0.011 showed significant difference among the respondents, therefore there are disagreements in the sharing of operational resources particularly the capital for business operation.



Table 5 a. Operational resource sharing

STATEMENT	1		2		3		4		5		Ave.
	N	%	N	%	N	%	N	%	N	%	
A. Farmer											
1. Buyer supports me for specific production investments.	10	23	8	19	12	28	10	23	3	7	3
2. We share investment in production operation.	15	35	13	30	8	19	2	5	5	12	3
3. I extend support to the buyer in our business operation.	10	23	6	14	14	33	11	26	2	5	3
4. The buyer extends credit assistance in the potato production.	11	26	12	28	7	16	8	19	5	12	3
B. Assembler-wholesaler											
1. Buyer supports me for specific procurement investments.	3	16	7	37	5	26	3	16	1	5	3
2. We share investment in procurement operation.	4	21	6	32	5	26	3	16	1	5	3
3. I extend support to the buyer in our business operation.	1	5	5	26	6	32	4	21	3	16	3
4. The buyer extends credit assistance in the potato procurement.	4	21	5	26	3	16	6	32	1	5	3
C. Financier- assembler-wholesaler											
1. Buyer supports me for specific procurement investments.	5	28	2	11	5	28	3	17	3	17	3
2. We share investment in procurement operation.	6	33	4	22	3	17	4	22	1	6	2
3. I extend support to the buyer in our business operation.	2	11	4	22	6	33	3	17	3	17	3
4. The buyer extends credit assistance in the potato procurement.	8	44	2	11	5	28	1	6	2	11	2

Legend:

- 1- strongly disagree
- 2- moderately disagree
- 3- undecided
- 4- moderately agree
- 5- strongly agree



Table 5 a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
D. Trucker-wholesaler											
1. Buyer supports me for specific procurement investments.	4	33	4	33	1	8	2	17	1	8	2
2. We share investment in production/procurement operation.	10	83	0	0	2	17	0	0	0	0	1
3. I extend support to the buyer in our business operation.	2	17	0	0	3	25	5	42	2	17	3
4. The buyer extends credit assistance in the procurement of vegetables.	5	42	1	8	3	25	3	25	0	0	2
E. Wholesaler											
1. Buyer supports me for specific procurement investments.	6	60	3	30	1	10	0	0	0	0	2
2. We share investment in procurement operation.	5	50	4	40	1	10	0	0	0	0	2
3. I extend support to the buyer in our business operation.	1	10	0	0	5	50	3	30	1	10	3
4. The buyer extends credit assistance in the procurement of vegetables.	3	30	2	20	3	30	1	10	1	10	3
F. Wholesaler-retailer											
1. Buyer supports me for specific procurement investments.	12	32	4	11	10	27	6	16	5	14	3
2. We share investment in procurement operation.	17	46	8	22	5	14	5	14	2	5	2
3. I extend support to the buyer in our business operation.	4	11	3	8	10	27	11	30	9	24	3
4. The buyer extends credit assistance in the procurement of vegetables.	10	27	7	19	5	14	8	22	7	19	3
G. Retailer											
1. Buyer supports me for specific procurement investments.	30	56	2	4	8	15	10	19	4	7	2
2. We share investment in procurement operation.	35	65	4	7	8	15	5	9	2	4	2
3. I extend support to the buyer in our business operation.	12	22	11	20	16	30	10	19	4	7	3
4. The buyer extends credit assistance in the procurement of vegetables.	27	50	6	11	8	15	7	13	4	7	2



Table 5 b. Descriptive and test statistics

STATEMENT	MEAN	CHI-SQUARE	DF	TEST STATISTIC
1. Buyer supports me for specific production/procurement investment.	2	5	3	0.157
2. We share investment in production/procurement operation.	2	11	3	0.011*
3. I extend support to the buyer in our business operation.	3	12	3	0.008**
4. The buyer extends credit assistance in the procurement of vegetables.	3	6	3	0.103

*significant difference

** very significant

Most of the farmers (33%), assembler-wholesaler (32%), financier-assembler-wholesaler (33%), wholesaler (50%) and retailer (30%) were uncertain to extend support to the buyers in their business operation but the trucker-wholesaler (42%) and wholesaler-retailer (30%) moderately agree to this condition. This mean, the respondents indicated vested interest in their owned business. These trucker-wholesalers however support their buyers particularly the wholesalers and wholesaler-retailers whom assumed to be their regular buyers that would enable them to create good business in the long run. This further justified by the mean average of three which means they moderately disagree to undecided. The result of test statistic of 0.008 revealed there appeared very significant difference among the actor's response that is they vary according to the condition. However, the trucker-wholesaler can extend support to their buyers like delivering the sold product on credit terms.

Table 5a, further indicated that majority of the financier-assembler-wholesaler (44%), trucker-wholesaler (42%), wholesaler (30%), wholesaler-retailer (27%) and retailer (50%) strongly disagree whether the buyer extends credit assistance in the



production/procurement of vegetables. This result implied the indifferences thus exhibit individualistic interest in business operation. The descriptive mean of three and test statistic of 0.103 would further justify this attitude by the different actors in the spot market chain.

Strategic resource sharing. The buyer and the seller make or plan for actions to achieve or improve their goals. Majority of the actors: farmers (42%), assembler-wholesalers (37%), financier-assembler-wholesalers (44%), trucker-wholesalers (33%) and wholesalers (30%) were undecided with regards the buyer and seller jointly share production/procurement and marketing strategies. The retailer and wholesaler-retailer however strongly disagree and disagree to this condition. This could further justified by frequency average at three and mean statistics of three where the respondents were uncertain on this system of business operation. However test statistic at 0.028 showed that there is significant difference among the different group of respondents. Therefore, it may be assumed that some respondents would be willing to share their marketing strategies to other group. That is, for them to improve their marketing operation.

Almost all of the respondents strongly disagree to jointly share investment in the attainment of business goals. The frequency average of two and mean average of two indicate their disagreement to sharing of investment in business. Test statistic at 0.010 that showed significant differences among the respondents thus proving of individualistic interest on their own business.



Table 6 a. Strategic resource sharing

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
A. Farmer											
1. The buyer and I jointly share production and marketing strategies.	6	14	10	23	18	42	7	16	2	5	3
2. We jointly share investment to attain our business goals.	16	37	12	28	9	21	4	9	2	5	2
3. We plan/make strategies to improve our business operation.	9	21	9	21	11	26	11	26	3	7	3
B. Assembler-wholesaler											
1. The buyer and I jointly share marketing strategies.	4	21	1	5	7	37	6	32	1	5	3
2. We jointly share investment to attain our business goals.	7	37	4	21	4	21	3	16	1	5	2
3. We plan/make strategies to improve our business operation.	3	16	6	32	4	21	4	21	2	11	3
C. Financier- assembler-wholesaler											
1. The buyer and I jointly share marketing strategies.	3	17	4	22	8	44	1	6	2	11	3
2. We jointly share investment to attain our business goals.	7	39	3	17	3	17	4	22	1	6	2
3. We plan/make strategies to improve our business operation.	4	22	3	17	5	28	4	22	2	11	3
D. Trucker-wholesaler											
1. The buyer and I jointly share marketing strategies.	4	33	1	8	4	33	2	17	1	8	3
2. We jointly share investment to attain our business goals.	7	58	2	17	3	25	0	0	0	0	2
3. We plan/make strategies to improve our business operation.	5	42	2	17	3	25	1	8	1	8	2



Table 6 a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
E. Wholesaler											
1. The buyer and I jointly share marketing strategies.	3	30	0	0	3	30	3	30	1	10	3
2. We jointly share investment to attain our business goals.	6	60	2	20	2	20	0	0	0	0	2
3. We plan/make strategies to improve our business operation.	4	40	1	10	1	10	3	30	1	10	3
F. Wholesaler-retailer											
1. The buyer and I jointly share marketing strategies.	8	22	10	27	9	24	8	22	2	5	3
2. We jointly share investment to attain our business goals.	20	54	4	11	7	19	5	14	1	3	2
3. We plan/make strategies to improve our business operation.	9	24	10	27	8	22	6	16	4	11	3
G. Retailer											
1. The buyer and I jointly share marketing strategies.	23	43	12	22	9	17	4	7	6	11	2
2. We jointly share investment to attain our business goals.	38	70	7	13	4	7	5	9	0	0	2
3. We plan/make strategies to improve our business operation.	30	56	5	9	5	9	5	9	9	17	2

Table 6 b. Descriptive and test statistics

STATEMENT	MEAN	CHI-SQUARE	DF	TEST STATISTIC
1. The buyer and I jointly share marketing strategies.	3	9	3	0.028*
2. We jointly share investment to attain our business goals.	2	11	3	0.010*
3. We plan/make strategies to improve our business operation.	3	5	3	0.179

*significant



Majority of the trucker-wholesaler (42%), wholesaler (40%) and retailer (56%) respondents strongly disagree to involve other groups in planning/making strategies to improve the business operation, while assembler-wholesaler (32%), and wholesaler-retailer (27%) moderately disagree and the farmer (26%) as well as the financier-assembler-wholesaler (28%) were undecided. The frequency average and mean average of three indicated moderately disagree to undecided level of scale which further justified in the test statistic at 0.179. This means, the respondents share commonalities in the planning and making strategies for the improvement of their business operation.

Information resource sharing. The buyer and the seller share marketing/production information. Majority of the actors particularly the assembler-wholesaler (37%), financier-assembler-wholesaler (33%) and wholesaler (30%) showed disagreement, the farmers (14%) and retailer (37%) strongly disagree to the sharing of production procurement information. However, the trucker-wholesalers (42%) and wholesaler-retailer (38%) agree and strongly agree respectively in sharing information. This result is further supported from the frequency average and descriptive mean of three. However, test statistic (0.008) showed highly significant differences, thus the different group of respondents have varying opinion in sharing information.

The different actors particularly the farmer (40%), assembler-wholesaler (26%), financier-assembler-wholesaler (33%) and wholesaler-retailer (38%) indicated their indecisiveness whether the buyer always share market information, while the trucker-wholesaler (33%) and the wholesaler (30%) and retailer (43%) have positive and negative opinion respectively. The descriptive mean of three and test statistic of 0.001 further revealed highly significant differences between and among the different group of actors.



Table 7 a. Information resource sharing

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
A. Farmer											
1. I share production information (volume, cost, production schedules) to the buyers.	6	14	13	30	10	23	9	21	5	12	3
2. The buyer always shares market information (demand, supply, prices & cost).	4	9	10	23	17	40	9	21	3	7	3
3. We share information about production and marketing schedules.	4	9	13	30	13	30	10	23	3	7	3
B. Assembler-wholesaler											
1. I share procurement information (volume, cost, production schedules) to the buyers.	2	11	3	16	3	16	7	37	4	21	3
2. The buyer always shares market information (demand, supply, prices & cost).	3	16	2	11	5	26	5	26	4	21	3
3. We share information about marketing schedules.	3	16	0	0	5	26	6	32	5	26	4
C. Financier- assembler-wholesaler											
1. I share procurement information (volume, cost) to the buyers.	0	0	3	17	6	33	6	33	3	17	4
2. The buyer always shares market information (demand, supply, prices & cost).	0	0	3	17	6	33	6	33	3	17	4
3. We share information about marketing schedules.	0	0	2	11	10	56	3	17	3	17	3
D. Trucker-wholesaler											
1. I share procurement information (volume, cost) to the buyers.	2	17	2	17	3	25	0	0	5	42	3
2. The buyer always shares market information (demand, supply, prices & cost).	2	17	2	17	2	17	4	33	2	17	3
3. We share information about marketing schedules.	2	17	2	17	0	0	5	42	3	25	3
E. Wholesaler											
1. I share procurement information (volume, cost) to the buyers.	1	10	2	20	2	20	3	30	2	20	3
2. The buyer always shares market information (demand, supply, prices & cost).	1	10	3	30	2	20	2	20	2	20	3
3. We share information about marketing schedules.	1	10	4	40	1	10	3	30	1	10	3



Table 7 a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
F. Wholesaler-retailer											
1. I share procurement information (volume, cost) to the buyers.	4	11	1	3	11	30	7	19	14	38	4
2. The buyer always shares market information (demand, supply, prices & cost).	7	19	4	11	14	38	4	11	8	22	3
3. We share information about production and marketing schedules.	5	14	6	16	11	30	9	24	6	16	3
G. Retailer											
1. I share procurement information (volume and cost) to the buyers.	20	37	6	11	4	7	14	26	10	19	3
2. The buyer always shares market information (demand, supply, prices & cost).	23	43	5	9	14	26	8	15	4	7	2
3. We share information about marketing schedules.	20	37	11	20	9	17	8	15	6	11	2

Table 7 b. Descriptive and test statistics

STATEMENT	MEAN	CHI-SQUARE	DF	TEST STATISTIC
1. I share production/procurement information (volume, cost) to the buyers.	3	12	3	0.008**
2. The buyer always shares market information (demand, supply, prices & cost).	3	16	3	0.001**
3. We share information about production and marketing schedules.	3	14	3	0.002**

*significant

**very significant

Most of the farmer (30%), financier-assembler-wholesaler (56%) and wholesaler-retailer (30%) were undeceive whether to share information about production/procurement and marketing schedules. But the assembler-wholesaler (32%), trucker-wholesaler (42%) moderately agreed and the wholesaler (40%) who disagreed and retailer (37%) strongly disagreed to this condition. The finding from the frequency



average and descriptive mean, revealed further the indecisiveness to moderately disagreement among the respondents group. The test statistic at 0.002 implies very significant differences in sharing information about production/procurement schedules. This result further proves that respondents look only for their greater interests in business operation.

Risks and Reward Sharing

The sharing of risks and reward/benefits fairly or unfairly among the sellers and buyers in the business operation.

Majority of the respondents were indecisive as to sharing of risks from the transaction of the business, except for the retailer who showed disagreement (Table 8a). The frequency average and the descriptive statistic mean indicate further the indecisiveness to moderately agree on this condition. Test statistic of 0.000 revealed highly significant differences among the actors thus implied varied behavior from sharing of the same level of risks could be observed.

The responses of the farmers (47%), trucker-wholesalers (2%) and retailers (28%) indicated indecisiveness as to the sharing of equal benefits in the business transaction between buyers and sellers. But as to the assembler-wholesaler (47%), financier-assembler-wholesaler (28%), wholesaler (40%) and wholesaler-retailer (35%) agreed that there is sharing of benefits. Glancing into the frequency average, it is moderately agreed to undecided, and as supported by the descriptive mean of three. Furthermore, test statistic (0.006) proves there is highly significant difference among the respondents, thus the actors believed that each of them received the same benefits in the business operation.



Table 8 a. Risk and reward sharing

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
A. Farmer											
1. The buyer and I share the same risks from the transaction we make.	10	23	6	14	20	47	4	9	3	7	3
2. The buyer and I share equal benefits from the transaction we make.	5	12	9	21	20	47	7	16	2	5	3
3. I take more risk from the transaction I make with buyers.	0	0	5	12	17	40	12	28	9	21	4
4. The buyer derives more benefits from the business operation.	1	2	10	23	8	19	15	35	9	21	3
5. I always control the pricing and grading.	9	21	17	40	14	33	2	5	1	2	2
B. Assembler-wholesaler											
1. The buyer and I share the same risks from the transaction we make.	0	0	1	5	8	42	7	37	3	16	4
2. The buyer and I share equal benefits from the transaction we make.	0	0	2	11	6	32	9	47	2	11	4
3. I take more risk from the transaction I make with buyers.	0	0	4	21	6	32	6	32	3	16	3
4. The buyer derives more benefits from the business operation.	0	0	5	26	5	26	5	26	4	21	3
5. I always control the pricing and grading.	1	5	4	21	7	37	5	26	2	11	3
C. Financier- assembler-wholesaler											
1. The buyer and I share the same risks from the transaction we make.	0	0	2	11	6	33	6	33	4	22	4
2. The buyer and I share equal benefits from the transaction we make.	0	0	3	17	5	28	5	28	5	28	4
3. I take more risk from the transaction I make with buyers.	0	0	1	6	13	72	1	6	3	17	3
4. The buyer derives more benefits from the business operation.	0	0	0	0	11	61	7	39	0	0	3
5. I always control the pricing and grading.	0	0	4	22	9	50	2	11	3	17	3
D. Trucker-wholesaler											
1. The buyer and I share the same risks from the transaction we make.	1	8	2	17	4	33	2	17	3	25	3
2. The buyer and I share equal benefits from the transaction we make.	1	8	2	17	5	42	3	25	1	8	3
3. I take more risk from the transaction I make with buyers.	1	8	4	33	3	25	2	17	2	17	3
4. The buyer derives more benefits from the business operation.	1	8	3	25	4	33	2	17	2	17	3
5. I always control the pricing and grading.	2	17	2	17	1	8	5	42	2	17	3



Table 8 a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
E. Wholesaler											
1. The buyer and I share the same risks from the transaction we make.	2	20	1	10	3	30	1	10	3	30	3
2. The buyer and I share equal benefits from the transaction we make.	0	0	1	10	4	40	4	40	1	10	4
3. I take more risk from the transaction I make with buyers.	2	20	0	0	5	50	2	20	1	10	3
4. The buyer derives more benefits from the business operation.	2	20	2	20	5	50	0	0	1	10	3
5. I always control the pricing and grading.	1	10	1	10	4	40	3	30	1	10	3
F. Wholesaler-retailer											
1. The buyer and I share the same risks from the transaction we make.	10	27	6	16	12	32	8	22	1	3	3
2. The buyer and I share equal benefits from the transaction we make.	6	16	6	16	8	22	13	35	4	11	3
3. I take more risk from the transaction I make with buyers.	1	3	2	5	10	27	12	32	12	32	4
4. The buyer derives more benefits from the business operation.	2	5	5	14	11	30	13	35	6	16	3
5. I always control the pricing and grading.	0	0	8	22	12	32	12	32	5	14	3
G. Retailer											
1. The buyer and I share the same risks from the transaction we make.	13	24	15	28	12	22	7	13	7	13	3
2. The buyer and I share equal benefits from the transaction we make.	7	13	15	28	15	28	10	19	7	13	3
3. I take more risk from the transaction I make with buyers.	4	7	12	22	17	31	15	28	5	9	3
4. The buyer derives more benefits from the business operation.	5	9	10	19	16	30	19	35	4	7	3
5. I always control the pricing and grading.	4	7	5	9	21	39	18	33	6	11	3



Table 8 b. Descriptive and test statistics

STATEMENT	MEAN	CHI-SQUARE	DF	TEST STATISTIC
1. The buyer and I share the same risks from the transaction we make.	3.89	21	3	0.000**
2. The buyer and I share equal benefits from the transaction we make.	3.11	12	3	0.006**
3. I take more risk from the transaction I make with buyers.	3.42	6	3	0.093
4. The buyer derives more benefits from the business operation.	3.28	3	3	0.444
5. I always control the pricing and grading.	3.08	34	3	0.000**

*significant

**very significant

The farmers (40%), assembler-wholesalers (32%) and financier-assembler-wholesalers (72%) were uncertain to take more risks from the transaction they make with the buyer. But the wholesaler (40%), wholesaler-retailers (35%) and retailers (28%) agreed in contrast to the trucker-wholesalers (33%) who disagree. Looking into the frequency average, it shows that respondents moderately agreed to undecided as supported by the statistic mean of three. Moreover, the test statistic (0.093) showed that there is no significant difference among the different actors as they conform on each other regarding of taking more risks on the business transaction. This implies that sometimes actors take more risks than the buyers.

Most of the farmers (35%), wholesaler-retailers (35%) and retailers (35%) agree that buyer derives more benefits from the business operation, but as to the assembler-wholesalers (26%), financier-assembler-wholesalers (61%), trucker-wholesalers (33%) and wholesalers (50%) were undecided. Looking into the frequency average of three and descriptive statistic mean of three, it shows the indecisiveness of these actors whether to receive more or less benefit. Moreover, this was further explained by the test statistics

result at 0.444 which implied no significant differences. This means, the actors may derived more benefits at a given opportune time.

Majority of the farmer (40%) disagree that they always control the pricing and grading of potatoes in contrast to the trucker-wholesalers (42%) who agreed. But the assembler-wholesalers (37%), financier-assembler-wholesalers (50%), wholesalers (40%), wholesaler-retailers (32%) and retailers (39%) were undecided. The average and the descriptive mean result which is three, shows uncertainty in the control of pricing and grading of potatoes. Moreover, the test statistic of 0.000 showed highly significant differences in the responses of the different actors in pricing and grading of the potatoes. This means, as sellers, they sometimes determine the price and grade the potato depending on the volume of supplies and buyers demand in the market.

Decision Style

How members decide what actions to take and how they decide in the business operation. There are two types of decision styles as identified from the literature review.

Centralized decision style. Centralized decision style, one firm has primary control in the decision-making. Table 10a illustrates the different chain actors' response in the centralized decision making.

As decision making about the business operation, assembler-wholesalers (47%), financier-assembler-wholesalers (44%), wholesalers (50%), wholesaler-retailers (59%), retailers (80%) strongly agree, while the farmers (35%) and trucker-wholesalers (33%) moderately agree. The frequency average falls to moderately agree to extremely agree, supported by descriptive mean of four which signifies that respondents agreed to decide in their own about their business transaction.



Table 9 a. Centralized decision style

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
A. Farmer											
1. I decide at my own about the business operations.	2	5	4	9	6	14	15	35	16	37	4
2. The buyer dictates the decision I should undertake.	6	14	15	35	15	35	3	7	4	9	3
3. The buyer never influences any decision I make.	6	14	11	26	20	47	2	5	4	9	3
4. I am the one who decides the volume to be purchased.	1	2	5	12	8	19	17	40	12	28	4
5. I choose the size/variety/color to be procured.	3	7	2	5	10	23	14	33	14	33	4
6. We jointly share decision in production and delivery schedules.	8	19	14	33	10	23	7	16	4	9	3
B. Assembler-wholesaler											
1. I decide at my own about the business operations.	0	0	0	0	5	26	5	26	9	47	4
2. The buyer dictates the decision I should undertake.	3	16	3	16	5	26	5	26	3	16	3
3. The buyer never influences any decision I make.	0	0	6	32	7	37	3	16	3	16	3
4. I am the one who decides the volume to be purchased.	1	5	4	21	3	16	7	37	4	21	3
5. I choose the size/variety/color to be procured.	2	11	1	5	3	16	8	42	5	26	4
6. We jointly share decision in procurement and delivery schedules.	3	16	1	5	2	11	8	42	5	26	4
C. Financier- assembler-wholesaler											
1. I decide at my own about the business operations.	0	0	1	6	5	28	4	22	8	44	4
2. The buyer dictates the decision I should undertake.	4	22	4	22	7	39	2	11	1	6	3
3. The buyer never influences any decision I make.	1	6	5	28	5	28	3	17	4	22	3
4. I am the one who decides the volume to be purchased.	0	0	1	6	4	22	3	17	10	56	4
5. I choose the size/variety/color to be procured.	0	0	0	0	5	28	4	22	9	50	4
6. We jointly share decision in procurement and delivery schedules.	1	6	3	17	4	22	6	33	4	22	4



Table 9 a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
D. Trucker-wholesaler											
1. I decide at my own about the business operations.	0	0	0	0	0	0	4	33	8	67	5
2. The buyer dictates the decision I should undertake.	4	33	3	25	2	17	1	8	2	17	3
3. The buyer never influences any decision I make.	2	17	5	42	1	8	1	8	3	25	3
4. I am the one who decides the volume to be purchased.	0	0	3	25	1	8	0	0	8	67	4
5. I choose the size/variety/color to be procured.	1	8	1	8	3	25	2	17	5	42	4
6. We jointly share decision in procurement and delivery schedules.	1	8	1	8	4	33	1	8	5	42	4
E. Wholesaler											
1. I decide at my own about the business operations.	0	0	1	10	1	10	3	30	5	50	4
2. The buyer dictates the decision I should undertake.	7	70	2	20	1	10	0	0	0	0	1
3. The buyer never influences any decision I make.	1	10	3	30	2	20	3	30	1	10	3
4. I am the one who decides the volume to be purchased.	0	0	1	10	1	10	4	40	4	40	4
5. I choose the size/variety/color to be procured.	0	0	0	0	3	30	3	30	4	40	4
6. We jointly share decision in procurement and delivery schedules.	1	10	1	10	4	40	3	30	1	10	3
F. Wholesaler-retailer											
1. I decide at my own about the business operations.	0	0	3	8	5	14	7	19	22	59	4
2. The buyer dictates the decision I should undertake.	8	22	14	38	6	16	4	11	5	14	3
3. The buyer never influences any decision I make.	3	8	10	27	9	24	6	16	9	24	3
4. I am the one who decides the volume to be purchased.	0	0	2	5	5	14	7	19	23	62	4
5. I choose the size/variety/color to be procured.	1	3	3	8	5	14	11	30	17	46	4
6. We jointly share decision in procurement and delivery schedules.	7	19	9	24	6	16	9	24	6	16	3



Table 9 a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
G. Retailer											
1. I decide at my own about the business operations.	0	0	1	2	3	6	7	13	43	80	5
2. The buyer dictates the decision I should undertake.	22	41	14	26	8	15	5	9	5	9	2
3. The buyer never influences any decision I make.	6	11	15	28	13	24	15	28	5	9	3
4. I am the one who decides the volume to be purchased.	1	2	3	6	6	11	10	19	34	63	4
5. I choose the size to be procured.	3	6	4	7	5	9	11	20	31	57	4
6. We jointly share decision in procurement and delivery schedules.	20	37	5	9	10	19	12	22	7	13	3

Table 9 b. Descriptive and test statistics

STATEMENT	MEAN	CHI-SQUARE	DF	TEST STATISTIC
1. I decide at my own about the business operations.	4	10	3	0.022*
2. The buyer dictates the decision I should undertake.	2	8	3	0.051*
3. The buyer never influences any decision I make.	3	5	3	0.206
4. I am the one who decides the volume to be purchased.	4	10	3	0.020*
5. I choose the size to be procured.	4	4	3	0.288
6. We jointly share decision in procurement/procurement and delivery schedules.	3	12	3	0.007**

*significant **very significant



The different respondents vary according to the idea that buyer dictates the decision they should undertake. Farmer (35%), financier-assembler-wholesaler (39%) and assembler-wholesaler (26%) who was undecided, but the trucker-wholesaler (33%), wholesaler (70%) and retailer (41%) extremely agreed. Looking further the frequency average, the respondents were undecided whether the buyer dictates the decision or not. The descriptive mean of 2 implied that the respondents moderately disagree to undecided about what they perceived that buyers dictate the decision or not. Further explanation showed from the test statistic at 0.051 that there is no significant differences among them therefore implied similar understanding on the buyer dictates the decision to undertake.

Majority of the different actors' responses disagree particularly the financier-assembler-wholesaler (28%), trucker-wholesaler (42%), wholesaler (30%), wholesaler-retailer (27%) and retailer (28%), while the farmer (47%) and assembler-wholesaler (37%) were undecided that the buyer never influences any decision they make. The frequency average result of three and the descriptive mean clearly implies that respondents were undecided about their ideas whether the buyer never influences any decision they make. This is further supported by the test statistic at 0.206 that there are no significant differences among the different actors. This signifies common opinion and understanding whether the buyer influence the decision they make as seller of potato.

Most of the respondents' claimed that they are the one who decides as to the volume of production/purchased of potato, particularly the financier-assembler-wholesaler (56%), trucker-wholesaler (67%), wholesaler (40%), wholesaler-retailer (62%) and retailer (63%), but as to the farmer (40%) and assembler-wholesaler (37%) response were moderately agree. The average showed that most of them moderately



agreed and further supported by the descriptive mean at four. Moreover, this proves further from the test statistic of 0.020 that there are significant differences between and among the respondents, thus, indicate the variation about the decision in the volume of potatoes to be produced or procured.

Given the responses, the farmer (33%), financier-assembler-wholesaler (50%), trucker-wholesaler (42%), wholesaler (40%), wholesaler-retailer (46%) and retailer (57%) strongly agree that they choose the size to be procured. Average shows that respondents extremely agree and supported by the descriptive statistic mean of four that means they agree on this idea. Furthermore, through the test statistic result at 0.288 indicated that there is no significant difference of the responses of the actors. This implies that actors have common understanding in choosing the potato to be procured.

Actors' responses indicated that they differ as to the idea whether the seller and the buyer share in production/procurement and delivery schedules. Assembler-wholesaler (42%), financier-assembler-wholesaler (33%), wholesaler-retailer (24%) moderately agreed, and as to trucker-wholesaler (42%) strongly agreed, while the wholesaler (40%) were undecided and retailer (77%) extremely disagree. The average implied that actors were undecided to moderately agree to sharing decision on delivery schedules. This is further supported by the test statistic of 0.007 that there is highly significant differences among the different group of respondents.

Decentralized decision style. Decentralized style, each firm makes its decisions autonomously. Table 10a illustrates the different chain actors' responses in the decentralized decision making.



Table 10 a. Decentralized decision style

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
A. Farmer											
1. I involved other people to decide for me in selling products and setting the price.	4	9	7	16	12	28	15	35	5	12	3
2. The buyer and I have our own decision.	1	2	5	12	10	23	17	40	10	23	4
B. Assembler-wholesaler											
1. I involved other people to decide for me in selling products and setting the price.	3	16	3	16	3	16	7	37	3	16	3
2. The buyer and I have our own decision.	0	0	2	11	6	32	2	11	9	47	4
C. Financier- assembler-wholesaler											
1. I involved other people to decide for me in selling products and setting the price.	5	28	4	22	3	17	4	22	2	11	3
2. The buyer and I have our own decision.	1	6	3	17	1	6	4	22	9	50	4
D. Trucker-wholesaler											
1. I involved other people to decide for me in selling products and setting the price.	5	42	3	25	1	8	2	17	1	8	2
2. The buyer and I have our own decision.	0	0	1	8	1	8	2	17	8	67	4
E. Wholesaler											
1. I involved other people to decide for me in selling products and setting the price.	4	40	3	30	0	0	1	10	2	20	2
2. The buyer and I have our own decision.	0	0	2	20	3	30	2	20	3	30	4
F. Wholesaler-retailer											
1. I involved other people to decide for me in selling products and setting the price.	11	30	6	16	5	14	8	22	7	19	3
2. The buyer and I have our own decision.	2	5	4	11	4	11	12	32	15	41	4
G. Retailer											
1. I involved other people to decide for me in selling products and setting the price.	24	44	12	22	6	11	10	19	2	4	2
2. The buyer and I have our own decision.	2	4	6	11	6	11	9	17	31	57	4

Table 10 b. Descriptive and test statistics

STATEMENT	MEAN	CHI-SQUARE	DF	TEST STATISTIC
1. I involved other people to decide for me in selling products and setting the price.	3	13	3	0.004**
2. The buyer and I have our own decision.	4	4	3	0.318

**highly significant



Given the different responses of the respondents, farmer (35%) and assembler-wholesaler (37%) moderately agreed that they involved other people to decide for them in production/procurement operation, while the financier-assembler-wholesaler (28%), trucker-wholesaler (42%), wholesaler (40%), wholesaler-retailer (30%) and retailer (44%) were strongly disagreed to this idea. Looking into the frequency average and the descriptive mean statistic result of three implies moderately disagree to undecided, this means respondents were sometimes uncertain to involving other people to their operation. The result further supported by the test statistics of 0.004 there is highly significant differences among the actors, therefore varied perceptions as to sharing in decision making.

As to the buyer and seller make their own decision, majority of the respondents (assembler-wholesaler, financier-assembler-wholesaler, trucker-wholesaler, wholesaler, wholesaler-retailer and retailer) extremely agreed about on this idea. However, glancing at the frequency average and descriptive mean, the respondents were undecided to moderately agree, thus the test statistics (0.318) shows that there is no differences about their perceptions in sharing decisions as buyers or sellers.

Level of Control

Control is the process of monitoring activities to ensure they are being accomplished as planned and to correct any significant deviations. Table 11a illustrates the different chain actors' response in the level of control as it is high or low.

Respondents vary on their responses as they always monitor the buyer on the production/procurement/marketing schedules planned.



Table 11 a. Level of control

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
A. Farmer											
1. I always monitor the buyer on the production/marketing schedules planned.	13	30	9	21	12	28	6	14	3	7	2
2. I set rules in our business operation.	13	30	10	23	8	19	10	23	2	5	2
3. The buyer sets rules in our business operation	11	26	10	23	9	21	9	21	4	9	3
B. Assembler-wholesaler											
1. I always monitor the buyer on the procurement/ marketing schedules planned.	3	16	1	5	6	32	3	16	6	32	3
2. I set rules in our business operation.	3	16	2	11	8	42	2	11	4	21	3
3. The buyer sets rules in our business operation	4	21	4	21	6	32	2	11	3	16	3
C. Financier- assembler-wholesaler											
1. I always monitor the buyer on the procurement//marketing schedules planned.	2	11	3	17	6	33	4	22	3	17	3
2. I set rules in our business operation.	2	11	2	11	6	33	3	17	5	28	3
3. The buyer sets rules in our business operation	6	33	4	22	4	22	1	6	3	17	3
D. Trucker-wholesaler											
1. I always monitor the buyer on the procurement/marketing schedules planned.	2	17	2	17	2	17	2	17	4	33	3
2. I set rules in our business operation.	2	17	3	25	1	8	4	33	2	17	3
3. The buyer sets rules in our business operation	4	33	5	42	0	0	2	17	1	8	2
E. Wholesaler											
1. I always monitor the buyer on the procurement/ marketing schedules planned.	2	20	1	10	2	20	2	20	3	30	3
2. I set rules in our business operation.	1	10	3	30	1	10	2	20	3	30	3
3. The buyer sets rules in our business operation	4	40	1	10	2	20	1	10	2	20	3
F. Wholesaler-retailer											
1. I always monitor the buyer on the procurement /marketing schedules planned.	10	27	5	14	11	30	2	5	9	24	3
2. I set rules in our business operation.	5	14	7	19	6	16	8	22	11	30	3
3. The buyer sets rules in our business operation	11	30	13	35	5	14	2	5	6	16	2
G. Retailer											
1. I always monitor the buyer on the procurement /marketing schedules planned.	28	52	8	15	9	17	5	9	4	7	2
2. I set rules in our business operation.	18	33	7	13	8	15	14	26	7	13	3
3. The buyer sets rules in our business operation	27	50	4	7	6	11	8	15	9	17	2



Table 11 b. Descriptive and test statistics

STATEMENT	MEAN	CHI-SQUARE	DF	TEST STATISTIC
1. I always monitor the buyer on the procurement /marketing schedules planned.	3	19	3	0.000**
2. I set rules in our business operation.	3	11	3	0.014*
3. The buyer sets rules in our business operation	3	3	3	0.46

*significant **highly significant

The farmers (30%) and retailers (52%) in particular extremely disagreed, while the assembler-wholesalers (32%), financier-assembler-wholesalers (33%) and wholesaler-retailers (30%) were undecided, whereas trucker-wholesalers (33%) and wholesalers (30%) who were extremely agreed. The frequency average shows that respondents moderately disagreed to undecided to whether they monitor the buyers in procurement/marketing planned schedules. The descriptive statistic mean of 3 further support this findings. However, the test statistics at 0.000 revealed highly significant differences in the responses of the different actors which implied that as sellers, they monitor the schedules of buyers in procurement of potatoes.

The different actors vary in their responses with regards to the setting of rules in business operation. The farmers (30%) and retailers (33%) were strongly disagree, but the assembler-wholesalers (42%), financier-assembler-wholesalers (33%) were undecided about this idea. On the other hand, the wholesalers (30%) and wholesaler-retailers (30%) expressed strong agreement. Similarly with the trucker-wholesaler (33%) moderately agreed. Looking into the frequency average and supported by the descriptive statistic mean of three shows moderately disagree to undecided. The test statistic at 0.014 however indicated there are significant differences in the responses of the different chain



players. Therefore, the result implied the actors have its own rules within their business operation.

Majority of the chain actors extremely disagreed as to whether the buyer set rules in the business operation. In particular, the farmers (26%), financier-assembler-wholesalers (33%), wholesalers (40%), wholesaler-retailers (30%) and retailers (50%) were undecided while the assembler-wholesalers (32%) and trucker-wholesalers (42%) moderately disagreed to this idea. The average and statistic mean of three, implies a moderately disagree to undecided by the respondents. The test statistic at 0.460 indicates no significant difference among the respondents, therefore emphasize that buyers never dictate rules in business operation.

Comprehensive Selection Procedure

It increases the likelihood that a suitable trading partner will be identified beforehand, thereby making it easier to cooperate in the future. Table 12a illustrates the different chain actors' response to the selection procedure.

Given the different responses of the respondents as to whether the seller select the buyer who is trustworthy, farmer (30 %), assembler-wholesaler (37%), financier-assembler-wholesaler (39%), trucker-wholesaler (25%) and wholesaler-retailer (35%) have expressed strongly disagreement, but the wholesaler (50%) and retailer (35%) were undecided and extremely disagreed respectively. Looking into the average shows that respondents were undecided to moderately agree. The descriptive statistic mean of three implied that sellers sometimes select buyers who were trustworthy. However, the test statistic of 0.020 showed that there are significant differences implied that respondents differ in the selection of buyers whom they deal with.



Table 12 a. Comprehensive selection procedure

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
A. Farmer											
1. I select the buyer who is trustworthy.	4	9	7	16	9	21	10	23	13	30	3
2. The buyer usually chooses the sellers with good quality and adequate volume of potatoes.	0	0	4	9	11	26	9	21	19	44	4
3. The buyer usually chooses the sellers that offer lower price of potatoes.	4	9	3	7	8	19	17	40	11	26	4
4. I choose buyers whom I know and trade with for a longer time.	1	2	7	16	12	28	16	37	7	16	3
5. I choose buyers with adequate resources.	5	12	9	21	10	23	8	19	11	26	3
6. The buyer must willingly share market information.	1	2	7	16	13	30	9	21	12	28	3
B. Assembler-wholesaler											
1. I select the buyer who is trustworthy.	0	0	2	11	5	26	5	26	7	37	4
2. The buyer usually chooses the sellers with good quality and adequate volume of potatoes.	1	5	3	16	4	21	5	26	6	32	4
3. The buyer usually chooses the sellers that offer lower price of potatoes.	1	5	0	0	1	5	10	53	7	37	4
4. I choose buyers whom I know and trade with for a longer time.	2	11	1	5	2	11	8	42	6	32	4
5. I choose buyers with adequate resources.	0	0	4	21	4	21	6	32	5	26	4
6. The buyer must willingly share market information.	2	11	2	11	7	37	2	11	6	32	3
C. Financier-assembler-wholesaler											
1. I select the buyer who is trustworthy.	1	6	3	17	1	6	6	33	7	39	4
2. The buyer usually chooses the sellers with good quality and adequate volume of potatoes.	0	0	2	11	4	22	6	33	6	33	4
3. The buyer usually chooses the sellers that offer lower price of potatoes.	1	6	2	11	6	33	7	39	2	11	3
4. I choose buyers whom I know and trade with for a longer time.	0	0	2	11	3	17	6	33	7	39	4
5. I choose buyers with adequate resources.	0	0	2	11	5	28	7	39	4	22	4
6. The buyer must willingly share market information.	1	6	4	22	4	22	5	28	4	22	3
D. Trucker-wholesaler											
1. I select the buyer who is trustworthy.	3	25	0	0	3	25	3	25	3	25	3
2. The buyer usually chooses the sellers with good quality and adequate volume of potatoes.	0	0	1	8	4	33	2	17	5	42	4
3. The buyer usually chooses the sellers that offer lower price of potatoes.	0	0	0	0	1	8	8	67	3	25	4
4. I choose buyers whom I know and trade with for a longer time.	2	17	1	8	1	8	4	33	4	33	4
5. I choose buyers with adequate resources.	2	17	2	17	4	33	3	25	1	8	3
6. The buyer must willingly share market information.	2	17	1	8	4	33	3	25	2	17	3



Table 12 a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
E. Wholesaler											
1. I select the buyer who is trustworthy.	2	20	1	10	5	50	0	0	2	20	3
2. The buyer usually chooses the sellers with good quality and adequate volume of potatoes.	1	10	1	10	3	30	2	20	3	30	4
3. The buyer usually chooses the sellers that offer lower price of potatoes.	0	0	0	0	3	30	2	20	5	50	4
4. I choose buyers whom I know and trade with for a longer time.	1	10	0	0	4	40	2	20	3	30	4
5. I choose buyers with adequate resources.	2	20	4	40	1	10	2	20	1	10	3
6. The buyer must willingly share market information.	1	10	2	20	3	30	1	10	3	30	3
F. Wholesaler-retailer											
1. I select the buyer who is trustworthy.	5	14	6	16	5	14	8	22	13	35	3
2. The buyer usually chooses the sellers with good quality and adequate volume of potatoes.	3	8	3	8	10	27	5	14	16	43	4
3. The buyer usually chooses the sellers that offer lower price of potatoes.	1	3	2	5	5	14	8	22	21	57	4
4. I choose buyers whom I know and trade with for a longer time.	1	3	4	11	11	30	7	19	14	38	4
5. I choose buyers with adequate resources.	4	11	13	35	6	16	8	22	6	16	3
6. The buyer must willingly share market information.	8	22	4	11	11	30	5	14	9	24	3
G. Retailer											
1. I select the buyer who is trustworthy.	19	35	7	13	7	13	9	17	12	22	3
2. The buyer usually chooses the sellers with good quality and adequate volume of potatoes.	5	9	8	15	9	17	14	26	18	33	4
3. The buyer usually chooses the sellers that offer lower price of potatoes.	5	9	6	11	6	11	12	22	25	46	4
4. I choose buyers whom I know and trade with for a long, long time.	8	15	9	17	12	22	11	20	14	26	3
5. I choose buyers with adequate resources.	14	26	21	39	7	13	4	7	8	15	2
6. The buyer must willingly share market information.	16	30	12	22	7	13	13	24	6	11	3



Table 12 b. Descriptive and test statistics

STATEMENT	MEAN	CHI-SQUARE	DF	TEST STATISTIC
1. I select the buyer who is trustworthy.	3	10	3	0.020*
2. The buyer usually chooses the sellers with good quality and adequate volume of potatoes.	4	2	3	0.671
3. The buyer usually chooses the sellers that offer lower price of potatoes.	4	5	3	0.200
4. I choose buyers whom I know and trade with for a longer time.	4	6	3	0.094
5. I choose buyers with adequate resources.	3	15	3	0.002**
6. The buyer must willingly share market information.	3	9	3	0.026*

*significant

**highly significant

Majority of the respondents: the farmers (44%), assembler-wholesalers (32%), financier-assembler-wholesalers (33%), trucker-wholesalers (42%), wholesalers (30%), wholesaler-retailers (43%) and retailers (33%) strongly agreed that buyer usually chooses the sellers with good quality and adequate volume of potatoes. On the average, the respondents signified to which moderately agree by the test statistic of 0.671 that there is no significant difference among the responses of the different actors. This means they have similar understanding on this thought.

Most of the respondents, the farmers (40%), assembler-wholesalers (53%), financier-assembler-wholesalers (39%) and trucker-wholesalers (67%) moderately agreed that the buyer usually choose the sellers that offer lower price of potatoes while the wholesaler (50%), wholesaler-retailer (57%) and retailer (46%) extremely agreed. As shown, frequency average indicated to moderately agreed and further supported with the descriptive statistic mean of four. Moreover, the test statistic shown of 0.200 that there is no significant differences, therefore the respondents signifies that signifies to have same understanding that buyer really chooses the seller.



As a seller choosing the buyer whom they know and trade with a longer time, farmers, assembler-wholesalers and trucker-wholesalers moderately agreed, while the financier-assembler-wholesalers, wholesaler-retailers and retailers were extremely agree. But as to the wholesalers they were undecided on this idea. Looking into the average, the respondents were undecided to moderately agree. These findings further prove by the descriptive mean at four. Test statistics (0.094) show that there are no significant differences among the respondents.

Assembler-wholesaler and financier-assembler-wholesaler moderately agreed in choosing the buyers with adequate resources, but the farmer claimed to extremely agree. On the other hand, trucker-wholesaler and the wholesaler, wholesaler-retailer and retailer were undecided to disagree in choosing the buyers. The test statistic of 0.002, shows there is highly significant differences among the respondents, therefore as sellers they differ in choosing the buyers with enough resources, thus implied that resources is not a criteria to deal with.

The different chain actors vary as to the buyer must willingly share market information. Frequency shows that they were undecided to this idea. This could be supported by the statistic mean of three. But the test statistic of 0.026 revealed that there is significant difference in the responses of the chain actors. This means, they differ whether to share marketing information or not.



Socialization

A subscribing factor of opportunism, that is powerful way to promote goal similarity. There are two types of socialization as identified from the literature review.

Natural socialization. The buyer and seller have been trading for a long period of time, farmer (47%), assembler-wholesaler (37%), financier-assembler-wholesaler (50%) and trucker-wholesaler (42%) moderately agree but the wholesaler (30%), wholesaler-retailer (41%) and retailer (31%) extremely agree that they have been trading partner for a longer period of time. Looking into the average, respondents signified to moderately agree and confirmed by the descriptive mean of four. The test statistic at 0.054 however implied no significant difference of the responses of the actors.

The different actors' responses vary as to whether the buyer and seller constantly communicate informally. The farmer, wholesaler and wholesaler-retailer were undecided, but the assembler-wholesaler and financier-assembler-wholesaler extremely agree to have constant communication informally. Similarly with the trucker-wholesalers and retailers who were moderately agree. However, the frequency average and descriptive statistic mean shows that respondents were undecided, which means that they never communicate informally. The test statistic at 0.008 revealed that there are highly significant differences from the perceptions of the respondents. Therefore, there were respondents that communicate informally with each other.

Most of the actors were undecided whether they have established close personal relationship with the buyers as claimed by the financier-assembler-wholesalers, trucker-wholesalers, wholesalers, wholesaler-retailers and retailers but the farmers and assembler-wholesalers however moderately agreed to have such relationship.



Table 13 a. Natural socialization

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
A. Farmer											
1. The buyer and I have been trading with the buyer for long period of time.	2	5	6	14	8	19	20	47	7	16	4
2. We constantly communicate informally.	4	9	5	12	14	33	10	23	10	23	3
3. I have established close personal relationship with the buyer of my potatoes.	4	9	8	19	13	30	13	30	5	12	3
B. Assembler-wholesaler											
1. The buyer and I have been trading with the buyer for long period of time.	0	0	0	0	5	26	7	37	7	37	4
2. We constantly communicate informally.	1	5	3	16	3	16	6	32	6	32	4
3. I have established close personal relationship with the buyer of my potatoes.	1	5	0	0	5	26	7	37	6	32	4
C. Financier-assembler-wholesaler											
1. The buyer and I have been trading with the buyer for long period of time.	0	0	0	0	2	11	9	50	7	39	4
2. We constantly communicate informally.	2	11	0	0	3	17	4	22	9	50	4
3. I have established close personal relationship with the buyer of my potatoes.	0	0	2	11	7	39	4	22	5	28	4
D. Trucker-wholesaler											
1. The buyer and I have been trading with the buyer for long period of time.	0	0	0	0	3	25	5	42	4	33	4
2. We constantly communicate informally.	2	17	2	17	3	25	5	42	0	0	3
3. I have established close personal relationship with the buyer of my potatoes.	0	0	0	0	5	42	4	33	3	25	4
E. Wholesaler											
1. The buyer and I have been trading with the buyer for long period of time.	0	0	2	20	3	30	2	20	3	30	4
2. We constantly communicate informally.	3	30	1	10	3	30	2	20	1	10	3
3. I have established close personal relationship with the buyer of my potatoes.	0	0	0	0	4	40	2	20	4	40	4
F. Wholesaler-retailer											
1. The buyer and I have been trading with the buyer for long period of time.	0	0	3	8	9	24	10	27	15	41	4
2. We constantly communicate informally.	4	11	5	14	12	32	5	14	11	30	3
3. I have established close personal relationship with the buyer of my potatoes.	2	5	2	5	16	43	7	19	10	27	4
G. Retailer											
1. The buyer and I have been trading with the buyer for long period of time.	3	6	7	13	13	24	14	26	17	31	4
2. We constantly communicate informally.	8	15	12	22	13	24	16	30	5	9	3
3. I have established close personal relationship with the buyer of my potatoes.	6	11	8	15	15	28	14	26	11	20	3



Table 13 b. Descriptive and test statistic

STATEMENT	MEAN	CHI-SQUARE	DF	TEST STATISTIC
1. The buyer and I have been trading with the buyer for long period of time.	4	8	3	0.054
2. We constantly communicate informally.	3	12	3	0.008**
3. I have established close personal relationship with the buyer of my potatoes.	3	7	3	0.059

**highly significant

The frequency average and the descriptive mean of three shows their indecisiveness to the established close personal relationship. The test statistic of 0.059 proves that there are no significant differences among the respondents.

Deliberate socialization. Majority of farmer, assembler-wholesaler, financier-assembler-wholesaler, trucker-wholesaler, wholesaler-retailer and retailer extremely agreed regarding on transacting with the buyer mainly for business, but the wholesaler moderately agree. The frequency average shows respondents moderately agree. The descriptive mean of four further supports the idea. The test statistic of 1.274 there is no significant difference on the responses of the respondents. They have the same thought.

As seller chooses the buyer with good reputation, chain actors differ in their answer. Looking into the frequency average it is undecided and as supported by the mean statistic of 0.015 that there was significant difference on the actors' response. This implies that respondents vary on their understanding on this idea. Majority of the respondents were undecided as the buyer negotiates with them fairly. Considering the frequency average, it is undecided to moderately agree and as supported by the mean statistic of 0.092 there is no significant difference of the actors. Those actors have common understanding in negotiating with buyer



Table 14 a. Deliberate socialization

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
A. farmer											
1. I transact with the buyer mainly for business.	1	2	1	2	8	19	11	26	22	51	4
2. I choose the buyer with good reputation.	3	7	6	14	18	42	8	19	8	19	3
3. The buyer negotiates with me fairly.	1	2	5	12	24	56	7	16	6	14	3
B. assembler-wholesaler											
1. I transact with the buyer mainly for business.	0	0	1	5	2	11	8	42	8	42	4
2. I choose the buyer with good reputation.	1	5	1	5	3	16	9	47	5	26	4
3. The buyer negotiates with me fairly.	0	0	0	0	8	42	5	26	6	32	4
C. financier- assembler-wholesaler											
1. I transact with the buyer mainly for business.	0	0	0	0	4	22	1	6	13	72	5
2. I choose the buyer with good reputation.	1	6	2	11	5	28	4	22	6	33	4
3. The buyer negotiates with me fairly.	0	0	1	6	8	44	3	17	6	33	4
D. trucker-wholesaler											
1. I transact with the buyer mainly for business.	0	0	2	17	0	0	2	17	8	67	4
2. I choose the buyer with good reputation.	2	17	3	25	2	17	3	25	2	17	3
3. The buyer negotiates with me fairly.	0	0	0	0	5	42	3	25	4	33	4
E. wholesaler											
1. I transact with the buyer mainly for business.	0	0	0	0	1	10	5	50	4	40	4
2. I choose the buyer with good reputation.	3	30	1	10	2	20	2	20	2	20	3
3. The buyer negotiates with me fairly.	0	0	2	20	4	40	1	10	3	30	4
F. wholesaler-retailer											
1. I transact with the buyer mainly for business.	0	0	2	5	6	16	4	11	25	68	4
2. I choose the buyer with good reputation.	5	14	5	14	12	32	6	16	9	24	3
3. The buyer negotiates with me fairly.	0	0	5	14	13	35	12	32	7	19	4
G. retailer											
1. I transact with the buyer mainly for business.	1	2	1	2	9	17	8	15	35	65	4
2. I choose the buyer with good reputation.	12	22	14	26	14	26	6	11	8	15	3
3. The buyer negotiates with me fairly.	1	2	3	6	25	46	14	26	11	20	4

Table 14 b. Descriptive and test statistic

STATEMENT	MEAN	CHI-SQUARE	DF	TEST STATISTIC
1. I transact with the buyer mainly for business.	4	1	3	0.735
2. I choose the buyer with good reputation.	3	10	3	0.015*
3. The buyer negotiates with me fairly.	4	6	3	0.092



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The study was focused on the coordination mechanisms and attributes between actors in the spot market of potato. The study was conducted in various places in La Trinidad, Benguet, Metro Manila and Urdaneta City, Pangasinan. The study aimed to identify the different chains of potato in the spot market and to determine the coordination mechanisms and attributes adopted in the different spot market chains.

The data needed were gathered through a prepared structured schedule (personal interview) with the different chain actors. There are four groups of respondents namely production group which consisted of the farmers; assembly groups which involved the assembler-wholesalers and financier-assembler-wholesalers; distribution group which comprised of the trucker-wholesalers, wholesalers and wholesaler-retailers; and the retailing group which composed of the retailers. One hundred ninety-three serves as respondents in the study. Majority of the different chain actors particularly the farmers, assembler-wholesalers, trucker-wholesalers and wholesalers have an age bracket of 21-30 years old, while financier-assembler-wholesalers and wholesaler-retailers belong to age bracket of 31-40 years old. It could mean that age does not influence any person to engage in vegetable business. There were an unequal number of males and females. Majority of the actors were males. Majority of chain actors attended formal education. As to the number of years engaged in business, majority of the different respondents were engaged 1-5 years in business. Almost all the respondents were not members of any organization. Furthermore, there were various chains of potato in the spot market.



Majority of the chain actors moderately disagreed whether the buyer supports them for specific production/procurement investments, that they do not share investment in production/procurement operation particularly capital. Based on whether sellers extend supports to the buyers of the potato and whether buyers extend credit assistance in the procurement of the potatoes, majority were uncertain because sellers and buyers were neither supporting each other with regards to production or procurement investments nor sharing of investments.

Majority of the chain actors were not sharing strategies with the buyers on the production/procurement and marketing strategies. However the statistical test showed that there is significant difference among the different respondents, thus it may be assumed that some respondents would be willing to share strategies with regards to marketing, long term planning and for the improvement of the business.

When it comes to information sharing, the respondents sometimes were able to coordinate to the buyers regarding on the production/procurement information.

For risks and reward, farmers and wholesaler-retailers take more risks from the transaction they made with the buyers but uncertain if their buyers derived more benefits.

For the decision-making on centralized decision style, majority of respondents decide on their own about the business operation. And on decentralized decision style, almost all of the respondents never involved other people to decide for them in the production/procurement and marketing decision and they decide on their own along with the buyers.

As to level of control, the farmers and retailers do not monitor their buyers with regards to the production/procurement and marketing schedules.



As to the comprehensive selection procedures, most of the respondents select their buyer who is trustworthy at the same time, buyer usually chooses the sellers that offer lower price and with good quality and adequate volume of potatoes.

In natural socialization, majority of the chain actors were uncertain as to actors had established a close personal relationship with the buyers of the potatoes. But as to the deliberate socialization, majority of them extremely agreed as to they transact with the buyer mainly for business.

Conclusions

Based on the findings of the study, the following conclusions were made:

1. There are several chains of potato in the spot market.
2. In operational resource sharing, different respondents and their buyers were neither supporting each other with regards to the production/procurement investments nor sharing of investments. Thus respondents used their own capital as investment in the business.
3. Majority of the chain actors do not share any strategies regarding the business operation to the buyers or planning/making strategies for the improvement of the business. Thus, respondents do not used or share any strategies in coordinating with the buyers for the improvement of the business.
4. Most of the respondents were uncertain to share information to their buyers on the production or procurement, market and marketing schedules information. This implies that respondents have reservation to share information to the buyers regarding on the demand, supply, prices and cost of potatoes.



5. Majority of the farmer takes more risks and fewer benefits as compared to the buyers of their produced thus, take the unfair sharing condition.

6. In decision-making, different actors decide on their own about the business operation they undertake. Thus, actors have primary control on the decision they took.

7. Majority of the production and marketing schedules planned were not monitored by the farmers. Thus, they trusted their buyers on the operations.

8. On comprehensive selection style, majority of the chain actors moderately or somewhat using the selection procedure to ensure them especially the farmers that buyer can pay them the desired and the right amount for the product.

9. On socialization, most of the respondents use the deliberate socialization as they extremely agreed whether they communicate with the buyers mainly for business.

Recommendations

Based on the conclusions, the following recommendations are suggested:

1. On the resource sharing, different actors should strengthen coordination through sharing of information and strategies.

2. In decision-making, respondents should coordinate more to their buyers to make plan on production and marketing to facilitate the product flow more effectively.

3. Establish closer relationship among the different chain actors, building camaraderie between and among them to ensure a better transaction in the vegetable trading business.



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APPENDICES

APPENDIX A

Letter to the Respondents

Benguet State University
COLLEGE OF AGRICULTURE
La Trinidad, Benguet

November 2010

Sir/ Madam,

The undersigned fourth year student taking up Bachelor of Science in Agriculture majoring in Enterprise Management at Benguet State University is conducting a researched entitled “COORDINATION MECHANISMS AND ATTRIBUTES BETWEEN ACTORS IN THE SPOT MARKET FOR POTATO.”

In this connection, I’m soliciting your full cooperation by answering this questionnaire honestly and completely. I assure you that your answers will be kept strictly confidential.

Your honest and complete response will make the study successful.

Thank you very much and God bless.

Very truly yours,

GLORY MEL Q. SALCEDO

Researcher

Noted:

LEOPOLDO N. TAGARINO



Adviser

APPENDIX B

Interview Schedule

Respondent's Group:

- Farmer
- Assembler- wholesaler
- Financier- assembler- wholesaler
- Trucker- wholesaler
- Wholesaler/ Wholsaler- retailer

This research aims to investigate the fresh vegetable supply networks. All information solicited will be treated with confidentiality. Please answer the questions honestly by putting X mark in the appropriate space provided for. Thank you very much!

Respondent's Name: _____ No. _____

A. Respondent's Profile

- Age _____
- Gender: _____ Female _____ Male
- Marital status: _____ Single _____ Married _____ Separated _____ Widowed
- Educational Attainment
 - _____ Elementary _____ High school
 - _____ College _____ Vocational
- Organizational affiliation: _____ Farmers' association _____ Cooperatives _____ Others, specify _____ None

COORDINATION MECHANISMS. Assess the coordination mechanisms adopted in dealing with the buyers of your vegetables.

1. Resource Sharing Structure –how the buyer and the seller share resources such as information and capital in the business operation.

1.1. Operational Resource Sharing – resources shared are capital, facilities, equipment in the business operation.

1 2 3 4 5

- 1. Buyer supports me for specific production/procurement investments. Strongly Disagree Strongly Agree
- 2. We share investment in production/procurement operation. Strongly Disagree Strongly Agree
- 3. I extend support to the buyer in our business operation. Strongly Disagree Strongly Agree
- 4. The buyer extend credit assistance in the production/procurement of vegetables. Strongly Disagree Strongly Agree

1.2. Strategic Resource Sharing – the buyer and the seller make or plan for actions to achieve or improve their goals.

1 2 3 4 5

- 1. The buyer and I jointly share production and marketing strategies. Strongly Disagree Strongly Agree
- 2. We jointly share investment to attain our business goals. Strongly Disagree Strongly Agree
- 3. We plan/make strategies to improve our business operation. Strongly Disagree Strongly Agree

1.3. Information Sharing – the buyer and the seller share marketing/ production information.

1 2 3 4 5



1. I share production/procurement information (volume, cost, production schedules) to the buyers.
Strongly Disagree Strongly Agree
2. The buyer always share market information (demand, supply, prices & cost).
Strongly Disagree Strongly Agree
3. We share information about production and marketing schedules.
Strongly Disagree Strongly Agree
2. Risk and Reward Sharing – the buyer and the seller share risk and reward sharing/ benefits fairly or unfairly.
1 2 3 4 5
1. The buyer and I share the same risks from the transaction we make.
Strongly Disagree Strongly Agree
2. The buyer and I share equal benefits from the transaction we make.
Strongly Disagree Strongly Agree
3. I take more risk from the transaction I make with buyers.
Strongly Disagree Strongly Agree
4. The buyer derives more benefits from the business operation.
Strongly Disagree Strongly Agree
5. I always control the pricing and grading of vegetables.
Strongly Disagree Strongly Agree
3. Decision Style- how the actors decide in their operation.
- 3.1. Centralized- one actor has primary control in their operation or buyer and seller jointly have control.
1 2 3 4 5
1. I decide at my own about the business operations.
Strongly Disagree Strongly Agree
2. The buyer dictates the decision I should undertake.
Strongly Disagree Strongly Agree
3. The buyer never influences any decision I make.
Strongly Disagree Strongly Agree
4. I am the one who decides the volume to be purchased.
Strongly Disagree Strongly Agree
5. I choose the size/variety/color to be procured.
Strongly Disagree Strongly Agree
6. We jointly share decision in procurement and delivery schedules.
Strongly Disagree Strongly Agree
- 3.2. Decentralized- the buyer and the seller have control or other party have control.
1 2 3 4 5
1. I involved other people to decide for me in selling products and setting the price.
Strongly Disagree Strongly Agree
2. The buyer and I have our own decision.
Strongly Disagree Strongly Agree
4. Level of Control- the buyer or the seller have high or low control.
1 2 3 4 5
1. I always monitor the buyer on the procurement/production/marketing schedules planned.
Strongly Disagree Strongly Agree
2. I set rules in our business operation.
Strongly Disagree Strongly Agree
3. The buyer sets rules in our business operation.
Strongly Disagree Strongly Agree
5. Comprehensive Selection Procedures
1 2 3 4 5
1. I select the buyer who is trustworthy.
Strongly Disagree Strongly Agree
2. The buyer usually choose the sellers with good quality and adequate volume of vegetables.
Strongly Disagree Strongly Agree
3. The buyer usually choose the sellers that offer lower price of vegetables.
Strongly Disagree Strongly Agree
4. I choose buyers whom I know and trade with for a long, long time.
Strongly Disagree Strongly Agree



- 5. I choose buyers with adequate resources. Strongly Disagree Strongly Agree
- 6. The buyer must willingly share market information. Strongly Disagree Strongly Agree

6. Socialization

6.1. Natural Socialization

1 2 3 4 5

- 1. The buyer and I have been trading with the buyer for long period of time. Strongly Disagree Strongly Agree
- 2. We constantly communicate informally. Strongly Disagree Strongly Agree
- 3. I have established close personal relationship with the buyer of my vegetables. Strongly Disagree Strongly Agree

6.2. Deliberate Socialization

1 2 3 4 5

- 1. I transact with the buyer mainly for business. Strongly Disagree Strongly Agree
- 2. I choose the buyer with good reputation. Strongly Disagree Strongly Agree
- 3. The buyer negotiates with me fairly. Strongly Disagree Strongly Agree

