

BIBLIOGRAPHY

LUCAS, JOVINIA SUBLA. APRIL 2011. Coordination Mechanisms and Attributes Between Actors in the Spot Market Chains for Cabbage. Benguet State University, La Trinidad, Benguet.

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ABSTRACT

The study was conducted to identify the different chains of cabbage in the spot market and to determine the coordination mechanisms and attributes adopted by the different chain actors, specifically at La Trinidad, Benguet; Urdaneta City, Pangasinan; and Metro Manila.

There were a total of 193 respondents from the different groups of actors in the spot market chain. Most of the respondents are aged within the range of 21-30 and 31-40 years old and majority is female. Most of them are married and have attained high school and college level. Majority of the respondents don't have organizational affiliation related to vegetable trading business and most are engaged one to five years in business.

There were several different spot market chains for cabbage. All of the chains started from the farmers in La Trinidad, Benguet and ended to the different consumers in La Trinidad, Benguet; Urdaneta City, Pangasinan and Metro, Manila.

In the coordination mechanisms which is operational resource sharing, most of the respondents do not share investments in their business operation. In strategic resource sharing, majority sometimes share their strategies to improve their operation and also same in information sharing. In the sharing of risk and reward in business transactions, most of the respondents sometimes have equal sharing of risks and rewards. The decision style is decentralized as the different actors never coordinate decision to be undertaken. The level of control of the

respondents in business operation is low. Most of the buyers have their own comprehensive selection procedure of who the sellers they wanted to transact with. However, only few actors/respondents have this mechanism in choosing the buyers. Most of the respondents communicate and socialize with their buyers mainly for business.

For better operation, it is recommended to improve more on the risk and reward sharing, operational resource sharing, information sharing and socialization between the actors in the spot market chain. In addition, the respondents are recommended to have an organizational affiliation.



INTRODUCTION

Rationale

Cordillera Administrative Region (CAR) is the country's top producer of cabbage. The region contributed 77% to the country's production of cabbage in the first three months of 2010. Cabbage produced in the region is 28.86 thousand metric tons. It surpassed the 2009 production of 27.87 thousand metric tons by 3.57% (BAS, 2010).

The region is one of the main producers of highland vegetables aside from the mountainous areas and highlands of South Tagalog, Cebu, Negros and Mindanao (Johnson *et al.*, 2008). Some of the major highland vegetables are potato, cabbage, chayote and carrot. Major provinces producing these vegetables are Benguet and Mountain Province. Vegetables being produced in these areas and some part of Ifugao are being distributed in the different spot markets in the region and even in Manila and other places outside the region.

Coordination mechanism is defined by Xu and Beamon (2006) as a set of methods used to manage interdependence between organizations. The distribution and marketing of products takes several intermediaries between the producer and the consumer. In the supply chain of highland vegetables, especially cabbage which was the focus of the study, the main actors are the producers, assemblers, truckers, wholesalers and retailers. Each of these actors works independently but is interdependent with each other. These actors interact and coordinate with each other through different mechanisms to facilitate transactions.

In the Philippines, researches on agricultural commodity supply chains become a priority agenda for industry development. Thus, studying the coordination mechanisms in



the spot market of cabbage may contribute in the literatures in the supply chain future researches especially in the behavioral aspect in the spot market.

Statement of the Problem

The study was conducted to answer the following questions:

1. What are the different chains of cabbage in the spot market?
2. What are the coordination mechanisms and attributes adopted in the different spot market chains and is there a significant difference among the actors' response?

Objectives of the Study

The study aimed to:

1. To identify the different chains of cabbage in the spot market.
2. To determine the coordination mechanisms and attributes adopted in the different spot market chains and to test whether there is a significant difference among the actors' response.

Importance of the Study

Identifying and analyzing the coordination mechanisms and attributes employed by the actors is important for further improvement in the coordination and in the long run, improvement in the supply chain of cabbage and other highland vegetables as well. The result of the study then can be a source of information for concerned agencies to explain the behavioral aspect in the spot market especially in coordination.

Scope and Delimitation of the Study

The study was focused on the coordination mechanisms and attributes such as resource sharing structure, decision style, and level of control and risk/reward sharing in



the spot market. The respondents were interviewed at the major trading areas of cabbage such as La Trinidad Trading Post, Metro Manila and Pangasinan.



REVIEW OF LITERATURE

Supply Chain and Networks

Folkerts and Koehorst (1998) defined 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”. 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 management 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 Fearne, 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) discussed the increasing move toward the



development of supply chains and described supply chain structures where all stages of production, processing and distribution are bound together tightly to ensure reliable, efficient delivery of high quality products.

Interdependencies and Coordination

Crowston (2008) stated that interdependency and coordination have been perennial topics in organization studies. The two are related because coordination is seen as a response to problems cause by dependencies. Past studies however, described dependencies and coordination mechanisms only in general terms without characterizing in detail differences between dependencies, the problems of dependencies create or how the proposed coordination mechanisms address those problems. This vagueness made it difficult or impossible to determine what alternative coordination mechanisms might be useful in a given circumstance or to directly translate these alternative designs into specifications of individual activities.

Researchers have typically conceptualized dependencies as arising between actors rather than between tasks the actors happen to be performing. The cause of a dependency is variously viewed as control by one actor over outcomes of actions of another or due to exchanges of resources(Crowston, 2008). Litwak and Hylton (1962), defined interdependency as when two or more organizations must take each other into account if they are to accomplish their goals, Victor and Blackburn (1987) made this view of interdependency more precise by casting it in a game-theoretic framework. Each actor has a set of actions it could take and each actor's payoff depends on the combined choice of actions, thus the payoffs an actor gets may depend on the other actor's choice of action.



Dependency is defined by “extent to which a unit’s outcomes are controlled directly by or are contingent upon the actions of another.

In a supply chain, there are many firms working together where each firm are dependent from the performance of the other. Apparently, there is dependency and coordination between the firms in a chain. Coordination could be a planned or tactical action from the dependency issues that may arise in a supply chain.

Coordination Mechanisms

Coordination within a supply chain is a strategic response to the challenges that arise from dependencies. A coordination mechanism is a set of methods used to manage interdependence between organizations (Malone and Crowston, 1994). By definition, there are actors, entities and processes that interact to execute supply chain objectives. Coordination mechanisms then, provide tools for effectively managing these interactions. Thompson (1967) identified different coordination mechanisms that are used to respond to different levels of interdependencies between organizations, and categorizes these interdependencies as pooled, sequential, or reciprocal. Corresponding to each kind of interdependence, Thompson (1967) identified three coordination mechanisms: standardization, plan, and mutual adjustment. Van de Ven et al (1976) extended the Thompson framework by adding a fourth type of interdependency: team arrangement, in which partners work jointly and simultaneously. In their research, authors identified three kinds of coordination mechanisms: (1) impersonal (plans and rules), (2) personal (vertical supervision), and (3) group (formal and informal meetings) and observe that as the level of interdependence increases (from pooled to team arrangement), so too does the need for group coordination.



For each type of dependency, there are many coordination mechanisms available. Coordination theory does not generally provide guidance for selecting coordination mechanisms, nor does it consider the operating environment of the organization (Xu, 2006).

Coordination Mechanisms Attributes

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 was used to differentiate the various coordination mechanisms: resource sharing structure; decision style; level of control and; risk/reward sharing (Xu and Beamon, 2006).



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.



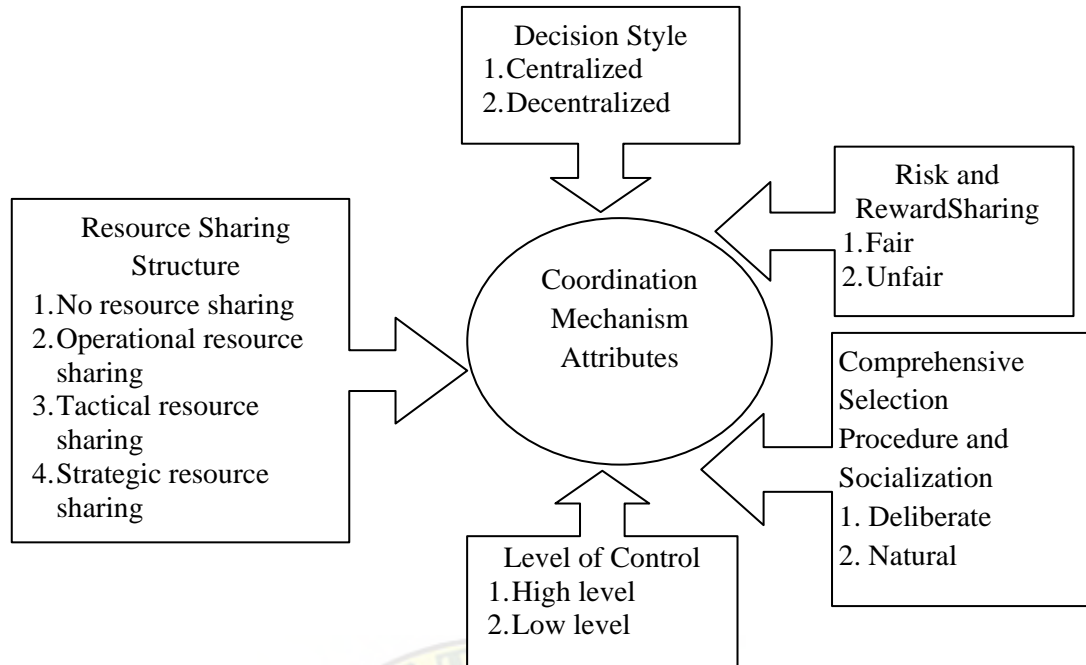


Figure 1. Coordination mechanism attributes

Definition of Terms

Farmer/ Producer- one who produces the commodity

Wholesaler- refers to the middleman who directly sells cabbage to retailers in wholesale price

Assembler- wholesaler- they are the one who assemble by cleaning further, sorting grading and packing the product in large quantity

Trucker- in charge of carrying the product to different markets

Retailer- individuals who market cabbage directly to the ultimate consumer

Spot market- also called open market where transaction between the buyer and the seller is done; place where the product are being delivered or sold

Conceptual Framework

In the supply chain of cabbage, there are several actors such as the farmers, assembler- wholesalers, trucker- wholesalers, wholesalers, wholesaler- retailers and retailers. Each of these actors works independently but is interdependent with each other. To manage the interdependency between these actors, there is several coordination mechanisms employed. These coordination mechanisms employed was identified through different attributes such as the resource sharing structure, risk and reward sharing, level of control, decision style, comprehensive selection procedure and socialization; and the difference of actors' response was tested. Furthermore, the different chains in the cabbage supply chain were identified.

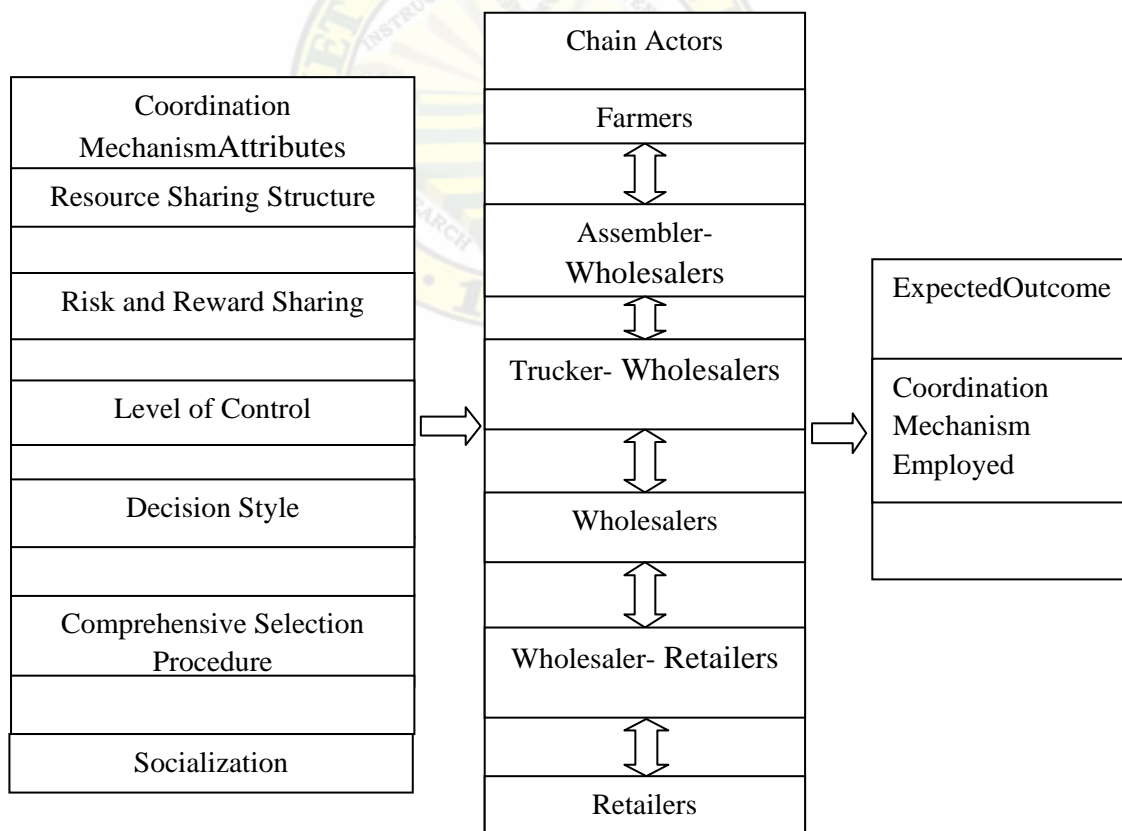


Figure 2. Conceptual framework

METHODOLOGY

Locale and Time of the Study

The study was conducted at the major trading areas in Benguet, Metro Manila and Pangasinan. Specifically at La Trinidad Vegetable Trading Post, Balintawak, Novaliches, Kamuning, Nepa Q, Blumentritt, Basilio and Urdaneta, Pangasinan. The study was conducted from November, 2010 to January, 2011.

Respondents of the Study

The respondents represented the major actors in the fresh vegetables supply chain. Specifically, the target respondents were classified into four major groups as shown below.

Respondent under the production was 46. Under assembly/ collection was 34, distribution was 58 and retailing was 55. The total respondent was 193.

Table 1. Respondents of the study

CLASSIFICATION	TYPE OF RESPONDENTS
Production	Vegetable farmers
Assembly/ Collection	Assembler- wholesalers; Financier- assembler-wholesalers
Distribution	Trucker-wholesalers; Wholesalers; Wholesaler-retailers
Retailing	Retailers



Data Gathering Procedure

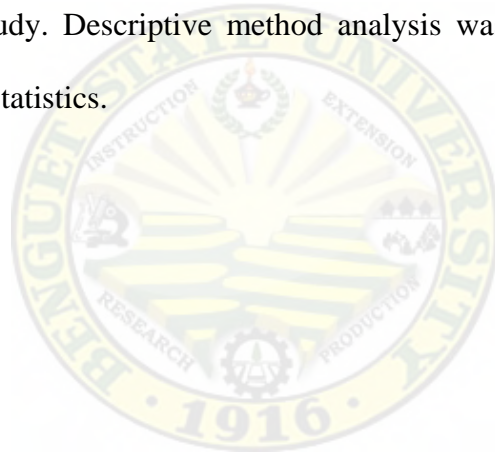
A structured interview schedule was used to gather data. The interview schedule was pre-tested to validate the questionnaire.

Data Gathered

The data gathered were the profile of the actors, the coordination mechanisms and attributes adopted in the chain by the actors and their buyers.

Data Analysis

The data gathered were organized, summarized and classified according to the objectives of the study. Descriptive method analysis was used like frequency, tables, percentage and test-statistics.



RESULTS AND DISCUSSION

Respondents Profile

Table 2 presents the background information of 193 respondents from Benguet, Manila, and Pangasinan. The respondents were categorized according to age, gender, marital status and educational background.

Age. Most of the farmers (39%), assembler-wholesalers (32%), and trucker-wholesalers (42%) have the age bracket of 21-30 years old. Moreover, most of the assembler-wholesalers (32%), financier-assembler-wholesalers (47%), and wholesaler-retailers (39%) have age ranging 31-40 years old. This implied that most of the actors were young to middle ages. Hence, these persons engaged in vegetable business assumed as their occupation and source of income.

Gender. There were more female than male respondents with the percentage of 67%. However, most farmers were male (91%) and retailers were mostly female (84%). This simply means that males do the hard work in production as compared to retailing activities which are done by females.

Marital status. Most of all the respondents were married with a percentage of 69%. This implies that the respondents work to support the respondents' families. Married people work more than unmarried people.

Educational background. Most of the respondents had attained high school (47%) and college (34%) education and lesser number with the vocational and elementary education. This means that the level of education is not a requisite to engage in vegetable trading business.



Table 2. Distribution of respondents according to socio-demographic status

CHARACTERISTICS	PRODUCTION		ASSEMBLY				DISTRIBUTION				RETAILING		TOTAL			
	F		A-W		F-A-W		T-W		W		W-R		R		TOTAL	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Age																
20 and less	5	11	2	11	0	0	0	0	4	40	3	8	2	4	16	8
21-30	18	39	6	32	1	7	5	42	3	30	12	33	12	22	57	30
31-40	10	22	6	32	7	47	4	33	1	10	14	39	10	18	52	27
41-50	9	20	4	21	4	27	2	17	1	10	3	8	21	38	44	23
51-60	3	7	1	5	3	20	1	8	1	10	3	8	8	15	20	10
61 and above	1	2	0	0	0	0	0	0	0	0	1	3	2	4	4	2
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100	193	100
Gender																
Male	42	91	13	68	5	33	8	67	4	40	12	33	9	16	93	48
Female	4	9	6	32	10	67	4	33	6	60	24	67	46	84	100	52
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100	193	100
Marital status																
Single	16	35	2	11	1	7	5	42	6	60	15	42	9	16	54	28
Married	30	65	17	89	13	87	7	58	4	40	20	56	43	78	134	69
Separated	0	0	0	0	1	7	0	0	0	0	0	0	2	4	3	2
Widow	0	0	0	0	0	0	0	0	0	0	1	3	1	2	2	1
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100	193	100
Educational attainment																
Elementary	13	28	1	5	2	13	2	17	1	10	4	11	10	18	33	17
High School	20	43	9	47	6	40	4	33	4	40	16	44	31	56	90	47
College	13	28	9	47	7	47	6	50	5	50	14	39	12	22	66	34
Vocational	0	0	0	0	0	0	0	0	0	0	2	6	2	4	4	2
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100	193	100

LEGEND:

F – Farmers

A-W – Assembler-wholesalers

F-A-W – Financier-assembler-wholesalers

T-W – Trucker-wholesalers

W – Wholesalers

W-R – Wholesaler-retailers

R – Retailers



Number of years engaged in vegetable business. Table 3 shows the distribution of respondents according to the number of years engaged in business. Most of the respondents (46%) were engaged one to five years in business while the least were in the business for 31 years and over. Therefore, the result reveals that the chain actors were still new in vegetable trading business.

Organization affiliation. The distribution of respondents according to organization affiliation is presented in Table 4. Most of the respondents were not affiliated to any organization. Thus, may not recognize the relevance to their business activities.

Table 3. Distribution of respondents according to the number of years engaged in business

NO. OF YEARS	PRODUCTION		ASSEMBLY				DISTRIBUTION				RETAILING		TOTAL			
	F		A-W		F-A-W		T-W		W		W-R		R			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Below 1 Yr.	0	0	1	5	0	0	0	0	1	10	0	0	2	4	4	2
1-5	17	37	9	47	4	27	4	33	6	60	32	89	17	31	89	46
6-10	6	13	5	26	2	13	3	25	3	30	4	11	9	16	32	17
11-15	6	13	3	16	7	47	4	33	0	0	0	0	5	9	25	13
16-20	9	20	0	0	0	0	0	0	0	0	0	0	11	20	20	10
21-25	2	4	1	5	2	13	1	8	0	0	0	0	2	4	8	4
26-30	2	4	0	0	0	0	0	0	0	0	0	0	8	15	10	5
31 and above	4	9	0	0	0	0	0	0	0	0	0	0	1	2	5	3
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100	193	100



Table 4. Distribution of respondents according to organization affiliation

ORGANIZATIONAL AFFILIATION	PRODUCTION				ASSEMBLY				DISTRIBUTION				RETAILING				TOTAL	
	F		A-W		F-A-W		T-W		W		W-R		R		TOTAL			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Farmer's Assoc.	1	2	0	0	0	0	0	0	2	20	0	0	0	0	3	2		
Cooperatives	1	2	2	11	4	27	3	25	1	10	8	22	2	4	21	11		
Others	3	7	3	16	3	20	4	33	0	0	3	8	5	9	21	11		
None	41	89	14	74	8	53	5	42	7	70	25	69	48	87	148	77		
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100	193	100		

Spot Market Chains

Figure 3a shows the flow of cabbage in the spot market. From the farmers at La Trinidad Vegetable Trading Post (LTVTP), the cabbage is distributed to the different spot markets in Metro Manila specifically at Balintawak, Nepa Q, Novaliches, Kamuning, Dapitan, Libertad and other parts outside Cordillera. Several chains were identified as shown in Figure 3b and these are from 1) farmers at LTVTP to retailers at Balintawak; 2) farmers at LTVTP to T-Ws at Balintawak to A-Ws at Balintawak to retailers at Balintawak, Novaliches, Libertad, Kamuning, Dapitan and Nepa Q; 3) farmers at LTVTP to T-Ws at Balintawak to W-Rs to consumers; 4) farmers to T-Ws at Nepa Q to retailers to consumers; 5) farmers to T-Ws at Urdaneta to W-Rs to retailers to consumers; 6) farmers to A-Ws at LTVTP to T-Ws at Balintawak to retailers at the different parts in Manila to consumers; 7) farmers to A-Ws at Balintawak to Ws to retailers at the different parts of Manila to consumers; 8) farmers to W-Rs at LTVTP to retailers to consumers; 9) farmers to F-A-Ws at LTVTP to A-Ws at Balintawak to W-Rs to consumers; and 10) farmers to F-A-W-Rs at LTVTP to consumers.



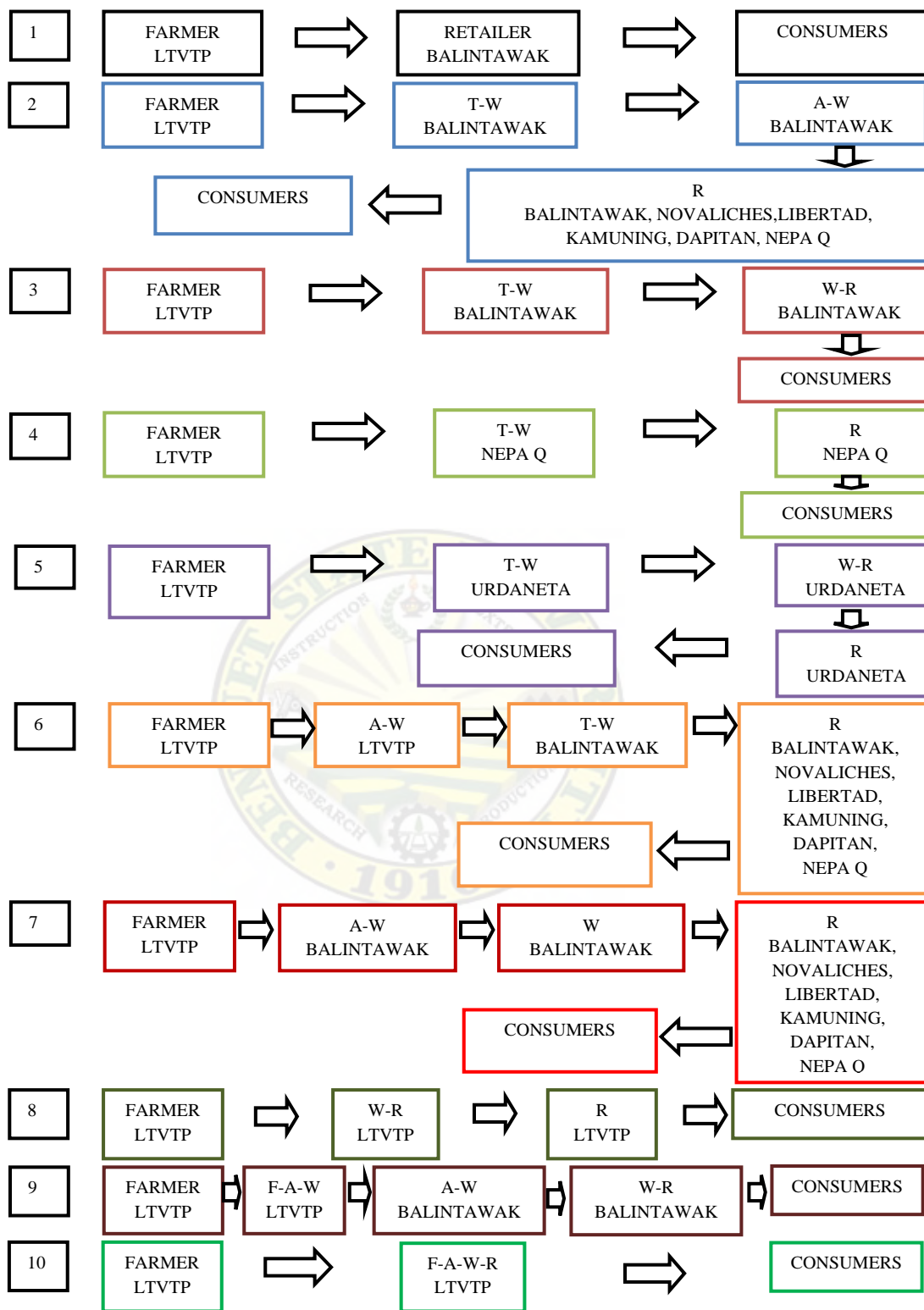


Figure 3b. Specific spot market chains for cabbage



Resource Sharing Structure

Operational resource sharing. Table 5a shows that most farmers (30%) just sometimes supported by the buyers for specific production investments. In statement that actors and buyers share investment in production/ procurement operation, most farmers answered one. Most of the farmers answered three if they extend support to the buyers in business operation. Also, most of them answered two in the statement that the buyers extend credit assistance. This then implies that farmers invest on their own selves. The buyers and the farmers sometimes support each other in business operation but there is no credit assistance by the buyers to the farmers.

For assembler-wholesalers (A-Ws), the buyers do not support them and they do not share investments as it reflects that 37% and 32% A-Ws disagreed in statement one and two, respectively. But on the credit assistance, 32% A-Ws answered four. And 32% answered that sometimes they extend support to the buyers. This then implies that A-Ws invest on their own selves but they help each other through credit assistance especially to the buyers.

Twenty seven percent (27%) of F-A-W respondents answered that the buyers never support them for specific procurement investments; 33% of F-A-Ws and the buyers never share investment in procurement operation; and 47% answered that the buyers never extend credit assistance. And further more 27% answered that they do not extend support to the buyers. It implies that F-A-Ws work independently.

Thirty three percent (33%) of T-Ws answered that the buyers do not support them for specific procurement investments, 83% also answered that they never share investment and 42% said that the buyers never extend credit assistance in the procurement of cabbage but 42% of the T-Ws answered that they extend support to the



buyers in their business operation. This implies that the buyers are dependent on the T-
Ws in some way in their operation.

Table 5a. Distribution of respondents on operational resource sharing

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Farmer											
1. Buyer supports for specific production/procurement investments.	11	24	8	17	14	30	9	20	4	9	3
2. Share investment in production/procurement operation.	17	37	14	30	8	17	1	2	6	13	2
3. I extend support to buyer in business operation.	11	24	6	13	14	30	12	26	3	7	3
4. Buyer extends credit assistance in the production/procurement of cabbage.	11	24	12	26	8	17	8	17	7	15	3
Assembler-wholesaler											
1. Buyer supports for specific production/procurement investments.	3	16	7	37	5	26	3	16	1	5	3
2. Share investment in production/procurement operation.	4	21	6	32	5	26	3	16	1	5	3
3. I extend support to buyer in business operation.	1	5	5	26	6	32	4	21	3	16	3
4. Buyer extends credit assistance in the production/procurement of cabbage.	4	21	5	26	3	16	6	32	1	5	3
Financier-assembler-wholesaler											
1. Buyer supports for specific production/procurement investments.	4	27	2	13	3	20	3	20	3	20	3
2. Share investment in production/procurement operation.	5	33	3	20	2	13	4	27	1	7	3
3. I extend support to buyer in business operation.	2	13	4	27	3	20	3	20	3	20	3
4. Buyer extends credit assistance in the production/procurement of cabbage.	7	47	1	7	4	27	1	7	2	13	2
Trucker-wholesaler											
1. Buyer supports for specific production/procurement investments.	4	33	4	33	1	8	2	17	1	8	2
2. Share investment in production/procurement operation.	10	83	0	0	2	17	0	0	0	0	1
3. I extend support to buyer in business operation.	2	17	0	0	3	25	5	42	2	17	3
4. Buyer extends credit assistance in the production/procurement of cabbage.	5	42	1	8	3	25	3	25	0	0	2
Wholesaler											
1. Buyer supports for specific production/procurement investments.	7	70	2	20	1	10	0	0	0	0	1
2. Share investment in production/procurement operation.	6	60	3	30	1	10	0	0	0	0	2
3. I extend support to buyer in business operation.	2	20	0	0	5	50	2	20	1	10	3
4. Buyer extends credit assistance in the production/procurement of cabbage.	3	30	2	20	3	30	1	10	1	10	3

LEGEND:

Numerical value	Descriptive equivalent	3	Undecided
1	Strongly disagree	4	Moderately agree



2 Disagree 5 Strongly agree

Table 5a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Wholesaler-retailer											
1. Buyer supports for specific production/procurement investments.	12	33	4	11	9	25	6	17	5	14	3
2. Share investment in production/procurement operation.	16	44	8	22	5	14	5	14	2	6	2
3. I extend support to buyer in business operation.	4	11	3	8	9	25	11	31	9	25	4
4. Buyer extends credit assistance in the production/procurement of cabbage.	10	28	7	19	5	14	7	19	7	19	3
Retailer											
1. Buyer supports for specific production/procurement investments.	31	56	2	4	8	15	10	18	4	7	2
2. Share investment in production/procurement operation.	36	65	4	7	8	15	5	9	2	4	2
3. I extend support to buyer in business operation.	12	22	11	20	17	31	10	18	4	7	3
4. Buyer extends credit assistance in the production/procurement of cabbage.	28	51	6	11	8	15	7	13	4	7	2

LEGEND:

Numerical value	Descriptive equivalent	3	Undecided
1	Strongly disagree	4	Moderately agree
2	Disagree	5	Strongly agree

Most wholesalers also worked independently since 70% answered that the buyers never support them in procurement investments, 60% answered they never share investment and 30% answered sometimes they extend support to the buyers and 30% also answered that sometimes the buyers extend credit assistance.

Wholesaler-retailers (W-Rs) and retailers too worked independently. Thirty three percent (33%) of W-Rs and 56% of retailers answered that the buyers never support them in their investments, neither also they share investment in their operation. Twenty eight percent (28%) of W-Rs and 51% of retailers said that the buyers never extend credit to them but they extend support to the buyers.

Overall, the respondents are not supported by the buyers and they do not share investment their specific production/ procurement operation. But the buyers sometimes



extend credit assistance and the respondents also extend support to the buyers in their business operation.

The responses were further validated in Table 5b, which shows the test-statistics. There are significant differences among the different chain actors in the operational resource sharing since some extends/shares support/investment to the buyers but some are not.

Strategic resource sharing. As showed in the previous table, farmers donot share investment with the buyers as reflected in Table 6a. Thirty seven percent (37%) of farmers answered that there is no sharing of investment. Thirty nine percent (39%) answered that they sometimes share marketing strategies. Twenty six percent (26%) of farmers also answered that they plan strategies to improve their business operation. This implies that there is strategic resource sharing between farmers and buyers.

Forty percent (40%) of F-A-Ws sometimes jointly share marketing strategies and 33% never share investment. On the average, F-A-Ws sometimes plan /make strategies to improve their business operation. This implies that there is no definite planning/ making and sharing of strategies between F-A-Ws and buyers in their business operation.

Table 5b. Test-statistics for operational resource sharing

STATEMENT	MEAN	CHI-SQUARE	df	SIGNIFICANCE
1. Buyer supports for specific production/procurement investments.	2.47	7.07	3	0.07
2. Share investment in production/procurement operation.	2.05	12.75	3	0.005**
3. I extend support to buyer in business operation.	2.99	8.87	3	0.031*
4. Buyer extends credit assistance in the production/procurement of vegetables.	2.51	7.23	3	0.065

*significant

**highly significant



Table 6a. Distribution of respondents on strategic resource sharing

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Farmer											
1. Joint sharing in production and marketing strategies.	6	13	12	26	18	39	7	15	3	7	3
2. Joint sharing in investment to attain business goals.	17	37	14	30	10	22	3	7	2	4	2
3. Plan/make strategies to improve business operation.	9	20	10	22	11	24	12	26	4	9	3
Assembler-wholesaler											
1. Joint sharing in production and marketing strategies.	4	21	1	5	7	37	6	32	1	5	3
2. Joint sharing in investment to attain business goals.	7	37	4	21	4	21	3	16	1	5	2
3. Plan/make strategies to improve business operation.	3	16	6	32	4	21	4	21	2	11	3
Financier-assembler-wholesaler											
1. Joint sharing in production and marketing strategies.	3	20	3	20	6	40	1	7	2	13	3
2. Joint sharing in investment to attain business goals.	5	33	3	20	2	13	4	27	1	7	3
3. Plan/make strategies to improve business operation.	4	27	1	7	4	27	4	27	2	13	3
Trucker-wholesaler											
1. Joint sharing in production and marketing strategies.	4	33	1	8	4	33	2	17	1	8	3
2. Joint sharing in investment to attain business goals.	7	58	2	17	3	25	0	0	0	0	2
3. Plan/make strategies to improve business operation.	5	42	2	17	3	25	1	8	1	8	2
Wholesaler											
1. Joint sharing in production and marketing strategies.	4	40	0	0	2	20	3	30	1	10	3
2. Joint sharing in investment to attain business goals.	6	60	2	20	2	20	0	0	0	0	2
3. Plan/make strategies to improve business operation.	5	50	0	0	1	10	3	30	1	10	3
Wholesaler-retailer											
1. Joint sharing in production and marketing strategies.	8	22	9	25	9	25	8	22	2	6	3
2. Joint sharing in investment to attain business goals.	19	53	4	11	7	19	5	14	1	3	2
3. Plan/make strategies to improve business operation.	9	25	10	28	8	22	5	14	4	11	3
Retailer											
1. Joint sharing in production and marketing strategies.	24	44	12	22	9	16	4	7	6	11	2
2. Joint sharing in investment to attain business goals.	39	71	7	13	4	7	5	9	0	0	2
3. Plan/make strategies to improve business operation.	31	56	5	9	5	9	5	9	9	16	2

LEGEND:

Numerical value	Descriptive equivalent	3	Undecided
1	Strongly disagree	4	Moderately agree
2	Disagree	5	Strongly agree



The same as the F-A-Ws, T-Ws also do not have definite planning/making and sharing of strategies in their operation. Fifty eight percent (58%) of F-A-Ws answered that they do not share investment and 42% do not plan/make strategies. On the average, the buyers and F-A-Ws sometimes jointly share production and marketing strategies.

Forty percent (40%) of wholesalers answered that they never jointly share in production and marketing strategies but on the average they sometimes jointly share. Sixty percent (60%) answered that they never jointly share investment in their operation. Fifty percent (50%) never plan/make strategies to improve their operation but on the average they sometimes plan/make strategies. This implies that wholesalers donot really share strategies with the buyer in their operation.

Fifty three percent (53%) of W-Rs never share investment to attain their business goal. Twenty eight percent (28%) donot plan/make strategies to improve in business operation. On the average, they sometimes share marketing strategies. This implies that there is sharing sometimes between W-Rs and buyers in strategies.

Same as the wholesalers, retailers too donot share strategies to improve their business operation. On the average, they do not jointly share marketing strategies and they donot share investment in their operation. Further more, retailers donot make/plan for strategies to improve their business.

Overall, the respondents sometimes jointly share with the buyers on production and marketing strategies. Sometimes they plan/make strategies to improve their business operation. The respondents and the buyers do not jointly share investment to attain their goals.

There are significant differences among the different chain actors in their strategic resource sharing, as shown in Table 6b, for there are still some actors whojointly share



Table 6b. Test-statistics for strategic resource sharing

STATEMENT	MEAN	CHI-SQUARE	df	SIGNIFICANCE
1. Joint sharing in production and marketing strategies.	2.58	9.09	3	0.028*
2. Joint sharing in investment to attain business goals.	1.93	14.71	3	0.002**
3. Plan/make strategies to improve business operation.	2.56	8.83	3	0.032*

*significant

**highly significant

production and marketing strategies and investment, and some plan/make strategies to improve their operation.

Information sharing. Information sharing in business operation is one important thing in improving business operation. Farmers, in Table 7a, do not share information specifically on production to the buyers but buyers share market information to them. Twenty eight percent (28%) of farmers do not share production information and 39% of farmers said buyers sometimes share market information.

Thirty seven percent (37%) of A-Ws answered that they share procurement information to the buyers. Thirty two percent (32%) A-Ws said that both of them share information on marketing schedules. On the average A-Ws said that buyers sometimes share market information. This implies that there is definite information sharing between A-Ws and buyers.

Forty percent (40%) of F-A-W respondents answered that they share procurement information to the buyers, 33% answered that the buyers always share market information and 53% answered that they sometimes share to each other the information on marketing schedules. This implies that F-A-Ws and the buyers have information sharing.



Table 7a. Distribution of respondents on information sharing

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Farmer											
1. Sharing of production/procurement information (volume, cost, production schedules) to the buyers.	6	13	13	28	12	26	10	22	5	11	3
2. Buyer always shares market information (demand, supply, prices & cost).	4	9	10	22	18	39	9	20	5	11	3
3. Sharing of information about production and marketing schedules.	4	9	14	30	12	26	12	26	4	9	3
Assembler-wholesaler											
1. Sharing of production/procurement information (volume, cost, production schedules) to the buyers.	2	11	3	16	3	16	7	37	4	21	3
2. Buyer always shares market information (demand, supply, prices & cost).	3	16	2	11	5	26	5	26	4	21	3
3. Sharing of information about production and marketing schedules.	3	16	0	0	5	26	6	32	5	26	4
Financier-assembler-wholesaler											
1. Sharing of production/procurement information (volume, cost, production schedules) to the buyers.	0	0	3	20	3	20	6	40	3	20	4
2. Buyer always shares market information (demand, supply, prices & cost).	0	0	3	20	4	27	5	33	3	20	4
3. Sharing of information about production and marketing schedules.	0	0	1	7	8	53	3	20	3	20	4
Trucker-wholesaler											
1. Sharing of production/procurement information (volume, cost, production schedules) to the buyers.	2	17	2	17	3	25	0	0	5	42	3
2. Buyer always shares market information (demand, supply, prices & cost).	2	17	2	17	2	17	4	33	2	17	3
3. Sharing of information about production and marketing schedules.	2	17	2	17	0	0	5	42	3	25	3
Wholesaler											
1. Sharing of production/procurement information (volume, cost, production schedules) to the buyers.	2	20	2	20	2	20	2	20	2	20	3
2. Buyer always shares market information (demand, supply, prices & cost).	1	10	3	30	2	20	2	20	2	20	3
3. Sharing of information about production and marketing schedules.	2	20	4	40	1	10	2	20	1	10	3
Wholesaler-retailer											
1. Sharing of production/procurement information (volume, cost, production schedules) to the buyers.	4	11	1	3	11	31	6	17	14	39	4
2. Buyer always shares market information (demand, supply, prices & cost).	7	19	4	11	14	39	4	11	7	19	3
LEGEND:											
Numerical value	Descriptive equivalent	3	Undecided								
1	Strongly disagree	4	Moderately agree								
2	Disagree	5	Strongly agree								



Table 7a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.	
	N	%	N	%	N	%	N	%	N	%		
3. Sharing of information about production and marketing schedules.	5	14	6	17	11	31	8	22	6	17	3	
Retailer												
1. Sharing of production/procurement information (volume, cost, production schedules) to the buyers.	20	36	6	11	4	7	14	25	11	20	3	
2. Buyer always shares market information (demand, supply, prices & cost).	23	42	5	9	15	27	8	15	4	7	2	
3. Sharing of information about production and marketing schedules.	20	36	11	20	10	18	8	15	6	11	2	
LEGEND:												
Numerical value	Descriptive equivalent				3				Undecided			
1	Strongly disagree				4				Moderately agree			
2	Disagree				5				Strongly agree			

Trucker-wholesalers (T-Rs) always share procurement information to the buyers. The buyers and T-Ws share with each other information. Forty two percent (42%) of T-Ws answered they always share procurement information to the buyers. Thirty three percent (33%) answered that the buyers share market information and 42% answered that they share information on marketing schedules.

On the average, wholesalers sometimes share procurement information to the buyers. Thirty percent (30%) answered that the buyers do not share market information and 40% answered that they do not both share information on marketing schedules. This implies that wholesalers and the buyers do not share to each other information.

Wholesaler-retailers (W-Rs) and buyers have limited information sharing. Wholesaler-retailers are the one who always shares information. Thirty nine percent (39%) of W-Rs answered that they share procurement information to the buyers. Thirty nine percent (39%) answered that the buyers sometimes share market information. Thirty one percent (31%) answered that they both sometimes share information about marketing schedules.



Retailers never share information to the buyers. Thirty six percent (36%) answered that they never share procurement information to the buyers. Forty two percent (42%) answered that the buyers never share market information and 36% answered that they both never share information on marketing schedules.

The respondents sometimes shares information with the buyer in their operation. The buyers also sometimes share information.

Table 7b shows that there are significant differences among the different chain actors in the sharing of production/ procurement information to the buyers, sharing of market information, and sharing of information about production and marketing schedules. Some respondents share information while others do not share information.

Risk and Reward Sharing

Table 8a presents the distribution of respondents on risk and reward sharing. On the average, the buyers and the farmers share equal risks and benefits. But it also shows that the farmers take more risks in their transactions and sometimes the buyers derive more benefits than the farmers.

Table 7b. Test-statistics for information sharing

STATEMENT	MEAN	CHI-SQUARE	df	SIGNIFICANCE
1. Sharing of production/procurement information (volume, cost, production schedules) to the buyers.	3.16	9.65	3	0.022*
2. Buyer always shares market information (demand, supply, prices & cost).	2.91	14.14	3	0.003**
3. Sharing of information about production and marketing schedules.	2.94	15.18	3	0.002**

*significant

**highly significant



Table 8a. Distribution of respondents on risk and reward sharing

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Farmer											
1. Same risks from the transaction we make.	10	22	7	15	21	46	4	9	4	9	3
2. Share equal benefits from transaction.	5	11	9	20	21	46	8	17	3	7	3
3. I take more risk from the transaction I make with buyers.	1	2	5	11	16	35	16	35	8	17	4
4. Buyer derives more benefits from the business operation.	2	4	10	22	9	20	19	41	6	13	3
Assembler-wholesaler											
1. Same risks from the transaction we make.	0	0	1	5	8	42	7	37	3	16	4
2. Share equal benefits from transaction.	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. Buyer derives more benefits from the business operation.	0	0	5	26	5	26	5	26	4	21	3
Financier-assembler-wholesaler											
1. Same risks from the transaction we make.	0	0	1	7	5	33	5	33	4	27	4
2. Share equal benefits from transaction.	0	0	1	7	5	33	4	27	5	33	4
3. I take more risk from the transaction I make with buyers.	0	0	1	7	12	80	0	0	1	7	3
4. Buyer derives more benefits from the business operation.	0	0	0	0	10	67	5	33	0	0	3
Trucker-wholesaler											
1. Same risks from the transaction we make.	1	8	2	17	4	33	2	17	3	25	3
2. Share equal benefits from transaction.	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. Buyer derives more benefits from the business operation.	1	8	3	25	4	33	2	17	2	17	3
Wholesaler											
1. Same risks from the transaction we make.	3	30	1	10	2	20	1	10	3	30	3
2. Share equal benefits from transaction.	1	10	1	10	4	40	3	30	1	10	3
3. I take more risk from the transaction I make with buyers.	3	30	0	0	4	40	2	20	1	10	3
4. Buyer derives more benefits from the business operation.	3	30	1	10	5	50	0	0	1	10	3

LEGEND:

Numerical value	Descriptive equivalent	3
1	Strongly disagree	4
2	Disagree	5

Undecided
Moderately agree
Strongly agree



Table 8a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Wholesaler-retailer											
1. Same risks from the transaction we make.	10	28	5	14	12	33	8	22	1	3	3
2. Share equal benefits from transaction.	6	17	6	17	8	22	12	33	4	11	3
3. I take more risk from the transaction I make with buyers.	1	3	2	6	10	28	11	31	12	33	4
4. Buyer derives more benefits from the business operation.	2	6	5	14	11	31	12	33	6	17	3
Retailer											
1. Same risks from the transaction we make.	13	24	15	27	13	24	7	13	7	13	3
2. Share equal benefits from transaction.	7	13	15	27	16	29	10	18	7	13	3
3. I take more risk from the transaction I make with buyers.	4	7	12	22	18	33	15	27	6	11	3
4. Buyer derives more benefits from the business operation.	5	9	10	18	17	31	19	35	4	7	3
LEGEND:											
Numerical value	Descriptive equivalent		3		Undecided						
1	Strongly disagree		4		Moderately agree						
2	Disagree		5		Strongly agree						

Forty two percent (42%) of A-Ws answered that they sometimes share same risks with the buyers but on the average, they share the same. Forty seven percent (47%) answered that they share equal benefits with the buyers but in the average, the buyers derive more benefits.

In the average, the F-A-Ws and buyers share same risks and benefits equally on the transactions they make. But sometimes F-A-Ws take more risk and sometimes buyers derive more benefits.

In the average, the wholesalers and buyers sometimes share same risks and benefits in their transactions. Sometimes wholesalers take more risk in their operation.



In the table, it shows that retailers and buyers do not share same risks because sometimes retailers take more risk. The buyers derive more benefits from their transaction but sometimes they share equal benefits.

Table 8b. Test-statistics for risk and reward sharing

STATEMENT	MEAN	CHI-SQUARE	df	SIGNIFICANCE
1. Same risks from the transaction we make.	2.89	18.83	3	0.00**
2. Share equal benefits from transaction.	3.09	12.8	3	0.01*
3. I take more risk from the transaction I make with buyers.	3.36	5.57	3	0.14
4. Buyer derives more benefits from the business operation.	3.25	1.4	3	0.71

*significant

**highly significant

It is reflected in the mean that the respondents were undecided if they share risk and benefits with the buyers. It shows that sometimes they do not share equally in the rewards and risks in their operation.

There are no significant differences among the different chain actors in the risk and reward sharing except on the equal sharing of benefits as shown in Table 8b. Some have equal sharing but some also donot have equal sharing.

Decision Style

The decision style of the respondents whether centralized or decentralized is presented in Table 9a and 10a, respectively.

In Table 9a, forty one percent (41%) of the farmers decide on their own most of the time but they involve other people on decisions on what product to sell and what is the price. Sometimes they are influenced by the buyers on the decisions they make. There is no joint decision making between the farmers and the buyers. Farmers are more on decentralized decision style.



Forty seven percent(47%) of A-Ws and the buyers decide at their own but they involve other people on decisions on products to sell and the price. The A-Ws sometimes are dictated and influenced by the buyers in the decision they make. Assembler-wholesalers (A-Ws) and the buyers jointly share decision in procurement and delivery schedules. This implies that there is centralization of decisions.

Forty seven percent (47%) of F-AWs decide at their own in business operation; and F-A-Ws and the buyers have their own decision. Financier-assembler-wholesalers (F-A-Ws) also do not involve other people to decide on product to sell and its price. Even though they decide at their own, there is still sharing of decision in procurement and delivery schedules. The buyers also sometimes have influence on the decisions done by F-A-Ws. This implies that F-A-Ws are more on decentralized decision style.

Table 9a. Distribution of retailers on centralized decision style

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Farmer											
1. Own decision about the business operations.	2	4	5	11	7	15	13	28	19	41	4
2. Buyer dictates the decision to undertake.	7	15	13	28	20	43	3	7	3	7	3
3. Buyer never influences any decision I make.	6	13	12	26	22	48	2	4	4	9	3
4. I decide the volume to be purchased.	1	2	5	11	10	22	17	37	13	28	4
5. I choose the size/variety/color to be procured.	3	7	3	7	10	22	15	33	15	33	4
6. Joint sharing of decision in procurement and delivery schedules.	8	17	16	35	9	20	8	17	5	11	3
Assembler-wholesaler											
1. Own decision about the business operations.	0	0	0	0	5	26	5	26	9	47	4
2. Buyer dictates the decision to undertake.	3	16	3	16	5	26	5	26	3	16	3
3. Buyer never influences any decision I make.	0	0	6	32	7	37	3	16	3	16	3
4. I decide 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. Joint sharing of decision in procurement and delivery schedules.	3	16	1	5	2	11	8	42	5	26	4
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LEGEND:

Numerical value	Descriptive equivalent	3	Undecided
1	Strongly disagree	4	Moderately agree
2	Disagree	5	Strongly agree

Table 9a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Financier-assembler-wholesaler											
1. Own decision about the business operations.	0	0	1	7	3	20	4	27	7	47	4
2. Buyer dictates the decision to undertake.	4	27	1	7	7	47	2	13	1	7	3
3. Buyer never influences any decision I make.	1	7	4	27	4	27	3	20	3	20	3
4. I decide the volume to be purchased.	0	0	1	7	4	27	3	20	7	47	4
5. I choose the size/variety/color to be procured.	0	0	0	0	4	27	3	20	8	53	4
6. Joint sharing of decision in procurement and delivery schedules.	1	7	2	13	4	27	4	27	4	27	4
Trucker-wholesaler											
1. Own decision about the business operations.	0	0	0	0	0	0	4	33	8	67	5
2. Buyer dictates the decision to undertake.	4	33	3	25	2	17	1	8	2	17	3
3. Buyer never influences any decision I make.	2	17	5	42	1	8	1	8	3	25	3
4. I decide 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. Joint sharing of decision in procurement and delivery schedules.	1	8	1	8	4	33	1	8	5	42	4
Wholesaler											
1. Own decision about the business operations.	1	10	1	10	1	10	3	30	4	40	4
2. Buyer dictates the decision to undertake.	6	60	2	20	1	10	0	0	1	10	2
3. Buyer never influences any decision I make.	1	10	2	20	2	20	3	30	2	20	3
4. I decide the volume to be purchased.	1	10	1	10	1	10	3	30	4	40	4
5. I choose the size/variety/color to be procured.	1	10	0	0	3	30	3	30	3	30	4
6. Joint sharing of decision in procurement and delivery schedules.	2	20	1	10	4	40	2	20	1	10	3
Wholesaler-retailer											
1. Own decision about the business	0	0	2	6	5	14	7	19	22	61	4



operations.												
2. Buyer dictates the decision to undertake.	8	22	14	39	5	14	4	11	5	14	3	

LEGEND:		
Numerical value	Descriptive equivalent	3 Undecided
1	Strongly disagree	4 Moderately agree
2	Disagree	5 Strongly agree

Table 9a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
3. Buyer never influences any decision I make.	3	8	10	28	8	22	6	17	9	25	3
4. I decide the volume to be purchased.	0	0	2	6	4	11	7	19	23	64	4
5. I choose the size/variety/color to be procured.	1	3	3	8	5	14	10	28	17	47	4
6. Joint sharing of decision in procurement and delivery schedules.	7	19	8	22	6	17	9	25	6	17	3

Retailer

1. Own decision about the business operations.	0	0	1	2	3	5	7	13	44	80	5
2. Buyer dictates the decision to undertake.	22	40	14	25	9	16	5	9	5	9	2
3. Buyer never influences any decision I make.	6	11	15	27	14	25	15	27	5	9	3
4. I decide the volume to be purchased.	1	2	3	5	6	11	11	20	34	62	4
5. I choose the size/variety/color to be procured.	3	5	4	7	5	9	12	22	31	56	4
6. Joint sharing of decision in procurement and delivery schedules.	21	38	5	9	10	18	12	22	7	13	3

LEGEND:		
Numerical value	Descriptive equivalent	3 Undecided
1	Strongly disagree	4 Moderately agree
2	Disagree	5 Strongly agree

Sixty seven percent (67%) of T-Ws decide at their own as well as the buyers. Trucker-wholesalers also do not involve other people on the decisions on selling products and setting the price. The buyers never dictate decisions they should undertake but the buyers still have influence on the T-Ws' decisions. Though they decide at their own, there is still sharing of decision in procurement and delivery schedules. This implies that T-Ws are more on decentralized decision style.



Forty percent (40%) of the wholesalers decide on their own in their business operation. The buyers do not involve others in decision wholesalers should undertake. Wholesalers also do not involve others in decision making. Sometimes buyers and wholesalers jointly share decision in procurement and delivery schedules. This shows that wholesalers have decentralization of decision.

In the overall response of the respondents on the centralized decision style, their decisions are sometimes centralized.

There are significant differences in the centralized decision style among the different chain actors, as shown in Table 9b, because some actors have centralized decision and some also do not have.

It is presented in Table 10a that W-Rs and buyers are decentralized in decision making, since 42% have their own decision and they do not even jointly share decision in the business operation. The buyers do not dictate W-Rs' decision but the buyer influences the decision of the W-Rs.

The retailers are sometimes influenced by the buyers in decision making in their business operation but they have their own decision. Not like the other actors who are being dictated in the decision they make, retailers are never dictated by the buyers on the decisions they should undertake and they never involve other people in decision making.

Table 9b. Test-statistics for centralized decision style

STATEMENT	MEAN	CHI-SQUARE	df	SIGNIFICANCE
1. Own decision about the business operations.	4.31	18.76	3	0.000**
2. Buyer dictates the decision to undertake.	3	9.35	3	0.025*
3. Buyer never influences any decision I make.	2.99	3.85	3	0.278
4. I decide the volume to be purchased.	4.07	15.06	3	0.002**
5. I choose the size/variety/color to be procured.	3.97	4.63	3	0.201



6. Joint sharing of decision in procurement and delivery schedules.	2.95	11.57	3	0.009**
*significant	**highly significant			

Table 10a. Distribution of retailers on decentralized decision style

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Farmer											
1. Other people are involved in deciding.	4	9	8	17	13	28	15	33	6	13	3
2. Buyer and I have our own decision.	1	2	4	9	11	24	18	39	12	26	4
Assembler-wholesaler											
1. Other people are involved in deciding.	3	16	3	16	3	16	7	37	3	16	3
2. Buyer and I have our own decision.	0	0	2	11	6	32	2	11	9	47	4
Financier-assembler-wholesaler											
1. Other people are involved in deciding.	4	27	5	33	2	13	2	13	2	13	3
2. Buyer and I have our own decision.	1	7	2	13	2	13	2	13	8	53	4
Trucker-wholesaler											
1. Other people are involved in deciding.	5	42	3	25	1	8	2	17	1	8	2
2. Buyer and I have our own decision.	0	0	1	8	1	8	2	17	8	67	4
Wholesaler											
1. Other people are involved in deciding.	4	40	3	30	0	0	1	10	2	20	2
2. Buyer and I have our own decision.	1	10	2	20	3	30	1	10	3	30	3
Wholesaler-retailer											
1. Other people are involved in deciding.	11	31	6	17	5	14	8	22	6	17	3
2. Buyer and I have our own decision.	2	6	4	11	4	11	11	31	15	42	4
Retailer											
1. Other people are involved in deciding.	25	45	12	22	6	11	10	18	2	4	2
2. Buyer and I have our own decision.	2	4	6	11	6	11	9	16	32	58	4
LEGEND:											
Numerical value	Descriptive equivalent		3		Undecided						
1	Strongly disagree		4		Moderately agree						
2	Disagree		5		Strongly agree						



They do not jointly share decisions in procurement or delivery schedules. This then implies that retailers and the buyers are decentralized in decision making.

In the overall response of the respondents on the decentralized decision style, the respondents and the buyers have their own decisions.

As shown in Table 10b there is a high significant difference among the different actors in the involvement of other people in decision making. Some actors involve other people but some just decide on their own self.

Level of Control

Table 11a presents the distribution of respondents on level of control in their business operation. Twenty eight percent (28%) of the farmers answered that they never monitor the buyers on the production schedules planned. Twenty eight percent (28%) also answered that they never set rules in their business operation and 26% also said that the buyers never set rules. This then implies that the level of control of retailers and the buyers is low.

Table 10b. Test-statistics for decentralized decision style

STATEMENT	MEAN	CHI-SQUARE	df	SIGNIFICANCE
1. Other people are involved in deciding.	2.67	17.81	3	0.000**
2. Buyer and I have our own decision.	3.95	5.06	3	0.167

*significant **highly significant

Table 11a. Distribution of respondents on level of control

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Farmer											
1. I always monitor the buyer on the procurement/production/marketing schedules planned.	13	28	11	24	12	26	6	13	4	9	3
2. I set rules in our business operation.	13	28	12	26	9	20	10	22	2	4	2



3. The buyer sets rules in our business operation	12	26	11	24	11	24	8	17	4	9	3
Assembler-wholesaler											
1. I always monitor the buyer on the procurement/production/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
LEGEND:											
Numerical value	Descriptive equivalent	3									Undecided
1	Strongly disagree	4									Moderately agree
2	Disagree	5									Strongly agree

Table 11a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
3. The buyer sets rules in our business operation	4	21	4	21	6	32	2	11	3	16	3
Financier-assembler-wholesaler											
1. I always monitor the buyer on the procurement/production/marketing schedules planned.	0	0	3	20	5	33	4	27	3	20	3
2. I set rules in our business operation.	0	0	1	7	6	40	3	20	5	33	4
3. The buyer sets rules in our business operation	4	27	3	20	4	27	1	7	3	20	3
Trucker-wholesaler											
1. I always monitor the buyer on the procurement/production/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
Wholesaler											
1. I always monitor the buyer on the procurement/production/marketing schedules planned.	3	30	0	0	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
Wholesaler-retailer											
1. I always monitor the buyer on the procurement/production/marketing schedules planned.	10	28	5	14	10	28	2	6	9	25	3
2. I set rules in our business operation.	5	14	6	17	6	17	8	22	11	31	3
3. The buyer sets rules in our business operation	11	31	12	33	5	14	2	6	6	17	2
Retailer											
1. I always monitor the buyer on the procurement/production/marketing schedules planned.	28	51	8	15	10	18	5	9	4	7	2
2. I set rules in our business operation.	18	33	7	13	8	15	14	25	8	15	3
3. The buyer sets rules in our business operation	28	51	4	7	6	11	8	15	9	16	2
LEGEND:											
Numerical value	Descriptive equivalent	3									Undecided
1	Strongly disagree	4									Moderately agree
2	Disagree	5									Strongly agree

Assembler-wholesalers (A-Ws) have little control and monitoring in their business operation. Assembler-wholesalers just sometimes set rules so as to the buyers



and sometimes A-Ws monitor their procurement/marketing schedules. This implies that there is low level of control among A-Ws and buyers.

Assembler-wholesalers (A-Ws) have little control and monitoring in their business operation. Assembler-wholesalers just sometimes set rules so as to the buyers and sometimes A-Ws monitor their procurement/marketing schedules. This implies that there is low level of control among A-Ws and buyers.

Financier-assembler-wholesalers (F-A-Ws) also sometimes monitor the buyers in the marketing/ procurement schedules planned as it is reflected in the table that 33% of F-A-Ws answered three. There is sometimes setting of rules between F-A-Ws and the buyers since 40% of F-A-Ws answered that they sometimes set rules in their business operation and 27% answered that the buyers sometimes sets rules. This still implies that the level of control is low since there is little monitoring.

T-Ws have low level of control on their business operation. Even though T-Ws set rules in their operation, they just sometimes monitor the procurement/marketing schedules planned. Thirty three percent (33%) answered that they set rules in their business operation. Forty two percent (42%) answered that the buyers do not set rules.

Forty percent (40%) of wholesalers answered that the buyers never sets rules in their business operation. On the average wholesalers answered that they sometimes set rules and sometimes monitor the buyers on procurement/ marketing schedules planned. This implies that level of control of wholesalers is low because there is no strict monitoring and control.

In the average W-Rs sometimes monitor the buyers on the procurement/marketing schedules planned. Thirty one percent (31%) answered that W-Rs set rules in the



operation. The buyers do not set rules. This implies that the level of control of W-Rs in business operation is low.

Fifty one percent (51%) of retailers never monitor the buyers on the procurement/ marketing schedule planned, 33% never set rules in their business operation, and 51% said that the buyers never set rules. This implies that retailers have very low level of control on their business operation.

In the overall response, the respondents said that sometimes they monitor the buyers on the procurement/ marketing schedules planned. Sometimes the respondents and the buyers set rules in their operation.

There is a significant difference among the actors in the setting of rules in their business operation as shown in Table 11b. Some sets rules but others never sets rules.

Comprehensive Selection Procedure

The distribution of respondents according to their comprehensive selection procedure is presented in Table 12a. Farmers (30%), A-Ws (37%), F-A-Ws (40%), and W-Rs (36%) said that they select buyers who are trustworthy. Others like T-Ws and wholesalers said that sometimes they select trustworthy buyers; and retailers said that they never select buyers who are trustworthy. Most of the respondents said that they choose buyers whom they know and trade with for a long time but wholesalers said that they just sometimes choose buyers whom they know and trade with for a long time. Respondents like farmers (24%); A-Ws (32%); and F-A-Ws (33%) said that they choose buyers who have adequate resources. Wholesalers (30%), W-Rs (33%) and retailers (38%) said that they do not choose buyers who have adequate resources.

Table 11b. Test-statistics for level of control



STATEMENT	MEAN	CHI-SQUARE	df	SIGNIFICANCE
1. I always monitor the buyer on the procurement/production/marketing schedules planned.	2.7	23.11	3	0.000**
2. I set rules in our business operation.	2.97	13.23	3	0.004**
3. The buyer sets rules in our business operation	2.51	3.09	3	0.378

*significant **highly significant

Table 12a. Distribution of respondents on comprehensive selection procedure

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Farmer											
1. I select the buyer who is trustworthy.	4	9	6	13	10	22	12	26	14	30	4
2. Buyer chooses the sellers with good quality and adequate volume of vegetables.	0	0	4	9	12	26	9	20	21	46	4
3. Buyer chooses the sellers that offer lower price of vegetables.	3	7	3	7	8	17	17	37	15	33	4
4. I choose buyers whom I know and trade with for a long time.	1	2	6	13	12	26	19	41	8	17	4
5. I choose buyers with adequate resources.	5	11	10	22	10	22	10	22	11	24	3
Assembler-Wholesaler											
1. I select the buyer who is trustworthy.	0	0	2	11	5	26	5	26	7	37	4
2. Buyer chooses the sellers with good quality and adequate volume of vegetables.	1	5	3	16	4	21	5	26	6	32	4
3. Buyer chooses the sellers that offer lower price of vegetables.	1	5	0	0	1	5	10	53	7	37	4
4. I choose buyers whom I know and trade with for a long 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
Financier-Assembler-Wholesaler											
1. I select the buyer who is trustworthy.	1	6	2	12	1	6	6	35	7	41	4
2. Buyer chooses the sellers with good quality and adequate volume of vegetables.	0	0	2	12	3	18	6	35	6	35	4
3. Buyer chooses the sellers that offer lower price of vegetables.	1	6	2	12	6	35	6	35	2	12	3
4. I choose buyers whom I know and trade with for a long time.	0	0	2	12	3	18	5	29	7	41	4
5. I choose buyers with adequate resources.	0	0	2	12	4	24	7	41	4	24	4
Financier-Assembler-Wholesaler											
1. I select the buyer who is trustworthy.	1	7	2	13	1	7	5	33	6	40	3
2. Buyer chooses the sellers with good quality and adequate volume of vegetables.	0	0	2	13	3	20	5	33	5	33	3
3. Buyer chooses the sellers that offer lower price of vegetables.	1	7	2	13	5	33	5	33	2	13	3
4. I choose buyers whom I know and trade with for a long time.	0	0	2	13	3	20	4	27	6	40	3



5. I choose buyers with adequate resources.	0	0	2	13	4	27	5	33	4	27	3	
Trucker-Wholesaler												
1. I select the buyer who is trustworthy.	3	25	0	0	3	25	3	25	3	25	3	
2. Buyer chooses the sellers with good quality and adequate volume of vegetables.	0	0	1	8	4	33	2	17	5	42	4	
3. Buyer chooses the sellers that offer lower price of vegetables.	0	0	0	0	1	8	8	67	3	25	4	
LEGEND:												
Numerical value	Descriptive equivalent				3				Undecided			
1	Strongly disagree				4				Moderately agree			
2	Disagree				5				Strongly agree			

Table 12a. Continued. . .

STATEMENT	1		2		3		4		5		AVE.	
	N	%	N	%	N	%	N	%	N	%		
4. I choose buyers whom I know and trade with for a long 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	
Wholesaler												
1. I select the buyer who is trustworthy.	3	30	1	10	4	40	0	0	2	20	3	
2. Buyer chooses the sellers with good quality and adequate volume of vegetables.	1	10	1	10	2	20	2	20	4	40	4	
3. Buyer chooses the sellers that offer lower price of vegetables.	0	0	0	0	3	30	2	20	5	50	4	
4. I choose buyers whom I know and trade with for a long time.	2	20	0	0	4	40	1	10	3	30	3	
5. I choose buyers with adequate resources.	3	30	3	30	1	10	2	20	1	10	3	
Wholesaler-Retailer												
1. I select the buyer who is trustworthy.	5	14	6	17	5	14	7	19	13	36	3	
2. Buyer chooses the sellers with good quality and adequate volume of vegetables.	3	8	3	8	9	25	5	14	16	44	4	
3. Buyer chooses the sellers that offer lower price of vegetables.	1	3	2	6	5	14	8	22	20	56	4	
4. I choose buyers whom I know and trade with for a long time.	1	3	4	11	11	31	6	17	14	39	4	
5. I choose buyers with adequate resources.	4	11	12	33	6	17	8	22	6	17	3	
Retailer												
1. I select the buyer who is trustworthy.	19	35	7	13	7	13	9	16	13	24	3	
2. Buyer chooses the sellers with good quality and adequate volume of vegetables.	5	9	8	15	9	16	14	25	19	35	4	
3. Buyer chooses the sellers that offer lower price of vegetables.	5	9	6	11	6	11	12	22	26	47	4	
4. I choose buyers whom I know and trade with for a long time.	8	15	9	16	12	22	11	20	15	27	3	
5. I choose buyers with adequate resources.	14	25	21	38	8	15	4	7	8	15	2	
LEGEND:												
Numerical value	Descriptive equivalent				3				Undecided			
1	Strongly disagree				4				Moderately agree			
2	Disagree				5				Strongly agree			



Most of the respondents said that the buyers choose the sellers with good quality and adequate volume of cabbage; and they also said that buyers choose sellers that offer lower price.

This implies that both buyers and sellers have their own comprehensive selection procedure in procuring and dealing with the sellers or the buyers.

In the overall response of the different actors, they sometimes select buyers who are trustworthy and buyers with adequate resources. They choose buyers whom they knew and trade with for a long time. The buyers too, select the sellers who offer lower price and sell a good quality cabbage.

In Table 12b, there is no significant difference among the different actors in their response except on choosing the buyer who is trustworthy and buyers with adequate resources. Some choose buyers who are trustworthy and with adequate resources but others do not choose buyers.

Socialization

Table 13a and 14a shows the socialization of chain actors of cabbage whether natural or deliberate. Farmers, A-Ws, and F-A-Ws said that they have established close relationship with the buyers and they have been trading for a long period of time and sometimes they communicate informally. The close personal relationship they have established is mainly for their business since they strongly agreed that they transact with the buyers mainly for business.

Table 12b. Test-statistics for comprehensive selection procedure

STATEMENT	MEAN	CHI-	df	SIGNIFICANCE
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	SQUARE			
1. I select the buyer who is trustworthy.	3.33	10.76	3	0.013*
2. Buyer chooses the sellers with good quality and adequate volume of vegetables.	3.79	2.21	3	0.529
3. Buyer chooses the sellers that offer lower price of vegetables.	3.95	4.52	3	0.211
4. I choose buyers whom I know and trade with for a long time.	3.57	4.30	3	0.231
5. I choose buyers with adequate resources.	3.02	19.22	3	0.000**

*significant **highly significant

In Table 13a, trucker-wholesalers (T-Ws) and retailers said that they have been trading with the buyers for a long period of time and they constantly communicate informally with the buyers. They also said that they have little closeness with the buyers.

Table 13a. Distribution of respondents on natural socialization

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Farmer											
1. The buyer and I have been trading with the buyer for long period of time.	2	4	6	13	8	17	21	46	9	20	4
2. We constantly communicate informally.	4	9	5	11	16	35	10	22	11	24	3
3. I have established close personal relationship with the buyer of my cabbage.	4	9	9	20	13	28	15	33	5	11	3
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 cabbage.	1	5	0	0	5	26	7	37	6	32	4
Financier-Assembler-Wholesaler											
1. The buyer and I have been trading with the buyer for long period of time.	0	0	0	0	2	13	8	53	5	33	4
2. We constantly communicate informally.	1	7	0	0	3	20	4	27	7	47	4
3. I have established close personal relationship with the buyer of my cabbage.	0	0	2	13	4	27	4	27	5	33	4
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 cabbage.	0	0	0	0	5	42	4	33	3	25	4
Wholesaler											
1. The buyer and I have been trading with the buyer for long period of time.	0	0	2	20	3	30	1	10	4	40	4
2. We constantly communicate informally.	4	40	0	0	3	30	2	20	1	10	3
3. I have established close personal relationship with the buyer of my cabbage.	1	10	0	0	4	40	2	20	3	30	4
Wholesaler-Retailer											
1. The buyer and I have been trading with the buyer for long period of time.	0	0	3	8	10	28	9	25	14	39	4
LEGEND:											
Numerical value	Descriptive equivalent				3	Undecided					
1	Strongly disagree				4	Moderately agree					
2	Disagree				5	Strongly agree					

Table 13a. Continued . . .

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
2. We constantly communicate informally.	4	11	5	14	11	31	5	14	11	31	3
3. I have established close personal relationship with the buyer of my cabbage.	2	6	2	6	16	44	6	17	10	28	4
Retailer											
1. The buyer and I have been trading with the buyer for long period of time.	3	5	7	13	13	24	14	25	18	33	4
2. We constantly communicate informally.	8	15	12	22	13	24	16	29	6	11	3
3. I have established close personal relationship with the buyer of my cabbage.	6	11	8	15	16	29	14	25	11	20	3
LEGEND:											
Numerical value	Descriptive equivalent				3	Undecided					
1	Strongly disagree				4	Moderately agree					
2	Disagree				5	Strongly agree					

Wholesalers and W-Rs said that they have been trading with the buyers for a long period of time and have little close personal relationship with the buyers. Wholesalers said that they never constantly communicate informally with the buyers while W-Rs sometimes communicate informally with the buyer. This implies that the actors socialize with the buyers mostly for business only.

For the overall response of the different actors on their natural socialization, they have been trading with the buyers for a long period of time. They sometimes communicate informally and they do not really have close relationship with the buyers.



In the deliberate socialization of the different actors shown in Table 14a, the respondents transact with the buyers mainly for business. They sometimes choose the buyers with good reputation. The buyers negotiate with them fairly.



Table 14a. Distribution of respondents on deliberate socialization

STATEMENT	1		2		3		4		5		AVE.
	N	%	N	%	N	%	N	%	N	%	
Farmer											
1. I transact with the buyer mainly for business.	1	2	1	2	9	20	11	24	24	52	4
2. I choose the buyer with good reputation.	3	7	6	13	17	37	11	24	9	20	3
3. The buyer negotiates with me fairly.	1	2	7	15	25	54	7	15	6	13	3
Assembler-Wholesaler											
1. I transact with the buyer mainly for business.	0	0	1	5	2	11	8	42	7	37	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
Financier-Assembler-Wholesaler											
1. I transact with the buyer mainly for business.	0	0	0	0	3	20	1	7	11	73	5
2. I choose the buyer with good reputation.	0	0	2	13	4	27	3	20	6	40	4
3. The buyer negotiates with me fairly.	0	0	0	0	7	47	2	13	6	40	4
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
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.	4	40	1	10	2	20	1	10	2	20	3
3. The buyer negotiates with me fairly.	1	10	1	10	4	40	1	10	3	30	3
Wholesaler-Retailer											
1. I transact with the buyer mainly for business.	0	0	2	6	6	17	4	11	24	67	4
2. I choose the buyer with good reputation.	5	14	5	14	12	33	5	14	9	25	3
3. The buyer negotiates with me fairly.	0	0	4	11	13	36	12	33	7	19	4
Retailer											
1. I transact with the buyer mainly for business.	1	2	1	2	9	16	8	15	36	65	4
2. I choose the buyer with good reputation.	13	24	14	25	14	25	6	11	8	15	3
3. The buyer negotiates with me fairly.	1	2	3	5	25	45	14	25	12	22	4

There are significant differences among the different actors in their natural and deliberate socialization with the buyers as shown in Table 13b and 14b. Some do not communicate with their buyers informally and some have established close relationship with the buyers. There is significant difference among the actors in the fair negotiation of buyers and high significant difference in the choosing of buyers with good reputation.



Table 13b. Test-statistic for natural socialization

STATEMENT	MEAN	CHI-SQUARE	df	SIGNIFICANCE
1. The buyer and I have been trading with the buyer for long period of time.	3.81	4.58	3	0.205
2. We constantly communicate informally.	3.32	10.12	3	0.018*
3. I have established close personal relationship with the buyer of my vegetables.	3.47	8.85	3	0.031*

*significant

Table 14b. Test-statistics for deliberate socialization

STATEMENT	MEAN	CHI-SQUARE	df	SIGNIFICANCE
1. I transact with the buyer mainly for business.	4.32	1.41	3	0.703
2. I choose the buyer with good reputation.	3.19	17.88	3	0.000**
3. The buyer negotiates with me fairly.	3.59	9.91	3	0.019*

*significant

**highly significant



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The study was conducted to identify the different chains of cabbage in the spot market and to determine the coordination mechanisms and attributes adopted by the chain actors of cabbage, specifically at La Trinidad, Benguet; Urdaneta City, Pangasinan; and Metro Manila.

There were 46 farmers under production group; 19 A-Ws and 15 F-A-Ws with a total of 34 under assembly group; 12 T-Ws, 10 wholesalers and 36 W-Rs with a total of 58 under distribution; and 55 retailers under retailing with a grand total of 193 respondents. A survey questionnaire was used to gather the needed data. The data were tabulated and analyzed using frequency, tables, percentage and test-statistics.

Most of the respondents are aged within the range of 21-30 and 31-40 years old and majority (67%) is female. Most of them are married and have attained high school and college level. Majority of the respondents do not have organizational affiliation related to vegetable trading business and most are engaged one to five years in business.

There were several different chains for cabbage identified. All of the chains started from the farmers in La Trinidad, Benguet and ended to the different consumers in La Trinidad, Benguet; Urdaneta City, Pangasinan and Metro, Manila.

In the operational resource sharing, most of the respondents do not share investments in their business operation. In strategic resource sharing, majority sometimes share their strategies to improve their operation and also same in information sharing. In the sharing of risk and reward in business transactions, most of the respondents sometimes have equal sharing of risks and rewards. The decision style is decentralized as the different actors never coordinate decision to be undertaken. The level of control of the respondents in business operation is low. Most of



the buyers have their own comprehensive selection procedure of who the sellers they wanted to transact with. However, only few actors/respondents have this mechanism in choosing the buyers. Most of the respondents communicate and socialize with their buyers mainly for business.

Conclusions

Based on the above findings, the researcher arrived at the following conclusions:

1. There are several chains of cabbage in the spot market. It always starts with the farmers and ends with the consumers.
2. There is little operation and strategic resource sharing and information sharing among the actors in the spot market chain of cabbage. There is unfair sharing of risks and benefits among the actors. The actors decide on their own in their business operation. There is low level of control of the actors in their business with the buyer. The chain actors do not select their buyers and their communication to buyers is mainly for business.

Recommendations

Based on the conclusions drawn, the following are recommended:

1. Generally, for all actors to give more attention on risk and reward sharing. For the actors to socialize more with their buyers, not just mainly for business, to gain trust and loyalty.
2. F-A-Ws to extend more support to the farmers especially on financial and other operational resource. To set the level of control on the actors who extends credits.
3. Farmers to be well informed about the market information for the improvement on their production schedule.
4. For the different group of respondents to have organizational affiliation related to vegetable trading business for assistance and business improvement. Especially for farmers to



have an organization preferably cooperative for a better production plan and strategy and to at least cope with the unpredictable demand and supply of vegetables.

5. An analysis study on the impact of organizational affiliation or cooperative to the improvement of the supply chain on the part of the farmer.



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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 Agribusiness Management majoring in Enterprise Management at Benguet State University is conducting a research entitled “COORDINATION MECHANISMS AND ATTRIBUTES BETWEEN ACTORS IN THE SPOT MARKET CHAINS FOR CABBAGE”.

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

Your honest and complete response will make the study successful.

Thank you very much.

Very truly yours,

JOVINIA S. LUCAS
Researcher

Noted:

LEOPOLDO N. TAGARINO
Adviser



APPENDIX B

Interview Schedule

This research aims to investigate the coordination mechanisms among the actors in the spot market of cabbage. All information solicited will be treated with confidentiality. Please answer the questions honestly by putting check mark [✓] in the appropriate box provided for. Thank you very much!

Respondent's Name: _____ No. _____

Respondent's Group:

1. Production Group: Farmers
2. Assembly (Collection) Group : Assembler-Wholesaler
 Financier-Assembler-Wholesaler
 Financier-Assembler-Wholesaler-Retailer
3. Distribution Group : Trucker-Wholesaler Wholesaler
 Wholesaler-Retailer
4. Retailing Group : Retailers

A. Respondent's Profile

1. Age: _____
2. Gender: _____ Male _____ Female
3. Marital status: Single Married Separated Widowed
4. Religion: Catholic Protestant Others, specify _____
5. Educational background: Elementary High School
 College Vocational
6. Number of years engage in vegetable business: _____
7. Organizational affiliation: Farmers' Association Cooperatives []
Others, specify _____

B. Who are the buyers of cabbage you produced/procured?

- Assembler-Wholesalers Financier-Assembler-Wholesalers
 Financier-Assembler-Wholesaler-Retailer
 Trucker-Wholesalers Wholesalers Wholesaler-Retailers Retailers

C. Where do you sell the cabbage produced/procured?

- La Trinidad Vegetable Trading Post Others, specify _____
 Private Trading Center in La Trinidad, specify _____
 Metro Manila, specify _____

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

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

A.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 cabbage. Strongly Disagree Strongly Agree
- A.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 plan/make strategies to improve our business operation. Strongly Disagree Strongly Agree
- A.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
- B. 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
- C. Decision Style- how the actors decide in their operation.
- C.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
- C.2. Decentralized- the buyer and the seller have control or other party have control.
1 2 3 4 5
1. I involve 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
- D. 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
- E. 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 cabbage. Strongly Disagree Strongly Agree
3. The buyer usually choose the seller that offer lower price of cabbage. 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
- F. Socialization
- F.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 cabbage. Strongly Disagree Strongly Agree
- F.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



