BIBLIOGRAPHY

CALPASE, BENIDO B. APRIL 2011. Relationship and Performance of Actors in the Spot Market Chains fur cabbage. Benguet State University, La Trinidad Benguet.

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ABSTRACT

This study was conducted to identify the significant effect of relationship and performance of chain actors in the spot market chain of cabbage as to trust, power, communication, cooperation, commitment, relationship satisfaction, quality product, flexibility, efficiency and responsiveness. Kruskal Wallis is used for the statistical analysis in-order to determined significant relationship.

The study was conducted in limited production and marketing areas such La Trinidad Trading Post, for primary markets(collection/assembly) secondary markets (for distribution) commonly called (bagsakan) in Metro Manila such Balintawak, Nepa Q, an others. The chain actor respondents were classified and segmented as producers forty six, assembly thirty four, distributor fifty eight and retailer fifty five with the total of one hundred ninety three. Majority of the respondents were high school graduate and mostly belongs to Roman Catholic.

The result presents that not all of the chain actors are satisfied with the business trading operation. However most of the respondents are satisfied with the satisfaction derived from the product quality satisfaction and income received by them.

As to the significant effect of relationship to performance of the chain actors most of them depend on the quality of cabbage produced in the market. Significant number of them build-up trust, cooperation and commitment relationship in producing/procuring the product as well as on responding to the needs of the buyers. Almost all of the chain actors were affected by the relationship satisfaction derived in their performance.

Based on the recommendations chain actors must establish or build-up satisfactory relationship in order to have satisfactory business trading and to fulfill the common goals. The government and non government organizations must assess and help the chain actors in order to improve knowledge and strengthen the relationship of the chain actors.

INTRODUCTION

Rationale

In the field of agriculture, yield of fresh vegetable production highly depend in many of informal moneylenders, limited access to capital, and natural occurrences in the environment such as (climate change, bad weather/typhoons) may affect as well.

Fresh vegetables are characterized perishable. During the distribution n and marketing, substantial losses are incurred which range from slight loss to total spoilage. Losses may occur at any point in the marketing process, from harvest to distribution of the commodity to the financial consumer. These losses are caused by physical damage during handling and distribution; this due to the low construction of the roads, psychological decay and water loss due to poor quality of packaging materials.

In the spot market; farmers are price takers where in (traders, assemblers, wholesalers, truckers) dictates the price of fresh vegetables. Grading losses in the marketing is shouldered by farmers due to perishability and spoilage of the product. In some cases farmers bring the products to the market and sell it to their suppliers, others may contact their “kailiyans” as t heir buyers, but most often the farmers sale their product to traders that offers quit high price.

Eighty five percent of the vegetables supplied in National Capital Region come from Benguet yet the farmers remain poor. Surveys and consultation with farmers show that there is a serious problem in marketing and that a greater chunk of a peso income derived from vegetable farming is shared by the traders/ key actors, putting farmers at their mercy. Other factors may due to the absence of an efficient market network coupled

with the absence of communication facilities, market assistance centers, transportation, and in adequate storage facilities and credit assistance to farmers.

REVIEW OF LITERATURE

Background of the Study

In the Philippines, losses incurred during shipping, storing and distributing of commodities are extremely high. Scientific packing and refrigeration of fresh vegetable have not been practiced widely despite of many factors which will help in the fast deterioration of fresh vegetable like insects, bacteria, fungi and excessive heat and mechanical injuries with either crush or infect fresh vegetable thereby reducing the market price considering also the transportation facilities and road conditions especially here in the CAR (Buena, 2004). Moreover relationship and performance of chain actors were highly considered as the asset in determining the responsibility in doing the business. Cabbage marketing system is composed of eight major types of participants namely (1)cabbage producers;(2) input suppliers; (3) growers; (4)traders; (5) transporters; (6) processors; (7) institutional buyers; (8) household consumers
(FRLD, 1995).

Supply Chain Management

In recent years, researchers recognized the relevance of supply chain management for the agri-food sector (Fearne, 1998; Hobs and Young, 2000; Vorst, 2000) due to the perishability of products and the need for quality controlled flows of products. This means that the original good quality products can easily deteriorate as cause by the careless actions along the supply chain.

People use different names for chains of activities and organization. When they emphasize the operations, they refer to process; when they emphasized marketing, they

call it logistic channel; when they look at the value added, they call it value chain; when they say how customer demands are satisfied and they call it demand chain. And when emphasizing the movement and will use the general term of supply chain. A supply chain consists of series of activities and organization that materials move through on their journey from the initial supplier to final customer. In reality, organization does not work from isolation, but each one acts as a supplier when it delivers the material to its customers. Every product has its own unique supply chain and these can be both long and complicated (Waters, 2003).

Supply chain means the process of planning, implementing and controlling efficiently, cost effective flow and storage of raw materials, in-process inventory, finished goods and related information from the point-of-origin to the point of final consumption for the purpose of conforming to customer requirements (Council of Logistic Management, 1986). Supply chain is a dual flow of products and information. It is a 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 the supply chain is a network of organizations from suppliers with the purpose to improve the flow of material and information. Dranbenstott (1999), discusses the increasing move towards the development of supply chains and describes supply chain structures where all stages of production, processing and distribution are bond together tightly to ensure reliable and efficient delivery of high quality products.

METHODOLOGY

Locale and Time of the Study

The research locations followed the geographic flow of fresh semi-temperate vegetables from the major source (production) to the major market assembly and collection, and the geographic distribution markets. However, the research coverage areas are limited to selected production and marketing areas. Producers group - The farmers was identified and interviewed at the trading post. The primary markets (assembly/collection) were concentrated in La Trinidad. Secondary markets (distribution) are the major vegetables trading centers (commonly called "bagsakan") in Metro Manila such as Balintawak, Marikina, and Pasig.

Respondents of the Study

Respondents of the study were the different chain actors involved in marketing of cabbage in the spot markets. There were 193 actors involve in marketing of cabbage such as 46 producers, 34 assemblers or collectors, 58 distributors and 55 retailers.

Data Gathering Procedure

For the research instrument that was used in the study was personal interview and validation with the used of interview guide questionnaires.

Data Gathered

The data gathered were the relationship and performance of chain actors in the spot market for cabbage. As to relationship trust, power, dependence, communication, cooperation, commitment and relational satisfaction; performance efficiency, flexibility,

responsiveness and quality satisfaction. Also to look for the direct significant relationship between the relationship and performance of the chain actors in the cabbage spot market.

Data Analysis

The data gathered was tabulated and analyzed using statistical tools such as descriptive method analysis, like percentage and test statistics.

The data collected were tabulated in the excel program and analyzed with the used of SPSS version 16 for the descriptive analysis, frequency count and percentage was used while in the statistical test, Kruskal-Wallis was used.

RESULTS AND DISCUSSION

Demographic Profile of the Respondents

The respondents are classified as to producers (farmers), assembly group are those that perform assembling and selling, distribution group distributes cabbage either by wholesaling or wholesaling-retailing or as trucker wholesaler and lastly the retailers are those that sell in retail basis.

Demographic profile of the respondents is presented on Table 1; according to age, gender, marital status, religion and educational background.

Age. This shows that in vegetable (cabbage) trading most of the respondents have age ranging from 21-40 years old except on the retailer group where their age ranged between 41-50 years old. Only few (5) respondents (Chain Actors) are 20 years old and below and one is 61 years old and above.

Gender. This implies that majority of male respondents work as farmers 91%, financier-assembler-wholesaler and trucker-wholesaler with 67% while majority female respondents work as retailer 84%, wholesaler-retailer 67%, and wholesaler 60% however 8.7% of female work as farmer.

Marital status. Most of respondents were married except on the distribution wherein 60% of wholesalers were single and 4% of retailers were separated and 2% widow. Marital status does not matter in engaging in vegetable business.

Religion. On religious affiliation of the respondent, Catholic constituted the largest number and only few belongs to Protestants and other religious denominations. Shows that most of the respondent (chain actors) belongs to Christian community.

Table1. Demographic profile of respondents

CHARACTERISTICS	PRODUCTION F		ASSEMBLY A-W		ASSEMBLY F-A-W		DISTRIBUTION T-W		DISTRIBUTION W		RETAILING W-R		RETAILING R	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Age														
20 and below	5	11	2	11	0	0	0	0	4	40	3	8	2	4
21-30	18	39	6	32	1	7	5	42	3	30	12	33	12	22
31-40	10	22	6	32	7	47	4	33	1	10	14	39	10	18
41-50	9	20	4	21	4	27	2	17	1	10	3	8	21	38
51-60	3	7	1	5	3	20	1	8	1	10	3	8	8	15
61 and above	1	2	0	0	0	0	0	0	0	0	1	3	2	4
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100
Gender														
Male	42	91	13	68	5	33	8	67	4	40	12	33	9	16
Female	4	9	6	32	10	67	4	33	6	60	24	67	46	84
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100
Marital Status														
Single	16	35	2	11	1	7	5	42	6	60	15	42	9	16
Married	30	65	17	89	13	87	7	58	4	40	20	56	43	78
Separated	0	0	0	0	1	7	0	0	0	0	0	0	2	4
Widow	0	0	0	0	0	0	0	0	0	0	1	3	1	2
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100
Religion														
Catholic	33	72	14	74	11	73	12	100	9	90	23	64	45	82
Protestant	8	17	3	16	3	20	0	0	1	10	9	25	6	11
Others	5	11	2	11	1	7	0	0	0	0	4	11	4	7
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100
Educational Background														
Elementary	13	28	1	5	2	13	2	17	1	10	4	11	10	18
High School	20	43	9	47	6	40	4	33	4	40	16	44	31	56
College	13	28	9	47	7	47	6	50	5	50	14	39	12	22
Vocational	0	0	0	0	0	0	0	0	0	0	2	6	2	4
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100

Educational Background. As presented on table 3, most of the respondents have reached or have graduated high school and even college for some. Just of few them finished or stepped elementary. Thus, it entails that majority of the market intermediaries in the spot market who were interviewed are literate and have enough education.

Number of Years Engaged in Vegetable Business

Table 2 indicates the number of years the different respondents are engaged in vegetable business. Among the different group of respondents, the result shows that most of the farmers are engaged in farming business from 1-20 years. It was also shown that majority of the respondents on assembly and distribution group have been doing business in 1-15 years and few of them (assembly) 21-25years and (distribution) 21-25 years and the rest. However most of the respondents on the retailing group have been engage in the vegetable business in 1-10 years.

Table 2. Number of years engaged in vegetable 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	%
Below1Yr.	0	0	1	5	0	0	0	0	1	10	0	0	2	4
1-5	17	37	9	47	4	27	4	33	6	60	32	89	17	31
6-10	6	13	5	26	2	13	3	25	3	30	4	11	9	16
11-15	6	13	3	16	7	47	4	33	0	0	0	0	5	9
16-20	9	20	0	0	0	0	0	0	0	0	0	0	11	20
21-25	2	4	1	5	2	13	1	8	0	0	0	0	2	4
26-30	2	4	0	0	0	0	0	0	0	0	0	0	8	15
31 and above	4	9	0	0	0	0	0	0	0	0	0	0	1	2
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100

Organizational Affiliations of Respondents

Represented in Table 3 are the different organizational affiliations of respondents. This indicates whether they belong to a farmers' association, cooperative, other organization or none at all.

The table indicates, that most of farmers (89%) are not a member of any organization and few of them are in cooperative and farmers' association having 2% each. In the assembly group, majority of them have not affiliated to any organization which constitute by 74% and 53% as to assembler-wholesalers and financier-assembler-wholesalers respectively. The rest of them are member of an organization such cooperative or other organization.

Majority of the distribution group are not a member of any organization. Trucker-wholesalers, have 42%, wholesalers of 70% and wholesaler-retailers of 69%. Some of the trucker-wholesalers and wholesaler-retailers are member of other organization having 33% and 8% respectively.

Retailing group are mostly not engaged in an organization and only few of them bothered to be in an organization or cooperative.

Although the result shows that most of the respondents in the different groups have not affiliated to any organization since they do not consider the benefits derived from the organization. There are still some who considered being a member of a cooperative or any other organization.

Table 3. Organizational Affiliation of respondents

	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 Association	1	2	0	0	0	0	0	0	2	20	0	0	0	0
Cooperatives	1	2	2	11	4	27	3	25	1	10	8	22	2	4
Others	3	7	3	16	3	20	4	33	0	0	3	8	5	9
None	41	89	14	74	8	53	5	42	7	70	25	69	48	87
TOTAL	46	100	19	100	15	100	12	100	10	100	36	100	55	100

Spot Market Chain for Cabbage

Figure 2 shows the different chain actors playing in the cabbage spot market. It shows whom the different market intermediaries' trade within the procurement and selling of cabbage. This therefore shows the flow of cabbage in the spot market from its point of production to the final consumer.

It was shown in the result that farmers have access to the different buyers in the spot market. Farmers (F) can sell the produced cabbage with any of the buyers in La Trinidad Trading Post (LTVTP) such as assembler-wholesalers (A-W), financier assembler wholesalers (F-A-W), trucker wholesalers (T-W), wholesalers (W) and wholesaler-retailers (W-R) and retailers (R). However some of them can access to buyers on other selling place such Urdaneta and Balintawak.

Further the result shows that there are many spot market chain for cabbage such: farmers to assembler-wholesalers, financier assembler wholesalers, trucker wholesalers, wholesalers and wholesaler-retailers and retailers in La Trinidad Trading Post, implies that chain actors can produce/ procure or sell cabbage with in La Trinidad Trading Post.

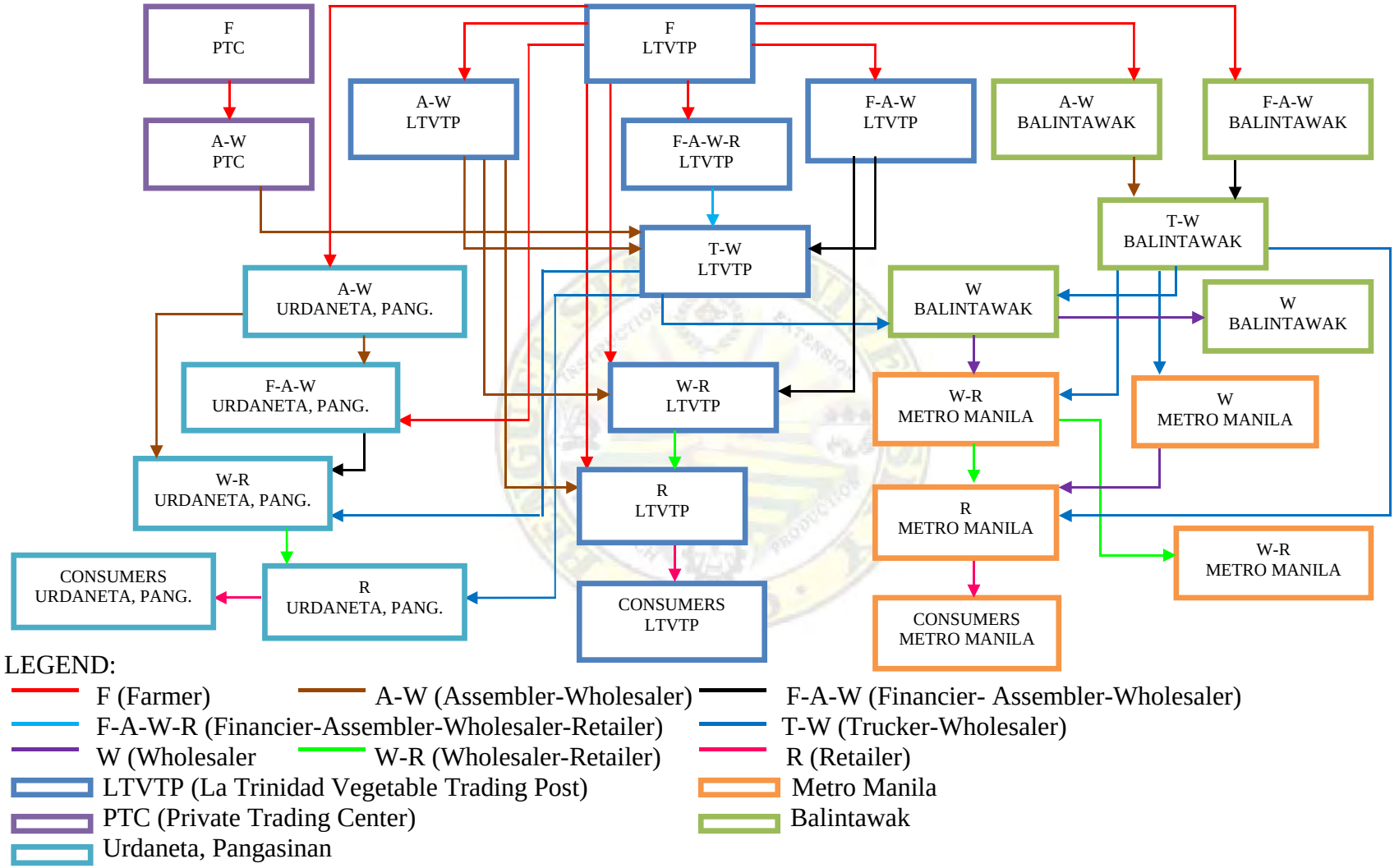

Figure 2. Spot market chain and location for cabbage

Moreover spot market chain for cabbage flows from farmers in LTVTP to A-W, F-A-W, T-R, W, WR and R in Urdaneta Trading Post, shows that through these chain actors cabbage are available to different selling place or spot market in the different places.

T-W from LTVTP is supplied either by farmers and A-W from private and non private. The procured cabbage is distributed by the T-W to W in Balintawak, W-R and R in Urdaneta market.

Financier assembler wholesalers in LTVTP sell the procured cabbage to chain actors T-W and W-R in LTVTP.

W-R in LTVTP directly buy/procure cabbage from A-W aside from farmers and the sell to retailer and end users in the same place.

Other spot market chain for cabbage follow the flow from farmers from LTVTP to assembler-wholesalers, trucker wholesalers and wholesalers in Balintawak, from Balintawak chain actors wholesaler retailer and retailer procure or buy produced cabbage that this chain actors will sale in Metro Manila.

F-A-W in Balintawak access or procure cabbage from farmers from LTVTP and sell to T-W from this T-W in Balintawak. The T-W distributes it to W in Balintawak and Metro Manila and to W-R as well.

The wholesaler-retailer in Metro Manila procures the cabbage form Balintawak wholesaler and trucker wholesaler. Wholesaler-retailer sells the procured cabbage to some wholesaler-retailer and retailers.

Relationship of Chain Actors
in the Spot Market

Relationship consists of firms that participate in organizational network and share a strategic vision centered on the objective of creating value within the network. Member firms remain independent, but trust one another and may more readily share important information.

Trust. Table 4 shows the indicators of relationships in the spot market chain.

On the average, majority of the respondents moderately agree with the different criteria of relational trust as confirmed in the findings of Schary and Skjott-Larsen, (2001) that the capability to establish trust between the partners in a collaborative supply chain becomes a crucial competitive parameter.

How ever the respondents were undecided as to confidently relying on buyer's promises, and information shared by the buyer for the reason that buyers sometimes don't fulfill what arrangement made such the volume, quantity that was being ordered price as well.

Power. The table indicates that almost all of the respondents were undecided on the criteria of relational power of chain actors that most of the time sometimes respondents have the power as to choosing of buyers, trading negotiation, and controlling market information.

Dependence. The state of relying someone or something for aid, support.

On the average, majority of the respondents were uncertain as to the criteria of relational dependence. This implies that not often respondents are dependent from buyer's suggestions, information, quality classification as well as payment term, pricing and market demand.

Table 4. Distribution of respondents according to relationship

STATEMENT	MEAN
Trust	
1. I have much confidence to rely on the buyer's promises (orders, payments, pricing).	3.42
2. I am always honest dealing with the buyers of vegetables.	4.31
3. I should not hesitate to make important decisions based on buyer's suggestions.	3.59
4. I always believe on the information shared by the buyer.	3.21
5. The buyer is fair in negotiating with me.	3.57
6. The buyer I deal with has a good reputation.	3.63
7. The buyer and I always consider the best interest in our business.	3.90
Power	
1. I am flexible to choose buyers at any time	2.78
2 I always adhere to the buyer's demand.	3.49
3. I have all the power in the trading negotiation.	3.10
4. Buyer has the best offer (price) relative to alternatives (other buyers).	3.00
5. Buyer often controls the market information (demand, price).	2.90
6. Buyer often acts opportunistically	3.26
Dependence	
1 I (seller) depend on the quality classification, quantity and payment term of vegetables by the buyer.	3.47
2. I depend much from the regular buyers of the vegetables I sold.	3.39
3. I depend on the price dictated by the buyer.	2.90
4. I always adhere to the seller's demand.	3.19
5. I depend much from the market information provided by the buyers.	2.81

Legend: 1.39-2.06 -strongly disagree 2.75-3.43 -undecided 2.07-2.74- disagree
3.44-4.12 -moderately agree 4.13-5 -strongly agree

Table 4. Continued…

STATEMENT	MEAN
Communication	
1. I can directly dictate price.	3.21
2. I usually share production and marketing (volume. quality, price) information to buyers.	3.30
3. As buyer, I use other people in sharing other information to farmers/sellers.	2.95
4. I always share information about production, procurement/marketing targets to the buyer.	3.22
5. I share the production or marketing decisions I made with the buyer.	3.05
Cooperation	
1. I work cooperatively with the buyer to improve our vegetable trading operation.	3.82
2. I usually buy good quality vegetables from suppliers and as needed by the buyer.	4.10
3. I build up buyer-seller relationships (alliances/partnership) with my colleagues.	3.82
4. I cooperate with other actors in pricing and quality determination of cabbage.	3.55
Commitment	
1. I keep the promises I make with the buyer.	4.03
2. I make extra effort to meet the buyer's demand requirement.	4.03
3. I invest large amount to produce/procure the vegetables.	3.62
4. I always continue trading with the buyer for a longer period of time.	4.12
Relational Satisfaction	
1. Trading with the preferred buyer is less risky.	3.51
2. My trading relationship with the buyer is satisfactory.	3.88
3. I'm satisfied trading with the buyer for a longer time.	3.95
4. The buyer meets my expectations in trading with them.	3.72
5. The buyer treats me fairly and equitably.	3.59
6. I am adequately rewarded trading with the buyer.	3.64
7. I always have conflict/misunderstanding with the buyer.	2.95
8. The relational trust established with the buyers is very satisfying.	3.65
9. I am happy on the business alliances with the buyers.	3.74

As supported by Andaleeb (1996) that when a channel member control resources that another channel needs, various power relations emerge that potentially enable the party controlling those resources to exert some influence or power.

Communication. Formal as well as informal sharing of meaningful and timely information between firms"

Based on the mean average, most of the respondents are doubtful as to the criteria of communication which implies that in between respondents sometimes dictates price, share information on production, marketing decisions and uses other people to communicate for them as validated by Morgan and Hunt, (1994) that frequently and timely communication is important because it assist in resolving conflicts and aligning perceptions.

Cooperation. The situation which individual works together to achieve common goals.

The mean average shows that most of the respondents moderately agree to indicators of cooperation. This proves that most of the respondents established cooperative relationship on doing the business to fulfill and improve their business trading for the fulfillment of their common goal. This confirmed the definition of Anderson and Narus, (1990) that cooperation refers to situations in which firms work together to achieve mutual goals.

Commitment. Ability to fulfill what is due e.g. promises. On the average, most of the respondents moderately agree to commitment to various undertakings like negotiations to orders, quality, payment term, and price. In support, respondents signify commitment to investment large amount of capital in order to meet requirements/demand.

Relational Satisfaction. Means extent to which the relational dimensions of the partnership meet expectation.

The mean average shows that most of the respondents moderately agree on the criteria on relational satisfaction. Both the sellers and buyers achieved relational satisfaction as trading partners. Furthermore trading with the buyer working with each other improves their business alliances and performance as well. As defined by Frazier (1983) that satisfaction as a positive effective state resulting from an appraisal of all aspects of a firms working relationship with another. Satisfaction is derived from the result of a relational satisfaction means the extent to which the relational dimensions of the partnership meet expectations.

However the respondents were not sure on the criteria that conflicts/ misunderstanding arise between them with the buyer for the reason that in vegetable trading conflict/ misunderstanding is an avoided most especially on negotiation in terms of pricing, quality classification, delivery period and payment term between the chain actors.

Performances of Chain Actors
in the Spot Market

Performance measurement involves the development of goals and their related measures, as well as the appropriate mechanisms of feedback. It must therefore reflect the operating assumptions of the organization, in terms of culture, strategy and operational processes. This requires the identification of the pressures, which the organization faces, both internal and external, and should consequently lead to a set of action plans for specific areas of organizations (Hines *et al.*, 2000).

Product quality satisfaction. Characteristic of a product or service that satisfies the customer's wants and needs. Table 5 shows performance dimensions used in the spot market.

Majority of the respondents agreed with the different criteria of performance on product quality satisfaction. This indicates that the respondents meet the expectation on the quality they buy and deliver to the buyers that satisfy the volume produce/ procured to the buyer.

However, the respondents disagree selling cabbages to buyers on credit arrangement. It shows that though the actors allow selling on credit arrangement, the buyers may not comply with the negotiated arrangement made such that buyers are delayed when paying (late payment), installment basis and sometimes no payment at all. The result confirmed the findings of Carter and Ellram (1994) that supplier involvement in product design has a positive impact on product quality.

Flexibility. Indicates the degree to which supply chain can respond to changing environment and extraordinary customer service requests.

Table 5 indicates that the respondents agreed as to the different criteria of performance flexibility except situation involving conflict with the buyers in the business transaction. Shows that respondents exert effort to fulfill or produce desired volume and quality that buyers wanted. In return buyers are flexible to buy cabbage regardless of quantity and quality produced in the market.

However conflict among the chain actors is an unavoidable during business transaction due to differences of behavior, and understanding.

Efficiency. Measures how well the resources are utilized. This includes capital, inputs for production/procurement inventory as well as net income. Table 5 presents the efficiency performance of chain actors in the spot market chain for cabbage.

The respondents agreed with the different criteria to measure efficiency in the performance of chain actors. The mean average indicates that respondents exert effort to reduce the cost of production, produce/procure desired volume with achieving income that is adequately rewarding and satisfaction with the rate of return on investment.

The finding supports Kaynak and Pagan (2003) findings that characteristics internal to the firm such as top management commitment to purchasing and supply management had a positive effect on production efficiency.

Responsiveness. Ability to respond request with a short period of time. It involves the interaction between buyers and suppliers on issues related to product, payment and information.

On the average, the respondents believed to agree their responsiveness to the demand in the market particularly on finding solutions on the complaints/demand of the buyers related to quality/quantity. However, the respondents are indecisive with the other criteria like responsiveness in terms of supplying the market with the desired quality/quantity and scheduling of deliveries to meet the time in the market and when buyers needed it. Since there are times that the chain actors cannot really meet the desired volume and quality of cabbage needed by the buyers in that certain period of time due to some aspects such insufficient availability of cabbage in terms of volume, quality and insufficient capital and poor infra structure such roads as well. This result implies that there are times the respondents are not conforming as to the other criteria .

The findings confirmed the definition of Salvador *et al*. (2001) that when buyers and suppliers interact on issues related to material flows and quality, there are significant effects in terms of speed and delivery punctuality.

Table 5. Performance of chain actors

STATEMENT	MEAN
Product quality	
1. The quality of vegetables I produce/procure/sold meets my expectation.	3.89
2. The quality of vegetables delivered meets the buyer's requirements.	3.73
3. I am satisfied with the volume I produce/procure or sold to the buyer	3.96
4. I always achieve my production/procurement/delivery targets	3.50
5 I am satisfied to fulfill the orders and deliveries of vegetables when needed	3.68
6 I am satisfied selling vegetables to buyers on credit arrangement.	2.75
7 The quality of vegetables I supplied in the market is reliable	3.95
8 The buyers are always satisfied as to variety of product, price, and quality/quantity	3.77
Flexibility	
1. I can procure the desired volume when buyers needed it.	3.59
2. I exert effort to produce the desired volume and quality when buyers demand it.	4.00
3. The buyer is flexible to buy vegetables regardless of quantity and quality	3.74
4. The buyer and seller have little conflict in the business transaction.	3.35
Efficiency	
1. I am happy to produce/procure the desired volume out of my limited resources.	3.95
2. The income I received is adequately rewarding.	3.91
3. I exert effort to reduce the cost of production/procurement.	4.11
4. I am satisfied with the rate of return to my investment.	3.87
Responsiveness	
1. I can supply the market with desired quality/quantity when needed.	3.36
2. I always schedule my deliveries to meet the time in the market.	3.29
3. I always find time to deliver vegetables when customers/market needs it.	3.37
4. I always act on the demand/complaints of buyers related to quality/quantity.	3.68

Relationship and Performance
of Chain Actors

Indicates whether there are significant relationships between chain actors as to relationship measurements to performance criteria measurements.

Trust to product quality. Table 6a shows trust as an indicator or determinant to performance criteria measurements. Trust and product quality has a significant relationship particularly on the production group that farmers have differed in terms of trust to performance since some farmers are dealing with the buyers for long period of time but others are particularly with the quality of cabbage produced. However trust is not a factor to product quality with the other actors.

Table 6a. Trust to product quality

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.331	0.126	2.475	0.013*
	Gamma	0.470	0.166	2.475	0.013*
	Spearman Correlation	0.376	0.141	2.696	0.010
	Pearson's R	0.409	0.124	2.969	0.005
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.184	0.148	1.235	0.217
	Gamma	0.277	0.221	1.235	0.217
	Spearman Correlation	0.207	0.168	1.196	0.240
	Pearson's R	0.161	0.174	0.922	0.364
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.162	0.131	1.233	0.217
	Gamma	0.220	0.176	1.233	0.217
	Spearman Correlation	0.183	0.146	1.394	0.169
	Pearson's R	0.231	0.164	1.775	0.081
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.069	0.140	0.495	0.620
	Gamma	0.096	0.195	0.495	0.620
	Spearman Correlation	0.067	0.159	0.485	0.630
	Pearson's R	-0.016	0.162	-0.113	0.910
	N of Valid Cases	55.000			

Trust to flexibility. Table 6b shows the correlation of trust to flexibility performance of chain actors.

Trust is not a determinant/indicator to flexibility of chain actors as to their functions. The fluctuating flow of supply in the spot market chain is not affected by relational trust of established between the sellers and buyers for the reason that they are uncertain to the conditions of the environment which greatly affects the flow of the supply chain.

Table 6b. Trust to flexibility

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.112	0.137	0.809	0.419
	Gamma	0.150	0.184	0.809	0.419
	Spearman Correlation	0.136	0.160	0.910	0.368
	Pearson's R	0.172	0.151	1.159	0.253
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.145	0.164	0.883	0.377
	Gamma	0.200	0.226	0.883	0.377
	Spearman Correlation	0.159	0.187	0.909	.370
	Pearson's R	0.128	0.189	0.727	.472
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.065	0.126	0.520	0.603
	Gamma	0.086	0.165	0.520	0.603
	Spearman Correlation	0.083	0.144	0.625	0.535
	Pearson's R	0.062	0.147	0.461	0.646
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	-0.050	0.116	-0.427	0.669
	Gamma	-0.065	0.153	-0.427	0.669
	Spearman Correlation	-0.060	0.139	-0.439	0.663
	Pearson's R	-0.069	0.133	-0.504	0.616
	N of Valid Cases	55.000			

Legend: significant*, highly significant**

Trust to efficiency. Table 6c shows that trust as determinant/ indicator has no significant effect to efficiency criteria of performance for actors in the spot market chain of cabbage as proven by the different methods of measurement such Kendall's tau-b and gamma. The confidence of the producers to rely on buyers' market information, orders, pricing and payments do not affect the ability of this producers to produced and procure the desired volume and quality of cabbage when needed.

Thus trust is not important indicator/determinant criteria in measuring flexibility performance of chain actors in the spot market chain.

Table 6c. Trust to efficiency

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	-0.084	0.120	-0.699	0.484
	Gamma	-0.119	0.168	-0.699	0.484
	Spearman Correlation	-0.091	0.143	-0.603	0.549[c]
	Pearson's R	-0.113	0.127	-0.757	0.453[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	-0.052	0.176	-0.294	0.769
	Gamma	-0.070	0.236	-0.294	0.769
	Spearman Correlation	-0.054	0.197	-0.305	0.762[c]
	Pearson's R	-0.086	0.173	-0.487	0.630[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.137	0.121	1.112	0.266
	Gamma	0.190	0.166	1.112	0.266
	Spearman Correlation	0.163	0.140	1.234	0.222[c]
	Pearson's R	0.260	0.139	2.016	0.049[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.124	0.114	1.082	0.279
	Gamma	0.172	0.158	1.082	0.279
	Spearman Correlation	0.153	0.133	1.128	0.264[c]
	Pearson's R	0.091	0.145	0.667	0.508[c]
	N of Valid Cases	55.000			

Trust to responsiveness. Table 6d shows that trust and responsiveness have no significant relationship.

Trusts do not affect the responsiveness of chain actors as to their functions like their availability to act on the needs of buyers. Furthermore expectation of both (seller and buyer) to comply on the promises, payments and pricing arrangement made as well as on time delivery will not influence directly their ability and capability of responding or catering on the demand or needs of the market.

Results prove (Singh and Sirdeshmukh, (2000) study that trust becomes important whenever there is a high level of performance ambiguity, and poor product. Performance will have significant adverse impact on the value derived by the buyer.

Table 6d. Trust to relational satisfaction

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	-0.025	0.129	-0.196	0.844
	Gamma	-0.035	0.177	-0.196	0.844
	Spearman Correlation	-0.019	0.155	-0.123	0.903[c]
	Pearson's R	-0.021	0.143	0.137	0.892[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	-0.023	0.161	-0.143	0.886
	Gamma	-0.033	0.232	-0.143	0.886
	Spearman Correlation	-0.025	0.182	-0.141	0.889[c]
	Pearson's R	-0.063	0.154	-0.358	0.723[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.148	0.106	1.392	0.164
	Gamma	0.197	0.140	1.392	0.164
	Spearman Correlation	0.176	0.126	1.334	0.188[c]
	Pearson's R	0.179	0.117	1.363	0.178[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	-0.084	0.118	-0.715	0.475
	Gamma	-0.111	0.155	-0.715	0.475
	Spearman Correlation	-0.101	0.140	-0.737	0.464[c]
	Pearson's R	-0.107	0.135	-0.786	0.435[c]
	N of Valid Cases	55.000			

Power to product quality. Table 7a shows the correlation of power to product quality satisfaction of chain actors in the spot market chain.

Power that binds some chain actors in vegetable trading business has no direct significant effect on their ability to provide desired quality product as expected or needed in the market.

On the other hand product quality as criteria used would not directly affect relationship power established among the chain actors. As for, whatever the outcomes on the quality of cabbage had no direct significant contributions on trading negotiation and always adhering to buyers demand.

Table 7a. Power to product quality

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	-0.071	0.132	-0.536	0.592
	Gamma	-0.098	0.183	-0.536	0.592
	Spearman Correlation	-0.072	0.155	-0.478	0.635[c]
	Pearson's R	-0.080	0.151	-0.532	0.598[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.274	0.154	1.752	0.080
	Gamma	0.389	0.214	1.752	0.080
	Spearman Correlation	0.313	0.173	1.862	0.072[c]
	Pearson's R	0.312	0.168	1.860	0.072[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.087	0.099	0.875	0.381
	Gamma	0.118	0.134	0.875	0.381
	Spearman Correlation	0.105	0.121	0.789	0.434[c]
	Pearson's R	0.103	0.114	0.774	0.442[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.102	0.128	0.802	0.423
	Gamma	0.142	0.179	0.802	0.423
	Spearman Correlation	0.111	0.150	0.816	0.418[c]
	Pearson's R	-0.020	0.164	-0.145	0.885[c]
	N of Valid Cases	55.000			

Power to flexibility. This table explain that power have no significant relationship on the flexibility of the chain actors in producing/ procuring cabbage.

Table 7b implies that influential relationship between some chain actors does not significantly affect their ability to produce and procure the desired volume when buyers needed in that period of time. In addition relationship power would not directly affect their ability to make appropriate decisions in order to cater extraordinary customer request and respond on the changing flow or fluctuating flow of cabbage supply chain in the spot market, more over flexibility of the chain actors (buyers) to buy cabbage regardless of quality and quantity was not also directly affected.

Table 7b. Power to flexibility

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	-0.018	0.126	-0.141	0.888
	Gamma	-0.023	0.165	-0.141	0.888
	Spearman Correlation	-0.014	0.154	-0.096	0.924[c]
	Pearson's R	0.008	0.147	0.051	0.960[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.064	0.150	0.424	0.671
	Gamma	0.084	0.197	0.424	0.671
	Spearman Correlation	0.073	0.177	0.413	0.682[c]
	Pearson's R	0.079	0.170	0.448	0.657[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.061	0.109	0.556	0.578
	Gamma	0.080	0.144	0.556	0.578
	Spearman Correlation	0.074	0.132	0.559	0.578[c]
	Pearson's R	0.108	0.130	0.816	0.418[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.091	0.116	0.784	0.433
	Gamma	0.119	0.152	0.784	0.433
	Spearman Correlation	0.109	0.140	0.798	0.429[c]
	Pearson's R	0.084	0.143	0.616	0.541[c]
	N of Valid Cases	55.000			

Power to efficiency. Table 7c shows the correlation between power and efficiency of chain actors in the spot market chain.

Power is not important factor or indicator to flexibility performance. Negative and positive effects of power do not directly affect the ability of chain actors to produce/ procure the desired volume/quality needed in the market. Furthermore the power of the actors to control market information and trading negotiations, does not contribute to efficiency of chain actors in using limited resources.

Thus power is not a determinant to efficiency performance of chain actors in the spot market chain.

Table 7c. Power to efficiency

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.149	0.125	1.199	0.231
	Gamma	0.195	0.162	1.199	0.231
	Spearman Correlation	0.176	0.149	1.187	0.242[c]
	Pearson's R	0.174	0.130	1.174	0.247[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.135	0.150	0.902	0.367
	Gamma	0.182	0.202	0.902	0.367
	Spearman Correlation	0.155	0.178	0.886	0.382[c]
	Pearson's R	0.132	0.156	0.754	0.456[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.072	0.108	0.666	0.505
	Gamma	0.100	0.148	0.666	0.505
	Spearman Correlation	0.074	0.130	0.556	0.580[c]
	Pearson's R	0.113	0.112	0.854	0.397[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.070	0.108	0.650	0.516
	Gamma	0.095	0.146	0.650	0.516
	Spearman Correlation	0.090	0.132	0.655	0.515[c]
	Pearson's R	0.077	0.133	0.561	0.577[c]
	N of Valid Cases	55.000			

Power to responsiveness. Table 7d presents that power and trust has no significant relationship.

Power never influences the chain actors' responsiveness on controlling the market in terms of pricing, quality and quantity classification and market information. In addition power do not significantly affect the way chain actors cater the needs of the buyers such providing quality, quantity desired and on time delivery as well as to act on buyers complains/demand regarding on the business transaction.

Thus power as criteria is not important determinant to responsiveness of chain actors in the spot market chain.

Table 7d. Power and responsiveness

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.196	0.138	1.410	0.158
	Gamma	0.254	0.178	1.410	0.158
	Spearman Correlation	0.219	0.161	1.488	0.144[c]
	Pearson's R	0.246	0.155	1.684	0.099[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.123	0.175	0.701	0.483
	Gamma	0.168	0.238	0.701	0.483
	Spearman Correlation	0.134	0.196	0.762	0.451[c]
	Pearson's R	0.202	0.200	1.168	0.251[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.031	0.120	0.261	0.794
	Gamma	0.040	0.154	0.261	0.794
	Spearman Correlation	0.026	0.143	0.193	0.848[c]
	Pearson's R	-0.023	0.143	-0.174	0.863[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.103	0.114	0.907	0.364
	Gamma	0.134	0.148	0.907	0.364
	Spearman Correlation	0.122	0.139	0.895	0.375[c]
	Pearson's R	0.107	0.139	0.785	0.436[c]
	N of Valid Cases	55.000			

Dependence to product quality. Table 8a presents the relationship of dependence to product quality satisfaction of chain actors in the spot market chain.

The table shows that dependence relationship and performance of actors have direct significant relationship. Dependence is a significant indicator to product quality satisfaction observed in production, distribution and retailing group. The buyers are dependent on the quality and quantity produced in the market except assembly groups where they have no pakialam.

Thus dependence is an important determinant to product quality satisfaction of chain actors in the spot market chain.

Table 8a. Dependence and product quality

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.285	0.126	2.189	0.029*
	Gamma	0.412	0.172	2.189	0.029*
	Spearman Correlation	0.319	0.140	2.231	0.031[c]
	Pearson's R	0.299	0.131	2.076	0.044[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.264	0.143	1.807	0.071
	Gamma	0.386	0.199	1.807	0.071
	Spearman Correlation	0.299	0.161	1.774	0.086[c]
	Pearson's R	0.307	0.152	1.825	0.077[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.265	0.091	2.895	0.004**
	Gamma	0.364	0.122	2.895	0.004**
	Spearman Correlation	0.319	0.109	2.52	0.015[c]
	Pearson's R	0.285	0.095	2.223	0.030[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.243	0.118	2.049	0.040*
	Gamma	0.333	0.159	2.049	0.040*
	Spearman Correlation	0.279	0.136	2.113	0.039[c]
	Pearson's R	0.293	0.147	2.230	0.030[c]
	N of Valid Cases	55.000			

Dependence to flexibility. Table 8b presents the correlation of dependence to flexibility performance of chain actors in the spot market chain.

Dependence as indicator is important factor in flexibility criteria on the performance of chain actors particularly in the production group. Farmers are flexible to meet or fulfill the buyer's demand, flexible to find buyers that are fair in negotiating with them in terms of price, quantity and mode of payment whether cash, installment or credit.

However on the assembly, distribution and retailing dependence is not important indicators to flexibility. Where chain actors on this group do not really addressed the expected needs of the buyers.

Table 8b. Dependence and flexibility

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.380	0.116	3.122	0.002**
	Gamma	0.515	0.149	3.122	0.002**
	Spearman Correlation	0.445	0.132	3.209	0.002[c]
	Pearson's R	0.046	0.115	3.299	0.002[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.187	0.144	1.288	0.198
	Gamma	0.252	0.191	1.288	0.198
	Spearman Correlation	0.222	0.169	1.288	0.207[c]
	Pearson's R	0.234	0.158	1.359	0.184[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.204	0.108	1.885	0.059
	Gamma	0.265	0.137	1.885	0. 059
	Spearman Correlation	0.248	0.128	1.915	0.061[c]
	Pearson's R	0.227	0.118	1.746	0.086[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.180	0.103	1.747	0.081
	Gamma	0.230	0.132	1.747	0.081
	Spearman Correlation	0.222	0.128	1.654	0.104[c]
	Pearson's R	0.185	0.124	1.373	0.176[c]
	N of Valid Cases	55.000			

Dependence to efficiency. Table 8c shows the relationship between dependence and efficiency as indicator of relationship and performance for chain actors in the spot market chain.

Dependence and efficiency has no direct relationship. Relationship dependence of chain actors in their relationship does not directly affect their efficiency on how they utilized the limited resources which includes production/procurement cost, income and return of investment as well.

Thus dependence as determinant/ indicator is not important to efficiency performance of chain actors in the spot market chain.

Table 8c. Dependence to efficiency

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.179	0.125	1.427	0.154
	Gamma	0.249	0.172	1.427	0.154
	Spearman Correlation	0.212	0.145	1.441	0.157[c]
	Pearson's R	0.189	0.145	1.279	0.208[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.149	0.187	0.797	0.425
	Gamma	0.195	0.246	0.797	0.425
	Spearman Correlation	0.163	0.209	0.933	0.358[c]
	Pearson's R	0.030	0.224	0.168	0.867[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.114	0.118	0.964	0.335
	Gamma	0.158	0.163	0.964	0.335
	Spearman Correlation	0.137	0.137	1.037	0.304[c]
	Pearson's R	0.146	0.129	1.105	0.274[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.151	0.113	1.342	0.180
	Gamma	0.202	0.150	1.342	0.180
	Spearman Correlation	0.181	0.133	1.342	0.185[c]
	Pearson's R	0.155	0.151	1.140	0.259[c]
	N of Valid Cases	55.000			

Dependence to responsiveness. Table 8d shows the significant relationship of dependence as indicator to responsiveness criteria used.

Dependence as indicator used is important to responsiveness performance of chain actors as observed in production, assembly and retailing group. The responsiveness of the chain actors to buyers needs in terms of quality/quantity depend on what is available in the market except in distribution group that they can source out from other producers in the market.

Thus dependence is important determinant/indicators to responsiveness of chain actors in the spot market chain.

Table 8d. Dependence to responsiveness

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.371	0.106	3.306	0.001**
	Gamma	0.513	0.135	3.306	0.001**
	Spearman Correlation	0.433	0.120	3.191	0.003[c]
	Pearson's R	0.446	0.108	3.308	0.002[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.374	0.150	2.472	0.013*
	Gamma	0.507	0.194	2.472	0.013*
	Spearman Correlation	0.425	0.166	2.653	0.012[c]
	Pearson's R	0.408	0.140	2.530	0.017[c]
	N of Valid Cases	34.000	34.000		
Distribution	Kendall's tau-b	0.184	0.110	1.662	0.097
	Gamma	0.242	0.143	1.662	0.097
	Spearman Correlation	0.218	0.130	1.675	0.099[c]
	Pearson's R	0.226	0.122	1.739	0.088[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.299	0.108	2.730	0.006**
	Gamma	0.378	0.132	2.730	0.006**
	Spearman Correlation	0.356	0.126	2.770	0.008[c]
	Pearson's R	0.378	0.124	2.970	0.004[c]
	N of Valid Cases	55.000			

Communication to product quality. Table 9a presents the significant relationship between communication and product quality satisfaction.

Communication is important indicator to attain product quality satisfaction. When right information is shared via formal or informal ways such using text to communicate regarding on the quality, quantity, and price needed in the market chain actors would be able to know how much to produced, what time of delivery and how much is the price in the market.

Thus communication is an important determinant to product quality satisfaction in the spot market chain.

Table 9a. Communication to product quality

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	-0.035	0.147	-0.239	0.811
	Gamma	-0.052	0.218	-0.239	0.811
	Spearman Correlation	-0.039	0.166	-0.259	0.797[c]
	Pearson's R	-0.023	0.173	-0.155	0.878[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.244	0.135	1.744	0.081
	Gamma	0.372	0.196	1.744	0.081
	Spearman Correlation	0.277	0.151	1.632	0.113[c]
	Pearson's R	0.270	0.141	1.584	0.123[c]
	N of Valid Cases	34.000	34.000		
Distribution	Kendall's tau-b	0.349	0.106	3.214	0.001**
	Gamma	0.478	0.138	3.214	0.001**
	Spearman Correlation	0.394	0.120	3.210	0.002[c]
	Pearson's R	0.427	0.127	3.538	0.001[c]
	N of Valid Cases	58.000	58.000		
Retailing	Kendall's tau-b	0.349	0.106	3.214	0.907
	Gamma	0.244	0.135	1.744	0.907
	Spearman Correlation	0.372	0.196	1.744	0.944[c]
	Pearson's R	0.277	0.151	1.632	0.895[c]
	N of Valid Cases	55.000			

Communication to flexibility. Table 9b shows the significant relationship between communication and flexibility as indicator used.

Communication and flexibility really affects each other since through communication the actors can readily change their strategy on marketing the product in compasses to the changes such on price, quantity and quality of cabbage in order to cater into the needs of the buyers. As defined by (Anderson and Narus, 1990:40) that Communication is the formal as well as informal sharing of meaningful and timely information between firms.

Table 9b. Communication to flexibility

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	-0.135	0.138	0.980	0.327
	Gamma	-0.191	0.192	0.980	0.327
	Spearman Correlation	-0.154	0.156	1.036	0.306[c]
	Pearson's R	-0.164	0.160	1.103	0.276[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.212	0.146	1.437	0.151
	Gamma	0.307	0.206	1.437	0.151
	Spearman Correlation	0.243	0.166	1.416	0.166[c]
	Pearson's R	0.254	0.162	1.484	0.148[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.356	0.086	4.080	0.000**
	Gamma	0.471	0.107	4.080	0.000**
	Spearman Correlation	0.426	0.102	3.527	0.001[c]
	Pearson's R	0.419	0.189	3.454	0.001[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.218	0.107	2.045	0.041*
	Gamma	0.286	0.140	2.045	0.041*
	Spearman Correlation	0.363	0.131	1.989	0.052[c]
	Pearson's R	0.220	0.122	1.645	0.106[c]
	N of Valid Cases	55.000			

Communication to efficiency. Table 9c shows that communication has no significant relationship with efficiency criteria used for relationship and performance.

Relationship communication of respondents such sharing information about the market, price information, and quality/quantity demanded by the buyers have no direct influence on their ability to utilize limited resources such production cost or capital, inventory, income and return on investment.

Thus communication is not important indicator to efficiency criteria used for the chain actors in the spot market chain.

Table 9c. Communication to efficiency

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	-0.172	0.126	-1.367	0.172
	Gamma	-0.241	0.173	-1.367	0.172
	Spearman Correlation	-0.196	0.145	-1.328	0.191[c]
	Pearson's R	-0.186	0.148	-1.259	0.215[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	-0.056	0.149	-0.374	0.709
	Gamma	-0.081	0.217	-0.374	0.709
	Spearman Correlation	-0.067	0.172	-0.377	0.708[c]
	Pearson's R	-0.019	0.152	-0.109	0.914[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.196	0.107	1.831	0.067
	Gamma	0.278	0.148	1.831	0.067
	Spearman Correlation	0.229	0.125	1.763	0.083[c]
	Pearson's R	0.216	0.123	1.652	0.104[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.052	0.117	0.443	0.658
	Gamma	0.072	0.163	0.443	0.658
	Spearman Correlation	0.056	0.139	0.405	0.687[c]
	Pearson's R	0.024	0.125	0.173	0.863[c]
	N of Valid Cases	55.000			

Communication to responsiveness. Table 9d presents the significant relationship between communication and responsiveness of chain actors in the spot market chain.

Communication is an important determinant or indicator to responsiveness of chain actors in the spot market chain. Thus communication helps on solving problem or misunderstanding that arises between the chain actors. Through communication conflicts can be minimized and easily access on information's in the market regarding on quality quantity needed, appropriate schedule of time for delivery to the buyers and price as well.

Table 9d. Communication to responsiveness

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.269	0.124	2.068	0.039*
	Gamma	0.377	0.165	2.068	0.039*
	Spearman Correlation	0.309	0.141	2.155	0.037[c]
	Pearson's R	0.421	0.134	3.076	0.004[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.347	0.148	2.242	0.025*
	Gamma	0.508	0.200	2.242	0.025*
	Spearman Correlation	0.386	0.164	2.364	0.024[c]
	Pearson's R	0.425	0.141	2.659	0.012[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.117	0.107	1.085	0.278
	Gamma	0.154	0.141	1.085	0.278
	Spearman Correlation	0.144	0.130	1.090	0.281[c]
	Pearson's R	0.149	0.124	1.129	0.264[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.273	0.103	2.643	0.008**
	Gamma	0.345	0.127	2.643	0.008**
	Spearman Correlation	0.321	0.124	2.465	0.017[c]
	Pearson's R	0.315	0.116	2.419	0.019[c]
	N of Valid Cases	55.000			

Cooperation to product quality. Table 10a shows the direct relationship between cooperation and product quality satisfaction in the spot market chain.

Significant relationship between cooperation and product quality satisfaction particularly distribution and retailing group which entails that chain actors work together that renounce to the production of quality, and quantity product. Such producing expected quality/quantity product needed in the market maintain high relationship cooperation with the respondents. However cooperation is not a factor to product quality satisfaction in the production and assembly group.

Table 10a. Cooperation to product quality

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.193	0.117	1.600	0.110
	Gamma	0.292	0.172	1.600	0.110
	Spearman Correlation	0.224	0.135	1.526	0.134[c]
	Pearson's R	0.227	0.127	1.548	0.129[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.202	0.162	1.204	0.229
	Gamma	0.310	0.240	1.204	0.229
	Spearman Correlation	0.228	0.178	1.325	0.195[c]
	Pearson's R	0.334	0.166	2.003	0.054[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.341	0.096	3.450	0.001**
	Gamma	0.475	0.125	3.450	0.001**
	Spearman Correlation	0.395	0.110	3.218	0.002[c]
	Pearson's R	0.408	0.096	3.346	0.001[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.245	0.116	2.137	0.033*
	Gamma	0.338	0.159	2.137	0.033*
	Spearman Correlation	0.283	0.133	2.152	0.036[c]
	Pearson's R	0.183	0.146	1.353	0.182[c]
	N of Valid Cases	55.000			

Cooperation to flexibility. Table 10b presents highly significant relationship between cooperation and flexibility as criteria used for relationship and performance of chain actors in the spot market chain.

Highly significant at (.000) and (.001) in the relationship of cooperation and flexibility of actors particularly production, distribution and retailing group. Chain actors differs in terms of flexibility since some of them exert effort to produce what is needed, and chain actors particularly buyers differ on desired quality/ quantity classification.

However in the assembly group cooperation is not an important factor to flexibility criteria.

Table 10b. Cooperation and flexibility

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.268	0.100	2.607	0.268
	Gamma	0.380	0.137	2.607	0.380
	Spearman Correlation	0.315	0.120	2.205	0.315
	Pearson's R	0.307	0.102	2.140	0.307
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.253	0.140	1.825	0.253
	Gamma	0.353	0.190	1.825	0.353
	Spearman Correlation	0.286	0.161	1.690	0.286
	Pearson's R	0.259	0.161	1.516	0.259
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.310	0.098	3.233	0.001**
	Gamma	0.408	0.126	3.233	0.001**
	Spearman Correlation	0.373	0.117	3.010	0.004[c]
	Pearson's R	0.315	0.126	2.480	0.016[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.359	0.104	3.481	0.000**
	Gamma	0.453	0.127	3.481	0.000**
	Spearman Correlation	0.436	0.118	3.525	0.001[c]
	Pearson's R	0.401	0.115	3.190	0.002[c]
	N of Valid Cases	55.000			

Cooperation to efficiency. Table 10c shows that cooperation and product efficiency has no significant relationship.

Implies that the chain actors used or utilize the resources individually in order to produce quality/quantity cabbaged demanded in the market do not directly affect developed relationship of the chain actors.

Thus cooperation is not a determinant or indicator to efficiency performance of the chain actors in the spot market chain.

Table 10c. Cooperation to efficiency

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.069	0.130	0.530	0.596
	Gamma	0.097	0.182	0.530	0.596
	Spearman Correlation	0.083	0.150	0.554	0.582[c]
	Pearson's R	0.058	0.165	0.382	0.704[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.184	0.148	1.246	0.213
	Gamma	0.272	0.215	1.246	0.213
	Spearman Correlation	0.208	0.167	1.201	0.239[c]
	Pearson's R	0.150	0.146	0.856	0.398[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.120	0.108	1.119	0.263
	Gamma	0.172	0.154	1.119	0.263
	Spearman Correlation	0.145	0.126	1.098	0.277[c]
	Pearson's R	0.044	0.120	0.327	0.745[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.125	0.115	1.091	0.275
	Gamma	0.168	0.154	1.091	0.275
	Spearman Correlation	0.163	0.137	1.205	0.234[c]
	Pearson's R	0.073	0.127	0.533	0.596[c]
	N of Valid Cases	55.000			

Cooperation to responsiveness. Table 10d presents highly significant and significant relationship of cooperation and responsiveness of chain actors particularly assembly, distribution and retailing group.

This implies that chain actors in this group work and share information in order to improve their business operation. But some do not share true information regarding on the production and marketing strategy and delivery period with the buyer and supplier they deal with. However on the part of production group cooperation is not an important indicator to responsiveness since farmers depend on what is available to produce.

Table 10d. Cooperation to responsiveness

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	-0.012	0.122	-0.101	0.920
	Gamma	-0.018	0.176	-0.101	0.920
	Spearman Correlation	-0.014	0.144	-0.090	0.928[c]
	Pearson's R	0.015	0.122	0.100	0.920[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.315	0.130	2.365	0.018*
	Gamma	0.474	0.183	2.365	0.018*
	Spearman Correlation	0.355	0.146	2.150	0.039[c]
	Pearson's R	0.316	0.123	1.884	0.069[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.263	0.104	2.546	0.011*
	Gamma	0.353	0.135	2.546	0.011*
	Spearman Correlation	0.308	0.122	2.423	0.019[c]
	Pearson's R	0.267	0.104	2.071	0.043[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.374	0.112	3.341	0.001**
	Gamma	0.471	0.136	3.341	0.001**
	Spearman Correlation	0.439	0.127	3.558	0.001[c]
	Pearson's R	0.429	0.121	3.459	0.001[c]
	N of Valid Cases	55.000			

Commitment to product quality. Table 11a presents the significant relationship between commitment and product quality satisfaction on the distribution and retailing group.

This implies that the chain actors on this group fulfill the promises made in order to meet buyers demand or requirements and to continue trading with the buyer for a long period of time, considering the good interest for the business. Producing the desired quality product adds to high level of relational commitment between the chain actors that build up stronger relationship. However on the production and assembly group commitment is not an important determinant to product quality.

Table 11a. Commitment to product quality

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.204	0.119	1.676	0.094
	Gamma	0.306	0.173	1.676	0.094
	Spearman Correlation	0.237	0.137	1.619	0.113[c]
	Pearson's R	0.222	0.118	1.507	0.139[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.068	0.165	0.410	0.682
	Gamma	0.107	0.257	0.410	0.682
	Spearman Correlation	0.079	0.184	0.446	0.658[c]
	Pearson's R	0.115	0.172	0.652	0.519[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.368	0.115	3.166	0.002**
	Gamma	0.529	0.156	3.166	0.002**
	Spearman Correlation	0.404	0.126	3.301	0.002[c]
	Pearson's R	0.408	0.134	3.345	0.001[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.315	0.116	2.746	0.006**
	Gamma	0.444	0.161	2.746	0.006**
	Spearman Correlation	0.358	0.131	2.789	0.007[c]
	Pearson's R	0.234	0.149	1.749	0.086[c]
	N of Valid Cases	55.000			

Commitment to flexibility. Table 11b presents highly significant and significant relationship between commitment and flexibility performance of chain actors.

This table entails that on the production, distribution and retailing group these chain actors fulfill the promised made in order to meet the buyers extra ordinary demand or needs with in that period of time. However on the assembly group commitment is not an indicator to flexibility since they fulfill their self interest or assemblers do not provide what is really needed by the buyers.

Thus commitment is a determinant factor to flexibility particularly on production, distribution and retailing group of chain actors in the spot market chain.

Table 11b. Commitment and flexibility

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.232	0.117	1.974	0.048*
	Gamma	0.323	0.160	1.974	0.048*
	Spearman Correlation	0.279	0.138	1.930	0.060[c]
	Pearson's R	0.251	0.115	1.719	0.093[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.184	0.160	1.135	0.256
	Gamma	0.267	0.227	1.135	0.256
	Spearman Correlation	0.196	0.178	1.133	0.266[c]
	Pearson's R	0.233	0.175	1.353	0.186[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.353	0.106	3.350	0.001**
	Gamma	0.493	0.139	3.350	0.001**
	Spearman Correlation	0.401	0.119	3.274	0.002[c]
	Pearson's R	0.335	0.110	2.663	0.010[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.336	0.113	2.958	0.003**
	Gamma	0.438	0.140	2.958	0.003**
	Spearman Correlation	0.387	0.127	3.058	0.003[c]
	Pearson's R	0.378	0.128	2.976	0.004[c]
	N of Valid Cases	55.000			

Commitment to efficiency. Table 11c shows that commitment and efficiency has no significant relationship.

Commitments as indicator do not affect the efficiency of the chain actors as to utilize resources. Thus commitment is not a determinant to efficiency performance of chain actors in the spot market chain.

As defined by Bowman, (1997) that one of the key factors in the development of successful supply chains' (SC) partnerships/alliances is the development of successful relationships between partners in the supply chain.

Table 11c. Commitment to efficiency

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.192	0.134	1.438	0.150
	Gamma	0.261	0.180	1.438	0.150
	Spearman Correlation	0.218	0.152	1.484	0.145[c]
	Pearson's R	0.142	0.154	0.949	0.348[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	-0.182	0.179	-1.016	0.310
	Gamma	-0.260	0.254	-1.016	0.310
	Spearman Correlation	-0.194	0.194	-1.119	0.271[c]
	Pearson's R	-0.152	0.212	-0.870	0.391[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.067	0.129	0.516	0.606
	Gamma	0.102	0.196	0.516	0.606
	Spearman Correlation	0.069	0.141	0.520	0.605[c]
	Pearson's R	0.094	0.153	0.708	0.482[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.203	0.124	1.637	0.102
	Gamma	0.282	0.168	1.637	0.102
	Spearman Correlation	0.227	0.141	1.695	0.096[c]
	Pearson's R	0.185	0.149	1.370	0.177[c]
	N of Valid Cases	55.000			

Commitment to responsiveness. Table 11b shows highly significant relationship between commitment relationship and responsiveness performance of chain actors.

Commitment is determinant to responsiveness only in the production and retailing group. Farmers and retailers fulfill their commitment or promise to the buyers as to trading with them in a long period of time and making the produce always available in the market with desired quality and quantity as needed. However on assembly and distribution group commitment is not an important indicator to responsiveness for the reason that they can classify the quality as wanted by them for self interest.

Table 11d. Commitment to responsiveness

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.383	0.109	3.534	0.000**
	Gamma	0.519	0.148	3.534	0.000**
	Spearman Correlation	0.459	0.125	3.430	0.001[c]
	Pearson's R	0.367	0.117	2.615	0.012[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.128	0.150	0.849	0.396
	Gamma	0.198	0.229	0.849	0.396
	Spearman Correlation	0.143	0.170	0.819	0.419[c]
	Pearson's R	0.140	0.139	0.802	0.429[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.180	0.109	1.659	0.097
	Gamma	0.262	0.156	1.659	0.097
	Spearman Correlation	0.208	0.126	1.594	0.117[c]
	Pearson's R	0.198	0.109	1.513	0.136[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.394	0.108	3.542	0.000**
	Gamma	0.518	0.133	3.542	0.000**
	Spearman Correlation	0.447	0.122	3.636	0.001[c]
	Pearson's R	0.465	0.126	3.821	0.000[c]
	N of Valid Cases	55.000			

Relational satisfaction to product quality. Table 12a present the correlation of relational satisfaction and product quality satisfaction.

Highly significant relationship between relational satisfaction and product quality satisfaction particularly on the production and retailing group. Proves that the chain actors on this group have satisfactory trading relationships which fulfill their expectation regarding on the quality of the product. However relational satisfaction is not a factor to product quality satisfaction to the assembly and distribution group.

Thus relational satisfaction is only determinant/indicator to production and retailing group.

Table 12a. Relational satisfaction to product quality

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.380	0.111	3.235	0.001**
	Gamma	0.529	0.141	3.235	0.001**
	Spearman Correlation	0.435	0.121	3.207	0.002[c]
	Pearson's R	0.421	0.123	3.079	0.004[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	-0.165	0.153	-1.083	0.279
	Gamma	-0.231	0.214	-1.083	0.279
	Spearman Correlation	-0.197	0.180	-1.135	0.265[c]
	Pearson's R	-0.179	0.168	-1.030	0.311[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.234	0.122	1.893	0.058
	Gamma	0.318	0.163	1.893	0.058
	Spearman Correlation	0.263	0.138	2.041	0.046[c]
	Pearson's R	0.313	0.147	2.468	0.017[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.381	0.110	3.383	0.001**
	Gamma	0.519	0.143	3.383	0.001**
	Spearman Correlation	0.431	0.123	3.476	0.001[c]
	Pearson's R	0.435	0.134	3.517	0.001[c]
	N of Valid Cases	55.000			

Relational satisfaction to flexibility. Table 12b present highly significant and significant relationship between relational satisfaction and flexibility.

This implies that on the production and distribution group of chain actors relational satisfaction is an important determinant to flexibility since they continue to trade with the buyer for a long period producing/procuring the desired quality of cabbage needed in the market in that certain period of time. However the assembly and retailing group relational satisfaction is not important factor to flexibility as to their function.

Thus relational satisfaction is an important determinant to flexibility only on the production and distribution group.

Table 12b. Relational satisfaction to flexibility.

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.509	0.085	5.356	0.000**
	Gamma	0.666	0.097	5.356	0.000**
	Spearman Correlation	0.590	0.095	4.842	0.000[c]
	Pearson's R	0.595	0.082	4.910	0.000[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	-0.178	0.171	-1.0432	0.297
	Gamma	-0.237	0.226	-1.043	0.297
	Spearman Correlation	-0.190	0.194	-1.097	0.281[c]
	Pearson's R	-0.194	0.195	-1.119	0.272[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.255	0.113	2.260	0.024*
	Gamma	0.338	0.148	2.260	0.024*
	Spearman Correlation	0.296	0.131	2.231	0.024[c]
	Pearson's R	0.221	0.137	1.694	0.096[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.175	0.111	1.582	0.114
	Gamma	0.227	0.142	1.582	0.114
	Spearman Correlation	0.214	0.132	1.595	0.117[c]
	Pearson's R	0.186	0.130	1.376	0.174[c]
	N of Valid Cases	55.000			

Relational satisfaction to efficiency. Table 12c presents the correlation of relational satisfaction and efficiency that is applicable only to retailing group.

Proves that retailers are satisfied with the relationship developed between them on the buyer. Retailers utilized the limited resources to address the buyers demand or needs in order to derive satisfactory income that satisfies the rate of return to their investment.

But on the other hand production, distributors and assembly groups have no direct relationship. As the chain actors on this group utilized the limited resources it does not directly affect the relationship satisfaction derived.

Table 12c. Relational satisfaction to efficiency

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	-0.037	0.137	-0.267	0.789
	Gamma	-0.050	0.186	-0.267	0.789
	Spearman Correlation	-0.028	0.160	-0.189	0.851[c]
	Pearson's R	-0.026	0.156	-0.172	0.864[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	-0.085	0.167	-0.505	0.613
	Gamma	-0.116	0.228	-0.505	0.613
	Spearman Correlation	-0.096	0.189	-0.544	0.590[c]
	Pearson's R	-0.123	0.181	-0.702	0.488[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.184	0.111	1.668	0.095
	Gamma	0.261	0.155	1.668	0.095
	Spearman Correlation	0.216	0.127	1.653	0.104[c]
	Pearson's R	0.155	0.134	1.173	0.246[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.384	0.111	3.411	0.001**
	Gamma	0.505	0.141	3.411	0.001**
	Spearman Correlation	0.434	0.126	3.506	0.001[c]
	Pearson's R	0.428	0.123	3.446	0.001[c]
	N of Valid Cases	55.000			

Relational satisfaction to responsiveness. Table 12d presents the significant relationship between relational satisfaction to responsiveness.

Chain actors are satisfied with the trading operation they have established between them. Chain actors find ways to produce the needed demand by the buyers in the market as to quality, quantity and time of delivery. Moreover as the respondent respond on the needs of the buyer on time with the wanted output high relational satisfaction arise. But in contrast if respondents were not satisfied with the respond they receive trading with the supplier the respondent (buyer) find ways to make reasons not to procure from that supplier thus the respondents were not satisfied with the relationship established between them.

Table 12d. Relational satisfaction to responsiveness.

RESPONDENT GROUP	SYMMETRIC MEASURES	VALUE	ASYMP. STD. ERROR[a]	APPROX. T[b]	APPROX. SIG.
Production	Kendall's tau-b	0.330	0.109	2.936	0.003**
	Gamma	0.448	0.141	2.936	0.003**
	Spearman Correlation	0.387	0.127	2.780	0.008[c]
	Pearson's R	0.389	0.115	2.805	0.007[c]
	N of Valid Cases	46.000			
Assembly	Kendall's tau-b	0.098	0.146	0.671	0.502
	Gamma	0.138	0.205	0.671	0.502
	Spearman Correlation	0.108	0.173	0.616	0.542[c]
	Pearson's R	0.047	0.149	0.267	0.791[c]
	N of Valid Cases	34.000			
Distribution	Kendall's tau-b	0.280	0.114	2.431	0.015*
	Gamma	0.367	0.146	2.431	0.015*
	Spearman Correlation	0.321	0.131	2.539	0.014[c]
	Pearson's R	0.330	0.133	2.616	0.011[c]
	N of Valid Cases	58.000			
Retailing	Kendall's tau-b	0.254	0.104	2.400	0.016*
	Gamma	0.323	0.130	2.400	0.016*
	Spearman Correlation	0.307	0.123	2.351	0.022[c]
	Pearson's R	0.333	0.119	2.570	0.013[c]
	N of Valid Cases	55.000			

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

As to their gender majority of the chain actors (farmers and trucker-wholesaler are male and there are more female on the assembler-wholesaler; financier-assembler wholesaler; wholesaler, wholesaler-retailer and retailer). On the respondents' marital status, majority of them are married although a significant number are single.

The respondents on this endeavor are mostly young aging from 20-40 years old. Only few (5) chain actors are of 20 years old and below. The respondents on cabbage supply chain catholic constituted the largest number followed by the Protestants. On the educational background most of them graduated high school level such (43) farmer's, (44) wholesaler-retailer and (56) retailers. However, a significant number of them have reached college level and only few had reached elementary and vocational levels. Based on the result of the study respondents differ with the year they engaged in vegetable business. A large number of them are not engaged in organizations such cooperative, farmers association and others.

The study revealed that on the mean average in the relationship criteria used proves that majority of the respondents were satisfied with the established relationship as to cooperation, commitment and relational satisfaction and trust particularly on trading with the buyer honestly considering the best interest of both of them seller/ buyer.. However the chain actors are indecisive as to criteria power and dependence for the reason that they sometimes share information about what is desired in the market and

they depend sometimes on the available quality/quantity in the spot market and they are undecided to confidently rely on buyers promised as well.

Further the study presents that chain actors believe to agree as to the different criteria used in measuring performance such as product quality satisfaction, flexibility, efficiency and responsiveness. Chain actors provide the desired quality/ quantity as needed in that certain period of time in order to cater to the needs of the buyer. Moreover buyers are flexible to buy cabbage regardless of quality and quantity even though chain actors differ on classifying product (cabbage) as to quality, payment term and pricing strategy. The common problems encountered by the chain actors were poor quality, late payment, unpaid credits, fluctuating flow of cabbage, and lack of appropriate facilities.

Correlation between relationship and performance of chain actors as criteria used findings revealed that:

Relationship of trust to product quality satisfaction, flexibility, efficiency, and responsiveness shows that only on the production group trust is a determinant to product quality satisfaction. For the other criteria such flexibility, efficiency and responsiveness, trust is not a determinant/ indicator as to the functions of the chain actors.

Correlation of power to product quality satisfaction, flexibility, efficiency and responsiveness presents that power is not an important factor to this criteria as used.

Relationship dependence to product quality satisfaction, flexibility, efficiency, and responsiveness criteria shows a significant relationship between dependence to product quality satisfaction for production, distribution and retailing group, flexibility for production group, and responsiveness for group production, assembly and retailing group except to efficiency for all the chain actor groups.

Relationship communication to product quality satisfaction, flexibility, efficiency, and responsiveness presents that communication is highly significant indicator to product quality satisfaction and flexibility performance on distribution group and distribution and retailing group respectively and communication is significant to responsiveness particularly on production, assembly and retailing group. However communication is not an important determinant to efficiency.

Correlation between cooperation and product quality satisfaction, flexibility, efficiency, and responsiveness presents that there is a significant relationship between chain actors on the criteria cooperation to product quality satisfaction, flexibility and responsiveness except efficiency.

Correlation between commitment and product quality satisfaction, flexibility, efficiency, and responsiveness shows high significant relationship between commitment indicator to product quality satisfaction, flexibility and responsiveness for the chain actors except assembly group. However commitment is not a determinant to efficiency criteria.

Relationship between indicator relational satisfaction and product quality satisfaction, flexibility, efficiency, and responsiveness present that relational satisfaction is a significant indicator to performance criteria for production, distribution and retailing group. Thus it entails that assemblers have no good business relationship with the other chain actors.

Conclusions

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

1. There are more male respondents (farmer, financer assembler-wholesaler and trucker-wholesaler) while more female respondents (wholesaler, wholesaler-retailer and retailer). Most of them start the business ranging from 20-40 years old, graduate of high school and college level.

2. Most of respondents belong to Christian community. Majority of them do not consider the benefits of organization.

3. Chain actors have common understanding as to their relationship such as cooperation, commitment and relational satisfaction which chain actors cooperate and fulfill the promises made for the purpose of fulfilling common interest. However, chain actors differ on understanding about trust, dependence, and power, commitment, and relationship satisfaction.

4. The chain actors are utilizing the limited resources to produce quality/ quantity product to cater into the needs and desire of the market within that period of time. However conflicts or misunderstanding between them are not avoided.

5. Trust is a determinant/indicator to product quality satisfaction. However, it is not a determinant/indicator to flexibility, efficiency and responsiveness of chain actors in the spot market chain.

6. Power is not an important factor or indicator to performance criteria such as product quality satisfaction, flexibility, efficiency and responsiveness of chain actors in the spot market chain.

7. Dependence is an important measurement to product quality satisfaction, flexibility and responsiveness for chain actors on production, distribution and retailing group except on efficiency criteria where dependence is not an important indicator.

8. Communication has significant relationships with performance criteria except on efficiency criteria wherein communication is not an important indicator.

9. Cooperation has a highly significant relationship to performance criteria except on efficiency where cooperation is not a right indicator.

10. Commitment is not an indicator to efficiency performance. However, it is a determinant/indicator to product quality satisfaction, flexibility and responsiveness for the chain actors except assembly.

11. Relational satisfaction is important criteria to all the criteria for performance of chain actors except on assembly.

Recommendations

Based on the findings of the study the following are recommended inorder to improve and strengthen the relationship of chain actors in business transaction of cabbage.

1. The chain actors should set standards on quality classification, and especially in pricing strategy and payment term in-order to have fair treatment among chain actors.

2. In-order to improve the skill, knowledge and performance of the chain actors, government and non government agencies should conduct seminars and trainings on proper handling, packaging, storage, financial management and quality management.

3. Chain actors must establish relational trust in order to produce/procure the desired needs of the market and to cater to the needs of the buyer and to compete in the spot market chain as well.

4. Power between chain actors must not be established in order to eliminate unsatisfactory or opportunistic behavior and to strengthen the relationship of the chain actors.

5. The chain actors should build-up satisfactory relationship in order to improve their performance on the trading industry, such as commitment and cooperation that must be fully established among them.

6. The chain actors must possess the right attitude in order to satisfy the requirements or needs of the buyers and to minimize conflicts between them.

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APPENDICES

APPENDIX A

Letter to the Respondents

Benguet State University
COLLEGE OF AGRICULTURE
La Trinidad, Benguet

November, 2010

Sir/Madam,

Warm greetings!

I am a graduating student of Benguet State University taking up Bachelor of Science in Agribusiness major in Enterprise Management. As part of the course requirement, I am presently conducting an undergraduate research study entitled "RELATIONSHIP AND PERFORMANCE OF CHAIN ACTORS IN THE SPOT MARKET FOR SELECTED VEGETABLES".

In connection with this, may I ask you to fill up or answer the questionnaire made for this purpose? Rest assured that all the information you will provide will be treated with outmost confidentiality. Your favorable approval is highly appreciated.

Thank you for your kindness and cooperation. May God bless you!

Sincerely yours,

BENIDO B.CALPASE
Researcher

Noted by:

LEOPOLDO N. TAGARINO
Adviser

Interview Schedule

This research aims to investigate the cabbage 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. _____
Respondent's Group:
1. Production Group: [ ] Farmers
2. Assembly (Collection) Group : [ ] Assembler-Wholesaler [ ] Financier-Assembler- Wholesaler
3. Distribution Group : [ ] Trucker-Wholesaler [ ] Wholesaler
4. Retailing Group : [ ] Retailers [ ] Wholesaler-Retailer

A. RESPONDENTS 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 engages in vegetable farming business: _____

B.What are the vegetables you frequently produce/procure and sell in the market?Please check the boxes
[ ] Potato [ ] Cabbage [ ] Chinese Cabbage [ ] Carrots [ ] Broccoli [ ] Lettuce [ ] Bell Pepper
[ ] Tomato [ ] Celery [ ] Chayote [ ] Cucumber [ ] SnapBeans [ ] Garden Peas

C.SUPPLY NETWORK RELATIONSHIP
Assess the nature of satisfaction with the buyers of your vegetables.
C.1 Trust:Trust can be understood as a faith, reliance, belief or confidence in the goodwill of other partners. Assess the nature of relational trust with the buyers of your vegetables**.**

	1 2 3 4 5
1. I have much confidence to rely on the buyer's promises	Strongly Disagree□□□□□Strongly Agree
2. I am always honest dealing with the buyers of cabbage.	Strongly Disagree□□□□□Strongly Agree
3. I should not hesitate to make important decisions based on buyer's suggestions	Strongly Disagree□□□□□Strongly Agree
4. I always believe on the information shared by the buyer.	Strongly Disagree□□□□□Strongly Agree
5. The buyer is fair in negotiating with me.	Strongly Disagree□□□□□Strongly Agree
6. The buyer I trade with has a good reputation.	Strongly Disagree□□□□□Strongly Agree
7. The buyer and I always consider the best interest.	Strongly Disagree□□□□□Strongly Agree

C.2 Power: Power is defined as the ability to influence a relationship partner and dependence or

asymmetrical investment in relationship-assets can lead to the exercise of coercive power. Assess the nature of relational power with the buyers of your vegetables.

1 2 3 4 5

1. I am flexible to choose buyers at any time. Strongly Disagree□□□□□Strongly Agree
2. I always adhere to the buyer's demand. Strongly Disagree□□□□□Strongly Agree
3. I have all the power in the trading negotiation Strongly Disagree□□□□□Strongly Agree
4. Buyer has the best offer relative to alternatives. Strongly Disagree□□□□□Strongly Agree
5. Buyer often controls the market information. Strongly Disagree□□□□□Strongly Agree
6. Buyer often acts opportunistically. Strongly Disagree□□□□□Strongly Agree

C.3 Dependence: Dependence is increased when the outcomes available from the relationship are comparatively better than the outcomes available from alternative relationship. Assess the nature of relational dependence with the buyers of your vegetables.

1 2 3 4 5

1. I am flexible to choose buyers at any time. Strongly Disagree□□□□□Strongly Agree
2. I always adhere to the buyer's demand. Strongly Disagree□□□□□Strongly Agree
3. I have all the power in the trading negotiation. Strongly Disagree□□□□□Strongly Agree
4. Buyer has the best offer relative to alternatives. Strongly Disagree□□□□□Strongly Agree
5. Buyer often controls the market information. Strongly Disagree□□□□□Strongl Agree
6. Buyer often acts opportunistically. Strongly Disagree□□□□□Strongly Agree

C.3 Communication: Communication is "the formal as well as informal sharing of meaningful and timely information between firms". Assess the nature of communication, between you and the buyer

1. I can directly dictate price Strongly Disagree□□□□□Strongly Agree
2. I usually share information Strongly Disagree□□□□□Strongly Agree
3. As buyer, I use other people to communicate with the farmers Strongly Disagree□□□□□Strongly Agree

C.4 Cooperation: Cooperation refers to situations in which firms work together to achieve mutual goals Assess the level of cooperation between you and the buyer of your vegetables

1 2 3 4 5

1. I work cooperatively with the buyer to effectively improve my operation Strongly Disagree□□□□□Strongly Agree
2. I usually share information's to my suppliers, buyers Strongly Disagree□□□□□Strongly Agree
3. I build up relationships (alliances/partnership) with my colleagues'
4. I always share information about production/marketing targets to the buyer Strongly Disagree□□□□□Strongly Agree
5 .I share the production or marketing decisions I made with the buyer Strongly Disagree□□□□□Strongly Agree

C.5 Commitment: commitment as "an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it. Assess the level of commitment between you and the buyer of your vegetables

1 2 3 4 5

1. I keep the promises I make with the buyer. StronglyDisagree□□□□□Strongly Agree
2 .I make extra effort to meet the buyers demand requirement. Strongly Disagree□□□□□Strongly Agree
3. I make signifiant investment to produce/procure cabbage. StronglyDisagree□□□□□Strongly Agree
4. I work cooperatively with the buyer to effectively improve my operation Strongl Disagree□□□□□Strongly Agree
5. I expect to continue trading with the buyer for a long time. StronglyDisagree□□□□□Strongly Agree
6. I invest large amount of capital in my business operation. StronglyDisagree□□□□□Strongly Agree

C.6 Relationship satisfaction**:** Satisfaction is derived from the result of a satisfaction means the extent to which the relational dimensions of the partnership meet expectation.

1 2 3 4 5

1. Trading with the preferred buyer is less risky. StronglyDisagree□□□□□Strongly Agree
2. My trading relationship with the buyer is satisfactory. StronglyDisagree□□□□□Strongly Agree

3. I am satisfied to continue to trading with
the buyer for a longer time. StronglyDisagree□□□□□Strongly Agree
4. The buyer meets my expectations in trading with them. StronglyDisagree□□□□□Strongly Agree
5. The buyer treats me fairly and equitably. StronglyDisagree□□□□□Strongly Agree
6. I am adequately receiving better income trading with the buyer. StronglyDisagree□□□□□Strongly Agree
7. I have much conflict with the buyer. StronglyDisagree□□□□□Strongly Agree
8. The relational trust established with the buyers is very satisfying.
StronglyDisagree□□□□□Strongly Agree
9. I am happy on the business alliances with the buyers. StronglyDisagree□□□□□Strongly Agree
10.Trading with the buyers is self fulfilling StronglyDisagréé□□□□□Strongly Agree

C. PERFORMANCE (Operations): Assess the performance of the supply network operation using the following metrics.

D.1 Quality Food Product consists of product safety and the product reliability and convenience.
The quality of vegetables I produce/procure/sold meets my expectation.

1 2 3 4 5
Strongly Disagree□□□□□Strongly Agree

1. The quality of vegetables delivered meets the buyer's requirements.
Strongly Disagree□□□□□Strongly Agree

2. I am satisfied with the volume I produce/procure
or sold to the buyer Strongly Disagree□□□□□Strongly Agree
3. I always achieve my production/procurement/delivery targets.
Strongly Disagree□□□□□Strongly Agree
4. I am satisfied to fulfill the orders and deliveries.
of cabbage when needed Strongly Disagree□□□□□Strongly Agree
5. The quality of cabbage I supplied in the market is reliable.
Strongly Disagree□□□□□Strongly Agree

D.2 Flexibility. Flexibility indicates the degree to which supply chain can respond to changing environment and extraordinary customer service requests.

1. I can produce/procure the desired volume when buyers needed it. 1 2 3 4 5
Strongly Disagree□□□□□Strongly Agree

2. I exert effort to produce the desired volume
and quality when buyers demand it. Strongly Disagree□□□□□Strongly Agree
3. The buyer is flexible to buy cabbage.
regardless of volume and quality Strongly Disagree□□□□□Strongly Agree
4. We the buyer and seller has little conflict.
in the business transaction Strongly Disagree□□□□□Strongly Agree

D.3 Efficiency. Efficiency measures how well the resources are utilized which include production/ procurement costs, profit return on investment and inventory.

1. I am happy to produce the desired volume out of my limited resources. 1 2 3 4 5
Strongly Disagree□□□□□Strongly Agree

2. The income I received is adequately rewarding.
Strongly Disagree□□□□□Strongly Agree

3. I exert effort to reduce the cost of production.
Strongly Disagree□□□□□Strongly Agree

4. I am satisfied with the rate of return to my investment.
Strongly Disagree□□□□□Strongly Agree

D.4 Responsiveness. Responsiveness aims at providing the requested products with a short lead time. This involves the interaction between buyers and suppliers on issues related to product, payment and information.

1. I can supply the market with desired quality/quantity when needed. 1 2 3 4 5
   Strongly disagree□□□□□Strongly agree
2. I always schedule my deliveries to meet the time in the market.
   Strongly disagree□□□□□Strongly agree
3. I always find time to deliver cabbage when customers/market needs it.
   Strongly disagree□□□□□Strongly agree
4. I always act on the demand/complaints of buyers related to quality/quantity.
   Strongly disagree□□□□□Strongly agree