

How Traditional Guanxi Supports Modern Marketing? A Path Analysis

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Introduction

There is a growing recognition that relationships play an important role in supply chain management (Berthon *et al.*, 2003; Brown *et al.*, 1995; Narasimhan & Kim, 2002). Guanxi¹, a typical Chinese historical and cultural embedded concept of personal relationships, gains more and more attention from academic and practitioners (Davies, 1995; Wang, 2005; Yau *et al.*, 2000).

Guanxi is translated as those personal connections or relationships on which an individual can build to secure resources or to draw benefits when doing business as well as in the course of social life (Davies, 1995). Guanxi can be generally classified into three categories: family, friend and business (Fan, 2002). Family guanxi is a relatively permanent and stable social relationship. It is governed by the need rule for social exchange and resource distribution within a family. Friend guanxi is rather stable and long term relationship as a means or an

¹ Guanxi is composed of two Chinese characters, guan (gate) and xi (connection). One must pass the gate to get connected to the network. Guanxi generally refers to personal relationships or social connections based on mutual interests and benefits (Yang, 1994). More detailed explanation for Guanxi see Fan (2002).

instrument with other people outside the family to attain material and/or mutual goals. Friend guanxi follows the reciprocity rule. Business guanxi is defined as the process of finding business (rather than personal) solutions through personal connections. Business guanxi is governed by equity rule (Fan, 2002). Because guanxi is transferable from person to person, both direct and/or indirect relationships of a person, family, friend, and/or business guanxi, build up his/her multilayer guanxi network.

Although some basic characteristics are shared such as mutual understanding, cooperative behavior, and long-term orientation, guanxi (relationship) marketing still shows underlying differences in terms of the nature of the relations, the mechanism of building and maintaining the relationships compared to the western concept of relationship marketing (Wang, 2005). From this point, further study on guanxi marketing has its theoretical contribution and empirical imperative.

Research on guanxi first appeared in the West in the 1980s in popular business writings that advised about cultural factors affecting doing business in China (Alston, 1989; Butterfield, 1983; Pye, 1982). Later studies mainly focus on the comparison of the concepts of relationship and guanxi (Arias, 1998; Wang, 2005). Researchers already applied relationship marketing theory in China in different ways, such as marketing and negotiation in China (Lee & Lo, 1988), Consumer studies (Yau, 1994), network relationships (Wong & Leung, 2001), air industry (Yang & Liu, 2003), direct selling of cosmetics and cleaning products (Luk, 1996), industrial marketing and purchasing (Fang, 2001), and nonfarm employment (Zhang & Li, 2003).

Although intensive studies already focused on guanxi marketing in China, most of the studies are in the domains of qualitative research. Literature review showed that there is lack of quantitative researches on guanxi marketing. Several questions are still not well addressed, such as: what is the value or benefit of guanxi marketing? How is the value created and

transferred in buyer-seller relationships, etc.? To answer these questions, an integrated relationship marketing framework is required to link the scheme of relationship value, relationship quality and marketing behavior in Chinese context.

The purpose of this paper is thus to develop a research framework to investigate the measurement and transformation of the value of the guanxi (relationship) networks in vegetable industry in China. Specifically this paper explores how the value of guanxi networks is measured, and quantitatively investigate the impacts of the value of guanxi network on guanxi quality and ultimately on smallholders' marketing behavior.

The remainder of the present paper is organized as follows. Section 2 provides the theoretical and conceptual framework by reviewing the literature. Research design is presented in section 3. Section 4 shows the empirical results. Conclusions and discussions are presented in Section 5, followed by several managerial implications.

Guanxi network value, quality and behavior: a structural model

As argued, a framework is required that integrates the relationships in the scheme of guanxi network value, quality and outcome. Figure 1 provides the conceptual research model based on such concerns.

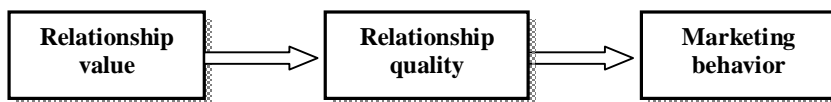


Figure 1 The conceptual research model of guanxi marketing

The value of guanxi (relationship) networks

Value has been recognized as “the fundamental basis for all marketing activity” (Holbrook, 1994). Value has been accepted as a core concept of marketing exchange (Hunt, 1991). Marketing exchanges take place because all parties involved expect to gain value in the exchange. Scholars have defined value in wide variety of ways, four recurring characteristics can be identified: (1) Value is a subjective concept; (2) It is conceptualised as a trade-off

between benefits and sacrifices; (3) Benefits and sacrifices can be multi-faceted; (4) Value perceptions are relative to competition (Ulaga & Eggert, 2006). In short, customer-perceived value is defined as the trade-off between the benefits (“what you get”) and the sacrifices (“what you give”) in a market exchange (Zeithaml, 1988).

Traditional research on customer value adopts a transactional approach focusing on product-related issues, while ignoring relationship dimensions of customer-perceived value (Parasuraman & Grewal, 2000). As Payne and Holt (1999) stated “the most recent development had been to consider customer value from the viewpoint of relationships marketing”. Different from the traditional researchers who look at relationship value from the customer perspective, we look at guanxi network value from the perspective of the sellers (e.g. vegetable farmers). We define the value of the guanxi networks in this study as the benefits from guanxi networks in business practices.

By developing guanxi networks with business partners, they can achieve transaction benefits regarding: reducing transaction costs (Standifird & Marshall, 2000), market access (Low, 1996), market expansion and sales growth (Kao, 1993), technical assistance (Cunningham & Homse, 1982), enhancing marketing and negotiation in China (Lee & Lo, 1988), improving product quality and performance (Luo & Chen, 1996), and ultimately, attainment of long-term business success in China (Yeung & Tung, 1996).

The quality of guanxi (relationship) networks

Much had been written about the development and maintenance of long-term buyer-seller relationships. Relationship quality is a broadly term to describe business relationships (Ulaga & Eggert, 2006). Although there is no consensus or distinct and related constructs, researchers typically conceptualise relationship quality as a higher-order construct composed of satisfaction and trust (Ulaga & Eggert, 2006). Consistent with guanxi value, we also look at guanxi (relationship) quality from sellers’ perspective. Satisfying buyers’ needs to achieve a

harmonious business relationship lies at the foundation of modern marketing thought and trust serves as the lubricant of the business relationships and transactions. Satisfaction and trust therefore serve as the conceptualized concepts of guanxi (relationship) quality in this study.

Satisfaction

Anderson and Narus (1990) define satisfaction as “a positive affective state resulting from the appraisal of all aspects a firm’s working relationship with another firm.” The positive affective state is derived from a trade-off between the seller’s performance and the buyer’s expectations (Fornell, 1992). Whenever seller’s performance exceeds buyer’s expectations, satisfaction will increase, but when performance falls below expectations, buyers will become dissatisfied.

However, satisfaction in buyer-seller relationships not merely depends on the product quality. It also largely depends on the quality of the dyad relationship. This point is even more important in the Confucianism society of China. As an experienced American businessman stated “... guanxi seems to be the lifeblood of the Chinese business community, extending into politics and society. Without guanxi one simply can’t get anything done” (Wong & Leung, 2001). In other words, building a good and/or strong guanxi network is helpful for the success of doing business in China.

The term of satisfaction is often used to indicate the quality of the relationship. High level of satisfaction with buyer-seller relationships will further enhance the business transactions. In a buyer-seller relationship, satisfaction is placed by the sellers to buyers (or in the other direction, placed by the buyers to sellers).

Trust

Anderson and Narus (1990) view trust as the belief that the partner will perform actions that will result in positive outcomes for the firm and not to take unexpected actions that may

result in negative outcomes. Moorman et al. (1993) define trust as the willingness to rely upon an exchange partner in whom one has confidence. Both definitions view trust as a behavioural intention that reflects some reliance upon the exchange partner.

Trust is considered to exist if one party believes that the other party is honest or benevolent (Doney & Cannon, 1997). It is the expectation that one party in the transactions will not behave opportunistically (Gulati, 1995). Therefore, trust is a relationship-based concept, which is created, reinforced, or decreased by bilateral relationship activities in a series of economics exchanges (Suh & Kwon, 2006). If trust exists in a business relationship, the counterpart will be convinced that they will not be victims of opportunistic behaviour.

Trust is directly influenced by the guanxi network since trust is socially embedded (Granovetter, 1985). Trust is dynamic and continuous (Wicks *et al.*, 1999), so a partner can both trust and distrust people at the same time. The development of trust relies on the formation of one partner's expectations about the motives and behaviors of another (Doney & Cannon, 1997) and the reputation of the counterparts (Gabre-Madhin, 2001).

To reflect the core concept of guanxi network, this study capturing the features of trust on the personal level. Interpersonal trust reflects the extent to which a boundary-spanning agent trusts his or her specific counterpart (Zaheer *et al.*, 1998). In a farmer-buyer relationship, interpersonal trust is placed by the farmers to buyers (or in the other direction, placed by the buyers to farmers).

Geyskens et al. (1999) found that non-economic satisfaction influenced trust directly, and economic satisfaction influenced trust indirectly through conflict. Satisfaction develops in the short run and is based on past interactions, while trust takes relatively longer to develop and has an expectational quality to it (Geyskens et al., 1999).

The marketing behaviors of smallholders

There is a growing recognition that relationships play an important role in supply chain management (e.g., Brown *et al.*, 1995; Leek *et al.*, 2003). With the development of marketing system in China, it is time to think how smallholders get better entry to commercial agrifood chains, such as supermarkets and international stages.

Traditional commercial channels become unprofitable for small scale farmers. Farmers are now trying to move away from traditional “arms length” business relationships and have made deliberate attempts to establish strong *guanxi* with buyers as a way of reducing costs, increasing efficiency and enhancing competitive advantage.

We distinguish smallholders’ marketing behaviors at two different levels: transactional level and strategic level. We study the influence of *guanxi* value and quality on smallholders’ marketing behaviors at both levels. For business transactions, we focus on communication, negotiation power and assistance; while for marketing strategies, we study market outlet and governance choices.

Transactional behavior

Before the transactions, market information related to market demand and quality requirements should be acquired and buyers should be contacted. To conduct a transaction, farmers need to negotiate with selected buyers, and put efforts and time to make agreements for transactions. In addition, transaction assistances, such as technical support and financial support from transaction partners and/or from the third parties are crucial for the completion of the transactions.

Whenever trust is present, sellers can lower their guard and economize on transactions costs. Trust minimizes search costs, facilitates the enforcement of contracts. Trust also makes it easier for sellers to renegotiate their transactional obligations when problems arise, thereby providing much needed flexibility in dealing with external shocks. Trust also facilitates the

circulation of reliable information about technology and market opportunities, as well as the blacklisting of unreliable agents (Barr, 1998).

As we discussed earlier, the benefits of guanxi networks lie in different aspects. Buyers and sellers are more willing to change and share information in a guanxi network. Buyers are more willing to offer assistance for transactions.

Strategic behavior

From the strategic management point of view, the marketing channel and governance choices are the fundamental determinant for the business success. Both traditional (e.g. wet market) and modern (processing industry, international market, and supermarkets) are available and contractual and relational transactions exist in the research area. The selection of particular marketing channel and transaction governance is hence determined by several factors: personal characteristics, resource endowments, and the transaction environments (e.g. the presence of transaction costs) (Lu, 2003).

Economic value of trust should also be considered when it is based on non-contractual arrangement (Dyer, 1997). Non-contractual trust such as goodwill eliminates the need for formal contracts. For example, in conditions of high trust, transactors spend less time and resources on ex-ante contracting because they trust that pay-off will be divided fairly. Trusting parties spend less time and resources on monitoring to see if the other party is not shirking or is fulfilling the spirit of the agreement.

The presence of the guanxi network functions as safeguarding mechanism in buyer-seller relationships. The development of a guanxi network reduces costs associated with searching for partners and negotiating contracts (Standifird & Marshall, 2000). Guanxi networks also reduce transaction costs associated with behavioural uncertainties that arise on account of bounded rationality and opportunity. The flexible and socially-based nature of guanxi networks also permit members of a guanxi network to deal with unforeseen contingencies

arising after agreements are reached. Thus guanxi networks serve as the complementary of the contractual arrangement in practice. Thus both guanxi network value and quality will influence smallholders' strategic marketing behaviors.

Research design

Sample

In 2005, we collected data from a stratified random sample of 167 farmers involved in vegetable production and sales in Jiangsu Province, P. R. China. All data were collected based on personal interviews.

Semi-structured questionnaires were designed. To optimize the validity of the questionnaire items, valuable insights were obtained through a series of eight case studies (Lu *et al.*, 2006) and pre-test interviews. The case studies and pre-test interview served the research in two ways. First, they were used to identify important topics that are related to guanxi network value, quality and behavior. Second, the interviews were important to formulate questions. The interviewees were asked to complete the questionnaire and raise questions where problems and ambiguities arose with wording and questionnaire layout. This yielded useful suggestions that improved the content validity of the measurement instrument. We used forward and backward translation techniques to translate the English items into Chinese. All the measures included in the data analyse are operationalized by multiple-items five-point Likert scales (1=not agree at all to 5= totally agree).

Methods

The measures were subjected to a purification process involving a series of reliability and validity assessments using SPSS (Field, 2005). First, Exploratory factor analysis with varimax rotation was conducted to determine the most related multiple items for each construct. Second, composite reliability, average variance extracted, item-to-total correlation were obtained from the measurement and structural path model to show validity and reliability.

A structural modeling approach was chosen to evaluate errors in the construct measurements and errors in the hypothesized relations. World's (1982) method of latent variables partial least-squares was employed. PLS is a theory prediction rather than theory confirming analytical method which coheres with the objective of this study. The path coefficients obtained from PLS analysis are standardized regression coefficients, while the loadings of items on individual constructs are factor loadings. Thus, PLS results can be easily interpreted by considering them in the context of regression and factor analysis. PLS provides a clear advantage over regression for two reasons: (1) it considers all path coefficients simultaneously to allow the analysis of direct, indirect and spurious relationships; and (2) it estimates the individual item weightings in the context of the theoretical model rather than in isolation. For hypothesis testing, Chin (1998) recommends bootstrapping. Path coefficients are reestimated with each random sample, and mean parameter estimates and standard errors are computed across the total number of samples. Following Chin (1998), we ran 500 samples.

Measurements

Multiple items were used to measure the constructs: guanxi network value, trust, satisfaction, communication, negotiation power, and buyer assistance. The constructs of contract and market are measured by single items. Table 1 listed the variables and factor loadings for each construct used in this study.

Guanxi network value reflects the value of the guanxi in business transactions. The operationalized term of guanxi network value focuses on the benefits of guanxi networks on facilitating production and marketing activities for smallholders. Guanxi networks help farmers to acquire high quality seeds, to improve production techniques, to find new buyers and access new markets. This measurement instrument was developed based on previous research (e.g. Anderson *et al.*, 1994; Claro *et al.*, 2003).

Table 1 Factor loadings for each construct (N=167)

| Construct | Items | Factor loadings |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------|
| Guanxi network value | My guanxi network is supporting me to build trust with my seeds suppliers | 0.86 |
| | My guanxi network is supporting me to get access this market | 0.77 |
| | My guanxi network is supporting me to find new buyers in this market | 0.82 |
| | My guanxi network is supporting me to build trust with buyers | 0.84 |
| | My guanxi network is supporting me to get payment more quickly | 0.82 |
| Trust | My guanxi network is supporting me to improve production technology | 0.79 |
| | The buyers I trade with have a good reputation | 0.74 |
| | My previous relationships with my buyers are satisfactory | 0.72 |
| | I expect my buyers to be working with me for a long time | 0.77 |
| | My buyers have been fair in their negotiations with me | 0.73 |
| Guanxi satisfaction | Based on my experience, I can with complete confidence rely on my buyers to keep their promises to me | 0.82 |
| | My buyers are trustworthy. | 0.86 |
| | My buyers are satisfied the guanxi with me | 0.99 |
| Communication | I am satisfied the guanxi with my buyers | 0.99 |
| | I spend a lot of time talking to my buyers to get market information | 0.76 |
| Negotiation power (reversed construct) | I get production advice from my buyers | 0.99 |
| | I have to negotiate with more buyers to settle a transaction | 0.93 |
| Buyers assistance | It takes me more rounds to negotiation to settle a price | 0.87 |
| | I get orders from my buyers through the telephone | 0.88 |
| | I get credits from my buyers | 0.79 |
| Contract | I get seeds or other inputs from my buyers | 0.86 |
| | My transactions are based on formal contracts | 1.00 |
| Market | I prefer to sell vegetables to modern markets | 1.00 |

Note: All constructs are measured using 5 point Likert-scale (not true at all – totally true)

Interpersonal trust in operational terms refers to the belief that the vegetable buyers are honest and sincere, and in no circumstances will deliberately do anything wrong to damage the relationship. Previous transaction experience, buyers' reputation and trustworthiness are the major reflective perspectives for interpersonal trust. This measurement instrument was based on the study of Zaheer et al. (1998) and Claro (2003)

Satisfaction is used to measure the perceived dyadic guanxi in a buyer-seller relationship. People are satisfied with their feelings that the perceived dyadic guanxi is equal to or higher than what they were expected (confirming). This measurement instrument is developed based on Fornell et al. (1996).

Communication refers to information sharing between buyers and sellers. Market information, such as price, demand and quality requirements, and production advice are crucial aspects for small farmers to achieve better performance. Efficient communication increases the understanding on both sides of the buyer-seller relationship.

Negotiation power refers to the position or power (weak or strong) in the negotiation process with vegetable buyers. Negotiation power in this study was evaluated by the number of buyers who had to be contracted and the number of negotiation rounds needed to reach a transaction agreement. If one party has to negotiate with more buyers or needs more rounds of negotiation with a specific buyer to settle a price, then this party is in a weak position, so more efforts are required to execute transactions. In this study, negotiation power is a reversed construct.

Transaction assistance refers to the support to vegetable production and marketing activities. It measures the contributions of the vegetable producers' guanxi on their vegetable production and marketing. To get high quality seeds, get credits from buyers and order through telephone are aspects of the support that were measured in this research.

Formal contract in this study was used to measure the intensions of transaction conditions for vegetable transactions of vegetable farmers. Formal (written) and informal (oral) contracts are distinguished in this study. Both contracts are used in vegetable business practices. It was measured by the single statement of "My transactions are based on formal contracts".

Modern market was used to measure the intensions of marketing channels choice for smallholders. In current study, we distinguish two different types of markets in the research area: traditional markets and modern markets. The wet market and the wholesale market are characterized as traditional markets; while the processing company, supermarket and international markets are modern ones. This construct was measured by the single statement of "I prefer to sell vegetables to modern markets".

Empirical results

Reliability and validity of measures and constructs

Generally, PLS results are presented in two stages. In the first stage, the researcher ensures that the measures used as operationalization of the underlying constructs are both reliable and valid. Once convinced of the adequacy of the measurement model, the research can proceed to interpret the resulting model coefficients. Following common practice (Agarwal & Karahanna, 2000; Jones *et al.*, 2002), we examine the inter-construct correlation, construct-to-item correlation, composite reliability, and average variance extracted for each construct. Composite reliability, variance extracted, and inter-correlations of constructs are reported in Table 2.

Table 2 Composite reliability, variance extracted, and inter-correlations of constructs

| Variables | <i>Composite reliability</i> | Guanxi value | Trust | Satisfaction | Buyer communication | Negotiation power | Buyer assistance | Formal contract | Modern market |
|---------------------|------------------------------|--------------|-------------|--------------|---------------------|-------------------|------------------|-----------------|---------------|
| Guanxi value | <i>0.92</i> | 0.82 | | | | | | | |
| Interpersonal trust | <i>0.90</i> | 0.46 | 0.77 | | | | | | |
| Satisfaction | <i>0.99</i> | 0.29 | 0.58 | 0.99 | | | | | |
| Buyer communication | <i>0.87</i> | 0.36 | 0.61 | 0.44 | 0.88 | | | | |
| Negotiation power | <i>0.89</i> | -0.60 | -0.24 | -0.14 | 0.17 | 0.90 | | | |
| Buyer assistance | <i>0.88</i> | 0.47 | 0.41 | 0.25 | -0.47 | -0.24 | 0.84 | | |
| Formal contract | <i>1.00</i> | -0.20 | 0.17 | 0.19 | -0.32 | 0.38 | 0.23 | 1.00 | |
| Modern market | <i>1.00</i> | 0.37 | 0.42 | 0.34 | -0.48 | -0.06 | 0.45 | 0.20 | 1.00. |

Note: The *italic* column shows the composite reliability. The bold numbers on the diagonal are the square root of the variance shared between the constructs and their measures (square root of AVE). Off-diagonal are the correlations among the constructs.

The acceptability of the measurement model was assessed by looking at the reliability of the individual items, the internal consistency (composite reliability) between the items expected to measure the same construct, and the discriminant validity between constructs. Individual item reliability was determined by examining the loadings of measures on their

corresponding constructs. In all cases, loadings are greater than 0.7, indicating a high degree of individual item reliability (see Table 1).

Internal consistency was assessed using a measure of composite reliability which was suggested by Fornell and Larcker (1981). This measure is similar to Cronbach's alpha as a measure of internal reliability, and interpretation of the values obtained is similar. But it does not treat each item equally as Cronbach alpha. An internal consistency of value of 0.7 or greater is reasonable for exploratory research (Nunnally, 1988). In the current study, composite reliability for all constructs exceeds 0.87 (see Table 2, italic column), indicating a good internal consistency of the constructs.

Table 2 also shows the correlations matrix of the constructs. The diagonal elements in this matrix show the square root of the average variances extracted (AVE). This can be done in two ways. First, for discriminant validity, the diagonal elements should be greater than all correlations of the constructs, as is the case here. Second, the test involves assessing how each item relates to the latent construct. All items should load more highly to its associated construct than to other constructs². Both these criteria indicate that the discriminant validity of the constructs used in this study is more than adequate. So we can confidently rely on the path coefficients to interpret the relationships among constructs.

Test of the conceptual model

The results of the conceptual model for small vegetable producers are shown in Figure 2.

Only path coefficients that are significant at 5% level are listed with solid lines. The relationships which are significant at 10% level are shown with dashed line. PLS does not report an overall goodness-of-fit index, but the R^2 of the structural model can be used to judge the predictive power. The average variance explained (R^2) for the overall model is 27.4% which indicates a good level of predictive accuracy.

² We provide the loadings and cross loadings for all constructs in Appendix 1.

Guanxi network value and guanxi network quality

Figure 2 shows that the value of guanxi network is positively correlated with guanxi network quality. The results reveal that the high value of guanxi network improves relationship quality in terms of trust and satisfaction. With a standardized path coefficient of 0.32, the value from farmers' guanxi networks has a slight greater impact on trust than on satisfaction (standardized path coefficient = 0.29), both path coefficients are significant at 1% level. We also find that the two concepts of guanxi network quality have interaction effects. Satisfaction with dyadic guanxi significantly increase interpersonal trust (standardized path coefficient = 0.48). This result confirms the finding of Ha et al. (2004).

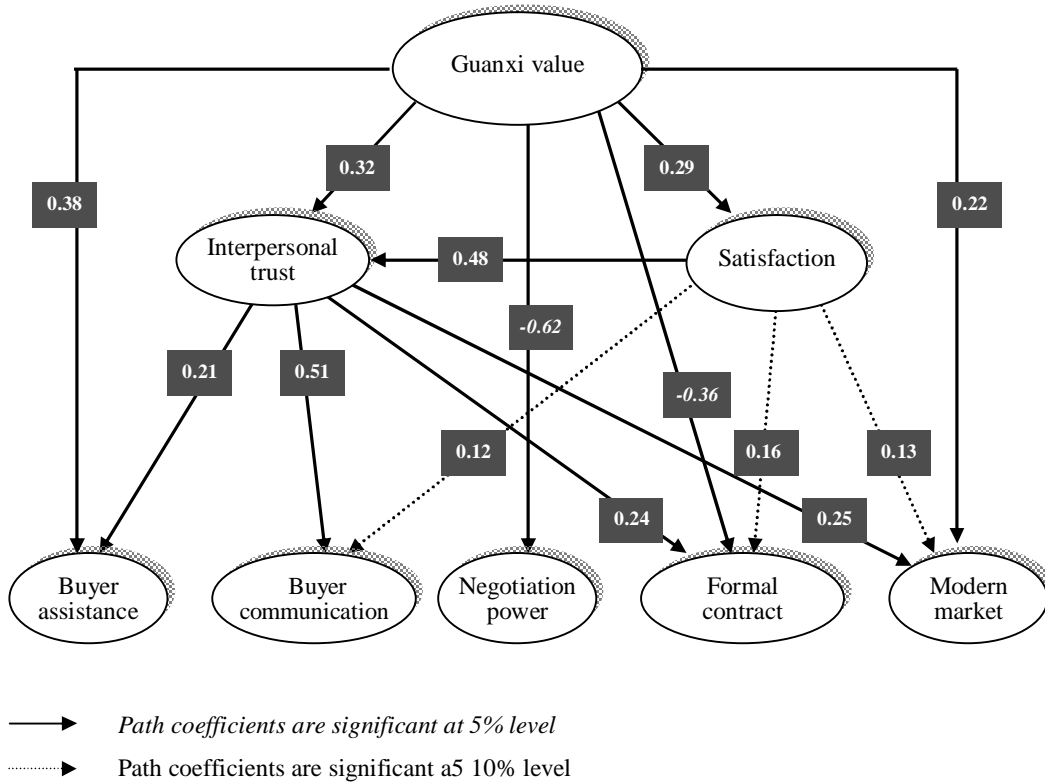


Figure 2. Results of the conceptual model

Guanxi network quality and marketing behavior

Our model demonstrates that both interpersonal trust and satisfaction have direct impacts on smallholders' marketing behaviors. With both significant path coefficients on buyer

assistance and communication, interpersonal trust shows a great influence on smallholders' transactional behaviour. Interpersonal trust significantly improves the communication between farmers and buyers for valuable market information and product advice (standardized path coefficient = 0.51). Trust also increase the possibility for farmers get assistance regarding production technology and finance support (standardized path coefficient = 0.21). Interpersonal trust does not show a direct significant impact on negotiation power. Our model does not prove a strong direct impact of satisfaction on business transactions. It only shows a weak relation with buyer communication (significant at 10% level). Results reveal that satisfaction shows indirect impacts on business transactions (buyer assistance and communication) which are mediated by interpersonal trust. This result confirms the findings of Ulaga and Eggert (2006).

Results also prove that there are significant relations between guanxi quality and smallholders' marketing behavior in terms of market outlet and transaction governance choices. Interpersonal trust shows a fare equal direct significant impact on smallholders' choice for formal contract and modern market outlets (path coefficients are 0.24 and 0.25 for contract and outlet respectively). The results imply that vegetable producers are willing to engage in newly developed marketing outlets with formal contracts to guarantee sustainable transactions and to achieve a high profit margin with a high level of interpersonal trust. Satisfaction also increases the possibility and willingness for small scale producers engaging in modern market outlets and formal contracts to facilitate their transactions (path coefficients are 0.16 and 0.13 for contract and outlet respectively). Although the relations between satisfaction and strategic behavior are significant at 10% level, but this relationships are further strengthened by interpersonal trust. It means that in a trust buyer-seller relationship, the influence of satisfaction on smallholders' marketing strategic behavior will become stronger and significant.

Guanxi network value and marketing behavior

Our model also reveals that guanxi network value has direct impacts both on smallholders' transactional and strategic behavior. The value of the smallholders' guanxi network improve the transaction assistance from buyers to facilitates business transactions (path coefficients = 0.38). Results demonstrate that guanxi network value shows a negative impact on farmers' negotiation power. This result is rather surprising. But this may be explained by the results of the fact of small scale production and less marketing experiences. Farmers occupy a weak position in negotiation process due to small volume and individual operations. Farmers benefit from their guanxi network to get chances to negotiate with more buyers to look for a "good" buyer³ and negotiate more rounds with buyers to get a better price which eventually lead to a weak negotiation position that is what we defined less negotiation power. With the highest significant path coefficient, guanxi network value deserves the most important factor to influence smallholders' negotiation power in research area. Although the value of guanxi network does not show direct influence on communication behavior, our model does imply that this impact is perfectly mediated by the guanxi network quality constructs of trust and satisfaction.

Guanxi network value also has direct impacts on smallholders' market outlet and transaction conditions choices. Our model demonstrates a positive relation between the value of guanxi network and the possibility and willingness of farmers accessing to modern market outlets (e.g. processing companies, supermarkets, and international markets). This result coheres with the findings of the case studies in the same research area (Lu *et al.*, 2006). Model also implies that the value of guanxi network negatively associates with the transactions based on written contracts. In other words, if vegetable farmers gain more

³ During the field work interview, farmers showed their preference to transact with "good" buyers who have a good reputation, and with whom the farmers have long term relationship.

benefits from their guanxi networks, they are more willing to make transactions based on informal contracts, or verbal or relational contracts.

Conclusions and discussions

Following a guanxi network value – quality – marketing behavior scheme, this study explores the value of guanxi networks of small scale vegetable farmers influence the quality of the relationship with vegetable buyers and their marketing behavior.

The results reveal that guanxi networks play an important role in small scale vegetable farming in China. Farmers are more satisfied with the relationships with their buyers and trust them more if their gain benefits from guanxi networks. The interpersonal trust with further strengthened with higher level of satisfaction. Compared to satisfaction, interpersonal trust shows greater influence on business transactions, especially for communication and transaction assistance. Guanxi networks both directly and indirectly influence smallholders' business transactions and marketing strategies in terms of market outlet and contractual choice. Farmers are more willing to engage in modern marketing channels with relational governance if they can gain more benefits from their guanxi networks. But several constraints prevent farmers such behavior. First of all, either processing and exporting company or supermarket requires consistent vegetable delivery quality and volume which are promised with small delivery volume per producer. Second, buyers require higher quality standards, such as Pollution Free Food or Green Food. But such quality standards are difficult for small producers to apply in practice. Thirdly, farmers' highly opportunistic behavior becomes the major obstacle for them to build up trust buyer-seller relationships in modern market chains and stringent contractual transactions become more favourable in practices.

Managerial implications

From a managerial point of view, there are three major implications of this study.

First, our research shows that guanxi network quality is crucial in managing business transactions and marketing strategies. The results underline the importance of trust building activities within a relationship marketing approach. Satisfaction with buyers will translate into trust to show influence on behavior intentions. Although it did not show direct impact on negotiation power, interpersonal trust is a pivotal constituent of guanxi network quality.

Second, our research shows that the guanxi network value has both direct and indirect impacts on business transactions and marketing strategies. The expected growing importance of supermarkets in the retail of vegetables will probably lead to greater attention for product quality, timely delivery and preservation characteristics to enhance shelf life of vegetables products. The developing of guanxi network not only facilitates the retransactions, but also helps farmers to achieve long-term buyer-seller relationships in supermarket channels. Thus guanxi (relationship) oriented marketing strategic should be further enhanced by smallholders.

Third, the economic transition in the Chinese vegetable markets increasingly asks for an accompanying adjustment in the sphere of market integration. Negotiation power determines the smallholders whether they can access and survive in the modern markets. Strengthen small holders' negotiation power can be achieved through transparent market information and market accessing. In addition, alternatives developing farmers' organizations (cooperatives or associations) deserve serious attentions as devices for increasing negotiation power of the farmers to reduce transaction costs (Hu *et al.*, 2004). It is therefore likely that farmers' cooperatives or professional associations will emerge to further enhance smallholder' marketing positions and to improve market efficiency.

Acknowledgements

We gratefully acknowledge the financial support for this research provided by WOTRO (grant file number W01.65.2001.010). We appreciate the valuable comments from Prof. Dr. Ruerd Ruben for the earlier draft of this paper.

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Appendix 1 Construct to item measure loadings and cross loadings

| Constructs Variables | Guanxi value | Trust | Satisfaction | Buyer communi- -cation | Negotiation power | Buyer assistance | Written contract | Modern market |
|-------------------------|--------------|-------------|--------------|---------------------------|-------------------|------------------|------------------|---------------|
| guanxi1 | 0.86 | 0.42 | 0.22 | 0.34 | -0.49 | 0.44 | -0.13 | 0.31 |
| guanxi2 | 0.78 | 0.32 | 0.20 | 0.24 | -0.52 | 0.40 | -0.17 | 0.25 |
| guanxi3 | 0.82 | 0.35 | 0.17 | 0.24 | -0.59 | 0.36 | -0.26 | 0.27 |
| guanxi4 | 0.84 | 0.39 | 0.24 | 0.30 | -0.51 | 0.37 | -0.16 | 0.34 |
| guanxi5 | 0.83 | 0.34 | 0.25 | 0.34 | -0.51 | 0.38 | -0.13 | 0.32 |
| guanxi6 | 0.79 | 0.40 | 0.31 | 0.26 | -0.42 | 0.35 | -0.19 | 0.30 |
| trust1 | 0.49 | 0.74 | 0.45 | 0.54 | -0.20 | 0.43 | 0.22 | 0.42 |
| trust2 | 0.39 | 0.73 | 0.41 | 0.45 | -0.27 | 0.22 | 0.04 | 0.23 |
| trust3 | 0.28 | 0.77 | 0.40 | 0.40 | -0.10 | 0.26 | 0.09 | 0.27 |
| trust4 | 0.17 | 0.73 | 0.53 | 0.41 | -0.04 | 0.24 | 0.17 | 0.30 |
| trust5 | 0.37 | 0.82 | 0.44 | 0.50 | -0.25 | 0.38 | 0.17 | 0.37 |
| trust6 | 0.37 | 0.86 | 0.46 | 0.53 | -0.24 | 0.32 | 0.09 | 0.34 |
| satisfaction1 | 0.29 | 0.58 | 0.99 | 0.45 | -0.15 | 0.26 | 0.20 | 0.34 |
| satisfaction2 | 0.29 | 0.57 | 0.99 | 0.43 | -0.13 | 0.25 | 0.19 | 0.33 |
| communi1 | 0.39 | 0.43 | 0.34 | 0.76 | -0.33 | 0.44 | 0.13 | 0.46 |
| communi2 | 0.33 | 0.62 | 0.43 | 0.99 | -0.12 | 0.44 | 0.35 | 0.46 |
| nego1 | -0.55 | -0.15 | -0.05 | -0.08 | 0.93 | -0.17 | 0.48 | -0.02 |
| nego2 | -0.54 | -0.31 | -0.23 | -0.26 | 0.87 | -0.27 | 0.17 | -0.09 |
| assistance1 | 0.47 | 0.37 | 0.27 | 0.39 | -0.24 | 0.88 | 0.16 | 0.36 |
| assistance2 | 0.28 | 0.31 | 0.20 | 0.43 | -0.06 | 0.79 | 0.25 | 0.39 |
| assistance3 | 0.35 | 0.33 | 0.16 | 0.41 | -0.19 | 0.86 | 0.22 | 0.43 |
| contract | -0.20 | 0.17 | 0.19 | 0.32 | 0.39 | 0.23 | 1.00 | 0.21 |
| market | 0.37 | 0.43 | 0.34 | 0.48 | -0.06 | 0.46 | 0.21 | 1.00 |

Note: Bold numbers indicate the loadings of the items to the correspondent construct.