Trust building behaviour within the Balinese fresh produce industry[1].

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Abstract

Regression analysis confirms that relational satisfaction communication and the availability of alternatives have a significant positive relationship on the development of trust between vegetable farmers and traders in Bali. While no relationship between power/dependence and a strong personal relationship was found to influence trust, the making of relational investments by traders had a significant negative relationship on trust, suggesting that such investments provide farmers with few tangible benefits.

Introduction

In Indonesia, the number of tourist arrivals has increased from 3,950,000 in 1994 to exceed 5,034,000 in 1994 (Hutabarat 1998; Luthfie et al 1995). As the main tourist destination in Indonesia, the number of tourist arrivals in Bali has increased from 436,000 in 1989 to more than 1,110,000 in 1996 (Diparda Tingkat I Bali 1995).

The marked increase in tourist numbers has substantially increased the demand for fresh food such as meat, fish, fruit and vegetables. Food is the third most important item of tourist expenditure in Bali, with most tourists spending 21% of their total expenditure on food (Erawan 1994). For the hotels, Antara and Susrusa (1991) estimate the demand for fresh vegetables to exceed 200 tonnes per month.

Institutions catering to the tourists buy most of their produce locally. However, there is a perception that the high class hotels may purchase greater quantities of produce from external sources (Bachmann 1988). This is believed to be because local farmers are unable to meet the needs of these institutional buyers who demand continuity of supply, consistent quality and other value-added services.

In most developing countries, and Indonesia is no exception, local farmers often find it difficult to satisfy the customers requirements, due to seasonal production, small land holdings, traditional cultivation methods, capital constraints and the lack of knowledge (Aksoy and Kaynak 1993).

In Indonesia, most farms vary in size from 0.2 ha to less than 5 ha (Soerojo et al 1991). In Bali, over 55% of farmers have landholdings less than 1 ha, most of who cultivate vegetable crops (Departemen Pertanian Propinsi Bali 1997). Vegetables are harvested from two major growing districts; Baturiti and Kintamani. From these two production areas, vegetables are sold to institutional buyers and consumers in the metropolitan centre (Denpasar) by collector agents and wholesalers.

[1] Batt, Peter J. and Nyoman Parining (2002), Trust building behaviour within the Balinese fresh produce industry in Batt, Peter J. (ed), Culture and Collaboration in Distribution Networks. Proceedings of the inaugural meeting of the IMP Group in Asia, December 11-13. Perth, WA. Curtin University.

According to Menegay et al (1993), there are two types of traders within the marketing system for fresh vegetables in Indonesia; (1) the tengkulak who predominate in the vegetable production areas; and, (2) the grosirs who distribute the vegetables within the major metropolitan areas. The larger tengkulak generally have a network of trusted farmers with whom they have regular input or cash support arrangements. Invariably, they also maintain a guarantee to purchase the crop at harvest.

Produce is sold to the tengkulak either via the tebasan system, where the price is negotiated before harvest, or the produce is delivered to the roadside immediately after harvest. In either case, farmers seldom bear the costs of transportation, grading or packing. Furthermore, since payments are invariably in cash, there is less chance of the farmer being cheated by unknown or unfamiliar traders. While farmers selling produce to the tengkulak often have well established personal relationships, the tengkulak generally purchase only small quantities and are reknown as being tough bargainers (Koster and Basuki 1991).

For the grosirs, Menegay et al (1993) describe three kinds; (1) the specialist grosirs who purchase only one kind of vegetable in large quantities from the major production areas; (2) semi-specialist grosirs who purchase two-three kind of vegetables in generally smaller quantities and (3) the diversified grosirs who buy several kinds of vegetables in moderate quantities.

While farmers selling directly to the grosirs are able to sell larger volumes and often negotiate a higher price, the grosirs often have strict quality criteria. Furthermore, many do not pay immediately for the produce they purchase and unlike the tengkulak, many are irregular buyers. Consequently, unless the grosir is well known to the farmer, there is a heightened element of risk in the transaction (Koster and Basuki 1991).

Trust

For any potential exchange, trust will be critical if two situational factors are present; risk and incomplete buyer information (Swan and Nolan 1985). Since most transactions present some degree of risk and uncertainty to the potential buyer, without some degree of trust, the perceived risk may be too great for the transaction to occur.

Trust provides a means of coping with risk and uncertainty in exchange relationships (Lane 2000). Risk arises because trusting behaviour potentially exposes one party to the presumed opportunistic behaviour of their exchange partner. In transaction cost economics (Williamson 1985), an exchange partner copes with the risk of opportunism by employing control mechanisms and by making opportunism costly. However, the existence of trust between exchange partners enables the transaction to occur without the rigidity and expense of hierarchical organisation, while, at the same time, minimising risk from opportunistic behaviour (Furlong 1996). Trust reduces transaction costs by enforcing honest behaviour.

Trust focuses on the belief or the expectation that the vulnerability arising from the acceptance of risk will not be taken advantage of by an exchange partner (Lane 2000). Hence, Anderson and Narus (1990) define trust as the belief that an exchange partner will perform actions that will result in positive outcomes for the firm and will not take unexpected actions that may result in negative outcomes. Moorman, Deshpande and Zaltman (1993) define trust as the willingness to rely on an exchange partner in whom one has confidence.

While both of these definitions view trust as a behavioural intention that reflects reliance on the other partner, both definitions, in part, capture quite different aspects of the construct. Moorman, Deshpande and Zaltman (1993) describe trust as a belief, a sentiment or an expectation about an exchange partner that results from the partner's expertise, reliability and intentionality. This component of trust, which Ganesan (1994) describes as credibility, is based on the extent to which the buyer believes that the supplier has the necessary expertise to perform the activity effectively and reliably.

However, trust also relates to the focal firm's intention to rely on their exchange partner. Ganesan (1994) describes this component as benevolence, because it is based on the extent to which the focal firm believes that its partner has intentions and motives beneficial to it. A benevolent partner will subordinate immediate self-interest for the long-term benefit of both parties and will not take actions that may have a negative impact on the firm (Geyskens et al 1998).

Plank, Reid and Pullins (1999) contest that trust can be defined as a global belief on the part of the buyer that a salesperson, product or company, will fulfil their obligations as understood by the buyer. As such, trust is not unidimensional, but rather, comprised of three individual components; salesperson trust, product trust and company trust.

Anderson and Narus (1990) and Doney and Cannon (1997) find it necessary to differentiate between trust in an individual and trust in an organisation. Heide (1994) considers inter-organisational trust to be a governance mechanism that mitigates opportunism in exchange transactions characterised by uncertainty and dependence (Pfeffer and Salancik 1978). Trust reduces the need for structural mechanisms of control (Achrol 1997) and firms learn to become more interdependent (Kumar 1997). When trust exists, buyers and suppliers believe that long-term idiosyncratic investments can be made with limited risk because both parties will refrain from using their power to renege on contracts or to use a change in circumstances to obtain profits in their own favour (Ganesan 1994; Doney and Cannon 1997; Geyskens et al 1998). Trust increases the partners tolerance for each others behaviour, facilitating the informal resolution of conflict, which in turn, allows the partners to better adapt to the needs and capabilities of the counterpart firm (Hakansson and Sharma 1996).

A buyer's trust in their supplier reduces the perception of risk associated with opportunistic behaviour, it increases the buyer's confidence that short-term inequities will be resolved over time and it reduces the transaction costs in an exchange relationship (Ganesan 1994). Trust is the critical determinant of many factors related to performance including the more open exchange of relevant ideas and emotions; greater clarification of goals and problems; more extensive search for alternative courses of action; greater satisfaction with efforts; and, greater motivation to implement decisions (Achrol 1997). Buyers who trust their suppliers are less likely to use alternative sources of supply and are more likely to accept any short-term inequities that may arise in the exchange relationship (Kumar 1996).

Trust building behaviour

Satisfaction

According to the disconfirmation of expectations model, customer satisfaction is the result of a comparison between a partner's performance and the focal firm's expectations (Oliver 1980). Whenever performance exceeds expectations, satisfaction will increase. Conversely, whenever performance falls below expectations, customers will become dissatisfied.

Between channel members, satisfaction has been defined as a positive affective state resulting from an appraisal of all aspects of a firm's working relationship with another (Frazier et al 1989). Geyskens, Steenkamp and Kumar (1999) propose that satisfaction should capture both the economic and non-economic (psychosocial) aspects of the exchange.

Economic satisfaction is defined as the channel member's positive affective response to the economic rewards that flow from the relationship (Geyskens et al 1999). An economically satisfied channel member considers the relationship a success when it is satisfied with the effectiveness and productivity of the relationship with its partner and the resulting positive financial outcomes. Channel members that are highly satisfied with the economic rewards that flow from their relationship generally perceive their partner as being more trustworthy. Furthermore, Mackenzie and Hardy (1996) propose that as satisfaction increases so also will trust.

> *H_1: The greater the extent to which the preferred trader is able to satisfy the farmer, the greater the farmer's trust in their preferred trader.*

However, satisfaction with the exchange also affects channel members moral and their incentive to participate in collaborative activities (Geyskens et al 1999). Both Frazier (1983) and Anderson and Narus (1990) suggest that satisfaction with past outcomes indicates equity in the exchange. Equity generally refers to the fairness or rightness of something in comparison to others (Halstead 1999). Equitable outcomes provide confidence that neither party has been taken advantage of in the relationship and that both parties are concerned about their mutual welfare (Ganesan 1994).

Conflict is one of the few constructs that is considered to have a direct negative effect on satisfaction (Frazier et al 1989). Firms that are able to lower the overall level of conflict in their relationship experience greater satisfaction (Anderson and Narus 1990). Conflict in channel relationships most often occurs over economic issues (Geyskens et al 1999). Channel members that are satisfied with the economic rewards that flow from their relationship generally perceive their partner as advancing their goal attainment as opposed to impeding or preventing it. Satisfactory conflict resolution will increase mutual trust and reinforce each members commitment and confidence that mutually satisfying outcomes will continue to be obtained (Thorelli 1986)

However, not all conflict is negative, nor does a relationship mean that all conflict has been resolved (Hakansson and Snehota 1995). A small amount of conflict may prove necessary to keep the relationship between two firms healthy. Occasional conflict can reduce the inertia in a business relationship, reshaping existing routines into new, potentially more effective solutions (Tikkanen et al 2000).

Nevertheless, what is more significant is the manner in which the conflict is resolved. Geyskens, Steenkamp and Kumar (1999) suggest that the most pervasive channel construct known to influence satisfaction is the use of power. Satisfaction increases when non-coercive sources of power are employed (Frazier 1983). Non-coercive influence strategies include information exchange and the discussion of business strategies and requests (Frazier and Summers 1986).

Communication and information exchange

Communication has been described as the glue that holds together a channel of distribution (Mohr and Nevin 1990). Communication in marketing channels serves as the process by which persuasive information is transmitted (Frazier and Summers 1984), participative decision-making is fostered, programs are coordinated (Anderson and Narus 1990), power is exercised (Gaski 1984) and commitment and loyalty are encouraged (Anderson and Weitz 1992). Communication enables information to be exchanged that may reduce certain types of risk perceived by either one of the parties to the transaction (Cunningham and Turnbull 1982; McQuiston 1989).

The more information a party has and feels they can obtain, the more likely they will be to trust their exchange partner (Moore 1999). Trust develops from the constant and detailed exchange of information that reduces performance ambiguity (Han et al 1993).

In the context of the fresh fruit and vegetable industry, buyers and sellers want to know the extent to which their exchange partner has been buying or selling from others and whether their partner has been reporting the correct prices (Lyon 2000).

> *H_2: The more market information the preferred trader provides to the farmer, the more the farmer's trust in their preferred market agent will increase.*

Tomkins (2001) defines trust as the adoption of a belief by one party in an exchange relationship that the other party will not act against their interests, where this belief is held without undue doubt or suspicion in the absence of detailed information about the actions of the other party. Trust implies adopting such a belief without full information.

However, trust building is a dynamic process dependent upon information. In the early stages of a relationship, commitments are usually less extensive and there will be little need for trust and information (Wilson 1995). However, as the relationship matures, there will be a positive association between trust and information, for trust cannot increase without information. Meaningful communication between firms in a working relationship is therefore a necessary antecedent of trust (Anderson and Narus 1990).

Personal relationships

Interpersonal trust in business-to-business relationships is rarely offered spontaneously; rather, it results from an extended period of experience with an exchange partner (Dwyer et al 1987; Lane 2000). During this time, knowledge about the exchange partner is accumulated, either through direct contact, or indirectly through reliable third parties.

Interpersonal trust between individuals is based on familiarity, developed either from previous interactions or derived from the membership of similar social groups. Zucker (1986) describes how characteristics-based trust rests on social similarities that assume cultural congruence because both parties belong to the same social group or community. They may share a common religion, ethnic status, or family background. Fukuyama (1995) describes how trust evolves in relationships where common values and norms, often based on kinship, familiarity and common interests and backgrounds predominate. In transitional economies, Fafchamps (1996) describes how in the absence of any effective mechanism by which information about bad payers can be widely shared, firms must carefully screen potential exchange partners. However, the costs of this screening process add appreciably to the costs of the transaction and may significantly reduce the firm’s reach. To reduce screening costs, firms may simply infer things about one another from easily observed characteristics including race, sex or ethnicity.

When contracts cannot be enforced, firms build up personalised trust relationships. Moore (1999) describes how trust is developed on the basis of personal relationships within both narrow and specific social and economic networks. An evaluation of a person’s trustworthiness may be based upon the memberships that each share in the same clan, the same village, ethnic group or social group, or upon the membership that only one party holds of a specific group, where the process of acquiring and maintaining membership of that group involves some rigorous evaluation of personal character. In Ghana, Lyon (2000) describes how many business relationships are referred to in terms of personal friendships. These friendship ties mean that the party providing the goods has greater confidence that the exchange partner will repay the money because of moral obligations to reciprocate. Long-term friends are perceived as being more reliable. Granovetter (1985) concludes how trust is embedded in particular social relations and the obligations inherent within them.

Anderson and Narus (1990) seek to differentiate between trust as a construct in inter personal relationships and trust within working relationships. In interpersonal relations, participants expose themselves and their resources to potential loss, whereas in inter organisational relations it is the firm that potentially incurs the loss. In small family farms, since it is seldom possible to separate farm business activities from household activities, interpersonal trust is anticipated to assume greater importance.

> *H_3: The more close the personal friendship that the farmer’s most preferred trader is able to maintain with the farmer, the greater the farmer’s trust in their preferred trader.*

The making of relationship-specific investments

If a firm wishes to improve its relationship with another, then in all probability, the firm will need to commit various resources to the relationship, whether expressed in terms of managerial or sales force time, product or service development, process, financial or administrative adaptations (Ford et al 1996). Any resource committed above and beyond that required to execute the current exchange transaction can be regarded as an investment (Campbell and Wilson 1996).

An investment is the process in which resources are committed in order to create, build or acquire resources that may be used in the future (Easton and Araujo 1994). Through interacting with other firms and committing resources to specific relationships, firms have the opportunity to use relationships as a resource for the creation of other resources, product adaptations and innovations, process improvements, or to provide access to third parties (Hakansson and Snehota 1995).

Adaptations are a significant feature in the dynamics of business relationships. One or both parties may make adaptations to bring about an initial fit between their needs and their capabilities, but adaptations may also be necessary in an on-going relationship as the parties are exposed to changing business conditions (Hallen et al 1991). The better adapted to each other the firms become, the more efficient coordination becomes, thus paving the way for more and more adaptations.

Inter-firm adaptations imply considerable investments by one or both firms. Since these investments are seldom transferable to other business relationships, adaptations tend to bond buyers and suppliers together in a closer relationship and to create barriers to entry for potential competitors (Wilson 1995). Inter-firm adaptations build trust by indicating one partner’s willingness to accommodate the needs of the other (Athaide et al 1996).

Firms adjust products and processes to their partner’s requirements, subject to the various constraints imposed by technology and economics (Easton 1992). Hakansson and Lundgren (1995) see technological innovation as being an interactive process, largely dependent on the exchange of technical information between individuals, organisations and institutions.

Feder, Just and Zilberman (1985) indicate that a farmer’s technological choices are based primarily upon their exposure to information regarding the new technology. After each growing period, the actual yields, revenues and profits are realised and this added information, as well as the experience accumulated during the period and information gained from other farmers, updates the parameters the farmer uses in making the next decision. However, output prices are often highly variable and their uncertainty may affect the farmer’s technological choices.

Where technological innovations are involved, firms should consider how they can help their partner to rationalise their decision making so as to achieve the full benefits from the innovation. Education and training includes the broad set of activities that a firm undertakes to help its partner get an innovation up and running (Athaide et al 1996). Farmers often need to be educated about the potential applications of a new technology before they can evaluate its appropriateness. Often this education process revolves around managing their expectations, which may require providing tangible evidence of product performance. Providing tangible evidence of product performance will not only reduce the farmer's perceived risk of adoption, but also provide an opportunity to gain the farmer's trust by being honest about the product's performance.

However, many of these investments are limited to a range of business opportunities and may be specific to a potential trading partner. The extent to which the firm making the investment is exposed to potential loss is dependent upon the asset specificity. Asset specificity refers to the ease with which an investment can be redeployed to alternative uses or alternative users without incurring a significant loss in value (Easton and Araujo 1994). Many of these relationship specific investments are not readily re-deployable, or at least, have a substantially reduced value in an alternative relationship, thus exposing the firm to the possibility of exploitation by an opportunistic trading partner (Williamson 1985).

Nevertheless, Williamson (1985) suggests that investments stabilise relationships by altering the firm's incentive structure. By making relationship specific investments, the firm creates an incentive to maintain the relationship. Engaging in opportunistic behaviour and thereby risking the dissolution of the relationship is contrary to the self-interest of the channel member, for, if the opportunism is detected and the relationship is terminated, the investment may not have generated adequate returns.

Furthermore, the making of such relationship specific investments may also provide a powerful signal to the other party. Observing the other party's pledges causes the channel member to be more confident in the other party's commitment to the relationship, because the other party will sustain considerable economic loss if the relationship is terminated (Anderson and Weitz 1992). Relationship specific investments offer tangible evidence that the supplier can be believed, that it cares for the relationship and is willing to make sacrifices (Ganesan 1994). Thus, the making of relationship specific investments may provide a strong signal of the channel partner's trustworthiness.

> *H_4: The greater the extent to which the preferred trader is willing to make relationship-specific investments, the more trust the farmer will place in their most preferred trader.*

Power-dependence

When the outcomes obtained from the relationship are important or highly valued, the focal firm is said to be more dependent (Heide and John 1988). The same is also true when the magnitude of the exchange is higher (Lohtia and Krapfel 1994). The higher the percentage of sales and profits that arise from handling a particular product line and the greater the expectations of sales and profits in the future, the greater the focal firm's dependence (Frazier et al 1989). Thus, a firm is considered more dependent upon another when the exchange partner provides a larger proportion of its business.

Dependence is also increased when the outcomes obtained from the relationship are comparatively higher than or better than the outcomes available from any alternative relationship. Firms dealing with the best partner are more dependent because the outcomes associated from trading with that partner are better than those available from alternative partners (Heide and John 1988). In this respect, Anderson and Narus (1990) view dependence as the outcomes given comparison level for alternatives. Dependence is a measure that represents the overall quality of the outcomes available to the focal firm from the best alternative exchange relationship. Over many transactions, since the focal firm observes that the best available exchange partner repeatedly follows through with its promises, they posit a positive relationship between dependence and trust.

However, it is the firm's perception of its dependence relative to its partner that is of most interest in channel relationships. Relative dependence determines the extent to which a firm will have influence over or be influenced by its exchange partner (Anderson and Narus 1990). With increasing dependence comes greater vulnerability making one firm more susceptible to the power and influence of another. The more powerful partner may be in a position to create more favourable terms of trade for itself (Heide and John 1988; Frazier et al 1989; Lohtia and Krapfel 1994).

Dependence therefore refers to the firm's need to maintain the channel relationship in order to achieve its desired goals (Frazier et al 1989). Dependence can be regarded as the price the focal firm has to pay for the benefits that it obtains from its relationships with others (Easton 1992). As such, dependence is partly a matter of choice and partly a matter of circumstances.

The manner in which power is distributed in the relationship will dictate the way in which the relationship both operates and develops. The manner in which the more powerful partner chooses to use its power will have a significant impact on the relationship. If the more powerful firm is perceived to be using its power to achieve collective goals and does not impede the other in attaining its desired rewards, a high level of goal compatibility will exist. Conversely, if the firm is perceived to frequently pressure the other into taking actions that are against its own interests, conflict will inevitably result and trust will decline (Frazier and Summers 1986). Partners will resist further influence attempts and try to enhance their power at the expense of the other. Trust is reinforced by a problem solving approach rather than those orientated towards control (Achrol 1997).

> *H_5: The more power the preferred trader exercises, the more the farmer's trust in their preferred trader will decline*

Availability of alternatives

Even when a dependent party does not trust its partner, it may maintain the relationship simply because of the benefits it derives (Andaleeb 1996). In such circumstances, dependence often arises because of the difficulty firms experience in finding alternative exchange partners; the more difficult it is to replace the channel partner, the more the focal firm is dependent on its partner (Heide and John 1988). The investment the firm needs to put into developing a new relationship in terms of time, effort and money, as well as the perceived costs of switching to an alternative exchange relationship can also contribute to its dependence on another firm (Frazier 1983).

While exploiting a powerful position will make it difficult for the firm to establish trust (McCutcheon and Stuart 2000), agents are less likely to behave in a detrimental manner when they are aware of the ability of the focal firm to readily find an alternative partner. The ease with which buyers can switch to alternative sources of supply gives them the ability to punish untrustworthy suppliers by readily discontinuing their relationship (Cannon and Perreault 1999).

> *H_6: As the number of alternative traders increases, the more the farmer's trust in their most preferred trader will increase.*

Methodology

Midway through 2001, 200 vegetable farmers in Bali (Indonesia) were asked to respond to a comprehensive questionnaire that sought to investigate the nature of the farmer's relationship with their most preferred trader.

Equal numbers of farmers (100) were selected from the two major vegetable growing areas of Bedugul and Kitamani (Departemen Pertanian Propinsi Bali 1997). In the absence of any reliable list of farmers, contact names and addresses of potential respondents were provided by the head man of each village selected for the survey. The only criteria for selection was that the respondent was a full-time vegetable farmer.

Developed from the extent literature on buyer-seller relationships, the survey instrument was written in English before translation by academic staff at Universitas Udayana to Bahasa Indonesia. Interviews were conducted in the farmer's home by two research assistants from Universitas Udayana.

Farmers were first asked to respond to a number of open-ended questions about the nature of their farming enterprise and the means by which they disposed of their crops. Farmers were then asked to respond to a number of questions that sought to describe the criteria they used in their decision to select a particular trader and the nature of their relationship with their most preferred trader. Information was sought on the farmer's satisfaction with the exchange, trust, power/dependence, communication and the various relationship specific investments the preferred trader made to maintain the relationship. The various item measures were developed from the literature reported by Anderson and Narus (1990), Anderson and Weitz (1992), Athaide, Meyers and Wilemon (1996), Doney and Cannon (1997), Ford (1984), Frazier (1983), Frazier, Gill and Kale (1989), Heide and John (1988), Ganesan (1994) and Gundlach, Achrol and Mentzer (1995).

The various item measures were then analysed using principal component analysis (with Kaiser normalisation and varimax rotation). Those items with factor loadings below 0.5 or with cross-loadings greater than 0.4 were excluded (Nunnally 1978). Further clarification of the contribution each item made to the corresponding factor was achieved by applying the reliability coefficient (Cronbach 1951). The resultant factors were then regressed against the dependent variable (trust) in order to test the hypothesis.

Trust was assessed by seven item measures derived from Moorman, Deshpande and Zaltman (1992) and Doney and Cannon (1997). Principal component analysis produced a two factor solution that collectively explained 53% of the variance. However, after applying the reliability coefficient (Cronbach's alpha) only the first factor was accepted (Table 1).

Table 1. The trust dimension.

	Factor score	
	1	2
I have confidence in my preferred trader	0.877	
I trust my preferred trader	0.869	
I believe my preferred trader has the necessary expertise to market the produce I grow*	0.639	
My preferred trader always keeps their promises*	0.548	0.559
My preferred trader always considers my best interests*		0710
My preferred trader is not always sincere* [R]		0.594
I believe the information provided by my preferred trader*		0.563
Cronbach's alpha	0.818	0.325

* item deleted

Results

From the farmers responses to the remaining 21 prepared statements, principal component analysis produced six factors that collectively explained 69% of the variance (Table 2).

Table 2. Results of principal component analysis.

	Mean	SD	Factor score
Power/dependence			
I am more dependent upon my preferred trader than they are upon me	3.00	1.82	0.831
I have no choice other than to adhere to my preferred trader's demands	2.89	1.76	0.793
Over time I have become more dependent upon my preferred trader	2.81	1.93	0.790
My preferred trader has all the power in our relationship	3.63	1.88	0.688
My preferred trader determines what I grow, when I grow plant and when I harvest	2.61	1.77	0.660
My preferred trader controls all the information in our relationship	3.04	1.80	0.646
Cronbach's alpha			*0.859*

Relational investments			
My preferred trader frequently provides education and training programs	3.22	2.19	0.877
My preferred trader often suggests that we should aim to coordinate production schedules	3.72	1.97	0.785
I look to my preferred trader for advice on what crops to grow	3.60	2.10	0.751
My preferred trader keeps me well informed on technical matters	4.24	1.95	0.639
Cronbach's alpha			*0.834*
Communication			
My preferred trader often advises me of potential market demand	5.46	1.69	0.855
My preferred trader frequently informs me of product quality and service requirements	5.39	1.69	0.842
My preferred trader keeps me well informed of prices in the market	5.53	1.59	0.755
Cronbach's alpha			*0.815*
Relational satisfaction			
My preferred trader treats me fairly and equitably	6.03	1.11	0.761
My preferred trader is quick to handle complaints	5.23	1.56	0.719
I feel I am adequately rewarded by my most preferred trader	5.79	1.12	0.708
My preferred trader often meets my expectations	5.51	1.36	0.685
Cronbach's alpha			*0.740*
Personal friendship			
My preferred trader is a close personal friend	4.23	2.05	0.894
I have a close personal friendship with my preferred trader	4.34	1.76	0.816
Cronbach's alpha			*0.760*
Alternative traders			
I can choose between several traders	5.61	1.47	0.840
I am free to choose another trader at any time	5.63	1.46	0.748
Cronbach's alpha			*0.655*

where 1 is "I disagree a lot" and 7 is "I agree a lot"

Factor 1 (power/dependence) captured six items that collectively evaluated the extent to which the preferred trader had all the power in the relationship (Frazier, Gill and Kale 1989) and controlled all the information. While most farmers (62%) cropped fewer than 0.5 hectares, the majority of farmers indicated that they were neither dependent, nor did they have to comply with the traders demands. With only 55% of farmers selling more than 80% of their vegetable crop to traders, most farmers had one or more alternative market outlets including direct sales to village or adjacent markets, or the option of retaining the produce they had grown for self consumption or animal feed.

Factor 2 (relational investments) was a measure of the extent to which traders were willing to provide education and training programs, to provide advice (derived from Athaide, Meyers and Wilemon 1996) and the extent to which the trader sought to coordinate production plans (Ford 1984). Most farmers indicated a somewhat neutral approach, suggesting that while some traders readily provided technical support, others were much less forthcoming.

Factor 3 (communication) was a measure of the extent to which the preferred trader advised the farmer of potential market demand, product and service requirements and the prevailing prices in the market (derived from Anderson and Narus 1990, Anderson and Weitz 1992 and Athaide, Meyers and Wilemon 1996). Most farmers indicated that their preferred traders readily provided market information.

Factor 4 (relational satisfaction) was derived from the farmer’s perceptions of having been adequately rewarded and treated fairly and equitably (Frazier 1983). Relational satisfaction was enhanced by the speed with which the preferred trader responded to the farmer’s complaints (Ford 1984) and the extent to which the trader met the farmer’s expectations (Anderson and Narus 1990). Most farmers indicated that they were highly satisfied in their relationship with their most preferred trader. Most farmers (60%) indicated that they had been transacting with their preferred trader for between one to five years, with 99% of farmers indicating that it was their intention to continue to transact with their preferred trader.

Factor 5 (personal friendship) captured two items that sought to measure the extent to which the farmer’s most preferred trader was a close personal friend (derived from Achrol 1997). While most farmer’s indicated that personal friendships were involved in their relationship with their most preferred trader, the somewhat neutral position adopted by most farmers suggested that a more arms-length business relationship was more appropriate in their transactions with traders.

Factor 6 (availability of alternatives) was comprised of two items (derived from Heide and John 1988) that sought to evaluate the extent to which farmers could readily choose an alternative trading partner. Most farmers indicated that they could readily switch between alternative traders should they find it necessary or desirable to do so.

The six principal components were then regressed against the single dependent variable (trust) using linear regression (Table 3).

A significant positive relationship between relational satisfaction and trust, the availability of alternatives and trust and communication and trust was confirmed. However, no relationship between power/dependence and trust or personal friendship and trust could be confirmed. Quite contrary to expectations, a significant negative relationship between the trader’s willingness to make relational investments and the farmer’s trust in their preferred trader was identified.

Table 3. Results of regression analysis

	Beta	t	Sig.	Hypothesis
Relational satisfaction	0.287	4.736	0.000	Accepted
Alternatives	0.242	4.005	0.000	Accepted
Communication	0.182	3.009	0.003	Accepted
Power/dependence	0.111	1.827	0.069	Rejected
Personal friendship	-0.024	-0.078	-1.294	Rejected
Relational investments	-0.322	-5.320	0.000	Accepted*
Adjusted R^2 = 0.274				
Standard error = 0.662				

Discussion and conclusions

While there is much empirical support for a significant positive relationship between relational satisfaction and trust (Mackenzie and Hardy 1996, Geyskens et al 1999), the availability of alternatives and trust (Cannon and Perreault 1999) and communication and trust (Han et al 1993, Moore 1999), the finding of a significant negative relationship between the trader's willingness to make relational investments and the farmer's trust in that trader was quite unexpected. While the majority of the literature anticipates a significant positive relationship between the making of relational investments and trust (Ganesan 1994), and there is strong empirical support for this relationship in the fresh produce industry in Western Australia (Batt 2002), it would seem that, at least from the Balinese farmers perspective, accepting and adopting these relational investments provides few tangible benefits.

In the fresh fruit and vegetable industry, farmers are often reluctant to enter into any long-term agreements with customers because such contracts inherently exclude farmers from transacting in the open market and taking advantage of the inordinately high prices that arise from time to time. In the processing industry, where product requirements are often quite dissimilar to those required in the fresh market, produce may not be able to readily change markets. Furthermore, as corporate ownership of plant varieties becomes more common, opting to grow a specific variety under contract may by necessity infer that the farmer has only one customer. Not unexpectedly, in such a situation, farmers fear exploitation. In such a situation, trust will assume far greater importance, however, the extent to which farmers choose to trust or not to trust will be tempered by previous interactions.

In Bali, Batt and Parining (2001) conclude that under the current system of marketing, where farmers are encouraged to sell their produce ungraded to local collector agents and traders, there is no financial incentive for farmers to improve product quality. Since the majority of relational incentives made by the traders seek to improve product quality or at least to improve the traders capacity to better fulfil their customers needs, it is not surprising that the majority of farmers may choose not to adopt these innovations or to enter into long-term agreements where farmers believe they are less able to exploit opportunities in the market. Lyon (2000) suggests that trust is calculative; actors make rational conscious decisions that minimise transaction costs in order to maximise their individual gains. If farmers cannot see any tangible benefits arising from the adoption of improved technologies, such investments may be perceived as simply an unnecessary cost which will, understandably, result in a significant reduction in trust.

There is abundant literature to support the importance of previous interactions in both the development and maintenance of trust. Prior experience provides opportunities to build credibility and trust (Dwyer et al 1987, Anderson and Narus 1990). Zucker (1986) describes how trust is based on first-hand experience; repeated transactions enable the exchange partners to better understand each other's motives and priorities. Luhmann (1979) argues that trust involves a learning process that is only complete when the person to be trusted has had the opportunity to betray trust. Personal experience is therefore the best indicator of the underlying trustworthiness of an exchange partner.

While Bradach and Eccles (1989) describe how trust evolves between exchange partners where there are common values and the relationship is embedded in personal friendships, no significant relationship between personal friendship and trust could be found. Fafchamps (1996) describes how when firms feel uncertain about the reliability of a customer, the firm will express an overwhelming desire to conduct business with people they already know. However, Fafchamps warns that non-business relationships (with relatives, neighbours, church mates) play little role in identifying trustworthy clients, and goes as far to suggest that, "selling on credit to relatives and neighbours is as good as signing a death warrant for the firm". Personal relationships often get in the way of pressuring customers for non-payment. Consequently, the inability to find a significant positive relationship between personal relationships and trust is not entirely unexpected.

Clearly, that factor which is most influential in building trust between vegetable farmers and traders is relational satisfaction. Farmers are most satisfied when they believe they have been treated fairly and equitably, when the farmer's expectations of what they think they should receive have been met and when farmer's feel adequately rewarded for their efforts. Whenever economic outcomes are higher than expected, farmer's may attribute a great deal of credit to their trading partner. In doing so, the farmer's attraction to and trust in their most preferred trader will increase (Geyskens et al 1998). Since satisfaction is also inversely related to channel conflict (Frazier 1983), the speed with which the trader addresses the farmer's complaints will lower the overall level of conflict in the relationship and have a significant positive impact on trust.

With trust, outcomes can be more reliably predicted which, in turn, makes both exchange partners feel more secure in their relationship (Andaleeb 1996). Conversely, when there is little trust between partners, the relationship becomes risky, costly and fragile and the outcomes much more uncertain. In order to operate with some degree of predictability, firms have to be able to take and place orders, arrange for future deliveries and to dissociate payment from the physical delivery of goods and services (Fafchamps 1996). Poor performance will have major implications through the system, travelling both up-stream and down-stream through the network. Trust reduces complexities and discloses possibilities for action that may have otherwise remained improbable and unattractive.

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