An empirical investigation of customer dependence in interpersonal buyer-seller relationships

Kareem Abdul Waheed
Institute of Management Technology, Dubai International Academic City, Dubai, UAE, and
Sanjaya S. Gaur
AUT Business School, Auckland University of Technology, Auckland, New Zealand

Abstract
Purpose – In the current highly competitive marketing environment, there are few situations in which customers attempt to build and maintain relationships with marketers. In large-format retail situations, customers maintain a non-personal association with the store and personal relationships with salespersons. By contrast, many customers in developing countries such as India build and maintain long-term relationships directly with the small-scale retailers, who happen to be the owners as well as the salespersons of the store. The purpose of this paper is to focus on customer dependence on the retailer, a rare phenomenon which is evident in rural areas of India even today.

Design/methodology/approach – The paper is based on an empirical study of a buyer-seller relationship between a farmer and a chemical fertilizer retailer, which is a common interpersonal business constellation in India.

Findings – The paper identifies the determinants of customer dependence as customer perceived market uncertainty, product importance and product familiarity. The paper also explains the positive effects of customer dependence on customer trust.

Originality/value – Traditionally, customer dependence is viewed as a structural constraint in relationship outcomes. The effect of customer dependence on power, control and opportunistic behavior in the buyer-seller relationship context is well researched. This paper applies an interpersonal trust-development perspective and views customer dependence as a positive relationship construct and fills an apparent gap in research on customer dependence in the context of the interpersonal buyer-seller relationship.

Keywords India, Rural areas, Buyer-seller relationships, Customer dependence, Customer trust

Paper type Research paper

Introduction
In the current highly competitive marketing environment, there are few situations in which customers attempt to build and maintain relationships with marketers. In large-format retail situations, customers maintain a non-personal association with the store and personal relationships with salespersons. By contrast, many customers in developing countries like India build and maintain long-term relationships. The authors are grateful to Dr Brian Bloch for his comprehensive editing of the manuscript.
directly with the small-scale retailers, who happen to be the owners as well as the salespersons of the store.

The relationship marketing research extensively covers such variables as customer dependence, satisfaction, trust and loyalty, which play an important role in building and maintaining long-term relationships (Anderson and Narus, 1990; Morgan and Hunt, 1994; Andaleeb, 1995; Rajaobelina and Bergeron, 2009; Kassim and Abdullah, 2010). With regard to research in the retail domain, there is a focus on customer satisfaction, trust, loyalty and emotional attachment (Westbrook, 1981; Macintosh and Lockshin, 1997; Reynolds and Beaty, 1999; Vlachos et al., 2010).

In this paper, we focus on customer dependence on the retailer, a rare phenomenon which is evident in rural areas of India even today. Dependence is an important initiating variable for buyer-seller relationship. Dependence has been studied in the marketing channel and industrial buying literature (Andaleeb, 1995, 1996; Lusch and Brown, 1996; Gassenheimer et al., 1996, 1998; Joshi and Arnold, 1998) with an interorganizational relationship perspective. Retailing in India is still dominated by an interpersonal-based buyer-seller relationship. To the best of our knowledge, no study in the field has researched customer dependence from an interpersonal buyer-seller relationship perspective. We attempt to identify the determinants of customer dependence and study the effects on customer trust both through the literature and conceptual model development. We conducted a survey to study customer dependence in the relationship between a farmer and a chemical fertilizer retailer, which is an example of a typical interpersonal buyer-seller relationship in Indian context.

**Literature review**

The extant literature suggests that dependence of one party on another provides power to the less dependent party (Anderson and Narus, 1984; Dwyer et al., 1987; Ganesan, 1994). There is broader research on the negative aspects of dependence for long-term relationships (Johnson, 1999). The negative aspects of dependence are evident when the powerful party tends to enforce a control mechanism then the dependent party tends to behave opportunistically. This phenomenon ultimately discourages parties from maintaining long-term relationships (Andaleeb, 1995, 1996; Monczka et al., 1995). It is therefore useful to understand coordinative behavior between buyer and seller subject to asymmetric dependence.

Emerson (1962) developed dependence theory in an interpersonal dependence perspective. According to this theory, dependence is defined as the degree of dependence of one individual on another as a multiplicative function of two factors: the value of the goal that the other individual mediates and the perceived availability of alternative avenues for achieving the goal. In other words, the dependence of an individual on a source person is directly related to the rewards obtained from that source and inversely related to the number of alternative sources of those rewards.

From an interorganizational perspective (Pfeffer and Salancik, 1978, p. 51), dependence is defined as “the product of importance of a given input or output to the organization and the extent to which it is controlled by relatively few organizations”. Pfeffer and Salancik (1978) further describe dependency as a measure of the potency of the external organizations or groups in a given organizational environment, and of the extent to which organizations must be taken into account, perceived as important and considered in organizational decision making. The pressure on organizations to comply
with external demands is especially significant when the level of dependency is high. Pfeffer and Salancik (1978) also mention three critical factors which determine the dependence of one organization on another:

1. the extent to which the interest group has discretion over resource allocation and use;
2. the extent to which they are limited by the availability of alternatives, or the extent of control over the resource by the interest group; and
3. the essentiality of the resource, the extent to which the organizations require it for continued operation and survival.

Frooman (1999) describes resource essentiality as a function of two factors:

1. the relative magnitude of exchange; and
2. criticality.

The percentage of inputs to outputs accounted for by an exchange determines the relative magnitude of the exchange. Hence, one organization depends on another if a large proportion of its inputs are supplied by the latter. The criticality of a resource has to do with whether an organization can exist without it. Therefore, for an organization to be effective and increase its probability of survival and success, it has to deal with influences from external actors. An organization can undertake three types of action. The first is to comply with such influence. The second response is to evade it, and the final is to alter external demands by modifying its relationships with external actors. According to the theory, organizations take actions to reduce the risk caused by uncertainty in interdependencies, by modifying their relationships with the external environment (Stern and Reve, 1980).

Resource dependence theory (RDT) has been applied in the marketing field, mostly in the marketing channel literature, in order to understand the effects of dependence between the channel partners (Cronin et al., 1994; Gassenheimer and Ramsey, 1994; Andaleeb, 1996). RDT has also been applied in industrial buying situations (Biong and Selnes, 1995; Joshi and Arnold, 1998; Handfield and Bechtel, 2002). RDT has been applied both to marketing channels and industrial buying situations, in an interorganizational perspective of dependence.

De Wulf (1999) questions the use of RDT in explaining long-term exchange relationships resulting from coordinative behavior based on trust. Trust is a basic component in any human interaction (Gambetta, 1988). In marketing, trust is studied in interpersonal as well as interorganizational-based buyer-seller relationships in various contexts (Morgan and Hunt, 1994; Dwyer et al., 1987; Macintosh and Lockshin, 1997; Kennedy et al., 2001; Dagger and O’Brien, 2010). Customer dependence and trust are closely related constructs (Andaleeb, 1995, 1996). There is a dearth of literature on the link between customer dependence and trust. We attempt to apply an interpersonal trust development perspective (Lewicki and Bunker, 1996) to the effects of customer dependence in interpersonal buyer-seller relationships.

Several empirical studies identify a strong positive association between dependence and commitment (Goodman and Dion, 2001; Gutierrez et al., 2004; Sriram et al., 1992; Iacobucci and Ostrom, 1996). Hence, the focus of the present study is on direct effect of dependence on trust. However, we do not consider the effect of dependence on commitment, as this issue has already been studied comprehensively.
Customer dependence in interpersonal buyer-seller relationships

Figure 1 shows the proposed conceptual model of determinants of customer dependence and both direct and indirect effects of customer dependence on customer trust in interpersonal buyer-seller relationships. Customer-perceived product familiarity, product importance and supply uncertainty are expected to impact on customer dependence on the seller. Customer dependence should impact directly on customer trust.

Determinants of customer dependence and customer trust

Product familiarity. This concept refers to the degree of knowledge of a particular product or service (Alonso, 2000; Tuu and Ottar, 2009). Increased product knowledge increases the expertise of the customer (Alba and Hutchinson, 1987). Knowledgeable customers consider the purchase decision making less complex compared to less knowledgeable (Dellaert and Stremersch, 2005). Product knowledge provides confidence to the customers and it acts as a precursor for expert power (Chinomona and Pretorius, 2011). There are numerous studies in distribution channel relationships area that suggest supplier’s expert power enables the supplier to infuse control mechanism in a non-coercive way and involve the customer to be non-coercively committed to the relationship and exhibit cooperative behavior (Harsini, 2001; Sahadev, 2005; Zhao et al., 2008; Lindblom et al., 2009). Because, customers perceive high risk when they lack product/service expertise, they tend to depend on a particular seller or service provider (Bendapudi and Berry, 1997; Schultze, 2003). Also, as argued by Chakrabarty et al. (2010), highly dependent customers need the products/services of the selling organization and the knowledge and expertise of salespeople. Hence, the supplier’s expert power necessitates the customer to depend on the supplier. When customers gain such an expert power which supplier possesses, they need not follow the control mechanism of the supplier and be not dependent on the supplier. Furthermore, expert power enables customers to switch easily between suppliers as their perceived switching costs is reduced, especially their procedural costs of switching (Burnham et al., 2003).

There are a couple of empirical findings that support our above argument. Selnes and Hansen (2001) argued that the frequent use of self service (which is commonly used by informed customers) by customers reduces the perceived utilitarian value of service person and found that it reduces the social bonding between the customer and the service person. Capraro et al. (2003) examined the relationship between level of knowledge about alternatives and defection in the context of actual health insurance choices and found that the level of objective and subjective knowledge about alternatives has a direct effect on likelihood of defection – above and beyond satisfaction level. Hence:
H1a. The greater the level of customer product familiarity; the lower the level of customer dependence on the retailer.

As mentioned in the above paragraph, product familiarity refers to the degree of knowledge of a particular product or service (Alonso, 2000; Tuu and Ottar, 2009). Knowledge reduces perceived risk, improves the confidence and provides expert power to the power holder (Reynolds and Beatty, 1999; Bendapudi and Berry, 1997; Schultze, 2003). Expert power reduces conflict and enhances the satisfaction between the exchange partners (Lee, 2001). One party’s expert power leads the other party to trust the former. Extant literature in marketing channels also suggests that the supplier expert power positively impacts customer trust (Harsini, 2001; Sahadev, 2005; Chinmona and Pretorius, 2011). In retailing context, Busch and Wilson (1976) conducted an experimental analysis of salesman expert and referent social power on customer trust in the salesman and found that the customers perceive both sources of power to be trustworthy. Also, they found that the expert power was more important than referent power in affecting customer trust. When the customer acquires that expertise which the salesman possesses, then the situation becomes different. Bell and Eisingerich (2007) argued that the customer investment expertise will reduce their loyalty to the financial service provider (although they did not find empirical support for their argument).

If a customer trusts a trader solely regarding the task of the trader, it is considered as a low degree of trust (Kao, 1998). When the customer is familiar with the task that the trader is performing for him, it is logical to conclude that the former need not trust the later. There are divergent empirical findings on this issue. Coulter and Coulter (2003) found that customer knowledge/familiarity acted as a negative moderator on the impact of perceived service person “personality related” characteristics (e.g. empathy) on customer trust. A negative impact of product familiarity on trust was tested empirically in a developing country context by Andaleeb and Anwar (1996), who found a non-significant relationship. However, a research from a developed country by Kennedy et al. (2001) yielded a significant negative relationship between product familiarity and trust in the salesperson, which suggests the need for further investigation. Hence:

H1b. Increased customer product familiarity is associated with lower levels of customer trust in retailers.

Product importance. Bloch and Richins (1983, p. 71) define perceived product importance as, “the extent to which a consumer links a product to salient, enduring or situation-specific goals”. Product importance is derived from the product characteristics, consumer characteristics and purchase situation (Bloch and Richins, 1983). If the product is perceived to be important to customer goals, risk perceived by the customer will be high (McQuiston, 1989). In such situations, customers always try to reduce the perceived risk, tending to acquire more information about the availability of alternatives. If there are alternatives available, they would be in a more powerful and comfortable position than the suppliers. Otherwise, customers have to depend on the supplier. Customer dependence on the supplier is one way by which the customer attempts to reduce perceived risk (Pires and Stanton, 2005). Customers need to depend on the supplier when they perceive their product purchase decisions to be important. Hence:

H2a. The greater the perceived importance of the product, the greater the customer dependence on the retailer.
Product importance is the perceived significance of the buying decision in terms of the size of the purchase and/or the potential impact of the purchase on the buyer (Kool et al., 1997). Shepherd and Zacharakis (2003, p. 155) argued that “if the purchase price represents a significant amount of the buyer’s income and/or represents an emotional decision, then the importance placed on the product is high”. It also increases the expectations of the customers (Patterson et al., 1997). Conceptually, product importance refers to the perceived consequences of making the wrong decision and determines the amount of time the buyer allocates to the purchase decision. The more important the purchase, the greater the perceived risk of the purchase decision (McQuiston, 1989). Hence, as a risk reduction mechanism, customers increase information acquisition behavior (Jacoby et al., 1978) and improve information exchanges, operational linkages (Lichtenthal and Tellefsen, 2001; Cannon and Perrault Jr, 1999; Batt, 2000; Metcalf and Frear, 1993), interfirm cooperation and social exchanges (Lichtenthal and Tellefsen, 2001; Metcalf and Frear, 1993) with the supplier when they perceive the product to be important for their business. When customers perceive the buying decision of a product/service to be important, Patterson et al. (1997, p. 8) argue that, “then to reduce dissonance (e.g. we chose the supplier who performed poorly), the customer will, all things being equal, tend to perceive the performance of the supplier more positively”. Patterson et al. (1997) also empirically found that the perceived product importance leads to higher perceptions of performance. It means that when there is greater perceived product importance, customers tend to perceive positive about the supplier by developing collaborative relationships (Cannon and Perrault Jr, 1999).

Furthermore, Cannon and Homburg (2001) found that the perceived product importance increases their intention to expand purchases from the current supplier. Empirically, Batt (2000) found a positive relationship between the importance of purchasing seed and farmer trust in their potato seed suppliers. There are some empirical findings from another related concept to product importance namely, product involvement. When customers perceive certain products or services to be important, they place high purchase involvement on those products or services (Beatty et al., 1988; Mittal, 1989). Bloch and Richins (1983, p. 73) consider product involvement, “as the motivational state that results from the stimulus of product importance perceptions”. Kinard and Capella (2006, p. 361) found that high involvement consumers perceive relational benefits from a service provider. In their research, the relational benefits are categorized as confidence, social and special treatment. They also argued that “the confidence benefits reduce anxiety levels associated with a service offering, increase perceived trust in the provider, diminish the perception of risk, and enhance knowledge of service expectations”. Similarly, Liang and Wang (2008) also found that a higher level of product involvement leads to a higher level of trust and commitment. Hence:

**H2b.** Customer trust in retailers is positively associated with the perceived importance of the product.

**Supply uncertainty.** Uncertainty is defined as unanticipated change in the circumstances surrounding an exchange (Noordewier et al., 1990; Jean et al., 2010) and is a basic requirement for the successful relationship performance between buyer and seller (Ambrose et al., 2010). Uncertainty in the input market is concerned with the availability of adequate and stable input supplies and is a perception the customer holds before making the purchase decision. Supply uncertainty can act as an exit barrier
in relationships with suppliers, if there is perceived uncertainty about the availability of alternative supplies and suppliers. If alternative suppliers are uncertain or unavailable, customers are normally motivated to continue established supplier relationships owing to difficulties in replacing existing suppliers in input markets. This exit barrier in the customer relationship with the supplier increases customer dependence on the supplier.

According to Williamson’s (1975) seminal work on transaction costs analysis (TCA) principle, if the input market is really uncertain, it increases transaction costs of the customers. These transaction costs normally happen in two ways namely, deterrence- and compliance-based transaction costs. The customer incurs deterrence-based transaction cost due to non-maintenance of relationship with the supplier when customer perceives the availability of input supplies and suppliers as uncertain. It means that the customer may not be able to continue its production in a smooth way and to avoid such a situation, the customer develops alternative transaction mechanism (increased opportunism) which also involves search cost. Also, customer might have developed idiosyncratic investments (asset specificity) with the focal supplier’s input and its processes (Joshi and Stump, 1999). If customer moves out of the relationship, it leads to the loss of earlier investments specific to the relationship. In order to reduce such cost, customers need to build and maintain long-term relationship with the supplier (Williamson, 1975). Building and maintaining long-term relationships (vertical relations and reduced opportunism) also involves transaction cost which is nothing but compliance-based transaction cost. Customers usually evaluate deterrence- and compliance-based transaction costs. If customers opt for deterrence-based transaction cost, they do not depend on the focal suppliers as they do not mind the expenses in finding alternative supplier and loss of idiosyncratic investments when input market is uncertain. However, if they opt for compliance-based transaction cost, it leads to dependence on suppliers as this dependence is directly proportional to the level of difficulty faced in gaining access to alternative sources of valued outcomes (Anderson and Narus, 1984, 1990). In practice, customer dependence is a prerequisite for attempts to build long-term relationships with suppliers.

There are controversial empirical findings on the effects of uncertainty on vertical relations (Anderson and Schmittlein, 1984) as implied from Williamson’s framework, especially on interaction effects of asset specificity and uncertainty (Rindfleisch and Heide, 1996; David and Han, 2004). However, our research focuses on the main effect of uncertainty on vertical relations. Rindfleisch and Heide (1996, p. 49) who critiqued TCA contributions state that:

\[ ... \] these main effects suggest that the problem created by environmental uncertainty is handled more efficiently by creating a governance structure that permits adaptation within an ongoing relationship, rather than by switching to a new partner if changes need to be made.

We contend that the customer dependence on seller is one form of such “adaptation” mentioned above. Hence:

**H3.** The greater the level of supply uncertainty perceived by the customer, the greater the customer dependence on the retailer.

**Effect of customer dependence on customer trust**

Researchers such as Andaleeb (1995) on marketing channel relations, and Handfield and Bechtel (2002) on industrial buyer – seller relations attempt to separate the effects
of dependence from those of trust. Customer (economic) dependence (measured by supplier assistance and revenue lost) is found to exert a significant positive effect on customer compliance (Gassenheimer and Calantone, 1994). Andaleeb (1995) questions the assumption of implicit trust in dependence-based relationships between the parties and entails the possibility that the dependent party does not trust the other party. He examines how the behavioral intentions of channel members (such as the intention to cooperate, control and influence) are likely to be moderated by trust perceptions when dependence is high or low. The results indicate the important role of trust in explaining intentions to cooperate, control and influence in a buyer-seller dyad. Dependence was also found to influence intent to cooperate and willingness to adopt a strong stance, but had no effect on intentions to exert control.

A widely prevailing argument suggests that when the customer is dependent on the supplier, the supplier can exploit its market power, and customers will be less able to obtain competitive price quotes to negotiate (Monczka et al., 1995). In addition, Handfield and Bechtel (2002) argue that customers may trust a supplier when they have more than one (multiple sourcing), but trust another supplier less, simply because they feel vulnerable, due to the fact that the supplier is the only source in the market for a unique product or service. This argument led Handfield and Bechtel (2002) to test the hypothesis that increased levels of perceived customer dependence on the supplier have a negative impact on customer trust, which was however, not empirically supported in their study.

The interpersonal trust development perspective of Lewicki and Bunker (1996) is adopted in this paper in order to justify the hypothesis that customer dependence on the supplier leads to customer trust. Lewicki and Bunker (1996) posit three stages of trust development in interpersonal relationships in a professional context: calculus-based trust (CBT), knowledge-based trust (KBT), and identification-based trust (IBT). According to them, interpersonal trust develops gradually as the parties move from one stage to another, evolving and changing over time. Trust is created as CBT develops; then, as the parties get to know one another better, the relationship may move on to the KBT stage. If only an arm’s length transaction is required, the relationship may not move beyond CBT. A similar process is involved in the movement from KBT to IBT.

At the first stage of interpersonal trust development, CBT, interpersonal trust is an “ongoing, market-oriented, economic calculation whose value is derived by comparing the outcomes resulting from creating and sustaining the relationship to the costs of maintaining or severing it” (Lewicki and Bunker, 1996, p. 145). We argue that by definition, both interpersonal dependence and CBT entail the same individual psychological process, as both involve a comparison of the value of outcomes (Emerson, 1962). In other words, interpersonal dependence and CBT are one and the same thing. Hence, as the relationship experience of dependence-based relations is positive, it would lead to the next stages of trust development, KBT and the IBT. KBT relies upon information developed over time, as the parties get to know one another. Increased information enhances the predictability of the other party, which contributes to the development of interpersonal trust (Shapiro et al., 1992). IBT is based on an understanding of the other’s needs and desires. Here, parties are confident that their interests will be protected, and little or no monitoring of the other is required (Shapiro et al., 1992).

This contention is supported by Andaleeb (1995, p. 159), “with the initiation of exchange, dependence relations are expected to result”. Dependence often establishes a need to build relationships. A recent study by Ferrer et al. (2010) found that...
the interdependency in inter-firm relationships have a significant positive influence on the formation of both arm’s length and cooperative relationships. In these relationships trust increases the merits of continuing them (Bradach and Eccles, 1989). Stevenson (1997) found a significant positive relationship between the extent of experience with a negotiation partner and the level of interpersonal trust, and a stronger positive relationship between extent of experience and extent of relationship, when the quality of experience increases. We contend that even when the buyers are in dependent position, the extent and quality of experience gained during the interactions could lead to positive effects on trust. Hence:

**H4.** The greater the customer dependence on the retailer, more the customer trusts the retailer.

**Methodology**

**Sample**

In India, interpersonal buyer-seller relationships could be found in consumer-retailer relationships where the retailer is the owner as well as the salesperson of the shop. In this study, we considered the farmer (customer) and the rural-based chemical fertilizer retailer (seller) relationship. India is an agriculture-based country and it has 29 states. Every state has its due share in agriculture. Each state has a distinct language and culture. Farmers of Tamil Nadu state were selected for this study primarily due to the lead author’s familiarity with the language, customs, practices and geography of the region. The study required the author to travel across selected villages in person and meet the farmers for personal interviews.

The study was conducted with respect to farmers of Madurai, Pudukottai and Trichy districts of Tamil Nadu state, India. These districts have a high per hectare chemical fertilizer consumption. One taluk[1] from each of the above districts with high fertilizer consumption was selected. Ten villages were selected randomly from each of the taluks. Lists of farmers were gathered from the Village Administrative Officer of the village in question. The lists from all 30 villages contained a population size of 3,119 farmers. A total sample size of 300 was planned to enable the statistical analysis required for this study. The number of farmers from each village was specified in proportion to the total number of farmers in the lists. The farmers were selected randomly from each village. If the selected farmer was not available, another was chosen randomly from the list, and so that the total number of farmers from each village was maintained as planned.

A questionnaire was prepared taking into account all the relevant measures and demographics. The questionnaire was first translated into Tamil and then back translated to English with the help of English and Tamil language translators (Brislin, 1980; McGorry, 2000). The earlier version of the English questionnaire was compared to the back-translated questionnaire and inconsistencies removed in consultation with the translators (Brislin, 1980; McGorry, 2000). The lead author of this article personally visited all these villages and the questionnaire was filled by the lead author himself while interviewing the respondents. Due care was given to avoid response bias while interviewing the farmers as the interviews were conducted at the farmer’s home or in his farm. Either they were alone or with their family during the interview. We avoided the situation where other farmers were present during the interview as they could get influenced to provide socially acceptable responses. About 16 percent (48/300) of the selected farmers from the initial list were not available for the interviews in the village.
due to their travel commitments and they were replaced by other farmers randomly selected from the complete farmer list of the respective village. Among the selected farmers for replacement 12.5 percent (5/48) were also not available and they were also replaced by other farmers chosen from the farmer list and the total sample size of 300 was maintained.

All the farmers included in this survey had purchased fertilizer either from retailers located in their villages or in nearby villages or towns. The demographic characteristics of respondents are shown in Table I. Approximately 97 percent of the respondents were male. This is primarily due to the fact that the land holding pattern and farm management practices are still considered to be male activities in the rural areas of India. The age of the respondents is well distributed among all age groups. About 2 percent of the respondents had no formal education at all and approximately only 50 percent of the respondents had

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<tr>
<td>Up to high school</td>
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<td>Unmarried</td>
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<td>Ten-13</td>
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<td>14 and above</td>
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**Note:** aOne American dollar = 45.26 Indian rupees as on 26 February 2011
a high school education. In addition, 91 percent of the respondents were married, with 66.33 percent living in a household comprising of five to nine members. Half the respondents had an annual income below Rs. 35,000 (approximately US$750).

**Measurement scales**

**Product familiarity.** Most of the researchers conceptualized the construct expertise as one party’s perception of the other party’s expertise. For example, Chinomona and Pretorius (2011) measured manufacturer’s perception of dealer’s expert power, Sahadev (2005) measured distributor’s perception of supplier expertise and Zhao et al. (2008) measured supplier’s perception of customer expert power. However, we conceptualized product familiarity as customer’s perception about his or her own knowledge about the product which he or she intends to purchase from the retailer. Kennedy et al. (2001) measured buyers’ perception of their own knowledge about the product. Hence, buyer familiarity with the product was measured on a three-item, seven-point semantic differential scale from Kennedy et al. (2001). In their research, the scale yielded a Cronbach α coefficient of 0.91. The scale was revised slightly to reflect the fertilizer purchase situation.

**Importance of the product.** Cannon and Perrault Jr (1999) measured perceived product importance in the context of manufacturing industry. Patterson et al. (1997) measured perceived product importance in the context of business to business professional services. Batt (2000) measured farmer’s perceived product importance in seed potato purchases. We adapted Batt’s (2000) scale as it suited context of our study. This scale has two factors, namely supplier evaluation and economic consequences. The first factor (supplier evaluation) suggested that farmers spend a considerable amount of time making the purchase decision and that, despite the long-standing relationships which often existed between seed suppliers and farmers, the farmers carefully evaluated the alternatives each time they purchased new seed. The supplier evaluation factor yielded a Cronbach α coefficient of 0.73. The second factor (economic consequences) dealt with the cost of purchasing the seed and the number of times the farmer chose to buy the new seed from the supplier. This factor yielded a Cronbach’s α of 0.62. The scale was revised to suit the study context.

**Supply uncertainty.** Ambrose et al. (2010) measured uncertainty by a four-item scale which was adapted from Gao et al. ’s (2005) scale in the context of supply chain relationships. Batt (2000) measured uncertainty on a two-factor, five-item; strongly disagree (1) to strongly agree (7) scale. The two factors were seed specifications and input market uncertainty. The first factor of seed specifications was related to personal indecisiveness about the seed requirements. The second factor of input market uncertainty had two items; price stability and supply stability. It is a two-item scale and yielded a Cronbach’s α of 0.89. We used Batt’s (2000) scale as it suited the context of our study. We conceptualize supply uncertainty as unanticipated changes in the availability of an adequate and stable supply of inputs and hence used a single item related to the stability of supply. Previous researches also measured market uncertainty as a single-item scale. For example, Anderson and Schmittlein (1984, p. 391) measured uncertainty as difficulty of evaluating sales force performance in a single-item semantic differential scale as, “It is very difficult to measure equitably the results of individual salespeople”.

**Customer dependence.** Dependence construct has been conceptualized in two ways, first, as a party’s perception of its own dependence on other party and second,
the perception of other party’s dependence on them. Heide and John (1988) conceptualized distributors’ perception of their own dependence as potential replaceability of principal. Similarly, Andaleeb (1995, 1996) measured buyer’s perception of their own dependence on the seller. However, quite different from above authors’ conceptualization, Carr et al. (2008) assessed customer’s perception of supplier’s dependence on them and Chakrabarty et al. (2010) measured customer dependence as perceived by salespersons.

We needed a scale to measure farmers’ perception of their own dependence on the chemical fertilizer retailer. Very close to the context of our study, Batt (2000) measured farmer dependence on their potato seed suppliers which was developed from the following studies, Anderson and Narus (1990), Frazier et al. (1989), Heide and John (1988) and Ganesan (1994). Originally, the scale had three factors, namely independence, availability of alternatives and comparison of alternatives with six items, three items and one item, respectively. The reported Cronbach’s α for the factors such as independence and availability of alternatives were 0.93 and 0.65, respectively. The present study used Batt’s (2000) first factor namely, independence, which described how and despite the financial obligations between farmer and seed supplier, most farmers were not unduly influenced by the demands imposed upon them by their seed supplier. The scale was revised to conform to the specific context of our study.

Customer trust. Morgan and Hunt (1994) measured retailers’ trust on their supplier. In an industrial purchasing context, Gao et al. (2005) assessed buyer trust and buyer-perceived supplier trust adapted from previous studies (Doney and Cannon, 1997; Ganesan, 1994). In this study, Holden’s (1990) “sales trust” scale was used to assess customer trust in the retailer. Holden’s (1990) original scale, developed to assess trust in an industrial buyer-seller relationship has eight items and a reported Cronbach’s α of 0.92. The same scale was also used by Kennedy et al. (2001) to assess trust in salesperson and has a reported Cronbach’s α of 0.97. The scale was again revised to conform to the present study.

Analysis and results
Measurement model
We used AMOS 16.0 for the analysis. We first assessed the measurement model, followed by the structural model for the hypothesis testing, using the guidelines suggested by Anderson and Gerbing (1988). In this section, we first report the results of our confirmatory factor analysis (CFA) for all the measures in order to test their convergent validity. The product familiarity (three items) did not require any modification, as their measurement model suggested a good fit with the data and reported significant factor loadings (product familiarity – $\chi^2(1) = 0.353, p = 0.552$, TLI = 1.003, CFI = 1, RMSEA = 0.000; composite reliability: 0.905).

Other measures such as product importance, dependence and trust required some refinement, due to weak factor loadings and poor fit indexes. We used a minimum cut off loading of 0.6 for all the measures. Following this procedure, we removed some of the items for product importance, dependence and trust measures. The remaining items provided a better fit and strong factor loadings as well (product importance – $\chi^2(1) = 0.208, p = 0.649$, TLI = 1.007, CFI = 1, RMSEA = 0.0; trust – $\chi^2(1) = 3.371, p = 0.066$, TLI = 0.983, CFI = 0.994, RMSEA = 0.089; dependence – $\chi^2(1) = 0.56, p = 0.454$, TLI = 1.004, CFI = 1, RMSEA = 0.0). All these measures had a good
composite reliability (product importance $= 0.729$; trust $= 0.865$; dependence $= 0.818$).

Table II summarizes the results of the CFA for all the individual measurement models. All the measurement scales related to the study are mentioned in the Appendix.

Once the convergent validity for all the measures had been established, we proceeded to the next step of testing the discriminant validity with CFA among the related measures. The results are shown in Table III. The measurement models for all the pairs had a good fit with the data. Furthermore, we used a confidence interval test to check the correlation among the measures.

**Structural model**

The full structural and measurement model analysis was performed to test the fit of our proposed theoretical model with the data. The results are provided in Table IV. Fit indexes such as the $\chi^2$ fit index, TFI, CLI and RMSEA suggested a good fit with the data ($\chi^2(50) = 68.148$, $p = 0.045$, TLI = 0.984, CFI = 0.988, RMSEA = 0.035). Overall, the theoretical model was found to have a satisfactory fit with the data. We now turn our attention to the hypothesis testing. Table IV the results of which are presented in Table IV. The results indicate that customer dependence is influenced positively

<table>
<thead>
<tr>
<th>Construct/items</th>
<th>Std. Reg. Coeff.</th>
<th>$\chi^2$</th>
<th>$p$</th>
<th>dF</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>Comp. reliability</th>
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<tr>
<td>Product familiarity</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>pf1</td>
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<tr>
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<td>1.004</td>
<td>1</td>
<td>0</td>
<td>0.818</td>
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<tr>
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<td>0.066</td>
<td>1</td>
<td>0.983</td>
<td>0.994</td>
<td>0.089</td>
<td>0.865</td>
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<td>tr1</td>
<td>0.795</td>
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<td>1.007</td>
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<td></td>
</tr>
<tr>
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</tr>
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</table>

**Table II.**

CFA results for all the measures

<table>
<thead>
<tr>
<th>Correlations between</th>
<th>Estimate</th>
<th>SE</th>
<th>Lower</th>
<th>Upper</th>
<th>$\chi^2$</th>
<th>$p$</th>
<th>dF</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE $\rightarrow$ PF</td>
<td>-0.125</td>
<td>0.195</td>
<td>-0.515</td>
<td>0.265</td>
<td>3.928</td>
<td>0.864</td>
<td>8</td>
<td>1.01</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>DE $\rightarrow$ PI</td>
<td>-0.014</td>
<td>0.144</td>
<td>-0.302</td>
<td>0.274</td>
<td>17.357</td>
<td>0.004</td>
<td>5</td>
<td>0.94</td>
<td>0.97</td>
<td>0.091</td>
</tr>
<tr>
<td>DE $\rightarrow$ TR</td>
<td>0.112</td>
<td>0.189</td>
<td>-0.266</td>
<td>0.49</td>
<td>15.302</td>
<td>0.054</td>
<td>8</td>
<td>0.98</td>
<td>0.99</td>
<td>0.055</td>
</tr>
<tr>
<td>TR $\rightarrow$ PI</td>
<td>0.556</td>
<td>0.155</td>
<td>0.246</td>
<td>0.866</td>
<td>1.794</td>
<td>0.877</td>
<td>5</td>
<td>1.01</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>TR $\rightarrow$ PF</td>
<td>-0.032</td>
<td>0.18</td>
<td>-0.392</td>
<td>0.328</td>
<td>10.589</td>
<td>0.226</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>0.033</td>
</tr>
<tr>
<td>PF $\rightarrow$ PI</td>
<td>-0.008</td>
<td>0.139</td>
<td>-0.286</td>
<td>0.27</td>
<td>1.862</td>
<td>0.868</td>
<td>5</td>
<td>1.01</td>
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</tbody>
</table>

**Table III.**

Assessment of discriminant validity among selected pairs of constructs

**Notes:** TR, trust; PF, product familiarity; DE, dependence; PI, product importance
by supply uncertainty (standardized coefficient = 0.277; critical ratio = 4.459) with a p-value less than 0.01 and negatively influenced by product familiarity (standardized coefficient = −0.133; critical ratio = −2.066) with a p-value less than 0.05. Furthermore, product importance was found to have a significant positive association with customer trust (standardized coefficient = 0.559; critical ratio = 7.447) with a p-value less than 0.01. The main contention of our study, that of customer dependence (standardized coefficient = 0.120; critical ratio = 1.898) was found to have significant positive association with trust, with a p-value of 0.058.

**General discussion and implications**

There is well-documented research suggesting the importance of customer dependence for long-term buyer-seller relationships. However, the limited research in the marketing domain has considered the phenomenon of customer dependence in the marketplace. Our study conceptualized and empirically tested the determinants of customer dependence and its effects on customer trust.

Customer perceptions of supply uncertainty were empirically established as an important determinant of customer dependence in buyer-seller relationships, specifically in the interpersonal relationship context. When customers perceive high supply uncertainty, they attempt to adapt within an ongoing relationship (Rindfleisch and Heide, 1996) which leads to their dependence on the retailers. Primarily, this finding conforms to the implications of Williamson’s TCA framework. Some researchers have shown contradicting results of the impact of uncertainty on vertical integration or relations (Harrison and Kelly, 2010; Leonidou et al., 2006). However, our result of the positive impact of supply uncertainty on customer dependence could be one of the reasons for the previous research finding on buyer and seller cooperation during uncertainty (Eriksson and Sharma, 2003).

Perceived product familiarity was found to have no impact on customer trust. We expected a negative impact of product familiarity on customer trust. Previous research on this issue also showed contradicting results. Kennedy et al. (2001) found

<table>
<thead>
<tr>
<th>Path</th>
<th>Hypotheses</th>
<th>Standardized estimates</th>
<th>Critical ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product familiarity → customer dependence</td>
<td>$H1a$</td>
<td>−0.133</td>
<td>−2.066</td>
<td>0.039</td>
</tr>
<tr>
<td>Product familiarity → customer trust</td>
<td>$H1b$</td>
<td>−0.014</td>
<td>−0.244</td>
<td>0.807</td>
</tr>
<tr>
<td>Product importance → customer dependence</td>
<td>$H2a$</td>
<td>−0.052</td>
<td>−0.731</td>
<td>0.465</td>
</tr>
<tr>
<td>Product importance → customer trust</td>
<td>$H2b$</td>
<td>0.559</td>
<td>7.447</td>
<td>0.000</td>
</tr>
<tr>
<td>Supply uncertainty → customer dependence</td>
<td>$H3$</td>
<td>0.277</td>
<td>4.459</td>
<td>0.000</td>
</tr>
<tr>
<td>Customer dependence → customer trust</td>
<td>$H4$</td>
<td>0.120</td>
<td>1.898</td>
<td>0.058</td>
</tr>
</tbody>
</table>

$\chi^2$ 68.148  
DF 50  
P 0.045  
TLI 0.984  
CFI 0.988  
RMSEA 0.035  

Table IV. Summary of results for the structural model
a significant negative relationship while Andaleeb and Anwar (1996) found the relationship to be non-significant. However, we found that the perceived product familiarity to significantly reduce customer dependence on the seller. Retailers have been provided with information and training related to the products and their functionality by the manufacturers which improves their product knowledge and gives expert power over their customers. Customers also look for such expertise from sellers to make an informed purchase decision which consequently leads them to cooperate and be committed to the relationship with the sellers (Sahadev, 2005; Zhao et al., 2008). In contrast, when customers improve their familiarity with the product and possess such expert power (expertise), they do not depend on the sellers. This finding is important to the marketers and implies them to understand customer familiarity status. This could be performed by the seller by knowing customer status in the “customer buying task continuum” (Hanson, 1979). According to the “buying task continuum”, in “new task buying” customer lacks knowledge about the product, familiarity increases in “modified rebuy” and customer gets a great deal of experience and information in “straight rebuy” (Park and Lessig, 1977; Hanson, 1979). This would possibly help the retailers to understand customer dependence level which could be used in their sales strategy formulation.

More product familiarity leads to lack of dependence on the retailer which means customer would switch from one particular retailer to another when they are highly familiar with the product. This does not mean that the retailers should not educate the customers about the product. It is always better for marketers to educate customers on the functionality of their product as it improves customer satisfaction (Soderlund, 2002). Soderlund (2002, p. 861) found that “when service performance was high, high-familiarity customers expressed a higher level of satisfaction and behavioral intentions than did less familiar customers”. Furthermore, theoretically, our finding conforms with previous researches which were conducted on the similar lines by Selnes and Hansen (2001) and Capraro et al. (2003) and possibly provides the missing link in their research as to why self-service reduces social bonding (Selnes and Hansen, 2001) and why knowledge about alternatives increases defection (Capraro et al., 2003).

Perceived product importance was found to have no impact on customer dependence, but it does exert a significant impact on customer trust. This finding implies that the customers are comfortable in being positive about the retailers and they expect higher perceptions of performance when they perceive the product to be important and consequently manifest trust on the retailers rather than feel dependent on them (Patterson et al., 1997; Cannon and Perrault Jr, 1999). Theoretically, this finding compliments similar researches conducted earlier (Batt, 2000; Liang and Wang, 2008).

Our main contention on the effect of customer dependence on customer trust was well supported (p-value = 0.058). Basically, this result emphasizes the relevance of interpersonal trust development perspective (Lewicki and Bunker, 1996) in interpersonal-based buyer-seller relationships. We view the development of CBT as a process that leads the customer dependence. The possible subsequent interactions between the buyer and seller add to mutual knowledge and positive experiences, which may lead to information symmetry. Such symmetry between the buyer and seller will evolve when the customer develops IBT in the seller. Such trust between buyer and seller leads to joint goals, cooperative behavior, collective decision-making and collective efforts. Hence, this process negates the negative consequences of customer dependence in buyer-seller relationships.
Morgan and Hunt (1994, p. 33) in their seminal article on “commitment-trust theory of relationship marketing” acknowledged the importance of power and resulting dependence for deriving partner’s compliance and suggested extending their model by including power as one variable that leads to “sick relationships”. They contended that continuing exercise of power and resulting dependence destroys trust and commitment and results in relationship failures. This made researchers to view dependence as having negative consequences in relationship marketing that results in “sick relationships” and motivated them to focus only on “healthy relationships” (Morgan and Hunt, 1994, p. 33) based constructs. Consequently, researchers neglected dependence construct in the researches of relationship marketing except in a few (Cronin et al., 1994; Gassenheimer and Ramsey, 1994; Andaleeb, 1996). In contrast to the widespread belief, we found that dependence did not yield negative consequences and in fact improves customer trust which would further build “healthy relationships”.

Also, Morgan and Hunt (1994) in their original model found that the manufacturer’s less opportunistic behavior enhances retailer trust and in their extended model hypothesized that the manufacturer’s power reduces retailer trust. Basically, they conceptualized customer trust from the perspective of the perceived behavior about partners (manufacturer/supplier/seller). However, we conceptualized customer trust from customer perspective, that is, how customer trust develops when customers feel they are dependent. Future research could also focus on how customer trust develops when customers perceive lack of power from their side and when they have less opportunistic behavioral tendencies.

We derive several implications from this finding. Apart from providing high-quality products and services and satisfying the customers (Kennedy et al., 2001), improving communication and inculcating shared values (Morgan and Hunt, 1994) to develop customer trust, the marketers should also look at building dependence negating its negative consequences as it eventually enhances trust. Marketers can nurture dependence mechanisms towards the goals of trust-based, long lasting relationships by providing ongoing streams of suitable products, facilitating upgrades from one product to another or investing in capital, people, lasting assets and basic business procedures (Jackson, 1985). Further, this result could be applied to the case of inter-firm alliances. Both the alliance partners should invest in men, machine and money which would increase mutual dependence and that would finally lead the alliance to a mutual trust-based long-term success.

Even though, our study is greatly limited in scope as it was conducted in small villages of the Indian market, it implies that future research in relationship marketing should basically change its mindset on dependence construct considering its positive consequence on trust development. Also, the future research should look into the comparison of our findings with other cultures and contexts.

Note
1. A taluk is the main revenue, administrative and planning unit in the district.

References


Appendix. Measurement scales after back translation (statements followed by (–) indicate reverse scoring)

**Product familiarity – seven-point semantic differential scale**

- How familiar or unfamiliar were you with the chemical fertilizers you purchased, before first visiting the current retailer’s shop? (completely familiar to completely unfamiliar) (–)
- How informed or uninformed were you about chemical fertilizers, prior to first visiting the current retailer? (fully informed to not at all informed) (–)
- How knowledgeable or unknowledgeable were you about chemical fertilizers before first visiting the current retailer? (knew all to knew nothing at all) (–)

**Supply uncertainty – seven-point scale: strongly disagree to strongly agree**

The supply of fertilizer is highly unstable.

**Product importance – seven-point scale: strongly disagree to strongly agree**

- I buy fertilizer from my retailer at least once a year.
- Fertilizer is the most significant component of my total production costs.

**Customer dependence – seven-point scale: strongly disagree to strongly agree**

- My retailer decides what fertilizers I should use.
- My retailer controls all the information pertaining to decision making in our relationship.
- My retailer has all decision making power in our relationship.
Customer trust – seven-point scale: strongly disagree to strongly agree

- My retailer would not lie even if he could gain by doing so.
- My retailer always maintains his principle of honesty and integrity even though his business is not doing particularly well.
- My retailer can be trusted.

About the authors
Kareem Abdul Waheed is an Associate Professor of Marketing at the Institute of Management Technology, Dubai, UAE. His research interests include buyer-seller relationship, societal marketing and corporate social responsibility. He has published research articles in Measuring Business Excellence, Supply Chain Management: An International Journal and Corporate Environmental Strategy: International Journal Corporate Sustainability. Kareem Abdul Waheed is the corresponding author and can be contacted at: waheed@imtdubai.ac.ae

Sanjaya S. Gaur is an Associate Professor of Sales & Marketing at AUT Business School, Auckland University of Technology, New Zealand. His research interests include buyer-seller relationships, relationship selling behaviour, small group buying behaviour, TBSS adoption behaviour, market orientation and its impact on firms in emerging economies. His research has appeared in Asian Journal of Marketing, Asia Pacific Journal of Marketing and Logistics and Corporate Environmental Strategy: International Journal Corporate Sustainability.