
Validating relationship marketing factors predicting B2B customer loyalty towards crop protection suppliers

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Abstract

Little is known about the contribution of relationship marketing factors to business-to-business customer loyalty towards suppliers of crop protection solutions. Insight into these matters may assist in winning the loyalty of independent sales agents who sell suppliers' products to farmers. Accordingly, the purpose of this study was to validate the impact of trust, commitment and service support on independent sales agents' business-to-business customer loyalty towards suppliers of crop protection solutions. Moreover, the paper sought to verify the degree to which commitment as an outcome of trust and service support would play a central role in contributing to business-to-business customer loyalty. A survey was conducted among 121 independent sales agents who have sold the crop protection solutions of their preferred suppliers in the past two years. Only trust and service support have a positive and significant impact on business-to-business customer loyalty. Furthermore, only trust has a positive and significant impact on commitment. Therefore, commitment may not always be fundamental to a long-term relationship. Rather, trust and service support are seen as pillars of equal importance, and should be managed by suppliers of crop protection solutions to win the loyalty of their agents.

Key phrases

Business-to-business (B2B) customer loyalty; commitment; service support and trust

1. INTRODUCTION

Building customer loyalty in a business-to-business (B2B) environment is perceived as a viable means of obtaining a competitive advantage (Gil-Saura, Frasset-Deltoro & Cervera-Taulet 2009:597). Loyal customers may result in higher profits for the organisation (Reichheld & Sasser 1990:105; Russo, Confente, Gligor & Autry 2016:888).

Loyalty relates to "...a deeply held commitment to rebuy or repatronise a preferred product/service consistently in the future..." (Oliver 1999:34). In a B2B context, loyalty can also be defined as a partner's commitment towards a supplier and to stay with the supplier notwithstanding minor displeasures and discounts offered by competitors. The partner will recommend the supplier to other customers and actively work with the supplier (Hetesi & Veres 2005:8).

Mindful of the benefits of B2B customer loyalty, over the years marketing scholars have identified several factors that may predict B2B customer loyalty (Russo *et al.* 2016:888). Among the studies previously reported, three important findings are worth noting in this article. First, it is believed that relationship marketing factors, such as trust and commitment, may contribute to B2B customer loyalty (Gil-Saura *et al.* 2009:598; Kim, Kim & Lee 2018:91). Trust is essential for building successful business relationships, and has also been acknowledged as an important concept within the inter-organisational research environment (Doney & Cannon 1997; Morgan & Hunt 1994). According to Morgan and Hunt (1994:23), relationship commitment is shown where partners believe that a continuing relationship with another is so important that it necessitates all efforts to maintain it. The parties believe the relationship is worth working on for endurance and benefit. Therefore, commitment can be regarded as a vital "investment" for ensuring a successful, long-term business relationship (Walter, Müller, Helfert & Ritter 2003:160). Second, following these studies, Ulaga and Eggert (2006a:134; 2006b:312-313) noted that in addition to the "soft factors" of trust and commitment, it is essential for organisations to focus on relationship value factors, such as service support, which is regarded a performance variable. Relationship value has a positive effect on customer loyalty in the current trend of supplier consolidation. This is vital for the long-term survival of supplier companies. When distributors experience superior relationship value with suppliers, they are likely to maintain the relationship and purchase more in future, and are less susceptible to counter competitive offerings (Skarmeeas, Zeriti & Baltas

2016:27). A third key finding is that it has also been found that an organisation perceiving trust in a relationship would want to be committed (Hessling, Asberg & Roxenhall 2018:139). Similarly, commitment may also be impacted by B2B customer's perceptions of relationship value received (Gil-Saura *et al.* 2009:598-599, 604).

Insight into these matters furthermore appears to be of significance to suppliers of crop protection solutions in South Africa, operating in a B2B setting. Within the South African crop protection industry, competition between original and generic suppliers of crop protection solutions has become fierce, and suppliers often compete to win the loyalty of the independent sales agents who must ensure their product selection is presented and sold to the farmers. To this end the previously established connections between the relationship marketing factors and B2B customer loyalty may also be valuable to suppliers of crop protection solutions in facilitating B2B customer loyalty. However, further research would be required to conclude on this matter, as the interrelationships among the proposed factors have not been formally investigated before among suppliers of crop protection solutions and their independent sales agents.

To assist in addressing the research gap, this study then aimed to validate the impact of trust, commitment and relationship value on independent sales agents' B2B customer loyalty towards suppliers of crop protection solutions. It was also the intention to verify the degree to which commitment as an outcome of trust and relationship value would play a central role in contributing to B2B customer loyalty.

Theoretically, the research findings may further explain the role and relevance of trust, commitment and relationship value in contributing to B2B customer loyalty within a South African B2B context. Greater insight may also be obtained into the interrelationships of the antecedents of B2B customer loyalty, and the extent to which all factors are required to foster loyalty in a South African B2B setting. Practically, the study may be of value to suppliers of crop protection solutions in South Africa, enhancing the loyalty of independent sales agents, which could result in greater sales of the supplier's crop protection solutions to farmers and a competitive advantage.

The remainder of this article is structured as follows: the subsequent section provides more insight into the crop protection industry, serving as the research context. The discussion is

followed by a brief overview of the relationship marketing theory grounding this study. The conceptual model and research hypotheses are presented next, after which the research methodology followed is briefly described. The final sections of this article are devoted to an analysis of the research findings as well as its theoretical and empirical implications, concluding with a discussion of the research limitations and suggestions for further research on this topic.

2. THE CROP PROTECTION INDUSTRY IN SOUTH AFRICA

Crop protection refers to the collection of techniques applied to manage pests, plant diseases, weeds and other pest organisms that damage crops. Farmers growing produce such as wheat, rice, maize, potatoes, soybeans and cotton, are reliant on crop protection solutions to prevent and curb losses due to pests in the field (pre-harvest) and during storage (post-harvest) (Oerke 2006:31). Harmful organisms, such as animal pests, insects, plant pathogens and weeds, collectively known as crop pests, may lead to significant losses for the farmer, and could threaten food security. Considering the estimated growth in the South African population from the current 55 million to 65 million in 2050, the effective management of crop protection solutions may become even more important in future (Population Reference Bureau 2015:11-12, 22). Crop protection solutions will play an ever-increasing role in the attempt to feed a growing population with finite land resources (Schreuder 2002:4).

However, competition between original and generic suppliers of crop protection solutions has become fierce, and these suppliers often compete to win the loyalty of independent sales agents who must ensure their product selection is presented and sold to the farmers. More specifically, up until the early 1990s, multinational companies manufacturing crop protection solutions employed their own dedicated sales agents to sell their products to the farming community, which was a business-to-customer (B2C) distribution model. The customer relationship was owned by the multinational company, which focused its marketing approach on farmer needs and satisfaction by supplying crop protection solutions. These agents were salaried employees managed and controlled to market and service the company's products (Myburgh 2014:11). Since 1991, these manufacturers and registration holders assisted in setting up independent distribution companies, which started to employ their independent sales agents on a commission-only basis. The independent sales agents

would typically prescribe and sell the pesticide to the farmer on the invoice of the intermediate distributor company. The gross profit of the sale is shared between the two parties in a 40:60 or 30:70 split, with the major share going to the independent sales agent after the farmer settled the invoice. A business-to-business-to-consumer (B2B2C) triad distribution model was subsequently introduced, and various new companies, like Unieko, Lowveld Agrochem, Wenkem, Qwemico, Viking, Terason and Nexus, acted as intermediaries between the farmers and manufacturers.

To expand their offering to the farmers and fill the shortcomings in their product portfolios, in recent years distributor companies have started marketing generic products and products from competing manufacturers (Greyling 2015). Consequently, both original and generic suppliers are now competing in the same market environment, and their success is largely dependent on whether they can convince the independent sales agents to market and sell their product offerings to the farmers.

In the new business model, suppliers of original and generic crop protection solutions are compelled to compete for the loyalty of the independent sales agents who have become powerful and have the potential to impact farmers' crop protection selection choice. In most cases, the independent sales agents fulfil an integral part of the farming operation in the provision of advice and in influencing the decisions made by the farmer regarding crop protection. The independent sales agents act as "consultants" for the farmers, and their services are not only restricted to the selling of a portfolio (Greyling 2015).

3. THEORETICAL BACKGROUND

This study's proposed model is grounded in the relationship marketing theory. Sheth, Parvatiyar and Sinha (2012:5, 7) refer to relationship marketing as one-to-one long-term mutually beneficial relationships between suppliers and customers, which suggests an involved and customised approach for individual accounts. Furthermore, they say relationship marketing is defined as: "...the ongoing process of engaging in collaborative activities and programs with immediate and end-user customers to create or enhance mutual economic, social and psychological value, profitably". This view seems to be supported by Grönroos (2017:218).

In a B2B context, the term buyer-supplier or key supplier relationship is interchangeable and similar in literature to buyer-seller relationships (Bensaou 1999; Hansen 2009; Tanskanen & Aminoff 2015; Ulaga & Eggert 2006a). Wicks (2012:18) defines a key supplier as someone who delivers and supports key inputs, processes, activities, products or services, whose failure to supply would seriously impact on the success or survival of the company in the short and medium term. These relationships are viewed as supplier partnerships or buyer partnerships respectively (Morgan & Hunt 1994).

In business markets, it is not uncommon to establish strong personal and business relationships between the buyer and seller of products (Dowell, Morrison & Heffernan 2015:121) Purchases are of such strategic importance that the organisations cannot shop around. To satisfy their needs and specifications, buyers and sellers enter into long-term relationships that enable them to plan jointly for their respective futures (Dwyer & Tanner 2002:8). Therefore, a business relationship can be defined as an exchange relationship between two companies, abstracted as collective participants doing business with one another, which is commonly referred to in literature as a dyadic business relationship. Efficiency and profitability are created by the dyad with integrated products, processes, logistics, systems and administrative routines (Eriksson & Johanson 1999:6).

B2B relationships may also be formed between the crop protection solution suppliers and the independent sales agents who do not buy and take ownership of the crop protection solutions, but merely perform an intermediary role between the suppliers and the end-users (the farmers). Considering the general characteristics of B2B relationships discussed in this section, the relationships between the crop protection suppliers and the independent sales agents would then relate to suppliers' conscious and continuous pursuit of crop protection solutions to assist and cooperate with the independent sales agents in their marketing endeavours to farmers. These relationships may result in financial gain, social benefits and relational satisfaction for both parties.

4. CONCEPTUAL MODEL AND RESEARCH HYPOTHESES

As positioned in the introduction to this article, the factors of trust, commitment, service support (relationship value) and B2B customer loyalty were considered in the development of the conceptual model.

4.1 Trust and commitment as relationship quality factors

Relationship quality relates to the quality of the interaction between a customer and an organisation (Naudé & Buttle 2000:352). In a highly regulated and contractual B2B setting, relationship quality is important for a successful long-term relationship (McDonnell, Beatson & Huang 2011:5). The quality of the relationship between the parties involved determines the longevity and strength of the B2B relationship (Caceres & Paparoidamis 2007:857). Furthermore, trust and commitment have been identified as key indicators of relationship quality (Athanasopoulou 2009:604; Casidy & Nyadzayo 2017:2).

Morgan and Hunt (1994:23) define trust as an exchange partner believing the reliability and integrity of the other. According to Hollensen (2015:210), trust relates to the fact that the alliance partner will act predictably, keep his/her word and not act in a way that negatively affects the other. This is especially important under conditions where a partner feels vulnerable due to over-dependence on the other. Sensitive trading information and knowledge are shared between the partners. The fear that such knowledge can be used later to compete against the former partner will diminish trust, especially in an asymmetrical power relationship.

Casaló, Flávian and Guinalú (2007:779) state that trust relates to competence, honesty and benevolence that are collectively perceived as cognitive elements of trust (Dowell *et al.* 2015:119-120). Competence concerns views of the other party's knowledge and skills, honesty is the belief that the other party will keep its promises, and benevolence relates to the belief that one's wellbeing is important to the other party. In this study, trust may relate to the independent sales agent believing that the supplier is kind, honest and competent, and could be viewed as the glue that bonds the relationship between the supplier and the independent sales agent.

Morgan and Hunt (1994:23) define commitment as "an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum effort at maintaining it". Commitment evolves from the trust, shared values and belief that partners are not easily replaced. Commitment motivates the partnering B2B members to cooperate in preserving the relational "investment", which can include time, money, energy and the sacrifice of alternative relationships. When given a choice, businesses will only commit to

trustworthy partners because it leaves them vulnerable to abuse and opportunism (Buttle & Maklan 2015:27).

Meyer and Allen's (1991) Three-Component Model of Commitment distinguishes between affective, continuance and normative commitment. Affective commitment indicates an emotional bond, and includes the longing to develop and maintain a deep relationship with an entity as a result of familiarity, friendship and comfort, which are established through interpersonal exchanges over time. Affectively committed customers maintain relationships because they like their suppliers and have fun interacting with them. Continuance commitment denotes the calculation of the cost of absolving the relationship (switching cost). It can be the result of a lack of alternative suppliers (negative) or a rational value-based commitment (positive) with benefits resulting from the relationship. Normative commitment refers to the moral obligation to remain in the relationship (indebtedness or gratitude). Normatively committed customers continue the relationship because they feel they are morally obliged to keep it intact (Čater & Čater 2010:1322-1323).

In this study, commitment is related to the independent sales agent having the passion to continue the relationship with the supplier and being willing to make short-term sacrifices to gain important long-term benefits.

4.2 Service support as a relationship value factor

Relationship value originates from the social psychological theory of Thibaut and Kelley (1959), which assumes that human relationships are formed by weighing the cost and benefits of a relationship in comparison with the cost and benefits of other relationships. Value is created when buyers and sellers interact through relationship marketing (Gummesson 1996). Ulaga and Eggert (2006b:314) refer to relationship value as a subjective trade-off between benefits and costs that are multifaceted and relative to the competition. For long-term B2B relationships to be successful, the understanding of relationship value between the partners is necessary (Kim 2014:92, 111).

For the purpose of this study, relationship value was measured by examining the independent sales agent's perception of service support provided by the crop protection supplier. In the process of selling a physical product in the B2B marketplace, the supplier often realises that the service provided in combination with the product is valued more by the

buyer than the product alone (Cann 1998:393-394). This is also the case in the generic crop protection industry, where there is no scarcity in tangible products to recommend and sell to the end-user producer. Typically, the independent sales agent would rely more on a supplier who gives good service and support on this product range.

Service support represents the supplier's capacity to add value by being responsive, exchanging information regularly and performing tasks on the customer's behalf (outsourcing). Customers value suppliers' responsiveness in addressing their concerns, especially in complexity and technicality. A second facet is the management of information (feedback) in the supply chain. When the situation and needs of the customer change, the supplier must react timely with new relevant information or action. Thirdly, suppliers can solidify their standing by performing tasks on behalf of the customer, such as communicating directly with the end-user (Ulaga & Eggert 2006a:124).

Therefore, service support includes those factors that give the buyer a competitive edge, such as partnering, problem-solving and the communication of new technology to the customers (Cann 1998:394-395). Service support is provided when the supplier assists the buyer when a new product is implemented by helping make the product acceptable and successful (Cann 1998:400). As far as the crop protection industry is concerned, service support consists mainly of the efforts and assistance the supplier extends to the independent sales agent to successfully establish remedies in the market as sustainable solutions to the producer's challenges and problems experienced.

4.3 B2B customer loyalty

Business customers tend to buy huge volumes of products, and the management and maintenance of B2B customer loyalty are important to secure a steady income stream (Rauyruen, Miller & Barrett 2007:21). The development of relationships can also reduce risk, as the customer stays loyal to a known supplier. Furthermore, bad buying decisions are averted given that the supplier continues to satisfy (Dwyer & Tanner 2002:113). Customers will be loyal if the value they receive from the business relationship aligns with their needs (Geiger & Kleinaltenkamp 2015:196). Long-term B2B relationships contain an element of "me-loyalty", which is described as the sense of connection between the salesperson of the supplier and the customer. This manifests in a personal relationship, also described as one-

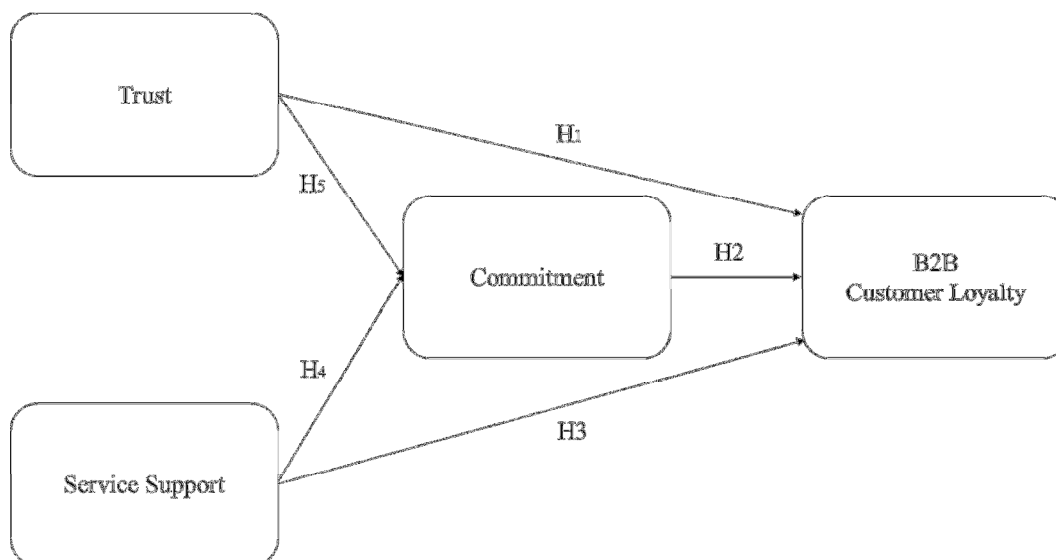
to-one loyalty. The supportive and consultative role played by the supplier is critical to cultivate personal loyalty, because it is difficult to reject a person to whom the customer feels a connection (Kamo 2014).

Moreover, B2B customer loyalty is a multidimensional construct expressed over time, intensity and life cycle from a mere rational buying decision to an intensive cooperative bond and determined self-isolation (Walz 2009:40). Hence, some scholars perceive B2B customer loyalty as “the degree of psychological affection and recommendations for suppliers among buyers” (Kim *et al.* 2018:101). This study examines action loyalty displayed by independent sales agents towards their preferred suppliers in the crop protection industry. This loyalty manifests as the independent sales agent’s “willingness to act” loyal (Oliver 1999:34, 36) by recommending and prescribing the products of the preferred supplier to farmers, despite some negativity, obstacles and even at a personal or financial sacrifice.

4.4 Proposed integrative model

The conceptual model proposed for this study is depicted and explained in Figure 1.

FIGURE 1: Conceptual model



There is an agreement in marketing literature that relationship quality may impact a customer's loyalty (McDonnell *et al.* 2011; Naoui & Zaiem 2010:145; Rauyruen *et al.* 2007:9). Good relationship quality forms the foundation for an effective and long-term business to the business relationship (loyalty) (Jiang, Shiu, Henneberg & Naude 2016:309).

Concerning commitment as a relationship quality dimension, it is argued that repeat purchase behaviour is grounded in commitment, relating to a strong bond between customers and suppliers. Committed customers are devoted and truthful. Truly committed customers develop interdependencies, shared values and strategies, which are fulfilled by long-term dedication and loyalty towards the other party (Naudé & Buttle 2000:353-354).

The connection between trust as a relationship quality dimension and customer loyalty has also been widely studied (Kim *et al.* 2018:111). It seems that in a B2B context suppliers should invest to build and sustain higher level customer trust for more favourable purchasing outcomes. The process of trust-building is time-consuming, costly and complicated. However, the outcomes are strong supplier-seller bonds and intensified loyalty (Doney & Cannon 1997:48).

In view of these previously established relationships and the fact that trust and commitment are further viewed as dimensions of the relationship quality domain, the possibility exists that trust and commitment may also impact on B2B customer loyalty within the crop protection industry. These relationships require further testing, and with respect to independent sales agents, it is hypothesised that:

H1: Trust has a positive and significant impact on customer loyalty towards a preferred supplier of crop protection solutions.

H2: Commitment has a positive and significant impact on customer loyalty towards a preferred supplier of crop protection solutions.

Extant literature on the service support value dimension is relatively silent on the relationship between service support value and B2B customer loyalty. Čater and Čater (2009:5) provide some direction on the matter by referring to Lam, Shankar, Erramilli and Murthy (2004), who found a positive relationship between value and behavioural loyalty. The value dimension assessed included elements of service support. Furthermore, as noted in the introduction to

this article, Skarmeas *et al.* (2016:27) also believe that when distributors experience superior relationship value with suppliers, they are likely to maintain the relationship.

However, these matters require further investigation among crop protection suppliers and their independent sales agents. Hence, concerning independent sales agents, it was hypothesised that:

H3: Service support has a positive and significant impact on customer loyalty towards a preferred supplier of crop protection solutions.

It has previously been noted that relationship value is a critical factor that contributes to commitment. A supplier should concentrate on creating value for the customer. A valued relationship will lead to commitment (Gil-Saura *et al.* 2009:605). Similar views have also been found in the work of Ulaga and Eggert (2006b), which examined the connection between value and commitment in a business-to-business setting.

Considering that service support is seen as a dimension of relationship value, it was further hypothesised that, with respect to independent sales agents:

H4: Service support has a positive and significant impact on commitment towards a preferred supplier of crop protection solutions.

Finally, it is widely acknowledged that trust is an antecedent of commitment (Gil-Saura *et al.* 2009:599; Morgan & Hunt 1994). When trust is established, perceived risk is lower, which may lead to greater commitment to the provider (So, King, Sparks & Wang 2016). It has also been noted that in a B2B setting, organisations perceiving trust in a relationship with another organisation would want to remain committed to the relationship (Gil-Saura *et al.* 2009:599).

Therefore, regarding independent sales agents, it is hypothesised that:

H5: Trust has a positive and significant impact on commitment towards the preferred supplier of crop protection solutions.

5. METHODOLOGY

5.1 Research design, population and sampling approach

A quantitative and descriptive design was chosen to profile the independent sales representatives who have sold the crop protection products to preferred suppliers and to

examine the constructs of this study. This approach was selected as a clear problem statement and hypotheses were formulated for further exploration. The target population included all males and females aged 18 years and older who are employed as independent sales agents, and who have sold the crop protection solutions of their preferred suppliers in South Africa during the past two years.

A non-probability purposive (judgement) sampling approach was followed to select this study's respondents. The researchers specifically approached respondents who form part of the target population, and would have the necessary knowledge and experience to complete the survey. Five peers and colleagues working as area managers in the crop protection industry were recruited as fieldworkers to attend area sales meetings. The fieldworkers were trained and requested to approach respondents who are familiar to them, form part of the target population, and have the necessary knowledge and experience to participate in the survey. The fieldworkers had to request these respondents (sample elements) complete the self-administered survey.

5.2 Measurement scales

Previously validated measurement scales were used to collect the information from the respondents. Appendix A provides a summary of the scale items that were adapted for this study. The respondents were requested to think of their preferred supplier of crop protection solutions and to indicate the extent to which they agree with each of the list of statements provided. A Likert scale, with anchors ranging from strongly disagree (1) to strongly agree (5), was used to capture the respondents' views.

5.3 Data analysis

SPSS 24 was used to determine frequencies (for assessing the demographic profile of the respondents) and calculate the means and standard deviations for each construct. The program was also used to estimate the values of Cronbach's alpha to evaluate the internal consistency reliability of the scales that measured each construct. Subsequent to this investigation, AMOS 24 was used to conduct the confirmatory factor analysis and structural equation modelling analysis, and to conclude on the hypotheses were formulated for this study.

6. RESULTS AND RESEARCH FINDINGS

6.1 Demographic profile

The fieldwork delivered 121 completed questionnaires. Considering the guidelines provided for structural equation modelling by Hair, Black, Babin and Anderson (2010), this sample size was regarded as adequate for further statistical analysis. According to Hair *et al.* (2010), a sample size of between 100 to 150 respondents are allowed when performing structural equation modelling, if five or fewer constructs are investigated, if each latent variable has more than three observed variables and where the item communalities are higher than 0.6. This study adhered to these requirements.

Frequencies were determined next and the research findings indicated that the respondents who participated in this study were homogeneous in their demographics. This industry is male-dominated, which was confirmed with 94.1% of respondents being male. The majority of the participants (96.6%) are Afrikaans-speaking and married (89.1%). Concerning their experience in the selling of crop protection products, 57.1% have more than 10-years' experience. The ages of the independent sales agents who participated in this study range between 24 and 77 years old, with a mean age of 47.47 years, and a standard deviation of 12.6 years. The majority of the respondents (82.9%) were older than 35 years. Regarding annual sales turnover, the range is between R600,000 and R85,000,000 with a mean turnover of R13,290,196. The majority of this study's respondents (80.4%) reported their annual sales to be more than R3m.

6.2 Measurement model

A confirmatory factor analysis was conducted to assess the validity and reliability of the measurement model. The measurement model included the factors of trust (T), commitment (C), service support (S), and B2B customer loyalty (CL). The full maximum likelihood method was applied to deal with missing responses.

The measurement model presented adequate fit indices (Van de Schoot, Lugtig & Hox 2012; Wheaton, Muthén, Alwin & Summers 1977): SA: $X^2/df = 1.349$, CFI = 0.971, IFI = 0.972, RMSEA = 0.054. The mean values and standard deviations presented in Table 1 further indicate that respondents tend to agree with the matters assessed.

All standardised factor loadings also exceed 0.7, and are positive and significant at $p < 0.0001$, indicating that the measurement items are well converged among their respective latent variables (Hair *et al.* 2010). All composite reliability (CR) and values of Cronbach's alpha far exceed 0.7, proving high factor reliability. Considering that all average variance extracted (AVE) values are also above 0.5 (as presented in Table 2), it can be concluded that the research findings provide sufficient evidence of convergent validity of all latent variables examined (Bagozzi & Yi 1988; Byrne 1998; DeVellis 2012; Fornell & Larcker 1981; Hair *et al.* 2010; Tabachnick & Fidell 2001).

Finally, Tables 1 and 2 prove that the latent variables measured in this study are distinct from each other. Specifically, the shared variance among any two variables is smaller than their respective AVE values. For each construct, the AVE values also exceed the corresponding maximum shared variance (MSV), which in turn is larger than the corresponding average shared variance (ASV). Therefore, supporting evidence of discriminant validity among the constructs measured is provided (Fornell & Larcker 1981; Hair *et al.* 2010).

TABLE 1: Assessment of research constructs

Construct items	Std. factor loading	Mean	Std. deviation	CR	Cronbach's alpha	MSV	ASV
T1	0.81	4.21	0.859	0.91	0.91	0.59	0.35
T2	0.85	4.13	0.879				
T3	0.77	4.03	0.882				
T4	0.72	3.90	0.970				
T5	0.82	4.23	0.730				
T6	0.77	4.28	0.809				
C1	0.86	4.17	0.823	0.91	0.91	0.59	0.30
C2	0.80	4.08	0.846				
C3	0.87	4.39	0.702				
C4	0.87	4.24	0.792				
S1	0.88	3.88	0.931	0.92	0.92	0.22	0.17
S2	0.86	3.87	0.898				

S3	0.90	3.87	0.869				
S4	0.81	3.87	0.947				
CL1	0.90	4.38	0.698				
CL2	0.87	4.48	0.647	0.90	0.90	0.29	0.24
CL3	0.84	4.37	0.697				
CL4	0.74	4.45	0.670				

All factors loaded significantly at $p < 0.0001$.

TABLE 2: Latent factor correlation matrix with AVE on the diagonal

Latent variables	1	2	3	4
1. T	(0.63)			
2. C	0.77	(0.73)		
3. S	0.42	0.33	(0.74)	
4. CL	0.54	0.46	0.47	(0.70)

Note: All correlations are statistically significant at $p < 0.0001$.

6.3 Structural model

Table 3 provides a summary of the structural model results:

TABLE 3: Structural model results

Structural path	Standardised β	S.E.	P	Result
H1: T→CL	0.37	0.130	0.015*	Supported
H2: C→CL	0.10	0.126	0.504	Not supported
H3: S→CL	0.31	0.065	0.001**	Supported
H4: S→C	0.04	0.062	0.536	Not supported

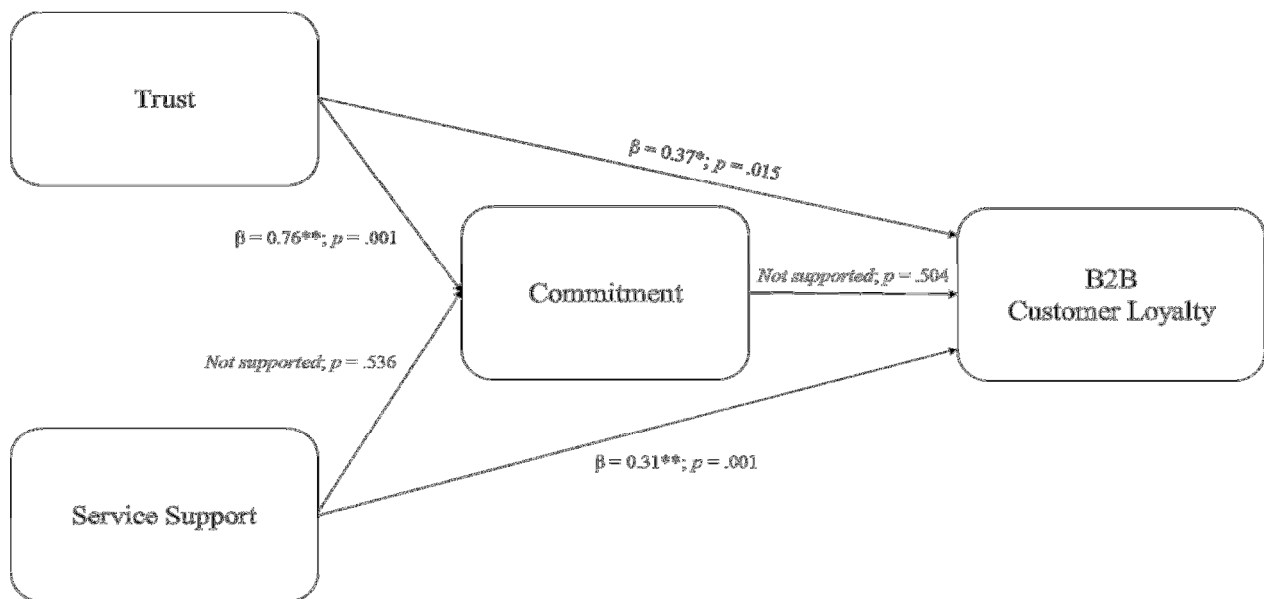
H5: T→C	0.76	0.097	0.001**	Supported
Fit indices:				
SA:	X2/df = 1.49, CFI = 0.96, IFI = 0.96, and RMSEA = 0.064			

*Significant at $p < 0.05$; **Significant at $p < 0.0001$; β = beta coefficient; S.E. = standard error

As evidenced in Table 3, acceptable model fit indices were obtained for the structural model assessed (Hair *et al.* 2010). All standardised regression results are positive. However, only the relationship between trust and B2B customer loyalty, service support and B2B customer loyalty, and trust and commitment are statistically significant at $p < 0.05$ or $p < 0.0001$. Therefore, only *H1*, *H3* and *H5* could be accepted for this study.

Figure 2 provides a graphical depiction of the results from the structural model analysis.

FIGURE 2: Structural model results



7. DISCUSSION AND CONCLUSION

Several theoretical and practical implications can be noted from the research findings.

7.1 Theoretical implications

In the literature review, it was identified that relationship marketing practices are generally aimed at establishing long-term relationships. It was further noted that trust, commitment and service support are considered essential for relationship marketing. Trust and commitment are seen as key indicators of relationship quality (Athanasopoulou 2009:604), which may contribute to customer loyalty in the long-term (Naudé and Buttle 2000:354). Similarly, service support is regarded as an element of relationship value that may also impact loyalty in the long-term. It is believed that for long-term B2B relationships to succeed, the understanding of relationship value between partners is necessary (Kim 2014:111).

This study's findings offer a different perspective on the matter, challenging current thinking. Specifically, confirmation of *H1* and *H3*, but not *H2*, highlights the possibility that in a B2B environment, only trust and service support may be important for the intermediary agent (independent sales representative) to remain loyal to the supplier. When trust and service support is present, commitment may not be required to contribute to B2B customer loyalty. Furthermore, considering that *H5*, and not *H4*, was supported, it seems that commitment in a B2B setting may not always be the outcome of relationship value initiatives, such as service support. These findings are important, as it has previously been acknowledged in marketing literature that a valued relationship will lead to commitment (Gil-Saura *et al.* 2009:605), and that commitment is seen as fundamental to relationship marketing practices (Morgan & Hunt 1994:23; Wetzels, De Ruyter & Birgelen 1998:406). However, in a B2B relationship involving suppliers and independent sales agents, commitment may not be fundamental to a long-term relationship. An agent's loyalty may predominantly be impacted by the level of service support provided by the supplier, as well as the extent to which the supplier can be trusted. Hence, the implication of this finding is that in a B2B setting involving crop protection suppliers and independent sales agents, the foundation of a good relationship may be built on trust and service support. Trust in the supplier is a vital ingredient for long-term orientation and relationship marketing success, which is based on the integrity of the supplier and his benevolent intentions. Additionally, service support seems to offer suppliers

the opportunity to differentiate from competitors and can be used as a strategic tool to gain loyalty.

Another interesting observation is that when measured simultaneously, trust and service support appear to be of equal importance in contributing to B2B customer loyalty. The standardised regression weight for the relationship between trust and B2B customer loyalty ($\beta = 0.37$, $p = 0.015$) is close to the standardised regression weight for the relationship between service support and B2B customer loyalty ($\beta = 0.31$, $p = 0.001$). These findings are relevant within the crop protection industry in South Africa, where the field of crop protection is not only scientifically challenging, complex and competitive, but also carries high responsibility regarding the recommendations made about the farmer's crop. Therefore, independent sales agents need all the support possible to differentiate themselves from their rival sales agents, and would also need to be in a position to recommend products and services from a supplier they can trust.

Moreover, the confirmation of *H5* further supports the widely acknowledged belief that trust is an antecedent of commitment (Gil-Saura *et al.* 2009:599; Morgan & Hunt 1994). The relationship is relatively strong ($\beta = 0.76$, $p = 0.001$), indicating that if independent sales agents trust their suppliers, it is highly likely that they will be committed towards them. In a B2B setting, such as the context measured in this study, suppliers may not benefit from loyalty as an outcome of commitment. However, commitment remains important as literature has also noted that commitment in a B2B setting may lead to behaviour such as relationship performance, cooperation and word of mouth (Chowdhury 2012:56).

7.2 Managerial implications

Considering the research findings, it seems imperative for suppliers of crop protection solutions to focus on building trust with independent sales agents and to ensure sufficient service support is provided, as this behaviour may contribute to B2B customer loyalty.

Regarding establishing trust, suppliers should consider that trust is gained over time and consists of communication, and continuous building and maintenance of the relationship between the supplier and the independent sales agents. Trust depends greatly on the suppliers' integrity, reliability and ability to make good on their promises and their concern for

the interests of the independent sales agents. Therefore, it is critical for suppliers of crop protection solutions to honour the pledges and promises they make to the independent sales agent. Furthermore, suppliers should establish communication channels with the independent sales agent to iron out problems and confront challenges. Better communication will contribute to a perception that the supplier acts fair and in the best interest of the supply relationship.

In the provision of service support, suppliers of crop protection solutions must note that independent sales agents have a choice of generic products from various alternative suppliers, which can be supplied to a farmer to protect his crop. The type, novelty, and quality of service and support received by the independent sales agent is an important element of supplier attractiveness. Hence, a proper assessment and evaluation of the service and support offered by supplier competitors would identify areas for improvement and the opportunity to differentiate from other suppliers. Additionally, a supplier should instil a company culture in their employees that quality service and support to their independent sales agents are not negotiable, because service represents the “human” side of the supplier. This includes being reachable and available even after normal office hours in peak season, assisting with marketing campaigns, knowledge-sharing, information availability and walking the proverbial extra mile for the independent sales agent. Suppliers can further invest in annual conferences for independent sales agents, where speakers are invited to talk on various topics, such as motivation, organisation, sales, crop production and integrated pest management. Another option is for suppliers to invest in third-party consultants to assist independent sales agents in technical and sales support.

Finally, for a supplier of crop protection products to improve the commitment levels of independent sales agents, it is important to let them feel “part” of the supplier’s operations. This can be attained by building attachments to the company and barriers to hinder the exit from the relationship. Attachment can be constructed through co-branding and the advancement of brand loyalty. Collaboration and joint development of products can also deepen the relationship and commitment of the parties.

7.3 Conclusions, limitations and directions for further research

Research in the crop protection industry, with reference to loyalty towards independent sales agents, is very limited. To the best knowledge of the researchers, no previous studies were conducted to specifically measure B2B customer loyalty towards suppliers of crop protection solutions. There also appears to be a lack of studies measuring independent sales agents' perception levels of relationship quality (trust and commitment) and relationship value (service support) received when dealing with their preferred suppliers of crop protection solutions. These findings address the gap and make a valuable contribution to understanding B2B customer loyalty and its antecedents in the South African crop protection industry.

Furthermore, the results provide a foundation for future research on the topic. For example, the current model can be expanded and additional relationship quality and relationship value factors can be investigated to determine their relevance and contribution to B2B customer loyalty. In this regard, qualitative research could assist in identifying alternative relationship quality and relationship value factors for further investigation. A comparative study can be conducted to investigate B2B customer loyalty of independent sales agents in other agri-business settings, such as animal health, animal feeds, fertilisers and seeds, to determine whether statistical similarities exist between the different industries. It might also be worthwhile extending the study to the end-users of the crop protection solutions (the farmers) to gain additional insight into the crop protection supply chain and the degree to which B2B customer loyalty towards the independent sales agent may affect the farmers' businesses.

Finally, it is suggested the same study be repeated on a larger scale across provinces to address the shortcomings of the convenience sampling method, and to obtain further verification of the proposed model.

APPENDIX A: LIST OF ITEMS MEASURED

Trust (Gil-Saura et al. 2009)

- T1: This supplier is sincere and honest
- T2: This supplier keeps his promises.
- T3: This supplier informs me honestly of any problems that might affect me.
- T4: This supplier is concerned about me and my interests.
- T5: The information this supplier give is reliable.
- T6: This supplier is an expert in the products I sell.

Commitment (Gil-Saura et al. 2009)

- C1: I am very committed to my relationship with this supplier.
- C2: I am very faithful to this supplier.
- C3: I try to maintain a long-term relationship with this supplier.
- C4: The relationship I have with this supplier is worth making the maximum effort to preserve.

Service support (Ulaga & Eggert 2006a)

- S1: Provides better services and product support.
- S2: Is more available when information is needed.
- S3: Provides more appropriate information.
- S4: Responds faster when information is needed.

B2B customer loyalty (Gil-Saura et al. 2009)

- CL1: I intend to continue selling this supplier's products in the future.
- CL2: The next time a farmer needs the same type of product I shall sell this suppliers' product to the farmer again.
- CL3: I shall continue selling products from this supplier more frequently in the future.
- CL4: I will probably sell products from this supplier again.

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