Buyer-supplier relationships –

The impact of the external environment on relationships and firm performance

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by
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Supervisor: Dr. Hamieda Parker
ACKNOWLEDGEMENTS

This thesis is not confidential. It may be used freely by the Graduate School of Business.

I wish to thank Dr Hamieda Parker for her excellent support and guidance during the entire research process. A special word of thanks to my wife Zeynab and my family for their love and continued support during the MBA program.

I certify that except as noted above the thesis is my own work and all references used are accurately reported.

Signed:

[Signature]

André Titus
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ABSTRACT

The study tested the impact that the external environment has on buyer-supplier relationship success and the influence of such relationships on company performance. The study also evaluated whether the constructs i.e. communication, collaboration, commitment/trust and flexibility influence buyer-supplier relationship success within an emerging economy. The research was conducted by surveying 86 buyers and suppliers within the supply chain of Company X in both their South African and Zimbabwean operations respectively. The study confirmed that buyer-supplier relationship success positively influences company performance in both these countries. Communication, collaboration, commitment/trust and flexibility all impact buyer-supplier relationship success positively. There is however a notable difference as to how buyers and suppliers view these constructs in South Africa and Zimbabwe respectively. It is therefore important that supply chain practitioners understand which construct within their supply chain has the strongest correlation with buyer-supplier relationship success in order for them to put the correct strategies in place. It was also found that there exists a significant positive relationship between BBBEE status and buyer-supplier relationship success.

KEYWORDS: Communication, collaboration, commitment, trust, flexibility, buyer-supplier relationship, company performance, external environment, regulation, BBBEE, supply chain strategy, emerging economy
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1 INTRODUCTION

1.1 Research Area and Problem

The research will be conducted within the supply chain management area, focusing on the impact of the external environment on buyer-supplier relationships and the influence of such relationships on company performance. Furthermore, the study will evaluate the constructs over which buyers and suppliers have control in order to improve their relationships and determine which of these constructs are most significant.

Wood (1997, quoted in Power, 2005, p.253) explains that ‘...since the supply chain represents 60% to 80% of a typical company’s cost structure, just a 10% reduction can yield a 40% to 50% improvement in tax profits’. This statement highlights the importance of supply chain management and illustrates that successful implementation could lead to it becoming a source of competitive advantage (Power, 2005). Stank et al. (2001) describe the concept of supply chain management as the broad array of activities required from planning and implementation, to control sourcing, manufacturing and delivery processes, commencing from the point of raw material origin to the point of ultimate consumption. Lejeune et al. (2005) maintain that supply chain management highlights the importance for companies to form partnerships across boundaries to the advantage of all the parties involved. Supply chain management should therefore not only focus on the movement of materials along the supply chain but according to Chen & Paulraj (2004) it should also incorporate the flow of information.

Kannan & Tan (2006) propose taking integration of the supply chain one step further by outsourcing non-core activities to other supply chain members so as to better utilise one’s own resources, to remain flexible and thereby responsive to changing needs. Suppliers can offer products or services to organisations which might improve overall performance. However, Kannan & Tan (2006) contend that increased outsourcing results in a greater reliance on other suppliers and a commensurate need to manage the proper selection of suppliers. Once the
correct suppliers are sourced, it becomes important to manage the relationships with those suppliers to the benefit of all parties.

In current recessionary economic conditions it has become very important to manage the relationships between buyers and suppliers in order to improve overall organisational performance. Understanding each other’s businesses might improve relationships which in turn could lead to better performance by the respective supply chain members.

This research contributes to the work done by several researchers to understand how relationship management between suppliers and buyers in a supply chain impacts the performance of the various parties. This research will endeavour to highlight the constructs that have the most significant impact on relationship management within the supply chain in order to provide focus areas for supply chain members. Furthermore, this research will investigate the influence, if any, of the external environment on such relationships.

1.2 Research questions and scope

The research will evaluate whether the following model holds for relationship and organisational performance of both buyers and the suppliers within supply chains:
The following research questions will be answered by this research paper:

1. *Does managing relationships between buyers and suppliers improve the performance of their respective companies?*

   Forging relationships between buyers and suppliers is beneficial to both businesses, encouraging them to work together instead of against each other. It is believed that these relationships should yield better performance for both parties.

2. *What impacts the relationship between buyer and supplier?*

   2.1. *Does communication improve the relationship between buyer and supplier?*
Misunderstandings within the supply chain in several instances are rooted in a lack of communication. Proper communication also assists in creating camaraderie between the different supply chain members, cultivating interest in and care for each other’s businesses and preventing a myopic attitude towards one’s own success. Having an open relationship with one’s key supply chain members creates an understanding about each other’s business needs. Supply chain members will therefore have a better understanding of the impact their strategies and conduct have on their supply chain partners’ businesses.

2.2. Does collaboration improve the relationship between buyer and supplier?

Collaboration is about sharing mutual benefit, rewards and risk (Stank et al., 1999; Barratt and Oliveira, 2001, quoted in Barratt, 2004) which is very onerous on the parties within the relationship. This sense of mutuality encourages both buyers and suppliers to look out for each others best interests and build each others businesses. This research question will determine if such collaboration in fact improves the relationships between buyers and suppliers.

2.3. Does commitment/trust improve the relationship between buyer and supplier?

The commitment that exists between parties is typically tested in difficult times, where either party is presented with the opportunity to improve its own position at the expense of the other party. If there is sufficient trust between the parties involved, they will act in a manner that does not influence the other party negatively. This question will determine whether trust and commitment positively impact the relationship between buyers and suppliers.

2.4. Does flexibility improve the relationship between buyer and supplier?

Change can cause stress in the relationships within a supply chain which by its very nature is an ever-changing entity. The question will consider whether the ability of supply chain members to handle change and to be flexible towards each others needs, will positively impact relationships between buyers and suppliers.
3. Does enforced regulation i.e. Broad Based Black Economic Empowerment (BBBEE) impact the relationship between buyer and supplier?

In the South African context buyer-supplier relationships take on a different dimension since preferential procurement forces buyers and suppliers to forge relationships. Buyers are forced to use certain suppliers because of their BBBEE status, even if it is not their preferred supplier. This could place strain on the relationship, which could influence organisational performance negatively. The purpose of this question is to determine whether regulation in fact influences relationships negatively.

4. How does socio-political and economic stability influence the relationship between buyer and supplier?

COMPANY X has an operation in Zimbabwe, a country that is currently experiencing severe economic depression due to its political context. This research question seeks to find the differences in buyer-supplier relationship management between COMPANY X's South African operation and their operation in Zimbabwe.

**Limited scope and constraints**

There are several other elements that impact the relationship between buyers and suppliers that will not be examined in this study. This study will be limited to the suppliers and buyers of COMPANY X. The size of the sample will largely depend on the availability of buyers and suppliers to participate in the survey. The findings of this research will not be able to be generalised to business within South Africa but it will provide insight into what managers could do to improve supply chain relationships when impacted upon by factors from the external environment.
1.3 Research Assumptions and Ethics

COMPANY X’s Supply Chain Director gave access to the suppliers and customers of COMPANY X. The concern that not enough buyers and suppliers would respond did not materialise. A sufficient number of suppliers and buyers from different levels within their organisations also participated. Access to the Zimbabwean operation’s supply chain members was given but due to the difficulties within the country the response rate was expected to be low. This risk was partially mitigated by getting COMPANY X’s senior Supply Chain Director and its Zimbabwean Operation’s CEO on board from the outset. It seems as if this strategy paid dividends since a large enough response was achieved.

It was assumed that the culture, policies and procedures between COMPANY X’s South African and Zimbabwean operations are similar and it was therefore possible to infer that any differences are most likely due to the external environment in which the two entities operate.

The anonymity of the responses received from buyers and suppliers was critical since it might have an influence on their future relationships. Furthermore, due to the sensitive political climate in Zimbabwe it was important to protect the confidentiality of the participants in this study. Based on a study conducted by Johnston et al. (2003) the questionnaire was accompanied by a covering letter undertaking that their responses would be confidential and would not be revealed to the other buyers and suppliers. Due to the nature of the internet survey process that was followed, it was impossible to identify any of the respondents and their confidentiality was therefore protected.
2 LITERATURE REVIEW

2.1 Discussion

2.1.1 Supply Chain Relationships and Performance

‘Customers, manufacturers, distributors, retailers and a host of service organizations have discovered that in order to survive, it is imperative for them to come together for mutually beneficial reasons based less on power play and more on value exchange (Sahay, 2003, p.553).’

‘Coming together’, however, will only be successful if the members within the supply chain are willing to forge relationships that support all parties. Lejeune et al. (2005) describe the different types of supply chains as communicative, coordinated, collaborative and co-operative e.g. the nature of COMPANY X’s supply chain relationships could be described as a combination of co-ordinated and collaborative. COMPANY X could be regarded as the dominant industry leader possessing power (co-ordinated) but it is perceived that there exists a substantial degree of reliability and competency trust amongst the different players within the supply chain.

Kannan & Tan (2006) encourage behaviours from both buyers and suppliers that signal a willingness to work together in order to prevent either of the parties selfishly pursuing their own interests. As long as buyers and suppliers work in isolation from each other the two parties will always compete in order to negotiate the best deal for themselves at the expense of the other party. Such behaviour inevitably leads to a breakdown in the relationship between the respective supply chain members. There must be mutual sharing and respect for the other trading partner (Crewe & Davenport, 1992, quoted in Barratt, 2004). This will, however, only be possible if the parties have each other’s best interests at heart. Working together and sharing risks allow mutual benefits to be achieved in terms of cost, quality, delivery, productivity, product development, technology development and problem-solving (Fram, 1995, quoted in Kannan & Tan, 2006). Monczka et al. (1995) found co-operation, dependence, percentage of total business, joint programmes and economic satisfaction to be predictors for the relationship between buyers and
suppliers. Sahay (2003) states that supply chain partnerships will achieve the associated benefits of a larger share of the business for both parties e.g. parties will be less price sensitive resulting in more referral behaviour that leads to greater loyalty and commitment.

The importance of relationships highlights the importance of choosing the correct suppliers from the outset, in particular those with whom one can forge good relationships. Kannan & Tan (2006) encourage buyers not to exclusively use operational criteria for selection but also to ensure that there is a match between their own strategic orientation and that of the potential supplier. Collaboration with one’s suppliers is labour intensive and it is therefore even more important for the organisation to focus on a small number of close relationships instead of trying to collaborate extensively with too many suppliers and customers (Barratt, 2004). They also contend that there should be a commitment to meet shared goals and objectives from the commencement of the relationship between the two parties. Ensuring a common understanding of what their goals and objectives are is critical, since it can cause frustration if clarity is lacking in this regard. It behoves buyers to carefully articulate their needs and to be discriminating in identifying suppliers (Kannan & Tan, 2006).

Based on the literature, one can conclude that there is overwhelming evidence that there is a positive correlation between managing supplier and buyer relationships, and organisational performance. In order to confirm this correlation one needs to consider what indicators to implement in order to measure performance. Kannan & Tan (2005) used market share, return on assets, overall product quality, overall competitive position and overall customer service levels. Stank et al. (1999) argue that these factors might not be appropriate when the objective of the analysis is a specific business activity such as logistics. Chan (2003) contends that measuring a supply chain on the basis of cost alone should be abandoned, even though cost is directly related to profit and it is a relatively easy measurement to establish. He proceeds to explain that customers should be the main concern for companies and that performance measurement should therefore be grounded in customer satisfaction. Stank et al. (2001) expand the theory and
propose that consistency, response time to the customers’ needs, ability to modify orders and delivery times should be used as measures for logistical service performance.

The literature research conducted on buyer-supplier relationship success and organisational performance has been done within the context of developed countries. This research will attempt to show that those findings hold within an emerging market context. The following hypothesis will therefore be posed:

**Hypothesis 1:** Buyer-supplier relationship success positively impacts organisational performance.

### 2.1.2 Developing the Constructs that impact Supply Chain Relationships

The question now remains: What do managers need to consider in order to improve the relationships between the different supply chain partners? Notwithstanding that all these constructs have been individually researched by various researchers, it appears that a gap exists within the literature, as it fails to investigate the hierarchical importance of the various constructs to such relationships. Table I is a summary of the most pertinent literature found on supply chain relationships. Kannan & Tan (2006) identify traits such as co-ordination, collaboration, commitment, communication, trust, flexibility and dependence to be central to meaningful relationships. Bullington & Bullington (2005) identify characteristics found within strong families that could be employed to improve supply chain relationships. These characteristics include the ability to handle change, time spent together, appreciation, commitment, and principles and communication. Barratt (2004) on the other hand found trust, mutuality, information exchange, openness and communication as the elements that support a collaborative culture. There appears to be a causal relationship between most of these traits and for the purposes of this research some of the traits will be combined to reduce the number of concepts that will be investigated.
Both commitment and communication were characteristics that were shared by the majority of researchers and will therefore be considered individually. Sahay (2003) states that trust is necessary in order for a partnership to develop, since it leads to specific behaviours that could create additional benefits for the partnership. Bullington & Bullington (2005) combined trust and commitment into one concept and a similar approach will be followed here. Both the ability to handle change and flexibility deal with the willingness/ability of buyers and suppliers to cope with changing circumstances both within and external to their businesses, although having an impact thereon. The concept flexibility will therefore evaluate these two constructs together. Time spent together and principles are enablers for most of the other characteristics and will therefore not be evaluated separately. For the purposes of this research communication, commitment/trust, collaboration and flexibility will be investigated as key constructs that impact the relationships between buyers and suppliers. For the purposes of measurement, indicators need to be developed for each of these constructs.
<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Research Approach and Strategy</th>
<th>Research design, Data collection methods and Research Instruments</th>
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<td>Success of buyer-supplier relationship (BSR)</td>
<td>Buyer-supplier engagement (E) Supplier selection (SS)</td>
<td>Deductive Quantitative</td>
<td>Cross-sectional Mail Survey</td>
<td>Non-Response Bias Reliability analysis (0.7) Construct Validity Predictive Validity</td>
<td>Pre-tested 30 industry professionals 527 usable responses</td>
<td>SS, E ↔ BSR ↔ FP</td>
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<td>Relationship</td>
<td>Commitment, Trust, Communications, Principles</td>
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Table I: Summary of Literature review on Supply Chain Relationships
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<th>Study</th>
<th>Relationship/Performance</th>
<th>Time Spent together</th>
<th>Change Appreciation</th>
<th>Data Collection</th>
<th>Findings</th>
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<tr>
<td>Sahay (2003)</td>
<td>Relationship (R)</td>
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<td>Flexibility (F)</td>
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<td>Shared Planning (SP)</td>
<td>Quantitative</td>
<td>Mail Survey</td>
<td>Convergent Validity</td>
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<td>Joint Responsibility (JR)</td>
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<tr>
<td>Barratt (2004)</td>
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<td>Wagner et al. (2002)</td>
<td>Organisational Performance (OP)</td>
<td>Partnering (P)</td>
<td>Inductive</td>
<td>Case Study</td>
<td>Attend management meetings</td>
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<td>Qualitative</td>
<td>Semi-structured interviews</td>
<td>Informal</td>
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<td>Study</td>
<td>Constructs</td>
<td>Methodology</td>
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<td>Quality management (QM)</td>
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<td>Supply Chain Management (SCM)</td>
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<td>Pre-tested by 30 senior purchasing and materials managers</td>
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<td>556 valid responses</td>
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<td>Internal Collaboration (IC)</td>
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<td>Information Sharing Between (ISB)</td>
<td>Information Sharing Within (ISW)</td>
<td>Supplier Development Support (SD)</td>
<td>Product Quality Improvement (PQ)</td>
</tr>
</tbody>
</table>

EEDED - Relationship present

<> - No relationship present
2.1.3 Communication

Information sharing improves firm performance

Large (2004) found that communication is of the greatest importance in creating and sustaining supplier-customer relationships. Mohr and Nevin (1990, quoted in Large, 2004, p.427) went as far as describing communication as ‘the glue that holds together a channel of distribution’. Several literature sources seem to agree that information sharing has an indirect and positive impact on firm performance (Carr & Kaynak, 2007). Kannan and Tan (2006) have found that buyer-supplier engagement impacts the success of the buyer-supplier relationship which in turn influences the performance of their respective firms. According to Hsu et al. (2008) the value of information sharing comes largely from helping to form better relationships and facilitating improved co-ordination and responsiveness within a supply chain. Furthermore, it creates opportunities for firms to work collaboratively thereby reducing supply chain inefficiencies, resulting in a significant direct impact on the relationship between the buyer and the supplier (Hsu et al., 2008). Information sharing therefore allows the supplier buyer relationship to operate closer to a team structure which makes the partnership stronger, benefiting both parties.

The importance of information sharing becomes even more critical when the supply chain operates in an environment where uncertainty and ambiguity are present. Ambrose et al. (2008, p.363) states that ‘the function of the communication activity is to reduce uncertainty and/or clarify ambiguity’. Clarifying ambiguity requires the ability to communicate complex phenomena, to easily combine multiple perspectives, and to quickly establish understanding and learning between parties.’ If uncertainty and ambiguity are present but not addressed, they could cause unnecessary misunderstandings between supply chain members which might negatively impact the relationship between the parties and, potentially, their respective performance.

There are, however, some studies that found communication to have a limited influence, if any, on relationships and firm performance. Large (2004) refers, for example, to Rodwell et al. (1998) whose research concluded that there was a negative relationship between perceptions
of communication and performance. Large (2004) also refers to Huhtinen et al. (2002) who Rodwell argued that, notwithstanding infrequent information sharing between two companies within a supply chain, the companies were of the view that they had obtained sufficient information to do their work successfully. Excepting for these findings, there remains overwhelming support in the literature that the relationship between communication and performance is positive.

**Types of Information sharing**

The type of interaction between the supplier and the buyer can vary and could impact company performance differently. Traditional communication methods include telephone, fax, e-mail, written and face-to-face contact (Dewett and Jones, 2001). Advanced communication methods refer to computer-to-computer links, electronic data interchange (EDI) and enterprise resource planning (Carr & Kaynak, 2007). Daft and Lengel (1984, quoted in Ambrose et al., 2008, p.362) propose a media richness scale which ranks communication media according to the communication characteristics set out in Table II below.

**Table II: Communication Media Richness Scale**

<table>
<thead>
<tr>
<th>Medium</th>
<th>Richness</th>
<th>Formality</th>
<th>Senses used</th>
<th>Language</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face</td>
<td>Highest</td>
<td>Informal</td>
<td>Visual, audio</td>
<td>Body, natural</td>
<td>Immediate</td>
</tr>
<tr>
<td>Videoconference</td>
<td>Informal</td>
<td>Visual, audio</td>
<td>Body, natural</td>
<td>Immediate</td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td>Informal</td>
<td>Audio</td>
<td>Natural</td>
<td>Immediate</td>
<td></td>
</tr>
<tr>
<td>Instant</td>
<td>Informal</td>
<td>Visual, audio</td>
<td>Natural</td>
<td>Immediate</td>
<td></td>
</tr>
</tbody>
</table>
Ambrose et al. (2008) found that rich information communication media is especially advantageous as it adds value to both parties in terms of new product or service ideas. Furthermore, they found that the day-to-day management of relationships can be done via telephone or e-mail. However, during conflict resolution the rich informal communication media such as telephone and face-to-face meetings provided more favourable outcomes.

**Face-to-Face Information Sharing**

Contact opportunities between multiple members of organisations create broad interfaces to overcome communication gaps and to create an environment where innovative thinking is encouraged and supported (Barratt & Green, 2001, quoted in Barratt, 2004). Cai et al. (2009) encourages this practice since it creates a forum where goals and Key Performance Indicators (KPI's), which are not compatible with the current reality, can be adjusted. Cai et al. (2009) further maintain that these communication sessions can also be used to update operational plans and share it amongst the respective supply chain members. Such increased co-ordination of the supply chain will lead to more integration in the supply chain, which will increase overall productivity (Germain et al., 2007). Chandra & Kumar (2000, p.105) confirm these viewpoints by
stating that ‘a successful strategic alliance or a partnership must be based on extreme trust, loyalty, positive sum game (win-win relationship), cross-functional teams, sharing common goals and co-operation that includes willingness to assist, and positive negotiations based on fairness’. A means to achieve this is to have regular face-to-face team meetings that could support partnering but it is important to understand that these institutional devices could potentially slow the process and be counter-productive in relation to the initiative and creativity of staff members (Wagner et al. 2002). Supply chain partners should therefore guard against making and/or executing decisions solely via these communication sessions. Where relationships between suppliers and buyers are more developed, the creation of opportunities for face-to-face meetings could revive and add further value to their relationships (Ambrose et al., 2008).

The literature research conducted on communication and buyer-supplier relationship success has been done within the context of developed countries. This research will attempt to show that those findings hold within an emerging market context. The following hypothesis will therefore be posed:

Hypothesis 2: Communication positively impacts the buyer-supplier relationship success

2.1.4 Collaboration

A major push over the past decade for collaboration has been the drive for companies to focus on core competencies and to outsource everything else (Gottfredson, 2005, quoted in Zacharia, Nix & Lusch, 2009). Consequently, the skills and knowledge that companies previously would have possessed are now distributed amongst the members of their supply chain, creating a greater dependence between supply chain members (Zacharia et al., 2009). Within a collaborative supply chain the respective supply chain members align their objectives and use their complementary assets to gain competitive advantage (Lejeune et al., 2005). Research in collaborative relationships assumes that buyers and suppliers enter into such agreements for mutual gain but it is not clear whether both parties benefit equally (Nyaga, Whipple & Lynch, 2009). The authors investigated independent buyer and supplier samples and found their perspectives ‘are more
similar than what they are different’. Nyaga et al. (2009) maintain that if partners see eye-to-eye it may be easier to implement collaborative partnerships resulting in satisfaction and performance.

Collaboration can be described as a process of decision-making amongst inter-dependent parties. It involves joint ownership of decisions and collective responsibility for outcomes (Stank et al. 2001). Schrage (1990, quoted in Stank et al., 2001, p.31) defines collaboration as ‘an affective, volitional, mutual shared process where two or more departments work together, have mutual understanding, have a common vision, share resources, and achieve collective goals’. The success of a relationship between the buyer and the supplier is to a large extent also dependent on the willingness of both parties to collaborate to build a partnership. The following are some barriers to collaboration identified within the literature:

- Barratt (2004) maintains that organisations that attempt to collaborate with too many of their suppliers and customers will not be as effective because the cost of wide-scale implementation would outweigh any value derived. He proposes a segmented supply-chain approach, limiting collaboration only to a few suppliers and customers.

- Barratt & Oliveira (2001, quoted in Barratt, 2004) established that a major barrier to collaboration was a lack of attention to developing front-end agreements that specifically set out what the organisations intended to collaborate on. Daugherty, Richey, Roath, Min, Chen, Arndt & Genchev (2006) interviewed several industry professionals and found that this formalisation enhanced performance by eliminating ambiguity and clarifying priorities.

Barratt (2004) explains that ‘collaborative’ culture constitutes trust, mutuality, information exchange, and openness and communication. Stank et al. (2001) highlights key dimensions for collaboration as cross-department/organisation scope, a commitment to working together and some common bond or goal. This entails ‘sharing of data, operating plans and even some financial information’ (Quinn 1999, quoted in Stank et al., 2001, p.32). Zacharia et al. (2009) state that there exist different levels of collaboration ranging from weak to high. Kanter (1994, quoted in Zacharia et al., 2009, p.105) maintain that high levels of collaboration can be characterised ‘by
high levels of commitment, numerous joint activities, overlapping operations and relationships that cause changes in each other’s organisation’. On the other hand, Zacharia et al. (2009) state that low levels of collaborations are characterised by firms not making decisions together and where very little information is shared amongst them.

There are different opinions within literature about the influence that collaboration has on buyer-supplier success and company performance. Stank et al. (2001) surprisingly found that external collaboration between parties within the supply chain does not significantly impact service performance. They did however find that internal collaboration mediates the relationship between external collaboration and logistical service performance. The implication of this finding is that if one intends to improve service performance through collaboration with external customers and suppliers, one first needs to enhance internal collaboration. The fact that there was only one respondent from each firm in the research conducted by Stank et al. (2001) could have lead to respondent bias, which could have influenced the validity of the results. Zacharia et al. (2009) on the other hand found that companies that invest in resources for collaboration improve both their operational and relational outcomes which in turn improve company performance.

The literature research conducted on collaboration and buyer-supplier relationship success has been done within the context of developed countries. This research will attempt to show that those findings hold within an emerging market context. The following hypothesis will therefore be posed:

*Hypothesis 3:* Collaboration positively impacts the buyer-supplier relationship success

### 2.1.5 Commitment or Trust

Jap (2001, quoted in Lejeune & Yakova, 2004, p.87) defines trust as ‘the ability to reliably predict the actions of the other party in the relationship and the belief that the other party will not act opportunistically if given the chance to do so’. A relationship built on trust removes a significant
amount of uncertainty for the parties involved (Chandra & Kumar, 2001, quoted in Sahay, 2003). Chan (2003) states that trust is the reliability and consistency between different levels of the supply chain that helps to build a long-term relationship between supply chain partners. Both buyers and suppliers need to conduct themselves in a consistent and reliable manner for the entire duration of the relationship and this requires that the relationships are based on integrity and honesty.

Sahay (2003, p.560) highlights the frailty of a relationship premised on trust in that ‘though trust is hard to attain it is never too hard to destroy’. This statement encompasses the importance of a trusting relationship and, more crucially, it highlights the importance of protecting the trust that was generated by the parties. To protect the trust that exists between the two parties there must be high levels of commitment from both sides. Chan (2003) maintains that this process requires commitment or in some cases contracts between the respective supply chain members to ensure consistent supply.

Chan (2003) identified consistency of supply as an appropriate measure for commitment within a supply chain. The success of any one member within a supply chain is highly dependent on the consistency of the preceding member within the supply chain. Trust is very dependent on information sharing within the supply chain (Chan, 2003). Parties can enhance their relationship by fast and accurate data transfer as well as their ability to forecast accurately.

Evaluating trust during a cross-sectional study presents the difficulty that the observations made of the dyad will not be longitudinal and it will therefore lack a complete understanding of the time required for trust building (Johnston et al. 2003).

Ambrose et al. (2008) states that conflict resolution is a mechanism that ensures the continuation of the relationship and that it signals the commitment of the parties to the relationship.

The literature research conducted on commitment/trust and buyer-supplier relationship success has been done within the context of developed countries. This research will attempt to show that those findings hold within an emerging market context. The following hypothesis will therefore be posed:
Hypothesis 4: Commitment/trust positively impacts the buyer-supplier relationship success

2.1.6 Flexibility

Supply chains typically consist of several buyers and suppliers who interact with each other continuously. Any change that is introduced into this system will most probably have some influence on most of the members of the chain. Crises or ‘change’ are inevitable in buyer-supplier relationships and it is therefore important for supply chain members to be able to deal with change (Bullington & Bullington, 2005). Various trends within supply chain management increase the potential exposure to these risks e.g. increased outsourcing, globalisation, reduction in supplier base, reduced buffer stocks and increased demand for on-time deliveries (Trkman & McCormack, 2009). Change can be due to both internal as well as external factors.

Internal factors comprise that over which the supply chain members have some control. Trkman & McCormack (2009) state that if the source of uncertainty is within the supply chain it could influence the buyer-supplier relationship. Internal factors could also include product design changes or unplanned changes e.g. breakdown of machines, late arrival of raw materials or new competitors that enter an existing market (Chan, 2003). The same authors divide external uncertainty into discrete events (e.g. terrorist attacks, contagious diseases, workers’ strikes) and continuous risks (e.g. inflation rate, consumer price index changes). Chan (2003) explains that flexibility entails the ability or adaptability of a company to respond to diversity as well as to these changes. Similarly, according to Gosling, Purvis & Naim (2009), flexibility is the reflection of the ability of a system to change or react to these internal and external changes with as little penalty in time, effort, cost or performance.

Sanchez & Perez (2005) categorise flexibility as follows:

1) Process flexibility of each supply chain plant, concerning the number of product types that can be provided by a supplier; and

2) Logistics flexibility, which relates to the different logistics strategies which can be adopted either to release a product to a market or to procure a component from a supplier.
This research focuses mainly on logistics flexibility and how this influences relationships and company performance. Sanchez & Perez (2005) refer to logistics flexibility as the routing flexibility at the shop floor level. Consequently, it consists of the ability to use alternative routes so as to move the work-in-process through different resources offering the same or compatible processes.

Naim, Potter, Mason & Bateman (2006) maintain that flexibility should be seen as a proactive attribute designed into a system instead of it being a reactive behaviour. It is therefore necessary for the buyer and the supplier to proactively (and thus preventatively) decide how they would handle unforeseen changes. This becomes even more important in unstable external environments where change is constant and is out of the control of the supply chain dyad. Contingency planning between the buyer and supplier may assist in dealing with the change more comfortably. Firms that decide to develop a flexibility strategy should be careful not to increase flexibility in a way that is not necessary for a given environment, and/or to miss out on opportunities to enter an area of the market requiring greater responsiveness (Venderhaeghe & Treville, 2003, quoted in Sanchez & Perez, 2005). Trkman & McCormack (2009) further argue that since different suppliers operate in different markets and environments, their turbulence varies and the forces that influence the respective buyers also differ. This implies that companies might have specific strategies for each of their suppliers and customers.

Fawcett et al. (1996) maintain that the ability to introduce logistic flexibility places a firm in a position to better meet the needs of consumers and thus provides the firm with a tangible competitive advantage. Fawcett et al. (1996) found a strong direct relationship between flexibility and firm performance, emphasizing the fact that firms that reduce cycle times and respond to customer needs tend to be more successful. Sanchez & Perez (2005) also found that a positive relationship exists between superior performance in flexibility capabilities and firm performance. It is important for customers to feel valued and they must believe that their suppliers will provide, or at least do everything in their power to ensure good service. Situations might arise due to either external or internal factors where a customer would require assistance from suppliers. Procurement/sourcing flexibility in this instance could be the ability of the supplier to adjust lead times or the ability to adjust its capacity (Swafford et al., 2006). It is during these times of crisis
where flexibility is crucial to enable the supplier to assist the customer, which in turn will strengthen their relationship. However, it is sometimes necessary for the customer to be flexible in terms of what the supplier can provide. The willingness of customers to be flexible in these abnormal situations will further help to strengthen the relationship with the supplier.

The literature research conducted on collaboration and buyer-supplier relationship success has been done within the context of developed countries. This research will attempt to show that those findings hold within an emerging market context. The following hypothesis will therefore be posed:

*Hypothesis 5:* Flexibility positively impacts buyer-supplier relationship success

### 2.1.7 External Environment

Business relationships can be viewed as a social system comprising interacting sets of major economic and socio-political forces that affect the collective behaviour and performance of the parties involved (Stern & Reve, 1980). Environmental moderators include the industry's pace of technological change, exchange rate variability, regulation variability and seasonality (Germain, 2008). According to Leonidou *et al.* (2006) the external socio-political system in which the relationship functions will also have an influence on the relationship.

In the South African context this will be especially relevant due to BBBEE initiatives that have been implemented through legislation in order to counteract the economic injustices of the Apartheid regime. Buyers are given incentive through the BBBEE scorecard to award, on a preferential basis, business to previously disadvantaged groups (preferential procurement).

In Zimbabwe the existing socio-political system has impacted Zimbabweans on all levels of society and it is believed that it has also influenced relationships on a buyer/supplier level. Leonidou *et al.* (2006) aptly state that the prevailing and prospective economic environment will influence the relationship between buyers and suppliers. In the case of COMPANY X's Zimbabwe operations, this is especially relevant since the country has been experiencing hyperinflation over the recent
years. This research aims to highlight the differences between buyer-supplier relationships in the same industry within a relatively stable South Africa on the one hand and an ever-increasingly unstable Zimbabwe on the other hand.

However, Achrol et al. (1983) list the following practical, methodological and theoretical-conceptual reasons for why it would be difficult to study the impact of external environmental factors on relationship dyads:

- One would have to itemise the environment and it would be difficult to specify the relevant variables;

- Every event confronting an organisation does not necessarily affect it. Organisation theorists refer to this as organisations being ‘loosely coupled’ with the environment; and

- The ability to generalise the ‘item effect is very tenuous across time and different situations’.

It follows that if item effects are difficult to generalise then there would be very few reliable sources of theory upon which to evolve a strong tradition of scientific empiricism.

In order to compare the South African and Zimbabwean environments with each other it will be necessary to identify item variables. In the light of Achrol’s findings, this research will only compare these two environments and merely test if there is indeed a significant difference in the findings based on the relationship constructs developed above. The following hypothesis will be posed:

*Hypothesis 6: The external environment impacts the buyer-supplier relationship success*

Carter & Jennings (2002) investigated the impact Purchasing Social Responsibility (PSR) has on supply chain relationships. As part of their research in measuring PSR, they considered how firms deal with minority/women-owned business enterprise suppliers. The outcome of their research was that PSR has a direct and positive impact on supply chain relationships. Since the impact of preferential procurement policies in the South African context impacts the dyad relationship
directly, the research will attempt to find if there is indeed a relationship. The following hypothesis will therefore be posed:

*Hypothesis 7: The BBBEE status of firms impact buyer-supplier relationship success*

### 2.2 Literature Review Conclusion

Based on the review, classification and analysis of the literature on buyer-supplier relationships, a number of gaps in the literature have become apparent and suggestions for future research can be put forward.

There is a glaring gap in the extent of research done on supply chain relationships within emerging economies. This is especially relevant, since emerging economies are becoming the focal point of global economic growth. This research could shed some light on understanding supply chain relationships within emerging economies and the potential implications this would hold for management.

Several literature sources found a direct relationship between supply chain relationships and organisation performance. Communication, collaboration and commitment/trust have been shown to influence supply chain relationships directly and organisational performance indirectly. Most literature sources found a direct link between supply chain flexibility and company performance. The following gaps were identified within the literature:

- Most literature sources found a direct positive relationship between flexibility and company performance. No literature could be found that investigated whether relationship success is a mediating factor as is the case with communication, collaboration and commitment.

- No literature could be found where the communication, collaboration, flexibility and commitment/trust constructs are evaluated together to hierarchically determine which is most important to buyer-supplier relationship success.
Another gap in literature exists in determining how regulation and the external environment influence buyer-supplier relationships. Within the South Africa context, buyers are legislatively encouraged to do business with certain firms through the preferential procurement item on the BBBEE company scorecard. This research will investigate whether these regulations impact supply chain relationships.

In Africa, where conflict is prevalent in various parts of the continent, relationships between buyers and suppliers play an important role in conducting business. A gap exists in the literature as to how these unstable environments impact the relationships between buyers and suppliers. Using COMPANY X as a subject for investigation provides the opportunity to evaluate the supply chain relationships within two different environments i.e. South Africa and Zimbabwe.

Based on the literature survey the following constructs were developed for the respective concepts as set out hereunder in Table III. These indicators will be used as measures for the concepts in order to find relationships between the respective variables identified in Figure 1. Table III summarises the definitions of the concepts, and the indicators that will be used as measures within the survey instrument are set out in bold.

**Table III: Indicators used in the Literature for the respective Concepts**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definitions</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Market share, ROA, overall product quality, overall competitive position, overall customer service levels (Kannan &amp; Tan, 2006)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time between order and delivery. Quoted or anticipated delivery dates and quantities. Needs and wants of key customers. Desired quantities on a consistent basis. Modify order. Accommodate delivery times.</td>
</tr>
<tr>
<td>Buyer-supplier relationships success</td>
<td>Relationship between the buyer and supplier within the supply chain</td>
<td>Quality level, total cost, new product development time, co-operation (Kannan &amp; Tan, 2006)</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Commitment/trust</td>
<td>The ability to reliably predict the actions of the other party in the relationship and the belief that the other party will not act opportunistically if given the chance to do so (Barrat, 2004).</td>
<td>Defend against outside criticism. Will not drop partner even for better terms. Willing to dedicate people and resources. Willing to make a long-term investment. Strong sense of loyalty. (Siguaw et al., 1998, in Lai 2009)</td>
</tr>
<tr>
<td>Flexibility</td>
<td>The ability or adaptability of a company to respond to diversity or change (Chan, 2003).</td>
<td>Ability to accommodate special or non-routine requests. Ability to handle unexpected events. Ability to provide rapid response requests. Change over time. System adaptability. Shorter lead times. (Fawcett et al., 1996)</td>
</tr>
<tr>
<td>Collaboration</td>
<td>‘An affective, volitional, mutual shared process where two or more departments work together, have mutual understanding, have a common vision, share</td>
<td>Cross-department/organisation scope, a commitment to working together and some common bond or goal. Sharing of</td>
</tr>
</tbody>
</table>

Customer expectations.
| **Communication** | resources and achieve collective goals’ (Shrage, 1990, in Stank et al., 2001, p. 31) | data, operating plans and even some financial information (Stank et al., 2001) |  |
| | ‘The formal and informal exchange of information and meaning between the parties of a working relationship, concerning day-to-day, tactical or strategic issues of the relationship’ (Leonidou et al., 2006, p. 150). | Informal info sharing, formal info sharing, integration of activities, communicating future needs, a greater level of trust and a compatible information system (Kannan & Tan, 2006) |  |
| **External environment** | External environment |  |  |
3 RESEARCH METHODOLOGY

3.1 Research approach and strategy

A deductive research approach was followed whereby hypotheses drawn from theory were postulated and tested by conducting surveys of suppliers and buyers within COMPANY X supply chains. Quantitative analysis was utilised to evaluate the data received from the surveys conducted. This research approach and strategy for evaluating relationships within a supply chain is common throughout literature, as set out in Table I. The intention was to conduct interviews with supply chain managers of both suppliers and buyers so as to test the findings of the quantitative analysis. Bryman & Bell (2007) state that the use of interviews as a follow-up method after initial surveys would yield a more ecologically valid study which would reduce the limitations of using only one method. This mixed research strategy will assist in providing a qualitative explanation for the quantitative data obtained through the surveys (Yeung, 2004). Unfortunately due to time constraints and the unavailability of the supply chain members, the interviews could not be conducted. Other methods of determining causality will be discussed below.

3.2 Research design, Data collection methods and Research Instruments

A cross-sectional research design was followed by conducting online surveys of both the suppliers and buyers within the COMPANY X supply chain. The cross-sectional nature of the survey procedure employed limits the ability to infer causality. The reason for this is that the data related to each of the variables is collected at the same time, therefore the time order of the related variables cannot be established (Duffy & Fearne, 2004). A longitudinal study would have allowed determination of causal direction but due to time and cost constraints this research design is not feasible. Causal inferences were derived from theory and existing research. Carr & Kaynak (2007) claim that this approach is controversial but argue that it is acceptable for clarifying theory and assessing specific causal effects from correlation research data. The majority of the available
literature sources (Refer to Table I) used the cross-sectional research method despite this limitation.

Data collection was conducted via an on-line survey since most of COMPANY X’s customers and suppliers have access to the Internet. In some cases, surveys were conducted by post. The surveys were sent to supply chain members comprising both the suppliers and customers of COMPANY X. A reminder was sent to all respondents after a specified period of time had lapsed. Churchill (1979) claims that the very basic requirement for a good measure is content validity, which means that an instrument should cover the major content of a construct. The questionnaire was compiled by predominantly using questions from literature (Refer to Appendix A for the survey including the changes decided upon after pre-testing was conducted). Grounding the survey questions in literature assisted in achieving content validity (Li, Rao, Ragu-Nathan & Ragu-Nathan, 2005). Emory (1980, quoted in Chen & Paulraj, 2004) defends this methodology by claiming that the determination of content validity is not numerical but subjective and judgmental. A Likert-type scale was used to measure the extent to which individuals agree or disagree with carefully designed questions (Kannan & Tan, 2006; Johnston et al., 2003).

For clarity, the survey instrument was pre-tested by one academic and five industry professionals (Kannan & Tan, 2006; Johnston et al., 2003). Carr & Kaynak (2007) advise that using academics for pre-testing is helpful as they can identify ambiguities, typographical errors, problematic formatting, etc. in the survey. Establishing the face validity of the measures using professionals working within the area of research assisted in ensuring that the measures chosen reflected the concept concerned (Bryman & Bell, 2007). The professionals used in the pre-test were however not used for the final survey. COMPANY X was the unit of analysis and the questions within the survey were set with respect to its functional areas (Carr & Kaynak, 2007).

The following literatures sources were consulted to develop scales for the survey questions:
<table>
<thead>
<tr>
<th>Construct</th>
<th>Scales used in the Literature</th>
<th>Literature sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMUNICATION</td>
<td>Five Point Scale (1=worse than competitors, 5=better than competitors) Cronbach $\alpha = 0.75$</td>
<td>Kannan &amp; Tan (2006)</td>
</tr>
<tr>
<td>RELATIONSHIPS</td>
<td>Seven Point Scale (1 represents very poor; 3 represents average, and 5 represents excellent)</td>
<td>Monczka et al. (1995)</td>
</tr>
<tr>
<td>PERFORMANCE</td>
<td>Five Point Scale (1=worse than competitors, 5=better than competitors) Cronbach $\alpha = 0.85$</td>
<td>Stank et al. (2001)</td>
</tr>
<tr>
<td>COLLABORATION</td>
<td>Five-point scale (1=strongly disagree 5=strongly agree)</td>
<td>Stank et al. (2001)</td>
</tr>
<tr>
<td>FLEXIBILITY</td>
<td>Five Point Scale (1=worse than competitors, 5=better than competitors) Cronbach $\alpha = 0.92$</td>
<td>Fawcett et al. (1996)</td>
</tr>
<tr>
<td>COMMITMENT/TRUST</td>
<td>Five Point Scale (1=strongly agree 5=strongly disagree)</td>
<td>Siguaw et al. (in Lai, 2009)</td>
</tr>
</tbody>
</table>
Cronbach $\alpha = 0.86$

| REGULATION | - | - |

The following adjustments were made to the survey instrument after the testing phase:

1. Some of the questions were not stated in a professional manner and it was felt by some of the industry professionals that these questions had to be adjusted e.g. ‘We would not drop our fellow buyer/supplier even if another customer offers us better terms’. This question was changed to ‘We would not do business with Company X even if another customer/supplier offers us better terms’.

2. Several questions referred to either supplier or customer. Since both suppliers and customers were surveyed for this research, the questions were adjusted to address both parties.

3. Discussions were held with the industry professionals to ensure that their understanding of the questions corresponded with the intention of the questions. Small changes proposed by industry professionals were implemented in order to remove any ambiguity within the questions.

The respondent, both buyer and supplier, was requested to answer all the questions in the survey with respect to COMPANY X as the basis for their responses.

3.3 Sampling

The survey instrument targeted the buyers and suppliers within the COMPANY X supply chain. A sample was taken from as many of COMPANY X’s buyers and suppliers as possible. The aim was to obtain as many responses as possible in order to reduce the sampling error (Bryman & Bell, 2007). Similar research within this research area typically achieved a response rate of between 10 - 20%
averaging about 200 - 400 valid responses (Refer to Table 1). The size of the sample population was 154 buyers and suppliers - 6 responses were spoilt and had to be removed from the sample data; 86 valid responses were received yielding a response rate of 55.8%. This percentage is relatively high compared to the percentages achieved in the literature. One can therefore assume that the sample taken is representative of the population from which it was taken.

As far as possible, more than one representative of each company was requested to complete the survey to prevent any personal bias. Supply chain managers within the respective companies were approached to complete the survey since it is felt that they have the best understanding of the supply chain and the relationships between the supply chain members. Due to time constraints however the questionnaires were completed by a wide range of supply chain members including company buyers, sales representatives and supply chain managers. Special effort was made, however, to target respondents familiar with their firm’s supply chain management practices (Kannan & Tan, 2006). This was a convenience sample due to the availability of respondents and time constraints, and is therefore not a representative sample. The findings of this study should therefore not be generalised beyond the chosen population (Bryman & Bell, 2007). However, Bryman & Bell (2007) state that research based on a convenience sample could serve as a springboard for further research or allow links to be forged with existing findings in a related area.

3.4 Data analysis Methods

Prior to using the data to test the hypotheses identified earlier, it is important to conduct a thorough measurement analysis of the survey instrument for the following reasons (Flynn, Schroeder & Sakakibara, 1994):

1. It assures the audience that the findings represent an accurate measure of the underlying constructs and that the results are believable;
2. Publication of complete instruments and their measurement analysis allows researchers to use the same instruments with different populations; and
3. It provides a tool for self assessment, benchmarking and longitudinal evaluation.
Figure 2 illustrates the measurement analysis process, adapted from Chen & Paulraj (2004) and Flynn et al. (1994), that was followed to ensure that the instrument used was valid and reliable. Phase one of the instrument development process was covered in detail set out in the previous sections. The next phase of refining the survey design involved testing whether the data gathered was valid and reliable.

**Figure 2: The Instrument/Data Refinement Process**
Subsequent to the data collection, the three-stage continuous improvement cycle was used to assess the reliability and validity of the survey instrument. Stage 1 of the cycle involves determining the internal reliability of the constructs using the Cronbach’s alpha. Construct validity is tested for in Stage 2 by conducting Exploratory Factor Analysis (EFA). During this process indicators or constructs can be deleted or flagged to improve the reliability and validity of the data.

### 3.4.1 Stage 1 - Construct Reliability

The first part of this evaluation will be to determine the internal reliability of each of the concepts measured by the multiple indicators in the survey. Since multiple indicators are used to measure one concept it is important to ensure that the chosen indicators measure the corresponding construct and that they are indeed related to each other. Cronbach’s alpha will be used to measure the internal reliability and a figure of 0.80 is proposed by Bryman & Bell (2007) as an acceptable level. Cronbach’s alpha calculates the average of all the possible split half-reliability coefficients. Chen & Paulraj (2004) maintains that reliability coefficients of 0.6 can be used as the cut-off value. The constructs used for this research are firmly grounded in literature and a decision was taken that any scale that had an alpha value of less than 0.6 will be removed (Flynn et al., 1994).

### 3.4.2 Stage 2 - Construct Validity

Construct validity measures the extent to which items in a scale all measure the same construct (Flynn et al., 1994). Campbell and Fiske (1959, quoted in Chen et al., 2004) states that construct validity involves finding out whether an item loads significantly on the item it is measuring (convergent validity) and if it measures no other factors (discriminant validity). Exploratory Factor Loading (EFL) was used to determine the construct validity. This method will therefore confirm that the measures chosen represent the concepts they were intended to represent (Monczka et al., 1995). Factor loading describes the relationship between the observed measures and their...
corresponding latent variable (Kannan and Tan, 2006). When the items in a scale loaded on more than one factor, rotated Varimax solution was used to determine whether the factors beyond the first were substantially meaningful or merely unwanted factors (Flynn et al., 1994). Varimax rotation is widely believed to be the best orthogonal rotation algorithm (DeCoster, 1998). The items that are nuisance factors or that clearly represent more than a single factor need to be eliminated (Flynn et al., 1994). EFL factors are considered to have convergent validity if its eigen value exceeds 1 and all the factor loadings must exceed the minimum value of 0.3 (Chen et al., 2004).

Another method proposed by Swafford (2006) claims that in order to achieve higher statistical power in testing, one could analyze each measurement model individually. However, it was felt that this approach would not show the interaction between the respective constructs well.

### 3.4.3 Non-response bias

Non-response bias was measured by comparing the response to chosen key variables for both buyers and suppliers, from those who responded immediately, to those who were sent a reminder (Johnston et al., 2003; Large, 2005). In accordance with the procedure, the responses were numbered in the order that they were received. The average scores of the first quartile, assumed to be most motivated to participate, were compared to those of the last quartile, assumed to compare best with the non-respondents (Stank et al., 2001). t-tests were conducted on these two quartiles and it was found that there were no significant differences between the two groups, indicating the absence of non-response bias.

### 3.4.4 Correlation analysis and Statistical significance

After demonstrating by means of reliability analysis that the respective indicators describe each construct, averages of these indicators will henceforth be used to describe each construct. Correlation analysis will be used to determine both the strength and the direction of the relationships between the different constructs. Utts & Heckard (2007) state that the following inferences can be made from a scatterplot that yields a straight line:
• The strength of the relationship is determined by the closeness of the points to a straight line.

• The direction is determined if the one variable is increasing/decreasing together with the other variable.

Pearson’s r will be used to evaluate the relationships between the variables. Bryman & Bell (2007) state that the closer this coefficient is to 1, the stronger the relationship is between the variables, and that the closer it is to 0, the weaker the relationship. The authors caution that Pearson’s r can only be used if the relationship is broadly linear and it is therefore necessary to first plot the two variables on a scatterplot. If one squares the value of Pearson’s r it yields the coefficient of determination, which expresses how much of the variation in one variable is due to the other variable.

Statistical significance testing estimates how confident one can be that the results based on a randomly selected sample can be generalised to the population from which the sample was taken (Bryman & Bell, 2007). The level of statistical significance will be expressed as probability levels – the probability of rejecting the null hypothesis when it should be confirmed. Bryman & Bell (2007) state that the convention amongst most business researchers is that the maximum acceptable level of statistical significance is p-value < 0.05. This standard will also be used to determine significance for this research.

The sample size for both the Zimbabwean and South African operation was big enough to assume normality. Several literature sources used correlation analysis to determine the strength of relationships between different constructs.
4 RESEARCH FINDINGS, ANALYSIS AND DISCUSSION

4.1 Research Findings

The following research findings were made:

- Buyer-supplier relationship success positively impacts organisational performance within an emerging economy.
- Communication positively impacts buyer-supplier relationships success within an emerging economy.
- Collaboration positively impacts buyer-supplier relationship success within an emerging economy.
- Flexibility has a positive relationship with buyer-supplier relationship success within an emerging economy.
- Commitment and trust positively impact buyer-supplier relationship success within an emerging economy.
- The external environment impacts the buyer-supplier relationship success.
- BBBEE status positively impacts buyer-supplier relationship success.

4.2 Research Analysis and Discussion

At the outset, the research analysis will describe the sample that was taken. This will be followed by evaluating the measurement instrument for reliability and validity. Descriptive analysis will be employed to determine whether the data gathered is normally distributed. Based on normality tests and the size of the sample, a decision will be taken whether to employ parametric or non-parametric data analysis. On the basis of the data gathered, the strength of the relationships identified in Figure 1 was tested using correlation analysis (Appendix 4). Simple linear regression was conducted to determine the relationships described in Figure 1 and the scatterplot together
with the $R^2$ value is reported in Appendix 3. This method is consistent with that employed in several of the literature sources consulted. The Statisca software package was used to perform the statistical analysis.

### 4.2.1 Description of response sample

The respondents consist of a mixture of buyers and suppliers that conduct business with Company X. The respondents are from various levels within their organisations but due to confidentiality most respondents preferred not to reveal their positions. The sample of respondents for the South African sample contains 54 responses whereas the Zimbabwean sample contains 32 responses.

![Figure 3: Respondent split between Buyer and Suppliers](image)

Even though the South African sample is significantly larger, the ratio of buyers to suppliers is very similar between the two samples. t-tests were conducted which showed that the buyer and supplier samples are not significantly different from each other and can therefore be evaluated as a single sample for both the South African and Zimbabwean operations (p-value for both South Africa and Zimbabwe < 0.05).
4.2.2 Reliability

The reliability of the research conducted was evaluated by calculating Cronbach’s alpha. Table V summarises the overall Cronbach alphas for each of the constructs and the impact the deletion of any of the items will have on the overall alpha.

Table V: Reliability Analysis

<table>
<thead>
<tr>
<th></th>
<th>Itm-Totl Corell</th>
<th>Alpha if deleted</th>
<th>Cronbach alpha</th>
<th>Std Alpha</th>
<th>Average inter-item corr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Com1</td>
<td>0.612397</td>
<td>0.799423</td>
<td>0.813089</td>
<td>0.814276</td>
<td>0.599601</td>
</tr>
<tr>
<td>Com2</td>
<td>0.757272</td>
<td>0.644564</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Com3</td>
<td>0.629469</td>
<td>0.777778</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rel1</td>
<td>0.567640</td>
<td>0.733083</td>
<td>0.776782</td>
<td>0.780138</td>
<td>0.477642</td>
</tr>
<tr>
<td>Rel2</td>
<td>0.550733</td>
<td>0.738449</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rel3</td>
<td>0.612109</td>
<td>0.706731</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rel4</td>
<td>0.610145</td>
<td>0.708885</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fle1</td>
<td>0.643333</td>
<td>0.780488</td>
<td>0.801552</td>
<td>0.819198</td>
<td>0.606722</td>
</tr>
<tr>
<td>Fle2</td>
<td>0.756354</td>
<td>0.638437</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fle3</td>
<td>0.606799</td>
<td>0.775829</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Col1</td>
<td>0.681318</td>
<td>0.725806</td>
<td>0.813305</td>
<td>0.830270</td>
<td>0.622900</td>
</tr>
<tr>
<td>Col2</td>
<td>0.750363</td>
<td>0.680256</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Col3</td>
<td>0.655273</td>
<td>0.793464</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cot1</td>
<td>0.703931</td>
<td>0.820072</td>
<td>0.826244</td>
<td>0.703931</td>
<td></td>
</tr>
<tr>
<td>Cot2</td>
<td>0.703931</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per1</td>
<td>0.850330</td>
<td>0.872747</td>
<td>0.919379</td>
<td>0.920572</td>
<td>0.794655</td>
</tr>
<tr>
<td>Per2</td>
<td>0.828821</td>
<td>0.891578</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per3</td>
<td>0.836868</td>
<td>0.886739</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
All the cumulative reliabilities for all the constructs are well above the required level of 0.6, suggesting that the theoretical constructs exhibit good psychometric properties (Chen & Paulraj, 2004). The deletion of any one item would not improve the reliability of any particular scale, therefore all indicators should be retained. The reliabilities found are also in line with the original reliabilities from the literature sources (Table IV) from which the scales were taken. These results prove that the multiple indicators chosen to represent a construct indeed measure the construct and, furthermore, that the individual indicators representing a construct are related to each other.

4.2.3 Validity

Refer to Table VI for the factor loadings of the respective constructs.

Anderson and Gerbing (1988) advocate having multiple indicators for each construct, although in practice in some instances only a single indicator of a construct may be available. A decision was taken not to include the regulation construct in the factor loading since it only has one indicator and could be seen as a separate measuring criteria. The regulation construct indicator’s content validity is sufficiently different from all the other indicators. One can therefore assume that regulation has sufficient construct validity.

Five out of the remaining six latent variables had all of their indicators loading highest on themselves. This includes communication, flexibility, collaboration, commitment and performance. Relationship success had one of its four indicators (Rel2) loading higher on another variable. It is felt, however, that this construct (Rel2) has significant content validity and should therefore not be removed from the analysis. This process of keeping indicators that might not load sufficiently is supported by Swafford (2006) who justifies the position by stating that these indicators could be kept if they are necessary to maintain the content validity of the construct. All the indicators have factor loadings exceeding 0.3 except Rel2 and will therefore be kept for the remainder of the analysis (Chen et al., 2004). Based on these results one can conclude that there is enough evidence that the constructs have both convergent and discriminant validity.
Table VI: Factor Loads for Variables

<table>
<thead>
<tr>
<th></th>
<th>Performance</th>
<th>Communication</th>
<th>Flexibility</th>
<th>Collaboration</th>
<th>Commitment</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Com1</td>
<td>0.188442</td>
<td>0.795125</td>
<td>-0.066326</td>
<td>0.175110</td>
<td>-0.038657</td>
<td>0.195928</td>
</tr>
<tr>
<td>Com2</td>
<td>0.046920</td>
<td>0.768692</td>
<td>0.259956</td>
<td>0.190366</td>
<td>0.268954</td>
<td>0.141237</td>
</tr>
<tr>
<td>Com3</td>
<td>0.185132</td>
<td>0.539798</td>
<td>0.105074</td>
<td>0.126013</td>
<td>0.523936</td>
<td>-0.074935</td>
</tr>
<tr>
<td>Rel1</td>
<td>0.102674</td>
<td>0.268980</td>
<td>0.106656</td>
<td>0.060633</td>
<td>0.384186</td>
<td>0.718128</td>
</tr>
<tr>
<td>Rel2</td>
<td>0.383338</td>
<td>0.188578</td>
<td>0.079181</td>
<td>0.129801</td>
<td>0.744057</td>
<td>0.198632</td>
</tr>
<tr>
<td>Rel3</td>
<td>0.365134</td>
<td>0.241361</td>
<td>0.019486</td>
<td>0.321043</td>
<td>-0.225758</td>
<td>0.655173</td>
</tr>
<tr>
<td>Rel4</td>
<td>0.224785</td>
<td>0.003463</td>
<td>0.400280</td>
<td>0.274651</td>
<td>0.212208</td>
<td>0.620208</td>
</tr>
<tr>
<td>Fle1</td>
<td>0.251353</td>
<td>-0.046363</td>
<td>0.828219</td>
<td>0.205176</td>
<td>0.024127</td>
<td>0.131717</td>
</tr>
<tr>
<td>Fle2</td>
<td>0.193845</td>
<td>0.201631</td>
<td>0.827875</td>
<td>0.077118</td>
<td>0.161915</td>
<td>0.034787</td>
</tr>
<tr>
<td>Fle3</td>
<td>0.324317</td>
<td>0.119522</td>
<td>0.743825</td>
<td>-0.154556</td>
<td>0.050103</td>
<td>0.131136</td>
</tr>
<tr>
<td>Col1</td>
<td>0.383116</td>
<td>0.138528</td>
<td>0.130778</td>
<td>0.682002</td>
<td>0.154589</td>
<td>0.210050</td>
</tr>
<tr>
<td>Col2</td>
<td>0.162066</td>
<td>0.214345</td>
<td>0.009754</td>
<td>0.844473</td>
<td>0.062546</td>
<td>0.163793</td>
</tr>
<tr>
<td>Cot1</td>
<td>0.005153</td>
<td>0.456728</td>
<td>0.260524</td>
<td>0.535908</td>
<td>0.268759</td>
<td>0.070527</td>
</tr>
<tr>
<td>Cot2</td>
<td>0.220610</td>
<td>-0.063643</td>
<td>0.229727</td>
<td>0.392176</td>
<td>0.498706</td>
<td>0.453920</td>
</tr>
<tr>
<td>Per1</td>
<td>0.868772</td>
<td>0.111188</td>
<td>0.233596</td>
<td>0.130903</td>
<td>0.160344</td>
<td>0.072403</td>
</tr>
<tr>
<td>Per2</td>
<td>0.847022</td>
<td>-0.004061</td>
<td>0.242761</td>
<td>0.177497</td>
<td>0.127089</td>
<td>0.139120</td>
</tr>
<tr>
<td>Per3</td>
<td>0.846991</td>
<td>0.176685</td>
<td>0.190562</td>
<td>0.102365</td>
<td>0.147190</td>
<td>0.178371</td>
</tr>
<tr>
<td>Expl.Var.</td>
<td>3.090490</td>
<td>2.220272</td>
<td>2.565388</td>
<td>2.040190</td>
<td>1.819982</td>
<td>1.821409</td>
</tr>
<tr>
<td>Prp. Totl.</td>
<td>0.171694</td>
<td>0.123348</td>
<td>0.142522</td>
<td>0.113344</td>
<td>0.101110</td>
<td>0.101189</td>
</tr>
</tbody>
</table>
4.2.4 *Descriptive Statistics*

Carr and Kaynak (2007) maintain that the measures of skewness and kurtosis could be used to test for normality of a distribution. They report a value of 2 as the maximum value for skewness and 5 as the maximum value for kurtosis indicating that there is considerable variation and lack of bias in the data. Both these factors were calculated for all the indicators and are listed in Appendix 2. All the skewness factors for the indicators are below the maximum value of 2 and all the kurtosis factors for the indicators are below 5. As a result, this would indicate that one can make the assumption that the distributions for the indicators are sufficiently normal and Pearson’s r can therefore be computed to find the correlations between constructs. Since the minimum sample size of 30 was achieved for both the South African and the Zimbabwean samples, it supports the decision to use parametric evaluation methods.

| South Africa | | | | Zimbabwe | | | |
|---|---|---|---|---|---|---|
| Mean | STD DEV | Percentage Scored 5 | Mean | STD DEV | Percentage Scored 5 |
| Communication | 4.21 | 0.75 | 25% | 4.3 | 0.8 | 32% |
| Relationship | 3.86 | 0.83 | 9% | 4.2 | 0.6 | 13% |
| Flexibility | 4.45 | 0.61 | 40% | 4.3 | 0.8 | 39% |
| Collaboration | 3.50 | 1.03 | 13% | 3.5 | 1.1 | 16% |
| Commitment | 4.16 | 0.96 | 40% | 4.2 | 0.8 | 35% |

All questions within the survey were stated and ranked in a similar manner e.g. for communication ‘1’ signifies a low level of information sharing whereas ‘5’ signifies a high level of information sharing. The mean scores for most of the constructs are very similar for both the samples. One could therefore infer that both the South African and Zimbabwean respondents view the respective constructs relative to Company X in a similar fashion.

On consideration of the percentage of respondents that scored indicator ‘5’, certain inferences can be made. Firstly, a substantial percentage of the respondents rated Company X very highly on
flexibility for both operations. Secondly, commitment was rated highly by respondents in respect of both operations but with the South African operations slightly higher.

Surprisingly, collaboration was rated significantly lower than the other constructs in relation to both countries. Closer inspection revealed that all the indicators for collaboration measured generally lower than the indicators for the other constructs for both Zimbabwe and South Africa. These results are therefore not a result of measurement error but could rather be indicative of the strategy that Company X is following in terms of collaboration. This construct also has the highest standard deviation indicating that the respondents experience collaboration differently. Again, this could be due to Company X’s strategy to focus their collaboration efforts only on certain buyers and suppliers. It is not abnormal for companies to focus their collaborative efforts on their biggest suppliers and customers.

4.2.5 Correlation Analysis

The first part of the analysis of the data will be based only on the South African operation. The main objective of this part of the analysis is to confirm whether the findings from the literature hold within an emerging market context. Furthermore and in order for the analysis to provide support to management, enablers sourced from the literature will be outlined and discussed.

The second part of the analysis will compare Company X’s South African operation with its operation in Zimbabwe. This comparison aims to highlight that the different external environments within which Company X operates indeed influences the respective buyer-supplier relationships. Furthermore, the comparison will provide a basis for evaluating the constructs that influence these relationships in South Africa and Zimbabwe.

Finally, the impact of regulation on buyer-supplier relationship success will be investigated. This will be conducted specifically in relation to the implementation of BBBEE within the South African context.

In order to test for these relationships, bivariate correlation analysis was conducted and the results can be found in Appendix 4 (Kannan & Tan, 2005).
South African Operations Analysis

The following hypotheses are all based on Company X that has all its operations within emerging economies. The first hypothesis test was devised to determine whether buyer-supplier relationship success positively impacts organisational performance:

**Hypothesis 1:** Buyer-supplier relationship success positively impacts organisational performance

The results of the correlation analysis yielded a correlation coefficient of 0.5424, supporting the hypothesis that there exists a strong positive relationship between buyer-supplier relationship success and company performance. The scatterplot (see Appendix 3) for this relationship indicates that a linear relationship exists between these two constructs, allowing the use of Pearson’s $r$ to compute the bivariate correlation. The p-value < 0.05 further indicates that the relationship is statistically significant and one can therefore accept the hypothesis. The correlation $r^2$ value of 0.29 indicates that buyer-supplier relationship success explains 29% of the variation among observed values of organisational performance construct. It is, however, not possible to infer the direction of causality from these results but one can make the assumption, based on the findings from the literature, that supply chain relationship success drives company performance (Kannan & Tan, 2006; Hsu et al., 2008). One can therefore conclude that buyer-supplier relationship success positively impacts organisational performance. Since Company X has its operations within emerging markets one should interpret the results within this context. Based on this finding, companies should pay special attention to managing the relationships between buyers and suppliers within their supply chains, since it will have a bearing on their company performance.

The following set of hypotheses is used to test for the relationships between communication, collaboration, commitment/trust, flexibility and their impact on buyer-supplier relationship success. Figure 4 summarises the correlation coefficients for the South African operations.
Figure 4: Correlation strengths for the South African Operations

**Hypothesis 2:** Communication positively impacts buyer-supplier relationship success

The correlation coefficient for communication was 0.6166, p-value < 0.05. Based on these results one can safely conclude that there exists a strong positive correlation between communication and buyer-supplier relationship success. The scatterplot (see Appendix 3) for this relationship indicates that a linear relationship exists between these two constructs, allowing the use of Pearson's $r$ to compute the bivariate correlation. The low p-value indicates that this result is statistically significant and one can therefore accept the hypothesis. The correlation $r^2$ value of 0.38 indicates that communication explains 38% of the variation among observed values of buyer-supplier relationship success construct. However, it is not possible to infer the direction of causality from these results but one can make the conclusion that communication impacts buyer-supplier relationship success positively based on the findings from the literature (Carr & Kaynak, 2007; Kannan and Tan, 2006). One can therefore conclude that communication positively impacts buyer-supplier relationship success. Since Company X has its operations within emerging markets one should interpret the results within that context.

A direct positive relationship exists between the communication construct and company performance ($r=0.4789$, p-value<0.05) (Table X in Appendix 4). However, it bears mentioning that
the relationship between communication and company performance is stronger if buyer-supplier relationship success is a mediating factor. This finding implies that organisation performance will improve with increased communication. Increasing communication would however have a bigger impact on company performance if it leads to increased buyer-supplier relationship success.

Hypothesis 3: Collaboration positively impacts buyer-supplier relationship success

Collaboration \( (r=0.6956, \ p\text{-value} < 0.05) \). These results indicate a strong positive relationship between buyer-supplier collaboration and buyer-supplier relationship success. The scatterplot (see Appendix 3) for this relationship indicates that a linear relationship exists between these two constructs, allowing the use of Pearson’s \( r \) to compute the bivariate correlation. The very low p-value indicates that the correlation is statistically significant and one can therefore accept the hypothesis. The correlation \( r^2 \) value of 0.48 indicates that Collaboration explains 48% of the variation among observed values of buyer-supplier relationship success construct. However, it is not possible to infer the direction of causality from these results but one can make the conclusion that collaboration impacts buyer-supplier relationship success positively, based on the findings from the literature (Daugherty et al., 2006; Zacharia et al., 2009). One can therefore conclude that collaboration positively impacts buyer-supplier relationship success. Since Company X has its operations within emerging markets one should interpret the results within this context. This result finds support in Nyaga et al. (2009) who state that collaborative relationships offer worthwhile benefits for both buyers and suppliers.

Enablers for collaboration between supply chain members include integrating operations and setting up supply chain arrangements that operate under principles of shared rewards and risks. Daugherty et al. (2006) found that the formalisation of collaborative relationships will enhance long-term relationships, making conducting business between trading partners easier and allowing firms to escalate service expectations. Other enablers for collaboration include benchmarking best practices/processes and the sharing of confidential results.

Hypothesis 4: Commitment/trust positively impacts buyer-supplier relationship success
Commitment and trust ($r=0.7729$, p-value $< 0.05$). These results indicate a very strong positive relationship between buyer-supplier commitment/trust and buyer-supplier relationship success. The scatterplot (see Appendix 3) for this relationship indicates that a linear relationship exists between these two constructs, allowing the use of Pearson’s $r$ to compute the bivariate correlation. The very low p-value indicates that the correlation is statistically significant and one can therefore accept the hypothesis. The correlation $r^2$ value of 0.60 indicates that commitment/trust explains 60% of the variation among observed values of buyer-supplier relationship success construct. One can conclude that collaboration positively impacts buyer-supplier relationships. Since Company X has its operations within emerging markets one should interpret the results in this context. Commitment and trust show the strongest correlation with relationship success for the South African operation. This means that managers within the South African operations of Company X should primarily focus their efforts on encouraging commitment and trust since it will have the biggest influence on relationship success. Nyaga et al. (2009) state that in social exchange literature, trust and commitment have been found to be crucial for fostering success in relationships. The literature source helps to infer causality, and one can therefore conclude that commitment and trust positively impact buyer-supplier relationship success within emerging economies.

**Hypothesis 5: Flexibility positively impacts buyer-supplier relationship success**

The results from the correlation analysis provide support that flexibility ($r=0.4541$, p-value $< 0.05$) impacts buyer-supplier relationship success positively. The scatterplot (see Appendix 3) for this relationship indicates that a linear relationship exists between these two constructs, allowing the use of Pearson’s $r$ to compute the bivariate correlation. Based on the p-value one can also conclude that this relationship is statistically significant and the hypothesis can therefore be accepted. The correlation $r^2$ value of 0.21 indicates that flexibility explains 21% of the variation among observed values of buyer-supplier relationship success construct. It is however not possible to infer the direction of causality from these results, since no literature could be found to support this finding. One can therefore conclude that flexibility has a positive relationship with buyer-supplier relationship success. Since Company X has its operations within emerging markets one should interpret the results within this context.
Several literature sources found a direct relationship between flexibility and company performance (Fawcett et al., 1996; Sanchez & Perez, 2005). The correlation coefficient between the flexibility and company performance constructs were found to be 0.5163, with a p-value < 0.05. This result confirms the findings from literature that there exists a statistically significant direct relationship between flexibility and company performance. A possible reason for this finding could be the fact that for the communication, collaboration and commitment/trust constructs, both the buyer and the supplier are required to participate in order to make the construct (relationship) work. The flexibility construct could however be driven independently by either the supplier or the customer.

Finally, and in relation to all the aforementioned hypotheses, it can be seen from the correlation table that all the correlation coefficients for the South African sample are positive, indicating that the constructs are not competing with each other. There also seems to be fairly strong positive associations between the respective independent constructs.

**Comparison between South African and Zimbabwean operations**

**Hypothesis 6:** The external environment impacts buyer-supplier relationship success

**Table VIII:** Comparison of correlations between constructs and buyer-supplier relationship success in South Africa and Zimbabwe

<table>
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<tr>
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<td>Performance (Per)</td>
<td>.5424</td>
<td>.6998</td>
</tr>
</tbody>
</table>

All values in table have p-values<0.05 – therefore statistically significant

If one considers the correlation coefficients for the South African and Zimbabwean operations, it is apparent that differences in correlation strengths exist for the respective constructs. This analysis
indicates that management would need to focus on different constructs in relation to the two supply chains in order to achieve maximum impact on buyer-supplier relationship success. Unfortunately, it will be difficult to conclusively state that the aforementioned differences between the South African and Zimbabwean operations are solely due to the difference in the external environments in these two countries (Achrol et al., 1983). However, it should be stated that South Africa is regarded as a relatively stable country by many commentators, compared to Zimbabwe which at the time of the survey was experiencing very unstable political and economic conditions. Furthermore, the research was conducted relative to Company X, whose systems and policies are similar in South Africa and Zimbabwe. One could therefore assume that it is unlikely that the source of the differences comes from within Company X. Based on these submissions it is probable that the uncertainty and unstable environment in Zimbabwe could be responsible for the differences. This finding is supported by Leonidou et al. (2006) and Stern & Reve (1980) who claim that the external economic and socio-political systems in which a relationship functions will also have an influence on the relationship.

In both countries there exists a strong relationship between company performance and buyer-supplier relationship success. However, this relationship is stronger in the case of the Zimbabwean operation. Suppliers and customers of the Zimbabwean operation regard the success of their relationships as a more important driver (importance rated in term of its impact on buyer-supplier relationship success) for company performance resulting in the stronger correlation between buyer-supplier relationship success and organisational performance. Table V reflects that the Zimbabwean respondents view their buyer-supplier relationships to be more successful than their South African counterparts. The following are possible explanations for this finding:

- Within the Zimbabwean context, possible uncertainty might exist with regard to contract compliance and the regulation thereof. As a result, there is a greater dependence on relationships.
• Due to market uncertainty there might be limited resources, and typically, suppliers will first select partners they have a relationship with (Gulati 1995, quoted in Beckman et al., 2004).

• Corporate governance is currently questionable within the Zimbabwean context and relationships therefore play a more important role.

Beckman, Haunschild & Phillips (2004) state that they would expect market uncertainty to encourage firms to reinforce their existing relationships. Consequently, the literature lends support to the finding that the nature of the external environment influences buyer-supplier relationship success.

Flexibility in the Zimbabwean case has the strongest correlation with buyer-supplier relationship success, whereas it has the weakest correlation in the South African operation. The difference in importance of flexibility can, according to Stevenson & Spring (2009), vary from supply chain to supply chain. Gerwin (1993, quoted in Gosling, 2009) maintains that flexibility is generally perceived as an adaptive response to environmental uncertainty. Due to the political and economic turbulence in Zimbabwe it is fair to assume that there is substantial external environmental uncertainty, therefore explaining this stronger relationship. This view is further supported by the Germain et al. (2008) finding that a predictable environment may require supply chain efficiency whereas an unpredictable environment may require flexibility or agility. Germain et al. (2008) further argue that flexibility could be achieved through decentralisation (e.g. decentralisation of transportation and production scheduling decisions) which may provide managers the leeway necessary to adapt and control process variability. Interestingly, it bears mentioning that the communication variable had the lowest correlation with relationship success in the Zimbabwean operation but it was significantly higher for the South African operations. This finding is supported by Swafford et al. (2006) who maintain that the need for flexibility becomes increasingly important where information sharing is limited, since suppliers/customers do not have adequate visibility to anticipate change.
Further to the above findings, it was observed that commitment/trust and collaboration constructs have the highest correlations with buyer-supplier relationship success within the South African operation and it is significantly higher than within the Zimbabwean operation. There also seems to be a fairly strong direct correlation between commitment/trust and collaboration for the South African operation (r=0.6306, p-value<0.05). Zacharia et al. (2009, p.106) state that ‘when firms collaborate intensely, they demonstrate a commitment to each other that nurtures an atmosphere of trust’. However, in the Zimbabwean sample both commitment/trust and collaboration have weaker correlations with buyer-supplier relationship success.

Hypothesis 7: A firm's BBBEE status positively impacts buyer-supplier relationship success

Investigating whether BBBEE has any effect on the relationship between buyers and suppliers has shown that there is a statistically significant weak relationship between BBBEE status and buyer-supplier relationship success (0.2996, p-value < 0.05). The scatterplot (see Appendix 3) for this relationship indicates that a slight linear relationship exists between these two constructs, and one should therefore take caution when using of Pearson's r to compute the bivariate correlation. The correlation r² value of 0.09 indicates that BBBEE status explains 9% of the variation among observed values of buyer-supplier relationship success construct. Similarly Carter & Jennings (2002) found that purchasing social responsibility improved relationships between buyers and suppliers. Therefore, the direction of causality can be inferred. Furthermore buyer-supplier relationship success cannot impact BBBEE status, and one can therefore infer that BBBEE status impacts buyer-supplier relationship success positively. This finding could also explain why Company X has been relatively successful in implementing preferential procurement, since they’ve managed to implement BBBEE buying practices without impacting the relationships with their suppliers negatively.
4.3 Research Limitations

The study was conducted relative to COMPANY X employing a convenience sampling methodology and the findings can therefore not be generalised further than the sample taken. A cross-sectional research design was followed, as a result of which inferences as to the direction of causality cannot be drawn solely on the findings of this research. An attempt was made to address this concern by consulting literature. However, the preferred way of addressing this concern is to follow a longitudinal research design. Even though the samples taken were sufficiently large to assume normality, it is believed that larger sample sizes would have made the research more reliable and valid.

Johnston et al. (2003) explain that through the use of a survey instrument, one will not have access to the rich interaction of actors and the events that produced the perceptions summarised in the measure's scores. This could be addressed by following a mixed approach by testing the quantitative findings through interviews conducted with practitioners within these environments.

The research set out to limit the number of indicators used to describe the constructs, in order to keep the questionnaire as short as possible so as to encourage the response rate. It is suggested that future research should aim to contain at least four indicators per construct which will improve construct validity.
5 RESEARCH CONCLUSIONS

The research has established that managing relationships within supply chains has a positive impact on company performance and it has therefore become a necessity to put enablers in place to manage these relationships. Since this research was conducted on a firm operating within an emerging economy the results should be seen in this context. The research has further confirmed that Company X’s supply chains within South Africa and Zimbabwe have very different constructs driving relationships and performance. The reason for this difference lies in the distinct economic and socio-political environments that currently exist within these two countries respectively. It has been shown that companies need to focus on different constructs in order to improve buyer-supplier relationship success depending on the environment the company operates in. In Zimbabwe, where conflict and uncertainty is more prevalent, flexibility and communication play a major role. In more predictable environments i.e. South Africa, collaboration and commitment are more important. These differences have various implications for management, which are addressed hereunder.

Generic supply chain strategies

It is evident from the research that supply chain managers need to understand the environment within which their supply chain operates in order to devise an appropriate strategy to harness supply chain relationships. The relevance of an appropriate strategy will be illustrated with reference to two constructs, namely collaboration and flexibility.

Within the South African context, there exists a strong relationship between collaboration and buyer-supplier relationship success. It is however notable that collaboration within the South African sample was rated significantly lower than the other constructs (Table VII). Company X could consider implementing a segmented supply chain approach whereby it limits collaboration only to a few customers and suppliers (Barratt, 2004). The high standard deviation for collaboration in the South African sample indicates that Company X is attempting to implement this strategy (albeit with limited success), which explains the varying levels of collaboration experienced by the respondents. Barratt (2004) identifies the reduction in the number of
suppliers as a further enabler for collaboration. This may however lead to lower levels of flexibility. This is not significant though, in light of the fact that the correlation analysis found that flexibility is in any event less important within the relatively stable South African context.

On the other hand, the correlation between flexibility and buyer-supplier relationship success for the Zimbabwean operation yielded a very strong correlation coefficient. The Zimbabwean respondents rated Company X very highly in terms of flexibility. Company X’s strategy for Zimbabwe is therefore very appropriate and has been successful. This is highlighted by the fact that the Zimbabwean respondents have rated their respective relationships with Company X higher than their South African counterparts (Table VII).

These research findings are supported by the literature sources which state that company strategy in terms of flexibility should be specific to a supply chain and the environment within which it operates (Venderhaeghe & Treville, 2003, quoted in Sanchez & Perez, 2005; Trkman & McCormack, 2009). Kannan & Tan (2006) encourage buyers not to only use operational criteria for selection but insist that there must be a match between the strategic orientation and the needs of buyers and suppliers within the supply chain. In the premises, it is clear that one should exercise caution not to generically implement supply chain strategies.

**BBBEE initiatives within supply chains**

The impact of the external environment was further evaluated by considering the influence of regulation on buyer-supplier relationship success. This was evaluated with specific reference to BBBEE within the South African context. The results show that a supply chain member’s BBBEE status has a positive impact on the relationship success between buyers and suppliers. This finding further strengthens the argument that there exists a relationship between the external environment and buyer-supplier relationship success.

In terms of BBBEE legislation, the preferential procurement policy probably has the biggest influence on relationships between buyers and suppliers. Since this is a regulatory issue which role players may feel is forced upon them, one might expect this to influence relationships negatively. On the contrary, this research has shown that there exists a weak positive correlation
between BBBEE status and buyer-supplier relationship success ultimately resulting in positive performance. From a governmental perspective and from the point of view of Company X, this is a very encouraging finding, as the obvious inference is that companies should drive BBBEE harder since it could lead to improved company performance.

**Interrelatedness of constructs**

The comparison of the application of the various constructs in different environments, that is within the South African context on the one hand and the Zimbabwean context on the other hand, has yielded interesting results in respect of the interrelatedness of those constructs. What is clear from the outset is that the constructs do not exist in isolation to each other in supply chains in either country.

In particular, in the South African case all the independent variables are positively associated with each other, which means that if managers develop one of the variables it is likely to have a positive influence on the other variables. This interrelatedness of the constructs should be encouraging since it indicates that efforts to improve supply chain relationships typically have a wider influence than what they were intended for.
6 FUTURE RESEARCH DIRECTIONS

The findings of this research should not be generalised further than the specific sample. However, Bryman & Bell (2007) state that research based on a convenience sample could serve as a springboard for further research or allow links to be forged with existing findings in a related area.

This research provides an important platform in the area of supply chain management within emerging economies and specifically regarding the role of the external environment. The importance of emerging economies on a global scale demands a better understanding of supply chains within these economies. Achrol et al. (1983) state that it would be very difficult to itemise the external environment and to specify the relevant variables. It is however believed that one should identify the most important factors and investigate their impact on buyer-supplier relationships similar to the process followed for BBBEE regulation in South Africa.

In addition with the advent of global supply chains, it would be interesting to investigate how foreign buyers and suppliers experience the external environments within emerging economies. The current challenges faced by local supply chain members would be amplified vis-à-vis foreign players for example by uncertainties such as language barriers, culture differences and the like.

Finally, the sample for this research taken was relative to a single company operating within one industry. A wider sample should be taken involving companies from different sectors. The sample size for the Zimbabwean operation was also smaller relative to the South African operation, raising questions about the validity of the findings.
REFERENCES


APPENDIX 1 – RESEARCH INSTRUMENT

A collection of the following questions will be used within the survey instrument. Likert type scales will be used for each of the questions.

COMMUNICATION (Kannan & Tan, 2006)

How important are the following in engaging with Company X?

COM1 - Exchange of information (Kannan & Tan, 2006)
COM2 - Communicating your firm’s future strategic needs (Kannan & Tan, 2006)
COM3 - Creating a compatible communication/information system (Kannan & Tan, 2006)

Five Point Scale (1=Not Important, 5=Very Important)

RELATIONSHIPS (Kannan & Tan, 2006)

How successful is your relationship with Company X in terms of:

REL1 - Dealing fairly in negotiations (Monczka et al., 1995)
REL2 - Develop joint quality, safety, and R&D programs (Monczka et al., 1995)
REL3 - Viewing Company X as preferred customer/supplier (Monczka et al., 1995)
REL4 - Relative working relationship compared to others (Monczka et al., 1995)

Five Point Scale (1 = Very poor; 3 = Average; 5 = Excellent)
PERFORMANCE

What is the level of your firm’s performance compared to that of major competitors in terms of:

PER1  -  Ability to accommodate delivery times for specific customers. (Stank et al., 2001)
PER2  -  Ability to respond to the needs and wants of key customers. (Stank et al., 2001)
PER3  -  Ability to provide desired quantities on a consistent basis. (Stank et al., 2001)

Five Point Scale (1=worse than competitors, 5=better than competitors)

COLLABORATION (Stank et al., 2001)

Please state whether you agree with the following statements:

COL1  -  My firm experiences improved performance by integrating operations with Company X.
COL2  -  My firm has supply chain arrangements with Company X that operate under principles of shared rewards and risks.
COL3  -  My firm benchmarks best practices/processes and shares results with Company X.

Five-point scale (1=strongly disagree; 5=strongly agree)

FLEXIBILITY

Please answer the following questions with respect to the logistical system between your firm and Company X:

FLE1  -  Logistics system’s ability to accommodate special or non-routine requests (Fawcett et al., 1996)
FLE2  -  Logistics system’s ability to handle unexpected events (Fawcett et al., 1996)
FLE3 - Logistics system's ability to provide rapid response to customer requests (Fawcett et al., 1996)

Five Point Scale (1=Significantly worse than competitors, 5=Significantly better than competitors)

COMMITMENT/TRUST

Please state whether you agree with the following:

COT1 - My firm defends Company X when outsiders criticise them. (Adapted from Siguaw et al.1998 in, Lai 2009)

COT2 - My firm would not stop using Company X even if another customer/supplier offers us better terms. (Adapted from Siguaw et al.1998 in, Lai 2009)

Five Point Scale (1=Strongly disagree 5=Strongly agree)

REGULATION

REG - How would you describe your companies BBBEE status?

Five Point Scale (1=very poor; 3=average, and 5=excellent)
## APPENDIX 2 - DESCRIPTIVE STATISTICS

Table IX: Descriptive Statistics

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APPENDIX 3: CORRELATION GRAPHS

South Africa: Communication vs Relationship success

\[ R^2 = 0.381 \]

South Africa: Flexibility vs Relationship success

\[ R^2 = 0.2214 \]
South Africa: Collaboration vs Relationship success

\[ R^2 = 0.4679 \]

South Africa: Commitment vs Relationship success

\[ R^2 = 0.599 \]
South Africa: Performance vs Relationship success

\[ R^2 = 0.3219 \]

South Africa: BBBEE Status vs Relationship success

\[ R^2 = 0.0746 \]
Zimbabwe: Communication vs Relationship success

\[ R^2 = 0.1364 \]

Zimbabwe: Flexibility vs Relationship success

\[ R^2 = 0.3932 \]
Zimbabwe: Collaboration vs Relationship success

\[ R^2 = 0.2681 \]

Zimbabwe: Commitment vs Relationship success

\[ R^2 = 0.1685 \]
Zimbabwe: Relationship success vs Performance

\[ R^2 = 0.4898 \]

![Graph showing relationship between relationship success and performance with \( R^2 = 0.4898 \).]
APPENDIX 4: CORRELATION TABLES

Table X: Correlation Table for South African Operation

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Correlations and significance levels: p-values are italicized.
Table XI: Correlation Table for Zimbabwean Operation

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