CUSTOMER PERCEIVED QUALITY, RELATIONSHIP QUALITY
AND BUSINESS LOYALTY:
AN EXAMPLE OF B2B ORGANIZATION

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ABSTRACT

The rapidly growing field of services has a strong focus on relationship marketing. Numerous researches are carried out on the effect of paradigm shift in marketing principles from transactional marketing to relationship marketing, but not many been discussed within industrial services and manufacturing environment. This study aims to examine how relationship quality can influence customer loyalty in the business-to-business (B2B) context. By targeting a Malaysian wooden product manufacturer as case organisation, tailored questionnaire surveys were sent with responses of 36 business customers. The study proposes a theoretical framework of relationship quality, customer perceived quality (using a modified Grönroos’s model of bi-dimensional service quality theory involving both product and services aspects) as antecedent of relationship quality and business loyalty as ultimate dependent variable. The findings of this study suggest that customer satisfaction towards service provider can be improved by focusing on their perceived quality on both service and product. Consequently, customer loyalty and relationship quality can be enhanced by increasing customer satisfaction. Furthermore, this study reinforces the belief that relationship satisfaction has an important role to play in the manufacturing environment. It puts forward one possible causal explanation of the elusive link between satisfaction and relationship. The study concluded with theoretical and managerial implications of the findings.
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LIST OF ABBREVIATIONS

B2B – Business-to-business
CPQ – Customer Perceived Quality
CS – Customer Service
DV – Dependent Variable
IV – Independent Variable
MV – Mediating Variable
PQ – Product Quality
RM – Relationship Marketing
RQ – Relationship Quality
RS – Relationship Satisfaction
SPSS – Statistical Package for the Social Sciences
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CHAPTER 1: BACKGROUND TO THE STUDY

1.0 Research Background

In a Business-to-business (hereinafter B2B) environment, suppliers and service providers need to understand customer unique characteristics and needs. It is important to have a strategic relationship management between supplier and business customer (Rauyruen and Miller, 2007).

Customer Relationship Management (hereinafter CRM) is a crucial factor in building success in the market, by continually developing relationship with business customers. With CRM, suppliers are able to enhance relationship quality, it influences and maintains customer loyalty in the business (Rauyruen and Miller, 2007). Moreover, Relationship Quality captures the nature of a relationship, which in turn provides positive benefits to the customer (Hennig-Thurau and Klee, 1997).

This study aims to examine how Relationship Quality (hereinafter RQ) can influence customer loyalty in the business-to-business (B2B) context, and how customer perceived quality acts as antecedent to RQ. A theoretical framework is proposed to study the relationship quality as central part of model, with customer perceived quality as its antecedents; and business loyalty as the ultimate dependent of the research model.

As the central part of research model, the construct of Relationship Quality, comprises 3 dimensions: satisfaction, trust, and commitment, constituting the central of the research model. The first dimension of RQ is Satisfaction, it is a positive affective state resulting from customer firm’s appraisal of all aspects of its working relationship with the supplier firm (Ruben et al., 2007). Whereas, the second dimension is Trust, it is defined as a belief in the supplier’s trustworthiness that results from the expertise,
reliability or intentionality of that supplier (Ha et al., 2004). Lastly, Commitment is an enduring desire to maintain a valued relationship (Zineldin & Jonsson, 2000).

Customer perceived quality (hereinafter CPQ) is posited as an antecedent to relationship quality. CPQ influences relationship quality by having direct relationship with relationship satisfaction (Grönroos, 1997, 1998, 2001; Ruben, 2007; S.Y. Lam and Jamil Bojei, 2006). The main reason CPQ was proposed as RQ antecedent, is because of improvement in customer perceived quality will increase customer satisfaction, loyalty, and profitability (E.Gummesson, 1998). In this study, both dimensions of product and service of CPQ are integrated into the framework, to adapt the specific need of manufacturing industry.

On the other hand, RQ is predicted to have influence on customer loyalty and it is the key factor to secure their loyal customer base and to reach a high level of profitability (Baran et al., 2008; Woo and Ennew, 2004, 2005). Therefore, Business Loyalty is posited as the ultimate dependent of the research model in a B2B setting. It highlights the need whether to build up customer loyalty as a long-term investment as well as the need for a customer relationship management between the case organization and its B2B customers.

An organization in wooden product manufacturing industry in Malaysia is chosen as a unit of analysis in the study. The case organization of this study is XX Moulding (M) Sdn Bhd.**, a Malaysian main-board listed company as one-stop solution supplier to provide designing service, manufacturing and exporting wooden products to global markets. The perceptions of the customers on product and service quality are measured and its correlation with relationship quality was studied. Significant finding on dimensions of relationship quality (satisfaction, trust, commitment) with customer loyalty will be analyzed and highlighted. The study is supported and analysed with sample data
collected from 55 B2B customers (distributors and retailers), mainly from North America (66.7%), Australia (13.9%), Western Europe (11.1%) and Asia (8.3%). Further introduction of the background and nature of business of this company can be found in Chapter 2 - Section B.

Although this research model of study is explored in a single industry study of a first tier supplier to it business customers, it was deemed appropriate. The major reason is that the dimensions of quality may differ in number or identity from one industry to another and this method allows researchers to reduce variability (e.g. industry effects). (Sime et al, 2000)

** The case organization (XX Moulding (M) Sdn Bhd.) had requested not to reveal its actual company name in this thesis report.

1.1 **Objectives of the Study**

The main purpose of this study is to examine the dimensions of customer perceived service quality, relationship satisfaction, relationship quality and inter-relationship of these dimensions in B2B. Specific research objectives are as follows:

1. To investigate the relationship of Relationship Satisfaction (RS) with customer profiles
2. To investigate the relationship between Customer Perceived Quality (CPQ) variables and Relationship Satisfaction (RS).
3. To investigate the relationship between Relationship Quality (RQ) variables and Business Loyalty (L).
4. To examine the mediating effect of Relationship Satisfaction (RS) between Customer Perceived Quality (CPQ) variables and Trust (U), Commitment (C) and Loyalty (L).
1.2 **Contribution of the Study**

First, the study integrates the Grönroos’ concepts of service (functional) and product (technical) performance quality dimensions of customer perceived quality, relationship satisfaction, trust, and commitment in a business-loyalty model. As a whole, the results indicate that perceptions of service and product performance quality can be viewed as antecedents to relationship satisfaction which, in turn, affects trust, commitment, and business loyalty as mediation effect. This study examined the role of service/product quality perceptions in established B2B relationships. The result demonstrates the equal importance of investment in both product and customer service to achieve greater customer satisfactions. As compared with product quality, intangible customer service is more difficult to be measured, but yet, the study shows the combination measurement of both product & customer service directly influences customer satisfaction in a business relationship.

Secondly, this study contributes in the research study’s gap of inadequacy of case study in B2B customer relationship quality in wooden product-based manufacturing industry, hence providing a foundation for future research. Product manufacturing industry, the research background of this study, was once traditionally less-emphasized the importance of customer relationship, but is now becoming more customer-oriented in providing value-added services for long term business partnership. Findings regarding relationship quality are rather divergent, related studies are fragmented, and it is very difficult to find related case studies, supported by evidence, especially for interrelationships among them that focus on Relationship Marketing in the manufacturing industry. Thus, less is known about relative impacts of quality-related factors on relationship quality and customer loyalty. Researchers have not widely explored either the development of loyalty or its potential application to the business-to-business settings. (P.
1.3 Organisation of the study

The following is an overview of the thesis:

**Chapter 2** summarises the main concepts of the study: Relationship Marketing, Perceived Quality, Relationship Quality, and Business Loyalty. The literature is reviewed to develop a theoretically relevant set of quality variables of customer perceived quality (product & services), relationship quality (satisfaction, trust, commitment) and business loyalty are defined. The proposed conceptual framework of the study, propositions and hypothesis are introduced in this chapter.

**Chapter 3** summarises the research methodology used in the study, including the sampling procedure and measurement process. The set of quality variables is then factor analyzed to identify the core dimensions of relevant constructs in the research study. The reliability of these quality constructs is also examined.

**Chapter 4** discussed the analysis result of propositions tests on the case organization. Then attention is given to the proposed conceptual framework to study the dynamic relationships among the variables, especially the moderating effect of relationship satisfaction between perceived quality and relationship quality.

Finally, **Chapter 5** provides conclusion with result summary, theoretical implications and managerial implications as suggestions given to the case organization, that it can be used, for future alignment of marketing goals and strategies to enhance the customer services competitiveness in the market. The limitations and further research suggestions are presented.
CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter is divided into two sections: Section I and II. Section I reviews literature on Relationship Marketing and followed with discussions on Customer Perceived Quality (hereinafter CPQ), Relationship Quality (hereinafter RQ) and lastly, Business Loyalty. Then, Section II introduces the case organization in its background, business nature, customer base and challenges of sales and marketing teams.

SECTION I

2.2 Definitions of Relationship Marketing

In this section, definitions and concept of Relationship Marketing (hereinafter RM) are discussed. RM is important to global business because it is viewed as one of the most crucial strategies in creating added value for customers rather than values of the core product and service by itself alone and thus reduces the sacrifices for the buyer that is assumed. RM make customers less price sensitive and influences customer loyalty (Gummesson, 1998; Nelson, 2007a).

The term ‘relationship marketing’ was first introduced by Berry in a services marketing context, he viewed that relationship marketing as a strategy to attract, maintain and enhance customer relationships (Grönroos, 1997). Other researchers agree that the main purpose of RM is to create mutual benefits and values, or meeting objectives in business relationship of both suppliers and customers.

RM is defined as:
a. "Marketing is to establish, maintain, and enhance relationships with customers and other partners, at a profit, so that the objectives of the parties involved are met. This is achieved by a mutual exchange and fulfilment of promises." (Grönroos, 1997: p.327)

b. “RM has the aim of building mutually satisfying long-term relations with key parties – customers, suppliers, distributors – in order to earn and retain their businesses.” (Patrick et al, 2007: p.38)

c. “RM is… the ongoing process of engaging in cooperative and collaborative activities and programs with immediate and end-user customers to create or enhance mutual economic value at reduced cost. The process of identifying and establishing, maintaining, enhancing and when necessary terminating relationships with customers and other stakeholders at a profit, so that the objectives of all parties involved are met, where this is done by a mutual giving and fulfilling of promises.” (Baran et al, 2008: p. 83)

d. “RM… involves the identification, specification, initiation, maintenance and dissolution of long-term relationships with key customers and other parties, through mutual exchange, fulfilment of promises and adherence to relationship norms in order to satisfy the objectives and enhance the experience of the parties concerned” (L.O’ Malley, 1997: pp.541-559)

A key concept of relationship marketing is the development of an individualized, one-to-one relationship with a customer that becomes increasingly relevant and focused, as the supplier learns about the customers’ needs and wants over time. As Peter Drucker wrote, “the basic purpose of any business is not to sell products but to create and keep customers.” (Drucker, 1964: p.541) The rationale for RM is to increase customer loyalty and customer retention, maintaining a continuous relationship with customers. It focuses
on building long-term bond rather than short-term relationships, as the longer the customer stays with a supplier, the better the profitability.

2.3 Why is RM important?

2.3.1. RM is an inevitable ‘Marketing Shift’ from transaction marketing

Transaction marketing means there is not much more than the core product, and sometimes the image of the firm or its brands, which keeps the customer attached to the seller. When a competitor introduces a similar product, advertising and image may help in keeping the customers for some time, but price usually becomes an issue. A firm that offers a lower price or better terms is a dangerous competitor, because in transaction marketing the price sensitivity of customers is often high. (Gummesson, 1998)

Transaction-type strategy less-emphasizes on personal contacts with their customers but focuses on mass markets by developing economies of scale, where cost economies were realized through repetition as opposed to customization.

Therefore, to sustain one’s competitiveness in the global market trend, RM is an inevitable ‘marketing Shift’ from transaction marketing. The concept of relationship marketing has emerged within the fields of service marketing and also industrial marketing. This is a change or ‘revolution’ where marketers shifting focus from acquisition of new customers to maintenance, enhancement, and retention of existing customers, that is Customer Relationship Management or Relationship Marketing. (Grönroos, 1997)

2.3.2. RM is applicable in manufacturing industry

RM is not only highly applicable to services, but it also provides input to the general paradigm for business of various industries, especially in manufacturing industry. Industrial goods, ranging from mass-produced components to complex machines and
projects, would probably fit best between consumer durables and services. However, in many industrial marketing situations the customer relationships are similar to many service situations, and hence no distinctions between the industrial marketer and service marketer on the continuum. Hence, these strategic benefits are as important for an industrial manufacturer as to a service provider in the market. However, RM must be carefully studied in specific scenario and join forces with an organization theory that corresponds to its requirements and recognizes networks of relationships and interactions as the foundation for business (Gummesson, 1998).

2.3.3. Attractive Paybacks of RM

RM strategy has created added value for customers than values of the core product by itself alone. There are attractive economic and non-economic paybacks for both company and customers in relationships. In terms of economic, the paybacks including lower cost of retaining versus acquiring customers, greater share of customers’ orders and their positive impact on profits, opportunities for cross-selling and up-selling, positive recommendations resulting in a greater customer base, more satisfied employee and a consequent improvement in service quality, the ability to aim marketing efforts at higher profit segments, etc.

In terms of non-economic, as the relationship tie established and continue develops, the buyer starts to feel safe with the supplier, and thus trust is developing. Over a longer period, more and tighter ties were developed with its customers’ specific needs or wants and more on one-to-one relationship which emphasized on the relationship quality elements of mutual trust, commitment and loyalty.

By trust and commitment through safety, credibility, and security, it reduces the sacrifices for the buyer and is assumed to be of value by itself. Hence, buyer will commit more to the supplier for assurance of certainty and stability. Then, price is now not a
critical issue in such relational links and relationship marketing acts to make customers less price sensitive. (Gummesson, 1998)

2.3.4. Relationship Quality as measure of RM

In relationship marketing, an agreed upon set of defining relationship attributes, has yet to be identified in a formal definition of relationship quality. However, the term ‘Relationship Quality’ has been used frequently in buyer–seller literature by few practitioners and scholars share a common definition and measure. (Julie, 2006)

2.4 Relationship Quality

The first construct in the study is Relationship Quality (herein after RQ), which is the central of research model, that consists of three dimensions: Relationship Satisfaction(S), Relationship Trust(U) and Relationship Commitment(C). This study focuses on ‘relationship quality’ as a relationship outcome and an overall means of assessing the strength of a relationship between a firm and its customers.

Hennig-Thurau and Klee’s (1997) defines relationship quality as the ‘degree of appropriateness of a relationship to fulfill the needs of the customer associated with the relationship’. Therefore, relationship quality captures the nature of a relationship, which in turn provides positive benefits to the customer. Hennig-Thurau (2002) conduct a similar review of the literature and conclude that the interrelated core dimensions of relationship quality are satisfaction, trust, and commitment. Therefore, it is dependable that these three related constructs have stood the test of time and scrutiny. Also, empirical researches indicate that trust and satisfaction are antecedents of commitment (Gerrard, 2007).

2.4.1. Dimensions of RQ

i. Relationship Satisfaction(S)

ii. Relationship Trust(U)
iii. Relationship Commitment (C)

There is no clear consensus in the literature on the set of dimensions that comprise the construct of ‘relationship quality’ (Ruben, 2007). RQ is determined from various perspectives and differs from many definitions found in prior literature. Lacking specific attempts to fully develop a relationship quality construct and a practical measure, researchers have used this term inconsistently to generally describe relational constructs based on the empirical context under investigation. (Julie, 2006)

The importance of relationship satisfaction, trust and commitment can be linked together as an overall indicator of the higher-order construct of relationship quality. It is assumed that better relationship quality is accompanied by greater satisfaction, trust, and commitment, although these three attitudinal dimensions are distinct, consumers tend to view and evaluate them as a group together (Ruben, 2007; Gerrard M. and Lawrence S.L., 1997; Nelson, 2007b; Julie, 2006; Roger, 2007; P. Rauyruen & K.E. Miller, 2007). Therefore, trust, satisfaction, and commitment are intimately interconnected in the conceptualization of relationship quality (Yang & Wu, 2008).

The present study, their effect on loyalty as a relationship outcome is therefore examined. Relationship satisfaction was captured in terms of the overall appraisal of the relationship with the supplier firm, in terms of products, customer services, value for money, profitability and business relationship as a whole; trust was captured as the client’s confidence in a supplier’s integrity; and commitment was taken to be the buying firm’s enduring desire to continue a relationship with the vendor. Each of these is explored in the following sections.

As a result of the above discussion, the following propositions are proposed:

\[ P_1: \text{There is a relationship between Customer Perceived Quality(CPQ) variables and Relationship Satisfaction(RS).} \]
P2: There is a relationship between Relationship Quality (RQ) variables and Business Loyalty (L)

2.4.2. Relationship Satisfaction

The first key element of construct Relationship Quality is relationship satisfaction. One of the most critical elements in new B2B global markets is the development of client relationships. Effective and satisfactory business relationships are of the greatest importance in the marketing of both professional services and products, in viewed of the highly demanding and complexity of the products and services and the long-term nature of business relationships.

According to the principles of relationship marketing, successful business relationships enhance customer satisfaction and thus enhance the performance of firms. In the past, relationship satisfaction has been conceptualised as a prerequisite for relationship quality. Three levels of relationship satisfaction are identified (Ruben et al., 2007):

(a) Interactions with personnel.
(b) Core service/product
(c) The organization (supplier)

All of these three levels contribute to overall satisfaction with the relationship. In a business context, relationship satisfaction has been defined as a positive affective state resulting from a firm’s appraisal of all aspects of its working relationship with another firm.

However, satisfaction per se does not automatically lead to repurchase or behavioural intention that leads to loyalty, therefore some studies have investigated the relationship between service quality and consumer satisfaction. Most findings support antecedent role of perceptions of service quality in consumer satisfaction in a cause-and-
effect relationship (Ruben et al., 2007). The most traditional method of determining industrial customer satisfaction is the listing of the variable dimensions of the products and services. In a Customer Satisfaction Survey, respondents are subsequently simply asked to rate their ‘level of satisfaction’ with the offering cross-section on these two dimensions. Most of the cases, customers are usually asked to give overall ‘satisfaction ratings’. (Henrikki Tikkanen et al, 2000)

The measure of relationship satisfaction is different from transaction-specific satisfaction in that it represents an overall evaluation based on previous purchases and accumulated satisfactory experiences from doing business with the supplier over time (Civilai et al, 2007). Civilai summarized that:

“That satisfaction is a higher-order construct consisting of the buyer’s satisfaction with financial returns derived from the sales of the supplier’s products, with the supplier’s products and with the supplier’s sales representatives. This outcome measure allows for economic satisfaction (financial returns derived from sales of the supplier’s products) as well as non-economic satisfaction (e.g. the satisfaction that could be derived from interpersonal relationships with the supplier’s sales representatives).” (Civilai et al., 2007: p.918).

In the present study, as an effort to avoid overlap between perceptions of service quality and perceptions of relationship, relationship satisfaction was assessed with 6 items encompassing both non-economically at three levels of relationship satisfaction: personnel interaction, the core product/customer service, the firm; and economically in terms of value for money and profitability.

As a result of the above discussion, the following propositions are proposed:

P3: Relationship Satisfaction (RS) is antecedent of Trust(U)

P4: Relationship Satisfaction (RS) is antecedent to Commitment(C)
2.4.3. Relationship Trust

The second key element of construct Relationship Quality is trust. Trust defined as a willingness to rely on an exchange partner in whom one has confidence, which means that there has to be a belief in the other partner's trustworthiness that results from the expertise, reliability or intentionality of that partner (Ha et al., 2004). Trust acts as a behavioural intention or behaviour that reflects reliance on the other partner and involves uncertainty and vulnerability on the part of the trustor.

In manufacturer-distributor relationships, trust defined as a firm’s belief that another company will perform actions that will result in positive outcomes, and that the other company will not take unexpected actions that result in negative outcomes for the firm. A key component of trust is the extent to which the customer believes that the vendor has intentions and motives beneficial to the customer and is concerned with creating positive customer outcomes. Suppliers who are perceived as being concerned with positive customer outcomes will therefore be trusted to a greater extent than suppliers who appear interested only in their own welfare. (Ruben et al., 2007)

According to Morgan and Hunt (1994), commitment and trust together encourage marketers:

- to work towards preserving relationship investments by cooperating with exchange partners;
- to resist attractive short-term alternatives in favour of the long-term expected benefits of staying with existing partners;
- to view potentially high-risk actions more favourably because they believe that their partners will not act opportunistically.

Zineldin M. & Jonsson P. (2000) advocated that the high levels of trust characteristics of relationship exchange enable parties to focus on the long-term benefits
of the relationship and willingness not try to exploit the new relationship at the expense of long term cooperation. A cooperative business relationship grows over time as trust and commitment between business-partners develop. Each partner’s ability to provide positive outcomes to the other determines commitment to the relationship.

“...Trust is major determinant of relationship commitment...Trust influences relationship commitment... Relationships characterised by trust are so highly valued that parties will desire to commit themselves to such relationship. Thus, it can be theorized that trust is a major determinant of relationship commitment.”(Zineldin M. & Jonsson P., 2000: p.250)

Thus, trust influences relationship commitment when there is confidence in a partner’s reliability and integrity (Morgan and Hunt, 1994).

The following hypothesis is therefore proposed:

P5: Trust(U) is antecedent to Commitment(C)

Trust and commitment are both very important elements in ensuring a long-term orientation towards a business relationship – an orientation that is necessary to implement relationship-marketing strategies. It is important that companies select their partners carefully, share common values, and maintain excellent communication at all times during the relationship continuum. To ensure a cooperative relationship that is mutually beneficial, companies must also ensure that they provide resources and benefits superior to the offerings of other companies, and that they avoid taking advantage of their partners in any way (Morgan and Hunt, 1994).

2.4.4. Relationship Commitment

Relationship commitment is the third key element of relationship quality construct. Commitment exists when a partner believes the relationship is important enough to
warrant maximum efforts at maintaining that relationship in the long term. Zineldin defines relationship commitment as:

“An exchange partner believing that an ongoing collaborative relationship with another is so important as to warrant maximum efforts at maintaining it; that is, the committed party believes the relationship is worth working on to ensure that it endures indefinitely” (Zineldin M., 2000: p.249)

Relationship commitment is an enduring desire to maintain a valued relationship. Relational commitment exists only when the relationship is considered important. It also means that the partners will try to build their relationships slowly and will seek to minimize their commitment until the potential outcome clearer. (Zineldin M. & Jonsson P., 2000)

Commitment is positively related to loyalty and repeated purchase, because relationship performance is critical to repurchase decisions in a relational exchange, business loyalty is similar to relationship commitment (Morgan and Hunt, 1994). Business Loyalty is described as “a deeply held commitment to re-buy or repurchase a preferred product/service consistently in the future, thereby causing repetitive same-brand or same-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour” (Oliver, 1999: p.34).

Oliver (1999) describes the consumer who ‘fervently desires to re-buy a product or service and will have no other’, as a consumer who will pursue this quest ‘against all odds at all costs’. These latter conditions define the concept of ‘ultimate loyalty’. Commitment and loyalty are two concepts connected but different. Beyond the favourable or unfavourable appreciation of the brand, commitment plays the role of stabilising the behaviours in time irrelevantly of the circumstances, being an essential component of long-term loyalty (Morgan and Hunt, 1994). Commitment helps customers to develop
positive intentions towards an extension of the brand to new categories of products moderating the effects of negative information about the brand on the changes of consumers’ attitudes (Ruben, 2007).

Commitment towards a brand is based on three principal behavioural consequences (Ruben, 2007):

- the repurchase of the brand
- resistance to modifications generated from the competing universe
- resistance to negative feelings generated by specific dissatisfactions

In an effort to highlight the mediating role of relationship satisfaction – most often discussed in the literature in terms of dissatisfied customers (Ruben, 2007), the following hypotheses are proposed:

- $P_6$: There is a mediating effect of Relationship Satisfaction (RS) between Customer Perceived Quality (CPQ) and Trust (U)
- $P_7$: There is a mediating effect of Relationship Satisfaction (RS) between Customer Perceived Quality (CPQ) and Commitment (C)

2.4.5. Customer Perceived Quality (CPQ) as antecedent to RQ


In the following sections, definition and concept of customer perceived quality is discussed. By adopting two-dimensional perceived quality concept (Grönroos, 1997, 1998, 2001), CPQ is conceptualised by integrating both dimensions of perceived quality of
product and service, to adapt the specific need of manufacturing industry. The two-dimensional construct consisting product and service quality is then explained in details.

2.5 Customer Perceived Quality

The second construct in the study is Customer Perceived Quality (CPQ) consisting of two dimensions. The dimensions of quality customers perceive typically differ from industry to industry and depending on what strategy a firm uses. According to the Grönroos’s service quality model of total perceived quality, the customer perceived quality is basically a function of the customer perceptions of two dimensions: the impact of the outcome or the technical solution (what the customer receives), and an additional impact based on the customer's perception of the various interactions with the firm (how the so-called ‘moments of truth’ are perceived or how is the way customer receives). (Grönroos, 1994)

2.5.1. Grönroos's service quality model

Grönroos (1998) attempts to understand how the quality of a given service is perceived by customers. The model divides the customer's perception of any particular service into two dimensions:

a. Technical quality: What the consumer receives the technical outcome of the process.

b. Functional quality: How the consumer receives the technical outcome, what Grönroos calls the ‘expressive performance of a service’ of the interaction process.

Grönroos suggested that, in the context of services, functional quality is generally perceived to be more important than technical quality, assuming that the service is
provided at a technically satisfactory level. He also points out that the functional quality dimension can be perceived in a very subjective manner (see FIGURE 2.1).

![Grönroos's Service Quality Model](image)

**FIGURE 2.1: Grönroos's Service Quality Model (Grönroos, 1998)**

### 2.5.2. Technical Quality

Technical quality is usually defined with specific relation to the product, whether it is a good or service. For goods, important aspects might be reliability, durability, performance characteristics, aesthetics, etc. These dimensions will differ according to the product type: the most important factor being whether it meets the end requirements of the customer. Sime defines:

> “...that quality is a two dimensional construct in the automotive supply industry. The core dimensions of quality are: product quality, which is primarily focused on design superiority and performance of the physical product; and service quality, which comprises both pre- and post-sale service.” (Sime, 2000: p.386)

Researchers from philosophy, economics, marketing, and operations management have different viewpoints concerning quality. For example, definitions of quality provided by engineering, marketing, and manufacturing scholars are often conflicting. Forker (1991) observed that these varying perspectives could be classified into five major categories of quality approaches: transcendent (experiential satisfaction); product-based
Garvin (1987) identified eight 'competitive dimensions of quality' that could guide a firm in its use of quality as a competitive weapon. While his quality dimensions were the result of subjective impressions and anecdotal evidence. Garvin’s eight dimensions are:

1. performance; (value / satisfaction, financial)
2. features; (sense of aesthetics)
3. reliability; (quality consistency)
4. conformance; (meet specifications)
5. durability; (core material & process quality control)
6. serviceability; (Customer Service)
7. aesthetics; and (Design Innovation)
8. perceived quality. (Product & Service Satisfaction)

He contended that by focusing on a combination of these dimensions, and outperforming competitors along these dimensions, a firm could effectively differentiate its product offerings.

Each of Garvin’s dimensions is linked to one of the quality approaches discussed earlier. Performance and features are yardsticks for the technological advantages of a product which the product-based approach to quality emphasizes. Reliability and conformance gauge a product’s adherence to specifications – the focus of the manufacturing-based approach to quality. Durability and serviceability appraise a product’s expected performance in terms of the time- and cost-based value the product delivers (i.e. the value-based approach to quality). Lastly, aesthetics and perceived quality
represent consumer judgments about the superiority of a product, which the transcendent and user-based approaches deem essential in describing quality (Garvin, 1987).

2.5.3. Functional Quality

Grönroos’s model suggested that service quality must include the manner in which it is delivered (Hofman et al., 1997). Functional quality, the second fundamental dimension of customer perceived quality is concerned not with ‘what’ is delivered, but rather processes of ‘how’ the core or technical service is delivered. Grönroos asserts that functional quality is concerned with the interaction between the supplier and customer or recipient of service that is assessed in a highly subjective manner. It is viewed as critical to client perceptions of overall service quality, especially since many service firms find it difficult to differentiate themselves on their core service alone.

As the core service sooner or later becomes a commodity as competition increases and the industry matures, it is the functional quality dimensions that become an increasingly important contributor in creating a sustainable competitive advantage. According to Ruben:

“In the context of personal services, functional quality is conceptualized as the responsive, courteous, caring and professional behaviour displayed by a service personnel during the many ‘moments of truth’ in the course of creation and delivery of the core service. It is concerned with the courtesy and friendliness shown to the client, making efforts towards understanding his/her circumstances, avoiding or solving dispute cooperatively, displaying empathy, giving prompt service, responding to queries and complaints in a responsible, courteous and timely manner.” (Ruben, 2007: p.840)

Being technical satisfactory in service interactions, Grönroos (1998) recognized that the perceived expertise or competence of a source is a major determinant of the effect of any communicative interaction with customers or partners. Aligned with the statement,
Selnes (1998) argued that the underlying rationale is that the ‘message’ or ‘advice’ can be trusted to be true or important. Competence of a supplier is, however, a complex concept that includes both internal knowledge and external knowledge. Internal knowledge is technical expertise regarding products and production methods, and external knowledge is a thorough understanding of the customer’s preferences, organization, markets, competitors, and industry. Therefore, competent salespeople are expected to be good at communications, able to reduce uncertainty and lead to more trust within the relationship.

2.5.4. Business Loyalty as dependent variable of RQ

Customer loyalty is posited as the ultimate dependent of the research model in a B2B setting. Evidence shows that relationship elements affect customer loyalty and relationship practices have a direct impact on customer loyalty. Relationship quality is predicted to have influence on customer loyalty, as building relationship with customer increases loyalty and purchases (P. Rauyruen & K.E. Miller, 2007).

2.6 Business Loyalty

The last construct in the study is Business Loyalty (L) that consists of only one dimension, that is loyalty itself, which is also the ultimate dependent variable in the study. In this study, the relationship business loyalty between relationship quality construct of its three dimensions is being examined, that are satisfaction, trust and commitment; considering the influence from customer perceived quality as antecedent to relationship quality and the mediating effect of relationship satisfaction.

In the marketing literature, loyalty has been widely recognised as being of the utmost importance with positive effect on profits of having a loyal customer base. Role of loyalty in the brand equity process is argued that it reduced marketing costs. In addition,
brand loyalty generates positive word-of-mouth recommendation, and greater resistance among loyal consumers to competitive strategies from rival suppliers (Ruben, 2007).

Oliver (1999) defines loyalty as:

“... a deeply held commitment to rebuy or repatronise a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour.” (Oliver, 1999: p.34)

Dwayne Ball (2004) defines loyalty in a more specific way in both attitude and behavioural intentions (repurchase or purchase frequency), and attitudinal component. There are two factors in loyalty items, active loyalty (word-of-mouth and intention to use) and passive loyalty (not switching even under less positive conditions). Behavioral loyalty is repeated transactions (or percentage of total transactions in the category) and attitudinal loyalty is often defined as both positive affect toward the relationship’s continuance, and the desire to continue to remain in the relationship, and is sometimes defined equivalently with relationship commitment (Morgan and Hunt, 1994). Attitudinal loyalty is measured by questionnaire methods. Behavioural loyalty is highly prized, because it means sales. Attitudinal loyalty is also highly prized, because behavioural and attitudinal loyalty is highly intertwined: repeated purchases lead to positive affect, which leads to curative loyalty: high levels of involvement and intention to continue repurchase. Both affective loyalty and conative loyalty are considered to be kinds of attitudinal loyalty. Strong attitudinal loyalty makes customers more resistant to attempts by other marketers to steal them away and more resistant to counter-persuasion and search for alternatives.

The present study focused on what might be considered at attitudinal loyalty and its antecedents.
2.6.1. Relationship between Customer satisfaction and loyalty

The relationship between Customer satisfaction and brand loyalty is well established in the literature at both the ‘transaction-specific’ level and the ‘overall’ level (Ruben, 2007). Recent findings provide evidence of a positive direct relationship between relationship satisfaction and loyalty, that as overall relationship satisfaction declines, loyal behaviour should also decline. Also, higher satisfaction has been proposed to be related to higher loyalty (Dwayne Ball, 2004). Similarly, it supports that repurchase intentions are strongly related to stated satisfaction across product categories (Roger, 1996).

2.6.2. Relationship between Trust and loyalty

Trust is logically and experientially a critical variable in relationships, as has been hypothesized and borne out in the marketing literature (Morgan and Hunt, 1994). Those who are not willing to trust a vendor in a competitive marketplace are unlikely to be loyal. The importance of trust in explaining loyalty is also supported by various authors and commonly being accepted. Trust is sometimes conceived of having two components, performance or credibility trust and benevolence trust. (Ball, 2004)

2.6.3. Relationship between Commitment and loyalty

Ruben (2007) claims notion of ‘commitment’ in his research on satisfaction and brand loyalty relationship. The notion of ‘relative attitude’, refers to ‘a favourable attitude that is high compared to potential alternatives’, as a means to provide better theoretical grounding to the loyalty construct. His research review suggests that loyalty maybe an outcome of both a more favourable attitude towards a brand (as compared to alternatives) and repeat patronage, while low relative attitude with low repeat purchase meaning absence of loyalty, and low relative attitude with high repeat purchase indicates spurious or ‘false’ loyalty. It should be explicitly take into account the degree of a consumer’s
commitment to a brand when he/she repurchases a brand. Thus repeat purchasing behaviour alone does not imply a consumer is loyal to a brand. True loyalty implies a commitment towards a brand and not just repurchasing due to inertia. Without commitment, consumers who repurchase a brand due to inertia may be easily induced to switch brands when offered a lower-price, or other attractions. Thus, with the existence of commitment is a prerequisite for loyalty.

2.6.4. Relationship between Customer Perceived Quality and loyalty

It is recognized that relationships exist between customer perceived quality and loyalty, hypothesising an indirect effect mediated by satisfaction (Ball, 2004). On the basis of relational theory, it is widely agreed in the literature that trust and commitment are key variables in influencing customer loyalty in successful relationship (Ruben, 2007). The following proposition is therefore proposed:

P_h: There is a mediating effect of Relationship Satisfaction (RS) between Customer Perceived Quality (CPQ) and Business Loyalty (L)

2.7 Proposed Theoretical Framework

The study will concentrate on relationships of business loyalty and its antecedents within an established relationship, as stated in the study objectives. Re-purchase intentions is the ultimate goal in the course of efforts under relationship marketing activities, that is to establish, maintain and enhance the relationship at a profit so that the objectives of both parties are met (Grönroos, 1994).
The theoretical framework clarifies how the conceptualized theories are presented in the literature review and how these relate to each study objective. The relationship diagram below is generated through visualization of the study objectives that perceived to be interrelated, further explanation are discussed in the following chapters for better understanding of the theoretical framework with empirical analysis.
SECTION II

2.8 Background of Case Organization – XX Moulding (M) Sdn. Bhd.

XX Moulding (M) Sdn. Bhd. (hereinafter XX) began as a wooden pallet, top plank and wooden strip manufacturing business in 1960s. They supplied their products locally to some manufactures such like F&N. In 1994, XX started to fully concentrate in expanding wooden picture frame products into global market. They successfully established and started operating in factory measuring 8,000 square meters located in Perak, Malaysia. In response to the ever-changing sophisticated demands, XX was then formed in 1999 to focus on the manufacture of high quality wooden picture frame moulding.

In 2000, further expended to 24,000 sq. meters and also become one of the biggest wooden moulding supplies in Malaysia. It has strengthened its image with the acquisition of the ISO 9001:2000 quality certification from Lloyds Register Assurance in December 2001, the one and only one picture frame moulding manufacturer in Malaysia with this award. The company’s annual production capacity was 37 million linear feet in year 2005 and is expected to increase to 47 million by 2008.

In 2002, XX Group- an investment holding company incorporated with 4 wholly-owned subsidiaries, including XX Moulding (M) Sdn. Bhd., XX Realty (M) Sdn. Bhd., XX Timber (M) Sdn. Bhd. and XX Marketing (M) Sdn. Bhd. In 2004, there are 5 factory lots adjoining to each other with total size 50,000 sq. meters. There are about 300 factory workers and skilled-labours with management team of 50 office staffs in the holding company. Based on the group’s revenue of RM50 million for the financial year ended Dec 31, 2006, XX is the largest operator within the wooden picture frame-moulding industry in Malaysia, with a 27% market share. The group was listed on the Second Board of the
Bursa Malaysia Securities Berhad in 2004. Subsequently in 2006, it was transferred to the main Board of the Malaysia Securities.

2.9 Financial Highlights

Table 2.1: 2004-2007 Annual Revenue of XX Group
(Source: 2005-2007 XX Group Annual Reports)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Revenue (RM)</td>
<td>57,330,000</td>
<td>59,170,000</td>
<td>58,320,000</td>
<td>46,720,000</td>
</tr>
</tbody>
</table>

2.10 Market base

With a rapid growing pace, they continued to upgrade their product quality control using advance Italian and Germany technology. Having relatively lower price compared to European countries enabled them to maintain a highly competitive strength in the international market. Export business currently contributes over 94% of the revenue, mainly to the United States. Its products are distributed to 120 customers in 15 countries, including Australia, Japan, South Korea, China, Canada, and Norway. American painters such as Lee Bogle, Terry Redlin and Steve Hanks – whose paintings can sell for as high as a couple of thousand US dollars- have found their work dressed in XX’s frames. The customer groups are picture frame moulding distributors and retailers in a range of interior decorative business including chain-retailer (hypermarkets), department store, specialty outlet and traditional framers.

2.11 Product

Wooden picture frames have been used for centuries. This style of picture frame will always be a favourite among consumers looking for the perfect frames to display
their pictures or photos. These picture frames are available in wide selection of all sizes, shapes and colours. There are many styles of these wood picture frames for customers to choose from that will display paintings or photos with the best quality and appearance. Some of the more elaborate of this type of frames are the ones that are carved with intricate designs.

Wooden frames moulding that have been stained and still show wood grain are the favored on the market today with its uniqueness. Frames are usually made of soft or hard wood, may be of any colour or texture, but gilding is common, especially on older frames. Some picture frames have elaborate mouldings which may relate to the subject matter, such as series of Bamboo, Antique gold-leaf, and etc.

The picture frame will later be customed-made into frames that contain a pane of glass or a plastic glass substitute, in order to protect the picture. In some instances where the art in the frame is dispensable or durable, no protection may be necessary. Certain kinds of pieces do not usually need glass when framed, including paintings done in acrylic or oil paint (the former is usually waterproof; the latter actually needs to ‘breathe’ due to the decades-long drying process), stained glass or tiles, and laminated posters. These kinds of pieces are still sometimes put under glass though if for example, they are framed using mats, or (in the case of oil paintings) they are kept in a carefully climate-controlled environment.

‘L’-style frames are a simple variety that are constructed with a single L-shaped border of wood, with the bottom part of the L, or rabbet, at the front of the frame to hold in the glass, object and backing, which are secured in from the back.

Substitute material of wooden picture frames including everyday plastic, acrylic, aluminium frames, even sea shells. A digital photo frame is an example of the changing technology of the 21st century which may be a threat or an opportunity to the traditional
wooden frames.

2.12 Product Positioning

Targeted at the high end consumer wooden frame market, XX’s wooden picture frames mouldings are globally renowned for their consistently high quality. This segment is distinguished from the low-cost giant retailers such as Walmart’s target market by increased emphasis on beauty of natural wood with state-of-art of leading edge technology married to style, where style and the visual sense of aesthetics will be a particularly important purchasing criterion for this more discriminating market.

On top of it, in order to cater the growing needs of customer with high awareness in environmentally friendly goods and services are often marked with eco-labels. XX has enhanced its product competitiveness in with environmentally friendly or so-called ‘eco-friendly’ sourced timber from both FSC and PEFC certified lumber for moulding manufacturing, which able to provide internationally-recognized goods and services considered to inflict minimal harm on the natural environment.

The mouldings are available purely in length form, ranging from 2.13-3.35 meters / 7-11 feet. Timber materials are Jelutong, Pine and other suitable lumber species are strictly legally sourced from certified vendors or millers that are in line with the national policy in practising sustainable forest management compatible with International Tropical Timber Organization (ITTO) standard.

In terms of product categories, XX specialized in stained wood, plain and decorative hot stamping, matt and gloss lacquering, washed and distressed finish, veneer and to a lesser degree, gold or silver leafing.
Table 2.2: Product Category of XX’s Wooden Picture Frame  
(Source: Company official website, 2005-2007 XX Group Annual Reports)

<table>
<thead>
<tr>
<th>Natural Wood</th>
<th>High Gloss Timber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matt Black</td>
<td>Decorative Gilding</td>
</tr>
<tr>
<td>Metallic and Colors</td>
<td>High Gloss Lacquer</td>
</tr>
<tr>
<td>Embossing</td>
<td>Pine</td>
</tr>
<tr>
<td>Washed and Distressed</td>
<td>Veneer</td>
</tr>
</tbody>
</table>

### 2.13 Summary of the chapter

Section I of this chapter provided a review of previous studies conducted on the topics focused by the study objectives. Section II provides a background introduction of the case organisation of the study. In Chapter III, the research method details are explained.
CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter will discuss the methodological issues associated with the present study. First, the research method chosen will be discussed. Then, discussion followed by explanation of proposed research propositions and selection of measure used in the study. Thirdly, the sampling design and the data collection procedure will be discussed. Lastly, the data analysis techniques and method of determining the quality standard of the survey is explained.

This chapter explains research methods used in examinations of relationships between customer perceived quality variables and customer satisfaction, relationships between relationship quality variables and business loyalty, and finally, mediating effect of relationship satisfaction in between customer perceived quality and other relationship quality variables in the studied theoretical model. Overall, the main objective of study is to investigate the effect of the selected variables on the ultimate dependent variable of Business Loyalty.

3.2 Research Design

Deductive approach is adopted in the study, as existing theories from literature review are studied thoroughly and being investigated empirically. The existing concept and theoretical model are the foundation references when selecting information, devising research instrument and methods that relate the analysis result to theories.

Due to the constraints of time and resources, rather than using large samples and following a rigid protocol to examine a limited number of variables, single case study
method had been selected in this study to involve an in-depth, longitudinal examination of a case organization, supported by quantitative evidence of questionnaire survey modified from literature review on previous related studies (see TABLE 3.2).

This study was limited by investigation to the customers of one supplier. This is to reduce the external validity of the findings but will focus into the dynamics of variables. Such a case study approach is in line with a recognised research process suggested by Fred Selnes (1998).

### 3.3 Unit of Analysis : Case Organisation

The unit of analysis is where information about the study is collected. In present study, a Malaysian organisation is used as the unit of analysis. The selected case organisation is a wooden moulding manufacturer serving the global market, with annual sales of average USD 20 million in year 2003-2007. The selected product line is its main product category, wooden picture frame. As the organisation compete in a competitive Business-to-business (B2B) environments with mainly product distributors and retailers, where the number of customer is relatively much more lesser compared with mass consumer business-to-consumer (B2C) markets. In this case of study, the organisation has about 60 business customers, hence each individual of customers become crucial and marketers’ effort to retain these customers is inevitably vital in the business.

The organization has an objective of developing closer relationships with its customers in order to achieve a higher degree of customer loyalty, and to develop new products and concepts in cooperation with its customers.
3.4 Development of Propositions

The development of propositions was based on literature review and derived from a modified theoretical framework combining concept of Perceived Quality-Relationship Quality-Business Loyalty model (Ruben, 2007) with Grönroos’s Customer Perceived Quality concept of two-dimensional quality measurement (Grönroos, 1994).

The following propositions were formulated for empirical analysis including customer profiles analysis, determining correlations and predictors’ effect between independent variables and dependent variable using multiple regressions, total effect analysis of Relationship Quality dimensions with Loyalty, and finally, examine the mediating role of relationship satisfaction in the whole model of framework. The propositions are aligned with the objectives of present study (see TABLE 3.1).

The set of independent and dependent variables defined is based on previous research studies (see Chapter 2: Literature Review). Theoretical framework used in the present study is depicted as below (see Figure 3.1):

![Figure 3.1: Proposed theoretical framework in present study](image-url)
### Table 3.1: The Propositions for Empirical Testing

<table>
<thead>
<tr>
<th>Propositions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P₁</strong></td>
<td>There is a relationship between Customer Perceived Quality(CPQ) and Relationship Satisfaction(RS).</td>
</tr>
<tr>
<td><strong>P₁a</strong></td>
<td>Product Quality(PQ) has a positive influence on Relationship Satisfaction(RS).</td>
</tr>
<tr>
<td><strong>P₁b</strong></td>
<td>Customer Service Quality(CS) has a positive influence on Relationship Satisfaction(RS).</td>
</tr>
<tr>
<td><strong>P₂</strong></td>
<td>There is a relationship between Relationship Quality(RQ) variables and Business Loyalty(L)</td>
</tr>
<tr>
<td><strong>P₂a</strong></td>
<td>Relationship Satisfaction(RS) has a positive influence on Business Loyalty(L)</td>
</tr>
<tr>
<td><strong>P₂b</strong></td>
<td>Relationship Trust(U) has a positive influence on Business Loyalty(L)</td>
</tr>
<tr>
<td><strong>P₂c</strong></td>
<td>Relationship CommitmentI has a positive influence on Business Loyalty(L)</td>
</tr>
<tr>
<td><strong>P₃</strong></td>
<td>Relationship Satisfaction(RS) is antecedent to Trust(U)</td>
</tr>
<tr>
<td><strong>P₄</strong></td>
<td>Relationship Satisfaction(RS) is antecedent to CommitmentI</td>
</tr>
<tr>
<td><strong>P₅</strong></td>
<td>Trust(U) is antecedent to CommitmentI</td>
</tr>
<tr>
<td><strong>P₆</strong></td>
<td>There is a mediating effect of Relationship Satisfaction(RS) between Customer Perceived Quality(CPQ) and Trust(U)</td>
</tr>
<tr>
<td><strong>P₆a</strong></td>
<td>There is a mediating effect of Relationship Satisfaction(RS) between Product Quality(PQ) and Trust(U)</td>
</tr>
<tr>
<td><strong>P₆b</strong></td>
<td>There is a mediating effect of Relationship Satisfaction(RS) between Customer Service Quality(CS) and Trust(U)</td>
</tr>
<tr>
<td><strong>P₇</strong></td>
<td>There is a mediating effect of Relationship Satisfaction(RS) between Customer Perceived Quality(CPQ) and CommitmentI</td>
</tr>
<tr>
<td><strong>P₇a</strong></td>
<td>There is a mediating effect of Relationship Satisfaction(RS) between Product Quality(PQ) and CommitmentI</td>
</tr>
<tr>
<td><strong>P₇b</strong></td>
<td>There is a mediating effect of Relationship Satisfaction(RS) between Customer Service Quality(CS) and CommitmentI</td>
</tr>
<tr>
<td><strong>P₈</strong></td>
<td>There is a mediating effect of Relationship Satisfaction(RS) between Customer Perceived Quality(CPQ) and Business Loyalty(L)</td>
</tr>
<tr>
<td><strong>P₈a</strong></td>
<td>There is a mediating effect of Relationship Satisfaction(RS) between Product Quality(PQ) and Business Loyalty(L)</td>
</tr>
<tr>
<td><strong>P₈b</strong></td>
<td>There is a mediating effect of Relationship Satisfaction(RS) between Customer Service Quality(CS) and Business Loyalty(L)</td>
</tr>
</tbody>
</table>
3.5 Selection of Measures

The research instrument was designed after an exhaustive literature review of different studies in supplying the appropriate measurement scales of variable to be used in the present study. All the adapted measurement items were being tested in earlier studies of its reliability and validity, although in different background of study. However, the questions were modified to fit the scenario of the case organisation and nature of the specific industry. The questionnaire was screened and technical terms were revised by the expert marketers of wooden picture frame industry and experienced senior management board of the case organization. The input of these experts ensured that the set of construct variables was expressed clearly and appropriate to the respondents.

This research instrument was a questionnaire containing 34 items. The measuring scale was a five-point Likert-type scale that ranged from ‘1’ (‘completely disagree’) to ‘5’ (‘completely agree’). Items evaluated in the constructs are included in few sections in the survey, as described below: (See TABLE 3.2 for details of measurement items and sample questionnaire survey form in Appendix A)

**Section A: Customer Perceived Quality**

- Product Quality (Technical) – 5 items
- Customer Service Quality (Functional) – 5 items

**Section B: Relationship Quality**

- Relationship satisfaction – 6 items
- Trust – 5 items
- Commitment – 7 items

**Section C: Business Loyalty**

- Business Loyalty – 6 items
Section D: Respondent Company Profile (some background details were obtained from the marketing department of case organization)

- Business type (Distributor or Retailer)
- Geographical Region Area of Customer Company/Organisation
- Years of establishment
- Number of employee
- [Data Collected from Marketing Department]
  a. Survey Respond Time
  b. Customer Sales % Share in 2007 Annual Sales of the case company
  c. Customer Repurchase Sales Value Growth % : 2007 vs. 2008 (first 6-month)
  d. Length of Relationship: Number of year(s) from first successful transaction
  e. Complaint made (categorized in major, minor, none) within last 12 months

Because different service dimensions are relevant in different industries, it was necessary to develop multiple scale items that would adequately capture the particular study context of the manufacturer.

To develop these items, initial qualitative research was conducted with senior managers of the case organization. Several items were selected from established previous studies and included to ensure that the questionnaire was relevant to the wooden frame industry. Key questions were examined by an academic skilled in questionnaire design. The questionnaire was then developed and pre-tested with senior managers and marketing director from the case organization to ensure that the questions included in the survey
instrument were readily interpretable. The questionnaire was designed based on previous study and modified according to the study objectives, as described in TABLE 3.2. Appendix A shows the actual final questionnaire used for the present study.

The ‘functional’ customer service quality dimension were measured using items from the service-quality literature(Sharma et al.,1999; Selnes,1996), whereas the ‘technical’ quality dimension that mainly focused on moulding products was termed on the basis of the quality of the manufacturing competitiveness(Vickery et al.,1994; Garvin,1987) which are industry-related.

Trust was measured by adapting Zineldin & Jonsson (1999) and Morgan and Hunt (1994), and commitment was measured using a scale adapted from Zineldin & Jonsson (2003). Loyalty was measured by adapting Woo & Ennew (2004) and Zineldin & Jonsson (1999) that focused on the likelihood of continuing doing business with the supplier. Finally relationship satisfaction was measured in line with Civilai et al (2007) and Palmatier et al (2007).
<table>
<thead>
<tr>
<th>Construct / Dimension</th>
<th>Adapted Items (Original Question from the literature)</th>
<th>Modified Measurement Items (Used in present study)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PERCEIVED QUALITY</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **Technical:**  
  **Product Quality** | 1. Product Reliability – (the consistency of performance of the product); Reliability  
  2. New Product Development  
  3. Design Quality/Innovation; Aesthetics (sensory characteristics & outward appearance of the product)  
  4. Product Flexibility (Customization), Quality (Conform to specifications)  
  5. Production Lead Time, Delivery speed | 1. **Product Reliability:** consistency in finish, colour, shape/size  
  2. Technical capability in development of new mouldings  
  3. Innovation & aesthetics in new moulding designs  
  4. Fulfilment of product customization / special requirement (specifications)  
  5. Production Lead Time (period from order placed to shipment ETD) |
| **Functional:**  
  **Customer Service Quality** | 1. My adviser is providing a courteous & friendly service to me  
  2. My adviser shows a genuine care & interest in my personal circumstances  
  3. My adviser responds promptly to my request  
  4. The supplier’s representative is good at solving disputes before they create problems in our working relationship  
  5. The supplier has knowledge about the market and market trends | 1. Courtesy & friendliness  
  2. Genuine care & interest in your critical requirements  
  3. Prompt responses to your requests/complaints  
  4. Good at solving disputes before they create problems in our working relationship  
  5. Knowledge of keeping you informed of useful business information, e.g.: new products & market info. |

**Note:** Product of this case: Wooden picture frame's main performance/attribute underlies on its finished appearance.
<table>
<thead>
<tr>
<th>Construct / Dimension</th>
<th>Adapted Items (Original Question from the literature)</th>
<th>Modified Measurement Items (Used in present study)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RELATIONSHIP QUALITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RELATIONSHIP SATISFACTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Civilai Terawatanavong et al (2007)</td>
<td>1. Products: The supplier’s <strong>product</strong> (or services) perform much better than the competitors&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1. Our <strong>product quality</strong>, in comparison with other suppliers.&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>2. Palmatier et al (2007)</td>
<td>2. Financial Returns: How satisfied you were with…The <strong>income from the sales</strong> of the supplier’s products? ; The <strong>profitability</strong> you have experienced with the supplier’s products?&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2. Our <strong>customer service quality</strong>, in comparison with other suppliers.&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>3. Sale Representative: Your <strong>personal dealing</strong> with the sales representative&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3. Your <strong>sales/ profitability</strong> in selling our mouldings (financial returns)&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>4. I am satisfied with the <strong>relationship</strong> I have with this rep. firm&lt;sup&gt;2&lt;/sup&gt;</td>
<td>4. <strong>Value for money</strong> of our mouldings (after having considered product quality &amp; customer service), compared with other suppliers&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Your <strong>personal dealing experience</strong> with XX Sales/Customer Service personnel&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Overall, the <strong>relationship</strong> you have with XX&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Trust</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Zineldin M. &amp; Jonsson P., (2000)</td>
<td>1. We can <strong>always trust</strong> the supplier</td>
<td>1. I can <strong>always trust</strong> XX.&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>2. Morgan, R. M., &amp; Hunt, S. D. (1994)</td>
<td>2. The supplier <strong>has high integrity</strong></td>
<td>2. XX has a <strong>high level of integrity</strong>.&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>3. The supplier <strong>keeps promises</strong></td>
<td>3. XX <strong>keeps promises</strong>.&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>4. When the supplier makes important decision, it also <strong>considers our interests</strong></td>
<td>4. <strong>My interests are taken into consideration</strong> in XX’s important decisions.&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>5. In our relationship, Firm X <strong>gives us reliable information and advice.</strong></td>
<td>5. XX gives <strong>us reliable information &amp; advice</strong>.&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
### TABLE 3.2 continued

<table>
<thead>
<tr>
<th>Construct / Dimension</th>
<th>Adapted Items (Original Question from the literature)</th>
<th>Modified Measurement Items (Used in present study)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. We have a <strong>strong commitment</strong> to this supplier</td>
<td>1. I have a <strong>strong commitment</strong> to XX</td>
</tr>
<tr>
<td></td>
<td>2. We intend to <strong>maintain and develop</strong> this relationship</td>
<td>2. I intend to <strong>maintain and develop</strong> this relationship</td>
</tr>
<tr>
<td></td>
<td>3. This relationship required maximum effort and involvement</td>
<td>3. Our relationship required <strong>maximum effort and involvement</strong></td>
</tr>
<tr>
<td></td>
<td>4. Our company is <strong>fully open &amp; honest</strong> in its relationship with XX</td>
<td>4. Our company is <strong>fully open &amp; honest</strong> in its relationship with XX</td>
</tr>
<tr>
<td></td>
<td>5. The supplier <strong>devotes sufficient time</strong> and effort to our relationship</td>
<td>5. <strong>XX devotes sufficient time</strong> and effort to our relationship</td>
</tr>
<tr>
<td></td>
<td>6. We often <strong>feel very happy</strong> about the cooperation with XX</td>
<td>6. I <strong>feel happy</strong> about the cooperation with XX</td>
</tr>
<tr>
<td></td>
<td>7. Deciding to work with this supplier was a <strong>definite success</strong> for my firm</td>
<td>7. Deciding to work with XX was a <strong>definite success</strong> for my company</td>
</tr>
</tbody>
</table>
### TABLE 3.2 continued

<table>
<thead>
<tr>
<th>Construct / Dimension</th>
<th>Adapted Items (Original Question from the literature)</th>
<th>Modified Measurement Items (Used in present study)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BUSINESS LOYALTY</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 1. K.Woo & C.T. Ennew (2004) | 1. I would say positive things about the CE to odell. \(^1\)  
2. I would recommend the CE to other people who seek my advice. \(^1\)  
3. I would consider the CE as my first choice when engineering consultancy services are needed. \(^1\)  
4. I wish my organization would do more business with the CE in the next few years. \(^1\)  
5. I would not stop buying products manufactured by this supplier even if I could have the opportunity to buy from others. \(^2\) | 1. I say positive things about XX to others. \(^1\)  
2. I would recommend XX to someone who seeks my advice \(^1\)  
3. I consider XX as the premium choice in your development of new mouldings. \(^1\)  
4. I wish my organization would do more business with XX in the next few years. \(^1\)  
5. I would find it hard to stop buying XX products even if I had the opportunity to buy from other suppliers. \(^2\)  
6. I intend to continue being a customer of XX for a long time to come \(^1\) |
3.6 **Sampling Method and Key informant**

The sampling is using **Cluster sampling** method, which by selecting respondents that are customers existing that are acquiring wooden products overseas or from case organization. As single-stage cluster sampling, all the elements from each of the selected clusters are used. This method is chosen to reduce travel time and costs, greater economy than simple random sampling can be achieved by treating several respondents within a geographical area as a cluster.

**TABLE 3.3: Summary Information of the Survey Sampling Method**

<table>
<thead>
<tr>
<th>Target Population</th>
<th>Global customers of XX Moulding (M) Sdn. Bhd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Method</td>
<td>Active customer who at least had one purchase transaction from 1st Jan 2007 to 30 Jun 2008</td>
</tr>
<tr>
<td>Methodology</td>
<td>Questionnaire</td>
</tr>
<tr>
<td>Sample Size</td>
<td>36 respondents (out of 55 survey being issued)</td>
</tr>
<tr>
<td>Duration</td>
<td>1 month (Jul 2008- 9 Aug 2008)</td>
</tr>
</tbody>
</table>

The sample consisted of companies acquired moulding design services and moulding products exports from the case organization. The survey questionnaires were sent to owner, marketing director or key marketing personnel of case organisation’s customers, and they played both roles as respondent and informant for their organisation. In all, the 55 companies (including top 20 customers) were randomly selected from active customer directory of case organization, they are picture frame moulding distributors and retailers in a range of interior decorative business including chain-retailer (hypermarts), departmental store, specialty outlet, and traditional framers. These 55 respondents were from various geographical regions of North America, Western Europe, Asia, and Australia & New Zealand.
3.7 Data Collection Procedure

Considering 90% of customers are located in many countries overseas all over the world. The information and completed questionnaire will be collected through fax and emails. In fact, much effort was put in with the user friendliness and standard simplified format of the survey form, and electronic form programmed using Microsoft Excel functions gave alternative whether to answer and send back electronically or print out and fax. These companies were contacted through email and received one set of electronic survey form, and 38 responses were collected within period of 1 month (10 Jul 2008 - 9 Aug 2008). Of the 38 responses, 2 completed questionnaires were eliminated because of excessive missing data – resulting in a final sample of 36 companies. Respond rate is 69%.

3.8 Data Analysis Technique

The design of this study data analysis techniques are in both descriptive statistics and prediction for identifying groups (using Factor Analysis, Pearson Correlation, and Multiple-Regression). Responses of all questions except for demography profiles, were captured in Likert scale of 1 to 5. The analysis is based on data available from the survey for statistical tests, data computations were performed by input of survey 5-point data loaded into a Statistics software package, SPSS(Statistical Package for the Social Sciences) for Windows (Release 16.0.1). Cronbach alpha was used in determining the reliability of individual scale of constructs dimensions.

The first step in data treatment and analysis consisted of conducting exploratory factor analysis in group of 36 respondent companies to verify that the variables indicators fell within the dimensions theoretically proposed and the construct validity demonstrated good measurement properties.
Secondly, exploratory analysis was conducted on Relationship Satisfaction with the various customer profile criterion. Thirdly, based on the study objectives, the study use the following main analysis tests in investigating the inter-relationship and relative effects of the customer perceived-quality dimensions, relationship satisfaction, trust, commitment, and loyalty:

i. **Exploratory factor analysis**

The items used to measure each construct were tested using exploratory factor analysis to verify the factor structure and identify items for deletion – that is, items with low factor loading and/or high cross loading. Varimax rotation was employed to derive a simple structure, and factors with eigen-values less than 1 were screened out (Ruben, 2007). Cronbach’s Alpha, Kaiser-Meyer-Olkin measure, and Barlett’s test of sphericity are used in confirming its reliability, factorability and appropriateness of the data set.

ii. **Pearson Correlation Analysis**

The Pearson product-moment correlation coefficient (r) can be used to describe a linear relationship between two continuous variables. The two important findings could be derived from the test result are: (i) how the variables can be related, In either positive relationship that both variables vary in the same direction; or negative relationship that the variables vary in different directions, and (ii) The strength of the relationship, by the p value that indicates the confidence level of significance, that are either strong relationship (x variable predicts y variable well, at p<0.05); or weak relationship (x variable does not predict y, at p>0.05). Underlying assumptions of correlational test are considered, that are: (i) data set are related paired, (ii) Scale of measurement are in interval or ratio, (iii) normality and linearity (Sheridan & Lyndall, 2002).
iii. **Multiple Regressions Analysis**

A statistical technique to determine the probability of a dependent variable (outcome) occurring when the independent (explanatory) variables are present or absent. It determines whether a model that includes the variables explains more about the outcome variable than a model that does not include the variables. It is a prediction of a dependent variable by a linear combination of two or more independent variables using least-squares methods for parameter estimation.

iv. **Causal path Analysis: Total Effect**

Causal Path Analysis is a type of multiple regression analysis in which standardized regression coefficients (path coefficients) are computed by stipulating the structure of hypothesized relationships between variables, in an explicitly formulated causal model. The causal connections are conceived as unidirectional and presented in a path diagram. In essence, the technique is merely a diagrammatic representation of a set of regression equations for which the variables are assumed to have a temporal ordering. Path analysis is a very useful method for description of the relationships within a set of variables including complex relationships among variables can be depicted with a single model, that total effects (direct effect + indirect effect) of independent variables on dependent variables can be calculated and compared, and that the significance of complex models that are based on series of regression analyses can be assessed. Other terms used to refer to path analysis include causal modeling, analysis of covariance structures, and latent variable models. (Sharma & Patterson, 1999; Lam & Bojei, 2006).

v. **Mediation Effect Test**

Mediation Effect test using regressions identify and explicate the mechanism that underlies an observed relationship between an independent variable and a dependent variable via the inclusion of a third explanatory variable, known as a mediator variable...
Rather than hypothesizing a direct relationship between the independent variable and the dependent variable, a mediational model hypothesizes that the independent variable has an effect on the mediator variable, which in turn causes an effect on the dependent variable. The mediator variable is used to clarify the relationship between the independent and dependent variables. In the mediation test, either full mediation or partial mediation is to be identified based on the change of direct effect from initial independent variable on dependent variable. When the direct effect is no longer statistically different from zero fixing the mediator variable, the mediation effect is said to be full mediation. However, if the direct effect between the independent variable and the dependent variable is reduced after inclusion of the mediator variable, but the direct effect is still significantly different from zero, it is partial mediation. Else, if the direct effect is the same or no change at all, there is no mediation.

After all statistical analysis are tested, the conclusions of each study objective are drawn based on the analysis result and finding of the study respectively.

3.9 Construct Validity

In any research study, it is highly important to judge the quality of research. The construct validity means establishing the correct operational measures for the studied concepts. The reliability means the likeliness of the operations of a study can be repeated with the same result.

In terms of content validity, the questionnaire had been pre-tested and read by people, other than the actual respondents, prior to its implementation, in order to correct if any dubious question formulations and thus to reduce the risk of misunderstanding and meaning interpretation by the actual respondents. When the questionnaire was designed based on the literature reviews, it was reviewed and revised by the expert marketers of
wooden picture frame industry and experienced senior management board of the case organization. The input of these experts ensured that the set of construct variables was expressed clearly and appropriate to the respondents. Before the actual questionnaire distribution, the final questionnaire was revised in some technical terms commonly used in the industry and advised improvement of sentence structure of measurement item was done accordingly, to fit the scenario of the case organisation and nature of the specific industry.

The construct of study was assessed using the exploratory factor analysis. The items used in measuring constructs were tested using exploratory factor analysis to verify the factor structure and identify items for deletion – that is, items with low factor loading and/or high cross loading. Varimax rotation was employed to derive a simple structure, and factors with eigen-values less than 1 were screened out (Ruben, 2007).

Cronbach’s Alpha, Kaiser-Meyer-Olkin measure, and Barlett’s test of sphericity are used in confirming its reliability, factorability and appropriateness of the data set. *(See TABLE 4.2 for details of the Exploratory Factor analysis)*

### 3.10 Summary of the chapter

This chapter discussed the research methods used in the study. In Chapter 4, the details of research results are explained.
4.1 Introduction

In this chapter, the collected primary data is analysed and presented, and all study objectives are met. First, the summary of the statistics will be presented, followed by analysis of measures and testing of developed propositions. Finally, testing results of the study is concluded. As a whole, the input data of respondents in the study, historical sales data, and customers’ profile categories are used for the output of the study. Statistics software SPSS (Statistical Package for the Social Sciences) for Windows (Release 16.0.1) was used to conduct all the statistical analysis in this chapter.

4.2 Statistics

Table below shows the summary of the respondents’ demographical profiles that had been used in the SPSS analysis. TABLE 4.1 shows the key characteristics of the 36 respondents. Almost one-half (45 percent) of the sample customer had established a long relationship at more than 5 years, 55 percent customers are within the range of 5 years or less. Other demographic and detailed criteria of customers are explained in the table below:

**TABLE 4.1: Demographics of the Respondents**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Category</th>
<th>No.</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year Of Relationship with</td>
<td>Less than 1 year</td>
<td>1</td>
<td>2.8</td>
</tr>
<tr>
<td>XX</td>
<td>1-5 years</td>
<td>19</td>
<td>52.8</td>
</tr>
<tr>
<td></td>
<td>6-10 years</td>
<td>6</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>More than 10 years</td>
<td>10</td>
<td>27.8</td>
</tr>
<tr>
<td>Business Type</td>
<td>Distributor</td>
<td>20</td>
<td>55.6</td>
</tr>
<tr>
<td></td>
<td>Framer</td>
<td>16</td>
<td>44.4</td>
</tr>
</tbody>
</table>
### TABLE 4.1 (continued)

<table>
<thead>
<tr>
<th>No. of Employee</th>
<th>Less than 20</th>
<th>10</th>
<th>27.8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20 – 50</td>
<td>17</td>
<td>47.2</td>
</tr>
<tr>
<td></td>
<td>More than 50</td>
<td>9</td>
<td>25.0</td>
</tr>
<tr>
<td>REGION</td>
<td>North America</td>
<td>24</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td>Western Europe</td>
<td>4</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>Asia</td>
<td>3</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td>Australia &amp; NZ</td>
<td>5</td>
<td>13.9</td>
</tr>
<tr>
<td>Annual Purchase Value with XX</td>
<td>USD 10,000 or less</td>
<td>13</td>
<td>36.1</td>
</tr>
<tr>
<td></td>
<td>USD 10,0001 to USD 50,0000</td>
<td>15</td>
<td>41.7</td>
</tr>
<tr>
<td></td>
<td>USD 50,0001 or more</td>
<td>8</td>
<td>22.2</td>
</tr>
<tr>
<td>Purchase Value Growth</td>
<td>Negative Growth: &lt;-11%</td>
<td>16</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>Maintained Between -10% to +10%</td>
<td>4</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>Positive Growth: +11%</td>
<td>11</td>
<td>30.6</td>
</tr>
<tr>
<td></td>
<td>New Customer of Current Year</td>
<td>2</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>Customer Who Stop Buying</td>
<td>3</td>
<td>8.3</td>
</tr>
<tr>
<td>Customer Annual Purchase Value %, of XX Annual Sales Value</td>
<td>Less than 1%</td>
<td>16</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>1 to 5%</td>
<td>13</td>
<td>36.1</td>
</tr>
<tr>
<td></td>
<td>6 to 10%</td>
<td>2</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>More than 10%</td>
<td>2</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>Customer who Stop Buying</td>
<td>3</td>
<td>8.3</td>
</tr>
</tbody>
</table>

### 4.3 Analyses of Measures: Exploratory Factor analysis (EFA)

Firstly, Exploratory Factor analysis (EFA) with varimax rotation was performed to determine underlying factors of identified variables and their interrelationships through data reduction, to group a smaller set into dimensions of Perceived Quality, Relationship Quality and Business Loyalty constructs. Construct validity-Cronbach’s Alpha, KMO and Bartlett’s Test of the established instrument, as mentioned in Literature Review, was assessed as shown in the table below.
### TABLE 4.2: Exploratory Factor Analysis with varimax rotation.

<table>
<thead>
<tr>
<th>Construct 1: Perceived Quality</th>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional : Service Quality, ( \alpha = 0.811 )</td>
<td>KMO: 0.708 ; Variation Explained: 72.7% ; Bartlett's Test Sig.&lt;0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Func3: Prompt responses</td>
<td>.854</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Func5: Knowledge-keeping you informed</td>
<td>.785</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Func4: Good at solving disputes</td>
<td>.677</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech5: Production Lead Time</td>
<td>.660</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Func2: Genuine care &amp; interest</td>
<td>.605</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Func1: Courtesy &amp; friendliness</td>
<td>.587</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech1: Product Reliability</td>
<td>.533</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical: Product Quality, ( \alpha = 0.886 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech3: Innovation &amp; Aesthetics</td>
<td>.951</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech2: Development of New Moulding</td>
<td>.851</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech4: Customization/Special Requirement</td>
<td>.800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construct 2: Relationship Quality</td>
<td>KMO: 0.829 ; Variation Explained: 82.26% ; Bartlett's Test Sig.&lt;0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment ( \alpha = 0.966 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment6: I feel happy about the</td>
<td>.858</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment4: Our company is fully open and honest in relationship with XX</td>
<td>.852</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment2: I intend to maintain and develop our relationship.</td>
<td>.844</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment1: I have a strong commitment to XX</td>
<td>.833</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction6: Overall Relationship</td>
<td>.831</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment3: Our relationship requires</td>
<td>.804</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment5: XX devotes sufficient time and effort to our relationship</td>
<td>.649</td>
<td>.523</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As shown in the result, all variables achieved Cronbach’s Alpha ranging from 0.811 to 0.966, and therefore all these scale is said to be reliable if its Cronbach’s alpha is 0.70 or higher (Mak and Sockel, 2001). Reliability refers to the degree of stability of the scale. It is demonstrated by checking the Cronbach’s alpha for the items in each question.
and the correlation of the items with the criterion. The criterion variable of each construct is obtained by averaging the items in each question.

The factor structure that emerged was more or less consistent with the initial conceptualisation of the dimensions of model – with the exception that 2 of items of the **Product Quality** items were loaded onto **Service Quality** dimension (see TABLE 4.2). The fact that the factor loadings of the items of trust and commitment were not of the same order of magnitude demonstrates that the concepts of engagement and confidence are connected. These results did not prevent a continuation of the analysis – because the cronbach’s alpha achieved at least 0.8 and above on these concepts confirmed its reliability and stability of the scales.

The result also displays the eigenvalue of the factors after rotation in terms of the percentage of variation explained. Rotation has the effect of optimizing the factor structure and the relative importance of the factors within the construct is equalized. **Relationship Quality** has the highest value of 82.26 per cent variation explained, followed by **Business Loyalty** 75.33 per cent and **Perceived Quality** 72.7 per cent.

As test of factorability appropriateness, there are several important outputs: Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett’s test of sphericity. The KMO statistic varies between 0 and 2. A value of 0 indicates that the sum of partial correlations is large relative to the sum of correlations, indicating diffusion in the pattern of correlations, where factor analysis is likely to be inappropriate. A value close to 1 indicates that patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. If Bartlett’s test of sphericity is significant, and KMO measure is greater than 0.6, then factorability is assumed (Coakes & Steed, 2002). For these data the KMO value is ranging from 0.708 to 0.829, and Bartlett’s test is highly
significant (p < 0.001), therefore it is confident that the factor analysis is appropriate for these data.

These extracted 6 components from the factor analysis result were then used in the following tests of study objectives and propositions.

4.4 Testing of Propositions

In the following sections, various tests were conducted for the study objectives below:

1. To investigate the relationship of Relationship Satisfaction (RS) with customer profiles:
   a. Customer Type – Distributor vs. Retailer (T-test & Chi-Square)
   b. 3 levels of Customer Complaint – Major, Minor, No Complaint (ANOVA)
   c. Geographical Region – North America, Western Europe, Asia, Australia & New Zealand (ANOVA)
   d. Annual Sales Growth in Value – RM (Correlation)
2. To investigate the relationship between Customer Perceived Quality (CPQ) variables and Relationship Satisfaction (RQ).
   a. Correlation (Bivariate)
   b. Multiple Regression
3. To investigate the relationship between Relationship Quality (RQ) variables and Business Loyalty (L).
   a. Correlation (Bivariate)
   b. Multiple Regression
   c. Total Effect Analysis
4. To examine the mediating effect of Relationship Satisfaction (RS) between Customer Perceived Quality (CPQ) variables and Trust (U), Commitment (C) and Loyalty (L).
   a. Mediating Test (4-step regression)
**Study Objective 1a:** To investigate the relationship of Relationship Satisfaction (RS) with Customer Type – Distributor vs. Retailer using T-test.

**Research Result:**

T-test is used to determine whether there is a significant difference of the mean (Relationship Satisfaction) in the 2 customer groups (Distributor & Retailer).

| TABLE 4.3: T-test - Relationship Satisfaction & Customer Type (Distributor & Retailer) |
|---------------------------------------------|------------------|-----------------|-----------------|
| Customer Type                              | Distributor      | Retailer        | t-test          |
| Mean                                        | 3.9485           | 4.0928          | -0.542          |
| Std. Deviation                              | 0.82656          | 0.75149         |                 |

First, Levene’s test was used to determine whether or not to assume equal variances of Entrepreneurial Intention. The Levene’s test result is not significant (p > 0.05) at 0.803, therefore assumed that variances of Entrepreneurial Intention are EQUAL. Then, by using value in row: ‘Equal variances assumed’, again, t-test result is Not Significant at 0.592 (p > 0.05). So, it can be concluded that there is no significant difference between means of customer type of Distributor & Framer in Relationship Satisfaction(S). The main difference between distributor and retailer customer group of samples are in their sales volume and purchases transaction type. Distributors’ purchase transaction are in large volume in range of RM 300,000 to RM 600,000 per shipment order with 5%-10% lower in average price, compared with retailer which in relative business size that normally place order in smaller volume in the range of RM 10,000 to RM 200,000 with non-discounted price.

From this T-test result, however, it shows no significant difference in relationship satisfaction of these two groups. So, there are more tests to be done on other factors or customer criteria to determine the factors that influence customer satisfaction in the business-to-business relationship, if any.
Study Objective 1b: To investigate the relationship of Relationship Satisfaction (RS) among 3 level groups of Customer Complaint – Major, Minor, No Complaint (ANOVA)

Research Result:
Dependent Variable : Relationship Satisfaction
Factor : Customer Complaint (Major, Minor, No Complaint)

Test of Homogeneity of Variances: Levene Statistic=.543 (Sig>0.05)

### TABLE 4.5: ANOVA - Relationship Satisfaction & Customer Complaint (Major, Minor, No Complaint)

<table>
<thead>
<tr>
<th>Complaint Type</th>
<th>No Complaint</th>
<th>Minor Complaint</th>
<th>Major Complaint</th>
<th>t-test</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship Satisfaction</td>
<td>n=17</td>
<td>n=5</td>
<td>n=14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>2.6471</td>
<td>2.4000</td>
<td>2.6429</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.70189</td>
<td>.89443</td>
<td>.63332</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ANOVA test comparison of means in Relationship Satisfaction among customer groups in complaints categories with ‘No Complaints’, ‘Minor Complaints’, and ‘Major Complaints’ in last 12 months (Jun 2007-Jun2008). ‘No complaint’ group categorize customers that did not report any complaints, ‘Minor Complaints’ are customers that reported complaint to the case firm without any product returns or claims. ‘Major Complaints’ are customers that report serious product or service issue that had required action to be taken by case firm, including product returns, or monetary claims (e.g. credit note).

TABLE 4.5 shows the result of F statistic is NOT significant at 0.77 (p>0.05) in
regard to ‘Customer Complaint’, therefore there are NO differences across groups in ‘Customer Complaint’. So, no test was conducted to identify any pair of groups is significantly different.

There is no significant difference in the comparison of degree of customer complaint in the study. Some studies found that customers are not always happy people that are very much related to complaints when they are not satisfied with a service or product offered.

“…people generally seek out a service transaction when they are having problems. They tend to be dissatisfied about something, which may range from a trivial merchandise complaint to a life-or-death health-care concern. They may be upset, demanding, or even rude. And in any event, they are not likely to be happy when they first approach you…” (Richard, 2006: p.26)

However, the result shows that the factor may not always be significant by itself alone, especially when satisfaction evaluation was rather based on the overall satisfaction, rather than quality perception on product/service, personal feeling and relationship with the supplier company. Based on the customer complaint details from the case firm, three conclusions were derived to be the possible reasons that lead to this result:

1. Complaint of product are relatively low percentage of total product quantity in overall order shipment delivered

2. Customers were satisfied with good complaint handling method with corrective actions being carried out or compensation by the case firm

3. Complaints on early batches of newly developed products and improvement are made to batches these complaint products after complaint were being made.
Study Objective 1c: To investigate the relationship of Relationship Satisfaction (RS) among Geographical Region groups – North America, Western Europe, Asia, Australia & New Zealand (ANOVA)

Research Result:

Dependent Variable : Relationship Satisfaction
Factor : Geographical Region (North America, Western Europe, Asia, Australia & New Zealand)

TABLE 4.6: Relationship Satisfaction & Geographical Regions

<table>
<thead>
<tr>
<th>Geographical Region</th>
<th>North America</th>
<th>Europe</th>
<th>Asia</th>
<th>Australia &amp; New Zealand</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>24</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>36</td>
</tr>
<tr>
<td>Mean</td>
<td>2.75</td>
<td>2.25</td>
<td>3</td>
<td>2</td>
<td>2.611</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>0.53161</td>
<td>0.95743</td>
<td>0</td>
<td>1</td>
<td>0.68776</td>
</tr>
</tbody>
</table>

Test of Homogeneity of Variances: Levene Statistic=4.351 (Sig<0.05)

TABLE 4.7: ANOVA - Relationship Satisfaction & Geographical Regions

<table>
<thead>
<tr>
<th>Relationship Satisfaction</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3.306</td>
<td>3</td>
<td>1.102</td>
<td>2.661</td>
<td>.065</td>
</tr>
<tr>
<td>Within Groups</td>
<td>13.250</td>
<td>32</td>
<td>.414</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16.556</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


TABLE 4.7 shows the result of F statistic is not significant at 0.065 (p>0.05) in regard to ‘Customer’s Geographical Region’, therefore there are NO differences across groups in ‘Customer’s Geographical Region’. So, no test was conducted to identify any pair of groups is significantly different.

There is no significant difference in the comparison of ‘Customer’s Geographical Region’ in the study. Further tests are to be done on other factors or customer criteria to
determine the factors that influence customer satisfaction in the business-to-business relationship, if any.

**Study Objective 1d:** To examine the relationship between ‘Relationship Satisfaction’ with ‘1-year Growth Rate (%)’ in Sales Revenue (RM) using Bivariate Correlation Analysis

**Research Result:**

According to Smith and Reece (1999), the business performance measure of Sales Growth Rate is appropriate in light of the presence of competitors and the frequency of repeat purchases. In the test, customer satisfaction is measured if there is any relationship with the sales growth rate.

1. **Bivariate Correlation**

<table>
<thead>
<tr>
<th>TABLE 4.8: Pearson Correlation between Relationship Satisfaction and Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship Satisfaction &amp; 1-year Sales Growth Rate %</td>
</tr>
<tr>
<td>Relationship Satisfaction</td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
</tbody>
</table>

   The result shows that 1-year sales growth (12-month-sales for Jun 2007 to Jun 2008) does not have any significant relationship with customer satisfaction measure at 0.35 (p>0.05). Though Customer satisfaction is recognized to be a significant determinant of a connection between customer satisfaction and profitability, this result with correlation of ‘1-year sales growth’ with ‘satisfaction’ is contrast with argument of studies that “the only real measure of customer satisfaction was sales” (Piercy, 1995: p10). Inversely, in this case, as the result is merely measured with sales growth factor alone, it
aligned with some scepticism about the conceptualization of customer satisfaction and profitability. (Bruhn, 2003)

**Study Objective 2:** To examine the relationship between Customer Perceived Quality (CPQ) and Relationship Satisfaction (S).

**Research Result:**

Based on this objective, two tests were carried out to analyse relationship between Customer Perceived Quality (CPQ) and Relationship Satisfaction (S), and the influence of 2 dimensions of (CPQ) when test as independent variables on (S) as dependent variables.

i. **Bivariate Correlation**

**TABLE 4.9: Pearson Correlation between Relationship Satisfaction and Customer Perceived Quality (Product Quality and Service Quality)**

<table>
<thead>
<tr>
<th></th>
<th>Relationship Satisfaction &amp; Product Quality</th>
<th>Relationship Satisfaction &amp; Service Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Relationship Satisfaction</td>
<td>Product Quality</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.608</td>
<td>0.603</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**: Correlation is significant at the 0.01 level (2-tailed).

The result is significant with correlation coefficients of 0.608 & 0.603. Relationship Satisfaction is positively related with Product Quality dimension \( (r = 0.608, p < 0.001) \) & Customer Service Quality dimension \( (r = 0.603, p < 0.001) \).

ii. **Multiple Regression (Backward method)**

**TABLE 4.10: Multiple Regressions of Perceived Quality Dimensions on the dependent variable of Relationship Satisfaction**

<table>
<thead>
<tr>
<th></th>
<th>Standardized Coefficients, β</th>
<th>t statistics</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Quality</td>
<td>0.416</td>
<td>2.977</td>
<td>0.005</td>
</tr>
<tr>
<td>Customer Service Quality</td>
<td>0.406</td>
<td>2.905</td>
<td>0.007</td>
</tr>
</tbody>
</table>

\[ R^2 = 0.498 \]
\[ \text{Adjusted } R^2 = 0.468 \]
\[ F \text{ Statistics} = 16.371 \]

Predictors: (Constant), Product Quality, Customer Service Quality
The ANOVA table presents a test of significance for the overall regression model. Using a significance level of 0.05, and comparing the model significance result of 0.000 (p < 0.001) suggests that the estimated model does exist and is statistically significant. The Coefficients table provides the actual values for establishing the equation describing the model.

The t-statistics associated with β value is significant (p < 0.05), that these predictors are making significant contribution to the model. For this model, [Product Quality] (t(36) = 2.977, p < 0.01), and [Customer Service Quality] (t(36) = 2.905, p < 0.01) are significant predictors of Relationship Satisfaction(S). From the magnitude of the t-statistics, the [Product Quality] had slightly more impact than [Customer Service Quality].

The Beta statistics interpreted as a ranking measure of these 2 independent variables exist, whereby the higher magnitude of the Beta values the more influence the variable has on the overall model. These Beta statistics (standardized coefficient, β) measured in standard deviation units indicate that [Product Quality] with a Beta statistics of 0.416, has the more relatively influence than [Customer Service Quality] in model predicting Relationship Satisfaction(S). In the result model, 46.8% of variation is able to be explained by both predictors together.

The Adjusted R² value was used because it attempts to yield a more honest value to estimate the R-squared for the given population. The value of R-square was 0.498, while the value of Adjusted R-square was 0.468. Adjusted R² is computed using the formula 1 - ((1-R²)(N-1 / N- k- 1)). In this formula, when the number of observations is small and the number of predictors is large, there will be a much greater difference.
between R-square and adjusted R-square (because the ratio of \( \frac{N-1}{N - k - 1} \) will be much less than 1. By contrast, when the number of observations is very large compared to the number of predictors, the value of R-square and adjusted R-square will be much closer because the ratio of \( \frac{N-1}{N-k-1} \) will approach 1.

Interestingly, technical quality was found to have slightly greater influences than functional quality on customer satisfaction. Past research shows subtle differences in findings regarding the importance of technical and functional quality across service types. Nevertheless, it is accepted that technical quality significantly influences customers’ perception of service quality (Grönroos, 2001). Moreover, the outcome of the services has been rated as the most important factor affecting service satisfaction and value (Lam and Bojei, 2006)

4.5 Result discussion

The existence of significant relationship from the finding of Pearson Correlation and Multiple Regression between Perceived Quality in both Product and Services dimensions with Relationship Satisfaction is supported by concept of relationship suggested by Civilai T., Grönroos C. and C. Homburg.

Civilai T.(2007) suggests that relationship satisfaction is derived with the supplier’s products (products quality) and with the supplier’s sales representatives (customer services quality). According to Grönroos(2001), what transformed to something that provides satisfaction are in the perceived service quality model concept. That customer perceives what he or she receives as the outcome of the process in which the resources are used, i.e. the technical or outcome quality of the process (product quality). But customer also, often more importantly, perceives how the process itself
functions, i.e. the functional or process quality dimension (customer service quality). Thus, the technical quality and functional quality dimensions of perceived service quality emerge (Grönroos, 2001).

Lastly, it fulfilled the theoretical statement suggested that industrial customer satisfaction as a relationship-specific construct describing how well a supplier meets a customer’s expectation in both product and service. (Homburg & Rudolph, 2001)

**Study Objective 3:**

To examine the relationship between Business Loyalty (L) with Relationship Quality (RQ) dimensions: Relationship Satisfaction(RS), Trust(U), Commitment(C).

**Research Result:**

i. **Correlation (Bivariate)**

TABLE 4.11: Pearson Correlation between Relationship Quality Dimensions and Business Loyalty


<table>
<thead>
<tr>
<th>Between Business Loyalty &amp; Relationship Quality Dimensions</th>
<th>Business Loyalty</th>
<th>Relationship Satisfaction</th>
<th>Business Loyalty</th>
<th>Relationship Trust</th>
<th>Business Loyalty</th>
<th>Relationship Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>0.869**</td>
<td>0.851**</td>
<td>0.843**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>:</strong> Correlation is significant at the 0.01 level (2-tailed).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result shows significant correlation coefficients above 0.80 between Business Loyalty (L) with Relationship Quality (RQ) dimensions: Relationship Satisfaction (RS), Trust (U), and Commitment(C). Relationship Satisfaction is positively related to Relationship Satisfaction ($r = 0.869$, $p < 0.001$), Relationship Trust ($r = 0.851$, $p < 0.001$) and Relationship Commitment ($r = 0.843$, $p < 0.001$).
ii. Multiple Regression (Backward method)

TABLE 4.12: Multiple Regressions of Relationship Quality Dimensions on the dependent variable of Business Loyalty

<table>
<thead>
<tr>
<th></th>
<th>Standardized Coefficients, ( \beta )</th>
<th>t statistics</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship Satisfaction(RS)</td>
<td>0.458</td>
<td>5.302</td>
<td>0.000</td>
</tr>
<tr>
<td>Trust(U)</td>
<td>0.335</td>
<td>3.514</td>
<td>0.001</td>
</tr>
<tr>
<td>Commitment(C)</td>
<td>0.252</td>
<td>2.443</td>
<td>0.020</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.895</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td>0.886</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F Statistics</td>
<td>91.227</td>
<td></td>
<td>0.000</td>
</tr>
</tbody>
</table>

Predictors: (Constant), Relationship Satisfaction(RS), Trust(U), Commitment(C)
Dependent Variable: Business Loyalty

The ANOVA table presents a test of significance for the overall regression model. Using a significance level of .05 and comparing the result significance of 0.000 suggests that the estimated model does exist and is statistically significant.

The t-statistics associated with \( \beta \) value is significant (p<0.05), that these predictors are making significant contribution to the model. For this model, [Satisfaction] \((t(36)=5.302, p<0.01)\), [Trust] \((t (36)=3.514, p< 0.01)\), and [Commitment] \((t(36)=2.443, p< 0.05)\) are significant predictors of Business Loyalty(L). From the magnitude of the t-statistics, the [Satisfaction] had more statistical impact than other 2 variables of [Commitment] and [Trust].

As predictor comparison in unified unit of measure using standard deviation of predictors, the Beta statistics interpreted as a ranking measure of these 3 independent variables exist, whereby the higher magnitude of the Beta values the more influence the variable has on the overall model. These Beta statistics (standardized coefficient, \( \beta \)) measured indicate that [Satisfaction] with a Beta statistics of 0.458, has the most influence in model predicting Relationship Satisfaction(S), followed by [Trust] with a Beta statistics of 0.335, and lastly [Trust] with a Beta statistics of 0.2252 [Commitment].
which has the relatively lowest influence. In the result model, 88.6% of variation is able to be explained by the set of these three predictors together.

iii. Total Effect Analysis

Total Effect Analysis was conducted to measure the overall total effect considering both direct and indirect impact of Relationship Quality dimensions on Business Loyalty in the proposed framework.

![Figure 4.1: Total Effect Analysis of Relationship Quality on Business Loyalty](image)

TABLE 4.13 summarise the findings of Multiple Regression Analysis shows that Trust, Commitment & Satisfaction have significant direct influences on Business Loyalty. Causal Path analysis was performed o investigate the direct and indirect impacts of Trust, Commitment and Satisfaction on the ultimate dependent variable, Business Loyalty.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable (Predictor)</th>
<th>R² (Variation Explained)</th>
<th>Adjusted R²</th>
<th>Beta, β (Std. Coefficient)</th>
<th>t Statistics</th>
<th>Sig. F Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loyalty</td>
<td>Commitment</td>
<td>0.895</td>
<td>0.886</td>
<td>0.252</td>
<td>2.443</td>
<td>.020</td>
</tr>
<tr>
<td></td>
<td>Trust</td>
<td></td>
<td></td>
<td>0.335</td>
<td>3.514</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td></td>
<td></td>
<td>0.458</td>
<td>5.302</td>
<td>.000</td>
</tr>
<tr>
<td>Commitment</td>
<td>Trust</td>
<td>0.692</td>
<td>0.674</td>
<td>0.538</td>
<td>4.103</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td></td>
<td></td>
<td>0.368</td>
<td>2.808</td>
<td>.008</td>
</tr>
<tr>
<td>Trust</td>
<td>Satisfaction</td>
<td>0.457</td>
<td>0.441</td>
<td>0.676</td>
<td>5.351</td>
<td>.000</td>
</tr>
</tbody>
</table>

The path coefficients were taken from the regression analysis. The direct, indirect and total effects of each independent variable on Business Loyalty reported in TABLE 4.14. The indirect effect was derived by multiplying the sequential beta coefficient along
any given path from each independent variable to ultimate dependent variable, following the method devised by Asher (1976).

The study discovers that all three predictors have positive direct effects on loyalty. The indirect effects of Relationship Satisfaction were mediated via Trust and Commitment variable. Also, the indirect effects of Trust were mediated via Commitment variable.

The causal path analysis identifies Relationship Satisfaction to having the greatest direct effect on Business Loyalty, followed by Trust and Commitment. The Relationship Satisfaction was found also having the largest overall effect (sum of direct and indirect) on Business Loyalty, followed by Trust and Commitment.

### TABLE 4.14: Effects of Independent Variables on Business Loyalty

<table>
<thead>
<tr>
<th>Variable</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship Satisfaction</td>
<td>0.458</td>
<td>RS-U-L : 0.676*0.335 = 0.227</td>
<td>0.869</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RS-U-C-L : 0.676<em>0.538</em>0.252= 0.092</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RS-C-L : 0.368*0.252 = 0.093</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Total = 0.411)</td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>0.335</td>
<td>U-C-L: 0.538*0.252= 0.136</td>
<td>0.471</td>
</tr>
<tr>
<td>Commitment</td>
<td>0.252</td>
<td>-</td>
<td>0.252</td>
</tr>
</tbody>
</table>

**Result discussion**

Based on above analysis of Correlation, Multiple-regressions and causal effect path on the same set of independent and dependent variables, all results show a positive relationship between Business Loyalty(L) with Relationship Quality’s(RQ) dimensions: Relationship Satisfaction(RS), Trust(U), Commitment(C). Therefore, proposition P2 was supported. The degree of prediction power of these independent variables on Business Loyalty are summarised below:
### TABLE 4.15: Prediction power of independent variables on Business Loyalty

<table>
<thead>
<tr>
<th>Relationship with Business Loyalty(DV)</th>
<th>Relationship Satisfaction</th>
<th>Relationship Trust</th>
<th>Relationship Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>0.869** (p&lt;0.001)</td>
<td>0.851** (p&lt;0.001)</td>
<td>0.843** (p&lt;0.001)</td>
</tr>
<tr>
<td>Standardized Coefficients, $\beta$</td>
<td>0.458** (p&lt;0.001)</td>
<td>0.335* (p&lt;0.05)</td>
<td>0.252 (p&lt;0.05)</td>
</tr>
<tr>
<td>Total Effect (Direct + Indirect)</td>
<td>0.869</td>
<td>0.471</td>
<td>0.252</td>
</tr>
</tbody>
</table>

The findings support the idea that Relationship Satisfaction, Trust and Commitment have significant influence on ultimate dependent variable of Loyalty, as depicted in the Literature Review. The Pearson Correlation indicates the simple direct one-to-one variable paired-relationships which are all above at 0.8 high values. Next, multiple regression result demonstrates relatively comparable impact of relationship quality on business loyalty, besides customer satisfaction as the greatest influencer, trust and commitment play important enhancer role with significant influence as well. Lastly, causal path analysis was carried out on the structured framework model of variables, including indirect effect, for an overall demonstration of total effect on Business Loyalty.

**Study Objective 4:**

To examine the mediating role of Relationship Satisfaction(RS) between Customer Perceived Quality(CPQ) and Trust(U), and Commitment(C) and Loyalty(L).

**Mediation Effect Test (4-step regression)**

To evaluate the mediating role of relationship satisfaction(RS) in dimension variables of Trust, Commitment and Loyalty, all possible mediating tests were conducted, using principle of four-step approach by Baron and Kenny (1986). Multiple regression analyses have been carried out using the average of the indicators for the multiple items latent variables of the structural model (Product-Quality (PQ), Customer Service Quality (CS), Relationship Satisfaction(S), Trust (U), Commitment (C) and Loyalty (L)). To test mediation, one should estimate the three following regression equations:
Step 1: Regressing the mediator on the independent variable. (IV -> MV)

Step 2: Regressing the dependent variable on the independent variable. (IV -> DV)

Step 3: Regressing the dependent variable on mediator. (MV -> DV)

Step 4: Regressing the dependent variable on both the independent variable and the mediator. (IV & MV -> DV)

Figure 4.2: Mediation Effect Test
**Research Result and Discussion:**

**TABLE 4.16: Test of the mediating effect of relationship satisfaction in the relationship between Customer Perceived Quality (CPQ) and Trust (U), Commitment (C) and Loyalty (L)**

| CPQ | Mediator | Step 1 (a) IV predicting IV MV | Step 2 (b) IV predicting MV DV | Step 3 (c) MV predicting DV | Step 4 (b+c) IV & MV predicting DV | Effect of Mediation | IV MV DV | β₁, Significant? | β₂, Significant? | β₃, Significant? | β_IV, Significant? | β_MV, Significant? | β_IV < β₂? |
|-----|----------|---------------------------------|--------------------------------|-----------------------------|-------------------------------|-----------------------------|---------------------|-------------|----------------|----------------|----------------|----------------|----------------|----------------|
| PQ  | RS       | U .608 (t=4.465) .550 (t=3.841) | .676 (t=5.351)               |                             |                               | Yes                          | Complete mediation |
| CS  | RS       | U .603 (t=4.404) .811 (t=8.098) | .676 (t=5.351)               |                             |                               | Yes                          | Partial mediation |
| PQ  | RS       | C .608 (t=4.465) .510 (t=3.459) | .732 (t=6.258)               |                             |                               | Yes                          | Complete mediation |
| CS  | RS       | C .603 (t=4.404) .784 (t=7.360) | .732 (t=6.258)               |                             |                               | Yes                          | Partial mediation |
| PQ  | RS       | L .608 (t=4.465) .670 (t=5.266) | .869 (t=10.249)              |                             |                               | Yes                          | Partial mediation |
| CS  | RS       | L .603 (t=4.404) .742 (t=6.458) | .869 (t=10.249)              |                             |                               | Yes                          | Partial mediation |


To establish mediation, the following conditions must hold:

i. The IV must significantly affect the MV
ii. The IV must significantly affect the DV
iii. The MV must significantly affect the DV. If by adding MV to the prediction of DV from IV in a regression model, the effect(β) of IV falls close to zero (p > 0.05) then **full mediation** is determined. If the effect of introducing MV is to reduce effect(β_{IV}) by a non-trivial amount but not to zero(p < 0.05), you have **partial mediation**. If β is not reduced there is no mediation.
iv. The effect of the IV on the DV must be less in the ‘Step 4’(β_{IV}) than in the ‘Step 2’(β₂). (Baron & Kenny, 1986)

Notes: IV: Independent Variable, DV: Dependent Variable, M=Mediating Variable

For the test of mediating role of Relationship Satisfaction, result indicates a **full mediation** of ‘Satisfaction’ between the ‘Product Quality’ dimension of Customer...
Perceived Quality with ‘Trust’ and also with ‘Commitment’. Initially, ‘Product Quality’ has a positive direct impact on ‘Trust’ and ‘Commitment’ (see TABLE 4.16). However, when satisfaction is introduced, it absorbs the impact of ‘Product Quality’ and reducing its beta($\beta_2$) to non-significant levels at (p>0.05) ($\beta_{IV(PQ-U)} = 0.221$, $t = 1.406$).

All other paths analysed with mediating role of Relationship Satisfaction(RS) between Perceived Quality(PQ: ‘Product Quality’ & CS: ‘Customer Service’) and Trust(U), Commitment(C), and Loyalty(L) were verified being significant ($\beta_M$) in step 4 (see TABLE 4.16).

Satisfaction was found to mediate partially the relationships in between four paths of relationships:

i. Between ‘Product Quality’ with ‘Loyalty’ ($\beta_{IV} < \beta_2$, and $\beta_{MV}$ is significant)

ii. Between ‘Customer Service’ with ‘Trust’ ($\beta_{IV} < \beta_2$, and $\beta_{MV}$ is significant)

iii. Between ‘Customer Service’ with ‘Commitment’ ($\beta_{IV} < \beta_2$, and $\beta_{MV}$ is significant)

iv. Between ‘Customer Service’ with ‘Loyalty’ ($\beta_{IV} < \beta_2$, and $\beta_{MV}$ is significant)

The relationship between constructs above were all significant(path a, path b) and became less significant(path a+c) with the introduction of satisfaction(see Figure 4.2). Thus proposition P6, P7 and P8 are supported. Satisfaction mediated the relationship of loyalty between perceived quality with Trust, Commitment and Business Loyalty(Ruben, 2004).

4.6 Summary of Study Result

As proposed propositions, the Product-Quality (PQ) and Customer-Service-Quality (CS) dimensions had a significant effect on relationship satisfaction. P1 was supported. Product-Quality (PQ) had a slightly greater but almost similar scale of effect on relationship satisfaction than Customer-Service-Quality (CS). P1$_a$ and P1$_b$ were thus supported.
Table 4.17: Testing of the Propositions (Part I)

<table>
<thead>
<tr>
<th>Propositions</th>
<th>Factors</th>
<th>Pearson Correlation, r</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P_{1a}</td>
<td>Product Quality(PQ) and Relationship Satisfaction(RS).</td>
<td>0.608</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>P_{1b}</td>
<td>Customer Service Quality(CS) and Relationship Satisfaction(RS).</td>
<td>0.603</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>P_{2a}</td>
<td>Relationship Satisfaction(RS) and Business Loyalty(L)</td>
<td>0.869</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>P_{2b}</td>
<td>Relationship Trust(U) and Business Loyalty(L)</td>
<td>0.851</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>P_{2c}</td>
<td>Relationship Commitment© and Business Loyalty(L)</td>
<td>0.843</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>P_{3}</td>
<td>Relationship Satisfaction(RS) and Trust(U)</td>
<td>0.676</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>P_{4}</td>
<td>Relationship Satisfaction(RS) and Commitment©</td>
<td>0.732</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>P_{5}</td>
<td>Trust(U) and Commitment©</td>
<td>0.787</td>
<td>p&lt;0.001</td>
</tr>
</tbody>
</table>

Table 4.18: Testing of the Propositions (Part II)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Does IV &amp; M predicting DV</th>
<th>Is β_{IV} &lt; β_{MV} ?</th>
<th>Mediation Exist?</th>
</tr>
</thead>
<tbody>
<tr>
<td>P_{6a}: Mediator: Relationship Satisfaction(RS), IV: Product Quality(PQ), DV: Trust(U)</td>
<td>β_{IV} =0.221 (No) β_{MV} =0.542 (Yes)</td>
<td>Yes</td>
<td>Complete mediation</td>
</tr>
<tr>
<td>P_{6b}: Mediator: Relationship Satisfaction(RS), IV: Customer Service Quality(CS), DV: Trust(U)</td>
<td>β_{IV} =0.641 (Yes) β_{MV} =0.290 (Yes)</td>
<td>Yes</td>
<td>Partial mediation</td>
</tr>
<tr>
<td>P_{7a}: Mediator: Relationship Satisfaction(RS), IV: Product Quality(PQ), DV: Commitment©</td>
<td>β_{IV} =0.104 (No) β_{MV} =0.669 (Yes)</td>
<td>Yes</td>
<td>Complete mediation</td>
</tr>
<tr>
<td>P_{7b}: Mediator: Relationship Satisfaction(RS), IV: Customer Service Quality(CS), DV: Commitment©</td>
<td>β_{IV} =0.518 (Yes) β_{MV} =0.419 (Yes)</td>
<td>Yes</td>
<td>Partial mediation</td>
</tr>
<tr>
<td>P_{8a}: Mediator: Relationship Satisfaction(RS), IV: Product Quality(PQ), DV: Business Loyalty(L)</td>
<td>β_{IV} =0.225 (Yes) β_{MV} =0.732 (Yes)</td>
<td>Yes</td>
<td>Partial mediation</td>
</tr>
<tr>
<td>P_{8b}: Mediator: Relationship Satisfaction(RS), IV: Customer Service Quality(CS), DV: Business Loyalty(L)</td>
<td>β_{IV} =0.343 (Yes) β_{MV} =0.662 (Yes)</td>
<td>Yes</td>
<td>Partial mediation</td>
</tr>
</tbody>
</table>
Relationship Satisfaction, Trust and Commitment were all found to have significant effect on Business Loyalty – thus confirming P2a, P2b, and P2c. Focusing on the mediating effect of Relationship Satisfaction (RS) in the relationship, it was apparent that the studied variables are mediated through Relationship Satisfaction. To demonstrate that Relationship Satisfaction completely mediates the effect of Trust, Commitment, and Loyalty, that significant bivariate relationship with Perceived Quality was demonstrated, and that this effect was non-significant when these constructs were linked to Perceived Quality through Relationship Satisfaction (Baron and Kenny, 1986). The results confirmed this mediating role of Relationship Satisfaction, hence P6, P7, and P8.

Table 4.19: The Findings of Study objectives

<table>
<thead>
<tr>
<th>Study objectives</th>
<th>Propositions</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 To investigate the relationship of Relationship Satisfaction (RS) with customer profiles:</td>
<td>There is a relationship between Relationship Satisfaction with: i. Customer business type ii. Level of Customer Complaint iii. Geographical Region iv. Annual Purchase Value Growth</td>
<td>There is none of the customer criterions has any relationship with Relationship Satisfaction (RS), therefore it is dependable to suggesting that non-response bias may not be a problem in this study.</td>
</tr>
<tr>
<td>2 To investigate the relationship between Customer Perceived Quality (CPQ) variables and Relationship Satisfaction (RS).</td>
<td>P₁: There is a relationship between Customer Perceived Quality (CPQ) variables and Relationship Satisfaction (RS). P₁₁: Product Quality (PQ) has a positive influence on Relationship Satisfaction (RS). P₁₂: Customer Service Quality (CS) has a positive influence on Relationship Satisfaction (RS).</td>
<td>The proposition is supported and there is a significant positive correlation.</td>
</tr>
</tbody>
</table>
| 3 | To investigate the relationship between Relationship Quality (RQ) variables and Business Loyalty (L). | P2: There is a relationship between Relationship Quality (RQ) variables and Business Loyalty (L)
P2a: Relationship Satisfaction (RS) has a positive influence on Business Loyalty (L)
P2b: Relationship Trust (U) has a positive influence on Business Loyalty (L)
P2c: Relationship Commitment (C) has a positive influence on Business Loyalty (L) | The proposition is supported and there is a significant positive correlation. |
|---|---|---|---|
| 4 | To examine the mediating effect of Relationship Satisfaction (RS) between Customer Perceived Quality (CPQ) variables and Trust (U), Commitment (C) and Loyalty (L). | P3: Relationship Satisfaction (RS) is antecedent to Trust (U)
P4: Relationship Satisfaction (RS) is antecedent to Commitment (C)
P5: Trust (U) is antecedent to Commitment (C) | The proposition is supported and there is a significant positive correlation. |
|   |   | P6: There is a mediating effect of Relationship Satisfaction (RS) between Customer Perceived Quality (CPQ) and Trust (U) | The proposition is supported and there is a significant mediation effect. |
|   |   | P7: There is a mediating effect of Relationship Satisfaction (RS) between Customer Perceived Quality (CPQ) and Commitment (C) | The proposition is supported and there is a significant mediation effect. |
4.7 Summary of the chapter

This chapter analysed the research results done in the study. In Chapter 5, conclusion, theoretical and managerial implications, research limitation and future research suggestions are given.
CHAPTER 5: CONCLUSIONS

In this final chapter, conclusion of the issues and study objectives of the study will be discussed. The theoretical implications, managerial implication, limitations of study and idea for further study are suggested.

5.1 Conclusion

As summary, the study had examined the inter-relationship among variables and to the ultimate dependent variable of Business Loyalty. The study objectives, propositions and the findings are tabulated as below:

Table 5.0: Conclusion: Overall Findings of the study

<table>
<thead>
<tr>
<th>No</th>
<th>Study Objectives</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To investigate the relationship of Relationship Satisfaction(RS) with customer profiles:</td>
<td>There is <strong>none of the customer criterions has any relationship</strong> with Relationship Satisfaction(RS), therefore it is dependable to suggesting that non-response bias may not be a problem in this study.</td>
</tr>
<tr>
<td>2</td>
<td>To investigate the relationship between Customer Perceived Quality(CPQ) and Relationship Satisfaction(RQ).</td>
<td>There is a <strong>significant positive relationship</strong> between Customer Perceived Quality(CPQ) variables and Relationship Satisfaction(RS).</td>
</tr>
<tr>
<td>3</td>
<td>To investigate the relationship between Relationship Quality(RQ) and Business Loyalty(L).</td>
<td>There is a <strong>significant positive correlation</strong> relationship between Relationship Quality(RQ) variables and Business Loyalty(L).</td>
</tr>
</tbody>
</table>
Table 5.0 (continued)

|   | To examine the mediating role of Relationship Satisfaction (RS) between Customer Perceived Quality (CPQ) and Trust (U), and Commitment (C) and Loyalty (L). | Relationship Satisfaction (RS) has mediating effect on $\beta_{\text{IV}}$ - Customer Perceived Quality (CPQ) significantly for relationships between Customer Perceived Quality (CPQ) and Trust (U), and Commitment (C) and Loyalty (L). |

Overall, the findings of this study suggest that customer satisfaction towards service provider can be improved by focusing on their perceived quality on both service and product. Consequently, customer loyalty and relationship quality can be enhanced by increasing customer satisfaction. Furthermore, this study reinforces the belief that relationship satisfaction has an important role to play in the wooden product manufacturing environment. It puts forward one possible causal explanation of the elusive link between satisfaction and relationship.

5.2 Theoretical Implications

Although some of the ideas expressed in this conceptual framework may be familiar to that of other researchers, the value of the framework is in integrating the various dimensions to provide a more comprehensive picture of business loyalty, integrating two constructs of perceived quality and relationship quality, through satisfaction as mediator. This study contributes to the relationship-marketing literature in three significant respects.

First, the study result shows that it successfully integrates the Grönroos’ concepts of service (functional)/ product (technical) performance quality dimensions of customer perceived quality, relationship satisfaction, trust, and commitment in a business-loyalty model. As a whole, the results confirms that perceptions of service/product performance
quality can be viewed as antecedents to relationship satisfaction which, in turn, affects trust, commitment, and business loyalty as mediation effect (Grönroos, 1997, 1998, 2001; Ruben, 2007; S.Y. Lam and Jamil Bojei, 2006; E.Gummesson, 1998). This study had examined the role of service/product quality perceptions in established B2B relationships of the case study. The result demonstrates the equal importance of investment in both product and customer service to achieve greater customer satisfactions.

Secondly, results concluded that determinants of relationship quality that are relationship satisfaction, trust and commitment have significant positive effects on the ultimate outcome variable, Business Loyalty. There were consistent results to indicate that relationship satisfaction acts as the greatest outcome influencer on relationship quality and loyalty. Specifically, determinants of relationship quality have been widely accepted in the literature as a relationship outcome and an overall assessment of the strength of the relationship. The findings of the present study confirm the significant effect of all the components of relationship quality – relationship satisfaction, trust, and commitment – on business loyalty. (Ruben, 2007; Dwayne Ball, 2004; Roger, 1996; Morgan and Hunt, 1994; Ball, 2004)

Thirdly, this study provides empirical evidence of the role of relationship satisfaction as a mediating variable between the constructs of service/product quality and trust, commitment and business loyalty. Since there are rare researches on the similar subjects(Ruben, 2007), this study contributes to this area of academic studies.

Overall, the study supports the proposed integrated conceptual framework of three constructs, namely ‘Customer perceived quality-Relationship quality-Business loyalty’ in the case study of the Malaysian wooden product manufacturing organization. Therefore, it gives a useful foundation on which further theoretical and empirical research in the field of B2B business relationship and loyalty can be built.
5.3 Managerial implications

The present model can be considered as an empirical approach capturing the major part of customer responses of global-based business transactions demonstrating the relationships between the related constructs and their direct or indirect influence on loyalty.

Thus level of relational effects is evidently identified from customers’ perception of quality that affect relationship satisfaction on the one hand; then from relationship satisfaction, as mediator subsequently influencing through trust and commitment to loyalty on the other hand.

This approach confirms the classical functional/technical model of service quality (Grönroos, 1982, 1984, 1988) existing in the literature. The two dimensions of perceived quality constitute a valuable starting point in capturing the elements in the quality characteristics in manufacturing-based B2B environment.

From a managerial standpoint, it is apparent that relationship satisfaction lies on the heart of this specific model affecting directly relationship trust, commitment and loyalty while the same time is being affected by customer perceived quality. However, re-assessment of determinants needs to be done in order to apply both instruments according to specific products/services, industry nature, markets and cultural environments. The mediating role of this construct provides evidence concerning the importance of the customer satisfaction as a major part of reflection in the evaluation of accumulated transactional experiences in both customer service and product and its key role in affecting relationship quality. It is important to note that the study identifies customer satisfaction as the strongest direct driver of relationship quality. Thus, as a supplier, the case organisation must continuously invest in Relationship Marketing, to develop a
satisfactory relationship with their customers in order to foster ‘true loyalty’ (Ruben, 2007).

In addition to its product strategies & excellent customer service, relationship satisfaction which help increase customer intention of re-purchase is the new focus point in the organizations’ marketing strategies to sustain its market competitiveness and at least customer satisfaction, if not customer loyalty.

In this customer service continuum, customer services managers are advised to focus their efforts in managing relationship quality because of its direct influence on loyalty, and marketing managers need to clearly define relationship development strategies, service provision policies and develop homogeneous service provision. Towards this direction, it is essential that the organisation communicate the service and product quality standards to partners so that differences in service provision can be avoided. An acceptable functional quality is required to ensure that customers are satisfied. As a result, the case organisation need to make sure that the quality of their human interaction (functional quality) with their clients is excellent in order to compensate for imperfections in technical quality. The customer contact personnel are often of vital importance to functional quality. Utmost care should be taken in recruiting, selecting, training and developing the customer contact personnel. Intensive training in interpersonal and human skills among the customer service staff would be crucial. Besides, the organisation can adopt some reward systems to encourage their customer contact personnel to be helpful, caring, courteous and friendly when serving the customers. In conclusion, the study determines the practical importance of improving the functional aspect in addition to the technical aspect of product quality in marketing.

Product quality is also been identified as an influential predictor of customer satisfaction. Hence, the case organization should take necessary action to improve the
technical aspect in product quality such as the product reliability, technical capabilities, innovation, and fulfilment of customised requirement to induce increased likelihood of customer satisfaction. The technical quality dimension is a result of the know-how, which includes good technical solutions and technical abilities of the manufacturer. The technical quality may be improved by the appropriate use of machines and computer systems. As a result, the manufacturer needs to upgrade their production/engineering processes and develop quality control system to fulfil specific product requirement of customers. The significance of the technical dimension of service quality also means that the organisation management has to make sure that product are produced properly in the first launch and to understand that customers want the best possible outcomes on their cost of sacrifice, at some agreed level of risk, in each transaction or new product development as crucial path towards building a sustainable partner relationship.

From a strategic point of view this study shows potential areas of competitive advantage and relationship strategies development. Relationship quality and its determinants (relationship satisfaction, trust and commitment) can help firms achieve competitive.

The role of **trust and commitment** development is of strategic importance as they are both directly associated with the creation of a relational atmosphere of high relationship quality influencing directly behavioural intentions. From a measurement perspective and in line with recent research efforts (Woo and Ennew, 2004) the conceptualisation of relationship quality as a higher-order construct provides practitioners with a valuable tool of business-to-business relationship quality measurement on the basis of relationship satisfaction, trust and commitment.

In a business-to-business setting, priority should be given for building strategies based on relationship quality and satisfaction leveraging these relationships to forestall
detrimental customer reactions. From the result that shows great influence of satisfaction, marketers should be aware of the danger of ignoring relationship satisfaction and its related aspects. This view is consistent with the study on marketing channels by Morgan and Hunt (1994) which showed that companies often look beyond satisfaction to developing loyalty in order to ensure long-term relationship.

5.4 Limitations & Further Research

The present study has certain limitations, and caution is therefore advised with respect to the generalisability of the results.

First, the simplicity of the measurement of satisfaction ignores the existence of different phases of satisfaction in a relationship continuum and also ignores the complexity of service/product offerings, i.e. evaluation of importance/priority of each item performance quality (Vickery et al., 1994). Some of the measurements may fail to identify the existence of any turbulent incidents that might dramatically affect the relationship.

Secondly, the results of the study were based on the survey of a single organization of manufacturing industry, the wooden product manufacturing sector. As such, the applicability of the current findings to other industry contexts would need further research and should be extended to respondents from different manufacturing organization of same industry, to allow cross-organisation validation. Future research should also test whether the issues and applications discussed here are applicable and helpful in all product manufacturing contexts.

Thirdly, due to time and cost constraints, the sample size for the research was only confined to those customers responded within one month. The present study involved a cross-sectional survey and is not a longitudinal study. This means, the data were gathered
at one point in time. As such, it only offers a static view without take into account their
dynamic nature. Instead, it would be a more interesting research to break down the
relationship into chronological parts, and for each part, to examine the variations in
perceptions of service/product quality and following changes in relationship satisfaction,
trust, commitment, and loyalty. That is to investigate how satisfaction changes over time,
and relatively, to assess how the relative importance of the relationship construct
dimensions changes over longer time periods. Therefore, future studies can be replicated
not only in diverse environments, but also over time periods.

Fourthly, the study concentrated only on one side of the supplier-customer
relationships. Future studies may address the issue from a dyadic perspective, by
incorporating data collected from both supplier organization staff and customers. Future
research could also focus on samples consisting of ‘real’ loyal customers participating in
customer loyalty programs.

Fifthly, the study focused on relationship quality and loyalty, but it did not relate
anything about successful relationship, i.e. profitability or strategic growth. Further
research measuring success of relationship, in terms of competitive strength or economic
profit/growth, in a collaborative relationship cold investigate whether success result from
high quality of relationship generated from high satisfaction or from relationship quality.
Other underlying contextual variables could be further investigated and developed in the
relationship quality-business loyalty model, especially on how an in what order he
identified crucial variables could be fulfilled to achieve long term relationship loyalty
with sustainable profits. Such findings can hardly be concluded from broad based survey
studies, but should instead be approached in longitudinal case studies.
Finally, the survey did not capture the cultural differences existing among business customers from various societal backgrounds. These cultural differences might lead to different perceptions of the attributes of trust and commitment.

In summary, the recommendations stated above might interest future researchers who may be interested to fill any research gap of the study.
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