Chapter 2: Literature Review

This chapter discusses on the literature review of the study. The discussion commences with general overview on the issue related to branding, B2B business, market differences between B2B and B2C, organizational buying behaviour, buyer-seller relationship; and follow by discussion on the dependent variables – "brand sensitivity", as well as the independent variables of the study, which includes: "purchase importance", "purchase complexity" and "time pressure". Next, intervening variable, which is "perceived purchase risk" in both organizational and individual basis are being discussed. The chapter ends with discussion relates to the construction material industry in Malaysia.

2.1 Brand

The American Marketing Association defines brand as a "name, term, design, symbol or any other feature that identifies one seller's good or service as distinct from those of other sellers. The legal term for brand is call trademark™, and a brand can take many forms, including a name, sign, symbol, colour combination or slogan. It is the personality that identifies a product, service or company and how it relates to key constituencies, such as: customers, staff, partners and investors (American Marketing Association, 2011). Brand information facilities identification of products, services and businesses, it communicates their benefits and value and reduce the risk and complexity of buying decision (Kotler & Pfoertsch, 2006). Three key aspects of branding important to marketers includes: general name awareness, how well known is the brand and purchase loyalty (Aaker, 1991).

One of the key roles of branding is its ability to offers cues that can improve information processing efficiency, reduce risk perceptions, and simplify production selection (Keller, 2003). Such brand cues influence the decision process by communicating information about the product/ service offering and the overall experience a customer might expect with the seller. Hence, provide “peace of mind” to its customers (Keller, 2003). A well accepted branding theories is Keller’s Customer-Based-Brand-Equity (CBBE) pyramid model that that stress on differential effect of brand knowledge on a consumer’s response to the marketing of brand, and is conceptualized according to an associative network memory model in terms of brand awareness and brand image, which appears to be relatively subjective and emotional. CBBE model focus on strategies to achieve resonance bonding between the brand and its customer via consistently enhancement of judgement, feeling, performance, image and salience stages, which are focusing to assess an end-consumer’s psychological perspective of a brand, including one’s awareness, attitudes, associations, attachments, and loyalties toward a brand. The ultimate goal of all branding strategies is to achieve brand salience – the emotional attachment between the customers and the brand, which resulted in purchase loyalty (Keller, 2003).

2.2 Business-to-Business (B2B) Marketing

B2B Marketing, or sometime refers as Industrial Marketing are commonly refers to business transactions between companies. The transacted products and/or services are used in manufacturing that are not marketed to the general consuming public. Industrial products can be process inputs – products consumed in the manufacturing/ construction process (such as steel formworks and scaffolding); or product inputs products that remains as ingredients of the final product (such as wall & floor tiling and sanitary wares). The transactions of industrial products are usually has relatively high value compared to consumer products, repeat-purchase in nature and are integral to the success of both parties (Hutt & Speh, 2001).

Research by De Chernatony & McDonald (1998) outlined some key characteristics that are suggested to differentiate industrial markets from consumer markets, which includes:

- Fewer, but larger buyers

  B2B transactions are transaction between companies; items purchased are commonly to be consumed during the processes in producing end products that selling to general public. Quantity purchased is relatively large as compared to consumer purchase, but the industrial products are only needed by companies that involves in the market segment as relates to the selling company.

- More people involved in decision making process,

  Unlike consumer purchases where the buyer is the decision maker and the user of the product; The purchaser is rarely the user of the purchase items, B2B purchases generally involves various professional that responsible for different roles & functions in an organization. Decision are only be made after systematic and careful search and evaluation of information relates to the purchase items and its alternative goods/ solutions.

- Closer buyer-seller relationships,

  In view that B2B transaction is integral to the success of both buying and selling company, and the transactions are commonly repeats in nature. It is critical for the selling company to have a good understanding on the operation of buying company, and to establish a trustworthy business partner relationship with the client. In fact, relationship marketing is a key study area by many academic researchers in the area of B2B marketing.

- Products often need customising to customers' needs,

  Consumer products are generally off-the-shelf items with little or no customization. However, industrial products are commonly uses as an ingredient/ component items to the buying company's end products, hence require substantial customization to match its specific requirements in term of technical, financial, delivery arrangement, after-sales supports and etc.

- Purchases are negotiated less frequently,

  Most negotiation on the purchase of industrial products took place during initial stage. Once the suitable item is selected, it will become repeat purchase unless the selected items fail to perform, or there are major chances in the requirement that the selected fail to accommodate.

- Greater loyalty,

  Trust and loyalty is the key to the integral success of both buying and selling company. Buying company would usually place repeat orders in reducing perceived purchase risks, and it will take a lengthy process for the purchasing committee to select a new supplier that can understand their operation, specific requirement and committed to the mutual success of both companies.

- More rational buying behaviour,

  The purchasing process goes through a systematic and objective procedure, where many professional that responsible for different roles & function involves in the selection process. Such procedure is able to reduce the chances of individual bias and/or preferences over the purchase item.

- Better informed buyers.

  The purchasing committee includes professional that has extensive knowledge and exposure in the area of their expertise; extensive information search is to be carry out during the selection process; and most available alternative items/ solutions are being study and evaluate before the selection in done.

2.3 Branding for B2B vs. Branding for B2C

For most companies in B2C environments, developing and maintaining strong brands is a key elements of their overall marketing strategy. In comparison, companies targeting business customers often put relatively less focus on branding, as price and delivery appears to be more important to organizational buyers. (Bendixen, Bukasa & Abratt, 2004). Consistent with the above findings, only 21 B2B brands were found on the listing of 100 most valuable brands worldwide on the brands ranking conducted by INTERBRAND for year 2011, the top 100 brands are mostly dominant by consumer brands that relates to automobile, banking & finance institutions, fast-moving-consumer-goods (FMCG), food & beverage, electrical & electronic devices, fashion icons as well as telco-companies. Out of the 21 B2B brands, 9 are investment/financial/consulting services providers such as: “Goldman Sachs”, “JP Morgan”, “Barclays”, “Morgan Stanley”, “Zurich”, “VISA”, “Credit Suisse”, “UBS” & “accenture”; 3 are ERP/IT services provider – “Cisco”, “SAP” & “Oracle”; 4 IT/electrical & electronic related hardware producers, which includes: “Intel”, “General Electric”, “Fuji Xerox” & “Siemens”; 2 heavy equipment brands of “Caterpillars” & “John Deere”; and the remaining 3 brands being “3M”, “Thomson Reuters” and “UPS” (InterBrand, 2011).

Most Marketing Manager in B2B segment receives little guidance from marketing academia because previous research has mainly focused on B2C brands (Bendixen, 2004), and B2B branding has not received the same level of attention as the research topic as B2C branding within marketing literature (Mudambi, 2002). Although consumer branding principles such as CBBE model might apply to business markets, some factors suggest that branding is playing very different roles in business markets. Factors listed as below suggest a reduced role for brands relative to consumer marketing contexts (Zablah, 2010):

- Group decision-making process

  The likelihood that brand considerations permeate the deliberation process is reduced, given that brand awareness and purchase criteria likely differ across buying centre participants in an organizational buying context.

- Nature of market demand

  Demand for B2B products is derived from the demand for B2C products, and it is commonly uses as an ingredient/component items in the B2C products which sometime will not be seen by the end users. Hence, the inherent value of brand as a vehicle for self-expression is generally reduced in B2B markets.

- Buyer-Seller relationship-oriented promotional approach

  Long term and cooperative driven relationship is the key in most B2B transactions; purchase consideration is more likely to be influence by the factors such as: trustworthiness, reliability and company credibility, instead of purely brand image.

Hague and Jackson (1994) suggest that in B2B markets, the brand name is often the firm name because the relatively smaller size of market segment (compared consumer market) does not justify the promotion of different brands. This characteristic differs from B2C segment, which generally comprise multiple segments so that the companies develop a number of brands to target a range of customers in those segments, and the brand management in B2C markets, such as fast-moving-consumer-goods (FMCG) industry is more emphasis on individual rather than corporate brands, and direct their efforts toward minimizing the size of the brand portfolio, while maximizing coverage. In B2B settings, branding is a multidimensional construct that includes product characteristics, brand image, support and distribution services, company reputation, and company policy (Cretu & Brodie, 2007; McQuiston, 2004). Therefore, B2B brand perceptions are influenced by associations related to an on-going relationship, corporate reputation and service experiences. Hence, the term “brand” can refers to people, things, and ideas, as well as the processes of targeting, positioning, and communicating offerings in a B2B context (Stern, 2006).

Some significant differences between B2B and B2C markets that suggest a diminished role for B2B brands when compared to B2C counterparts. According to the study by Bendixen (1994), the organizational buying that based on systematic decision-making process, and is subject to supervisor’s review is less susceptible to the influence of emotional or brand factor. Hence, the relatively importance of branding roles is reduced in such group decision-making process. Meanwhile, the inherent value of brands as a vehicle for self-expression is generally reduced in a B2B context, in view that the demand on B2B products is derive from the demand of B2C products and is generally consumed during the production process or remain as an ingredient that not visible to the end users (Webster & Keller, 2004). Moreover, brand consideration is also reduced to a supplemental role as interpersonal interactions plays a vital role in maintains a cooperative and close buyer-seller relationship (Turley & Kelly, 1997). The key differences on branding role between B2B & B2C are summarized in table 1 as below:

Table 1:
B2B vs B2C market differences & their implications
for the relative importance of B2B brands

Market differences	**Description**	**Implications for the relative importance of brands in business markets**		
		Decreased	**Increased**	**Rationale**
Decision-making process	Purchase process are more systematic & objective driven in B2B than B2C markets; (Bendixen, 2004; Kotler & Pfoertsch, 2007)	X		Systematic decision-making, which is subject to supervisor review, is less susceptible to the influence of emotional or brand factors.
Group dynamics	Purchase decisions in B2B markets often involve groups of individuals with distinct roles & agendas while individual decision-making tends to be the norm in B2C markets. (Johnston & Botoma, 1981)	X		The likelihood that brand considerations permeate the deliberation process is reduced, given that brand awareness & purchase criteria likely differ across buying centre participants.
Nature of demand	Demand for B2B products is derived from the demand for B2C products (Webster & Keller, 2004)	X		The inherent value of brands as a vehicle for self-expression is generally reduced in B2B markets.
Branding emphasis	Corporate (as opposed to product) branding is more prevalent in B2B than B2C markets (De Chernatony & McDonald, 1998; Malaval, 2001)		X	Corporate brands can be leveraged across product categories & purchase situations to influence buyer decision processes.
Marketing communications mix	Interpersonal communication, i.e. personal selling has a heightened role in B2B markets when compared to B2C markets. (Turley & Kelly, 1997)	X		Brand considerations are reduced to a supplemental role as interpersonal interactions strongly inform buyer decision processes.

(Zablah, et. al., 2010)

Even-though most researches relating to B2B markets, organizational buying behaviour and buyer-seller relationship in B2B segment concludes that organizational buyers are “rational” decision makers who rely primarily on objective attributes when making product choice decisions; Another school of thought argued that brands can play an important and functional role in business markets, particularly as signals of product quality and of the overall relationship and experience a customer can expect from one supplier (Aaker & Joachimsthaler, 2000). In fact, perceived purchase risk has been identified as one of the primary determinant of buyer behaviour in an organizational buying context (Newall, 1977). As strong brand signals trustworthy and reliability to buyers; it can play a meaningful role in risky purchase situations (Mudambi, 2002). This finding, however contrasts with the findings of established organizational buying models, which suggests that buyers offset heightened levels of risk by pursuing disciplined purchasing strategies built upon an extensive information search process.

B2B branding begun to receive increased attention from marketing scholars over the last decade, and extant research also finds that B2B brands offer cues that improve information processing efficiency, reduce risk perceptions, and simplify product selection (Gordon, Cantone & di Benedetto, 1993). The above findings have no doubts influence the decision making process by communicating information about the product offering and the overall experience a customer might expect with a seller. Even though branding practices in B2B context had received more attention in recent years, the relative influence of brands based on organizational buying decision appears to be modest and not as pervasive as in brand-laden consumer markets. (Hutton, 1997; Mudambi, 2002). Some key differences identified by Mudambi (2002) between B2C brand management and B2B brand management are outline as per table 2 below:

Table 2:
Brand Management Issues (B2C vs. B2B)

B2C Brand Management	B2B Brand Management
Branding at product level, with increasing emphasis on corporate level	Branding at the corporate level, with experimentation at the product level
Customer perception of functional, emotional and self-expressive benefits of brands	More customer emphasis on risk-reduction; less customer emphasis on self-expressive benefits of brands
Moves to reduce the numbers of brands within a company	Number of brands within a company increasing due to acquisitions

Mudambi (2002)

2.4 Organizational Buying Behaviours

Organizational buying behaviour believes that B2B marketing is relatively aligned toward "objective" measures, as business purchases decision are only made after all relevant information that relates to the purchase decision, such as: quality, performance, pricing, delivery, services, company's track-records & etc. are carefully evaluate based on some extensive and systematic information processing. Dean & Sharfman (1993) refers "rationality" as the extent to which the decision making process involves the collection of information relevant to the decision, and the reliance upon analysis of this information in making the choice. The classic organizational buying models portray buyers as rational decision makers who rely primarily on objective attributes when making product choice decisions. The purchasing agents will estimates the relative value of each alternative in the choice set and make the choice in a systematic manner. This rational view of organizational buyer decision making has not allowed a significant role for the subjective or self-expressive benefits often associated with brands. (Wilson, 2000). Thus, organizational purchasing behaviour omit the possibility of subjective influences, such as advertising & promotion, as well as personal preference over designs & figures during the decision making process in view that the purchase has no direct influence to the purchaser at individual level.

Industrial Marketing studies have always been focusing on organizational buying behaviour and buyer-seller relationship marketing model, in view that:

- Purchase decisions are made collectively by a group of personnel with different responsibilities, but shared a mutual goal; Hence, the decisions are made on the basis of collective, rational and objective
- B2B transactions are usually repeats in nature, and are integral to the success of both buying and selling company. Hence, buyer-seller relationship is a critical component in the success of B2B business.

Past studies on organizational buying models portray buyers as being highly objective when making product choice decisions (Bonoma, Zaltman & Johnston, 1977; Malaval, 2001; Low & Mohr, 2001); and generally, an objective decision maker has not allowed a significant role for the influence of “subjective”, brand-based judgements on organizational buying deliberations. Unlike consumer behaviour where the purchase decision is made on an individual basis; Organizational buying behaviour is consists of three distinct aspects as follows (Sheth, 1973):

- Psychological world of the individuals involved in making decisions
- Conditions which precipitate joint decisions among these individuals
- Process of joint decision making with the inevitable conflict among decision makers and its resolution by resorting to a variety of tactics

Interestingly, and contrary to the common belief, many industrial buying decisions are not solely in the hands of purchasing agents, and these individuals are identified in the organizational buying model as purchasing agents, engineers, and users respectively. Expectations defers among these individuals, including what they perceive to be important, the decision-process they follow, and the purchase they make (Bonoma, Zaltman & Johnston, 1977).

In our study on construction materials purchases, at least three departments (internal party) within a construction firm whose members are continuously are involved in different phases of the buying process:

- Procurement department

  Purchasers who involves in compilation and evaluation of alternative brands/ specification that meet the contract's requirement; they are also the person that issue the purchase orders after the decisions are made.

- Contract department

  The department includes quantity surveyors (QS), contract executives and contract manager that involves in functions such as: tenders, follow-up of progressive claims, and ensuring the specification as stated in Bill of Quantities (BQ) are adhered to, the department is also responsible to ensuring the construction firm making a reasonable profit based to the awarded contract value

- Construction department

  This department includes the project manager, site supervisor, clerk-of-work and other site workers who are the actual users of the purchased products. This group of people usually has the primary concern over the product quality, prompt delivery, workability and on-site services when it is needed as opposed to procurement and contract department that placed a significant concern over the money to be spend on the purchases.

2.5 Buyer-Seller Relationship

The long-term relationship of loyalty and trust is recognized as an important aspect in the success of B2B markets. Many literatures recognize “trust” element as a prerequisite to building buyer-seller relationships and as a preceding state for the development of commitment. Li & Rowley (2002) concluded that firms are likely to choose supplier firms that are familiar to them, understanding their daily operations and able to accommodate the changes in the requirement; the commitment toward mutual benefits of both buying and selling company or the relationship of “business partners” are crucial in a B2B business environment. Hence, preference is always given to those with whom the buying company have worked before. They rely on cooperative, long term relationships with fewer suppliers in order to reduce risk and uncertainty. One advantage for suppliers in such cooperative relationships is the likelihood that they will be included in the consideration set when new purchases are proposed. Suppliers that are viewed as more short term or transactional in nature are likely to face more stringent requirement and a different set of evaluative criteria. Hence, relationship-oriented suppliers are likely to be evaluated on attributes such as trustworthiness, reliability and corporate credibility; while transaction-oriented suppliers are likely to be evaluating on attributes such as product performance, pricing and other more tangible criteria (Webster & Keller, 2004).

2.6 Perceived Purchase Risks

Purchasing agents are confronted with a myriad of stresses in their responsibilities. One of the most important stress factors faced is the perceived risk associated with making buying decisions – the purchase risk! Purchase risks can be defined in terms of perception of the uncertainty and adverse consequences associated with buying a product/ service (Dowling & Staelin, 1994).

There is an important distinction needs to be made between perceived risk in consumer and industrial settings. For the consumer, risk perceptions involve the uncertainty among choice alternatives and the potential for negative consequences from the personal or household use of the product. Almost all consumer research on perceived risk has assumed that only the person making the buying decision is the locus of all the potential negative consequences. In organizational buying, however, the purchasing agent also deals with uncertainty but he or she is seldom the "actual user" of the purchased items. Hence, in most circumstances the purchaser have limited knowledge to whether the purchase decision is the correct one, and if the purchased items fulfil most of the requirement needed by the "actual users". Consequently, the purchase risks can be from the perspective of the organization or of the individual buyer, as below:

- Performance risk to the organization

  Such risk occurred when the purchased item unable to performance as what it is expected. For example, a construction chemical additive is being use to boost the curing time of concrete; site personnel are expecting the purchased items to reduce the concrete curing time from 28 days to 10 days in order for the site to remove the formworks earlier and kick-start other trades. Should the purchased additive unable to meet the 10 days curing time, the construction progress will be delay. In a much worst scenario, the building structure may collapse and causing loss of human life as the pre-mature concrete slab/column will not be able to take the loads imposed on-to it.

- Economic/monetary risk to the organization

  Performance issue will eventually lead to monetary loss to the buying company; Take the above example, when the wrong purchase decision was made, and the construction chemical additive unable to meet the 10 days curing time. It caused delays of construction progress, which in turn, resulting delay in progressive claims. The idle site workers daily wages have to be paid despite the concrete structures are not ready for subsequent construction works. All of the above problems will then causing unfavourable impact to the contraction firm's cash flow.

- Psychosocial risk to the purchasing agent (purchaser)

  Generally, the direct impacts causing by the mistake in purchase decisions will only hit the company on both performance as well as monetary aspects. However, the psychosocial risk is on the purchaser. Using the same example illustrated above, the purchaser who made the wrong purchase decision and causing the performance and monetary loss to the company will most likely have the fear of negative impressions from its peers and co-workers. Such mistakes might also have an adverse effect on promotion prospects on the purchaser if poor product choice is made repeatedly.

Newall (1977) defines organizational buying behaviour as an entirely function of risk. While Cardozo (1980) identifying five types of purchase risks (uncertainties) as below:

- Need uncertainty

  Risks incurred due to unclear product or specification requirement, when the purchasing agents do not have clear idea on what is requirement, it is unlikely that the "right" product choice will be chosen.

- Technical uncertainty

  Certain brand may have higher probability of product failure; for example Germen made equipment are often perceived to be highly reliable as compared to a Taiwan made equipment. In such scenario, the purchasing agents will need to strike a balance among the budget allocates for the purchase and the acceptable level of quality assurance the chosen brand can provides.

- Market uncertainty

  Market uncertainty covers risks arise from overall market stability, homogeneity and intensity on its end products which literally causing disruption on the demand of materials. Apparently, such purchase risk is beyond purchasing agents' control. However, the business analyst and/or marketing department should conduct regular demand analysis on the forecasting sales on its end products for coming months, quarters or even the next 1-3 years.

- Acceptance uncertainty

  There are many standards that one business entity needs to adhere to in their daily business operation. In a construction environment, if the purchase items causing rejection from the authorities (i.e. Local Council, Land Offices, Jabatan Bomba & etc.) and developer/project owner unable to obtain certificate of fitness to handover the project. The contractor that undertakes the project, the architect that select/approved the materials, and/or the consultant who design the building using the chosen materials will all in risks.

- Transaction uncertainty

  Such risk are mainly relates to the reliability of the chosen supplier, whether it can fulfil the order quantity within the agreed time frame, and has the financial muscles in securing the necessary resources in completing the awarded contract.

Past researches shown that purchasing agents can respond to purchase risk in many ways, such as:

- Involvement of larger buying centre (Spekman & Stern, 1979)

  Purchasing group that includes individual and professionals with distinct roles, function and agendas tends to better covers various aspects of purchase consideration and hence reduce the uncertainties caused by limited knowledge boundary of individual purchasing agent.

- Conversion of the purchase to a straight rebuy, which shifts the risk to the prior decision maker (Puto et. al., 1985)

  Each new purchase decision is only be made after systematic and extensive information search, evaluation and debates between the various individuals within the purchasing group to shortlist items that meet the technical performance, budget constraints as well as reliability of the supplying company. Converting a purchase into straight rebuy will be able to eliminate majority of the uncertainties, as most factors have been evaluated during the initial lengthy evaluation process.

Newall (1997) also suggested that purchase risk is a primary determinant of buyer behaviour in organizational contexts. Studies by Mudambi (2002) also found that brands can play a meaningful role in risky purchase situation. Such findings are contrasts with the findings of established organizational buying models, which suggest that buyers offset heightened levels of risk by pursuing disciplined purchasing strategies built upon an extensive information search process.

To a buyer that faced with an unfamiliar or newly important purchase, a strong B2B brand can signal or symbolize expected brand performance. Brand signal such as strong corporate reputation in specific products/ services environment helps mitigate the purchase risk one face in an important and complex purchase situation. (Brown, B.P., 2010) High corporate reputations strengthen customer's confidence and reduce purchase risk perceptions when they make judgement on the company performance and quality of products or services. Company with good reputation are more likely to perceive as trustworthy by customers (Hutton, 1997). In such environment, brands function differently compared what they do in B2C markets. The role of B2B brands in reducing perceived risk of a purchase is likely to be stronger because buyers face two types of risk: organizational risk and personal risk (Hawes & Barnhouse, 1987). Meanwhile, the brands in question are much less likely to provide emotional benefits for the buyers (Wilson, 2000). Establishing brand power such as customer trust and brand reputation are key determinants of B2B brand equity.

It is likely that brand awareness also plays a special role in driving brand equity in B2B markets, as based on theory of information economics, brand awareness is identified to be related to market performance through the reduction of perceived risk and information costs for organizational buyers. (Erdem, Swait & Louviere, 2002). The significant of the purchase decision in affecting the overall business objectives is generally considered an important determinant of organizational buying behaviour, while the levels of purchase importance may affect a buying centre's brand sensitivity because of the variation they induce in the degree of purchase risk (Valla, 1982). Strong B2B brands can play a significant role when purchasing agents seek to mitigate the heightened risk and uncertainty inherent in certain B2B buying contexts (Webster & Keller, 2004; Homburg, Klarmann & Schmitt, 2010). This suggests that in certain circumstances, the purchasing agents are likely to be more sensitive to brand information than in others. Studies by Hutton (1997) discover that organizational buyers are most likely to choose well-known brands when:

- Product failure would create serious problems for the buyer's organization or the buyer personally,

  This is consistent to our earlier discussion on perceived purchase risk on both performance and monetary aspects toward the organization, as well as the psychosocial risks toward the individual purchaser.

- The product requires greater service or support,

  An establish brand with proven track records is always in preference when the purchased items require extensive customization, as well as after-sales supports to ensure smooth operation.

- The product is complex,

  Complication is always positively correlated uncertainty. The higher the complexity, the higher the chances of something went wrong. It will also require people with specific knowledge and technical know-how to use it. Hence, an establish brand with proven track records is always in preference compared to a new and up-coming brand.

- The purchase decisions are made under time and/or resource constraints. The "objectivity" and "rational" decision made in an organization buying context is built on the basis of the purchasing group will conducts some systematic and extensive information search and evaluation before they come to a purchase decision and product choice. Such evaluation process will not be possible if the purchasing group does not have sufficient time resources to do the require information search.

Known brands have the emotional benefit of reducing perceived risk and uncertainty. Hence, branding can benefit the B2B customer by increase purchase confidence. While, buying a familiar brand may involve additional comfort and a "feel-good" factor. Most procurement personnel take pride in their work, and feel good about making the right choices. Even though we acknowledge the fact that organizational buying model is objective up-to certain extend; but also cannot deny that there is tendency of risk adverse characters among most purchasing agents, especially when the purchasing decision involves major uncertainty and unanticipated consequences that could adversely affected on the promotion prospects if poor product choice is made. Beyond a certain threshold, purchasing agents will adopt various shortcuts and decision heuristics, such as weighing brand information or the reputation of the market leaders more heavily to reduce their cognitive strain and risk perception.

2.7 Dependent Variable

2.7.1 Brand Sensitivity

In B2B settings, branding is a multidimensional construct that includes product characteristics, brand image, support and distribution services, company reputation and company policy. It is generally related to an on-going relationship, corporate reputation and services experiences (Bendixen, 2004). Brand sensitivity is defined as the degree to which brand information get actively considered in an organizational buying process (Hutton, 1997). It measures the importance of brands in the decision making process of a buying act. Brand sensitivity will be operationalized as the value that a purchasing agent places on a well-known brand, instead of an unknown or generic brand of product offering during the product evaluation process (Brown, B.P., 2010). Based on Kotler & Pfoerstsch (2006), brand management generally contend that brand information playing the following roles:

- Facilitates the identification of products, services and businesses
- Communicates their benefits and value
- Reduce the perceived risk and complexity of the purchase decision

Considering one of the key roles of branding is to mitigate perceived purchase risk, a strong B2B brand will help the purchasing agents to mitigate the heightened risk and uncertainty inherent in certain B2B buying context (Webster & Keller, 2004). The above findings further suggest that, in certain scenario, purchase agents are likely to be relatively more sensitive to brand information than in other scenario. Hence, brand sensitivity provides the key outcome variable for this study as we focus on understanding “when” brands are most likely to influence organizational buying process.

2.8 Independent Variables

2.8.1 Purchase Importance

Purchase importance refers to the buying centre’s perception of the relative impact of the product purchase as it relates to business objectives (Cannon & Perreault, 1999). The level of importance (i.e. risky and uncertainty) may not be in equal ground to all individual that involves in the purchase decision making process, or in all purchase situations (Johnston & Lewin, 1994). In a low levels of importance, risk should be lower, hence purchasing agents will tends to place more consideration on-to other information factors, such as: prices, discounts, credit terms offered, as well as logistics and distribution. When purchase move up in term of the level of importance, risk increases, and the relative importance of brand information should also increase in tandem as a risk reduction mechanism (Chaiken, 1980).

2.8.2 Purchase Complexity

Purchase complexity is defined as the buying centre’s perception of the relative level of sophistication or elaborateness of the product being considered. Generally, complex product purchases tend to suffer more from ambiguity and uncertainty (Cannon & Perreault, 1999). Generally, at low levels of complexity, and information processing is manageable, purchasing agents would evaluate objective and non-brand factors, and consider brand information as only one of the several information factors in their product choice decision making process. However, when it reach a high level of complexity, purchasing agents should disproportionately rely on brand attributes that showcased a proven track records over other more objective information as a way of managing their information overload (Payne, 1976).

2.8.3 Time Pressure

Brand allow industrial buyers/ purchasing agents to reduce the time spent in selecting alternative brands; strong brand signal less risky when addressing possible technical problems and resolving internal production problems (Hutton, 1997). Hence, when purchaser has limited time resources in evaluating all the information associates with the product or its alternative, they will tend to look-up for the established and proven brand/product that meets the budget allocation as a risk reduced mechanism measure.

2.9 Intervening Variable

2.9.1 Perceived Purchase Risk

Organizational buying literature suggests that individual risk minimization or avoidance is a key motivating factor in the industrial buying process. Individuals of the organizational buying centre are expected to have varying degrees of risk propensity ranging from risk averse to risk prone. Member who is risk averse is one who has a preference for an alternative whose outcome is known with certainty over one having an equal or more favourable expected value whose outcome is probabilistic (Puto et. al., 1985). In view that brand selection is considered a strategy to reduce perceived purchase risk; it is assert that influential buying centre members with risk adverse attitudes are likely to moderate the relationship between the hypothesized buying centre, purchase situation and product/ relationship variables and brand sensitivity (Newall, 1997). The perceived purchase risk can be further breakdown to organizational and individual level, which includes performance & monetary risk to organization, and psychosocial risk to the purchasing agent as we had discussed earlier. Two main factors that influence the level of perceived purchase risks are: gender, and the different roles & functions that an individual possess in the purchasing group.

2.10 Construction Industry in Malaysia

Construction industry makes up an important part of the Malaysia economy due to the amount of industries linked to it such as those for construction materials, machinery & equipment, transport & logistics and so-on. The construction industry could be described as a substantial economic driver for Malaysia, and it has been identified as a key driver for the PEMANDU's Economic Transformation Programme, especially on the Greater Kuala Lumpur/ Klang Valley master plan.

Generally, construction industry can be sub-divided into two major categories, i.e. infrastructure works and building works. The former will involves consumption of mainly bulk materials, while the latter will consume a comprehensive range of building materials, ranging from bulk/ structural items to architectural items. Bulk materials such as cement, wire mesh, long steel products, concrete, aggregates, plywood and so-on are relatively commodity in nature with no significant difference between one brand to another. The materials is consume during the construction process, and will not been seen in the end products (i.e. residential/ commercial/ public properties, bridges, highways & etc.). On the other hand, architectural products such as wall & floor tiling, sanitary wares, ironmongeries, roof tiling, paints & coatings and so-on add value to the end product. Architectural materials will later become part of the end products which is visible to the customer. (i.e. modern & contemporary designed bathroom with branded wall & floor tiling and sanitary wares)

The purchase decision-making process in construction industry is complex and involves many internal and external parties. Two main functions and the parties involves respectively are outline as below:

Function	**Parties involved**
Design & Planning	▪ Owners & Developers ▪ Architects & Interior Designer ▪ Consultants (M&E, Civil, Structural, Facade) ▪ Quantity Surveyor ▪ Authority (Ensure compliance to building codes)
Site Construction	▪ Various levels of contractors ▪ Various levels of intermediaries

Generally, the purchasing agent is the purchaser for the main-/sub-contractor, and is the person that will issue purchase orders to product (brand) owner or its distributor. The product choice made must fulfil the following major criteria:

- Meeting the specification as spell out in bill of quantities (BQ)
- Meeting the construction budget, and achieve reasonable profit based on the awarded contract value

Specification of products stated in bill of quantities is decided during the design & planning stage among the developer, architect, consultant and quantities surveyor. The products (brands) being specified in bill of quantities will have technical specification details spell out, and usually come with a clause of accepting equivalent products (brands). The product choice is made with the objective in meeting the structural & engineering requirement as well as architectural design within the developer's allowable budget for construction costs. Contractors that tender for the project will place their bid based on specification and requirement spell out in the bill of quantities, and is allow proposing for alternative products (brand) that meet the technical specification spell out in the bill of quantities. Theoretically, contractor with the most competitive bid will win the contract. Hence, it is crucial for contractors to be able to source the specified or its equivalent product at competitive rates. Based on the above process, product choice can be made and modified at the following stages:

i. Design & Planning stage

    - Direct proposal by brand owner to owner/ developer

- Proposal made by brand owner to specifiers; that will later propose their selected proposals to the owner/ developer
- Proposal made by brand owner to main contractor and architect when the project is awarded under design-and-build basis

ii. Tendering stage

- Counter proposal made by brand owner to contractor as alternative choice to the specified product spelled out in bill of quantities (equivalent specification).

iii. Site construction stage

- Counter proposal made by brand owner to main- and/or sub-contractors as alternative choice to the specified product spell out in bill of quantities (equivalent specification).
- Counter proposal made by brand owner via distributors to main- and/or sub- contractors as alternative choice to the specified product spelled out in bill of quantities (equivalent specification).

Summary of the product (brand) choice decision making process in construction industry is outline as per figure 2 – figure 4 as below:

Figure 2: Product Choice Decision Making Process

(Route through Project Owner)

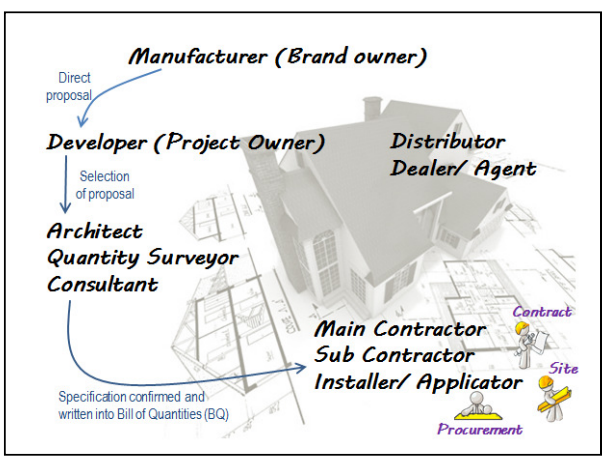


Figure 3: Product Choice Decision Making Process

(Route through Architects)

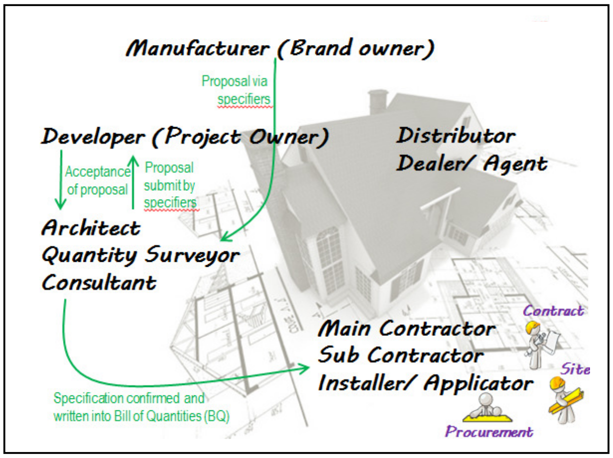
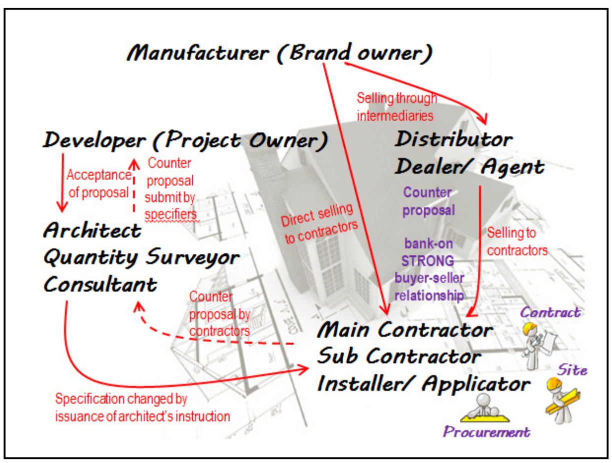


Figure 4: Product Choice Decision Making Process

(Route through Contractors)



The important consideration factors are various between the above-mentioned parties. Architect & consultant are generally more concern on the design and performance of the products, and pay less attention to the pricing. On the other hand, quantity surveyor & contractor will focus more on to the pricing and other commercial terms in meeting the project's budget. The owner/ developer will rely on the information gathers by these professional in making the right product choice. Extensive information search will be carried out throughout the purchase decision process, and the significant of branding influence various among different stage of the process.

2.11 Hypotheses Development

Hypothesis of this study is developed through an evolutionary procedure, beginning with literature review on B2B marketing, branding, organizational buying model, buyer-seller relationship, purchase risks behaviour and consideration of the unique decision making process in the organizational buying process for building material, especially on architectural items.

In a perfect organizational buying environment, purchasing agents will process all available information and willingly exert the effort to analyse alternative products rationally. However, in an not so ideal (or realistic) organizational buying environment, purchasing agents tends to employ heuristic-based evaluation strategies, often based on brand cues, in order to minimize the amount of effort needed to arrive at a choice decision. There are possibility that purchasing agents are likely to actively consider brand information more or less depending on the nature of purchase situation and their individual information processing constraints. Consistent with this basic framework, this study propose that organizational buying centre's brand sensitivity relates in a curvilinear fashion to purchase important, purchase complexity and positively relates to time pressure face by the purchasing agents during the decision making process. As outlined in previous chapter, the constructs of interest are:

- Dependent variable: "brand sensitivity"
- Independent variables: "purchase importance", "purchase complexity" and "time pressure"
- Mediating variables: "perceived purchase risk" (on organizational & individual level respectively)
- Control variables: "gender", and "roles & functions" of individual purchasing agent

2.11.1 Research Hypothesis One (H1)

Cannon & Perreault (1999) advocate that purchase importance refers to the buying centre's perception of the relative impact of the product purchase as it relates to business objectives. In a low level of importance and perceived risks, purchasing agents tends to place more consideration on information other than branding when making the product choice. However, when purchase move up in term of the level of importance, and perceived risk increases in tandem. The relative importance of brand is increased as a risk reduction mechanism (Chaiken, 1980). Hence, we would infer that:

H1: Organizational purchasing agent's level of brand sensitivity is positively correlated to the level of purchase importance.

2.11.2 Research Hypothesis Two (H2)

Cannon & Perreault (1999) concluded that complex product purchases suffer from ambiguity and uncertainty. While, information processing theory suggests that when uncertainty increases, the "procedural rationality of decision making" also increase until it reach a point that information overload occurs. Payne (1976) discover when information processing become overwhelming, purchasing agents tend to adopt strategies to reduce or limit the information they must process by resorting to brand cues and brand attributes over other more objective information. Bendixen (2004) advocate that well established brand names play an important role in reducing perceived risk in a complex product purchase situation, because it serve as cues that signal performance of a supplier or product. As a result, we outline the second hypothesis of this study as below:

H2: Organizational purchasing agent's level of brand sensitivity is positively correlated to the level of purchase complexity.

2.11.3 Research Hypothesis Three (H3)

The "objectivity" and "rational" judgement of organizational buying behaviour is based on the assumption that the purchasing group has sufficient time and human resources to conduct systematic information search and evaluation before a purchase decision is made. However, in an actual business environment, purchasing agents constantly faced with tight deadline in making the correct decision. Hutton (1977) argue that an establish brand signal less risky when addressing possible technical problems and resolving internal production problems. Hence, enable the purchasing agents to reduce the time spent in making the right product choice. Therefore, we can draw hypothesis as below:

H3: Organizational purchasing agents' brand sensitivity level is increase when time resources for gathering and processing information about the product, and evaluate its alternatives is limited.

2.11.4 Research Hypothesis Four (H4)

Newall (1997) found that perceived purchase risk is the primary determinant of buying behaviour in an organization context, and individual risk avoidance is a key motivating factor in the industrial buying process. Individuals member of the purchasing group are expected to have varying degrees of risk propensity ranging from risk averse to risk prone. Considering brand selection is classified as a strategy to reduce perceived purchase risk, it is assert that individual with risk adverse attitudes are likely to have higher level of brand sensitivity as a risk reduce mechanism.

In many circumstances, gender plays a role in influencing the individual perceived risk appetite. Male purchaser are likely to be view to have higher risk appetite compare to female purchaser; Thus, male purchaser are more likely in trying and exploring new product/brand in meeting the organization's purchasing objectives within the allocated budget constraint. Therefore, we draw a hypothesis as below:

H4: Women purchaser will perceive higher purchase risk, and possess higher level of brand sensitivity compare to men.

2.11.5 Research Hypothesis Five (H5)

Other than gender issue, individual also perceive different level of purchase risk depending on the roles & function one is responsible. Individual who responsible for site/construction works, and has direct interaction with the project owner and the design team but do not responsible on the budgetary/monetary concerns, tends to possess higher level of brand sensitivity compare to a procurement personnel who is responsible to source for the specified or equivalent material within a budgetary limit. Based on the above argument, we draw a hypothesis as below:

H5: The purchasing agent's level of brand sensitivity will not be the same depending on his/her roles & functions.

2.11.6 Research Hypothesis Six (H6)

H6: "Time Pressure", "Purchase Importance", "Purchase Complexity" and "Perceived Purchase Risk" significantly explains the variance of brand sensitivity in an organizational buying context.

2.12 Research Framework

To summarize the research hypotheses as discuss in earlier part of this chapter, research framework below intends to illustrate the construct propositions.

Figure 5: Research Framework