Key supplier retention for electrical and electronic industry: determinant factors

K. Jayaraman*

Faculty of Business and Law,
Taylor’s Business School (TBS),
Taylor’s University,
47500, Subang Jaya, Selangor, Malaysia
Email: Jayaraman.Krishnaswamy@taylors.edu.my
*Corresponding author

Logeswari Arikrisnan,
Kavigtha Mohan Kumar and
Shaian Kiumarsi

Graduate School of Business,
Universiti Sains Malaysia,
11800, Penang, Malaysia
Email: loges_wari28@yahoo.com
Email: ktanika@yahoo.com
Email: shaian@usm.my

Abstract: The purpose of this article is to identify the possible determinant factors influencing key supplier retention in electric and electronics industry. The data were collected from purchasing and sales managers working for electric and electronic companies in Malaysia. A total of 112 usable responses were received from various electric and electronics firms. The findings reveal that besides the four pure predictors namely supplier engagement, supplier quality, supplier infrastructure, supplier commitment which influences supplier retention, confidential sharing is a new determinant emerged for key supplier retention, has a significant positive relationship. The present paper provides guidance for suppliers who are offering services to the electric and electronic industry to focus and implement on the determinants factors of key supplier retention to effectively sustain as the preferred supplier for their manufacturing companies. However, the findings from this study nature only the context of Malaysian electrical and electronic industry for key supplier retention.

Keywords: key supplier retention; supplier engagement; supplier quality; supplier infrastructure; supplier commitment; confidential sharing; buyer supplier relationship; BSR.


Biographical notes: K. Jayaraman has more than 32 years of experience in quantitative research methods and currently employed in Taylor’s Business School, Taylor’s University, Malaysia. He has published more than 100 research articles in international and national journals. About 75% of his
Key supplier retention for electrical and electronic industry

Introduction

In the current scenario, manufacturing firms are working closely with key suppliers due to the fact; functions of key suppliers are many folds in manufacturer operations. For instance, key suppliers are involved in multiple supply chain networks to provide the best product and services to manufacturers in comparison to their competitors in the business market. Every manufacturer prefers the best supply chain patterns to win over the global competitive market (Chopra and Meindl, 2016). Due to this, manufacturing firms usually allocate significant amount of their time and resource during supplier selection process to choose the most appropriate one and prefer to retain that supplier in the long run. The aspects of retention are often studied from the perspective of customer (Murali et al., 2016; Diaz, 2017); however, the present study intended to tap the literature gap on retention and its application towards supplier retention in the supply chain instead of...
customer retention. According to Zineldin (2000), retention is referred as a commitment related to business exchange with a company which the users prefer to continue as an ongoing service. Hence, key supplier retention is regarded as manufacturer’s commitment to continue use the same supplier selected in selection process to continue the business exchange of supplying critical parts a raw materials ongoing basis. Notably, for manufacturer to retain the same supplier certain factors may influence their retaining decision. The current research studied on the determinants factors which influences manufactures retaining decision and how does buyer supplier relationship (BSR) further strengthen the key supplier retention for suppliers in the electrical and electronic industry.

The present study contributes to supply chain management research by offering and empirically testing a combined research model that identifies the relationships between supplier engagement (SE), supplier quality (SQ), supplier infrastructure (SI) and supplier commitment (SC) on key supplier retention using a survey approach. The suppliers of E&E industry play a key role for on time delivery of the products so that the production flow will be smooth on a day-to-day basis. The retention of suppliers in E&E industry is an essential and strategic purchasing obligation for manufacturers not only for consistent supply of required products, but also for the stability of the supplier in terms of reasonable costing, trustworthiness and hospitality. Retention of suppliers adds buyer value further. The current study identifies the important determinants for retaining key suppliers in E&E industry of Malaysia. By doing so will provide a business with a competitive advantage. Suppliers are basically selected based on quality and consistency or reliability. The informal nature of the interactions allows open communication, leading to commitment from both buyer and supplier which eventually aids in supplier retention together with payment of accounts and brand loyalty. The benefits attained from retention of suppliers comprise special deals offered from suppliers, and help in times of difficulty. These benefits will lead to the improvement of a competitive advantage of the purchasing business (Galland, 2003). On the other hand, Siguaw and Simpson (2004) studied on the aspect of supplier selection and supplier retention and described that criteria used for supplier selection are like supplier retention. Hence, a good level of price, quality, service and delivery are important for supplier retention and those are what manufacturers and buyers look in a supplier retention process.

According to Krause et al. (2001), there should more research efforts to re-examine whether ‘supplier selection and retention’ fully tap the scopes of purchasing competitive priorities. As organisation now, days are now trying to persist competitive by bettering their products, decreasing production costs, and financing in new manufacturing technologies, but without a successful buyer-supplier relationship, there will be no improvement seen. Therefore, under operations and supply chain management literature on supplier retention is low and most of the studies have only considered supplier selection only with little focus on retention. His study seeks to identify whether SE, SQ, SI and SC are determinants of key suppliers retention in electric and electronic (E&E) companies of Malaysia. Secondly, the study is interested to find out the relationship between supplier retention determinants and key supplier retention. Thirdly, the study is interested to investigate the mediating effect of buyer-supplier relationship between supplier retention determinants and key supplier retention. The paper is organised based on the followings. A detailed literature review is given in Section 2 which covers research framework, theory and research methodology in Section 3. Findings of the research is presented in Section 4, followed by discussion in Sections 5–7 cover on findings discussion, future research, limitation and conclusion.
2 Literature review

Supplier selection and retention are crucial and major tasks accomplished by the purchasing function. Companies should choose what competencies they are buying, the conditions used to buy them, and the costs they are prepared to acquire, when selecting suppliers. According to Kraus et al. (2001) retention proposes a constant practice of evaluating suppliers to determine if the designated supplier is performing as to further the objectives of the buying organisation over time. Nevertheless, there are further areas of importance to the purchasing function that may need to be considered in the processes to develop their validity. Organisations are beginning to recognise that suppliers are a necessary part of organisational success, in today’s present conditions. Every organisation is formed by various parties and each of these parties must not breakdown – therefore triggering the whole organisation to fail. Each element in an organisation beginning with its employees, suppliers, customers, the environment and the government play a significant part in creating or breaking an organisation. Manufacturing plant can eventually come to a complete halt, if the right materials are not being supplied in a timely manner, which is a very awful consequence when the organisation is a customer centric organisation. The benefits of dealing with fewer suppliers are documented well in the literature of purchasing and supply chain management, according to Chen et al. (2004), Hahn et al. (1990) and Kekre et al. (1995). Placing a greater importance on fewer suppliers from a cost perception, will eventually allow customers to be more focus on the volumes of orders and at the same time will further achieve the influence upon their vendors.

The role of the supplier in the supply chain is being concentrated. As businesses progressively subcontract their non-core activities, suppliers have been acknowledged as an important role in the firm’s supply chain, from product progress to finished goods inventory management. Integrating the supplier’s actions with its specific has become critical for companies, particularly the necessity to reduce inventories and able to distribute the orders to customers on time. The relationship between buyer and suppliers has become gradually imperative in the total perspective of the organisation in the early 21st century. To improve long-term, mutually valuable strategic partnerships with key suppliers, buyers mostly reduced the number of suppliers they purchase from. A supplier relationship is one in which buyer acquires from a supplier for reselling and creating profit. According to Wathne et al. (2000) and Heide (1995), efficiently achieved strategic supplier relationships comprise the selection and improvement of suppliers with comparable goals and with the enthusiasm of the supplier to familiarise to the needs of the buyer. Companies improve strategic relationships with suppliers to decrease costs, advance quality and to improve competitive advantage (Peterson and Limb, 2009).

2.1 Supplier engagement

A strategic condition of an effective and good SE system will be competent to support in discovering and engaging with suppliers by ensuring staff are linked to the best supplier agreements and contracts which reduce overhead of handling suppliers. Organisations will be proactive in engaging with suppliers and attaining their preferred outcomes, balanced against defined resources and priorities when they are united. Companies should improve a SE approach which constructs on a precise assessment of the strengths of their
supplier relationships to become a customer of choice. According to Fleming and Rowlands (2014), the research fact, in the *Gallup Business Journal*, emphasise that when companies that implement a proactive methodology for evaluating and managing the emotional connections that drive SE can gain extensive economic gains, including greater quality, enhanced planning, enriched product development, greater supplier support and value, and lower costs. In addition, it decreases risk of supplier failure, quality under-performance and cost aversion. According to Moss (2012) on the *Harvard Business Blog Network*, businesses need a SE program and suppliers must have a worthy purpose to engage. She explains further that suppliers are frequently anxious about sharing information that exposes their cost structure with the people with whom they are conveying price with. Most vitally, to be successful, the SE program should create business wisdom for both customer and supplier beyond fulfilling with regulation or stakeholder forces. A well-construct of the SE program will not only neutralise these anxieties, but also open the fundamental opportunity. Previously merchants approached the test by using ‘supplier scorecards’ but a scorecard without a proper SE program to support will bound to fail in the end (Moss, 2012). This happens due to these retailers are concentrating on gathering this difficult, hard-to-collect data for the scorecards rather than understanding the meaning of the data or what are they able to study from it.

2.1.1 Relationship between SE and key supplier retention

It is essential for the suppliers to win a buyer’s trust and nurture it over the course of a relationship – SE. A buyer’s trust in a supplier is defined as “the willingness to rely on the supplier in times of uncertainty which is based on the confident expectation that the supplier will perform the specific action satisfactorily to the expectation of the buyer” (Ryu, 2005). Relationship permanency is known as both party’s enthusiasm to extend their collaboration contract for a time of period, either unspecified or not. There are relative studies which illustrate there is a better chance for relationship sustainability of the supply chain firm where their collaboration level is greater, comparing to those with less collaborative supply chains as stated by Myhr and Spekman (2005) in their study. This indicates that capability of suppliers for generating customers’ fulfilment, continue to be loyal, future expectations of their customers have been meeting and create intentions to retain suppliers are known as important condition that will trigger the desire for the purchasing partner to retain the established the relationship (Hennig-Thurau et al., 2002). There is no any literature previously tested SE as the element to measure supplier retention. Therefore, the present study, proposes the following hypothesis:

H1 SE has positive influence on key supplier retention in E&E companies in Malaysia.

2.2 Supplier quality

Supplier selection is the procedure by which the buyer finds, evaluates, and deals with suppliers. Supplier need to be evaluated before an organisation start dealing with them. They will be evaluated in the mode of pre-qualified which comprises understanding well the supplier’s business which includes financial, quality assurance and performance based on the top present customers and the significance of these dealings with the top customers. This will aid the procurement team to have a better understanding on these
suppliers’ capabilities. Identify appropriate suppliers always a challenging task for the buyer, due to each supplier may have various strengths and weaknesses which involve very cautious valuation by the buyers before engaging them the job or before even acquiring from them. As after sales support is very vital for buyers nowadays, tough competition forces suppliers to have serious responsiveness after sales and made them as part of their marketing tool. Holjevac (2008) defined quality as follows:

1. Quality refers to the capability of a product or service to steadily meet or exceed customer’s expectations.
2. Quality means receiving what you have paid for.
3. Quality is not somewhat that is accepted as a special feature, instead it is an essential part of a product or service.

From the corporation’s point of view, if the supplier has poor quality, it’s a direct reflection on them, not the supplier. If a supplier lets them down, they will let their customer down. If their supplier delivers them with a low-quality component, it can undesirably distress their delivery and cost.

Customers will always require products and services distributed to them as per their decided quality or be obtainable as per the agreed time, and be reflect value which is worth for money. Purchasing firm, will only persist their supplier if their supplier, supplies products which can gain satisfaction of manufacturers, and this can be achieved when supplier produce products or services that fulfil customer’s requirements and their expectations. Most of the key electronics original equipment manufacturers (OEMs) will judge their suppliers, according to technology, distribution and the total cost of proprietorship. Some of the companies will also consider a few factors into the quality scorecards which are social responsibility codes of conduct and ecological compliances and governmental protocols. If the expertise is convincing, innovative and being useful, this will cause some of the OEMs will work through a start-up to progress their supplier’s manufacturing and quality processes. For many OEMs, this is similarly vibrant as the supplier not only will advanced parts based on the new technologies, but they are also capable to yield the parts with higher revenues, higher quality and higher reliability doesn’t matter if it is combined an application-specific circuit or high-density low-power memory chip. Jantan et al. (2006) did a study to evaluate the relationship between technology, quality, cost and delivery performance-based, supplier selection approaches, and manufacturing flexibilities, product flexibility, launch flexibility, and volume flexibility by doing a postal survey of 120 manufacturers which in reverted 92 usable replies. Their findings discovered that the selection of suppliers based on technological and quality performance, which positively affects all the three dimensions of manufacturing flexibility, with balancing effects of good technology and quality roadmaps.

2.2.1 Relationship between SQ and key supplier retention

According to Monczka (2000), product quality in the electronics industry is a certainty. The six-sigma approach by companies such as Motorola, have become standard practice in the industry. Nevertheless, the input quality of some suppliers is still problematical. Furthermore, quality of component parts affects customers’ insights of quality in the final product. Product quality is viewed as a necessary aspect in selecting a supplier. Based
upon the former research and practices, both large and small firms conclude that there is a
trend in the selection and retaining of suppliers where their quality been stressed (Pearson
and Ellram, 1995). Lahiri et al. (2012) also has emphasised on greater quality of the
partnership between the buyer and the supplier will eventually enhance the indication of
performance and profits were at the same time the focal firm’s managing ability also
excessive. Consideration has also revealed that the relationship quality between buyer
and supplier significantly affect the performance of both parties (Lee, 2001; Lee and
Kim, 1999). There is no any literature previously tested SQ as the element to measure
key supplier retention. Therefore, the present study, proposes the following hypothesis:

**H2** SQ has positive influence on key supplier retention in E&E companies in Malaysia.

### 2.3 Supplier infrastructure

Businesses have exceeded the geographical boundaries with the rise of logistics
developments and more advance information technology. There are progressions in the
number of companies which have already changed their emphasis on sourcing
domestically, so that the supplier foundations can be developed round the world and this
is due to the cause of world’s economy globalisation (Min and Mentzer, 2004). Awareness in international sourcing increased as the result due to the initiative of the
trade barrier control and the comparative strengths of the world geographical region’s
diversity of realisation. There are further innovative been introduced by information
technology for closer management of supply chains, Thus, buyers could expect less
importance of their supplier’s geographic location during selection decision problem.
Supplier location may also be a concern in a way not manifested in logistics costs.
According to Wan and Beil (2009) study, buyer may be exposed to risks of cost such as
transportation cost spikes between the buyer’s location and the supplier district, because
of the origin of the port strike when suppliers are in the same region.

By choosing suppliers from different regions, the suppliers’ total costs can be
reducing, and this could only benefit if the buyers are able to prevent extra profit-taking
by low-cost suppliers. However, dealing with distant suppliers might result to longer
delivery times and additional freight costs. If buyer needs rather rapidly, a local supplier
might be a better selection. Though, is it advisable to scrutinise freight policies of distant
suppliers as bulk orders, for instance, might be free shipping or different orders can be
combined to reduce costs (Wan and Beil, 2009). There are two principal components in
supplier image, which are known as functional and the second component known as
emotional. Functional component comprises of the coherent and the structural analysis on
the performance of the organisation’s performance by focusing on the characteristics
which are tangible that can be measured whereas, for the business of the emotional
component generally is based on characteristics which are subjective, where the
sentimental of attachments are comprises (Alwi et al., 2009; Chang and Tu, 2005;
O’Loughlin et al., 2004). As stated by Kuo and Ye (2009), there is a total of three aspects
which have been identified, where the supplier image influences the corporate images,
supply images and credibility. As the member of society, corporate image usually linked
to the business. Therefore, it has not only been observed as products and services
provider, but being observed as terms of how overall the surrounding society was funded
and encourages.
Supply image is defined according to the infrastructure of the industry cares in the necessities and requirements of their customers or buyer. Da Silva and Alwi (2008) had discussed regarding the supplier in their study where they stated that image is considered as vital predecessor of trustworthiness, and according to the formation of variability of supplier image, loyalty will improvise. Friedman et al. (2011) also argues that it is necessary to addressed supplier image by business as if it is not managed appropriately can cause either equally positive or negative concerns. For the precise intentions, it is encouraged for the customers or buyers to identify their suppliers and their brands. Supplier image is considering as one of the important factors which can assists in influencing purchaser loyalty, and moreover, for more repeat support image of the suppliers plays as an encouraging factor too.

Suppliers should also need to make sure that they have sufficient cash flow to produce or deliver the order of their buyers, as it is a very important aspect. Usually, both buyers and sellers will consider for partnership with whom they think they can sustain will emerge relationship, both in the current and in the upcoming. To achieve this, a credit evaluation will help to reassure that they will not go out of business in the situation that is most needed. Based on Beil (2009) studies, the position of suppliers’ financial and their financial capability possibilities for short to medium term can be decided accordingly by buyers using published supplier assessments. Suppliers who are unbalanced in term of financial will most likely be struggling more in contributing to venture, partnership because they need to emphasise their efforts on improving their security of financial. Due to this circumstance, the suppliers and buyers are more aware of their possible partners’ financial situation (Ellram, 1990). Supplier flexibility involves of building organisational competencies to sense threats to supply continuousness and rapidly respond. This would develop organisational elasticity to distraction, forming competitive advantage for the supplier (Zsidisin and Wagner, 2010). They propose there is necessity for suppliers with the degree of flexibility which empowers them to be both competent and effective to fulfil their customer’s requirement. This flexibility can only be assured when suppliers are financially and operationally sustainable. When selecting a supplier, it is important to look for knowledgeable suppliers who have been in business for a long time. Stability is vital, mainly if entering into a long-term contract with a supplier or they are the only supplier of a specific item that required for business (Beil, 2009). Beil (2009) studies discuss on the capabilities of suppliers is based on their delivery capacities within the shorter lead times are very important as the buyer may be uncertain about their requirements upon the exact quantity over the life of the bond. For long-term bonds, this is normally true, where the buyer’s product demands may be tied with the unforeseen occasion of the market.

2.3.1 Relationship between SI and key supplier retention

Suppliers’ economic position may affect the currency exchange rate and local price control. For international sourcing, these can consequence in greater hidden costs. According to Awino (2002), to label as a good supplier, decent financial base is a must. So that, if there is a situation of overdue payments occurs, hindered of supply can be overcome. Generally, if buyers going to form long-term bonds with their suppliers or they are being identified as the only supplier for certain items that are compulsory for business, the stability of that supplier is very important (Beil, 2009). According to Mwikali and Kavale (2012), the performance and history of the suppliers help in taking
decisions for its selection such as financial status, performance history and geographical location. There is no any literature previously tested SI as the element to measure supplier retention. Therefore, the present study, proposes the following hypothesis: 

H3 SI has positive influence on key supplier retention in E&E companies in Malaysia.

2.4 Supplier commitment

SC is one of an important aspect to achieve competitive advantage. Ibrahim and Najjar (2008) describe commitment as “an exchange partner believing that an ongoing relationship with another is so important as to certify optimisation efforts and maintaining it; that is, the committed party trusts the relationship is worth working on to confirm that it sustains indefinitely.” Commitments of higher level are predictable for successful relationship (Cai and Wheale, 2004). Based on Ibrahim and Najjar (2008) point of view, to decide the interactions effectiveness from ineffective, commitment considers as an imperative resource. Therefore, based on the mutual commitment, strong relationships are founded. An important result of worthy relational is based upon commitment is normally noticed to connect and it is influenced by the buyer’s perception of the effort which made by their suppliers. Commitment is driven by the benefits constantly which accumulated to one another in the relationship. The point is that, suppliers who are committed usually have a better tendency to perform due to the requirement to maintain their commitment. It can be concluded clearly that the both sides relationship becomes more established, when the commitment percentage becomes further visible. Subsequently, in term of the dimension of customers’ loyalty, commitment is considered as one of the important variable (Du Plessis, 2010; Liang and Wong, 2004). Commitment and trust, functions in the same method in that certain level of commitment are mandatory to initiate the correlation, and as the relationship develops, level of commitment will evolve too. There is mainly a total of three major dimensions of the listing of operational commitments which the first dimension is known as, contributory commitment, where costs and feeling of inconveniences for leaving the existing relationship factors influence the relevant parties according to Gilliland and Bello (2002). The second dimension is known as normative commitment, which is established based on the value of the partners in the collaboration as per Brown (1995), opinions. The third dimension which has been identified by Brown (1995); Porter (1980); Allen and Meyer (1990) is commitment which is effective. This effective commitment relates to the identification of partner and their involvement with the one another.

Buyers usually prefer to work together with their suppliers whom they identified as a source of investments on their behalf. More commonly, the enthusiasm to collaborate that shows the supplier’s commitment to sustain the relationship (Lewicki and Bunker, 1995; Zineldin, 2000). It must be noted that the resource spent in execution some associations to support a specified relationship cannot be willingly transferred elsewhere (Williamson, 1988). Such an act can indicate commitment to that relationship and consequence in a company being reflected more dependable by an exchange partner. Morgan and Hunt (1994) indicated that commitment is a central phase for the supply relationship success. This can be concluded that, when there is a presence of commitment, there will be stimulating for effectiveness, efficiency and productivity. As well as further supported by Anderson and Weitz (1992) who have emphasised that the commitment of the link of each supply chain is correlated on their awareness of commitment awareness regards to
the other members. In this way, there is a link where the buyer’s commitment most likely will affect positively on supplier’s commitment.

2.4.1 Relationship between SC and key supplier retention

Commitment offers the context where individual and joint goals of buyer and supplier can be accomplished without any anxiety of behaviour which is unprincipled because, the balance short-term difficulties with a long-term goal can be achieved with more committed partners. For relationship success, higher levels of commitment are anticipated (Cai and Wheale, 2004). Therefore, strong relationships are erected based on mutual commitment (Ibrahim and Najjar, 2008). Commitment is known as a certainty for the relationship sustainability. However, according to Moorman et al. (1992), commitment is “an enduring desire to maintain a valued relationship.” Partners do offer resources based on commitment, to sustain and further the collaboration objectives. Prahinski and Fan (2007) discuss about content and frequency in communication impacted suppliers’ commitment to change their behaviours. There is no any literature previously tested SC as the element to measure key supplier retention. Therefore, the present study, proposes the following hypothesis:

H4 SC has positive influence on key supplier retention in E&E companies in Malaysia.

2.5 Mediating effect of BSR towards key supplier retention

It is crucial to cultivate a stable buyer-supplier relationship, to achieve quality in the supply chain, where firms involved work further than organisational limitations to progress performance throughout the supply chain. According to Dwyer et al. (1987), based on the current profits concern and relationship with costs related eventually will go beyond an uncertain, and will trigger for positive assessment of the relationship. The acceptance of a long-term alignment towards the relationship will sooner or later lead to short-term losses while recognising the long-term relationship benefits. Commitment level has been identified as the strongest factor in intended decisions to endure in a relationship (Rusbult and Farrell, 1983). This perception is somewhat constant with Dwyer et al. (1987) who earlier mentioned that, commitment refers to an inherent or obvious an initiate for continuation of the relationship between the exchange partners. On the other hand, Weber et al. (1991) re-examine Dickson’s research outcome by studying published works during 1966 to 1990. They acknowledge that the main JIT components such as quality, delivery, net price, geographical location and production facilities, and capacity are given priority by many purchasing firms. According to Ellram (1995), there are confirmed from the literature on strategic supplier alliances, a specific indicator of a long-term, joint relationship, recommends that buyers tend to desire closer relationships when they desire to resist or the reliability of supply or inspiration SQ and delivery schedules. According to Soh and Yen (2015), there are various indicators can be used to measure relationship strength, such as involvement, trust, business understanding, involvement, commitment, communication, information sharing and knowledge for supplier performance. A number of researchers have studied the relations between relationship and performance. These have established achievements to the buyer from an effective relationship in terms of financing (Carr and Pearson, 1999; Martin and Grbac, 2003: Johnston, 2004) and lead time performance (Larson and Kulchitsky, 2000).
Moreover, these relationships can cause in enhanced awareness and customer loyalty (Martin and Grbac, 2003), innovation (Corsten and Felde, 2005; Johnston, 2004) and quality (Johnston, 2004). Effective relationships have also been presented to yield enhancements in supply chain performance (Narasimhan and Nair, 2005; Benton, 2005; Maloni, 2000). There is no any literature previously tested BSR as the element to measure supplier retention. Therefore, the present study, proposes the following hypothesis:

H5 BSR has positive influence on key supplier retention in E&E companies in Malaysia.

H6 BSR mediates the relationship between supplier capacity (SE, SQ, SI and SC) and key supplier retention in E&E companies in Malaysia.

2.6 Theoretical background and research framework

Penrose (1959) who proposed that the resources influenced, organised and utilise by the organisation are indeed more vital than industry structure. The word ‘resource-based view’ was invented by Wernerfelt (1984) much later, who observed the firm as a package of resources or assets which are tangled semi-permanently to the firm. Prahalad and Hamel (1990) recognised the concept of core competencies, which emphasises attention on a vital sort of resource – a firm’s capabilities. Barney (1991) also claimed that the firm’s resources are its crucial source of competitive advantage. RBV theory has made valuable influences to realise business phenomena for years and recently, has been conceived in operations and supply chain studies (Hunt and Davis, 2012; Rungtusanatham et al., 2003). According to Amit and Schoemaker (1993), they define resources as accessible stocks that firm reserves are controlled. Aside from that, the abilities of an organisation to attain resources, which are commonly from the combination with each other to accomplish an anticipated result, are known as capabilities. Barney (1991) mention that organisations will succeed competitive when they are capable enough to accrue resources and capabilities that are known as rare, valuable resources, non-substitutable, and difficult to imitate. For this study, this theory is applicable due, for the focal firms, suppliers can assist as a strategic relational (Hult et al., 2006).

For this study, RBV theory is only used to measure independent variables to mediating variables (MVs). It is not used to measure the dependent variable (DV) due to it is not related to performance. The independent variables in this study are SE, SI, SQ and suppliers’ commitments which are known suppliers’ practices that create the relationship between buyers and suppliers. According to Parolini (1999) and Lavie (2006), this is established in RBV of the firm and link theory, which proposes that industries interact since the need to access complementary resources and capabilities of other organisations. Current developments in the literature suggest that all value is co-created, appropriated and perceived by all players involved (Vargo and Lusse, 2004). Subsequently, a collaboration between buyer and supplier will result in three different perspectives which are value creation for the buyer, value creation for the supplier, and joint buyer-supplier value formation (Ulaga, 2001). It is discussed that the value perceptions of suppliers are established on abilities and competencies that suppliers can achieve access to or co-create with their customers. Thus, RBV theory is applied in this study where a company’s external relationships are observed as valuable, rare, and
unique assets that serve as a source of a sustainable competitive advantage (Palmatier et al., 2007; Conner, 1991).

Service switching, switching intention, customer loyalty, customer retention, and repurchase intention are all interrelated (Bansal and Taylor, 1999; Han, 2009). While, customer faithfulness, retention, and repurchase intentions, identified as positive outcomes for the provider, service changing and switching intention show contrasting results (Bansal and Taylor, 1999; Han, 2009). According to Keaveney (1995), the term ‘behavioural intention’ comprises both switching and repurchase intention. However, the intention to change reverses to unwelcome concerns, intention to repurchase indicates positive consequences. This is supported by Oliver (1997) who defined that, the behavioural intention as ‘stated likelihood to engage in a behaviour’. Which is similar with the switching intention in this study where will study about the E&E companies (E&E) intention, to retain their key supplier. Switching intention does not support a firm to acquire rare, valuable, non-substitutable, and difficult to imitate resources. However, as we move on to a post-industrial economy, the importance has shifted from the supply side to the demand side, and here switching intention will help a firm sustains one of its key assets, which in this study is the key supplier. A firm may pursue accepted strategies for achieving competitive advantage like the low cost or differentiation strategies, but switching intention will help a firm sustain the advantage.

Figure 1 Conceptual research framework of key supplier retention

Earlier studies, generally in marketing and consumer behaviour, have explored service switching from the customer’s perspective (Bansal and Taylor, 1999). According to Sambandam and Lord (1995), service switching shows a person’s aspiration to replace or change his or her current service provider to another or competitors. There also several studies have examined and acknowledged determinants of switching behaviours (Anderson, 1986; Keaveney, 1995). Cronin and Taylor (1992) found that service quality/performance, satisfaction, and switching costs are most likely to inhibit customer switching. Similarly, Colgate and Lang (2001) and Keaveney (1995) recognised service performance, such as a core service and service encounter and for the switching barriers for an example, switching costs, relational investment, and lack of alternatives’ attractiveness as imperative impeding components of switching acts. It is not unexpected, then, that various service firms pursue to increase their service performance and
fulfilment levels while dealing successfully with switching barriers to promote customer retention. Based on Keaveney (1995) study regarding the switching behaviour in the service industry has been essential for understanding switching behaviour. The purpose of Keaveney (1995), the research was to recognise why customers switched service provider by recognising the determinants that affected their switching decisions. In the context of this study, switching behaviour involves identifying the determinant of key supplier retention in E&E companies of Malaysia. With this the present study presents the below framework in Figure 1 as the research model for empirical testing:

3 Research methodology

A questionnaire technique is chosen for data collection directly from employees who are knowledgeable and experienced in this research area. A survey questionnaire designed according to the essential hypotheses findings above. The questionnaire was created based on previous literature discussed either directly or indirectly to supplier retention and providing it with appropriate measurement scales of variables to be used in the present study with five-point Likert-type scale ranging from 1–5 which refer as ‘strongly disagree’ for 1, ‘disagree’ for 2, ‘neutral’ for 3, ‘agree’ for 4 and ‘strongly agree’ for 5. A total of 39 items are included to capture the research model. The snowball sampling based on the referrals in E&E companies was established first. This technique enables to obtain the probability that the sample will symbolise good cross sectional and heterogeneous units of the population. Around 400 questionnaires were sent to a number of associates in numerous E&E companies in Malaysia and respective sales or purchasing department’s senior officers, managers and directors. A total of 134 questionnaires were returned which represents 33.5% of response rate. There are 21 sets of respondents omitted from the analysis due to incomplete response. Therefore, the total questionnaire 113 sets were used to further analyse the data using SPSS software package.

4 Findings and results

The socio-demographics of the respondents are outlined in Table 1. With respect to gender, 54% were males and 46 % were females. Most of the respondents are Chinese (63.7%), followed by Malays (17.7%), Indians (16.8%) and others consist of 1.8%. In addition, for the ages of respondents in the range of 21–25 years old, consist of 1.8%, 26–30 years old 0.9%, 31–35 years old (31%) and followed by ages between 36–40 years old (31%). Next ages, 41–45 years old comprise of 38.9%. Finally, above 45 years old consist 18.6%. Fewer respondents from age group 26–30 years. Furthermore, for the number of years, respondent working in the company consist of 31.9% for 2–4 years, 46.9% for 6–10 years. Following for 11–15 years is 13.3%, followed by 16–20 years is 4.4% and 3.5% for more than 20 years. Most of the key supplier range of the respondent is 9–11 supplier which is 34.5%. The respondents mostly are from a foreign based company which is around 79.6% compared to the locally based company which is 20.4%.
Table 1  Socio-demographic profile of respondents (n = 113)

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<th>Variable</th>
<th>Particulars</th>
<th>No. of respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>52</td>
<td>46.0</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>61</td>
<td>54.0</td>
</tr>
<tr>
<td>Age (in years)</td>
<td>21–25</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>26–30</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>31–35</td>
<td>10</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>36–40</td>
<td>35</td>
<td>31.0</td>
</tr>
<tr>
<td></td>
<td>41–45</td>
<td>44</td>
<td>38.9</td>
</tr>
<tr>
<td></td>
<td>Above 45</td>
<td>21</td>
<td>18.6</td>
</tr>
<tr>
<td>Race</td>
<td>Malay</td>
<td>20</td>
<td>17.7</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>72</td>
<td>63.7</td>
</tr>
<tr>
<td></td>
<td>Indian</td>
<td>19</td>
<td>16.8</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Type of company</td>
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<td>107</td>
<td>94.7</td>
</tr>
<tr>
<td></td>
<td>Non-listed</td>
<td>6</td>
<td>5.3</td>
</tr>
<tr>
<td>Experience (in years)</td>
<td>2–5 years</td>
<td>36</td>
<td>31.9</td>
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<td></td>
<td>6–10 years</td>
<td>53</td>
<td>46.9</td>
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<td>11–15 years</td>
<td>15</td>
<td>13.3</td>
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<td></td>
<td>16–20 years</td>
<td>5</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>More than 20 years</td>
<td>4</td>
<td>3.4</td>
</tr>
<tr>
<td>No. of key suppliers</td>
<td>Less than two suppliers</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>3–5 suppliers</td>
<td>14</td>
<td>12.4</td>
</tr>
<tr>
<td></td>
<td>6–8 suppliers</td>
<td>24</td>
<td>21.2</td>
</tr>
<tr>
<td></td>
<td>9–11 suppliers</td>
<td>39</td>
<td>34.5</td>
</tr>
<tr>
<td></td>
<td>More than 11 suppliers</td>
<td>34</td>
<td>30.1</td>
</tr>
<tr>
<td>Company based on</td>
<td>Malaysia</td>
<td>23</td>
<td>20.4</td>
</tr>
<tr>
<td></td>
<td>US</td>
<td>85</td>
<td>75.2</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>9</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>Taiwan</td>
<td>6</td>
<td>5.3</td>
</tr>
</tbody>
</table>

4.1 Factor analysis and reliability for independent variables

In creating a practical value of the dimensionality of a set of items, factor analysis plays a crucial role by recognising the number of factors and the loadings of each variable on the factors (Hair, 2006). There are four independent variables in this research study, SE, SQ, SI and SC. There are seven dimensions in SE which are named as SE1, SE2, SE3, SE4, SE5, SE6 and SE7. Meanwhile, SQ has six dimensions which are SQ1, SQ2, SQ3, SQ4, SQ5 and SQ6. For SI, there are five dimensions, which are SI1, SI2, SI3, SI4 and SI5 and then SC1, SC2, SC3, SC4 and SC5 are used as the five dimensions in SC. The outcome of the factor analysis revealed in Table 2 involves of five variables which impact supplier retention. The main loading value should be more than 0.5 and the cross loading should
be less than 0.35, so that the factors can be accepted (Table 2). Based on the result, there are a total of seven questions need to be dropped which are SE3, SE7, SC2, SI2, SI5, SQ6 due to the main loading value is less than 0.5 and cross loading is more than 0.35. Apart from that, the question of SE3, SI2 and SC2 is grouped to become a new independent variable which is confidential sharing (CS). Therefore, the result shows there are five factors that influence supplier retention. SE, SQ, SI and CS are highly interconnected with each other due to the Cronbach’s alpha shown 0.810, 0.864, 0.885 and 0.63 respectively which greater than the minimum value 0.5. However, after dropping one question in SC, the variable also highly interconnected where the value of Cronbach’s alpha 0.713. The eigenvalue is more than 1 for all factors. KMO is 0.725 which is adequate since it is more than 0.5. Total variance explained is 70.76% and it surpassed the minimum suggested value of 60% (Hair, 2006).

Table 2  Factor loadings of question items of all independent variables (latent variables)

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Supplier quality</td>
<td></td>
</tr>
<tr>
<td>SQ2</td>
<td>.836</td>
</tr>
<tr>
<td>SQ4</td>
<td>.802</td>
</tr>
<tr>
<td>SQ1</td>
<td>.732</td>
</tr>
<tr>
<td>SQ5</td>
<td>.721</td>
</tr>
<tr>
<td>SQ3</td>
<td>.720</td>
</tr>
<tr>
<td>Supplier infrastructure</td>
<td></td>
</tr>
<tr>
<td>SI1</td>
<td>.897</td>
</tr>
<tr>
<td>SI3</td>
<td>.878</td>
</tr>
<tr>
<td>SI4</td>
<td>.866</td>
</tr>
<tr>
<td>Supplier engagement</td>
<td></td>
</tr>
<tr>
<td>SE5</td>
<td></td>
</tr>
<tr>
<td>SE4</td>
<td></td>
</tr>
<tr>
<td>SE6</td>
<td></td>
</tr>
<tr>
<td>Confidential sharing</td>
<td></td>
</tr>
<tr>
<td>SE2</td>
<td></td>
</tr>
<tr>
<td>SC4</td>
<td></td>
</tr>
<tr>
<td>SE1</td>
<td></td>
</tr>
<tr>
<td>Supplier commitment</td>
<td></td>
</tr>
<tr>
<td>SC1</td>
<td></td>
</tr>
<tr>
<td>SC5</td>
<td></td>
</tr>
<tr>
<td>SC3</td>
<td></td>
</tr>
<tr>
<td>KMO</td>
<td>0.725</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>5.298</td>
</tr>
<tr>
<td>Variance</td>
<td>31.167</td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>0.864</td>
</tr>
</tbody>
</table>

(reliability analysis)
4.2 Factor analysis and reliability for MV and DV

Table 3 shows the result of MVs factor loading which is BSR and supplier relation (SR) as a DV. The factor loadings of the question items are more than 0.5 and the KMO is showing 0.884 for MV and 0.786 for DV which is greater than the minimum acceptable value 0.5 with significant value for the Bartlett’s test of sphericity. All the items are highly interconnected with each other due to the Cronbach’s alpha is 0.927 for MV and 0.893 for DV which are greater than the minimum threshold value of 0.5.

Table 3 Factor loadings of question items for MV and DV

<table>
<thead>
<tr>
<th>Buyer-supplier relationship</th>
<th>Component</th>
<th>Key supplier retention</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSR5</td>
<td>0.907</td>
<td>SR3</td>
<td>0.863</td>
</tr>
<tr>
<td>BSR3</td>
<td>0.896</td>
<td>SR4</td>
<td>0.843</td>
</tr>
<tr>
<td>BSR2</td>
<td>0.879</td>
<td>SR1</td>
<td>0.806</td>
</tr>
<tr>
<td>BSR4</td>
<td>0.866</td>
<td>SR2</td>
<td>0.803</td>
</tr>
<tr>
<td>BSR1</td>
<td>0.831</td>
<td>SR9</td>
<td>0.780</td>
</tr>
<tr>
<td>BSR6</td>
<td>0.782</td>
<td>SR10</td>
<td>0.745</td>
</tr>
<tr>
<td>KMO</td>
<td>0.885</td>
<td>KMO</td>
<td>0.786</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>4.451</td>
<td>Eigenvalue</td>
<td>3.912</td>
</tr>
<tr>
<td>Variance (%)</td>
<td>74.18</td>
<td>Variance (%)</td>
<td>65.20</td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>0.927</td>
<td>Cronbach’s alpha</td>
<td>0.893</td>
</tr>
</tbody>
</table>

Figure 2 Revised framework after factor analysis and reliability test (see online version for colours)
After running factor analysis and reliability test, the number of independent variables becomes five from four dimensions. The fifth variable is named as CS since it is connected to the technical sharing between buyer and supplier at periodical intervals and is a combination of question items SE1, SE2, and SC4. In other words, these questions (SE1, SE2, and SC4) relate to sharing of information between manufacturers and suppliers and therefore the new name CS is coined.

4.4 Descriptive analysis

Table 4 shows the descriptive statistics and correlation matrix for the independent variables (SE, SQ, SI, SC, and CS), MV (BSR) and DV (SR). All these variables were measured with 5-point Likert scale, ranged from 1 being strongly disagree to 5 being strongly agree. Based on the results in Table 4, the mean for all these variables are more than 3.0. From the description, analysis results, the highest mean for variables is for SQ, 4.6670 and highest standard deviation is 0.88967 for the variable CS. The multi-collinearity arises when two or more predictor variables are greatly correlated within each other and increase to uneven coefficients. To ensure there is no multi-collinearity issue exists, the correlation coefficients for all the variables should be lower than 0.9. The results in Table 4 shows all the variables are less than 0.9 and there is no multi-collinearity problem appears. Apart from that, all the independent variables such SE, SQ, SI, SC, and CS are significantly and positively correlated to the DV supplier retention (SR).

<table>
<thead>
<tr>
<th>Var</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
<th>SQ</th>
<th>SI</th>
<th>SC</th>
<th>CS</th>
<th>BSR</th>
<th>SR</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE</td>
<td>4.354</td>
<td>0.396</td>
<td>1</td>
<td>0.370**</td>
<td>0.203*</td>
<td>0.374**</td>
<td>0.293**</td>
<td>0.284**</td>
<td>0.563**</td>
</tr>
<tr>
<td>SQ</td>
<td>4.660</td>
<td>0.443</td>
<td>1</td>
<td>0.341**</td>
<td>0.494**</td>
<td>–0.195*</td>
<td>0.588**</td>
<td>0.449**</td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>4.289</td>
<td>0.635</td>
<td>1</td>
<td>0.333**</td>
<td>–0.056</td>
<td>0.487**</td>
<td>0.397**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>4.580</td>
<td>0.500</td>
<td>1</td>
<td>–0.010</td>
<td>0.573**</td>
<td>0.511**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>2.631</td>
<td>0.889</td>
<td>1</td>
<td>–0.126</td>
<td>0.206*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSR</td>
<td>4.647</td>
<td>0.458</td>
<td>1</td>
<td>0.591**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SR</td>
<td>4.339</td>
<td>0.429</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ** p < 0.01 and * p < 0.05.
Table 5 shows, model-1 which is the regression analysis for independent variables on DVs. The R-square value for model-1 is 0.495 and the F-value is highly significant at 20.757. There is no multi-collinearity problem in this model, since VIF value is less than 5. Furthermore, all the regression coefficients (standardised beta values) are positively and significantly influencing the Supplier Retention.

Model-2 was tested using the hierarchical regression analysis with addition MV (BSR) into the relationship between independent variables and a DV. After adding perceived views as the MV, there is a change in R square from 0.495 to 0.563, thus there is an increase of 0.068 (6.8%). It means that MV affects the relationship between independent variables on the DV. For all the variables, the VIF value is less than 10 which confirms that there is no multi-collinearity issue with this model. Based on the significant values, there are three predictors which were SQ, SI, and SC fully mediated by the BSR on the supplier retention. On the other hand, SE and CS were partially mediated by the BSR on the supplier retention.

Table 6 Regression analysis for independent variables and MV on DV

<table>
<thead>
<tr>
<th>Model-2</th>
<th>Beta value</th>
<th>t-value</th>
<th>p-value</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVESE</td>
<td>0.321</td>
<td>4.130</td>
<td>0.000</td>
<td>1.451</td>
</tr>
<tr>
<td>AVESQ</td>
<td>0.051</td>
<td>0.587</td>
<td>0.558</td>
<td>1.831</td>
</tr>
<tr>
<td>AVESI</td>
<td>0.103</td>
<td>1.379</td>
<td>0.171</td>
<td>1.326</td>
</tr>
<tr>
<td>AVESC</td>
<td>0.119</td>
<td>1.431</td>
<td>0.155</td>
<td>1.664</td>
</tr>
<tr>
<td>AVECS</td>
<td>0.176</td>
<td>2.444</td>
<td>0.016</td>
<td>1.244</td>
</tr>
<tr>
<td>AVEBSR</td>
<td>0.374</td>
<td>4.046</td>
<td>0.000</td>
<td>2.054</td>
</tr>
</tbody>
</table>

Note: $R^2 = 0.563$, $F= 16.369$ and $p = 0.000$ (ANOVA table).

5 Discussion

This research intention is to recognise the determinants of key supplier retention in E&E companies of Malaysia. From literature assessment, there were four main factors that were identified as the primary predictors persuading key suppliers retention. After running factor analysis and reliability test, the number of independent variables becomes five from four dimensions. The fifth variable is named as CS since it is connected the technical sharing between buyer and supplier at periodical intervals. In addition, the current study aims to identify whether the buyer-supplier relationship mediates the relationship between the independent variables (SE, SQ, SI, SC and CS) on the DV (key supplier retention). The survey questionnaire method was exploited, to gather the data from the targeted respondents. There were a total of 112 manufacturers who have responded to this study.

The results of this study discovered a significant and positive relationship between SE, SQ, SI, SC and CS on key supplier retention in E&E companies in Malaysia. The significance value of all these variables is less than 0.05 ($p < 0.05$) which means that these variables determine the decision to retain key supplier. SE is about reliability and commitment of suppliers to their respective manufacturers. When buyers and suppliers of E&E companies are committed to each other, the relationship continuousness will develop for long term partnership. These findings can be related to the research of
Rusbult and Farrell (1983) who indicated that commitment level has been identified to be the greatest predictor of intended assessments to persist in a relationship. Dwyer et al. (1987) also emphasises that, commitment is important to initiate the relationship continuity between the exchange parties which will result in continuation of the relationship. Suppliers who can resource the accurate volume of supplies or services at the exact time, at the right price and the precise quality was acknowledged as an effective supplier. From the viewpoint of manufacturers, if their suppliers supply poor quality of raw materials, eventually it will have a direct reflection on the production of products and the image of manufacturers will be damaged from the customers’ viewpoints. Hence, SQ was considered as an important factor to determine key supplier’s retention. In addition, the capability of suppliers to follow the predefined delivery schedule is always the prime criteria for selection in this fast-moving world. This is supported by Stanley and Wisner (2001) who have measured several industries and proposed that quality and on-time delivery were the utmost significant qualities of suppliers.

Referring to regression model-2, it shows that the buyer-supplier relationship partially mediates for SE and CS on supplier retention where the p-value for these two predictors is less than 0.05. For SE, the p value remains 0.00 which means that SE plays an important role for key supplier retention when there is a presence of good buyer-supplier relationship. As far as CS is concerned, when there is a good buyer-supplier relationship the p value decreases to 0.016 but it is less than 0.05. This shows that the manufactures have full confidence and belief on the suppliers as they never reveal the company secrets to others. The BSR fully mediates for SQ, SI and SC to supplier retention. Since, all these factors were the basic requirements for any supplier to be a part of the manufacturers. Based on the results the p value is more than 0.05 for these three variables which are p = 0.558 for SQ, p = 0.171 for SI, p = 0.155 for SC.

This means that, with the existence of the buyer-supplier relationship, buyer adopt to trust or have confidence upon their key suppliers in their transactions and this lead to relationship continuity by retaining their key suppliers. Therefore, buyers have confidence upon their key supplier’s capability to produce quality products and distribute to them on time without any delay. This result is consistent based on Morgan and Hunt (1994) finding who emphasises one of the dominant features for continuity of relationship is known as trust. This can only be achieved when they have confidence upon their partners’ reliability and trustworthiness. This statement further supported by Forrest and Martin (1990) where, in their findings, they debated that the relationship failure and collapse will happen when continuous and mutual trust upon them.

6 Limitation and future research directions

Overall, the result recommends that the sets of variables are reliable and valid measures of their relevant factors. Nevertheless, there are some limitations recognised during the research was being conducted. First, sample was restricted to E&E firms only. Therefore, the results are merely based on the survey of a single industry, so the results may not able to be used for other industries precisely. It is preferred more respondents from a larger pool of samples for a further significant and perfect study. Second, research findings are constructed based on 112 respondents in Malaysia. To have widespread finding for the population in Malaysia, the sample size of this study is substantially lesser as the study covers entire E&E companies of Malaysia. Apart from that, it is based on no probability
sampling way, which cannot be assured generalised to the population in Malaysia (Sekaran and Bougie, 2010). But, this convenient sampling method is beneficial for attaining only primary insightful information of the respondents’ intension to retain their key supplier based on limitations provided in this study. The next limitation is the time limit of the data collection. Since, the data were collected once and within 2-month time frame, such studies known as cross-sectional studies (Sekaran and Bougie, 2010). Therefore, there were several aspects which could impact the survey inputs, during the time as the input only replicate the relationship of the undertaken study at that specific point. The factors which may influence were, for example, economic conditions, business outlook and financial ability of the respondent’s firm. There are some recommendations for future research, based on the findings and limitations of this study. Consequent research should re-examine whether ‘supplier selection and retention’ completely interlink the measurements of purchasing competitive importance. The validation of scales is an approximate, continuing process and validity is recognised when there are sequences of studies that improves and assessment of measures across the different populations (DeVellis, 1991; Hensley, 1999). Furthermore, research should be done on larger generalised ability with respondents of diverse population groups and the sample size should equally take from each state of Malaysia to have a better result of the study. Future researcher can be considered more time for the study that can be increased from seven weeks to 12 weeks to gather more respondents. Moreover, future research endeavours can increase the validity of collecting data from multiple respondents within each firm.

7 Conclusions and recommendations

Purchasing function envelops major tasks accomplished by selecting and retention suppliers. To select suppliers, companies would decide what capabilities they are obtained, the conditions used to acquire them, and the expenditures they are willing to incur. Retention proposes a constant procedure of appraising suppliers to determine if the selection of suppliers is execution to further the aims of the buying organisation over time. In addition, the buyer-supplier relationship is significantly mediating the independent variables towards supplier retention. We can conclude that this study has studied the interrelationship among the variables and eventually to perceive the significant consequences on the DV (key supplier retention). The average score for key supplier retention is 4.34 with a standard deviation of 0.43 on a point scale. It means that the manufactures of E&E companies wish to retain the key supplier for smooth supply chain management.

Also, it indicates that the suppliers maintain their standards as per the expectations of the manufacturers. In the other dimension, the BSR has an average of 4.65 with a low standard deviation of 0.46. The manufacturers have remarked that key supplier is the major force from the procurement of raw materials till the production of end products. This was clear when the respondents have given high scores for both supplier retention and BSR. In fact, the respondents are highly consistent in their views of appreciations to key supplier. For the sake of comparison, it is of interest to test the proposition that the more the score for BSR results in the more the score for supplier retention, the following analysis is carried out. Out of 112 respondents, 41 (36.6%) have given more than 4.34 as
their overall average score for supplier retention. On the other hand, 72 (64.3%) out of 112 manufacturers remarked that they have a good relationship with the key supplier. When chi-square test was applied, for testing the association between the two attributes, namely BSR and supplier retention, it was found that the two attributes were highly associated ($\chi^2 = 9.789, p = 0.002$).

It reveals that the key supplier has excellent coordination with the manufacturers for the smooth daily production operations. In a nutshell, the findings of this study recommend that with the existence of the MV – buyer-supplier relationship, it partially mediates the relationship between the SE and CS with the supplier retention and fully mediates the relationship with the SQ, SI and SC to key supplier retention. Subsequently, without the occurrence of the buyer-supplier relationship in the framework; there are positive and direct relationships with the supplier retention. Furthermore, this study emphasises the awareness that the buyer-supplier relationship does not really play an imperative role when it comes to SE and CS.

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References


Key supplier retention for electrical and electronic industry


Key supplier retention for electrical and electronic industry


