Evaluating key factors in supplier selection for micro-businesses: implications for buyer satisfaction

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Abstract: Final quality of products/services starts with suppliers in the supply chain. Problems can occur if suppliers do not deliver the quantities requested in full, on time, or buyers select suppliers solely on the basis of lowest price. Supplier selection has been studied for large businesses but not for very small (micro) businesses. Therefore, a survey was administered to micro-businesses to determine: what factors are important to micro-businesses in selecting suppliers and how satisfied they are with their suppliers. Factors included Brand Name, Consistency, Cost/Lower Price, Loyalty, Quality, and Warranty. Results indicated that none of the factors were unimportant. However, buyer satisfaction was found to be dependent on Quality, Brand Name, and the Length of Time of the Buyer/Supplier Relationship. Additionally, it was concluded that quality, along with complete, on-time delivery are key to buyer satisfaction and may help suppliers achieve preferred status with micro-business buyers.

Keywords: micro-business; supplier selection; quality; cost; buyer satisfaction; supply management.

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1 Introduction

Final quality of products or services starts at the root of all supply chain activity – the purchasing function. One major aspect of the purchasing function is supplier selection for the acquisition of materials, services and equipments. Supplier selection and purchasing functions are important since the costs associated with purchasing can be significant. However, as suggested by Deming, the purchasing function should not only focus on cost, but should also consider other factors, such as better supplier relationships (Stevenson, 2009).

The ability of a firm to select reliable suppliers and to maintain a productive relationship with them can have a significant impact on competitiveness and profitability. Paulraj (2008) confirmed this in his work that showed that coordinated supplier management has a significant impact on supplier as well as buyer performance. Consequently, supplier selection is widely considered as one of the most important functions in any production process. Many past researchers have said that it is not just important for large companies, but for small businesses too (Pearson and Ellram, 1995; Ellegaard, 2009).

Small/micro-businesses comprise a significant portion of the economic activity not only in the USA, but also in most other countries (we define *micro-business* as a very small business with fewer than 25 employees). Interestingly, in the context of supply chains, small/micro-businesses are often viewed as suppliers more than as buyers (Park and Krishnan, 2001). Additionally, the outsourcing of materials, services, and components to external suppliers has been recognised as a source of great competitive advantage (Paulraj and Chen, 2005). Sim et al. (2010) estimate that 85% of North American and European multinational companies practise outsourcing, some of which could reach micro-business level.

Even more significant is the emergence of new economies around the world in the so-called *Globalisation 3.0* (Friedman, 2004). These new economies have accelerated development and encouraged even more small/micro-business entrepreneurial activities. Another important reason to study small/micro-businesses is the fact that they contribute significantly to the overall employment and job creation of their economic system (Pearson and Ellram, 1995).

With such a significant transformation ongoing in the global economy, we see an opportunity to study the importance of supplier selection for micro-businesses. The selection process is critical for a number of reasons. First, as the trend towards 'just-in-time' manufacturing practices becomes commonplace, the consequence is often times a significant reduction of a firm's supply base (Sim et al., 2010). Second, as resources become scarce, there is a need for greater interaction between the buyer and supplier. Third, in order to deliver superior value to their customers, many firms choose to involve their suppliers early on in the production planning process (Trent and Monczka, 1998). Finally, micro-businesses realise that one of the ways to achieve a competitive edge is to control unit costs. Thus, we are interested in exploring ways to help micro-businesses be more effective in selecting their suppliers and become excellent suppliers for their own clients. It is apparent that a better understanding of how small/micro-businesses approach the supplier selection function is an important step towards increased productivity (Pearson and Ellram, 1995).

With the prevalence of e-commerce, micro-businesses compete not only with other local competitors, but also with global ones. There is a huge gap between large and small/micro-businesses in the manner in which the purchasing function is managed. Sim et al. (2010) suggested that for large businesses, suppliers must first qualify before selection. Once qualified based on certain factors, a supplier is then considered for selection. Thus, larger businesses use qualifying criteria and then selection criteria for choosing suppliers. Kumar et al. (2009) found that vendor reliability, vendor experience, and quality take priority for effective vendor selection for large-scale industries. In general, large businesses have purchasing managers/executives and support staff who have the knowledge and training in supplier selection. They use quality control screenings and keep records to evaluate and track supplier performance. This may not be the case with small/micro-businesses where resources are limited and several functions are performed by one person, usually with limited knowledge of those functions. Thus, being able to select the right supplier can be a challenge, especially for micro-businesses with limited expertise and resources. They rely on their subjective view of the supplier and tend to select suppliers based on convenience, recommendations from others, and/or quick availability. Will such an approach affect buyer satisfaction? This is our motivation for this paper.

While there have been a fair number of studies on supplier selection, many of them were conducted in the context of large, global companies (Dollinger and Kolchin, 1986; Evans et al., 1990; Kumar et al., 2009). Only a few studies were conducted that focused on the purchasing/supply management areas of small businesses (Pearson and Ellram, 1995; Ellegaard, 2009). It appears that the micro-business segment has been somewhat overlooked even though they are a significant part of any economy.

As a result, the scope of this study is about micro-businesses, and we explore the behaviour of micro-business buyers and their suppliers. We focus on what keeps micro-businesses satisfied with their suppliers, which could lead to long-term relationships. To help understand micro-businesses better from a buyer/supplier perspective, our study identifies factors micro-businesses view as important in the supplier selection process. We then empirically explore how satisfied micro-businesses are with their suppliers in the context of those factors that were identified as significant. Results from our study are expected to be useful in helping micro-businesses develop criteria for supplier selection. For micro-businesses that serve as suppliers, knowledge of what satisfies micro-business buyers could be valuable in developing a strategy for maintaining a productive relationship with their clients.

2 Conceptual background

2.1 Review of past studies on supplier selection

Table 1 summarises various past studies conducted on supplier selection, their context and significance.

Table 1 showed that many approaches have been proposed to address the formulation of criteria in supplier selection process (Min, 1994; Ghodsypour and O'Brien, 1998; De Boer et al., 2001; Humphreys et al., 2001; Liu and Hai, 2005). The common assumption is that cost/price is the driving factor behind supplier selection. Interestingly, some earlier studies consistently showed that cost was not dominant among other factors in supplier selection. For instance, instead of cost, Dickson (1966) suggested three critical factors: quality, on-time delivery, and the supplier's performance history. In the context of capital equipment suppliers, Dempsey (1978) found that the top three criteria for selection of suppliers were: delivery capability, technical capability, and quality. Price became a dominant factor only when decisions were recurring. Wagner et al. (1989) studied how various criteria for supplier selection were rated by retail buyers. They found that selling history, markup and delivery were among the most dominant factors, followed by merchandise quality and fashionability, while reputation, service, and country of origin showed little effect.

However, Pearson and Ellram (1995) found that purchasing has long focused on 'low price' as the major criteria with supplier selection and retention decisions made by small businesses. This seems logical because small businesses have limited resources and many of them rely on low cost to gain a competitive advantage. This is especially true for new small businesses. Many do not realise that the cost of purchased supplies/services is only a relatively small part of their entire operational costs. It is also true in service operations, some small manufacturing operations and some non-assembly operations. Also, in their 1995 study, Pearson and Ellram reported that the importance of supplier selection criteria does not vary by the type of purchase and/or product. They reported that quality, cost, current technology and design capabilities were the most important selection criteria.

Table 1 Summary of past supplier selection studies

Study	*Major factors*	*Context*	*Significance*
Dickson (1966)	Quality, delivery, and supplier performance	Comparison of 23 supplier selection criteria for business purchasing	Cost was not significant
Dempsey (1978)	Delivery capability, technical capability, and quality	Capital equipment suppliers	Price became a dominant factor only when decisions were recurring
Wagner et al. (1989)	Selling history, markup and delivery, merchandise quality, reputation, service, and country of origin	Retail buyers	Selling history, cost and delivery were among the most dominant factors
Pearson and Ellram (1995)	Cost, quality, current technology, and design capability	Small business	Low price was significant in supplier selection and retention made by small businesses
Ghodsypour and O'Brien (1998)	Cost, quality, and service	Qualitative and quantitative factors, linear programming model to maximise total value purchasing	Cost, quality and service were the three main classes when deciding supplier selection parameters
Kotabe and Murray (2001)	Competency, quality control, cost, brand image, and country	Service outsourcing	Outsourcing of supplementary services affect the service firm's market performance
Tracey and Tan (2001)	Quality, delivery reliability, product performance, and price	Study of relationship among supplier selection criteria supplier involvement, and customer satisfaction	Customer satisfaction and firm performance were enhanced with focus on these four factors in the study
Bhutta and Huq (2002)	Quality, service, delivery, price, reputation, and location	Industrial purchase	Quality, service, delivery, and price were more important than others

Table 1 Summary of past supplier selection studies (continued)

Study	*Major factors*	*Context*	*Significance*
Choy and Lee (2003)	Culture, joint development, forward engineering, trust, supply chain management, quality, and communication	Global supply chain with enterprises and manufacturers dispersed around the world	Intelligent generic supply management tool was developed. Cost and supplier relationship were found to be important
Hartley et al. (2005)	Price	Reverse e-auctions	Lower purchase prices is more important
Argyropoulou et al. (2007)	Use of guidelines (structured methodology)	Small and medium sized enterprises	Small business tended not to use the guidelines
Ellegaard (2009)	Cost, reliability, quality, delivery, and problem-solving	Small manufacturing firms	Price is a minor issue and reliability from suppliers is essential
Kumar et al. (2009)	Price, transportation cost, quality, goodwill, reliability, experience, lead time, and buffer stock	Small, medium, and large scale enterprises	Reliability of vendor ranked #1. It is followed by quality and vendor experience
Sim et al. (2010)	Cost, quality, delivery, service, and supplier relationship	Small and medium size businesses, manufacturing industry	Cost was most important followed by quality and delivery
Garfamy (2011)	Cost, quality, service, organisation, relationship, and cycle time	A large public healthcare complex and a medium sized manufacturing firm	Cost was an important selection factor

Built upon the previous literature, Ghodsypour and O'Brien (1998) confirmed that cost, quality and service were the three main classes when deciding on supplier selection parameters. Regarding the importance of evaluation, Carr and Pearson (1999) found that when firms had a strategic approach to purchasing, they became more involved in supplier evaluation. With supplier evaluation systems in place, the firm's financial performance was better than those without evaluation systems. Tracey and Tan (2001) showed that evaluating and selecting suppliers grounded in the criteria of quality, delivery reliability, and product performance enhanced the four dimensions of customer satisfaction (i.e. price, quality, variety and delivery) and firm performance.

As more studies on supplier selection were conducted over time, researchers began to refine the factors related to supplier selection. For instance, Kotabe and Murray (2001) found that a supplier's competency, service quality control, transaction-cost drivers, brand image, and country characteristics became more significant than other factors. However, Bhutta and Huq (2002) found that in industrial buying, criteria such as quality, service, delivery, and price were more dominant than those implicit criteria such as reputation and location. Shortly thereafter, Choy and Lee (2003) stated that culture, joint development, forward engineering, trust, supply chain management, quality, and communication are the key requirements for supplier partnership apart from an optimum cost. Later, Hartley et al. (2005) again showed the importance of price when their results suggested that attaining lower purchase prices is more important than improving the purchasing process, meeting strategic objectives, and finding new suppliers in their study of reverse e-auctions. In the context of ERP system implementation involving purchasing, Argyropoulou et al. (2007) found that many small and medium sized enterprises do not follow a structured methodology, implying lack of use of guidelines in supplier selection. We suspected the same for micro-businesses. In a recent study, Azadegan et al. (2009) found that trends in formal and informal communication patterns influence perceptions of supplier performance and buyer satisfaction.

Ellegaard (2009) did case studies regarding purchasing practices among small manufacturing firms. The study showed 'Small firm owners down-prioritise purchasing and spend few resources on developing their purchasing capabilities. They (small businesses) emphasise operational security from suppliers – covering quality and delivery as well as service and problem-solving capabilities. Price is a minor issue. They are extremely loyal customers, who rarely meet suppliers, but still manage to maintain trusting relationships with them. Reliability from suppliers is essential'. Kumar et al. (2009) examined vendor selection problems among small, medium, and large scale industries. They focused on price of product, transportation cost, quality certification, quality of product, goodwill of vendor, reliability of vendor, experience of vendor, lead time, and buffer stock required as relevant factors in supplier selection. They concluded that reliability of vendor, product quality and the vendor experience are the top three criteria. Sim et al. (2010) did a survey on supplier selection criteria in the manufacturing industry in Malaysia. Their finding showed the ranking of supplier selection factors as follows: cost (#1), quality (#2), delivery (#3). They concluded that suppliers are first qualified based on quality and delivery. Afterward, businesses would use cost and service as final selection factors. In 2011, Garfamy conducted a multiple case study to explore the effect of quality, service, organisation, relationship, cycle time, and cost on supplier selection. The result showed that cost is an important selection factor. Furthermore, the study indicates that a greater discrepancy existed for the supplier selection criteria in each case. He suggested that supplier selection is highly contextual and firms probably use a set of factors that is relevant to a specific situation (Garfamy, 2011).

To summarise, supplier selection studies have reported conflicting results (e.g. cost important or not as important) and have shown that criteria vary between large and small businesses. Moreover, no studies were found on micro-businesses. Also, the studies show that supplier selection is affected by a wide range of factors. However, there is no common list of criteria/factors used across previous studies on supplier selection. All this appears to be especially true in case of micro and small businesses which led us to conduct this study.

2.2 Identification of factors important to micro-businesses in supplier selection

Liu and Hai (2005) summarised various articles related to vendor selection involving 23 factor criteria and indicated that net price, delivery, and quality were discussed in 80%, 59%, and 54% of the 74 articles respectively. Pointing out an important fact, Avery (2008) quoted in concurrence, "Although many RFQs stress that price is not the most important part of the process, most have pricing as the major determinant". Supplier selection criteria have grown over the years. It first started with more general criteria including cost/price, quality, delivery, performance, capability, etc. Then it began to evolve with criteria such as joint development, culture, trust, brand image, service quality control, transaction-cost drivers, etc. With such a wide scope of supplier selection factors, it was necessary in this study to pick out factors that were relevant to micro-businesses. When considering different criteria that micro-businesses might use to select suppliers, it may not be a simple task to identify a list or subset of the most important factors. However, we were able to extract several factors from the past studies. We then narrowed the list of factors to what we believed were relevant and important to micro-businesses. The list was again refined and modified after informally consulting a number of micro-business owners available to us through a regional university's Small Business Development Centre. Among the final factors identified were: Brand Name, Consistency, Cost/Lower Price, Loyalty, Quality, and Warranty. The validity of the initial list was evaluated by several micro-business owners at the centre after asking them to judge each item and comment on its relevance. Their input allowed us to develop the final list used in this study shown in Table 2 below.

Table 2 Factors that micro-businesses consider when selecting suppliers

Factor	*Description*	*Reference*
Brand Name	Reputation as recognised by other	Wagner et al. (1989), Kotabe and Murray (2001), Bhutta and Huq (2002)
Consistency	Consistency of delivery times (timeliness) and quantities	Larson (1994), Tracey and Tan (2001), Kotabe and Murray (2001), Bhutta and Huq (2002), Ellegaard (2009), Kumar et al. (2009), Sim et al. (2010)
Cost/ Lower Price	Ability to offer competitive prices	Pearson and Ellram (1995), Ghodsypour and O'Brien (1998), Ellegaard (2009), Kumar et al. (2009), Sim et al. (2010), Garfamy (2011)
Loyalty	Willingness of suppliers to accommodate changes, requests, etc. Ability to maintain relationship	Dzever et al. (2001)
Quality	Performance, Durability, Flexibility, Simplicity, Ergonomic Quality	Dickson (1966), Larson (1994), Tracey and Tan (2001), Dzever et al. (2001), Bhutta and Huq (2002), Ellegaard (2009), Kumar et al. (2009), Sim et al. (2010), Garfamy (2011)
Warranty	After sales services	Dzever et al. (2001)

2.3 Research questions and proposed research hypotheses

As noted in some studies earlier, purchasing by small businesses tend to focus on 'low price' in supplier selection and retention decisions. We however posit that cost of purchased goods is only a relatively small part of their entire costs. If this is the case, then we are interested in exploring what other factors are important to small/micro businesses and how these factors affect their satisfaction with suppliers. This motivates the following research questions and research hypotheses involving various factors important to micro-businesses and their satisfaction with the suppliers as shown in Table 3. All the research hypotheses are formulated as alternate hypotheses with the null hypotheses reflecting the contradiction.

The factors used for formulation of Hypotheses H_1 to H_6 included Quality, Consistency, Loyalty, Cost/Lower Price, Warranty, and Brand Name because they were identified by previous studies as important factors in supplier selection. Then, we hypothesised that buyer's satisfaction is dependent on how important buyer views these factors to be.

A variety of changes in the business environment are increasingly leading firms towards development of long-term strategic partnerships with a few competent suppliers (Garfamy, 2011). Thus, in order to obtain competitive advantage, companies are streamlining the number of suppliers. According to the study by Sim et al. (2010), smaller supplier base means that closer, long-term relationship can be established with a few suppliers. In addition, Ellegaard (2009) stated that small businesses are extremely loyal customers who rarely meet suppliers but still maintain trusting relationship with reliable suppliers. For these reasons, we hypothesised that satisfaction is dependent on (1) the length of time of supplier relationship and (2) the supplier's length of time in business in Hypotheses H_7 and H_8.

Finally, Carr and Pearson (1999) suggested that firms with evaluation systems tend to outperform those without the guidelines. This led us to believe the use of guideline may be important and thus affect the satisfaction of the buyers. Therefore, we hypothesised that satisfaction is dependent on the Use of Guidelines in Hypothesis H_9.

Table 3 Research questions and associated hypotheses

Research questions	*Proposed research hypotheses*
First research question: Was any one factor more or less important than any of the others?	• Research hypothesis: The importance ratings for various factors are NOT uniformly distributed across the five categories of importance from very important to very unimportant
Second research question: How do micro-businesses actually rank the importance of supplier selection factors?	• No hypothesis was needed
Third research question: Is there a relationship between satisfaction of micro-businesses with supplier performance and the factors considered?	• H_1–H_6: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance for factor • H_1: Quality • H_2: Consistency • H_3: Loyalty • H_4: Cost/Lower Price • H_5: Warranty • H_6: Brand Name

Table 3 Research questions and associated hypotheses (continued)

Research questions	*Proposed research hypotheses*
Fourth research question: Is there an association between satisfaction of micro-businesses with supplier performance and two specific buyer-supplier variables (1) the length of time of a buyer-supplier relationship, and (2) the supplier's length of time in existence measured in years?	• H_7–H_8: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on (1) the Length of Time of the buyer-supplier Relationship: H_7 and (2) the supplier's Length of Time in Existence, or 'years in business': H_8
Fifth research question: Is there an association between satisfaction of micro-businesses with supplier performance and a proposed selection criteria? – Use of guidelines in supplier selection.	• H_9: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on the Use of Guidelines in supplier selection

3 Methodology

3.1 Instrument

A survey research method was used to collect data. A questionnaire was developed utilising the factors from Table 2. The questionnaire, along with a statement explaining the purpose of the study was used to collect the data.

The questionnaire consisted of three sections: (1) a demographic information section, (2) a general information section, and (3) a section with questions related to a supplier selection process. Demographic questions included information on the respondent's type of industry, number of employees, years in existence, gender, and respondent's position in the firm.

The general information section requested basic information such as number of suppliers, average length of time of a relationship with the suppliers, and satisfaction. Satisfaction level with current suppliers was rated on a Likert scale (1 to 5). The copy of the questionnaire can be found in the Appendix A.

The supplier selection process section included questions such as "Do you use any formal or informal guidelines to select suppliers?" "How do you choose your suppliers?" (by guidelines, name/image, recommendation, yellow pages, past experience, convenience, other criteria) "What problems do you mainly have with your suppliers?" (product quality, delivery quantity, delivery time, wrong specification, other). Finally, participants were asked to rate the importance of the factors in selecting their suppliers. The importance ratings were again to be based on a Likert rating scale of 1 to 5. The importance ratings reflect how heavily a factor is weighed in selecting a supplier.

According to Anastasi (1988), face validity can be established by using observers who are no expert in test methodologies. In the present research, face validity of the questionnaire was established by showing it to 11 graduate students who were asked to review the research instrument and were asked if the questionnaire items used would be sufficient to measure various aspects of buyer–supplier relationship. 82% of the students indicated that the research instrument would be appropriate to measure what it was supposed to measure, that is, the buyer–supplier relationship. Content validity was

checked by obtaining opinions of a few micro-business owners about the relevance of the questions included in the questionnaire to supplier selection. The questionnaire was modified as needed before it was administered.

3.2 Participants

Though a standard definition does not yet exist, a common one for the term *micro-business* is an organisation consisting of ten or fewer employees. We broaden this definition slightly to cover the majority of respondents in the convenience sample selected from the university's Small Business Development Centre's client database. Six hundred micro-businesses were invited to participate in the study, and 163 questionnaires were completed. Some of the questionnaires were completed by the business owners or managers at the university's small business development centre while seeking consultation there. The response rate was 21.3%. Neither reminders nor incentives were used. As indicated by their title, all the respondents appeared to be involved in their firm's supplier selection process. The participants (n = 163) consisted of businesses from seven types of industries: Construction, Retailing, Real Estate, Manufacturing, Healthcare, Services, and Others. Table 4 indicates the breakdown of responding businesses by number of employees.

Table 4 Respondents by number of employees

Employees per organisation	*Frequency*	*Percentage*
1–10	115	71%
11–25	25	15%
26–50	15	9%
51–100	6	4%
100+	2	1%
Total	*163*	*100%*

4 Data analysis and results

Questionnaire data were analysed using EXCEL and statistical tools such as hypothesis testing and correlation.

4.1 Results of the first research question

The first research question was designed to determine whether any one factor is more or less important than any of the others. Past research (Table 1) shows that businesses view many of the supplier selection factors as important or very important. This made us believe that the importance ratings for all the factors are not uniformly distributed across the five categories of importance: (1) very unimportant, (2) unimportant, (3) neutral, (4) important, and (5) very important. This formed the various research hypotheses for the first research question.

Thus, the Null Hypotheses for all the factors studied were H_0: $p_1 = p_2 = p_3 = p_4 = p_5 = 0.20$. Conversely, the alternate (research) hypotheses, H_a, were that at least one of the p_i's is different (where p_i is the proportion of micro-businesses who place importance for the factor in the i-th category). As an example, Table 5 displays the distribution of importance ratings (observed and expected frequencies) for the factor Cost/Lower Price.

Table 5 Importance ratings for factor Cost/Lower Price

Importance rating	*Very unimportant 1*	*Unimportant 2*	*Neutral 3*	*Important 4*	*Very important 5*	*Total*
Observed frequency	2	8	24	47	47	128
Expected frequency	25.6	25.6	25.6	25.6	25.6	128
Chi-square	21.75	12.10	0.10	17.89	17.89	69.73

A Chi-square 'Goodness of Fit' test was used to test the hypotheses. Importance ratings for all the factors fell between neutral and very important, clustering towards important. Examination of the observed and expected frequencies revealed that significantly more micro-businesses than expected thought that all of the factors were either important or very important confirming the research hypothesis. The null hypotheses were rejected in a separate test for each factor ($p < 0.005$), too. This may be good news that none of the factors were thought to be unimportant by the micro-businesses participating in the study.

4.2 Results of the second research question

The second research question investigated how micro-businesses actually view, or rank the importance of the supplier selection factors on a Likert scale from 1 to 5. An Average Importance Rating was computed for each factor. Our results showed that Quality was the factor with the highest rating. Its average score was 4.8, followed by Consistency with the score of 4.6. Loyalty ranked third with a score of 4.4, followed by Cost/Lower Price with a score of 4.0. Finally, the factor Warranty earned a score of 3.8, followed by Brand Name with an average score of 3.4.

4.3 Results of the third research question

The third research question investigated whether a relationship exists between the importance placed on a given factor and the satisfaction of micro-businesses with supplier performance. To answer, various research hypotheses were proposed and tested using a Chi-square test for independence. A standard level of significance, $\alpha = 0.05$, was used. Results of each test are presented below.

Research Hypothesis H_1: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance of Quality of suppliers.

For this test, one factor of interest was the importance buyers placed on Quality in the supplier selection process. The other factor of interest was Satisfaction of the buyer, and it provided an indication of supplier performance. Both factors had five levels,

or categories. However, because of the low expected frequencies in some cells in the contingency table, the categories had to be collapsed so that none of the expected frequencies were less than 5. This resulted in a 2×2 contingency table, the summary of which is displayed in Table 6.

The null hypothesis could be rejected because the calculated test statistic value was 4.52, with a p-value = 0.03. Thus, the research hypothesis was supported. This implied that the importance placed on the Quality of products and services is related to the Satisfaction of micro-businesses with their suppliers. Comparisons of expected and observed frequencies revealed that significantly more than expected respondents who felt Quality was very important reported to be very satisfied with their suppliers. This suggests that the importance placed on the factor Quality (of products and services supplied) is an important determinant of how satisfied micro-businesses are with their suppliers.

Table 6 Test of independence between Quality and Satisfaction with suppliers

Quality	*Satisfaction*	*Observed frequency*	*Expected frequency*	*Chi-square*
Neutral/Important	Average/Satisfied	23	18	1.31
Very Important	Average/Satisfied	57	62	0.38
Neutral/Important	Very Satisfied	6	11	2.19
Very Important	Very Satisfied	42	37	0.64
			Chi-square value	4.52
			p-value	0.03

Research Hypothesis H_2: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance of Consistency in product/service provided suppliers.

In this test, one factor of interest was the importance buyers placed on Consistency in the supplier selection process. The other factor of interest was Satisfaction. Both factors had five levels. However, because of the low expected frequencies in some cells in the contingency table, some categories had to be collapsed so that none of the expected frequencies were less than 5. This resulted in another 2×2 contingency table, the summary of which is shown in Table 7.

The null hypothesis could not be rejected because the calculated test statistic value was 1.43, with a p-value = 0.23. Thus, research hypothesis was not supported. This implied that the Satisfaction of micro-businesses with their suppliers is not related to importance placed on the factor Consistency. In other words, satisfaction of a micro-business buyer does not directly depend on how consistent the supplier performs.

Comparison of expected and observed frequencies revealed that there was no significant difference in Satisfaction reported between businesses that thought Consistency was neutral/important and businesses that felt it was very important. One should understand that Consistency refers to the timeliness of delivery, with very little variance in delivered quantities. Remember, research question 2 indicated that the respondents ranked Consistency second to Quality in terms of average ranking. This may suggest that Consistency in delivery times and quantities is expected by micro-businesses, but they may be willing to be understanding and accommodating. Therefore, Consistency may not be the direct determinant of how satisfied micro-businesses are with their suppliers.

Table 7 Test of independence between Consistency and Satisfaction with suppliers

Consistency	*Satisfaction*	*Observed frequency*	*Expected frequency*	*Chi-square*
Neutral/Important	Average/Satisfied	22	19	0.41
Very Important	Average/Satisfied	56	59	0.13
Neutral/Important	Very Satisfied	9	12	0.66
Very Important	Very Satisfied	39	36	0.22
			Chi-square value	1.43
			p-value	0.23

Research Hypothesis H_3: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance of Loyalty shown by suppliers.

Collapsing the categories as needed resulted in a 3×2 contingency table similar to Table 7. The null hypothesis could not be rejected because the calculated test statistic value was 0.58, with a p-value = 0.65. Thus, the research hypothesis was not supported. This implied that Satisfaction of micro-businesses with their suppliers is independent of the importance placed on the factor Loyalty. It appears that in the micro-business world, Loyalty does not directly influence the level of supplier Satisfaction.

Research Hypothesis H_4: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance of Cost/Lower Price offered by suppliers.

To test H_4, Cost/Lower Price and Satisfaction were used to determine if a relationship exists between them. Collapsing the categories as needed resulted in a 3×2 contingency table, the summary of which is shown in Table 8. The null hypothesis could not be rejected because the calculated test statistic value was 0.73, with a p-value = 0.69. Thus, the research hypothesis was not supported. This implied that the Satisfaction of micro-businesses with their suppliers is independent of the importance placed on the factor Cost/Lower Price.

Table 8 Test of independence between Cost/Lower Price and Satisfaction with suppliers

Cost/Lower Price	*Satisfaction*	*Observed frequency*	*Expected frequency*	*Chi-square*
Unimportant/Neutral	Average/Satisfied	23	21	0.14
Important	Average/Satisfied	29	29	0.00
Very Important	Average/Satisfied	28	30	0.13
Unimportant/Neutral	Very Satisfied	11	13	0.24
Important	Very Satisfied	17	17	0.00
Very Important	Very Satisfied	20	18	0.22
			Chi-square value	0.73
			p-value	0.69

The result of H_4 implies that Satisfaction is independent of the factor Cost/Lower Price, which is counterintuitive. Avery (2008) states "Although many RFQs stress that price is not the most important part of the process, most have pricing as the major determinant". Our result however suggests that Cost/Lower Price is not a significant factor for Satisfaction by itself. It is Quality and Brand Name (see H_6), as suggested by the results of this study, that contribute to Satisfaction. Hence, Cost/Lower Price is likely to be significant when coupled with other factors (Quality, Consistency, Timeliness of

delivery, etc.). This is consistent with Deming's assertion that supplier selection should not be based solely on pricing (Stevenson, 2009). However, it does help to explain why Cost/Lower Price, though an important feature in supplier selection, does not necessarily determine buyer's Satisfaction.

Research Hypothesis H_5: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance of Warranty provided by suppliers.

To test H_5, again, collapsing the categories as needed resulted in a 3×2 contingency table similar to Table 8. The null hypothesis could not be rejected because the calculated test statistic value was 3.12, with a p-value = 0.15. Thus, the research hypothesis was not supported. This implied that the satisfaction of micro-businesses with their suppliers is independent of the importance placed on the factor Warranty. This suggests Warranty and Satisfaction are not related. It appears that the availability of a warranty for a product or service does not directly influence the level of satisfaction with a supplier.

Research Hypothesis H_6: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance for the factor Brand Name.

To conclude testing for Research question 3, we again collapsed the categories as needed into the 3×2 contingency table for Hypothesis H_6 as shown in Table 9 for factor Brand Name. The calculated test statistic value was found to be 9.61, with a p-value = 0.02. Thus, the research hypothesis was supported since the null hypothesis could be rejected. This implied that Satisfaction of micro-businesses with their suppliers is related to the importance placed on the factor Brand Name. This implies that a supplier's brand does influence a buyer's level of satisfaction with the supplier.

Table 9 Test of independence between Brand Name and Satisfaction with suppliers

Brand Name	*Satisfaction*	*Observed frequency*	*Expected frequency*	*Chi-square*
Unimportant/ Very Unimportant	Average/Satisfied	22	17	1.61
Neutral	Average/Satisfied	21	27	1.48
Unimportant/ Very Unimportant	Very Satisfied	5	10	2.65
Neutral	Very Satisfied	23	17	2.44
Important	Average/Satisfied	22	19	0.38
Very Important	Average/Satisfied	14	16	0.15
Important	Very Satisfied	9	12	0.63
Very Important	Very Satisfied	11	9	0.25
		Chi-square value		9.61
		p-value		0.02

4.4 Results of the fourth research question

The fourth research question investigated whether a relationship exists between supplier-related variables regarding time (e.g. duration of supplier relationship and supplier's years in business) and the satisfaction of micro-businesses with supplier performance. To answer, two hypotheses were proposed and tested using a Chi-square test for independence. A standard level of significance, $\alpha = 0.05$, was used. Because of the low expected

frequencies in some cells in the two contingency tables, some categories had to be collapsed so that none of the expected frequencies were less than 5 observations. Results for each test are presented below.

Research Hypothesis H_7: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on the Length of Time of the buyer-supplier relationship.

The results indicate a test statistic value of 4.72, and a *p*-value = 0.03. Thus, the research hypothesis was supported since the null hypothesis could be rejected. This implied that the Satisfaction of micro-businesses with their suppliers is dependent on the importance placed on the factor Length of Time of the buyer-supplier relationship. This implies that the two factors are related, and it appears that in the micro-business world, the length of time a buyer has been doing business with a particular supplier does influence the level of satisfaction with the supplier.

Kumar et al. (2009) reported in their study that vendor experience is the third most important factor in supplier selection. Consequently, it is assumed that suppliers who have been in business a long time are more likely to have better quality, consistency, etc., and the ability to provide higher levels of satisfaction to buyers. To test this assumption, following hypothesis was proposed.

Research Hypothesis H_8: Level of reported by micro-businesses with their suppliers is dependent on the supplier's Length of Time in Existence, or 'years in business'.

After collapsing the categories as needed, the null hypothesis could not be rejected because the calculated test statistic value was 0.37, and a *p*-value = 0.54. Thus, research hypothesis was not supported. This implied that the satisfaction of micro-businesses with their suppliers is independent of the importance placed on the factor 'supplier's length of time in business' implying the two factors are not related. It appears that as time goes by, a buyer's level of satisfaction appears to be indifferent between both new and old suppliers.

4.5 Results of the fifth research question

Some large businesses select their suppliers using formal (or informal) guidelines based on factors that are relevant and important to their business. In our final research question, we examine the idea whether this practice will help micro-businesses select better suppliers and achieve satisfaction. The use of such guidelines may help avoid mistakes in supplier selection resulting in costly consequences. To answer, the following hypothesis was proposed and tested.

Research Hypothesis H_9: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on the Use of Guidelines in supplier selection.

Collapsing the categories to account for low expected frequencies resulted in a 3×2 contingency table similar to Table 8. The null hypothesis could not be rejected because the calculated test statistic value was 0.17, with a *p*-value = 0.92. Thus, research hypothesis was not supported. This implied that the satisfaction of micro-businesses with their suppliers is independent of the use of formal guidelines.

4.6 Inter-correlations among the supplier selection factors

Finally, we examined correlations among all the factors studied. Table 10 below shows the inter-correlations among Satisfaction and various supplier selection factors.

Table 10 Correlations between Satisfaction and Supplier Selection factors

	Satisfaction	*Consistency*	*Lower price*	*Quality*	*Loyalty*	*Warranty*	*Brand name*
Satisfaction	1						
Consistency	0.1306*	1.0000					
Lower price	0.1094	0.0133	1.0000				
Quality	0.2119***	0.1258	0.1364*	1.0000			
Loyalty	0.0983	0.2582***	0.0777	0.2143**	1.0000		
Warranty	0.2220***	0.0665	0.2139***	0.4325***	0.2898***	1.0000	
Brand Name	0.0232	–0.1269	–0.0652	0.2056**	0.2697***	0.2820***	1

Notes: *Significant at 0.10; **Significant at 0.05; ***Significant at 0.005.

The correlations from Table 10 strongly support H_1 (Satisfaction and Quality) and H_5 (Satisfaction and Warranty), whereas it moderately supports H_2 (Satisfaction and Consistency). Judging from the strong correlations among Brand Name, Quality, Loyalty, and Warranty, it is possible that factors such as Loyalty and Brand Name affect Satisfaction via their relationship with Quality and Warranty.

5 Discussion

Based on 'Goodness of Fit' tests, results for our first research question showed that most of the factors considered in the study were important. Hence, none of the factors should be ignored or eliminated from consideration by a micro-business in supplier selection.

For our second research question, we determined how important each factor was relative to the other factors. An average importance rating for each factor produced the following ranking: (1) Quality, (2) Consistency, (3) Loyalty, (4) Cost/Lower Price, (5) Warranty, and (6) Brand name. In contrast, Sim et al. (2010) reported Cost with highest ranking (#1), followed by Quality, then Delivery (Consistency), and finally Service.

Based on our result, Warranty and Brand Name do not appear to be as important as the others since their average ratings were between 3 (neutral) and 4 (important). This suggests that both Warranty and Brand Name, by themselves, may not be significant factors for micro-businesses in selecting suppliers. Although, they are likely to contribute when other factors like Quality, Consistency, Loyalty, and Cost/Lower Price are present.

Among all of the factors, we expected Brand Name to be important, but the results of the rankings by those who participated in the survey showed that it wasn't. This seems contradictory to our findings since Satisfaction was found to be significantly dependent on Brand Name. Our explanation is that micro-businesses may not have many suppliers who offer brand name items to choose from. It might be easier sometimes to get supplies from non-brand firms, who are generally lower in cost.

With the important and relevant factors identified, micro-business buyers can use our work to decide what to focus on in their supplier selection process. However, the main focus of this study was on satisfaction with suppliers. Therefore, we summarised the hypothesis testing results of the factors that influence satisfaction of micro-businesses with suppliers in Table 11 below. A brief explanation of each follows.

Table 11 Summary of hypothesis testing on Supplier Satisfaction

Research hypotheses	*Conclusion*	χ^2	*p-value*
H_1: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance of Quality of suppliers.	*Supported*	4.52	*0.03*
H_2: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance of Consistency in product/service provided supplies.	Rejected	1.43	0.23
H_3: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance of Loyalty shown by suppliers.	Rejected	0.58	0.65
H_4: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance of Cost/Lower Price offered by suppliers.	Rejected	0.73	0.69

Table 11 Summary of hypothesis testing on Supplier Satisfaction (continued)

Research hypotheses	*Conclusion*	χ^2	*p-value*
H_5*: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance of Warranty provided by suppliers.*	Rejected	3.12	0.15
H_6*: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on perceived importance for the factor Brand Name.*	*Supported*	9.61	*0.02*
H_7*: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on the Length of Time of the buyer-supplier relationship.*	*Supported*	4.72	*0.03*
H_8*: Level of reported by micro-businesses with their suppliers is dependent on the supplier's Length of Time in Existence, or 'years in business'.*	Rejected	0.37	0.54
H_9*: Level of Satisfaction reported by micro-businesses with their suppliers is dependent on the Use of Guidelines in supplier selection.*	Rejected	0.17	0.92

- H_1: In our first hypothesis, results indicate that satisfaction with suppliers is dependent on the factor Quality. This is expected because high-quality raw materials, components, sub-assemblies, etc. are critical to the production of high-quality finished products. This, in turn, avoids costly rework, rejection, low productivity, and potential loss of business. Our finding regarding micro-businesses is consistent with Fitzgerald's (1999) claim that quality still reigns as the most important factor in supplier selection. Quality also ranked high (second) in Sim et al.'s (2010) study.
- H_2: Results of our second hypothesis indicated that satisfaction with suppliers is not dependent upon the factor Consistency. However, in our second research question Consistency ranked second and Fitzgerald (1999) reported that delivery problems (Consistency) continue to lead the list of what buyers would most like suppliers to improve upon. These findings are contradictory. However, it may reflect an important coupling effect between product quality and timeliness of delivery, as well as completeness of the order. The message is that consistency alone is insufficient to assure satisfaction. It must be coupled with Quality in order to completely satisfy buyers. In other words, simply delivering correct quantities on time may not guarantee satisfaction without Quality present.
- H_3: In our third hypothesis, Satisfaction was found to be independent of the factor Loyalty. However, Loyalty is an important factor for big businesses. Most suppliers are very interested in catering to larger buyers. Although some micro-businesses may rely on large suppliers for raw materials, their leverage on such suppliers is somewhat limited. As a result, micro-businesses do not often experience the loyalty that larger businesses enjoy from their suppliers. This may explain why satisfaction was not influenced by Loyalty in this case.
- H_4: Conclusions by testing our fourth hypothesis indicated that satisfaction with suppliers is not dependent on the factor Cost/Lower Price. Avery (2008) says "Most small businesses as described in the literature and in the field look at Cost/Lower Price as the first factor to consider". This practice suggests that they may eliminate potential suppliers on the basis of competitive pricing. Our results showed that lower

pricing does not necessarily result in satisfaction. This may imply that when other factors are present, a lower price becomes relevant. This is consistent with the results of Sims et al. (2010) that price is a 'qualifying criteria' as opposed to 'selection criteria'. It is also consistent with Dempsey (1978) who reported that price became a dominant factor only when decisions were recurring. In other words, low price does not guarantee satisfaction unless delivered with quality and consistency. We believe that this is important for small/micro-suppliers to assure repeat business.

- H_5: In our fifth hypothesis, results showed that satisfaction with suppliers is not dependent on the factor Warranty, as it relates to products and/or services. Although a good warranty gives confidence to micro-businesses, it does not necessarily satisfy them. One reason is thought to be that a warranty without quality will not eliminate potential rework, loss of goodwill and productivity.
- H_6: Results of our sixth hypothesis indicate that satisfaction is dependent on the factor Brand Name. This is expected since reputation for a supplier's brand is derived from years of quality, and suppliers with brand name products are more likely to satisfy their buyers. Thus, Brand Name can be an important factor for micro-businesses. Due to the lack of resources and time, one strategy could be to rely on brand name products and/or services to select suppliers.
- H_7: Findings from the data collected on our seventh hypothesis indicate that satisfaction is associated with the length of time of a buyer-supplier relationship. A common assumption is that the longer a micro-business has been dealing with its suppliers, the higher the satisfaction. In our case, it was found to be true. One possible reason is that micro-businesses have a small pool of suppliers due to limited resources and expertise.
- H_8: For our eighth hypothesis, results indicated that satisfaction is independent of a supplier's length of time in existence, or years in business. Although, simply choosing a supplier that has been around a long time may not guarantee a buyer's satisfaction. One explanation could be that long-established suppliers might already have too many clients, and they tend to cater to their larger accounts than new, micro-businesses.
- H_9: Finally, results of our ninth hypothesis show that supplier satisfaction is independent of the use of formal (or informal) guidelines for selection. Basically, micro-businesses may not normally have the necessary training and resources to develop such guidelines. In their case, many times, supplier selection is a direct result of personal judgment, recommendations by others, or simply by relying on advertised information.

6 Conclusion/implications

Our results have important implications for micro-businesses, which is an under-research area. We believe they should not look at Cost/Lower Price as the major factor in rejecting potential suppliers. Otherwise, they may bypass some suppliers who are quite capable of satisfying them. To achieve satisfaction in the end, micro-businesses should consider other factors. They should be mindful that factors such as Quality and Brand Name are

significant too. Also, this can be a challenge for micro-businesses because Quality and Brand Name are not transparent, and information on the quality of suppliers is not easy to obtain. For big and well-established firms, recognising a brand name is not an issue. However, it can be difficult to assess both Quality and Brand Name for suppliers who are new or small, and are not well-established.

One of the challenges for micro-business is a lack of use of guidelines. For bigger firms, they have clear, specific decision criteria to help them analyse a potential supplier's ability and performance. Although it may be true that most micro-businesses may not have the expertise, as well as the resources to develop clear guidelines, our results indicate no connection between satisfaction and the use of guidelines.

This suggests that micro-businesses might rely on their judgement, recommendations of others, or available sources of suppliers rather than following guidelines. This is quite different from bigger firms that have the ability to keep track of supplier performance with quantitative data. For micro/small firms, although they may not have quantitative data at their disposal, they tend to form subjective impressions with each purchasing occurrence that may guide their supplier selection decision in the future.

6.1 Practical implications

It is quite possible to have conflicting selection criteria, which is why micro-businesses should carefully analyse their supplier selection process. For example, the low cost of purchased materials from a particular supplier could be offset by the supplier's loose quality standards, chronic delivery problems, or financial instability. When the economy takes a downturn many buyers, including micro-business buyers, try to cut costs by trimming inventory. This could result in a reduction of the number of brands offered to customers, which could further result in the elimination of some suppliers. In addition, some companies implement a 'Preferred Supplier Programme'. In turn, this increases competition among suppliers ending in lost opportunities for some. In order to survive and thrive, suppliers need to have a clear understanding of what satisfies buyers.

6.1.1 For suppliers

The study partly focused on satisfaction of micro-businesses as buyers. It showed what factors are important to them and have influence on their satisfaction. Based on these results, suppliers should focus on these factors (e.g. Quality, Consistency) and strive to satisfy the buyers so they can be chosen as preferred suppliers. This can be critical in today's competitive environment, because of the move towards shorter supplier list and low inventories.

This study's contribution is also to provide insight to help suppliers understand what can earn them the preferred supplier status. For instance, the rankings from this study show that Cost/Low price is not the major determinant, but it is Quality and Consistency that are ranked high and are likely to earn them a preferred status.

6.1.2 For buyers

The tendency of some micro-business buyers is to focus on cost alone. However, this study showed that there are other factors that are more important than cost. The factors included delivery of quality products with consistent timeliness. This could be the key to satisfaction with suppliers, which could lead to a long-term relationship.

Knowing what factors influence satisfaction is beneficial to micro-businesses in developing criteria for effective selection of suppliers. Rather than relying on ads or recommendations, micro-business buyers can make intelligent decisions in selecting their suppliers if they know what factors can result in satisfied relationship with their suppliers. The paper shows that delivery of quality products with consistent timeliness along with competitive price is the key to satisfy micro-business clients.

6.1.3 Academic implication

Small business development centres are part of university setting. They can conduct an 'awareness event' such as a short lecture, seminar, workshop, or discussion session to emphasise importance of supplier selection and promote a more informed selection based on factors evaluated in this study to enhance success of micro-businesses.

6.2 Limitations and future research

There are several limitations to our study. The first limitation is the convenience sample. It limits the generalisability of the results. The second one involves multi-item scales. Ideally, multi-item scales should have been used instead of a single item. This can be addressed in a future study. For future research directions, an interesting study could involve a comparison and contrast among micro, small, medium and large businesses' practices in supplier selection and development of a buyer satisfaction model based on supplier-controlled variables and buyer-related variables.

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Appendix A

Factors Important to Micro/Small Businesses in Supplier Selection: A Survey

Selecting the right suppliers for many small businesses is very important. If you get it wrong, it can lead to costly and time-consuming mistakes. Please take time to answer these few questions in order to help us find out what factors are important to you when selecting your suppliers.

Demographics:

1. What industry is your company in?
   ☐ Construction ☐ Healthcare
   ☐ Retail ☐ Service
   ☐ Real Estate ☐ Other (please specify) _____
   ☐ Manufacturing
2. How many employees work in your facility?
   ☐ 1-10 ☐ 11-25 ☐ 26-50 ☐ 51-100 ☐ More than 100
3. How many years has your business been in existence?
   ☐ 1-3 ☐ 4-6 ☐ 7-9 ☐ 10 or more
4. What is your gender?
   ☐ Male ☐ Female
5. What is your position in the firm?
   ☐ Staff level ☐ Business owner
   ☐ Management level ☐ Other (Please specify) _____

General Information:

6. How many suppliers do you have?
   ☐ None ☐ 1 - 5 ☐ 6 - 10 ☐ 11 - 15 ☐ 16 or more
7. On the average, how long would you say, you stay with your suppliers?
   ☐ Less than 6 months ☐ Less than 2 years ☐ Less than 5 years
   ☐ Less than 1 year ☐ Less than 4 years ☐ More than 5 years
8. Who selects your suppliers?
   ☐ Business Owner ☐ Other (Please specify) _____
   ☐ Business Manager
9. Do you use any (formal or informal) guidelines to select your suppliers?
   ☐ Yes ☐ No

(Continued on back)

Appendix A (continued)

10. How do you choose your suppliers?

☐ Suppliers' Name/ image ☐ Recommendation ☐ Yellow Pages

☐ Past experience ☐ Other (Please Specify) _____

11. Are you satisfied with your current suppliers?

Not Very Satisfied 1 2 3 4 5 Very Satisfied

12. Mostly, what problems you have with your suppliers?

☐ Wrong specification ☐ Product quality ☐ Delivery Quantity ☐ Delivery time

☐ Other (please Specify) _____

13. To evaluate supplier quality, do you consider:

☐ Quality of individual products

☐ Overall quality of all the products supplied by that supplier

☐ Use some other criteria, Please specify _____

14. Please rate the importance of the following factors in selecting your suppliers by circling the appropriate number for each using the following scale:

5 = Very Important (VI)
4 = Important (I)
3 = Neutral (N)
2 = Unimportant (U)
1 = Very Unimportant (VU)

Note: In the list below, **consistency*** refers to consistency of delivery times (timeliness) and quantities. **Loyalty**** refers to willingness of suppliers to accommodate your changes and requests, new specifications, etc, and to work with you as needed, that is their flexibility.

Factors:	**VI**	**I**	**N**	**U**	**VU**
Consistency*	5	4	3	2	1
Lower price/ Cost	5	4	3	2	1
Quality	5	4	3	2	1
Loyalty**	5	4	3	2	1
Warranty	5	4	3	2	1
Brand Name	5	4	3	2	1

Thank you for your time