Original Research Article

What makes Bangladeshi RMG Suppliers Resilient in Global Apparel Supply Chain Management?

Abstract

Global supply chain management is a common phenomenon in the RMG industry worldwide. Multinational clothing brands are constantly looking for outsourcing readymade garments (RMG) from a supplier that provides cheap, better quality products at a minimum lead-time. Despite being a highly-practiced issue in the RMG industry, it is evident from the literature review that studies on factors determining supplier decisions in RMG are rare or unavailable. Moreover, available models are incompetent to answer the paradox prevailing in the RMG Sector of Bangladesh, where export is rising despite of supply chain disruption. This research strived to pervade this knowledge gap through a mixed-method research approach. Using a structured questionnaire, a survey was applied to collect quantitative data from over 100 respondents from 66 international brands. In addition, the study obtained qualitative data through in-depth interviews with ten industry experts. This study revealed that RMG suppliers are chosen in a two-step process. First, the suppliers are enlisted in a qualified pool, and then among them, one or more suppliers are given work orders. Criteria for enlistment or order qualification involve supplier competence and supplier competitiveness, whereas criteria for order winner involve: relationship, supplier competitiveness, and supplier competence. Big companies tend to choose suppliers for order allocation based on relationships. Therefore, international buying companies must concentrate on the competency factors of suppliers to avoid supply chain risk and public relations issues. For the same reason, the Bangladeshi policymakers should enforce compliance and help RMG suppliers to gain competencies.

Keywords: Global Supply Chain Management, Outsourcing, RMG, Suppliers Selection, Bangladesh

1.0 Introduction

Global supply chain management is a current buzz in the industry and academic sector. This global operation's success mainly lies in how efficiently the global supply chain is managed. For most companies, the global supply chain has become a source of competitive advantage (Manuj & Mentzer, 2008). However, choosing suitable suppliers has always been a challenge in global supply chain management.

The risk of supplier selection, mostly evolved from the substantial differences in these global situations such as distance, lead-time, tariff, non-tariff trade barriers, different local cultures, languages and practices, worker skills, supplier availability, supplier quality, equipment and technology, telecommunications, and, exchange rate, not only complicate decisions but also diminishes the effectiveness of supply chain (Meixell & Gargeya, 2005). Thus, only risk-adjusted supply chain management can translate into improved financial performance and competitive advantage (Hauer, 2003). To minimize the risks inherent in managing the global supply chain, a company can choose different globalization strategies (Arlbjorn & Luthje,

2012), such as outsourcing and offshoring. Furthermore, firms take sourcing choices that best position the firm to minimize cost, improve quality, and increase productivity and performance (Hartman et al., 2017).

One of the famous destinations for RMG outsourcing is Bangladesh, which holds the 2nd largest RMG exporter position after China. In 2010, Bangladesh became the 2nd largest RMG exporting nation by exporting about 18 billion dollars of readymade garments (BGMEA, 2016b). By 2021, Bangladesh wants to ship 50 billion dollars of RMG. RMG sector of Bangladesh is the most significant (approx. 82% of the total export) foreign exchange earning sector, which has about 248 International brands, 200 buying houses Click or tap here to enter text.(Bangladeshaccord.org, 2016; Bangladeshworkersafety.org, 2016) and employs nearly 5 million workers (90% are women (Akhter et al., 2010)) in about 6,393 garments manufacturing factories (BGMEA, 2013; Ferber, 2009). Bangladesh RMG sector adds value by the cutting-sewing-packaging process. Domestic value addition for knit products is about 75% of the entire process. Bangladesh export both knit and woven items around the world.

Although global supply chain management has become a common phenomenon in today's world and outsourcing has been highly practiced among different industries since the 1980s, researchers have long overlooked factors affecting outsourcing supplier selection in the RMG sector. For example, a group of researchers (Boardman Liu, L., Berger, P., Zeng, A., & Gerstenfeld, 2008; Dunning, 1998; Ellram, 2013; Hsu et al., 2013; Huq et al., 2014; Jain et al., 2013; Jin & Farr, 2010; Jung, 2006; Liao & Rittscher, 2007; Sanayei et al., 2010; Swift, 1995; Weber et al., 1991) have developed and used different models to identify the best supplier rather than focusing on effective criteria let alone the specific area such as RMG.

Moreover, the possible consequences of supply chain risks may have catastrophic effects on companies (Giannakis & Papadopoulos, 2016). When a supply chain is disrupted, the outsourcers tend to move to a different location or a different supplier as (Hendricks & Singhal, 2005) have found that companies suffer (their stock value declines about 40%) a lot for supply chain disruption. Furthermore, recovery takes a long period from the effect of disruption (Jüttner & Maklan, 2011). However, the paradox is that despite on average 148 workers being killed in suppliers' factories (Caleca, 2014; CBC News, 2013; Clean Clothes Campaign, 2017) for the different incidents and the RMG supply is disrupted; still, the international brands sourcing from Bangladesh and the export of RMG from Bangladesh is increasing.

The available literature may help an academician and a practitioner identify the better supplier, but it fails to explain the Bangladeshi RMG export growth mystery. Identifying the factor affecting supplier selection in RMG outsourcing may unlock the mystery and increase knowledge among the academician regarding the salient RMG supplier determinants. To address these research problems, the objectives of this study are as follows.

1.1 Objectives

The prominent theories (AHP, Fuzzy-AHP, TOPSIS, ANP, Fuzzy ANP, DEMATEL, and others) discussed earlier in the section on supplier selection are mostly methodologies to identify suitable suppliers based on some criteria set by respective researchers or practitioners. But, industry-specific supplier selection criteria have become a vital element in selecting the right supplier, which appeared as one of the crucial factors for the organizational performance, competitive advantage, attaining strategic goal at low risk (Mukherjee, 2016;

Navasiri et al., 2016; Rezaei et al., 2016; Wiengarten et al., 2016). For this essential cause, this research aims

i. to identify the items/factors relevant to supplier selection in RMG outsourcing of global supply chain management.
ii. to examine the role of company size and origin in selecting suppliers for RMG outsourcing.

1.2 Methodology

A multi-method approach (qualitative and quantitative), a common trend in supply chain / logistic research (Frankel et al., 2005), has been undertaken. At first, through literature review, the quantitative survey instrument was developed to test the relationship between the variables. Then, qualitative interviews were conducted to elaborate and refine the quantitative results.

1.2.1 Constructs and Model

Supplier selection criteria identified in the previous research of supplier selection methodologies have been grouped in three constructs: Competitive Factors, Competence Factors, and Relationship Factors. These constructs are the Independent variables. The Selection construct is the dependent variable, which includes the items: level of satisfaction on the supplier and the future commitment to outsourcing from the concerned supplier. Customer satisfaction on the supplier directly determines customer loyalty, a central determinant of customer retention (Gerpott et al., 2001). Consumer retention may be achieved in two ways: a) continuing the purchase contract and b) future purchase commitment (Herrmann & Johnson, 1999). In addition, the company size and origin of the buyers have been used as moderator variables. These items and the constructs are given in Table 1.

Table 1: Items used in the Construct for Supplier Selection

Construct	Items	
Competence	COMT1	Capacity
	COMT2	Certification*
	COMT3	Compliance*
	COMT4	Efficiency*
	COMT5	Environmental Practices
	COMT6	Financial Soundness*
	COMT7	Management Quality
	COMT8	Testing Facility*
Relationship	RE1	Communication Skill / Culture understanding
	RE2	An ongoing relationship with existing buyer
	RE3	Relationship with other international buyers*
	RE4	Reliability
	RE5	Reputation
Competitiveness	COM1	Cost
	COM2	Flexibility
	COM3	Innovations
	COM4	Lead-time

Construct	Items	
	COM5	Product Quality
	COM6	Skilled labor*
	COM7	Technology
Selection	S1	Future Commitment
	S2	Satisfaction
* Added based on expert opinion and pilot study		

Both primary surveys and Fu et al. (2016) suggest that suppliers are chosen first for the qualified pool then order allocation is done among the qualified suppliers. Because order winner criteria are not essentially the same as order qualifiers (Chroneer & Wallstrom, 2016; Lindström et al., 2016), this study divided the hypotheses based on supplier selection/order qualifying criteria and order winning criteria. The following are the Hypotheses of factors affecting the selection of a supplier of RMG as a qualifier and order winner.

- **Competence Factor**

Competence factors include capacity, certification, compliance, efficiency, Environmental practices, financial Soundness, management quality, and having a testing facility. These items are included in the competency because suppliers need to meet these basic requirements for selection identified in other previous research (Dou & Sarkis, 2010; Hsu et al., 2013; Luo et al., 2013; Murali et al., 2014; Upadhyayula et al., 2017). Thus, the following hypotheses can be made:

H_{11a}: *Competence factors influence the supplier selection as an order qualifier to a buyer for RMG outsourcing.*

H_{11b}: *Competence factors influence the supplier selection as an order winner to a buyer for RMG outsourcing.*

- **Competitive Factors**

The competitive factors include cost or price, flexibility, innovations, lead-time, product quality, skilled labor, and technology. In global supply chains, the cost is one of the most critical criteria that directly affect the supplier selection problem (Yücenur et al., 2011a). For basic apparel, Jin & Farr (2010) found, the cost was the essential criterion in selecting suppliers, followed by lead time, quality, and technology. The quality of the apparel products also affects the customers' impression; hence, the high quality of the products is critical in a global supply chain(Yücenur et al., 2011a). Thus, the following hypothesis can be made:

H_{12a}: *Competitiveness factors influence the supplier selection as an order qualifier to a buyer for RMG outsourcing.*

H_{12b}: *Competitiveness factors influence the supplier selection as an order winner to a buyer for RMG outsourcing.*

- **Relationship**

It refers to the integrity of the supplier based on past performance and honesty in fulfilling supply chain activities(Gary Teng & Jaramillo, 2005). The relationship factors include the ongoing relationship with existing buyers and other international buyers, reliability, reputation, communication skills and cultural understanding, and standing in the industry. The recent studies by (Li et al., 2017) has found that both informal (*guanxi*) and formal relationship between supplier and buyers help to gain superior outsourcing performance and manage conflict in China, the most prominent outsourcing destination. Where the buyers are more dependent on the suppliers, the relationship can help to build trust and remove vulnerability (Gulati & Sytch, 2007). The more dependability, the more the need to make the relationship and thus the more chances that the supplier will get the order (Milecova et al., 2010; Swift, 1995). Therefore, the following hypothesis can be made:

H_{13a}: *Relationship factors influence the supplier selection as an order qualifier to a buyer for RMG outsourcing.*
H_{13b}: *Relationship factors influence the supplier selection as an order winner to a buyer for RMG outsourcing.*

- **Moderating Factors**

Company origin sometimes influences supplier selection (El Dief & Font, 2010; Jin & Farr, 2010). Therefore, this study tried to include another variable company size identified in the qualitative research to see whether international company size (annual sales) impacts the selection of suppliers. Thus, the following hypotheses can be made:
H_{14a}: *The influence of Competence factors on the selection of a supplier as an order qualifier to a buyer for RMG outsourcing is moderated by company size.*
H_{14b}: *The influence of Competence factors on the selection of a supplier as an order qualifier to a buyer for RMG outsourcing is moderated by company origin.*
H_{14c}: *The influence of Competence factors on the selection of a supplier as an order winner to a buyer for RMG outsourcing is moderated by company size.*
H_{14d}: *The influence of Competence factors on the selection of a supplier as an order winner to a buyer for RMG outsourcing is moderated by company origin.*
H_{15a}: *The influence of Competitive factors on the selection of a supplier as an order qualifier to a buyer for RMG outsourcing is moderated by company y size.*
H_{15b}: *The influence of Competitive factors on the selection of a supplier as an order qualifier to a buyer for RMG outsourcing is moderated by company y origin.*
H_{15c}: *The influence of Competitive factors on the selection of a supplier as an order winner to a buyer for RMG outsourcing is moderated by company size.*
H_{15d}: *The influence of Competitive factors on the selection of a supplier as an order winner to a buyer for RMG outsourcing is moderated by company y origin.*
H_{16a}: *The influence of Relationship factors on the selection of a supplier as an order qualifier to a buyer for RMG outsourcing is moderated by company size.*
H_{16b}: *The influence of Relationship factors on the selection of a supplier as an order qualifier to a buyer for RMG outsourcing is moderated by company origin.*
H_{16c}: *The influence of Relationship factors on the selection of a supplier as an order winner to a buyer for RMG outsourcing is moderated by company size.*
H_{16d}: *The influence of Relationship factors on the selection of a supplier as an order winner to a buyer for RMG outsourcing is moderated by company origin.*

Based on the hypotheses, figure 1 shows the model for supplier selection/ordering for RMG outsourcing

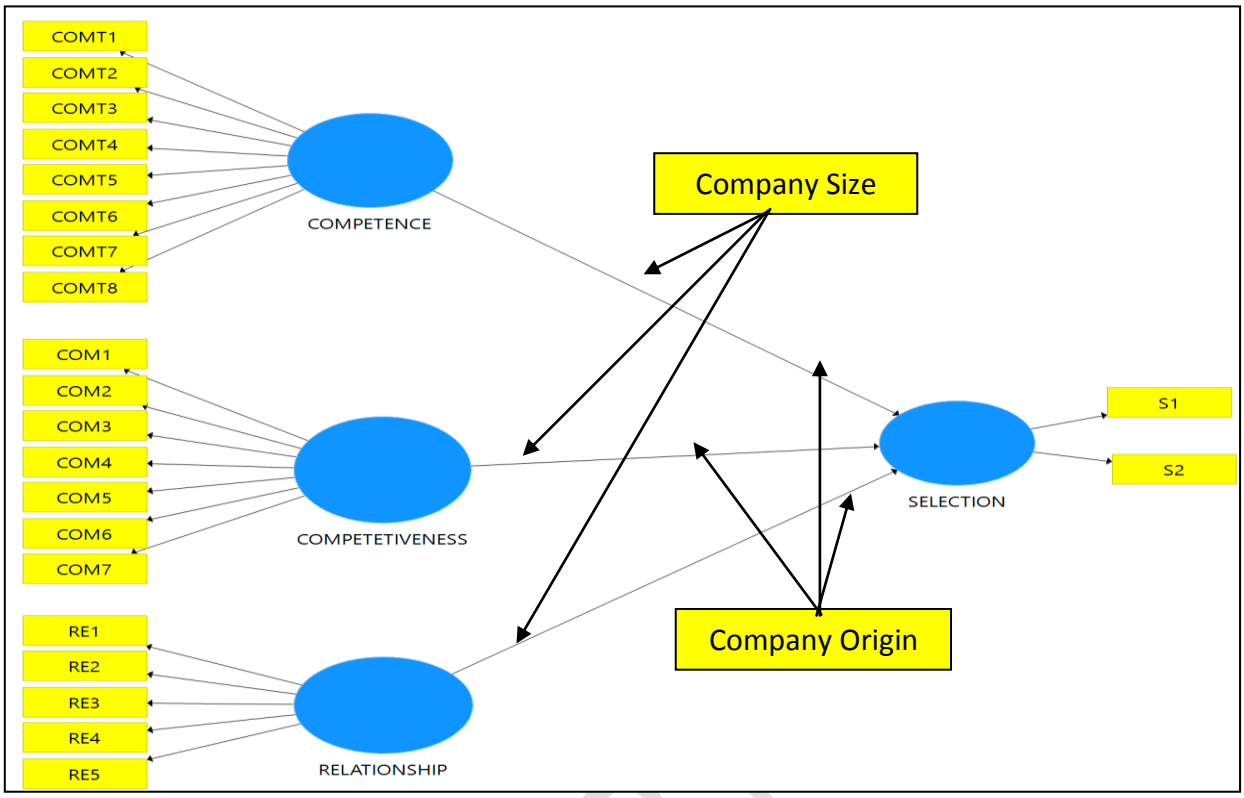

Figure 1: Proposed model for selection/ordering of supplier for Outsourcing RMG

1.2.2 Questionnaire Design

This study adopted a cross-sectional survey with self-completion close-ended questionnaires administered to participants to achieve a higher response rate. The questionnaire for this study has interviews into four parts. The first section gives an overview of the survey and takes respondents' ethical consent about the study. The second section includes four demographic questions: the company's origin, how long they have been outsourcing, company turnover (sales), and product type, and the last section asks the question about the variables determining the supplier to offer RMG outsourcing orders. Each variable consisting of a 5 point Likert scale was used for the questionnaire to convey a level of intensity and feeling to the respondent of expressed without confusion.

A pre-test was carried out to evaluate the validity of the contents of the questionnaire before its final distribution to the respondents. Also, a Pilot-test was undertaken with about ten respondents to test the reliability of the survey questionnaire. Finally, suggestions and observations from pre-test and pilot tests were evaluated based on the rationale, validity, and reliability. After the screening, the most appropriate recommendations and comments were included in the questionnaire.

1.2.3 Sample and Sampling

In Bangladesh, there is about 200 local buying house (BGMEA, 2016a), 29 American ABWS brands (Bangladeshworkersafety.org, 2016), and 219 AFBSB member brands (Bangladeshaccord.org, 2016) outsourcing from Bangladesh. These 248 international brands either outsource directly through the local liaison office or the local 200 buyers. For simplicity, this study only considered original brands rather than buying houses.

For a reliable study, this study requires a minimum of 91samples to conduct data analysis with PLS-SEM (Hair et al., 2006, 2012, 2014; Hair Jr et al., 2017; Hensley, 1999; Hinkin, 1998; Marcoulides & Saunders, 2006; Nunnally, 1978; C. M. Ringle & Sarstedt, 2015, 2016). However, for a greater response rate, 135 respondents (merchandiser) were chosen applying snowball sampling (Eze et al., 2011; Ritchie et al., 2014) from 66 international brands considering the historical low response rate of companies (Hoyle, 1995; Jin & Farr, 2010)

The study distributed 135 questionnaires, and all the questionnaires were returned due to the direct face-to-face method, which is used to eliminate non-response bias (Shih & Fan, 2008). However, 35 questionnaires were discarded for incompleteness (intentionally left unanswered for company secrecy), and single value items were answered on the Likert scale. Thus, there were 100 questionnaires for further analysis based on the PLS-SEM method using SmartPLS 3.3 (C. Ringle et al., 2015; C. M. Ringle et al., 2017)software.

2.0 Literature Review

In today's competitive environment, the effective supplier selection process is critical to the successful operation of the global supply chain. Selecting the right supplier is challenging for the manager responsible for purchasing. For most companies, the purchases of services and goods make up to 70 percent of the product costs (Özkan et al., 2011). Therefore, selecting the right supplier is vital to the procurement process and represents an excellent chance for the organizations to minimize costs; choosing a wrong supply can cause financial and operation problems (Kilincci & Onal, 2011). Moreover, companies are enormously dependent on suppliers due to outsourcing, making it more crucial to select better-performing suppliers (Govindan et al., 2015).

However, supplier selection is a complicated process where the decision-makers have to deal with conflicting objectives optimization such as delivery time, costs, and quality. As a result, global brands have to make a trade-off at every stage of the supply chain (Tahriri et al., 2008).

Several multi-criteria decision-making solutions are available to these problems (Singh & Sharma, 2011) to resolve the supplier selection trade-off problem. Based on the purchasing scenarios, the criteria has diverse necessity, and there is a demand to evaluate them (Aysegul Tas, 2012). Multi-criteria decision-making methods support decision-makers in analyzing these available alternatives. Some popular multi-criteria supplier selection models are Analytic Hierarchy Process (Thomas Loire Saaty, 1990), Fuzzy-AHP Method (Yu, 2002), Fuzzy AHP, Technique for Order Preference by Similarity to Ideal Solution (Hwang & Yoon, 1981), The Analytic Network Process (Thomas L Saaty, 1996), Fuzzy ANP (Ayağ & Özdemir, 2011), DEMATEL (Gabus & Fontela, 1972), Fuzzy DEMATEL (Lin & Wu, 2004), Grey-DEMATE (Govindan, Shankar, & Kannan, 2016), ANP-DEMATEL (Büyüközkan & Güleryüz, 2016) and AHP-MAUT (de Freitas et al., 2013) have applied in selecting a supplier in RMG industry.

However, these models of supplier selection mentioned earlier are primarily based on the methodology rather than criteria selection. Without properly selecting the criteria of the supplier that apply to a particular context, the result driven by these methods will be vague and unusable for practical application.

Most supply chain disruptions (58%) occur at the first-tier supplier, and suppliers are the companies number one worry (Scholten & Schilder, 2015). Therefore, industry-specific supplier selection criteria have become a vital element in selecting the right supplier, which appeared as one of the crucial factors for the organizational performance, competitive advantage, attaining strategic goal at low risk (Mukherjee, 2016; Navasiri et al., 2016; Rezaei et al., 2016; Wiengarten et al., 2016). For this essential cause, this research will identify the items/factors relevant to supplier selection in RMG outsourcing of global supply chain management.

Su, Dyer, & Gargeya (2009) found that strategic sourcing (a way to obtain manufacturing capabilities without capital investments such as outsourcing) has a significant and positive effect on business performance, and supplier selection has a significant and positive impact on a firm's ability to gain competitive advantages. Supplier selection is crucial for establishing the supply chain, but various factors affect supplier selection (B. Chang & Hung, 2010).

Global supply chain management is recently changing its focus from competition to collaboration. Thus, the evolving relationship between enterprise and supplier is changing from vendor to preferred supplier to the exclusive supplier and partner (Tang, 2006). Big textile/apparel companies usually use multiple sourcing strategies to reduce risk and to lower down the cost while at the same time establishing close relationships between personnel on both the buyer and supplier sides.

Due to the current global sourcing trend, it is hard for textile/apparel companies to conduct frequent on-site supplier evaluations. Hence, companies need to develop an effective process for selecting and assessing suppliers as a part of their SCM processes (87). Leenders, Fearon, Flynn, & Johnson (2001) asserted that Suppliers are chosen based on the buyer's assessment of their ability to meet quality, quantity, delivery, price, and service requirements. However, these criteria are conflicting (Yayla et al., 2012) and there is always a trade-off between risk, penalty, and expenditure (Fu et al., 2016).

In the apparel industry, make-to-order environment (Tang, 2006), supplier selection responsibility ultimately lies with the merchandising managers. Meixell & Gargeya (2005) suggested including enough supplier tiers to allow the investigation to enhance supply chain managers' capacity to combine decisions and coordination within the tier. Factors identified or used by the previous researchers are summarized below in Table 2, including the frequency.

Table 2: Supplier Determinants

No.	Factors	Authors	Frequency
1	Product Quality	Dickson (1966); Cusumano & Takeish (1991); Weber & Current (1991); Chaudhury et al. (1993); Swift (Swift, 1995); Jayaraman et. al. (1999); Lee et. al (2001); Muralidharan et al. (2001); Muralidharan et al. (2002); Sarkis & Talluri (2002); Chan (2003); Prahinski & Benton (2004); Kreng & Wang (2005); Teng & Jaramillo (87); Pi & Low (2005); Chang et al. (2007); Su et al. (2009); Milecova et al. (2010); Jin & Farr (2010); Sawik (2010)	20

No.	Factors	Authors	Frequency
2	Price / Cost	Dickson (1966); Cusumano & Takeish (1991); Weber & Current (1991); Chaudhury et al. (1993); Swift (1995); Choi & Hartley (1996); Lee et. Al (2001); Muralidharan et al.(2002); Sarkis & Talluri (2002) ; Chan (2003); Prahinski & Benton (2004); Teng & Jaramillo (2005); Kreng & Wang (2005); Pi & Low (2005); Chang et al. (2007); Su et al. (2009); Milecova et al. (2010); Jin & Farr (2010); Sawik (2010); Yücenur et al. (2011b); Upadhyayula et al. (2017);	21
3	Fulfilment of deadlines / Delivery/ Lead-time	Dickson (1966); Cusumano & Takeish (1991); Chaudhury et al. (1993); (Weber et al., 1991); Jayaraman et. al. (1999); Lee et. al. (2001); Muralidharan et al. (2001); Muralidharan et al. (2002); Sarkis & Talluri (2002) ; Chan (2003); Prahinski & Benton (2004); Teng & Jaramillo (87); Pi & Low (2005); Kreng & Wang (2005); Su et al. (2009); Milecova et al. (Milecova et al., 2010); Jin & Farr (2010); Sawik (2010)	18
4	Quality of management / Service	Choi & Hartley (1996) Lee et. al. (2001); Muralidharan et al. (2001); Sarkis & Talluri (2002); Chan (2003); Prahinski & Benton (2004); Pi & Low (2005); Chang et al. (S. L. Chang et al., 2007) ; Milecova et al. (2010); Yücenur et al. (2011b); Hsu et al. (2013)	11
5	Flexibility	Choi & Hartley (1996) Muralidharan et al. (2001); Sarkis & Talluri (2002); Chan (2003); Prahinski & Benton (2004); Teng & Jaramillo (2005); Milecova et al. (2010)	7
6	Technology Used	Cusumano & Takeish(1991); Choi & Hartley (1996) Muralidharan et al. (2001); Milecova et al. (2010); Sarkis & Talluri (2002); Chan (2003)	6
7	History of Relationship/ Experience / Past Performance	Cusumano & Takeish (1991); Swift (1995); Choi & Hartley (102); Sarkis & Talluri (2002); Muralidharan et al. (2001); Chan (2003)	6
8	Environmental Practices & Sustainability	Gauthier (2005); Klassen & Whybark (1999); Dou & Sarkis (2010); Hsu et al. (2013)	4
9	Capacity	Jayaraman et. al (1999); Milecova et al. (2010); Sawik (2010)	3

No.	Factors	Authors	Frequency
10	Reliability / Dependability / Trust	Swift (Swift, 1995); Choi & Hartley (1996) Teng & Jaramillo (2005); Su et al. (2009)	3
11	Goodwill /Reputation / Characteristics	Milecova et al. (2010); Yücenur et al. (2011b)	2
12	Language skills and cultural understanding	Milecova et al. (2010); Yücenur et al. (2011b)	2
13	Finance	Choi & Hartley (1996); Muralidharan et al. (2001)	2
14	Innovations	Sarkis & Talluri (2002); Chan (2003)	2
15	Stability/ Consistency	Choi & Hartley (1996); Milecova et al. (2010)	2
16	References	Milecova et al. (2010)	1
17	Complexity of services	Milecova et al. (2010)	1
18	Usability	Swift (1995)	1
19	Response	Chang et al. (2007)	1
Source: Bai & Sarkis (2010), B. Chang & Hung (2010) and Author			

The competitive advantages of the Bangladesh RMG sector are price, capacity, and capability (N. Ahmed, 2009; Ali & Medhekar, 2016; Berg et al., 2011; Khosla, 2009; Muhammad, 2007). For example, compared to the USA, Bangladesh can produce a Polo T-Shirt 65% cheaper than the USA (see Table 2 for details). In every aspect of the production, there are enough savings, for which the global apparel industry and USA per se moved for outsourcing in the 1950s (Caleca, 2014).

Bangladeshi suppliers can offer lower prices due to the cheap labor available in Bangladesh. The average monthly wage for an RMG worker in Bangladesh is about $68 compared with $280 in China, the world's biggest clothes exporter (The Guardian, 2016). However, ILO (2014) reported Bangladeshi RMG workers to get the second-lowest minimum wages in the world after Sri Lanka.

Moreover, the RMG industry is highly labor-intensive (Rahman & Amin, 2016). The abundance supply or cheap labor suit the labor-intensive RMG sector's need for labor. Bangladesh employs about 5 million workers (90% are women (Akhter et al., 2010) in approximately 6,393 garments manufacturer factories (BGMEA, 2013; Ferber, 2009), which is ahead of the South Asian countries in terms of capacity (Berg et al., 2011). Regarding

capability, Bangladeshi RMG suppliers are very focused; they are branded for delivering excellent quality apparel of bulk order sizes for the lower mid-market.
In addition to price, capacity, and capability, Bangladesh is preferred by the RMG buyers for favorable trade agreements such as MFA & GSP, duty-free import, two-stage processing, and balanced sourcing of product portfolio (N. Ahmed, 2009; Berg et al., 2011; Bhattacharya & Rahman, 2000; Khosla, 2009; Muhammad, 2007; Spinanger, 2000).
Lead-time in the RMG industry is considered the duration from order receipt to shipment of goods to the buyers - termed as manufacturing lead-time, part of the buyers' global supply chain lead-time. Therefore, RMG manufacturers need to calculate the lead time at five points in the supply chain (Nuruzzaman et al., 2010), including order processing time, procuring and manufacturing time, and transporting time between the different phases of the supply chain (Kader & Akter, 2014).
The average lead-time of RMG factories can be categorized by their input for producing apparel. First, the Full Composite Factories imports cotton and takes about 90-110 days to finish the process. Second, Knit Composite factories outsource yarn domestically or internationally and take about 70-90 days to complete the process. Third, Woven Apparel Factories outsource fabric domestically or internationally and take about 120 days to complete the process.
It takes about 40-60 days for importing cotton, yarn, or fabrics to reach the factory for further processing. The biggest competitor of Bangladesh, China's average lead-time is only 40 days, followed by India's and Pakistan's lead-time 45-60 (Kader & Akter, 2014). However, except for foreign procurement, RMG processing time for Bangladesh is about the same 30-60 days as China, India, and Pakistan.
Bangladesh is lagging behind China, India, and Pakistan in labor productivity. According to a study by McKinsey, which took productivity of Chinese workers as a base (100%), Bangladeshi workers are found to be 77%, India's workers are found to be 92%, and Pakistani workers found to be 88% productive (Berg et al., 2011). However, to achieve the 50 billion dollar export goal, the productivity of the Bangladeshi workers needs to be increased significantly (Moazzem, 2016).
(Ferdous, 2015) argued that less productivity is workers' dissatisfaction and a shortage of skilled workforce. However, he also found that improvement in the six areas (medical facility, canteen facility, well-behaved supervisor, working environment, onetime salary, benefit payment, and adequate wages) can increase RMG workers' productivity.

This poor working condition is that Bangladeshi manufacturers are forced to operate on tight profit margins, often encouraging them to cut corners. These cost-saving techniques often include: subcontracting work to other factories and slashing safety (Muhammad, 2015; Steinisch et al., 2013). Although corporate giants are often aware of the poor or even sweatshop conditions of RMG factories, they make the decision to turn a blind eye to it and deny responsibility if anything happens (Caleca, 2014; Huq et al., 2014; Jacobs & Singhal, 2015). The buyers sanely weigh the prevailing hazardous working conditions against the advantages of the Bangladeshi suppliers' competitive prices, capacities, and capabilities.
On an opinion study on the garments workers, (Ali & Medhekar, 2016) found that 82% of the respondents work more than 10 hours daily, 98% of the respondent do not get any weekend and about the same amount of respondents reported that they are working in an unsecured factory. Consequently, several accidents occurred, including the world's worst RANA PLAZA accident (Caleca, 2014; CBC News, 2013; Clean Clothes Campaign, 2017).

However, there is a paradoxical situation prevailing in Bangladesh. International brands continue to import from Bangladesh despite many incidents such as child labor, political

unrest, labor unrest, factory accidents, and poor governance (F. Z. Ahmed et al., 2014). However, Hendricks & Singhal (Hendricks & Singhal, 2005) have found that companies suffer (their stock value declines about 40%) a lot due to supply chain disruption, and it takes a long time to recover from the effect of disruption. As a result of the RANA Plaza crash, the world's tops apparel brands, such as Walmart, suffered supply chain disruption and public relations crises (Caleca, 2014). Moreover, multinational apparel companies are under intense scrutiny by their customers, employees, GOs, and NGOs on the sustainability of their operations and performances (Huq et al., 2014).

The brands might have shunned sourcing from Bangladeshi suppliers of RMG. But, the opposite happened, and there might be some mystical issues here in the Bangladeshi RMG sector.
F. Z. Ahmed et al. (2014) has analyzed this paradoxical situation and argued that increase in China's labor costs (Caleca, 2014), positive outlook of the industry stakeholders, improved living standard for the worker and competitive environment, improved managerial capabilities of the second generation garment owners propelled the growth of RMG sector in Bangladesh despite the weak governance and tragedies. However, no systematic study has been done to identify the factors influencing the selection of suppliers for RMG outsourcing. Therefore, this study tried to fill this knowledge gap by empirically identifying the factors affecting the country and supplier selection.

3.0 Data Analysis and Findings

3.1 Supplier Qualifying Factors for RMG Outsourcing

3.1.1 Measurement Model of Supplier Qualifying Factors for RMG Outsourcing

The measuring model was evaluated for all constructs' internal reliability, convergent, and discriminant validity. Figure 1 shows the measurement model for supplier qualifying factors for RMG outsourcing.

3.1.1.1 reliability

The reliability is evaluated by Cronbach's alpha and composite reliability, where the level of 0.70 is an indicator for acceptable internal consistency. All the constructs are seen in Table 3- have Cronbach Alpha and composite reliability values of more than 0.742, which is higher than the recommended value. Thus, the constructs were deemed to have adequate reliability.

Table 3: Measurement Model for Supplier Selection as an Order Qualifier

Constructs	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Competence	0.866	0.894	0.512
Competitiveness	0.863	0.895	0.548
Relationship	0.842	0.888	0.614
Selection	0.742	0.886	0.795

3.1.1.2 Validity

The validity is assessed from two dimensions: convergent validity and discriminant validity. When measuring constructs that have an average variance extracted (AVE) of at least 0.50 and item loading is substantially over 0.50 and larger than other constructs loading, convergent validity is regarded to be satisfied (Hair et al., 2013). Table 3 shows that the average variance extracted (AVE) values are above 0.50 and the item loading values in table 4 are above 0.70 and larger than other constructs' loading. Therefore, conditions for convergent validity were met.

Table 4: Item Cross Loading for Supplier Selection as an Order Qualifier

Items	Competitiveness	Competence	Relationship	Selection
COM1	0.723	0.484	0.402	0.384
COM2	0.736	0.573	0.484	0.527
COM3	0.758	0.420	0.483	0.542
COM4	0.732	0.510	0.287	0.490
COM5	0.742	0.629	0.526	0.491
COM6	0.761	0.368	0.482	0.389
COM7	0.729	0.547	0.505	0.607
COMT1	0.503	0.713	0.368	0.526
COMT2	0.575	0.706	0.369	0.320
COMT3	0.451	0.720	0.294	0.358
COMT4	0.419	0.721	0.295	0.364
COMT5	0.470	0.730	0.392	0.555
COMT6	0.496	0.731	0.509	0.428
COMT7	0.491	0.705	0.387	0.415
COMT8	0.567	0.701	0.421	0.355
RE1	0.420	0.409	0.708	0.407
RE2	0.490	0.346	0.772	0.336
RE3	0.444	0.463	0.806	0.465
RE4	0.481	0.355	0.781	0.384
RE5	0.585	0.494	0.844	0.412
S1	0.604	0.518	0.465	0.890
S2	0.604	0.553	0.458	0.893

The discriminant validity is assessed by the square root of the AVE (Fornell-Larcker Criterion), cross-loading matrix, and Heterotrait-Monotrait Ratio (HTMT) ratio. The square root of a construct's AVE and cross-loading items must have greater correlation values with items of own constructs than those of other constructs, respectively, for satisfactory discriminant validity (Henseler, J., Ringle, C. M., & Sinkovics, 2009). For HTMT ratio criteria, the construct must have a ratio below 0.90 with other constructs under consideration to satisfy the discriminant validity. Table 5 represents Fornell-Larcker Criterion, and 6 illustrates HTMT ratios. All of these tables show that constructs and items have good discriminant validity.

Table 5: Fornell-Larcker Criterion for Supplier Selection as an Order Qualifier

Constructs	Competence	Competitiveness	Relationship	Selection
Competence	0.716			
Competitiveness	0.689	0.740		
Relationship	0.534	0.617	0.783	

Selection	0.600	0.678	0.517	0.891

Table 6: Heterotrait-Monotrait Ratio (HTMT) for Supplier Selection as an Order Qualifier

Constructs	Competence	Competitiveness	Relationship	Selection
Competence				
Competitiveness	0.790			
Relationship	0.613	0.719		
Selection	0.721	0.826	0.648	

3.1.1.3 Test for Common Method Bias (CMB)

Firstly, using SPSS, Harman's single-factor test using exploratory, unrotated factor analysis for all of the first-order indicators has been done. The result of factor analysis produced 22 distinct factors, the largest of which accounted for only 41.294 % of the variance of the model. The outcome is less than the threshold of 50% or above. Secondly, the correlation matrix of the constructs (using Pearson's correlations) was applied to test whether the indicators have a correlation value over 0.90, which gives evidence that data have CMB. All the correlation values were below 0.90. Both tests indicate that our data is unlikely to have common method bias (CMB).

3.1.2 Structural Model for Supplier Qualifying Factors for RMG Outsourcing

The structural model helps to identify the path relationships among the constructs and access the connection for statistical significance through the VIF, R^2, f^2, Q^2 path coefficient (β), ρ-value, and *t*-statistics.

3.1.2.1 Collinearity Statistic (VIF)

Table 8 shows the VIF values of all combinations of endogenous constructs (represented by the columns) and corresponding exogenous (i.e., predictor) constructs (represented by the rows). As seen in Tables 7, all the VIF readings are well below the five (threshold value). As a result, collinearity among predictor constructs isn't a significant concern in the structural model.

Table 7: Collinearity Statistics (VIF) for Supplier Qualification Determinants

Constructs	Competence	Competitiveness	Relationship	Selection
Competence				1.977
Competitiveness				2.281
Relationship				1.674
Selection				

4.1.2.2 Path Coefficient

Table 8presents the path coefficient of the structural model for supplier qualification determinants for outsourcing RMG. Table 8 shows that Competence (β = 0.229, *t* = 2.224, and p = 0.027), Competitiveness (β = 0.446, *t* = 4.244, and p = 0.000) had significant effect on supplier selection as a qualifier, whereas, Relationship (β = 0.120, *t* = 1.266, and p = 0.206) had no significant effect on selection as a qualifier. Therefore, H_{11a} and H_{12a} were supported among the hypothesis, whereas H_{13a} was not supported.

Table 8: Structural Model for Supplier Selection as an Order Qualifier

Relationship	β	t -Statistics	p -Values	Decision
Competence -> Selection	0.229	2.224	0.027	Supported

Competitiveness -> Selection	0.446	4.244	0.000	Supported
Relationship -> Selection	0.120	1.266	0.206	Not Supported

3.1.2.3 R Squared (R^2)

The endogenous latent variable R^2 value has been examined, and the result shows that the R^2 value of the selection (0.502) can be considered a moderate following rule of thumb (Ketchen, 2013).

3.1.2.4 Effect Size (f^2)

The effect size (f^2) values help access the endogenous constructs' contribution to an endogenous construct's R^2 value. The f^2 value of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively; however, any value less than 0.02 represent no effect (Hair Jr et al., 2017). Table 9 shows competence (0.053), competitiveness (0.175), and relationship (0.017) constructs have a small, medium, and no effect size, respectively, on the selection construct's R^2 value.

Table 9: Effect Size (f^2) for Supplier Qualification Determinants

Constructs	Selection	Effect Size (f^2)
Competence	0.053	Small
Competitiveness	0.175	Medium
Relationship	0.017	-

3.1.2.5 Predictive Relevance (Q^2)

The path model has predictive relevance for a specific reflective endogenous construct if the Q^2 value is above zero. Table 10 shows the blindfolding results report for the supplier qualification determinant model. As can be seen, the Q^2 value of the endogenous construct selection is considerably above zero (0.364). These findings well support the model's predictive value for endogenous latent variables.

Table 10: Predictive Relevance (Q^2) for Supplier Qualification Determinants Model

Constructs	SSO	SSE	Q^2 (= 1- SSE / SSO)
Competence	800.000	800.000	
Competitiveness	700.000	700.000	
Relationship	500.000	500.000	
Selection	200.000	127.242	0.364

3.1.2.6 Model Fit: Standardized root mean square residual (SRMR)

The SRMR allows assessing the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of (model) fit criterion. An SRMR value less than 0.10 or 0.08 (more conservative version) represents model fit (Hair Jr et al., 2017; Marsh et al., 2004). The supplier qualification determinant model's SRMR value was 0.091, less than the threshold value of 0.10. This indicates that the supplier qualification determinant model has an acceptable level of model fit.

3.1.3. Moderating Effect of Company Size on the Supplier Qualification Determinants

Table 11 shows the moderating effect of company size in the supplier qualifying model of RMG outsourcing. Company size depends on the industry, country of origin, and many other

factors. Moreover, not all companies come from the same country of origin to compare. For this study, the country size has been divided into two groups: a) Small Companies and b) Big Companies based on the company sales. The selection of the company size was arbitrary because of the nature of the data. None of the factors, competence (p = 0.280), competitiveness (p = 0.767), and relationship (p = 0.922) were found to have a statistically significant moderating effect. Thus, $H_{14a,}$ $H_{15a,}$ and H_{16a}were not supported.

Table 11: Moderating Effect of Company Size on the Supplier Qualification Determinants

Relations	Small	Big	Comparison		Comments
	β	*β*	*β*	p-values	
Competence -> Selection	0.097	0.212	0.115	0.280	Not Supported
Competitiveness -> Selection	0.562	0.427	0.135	0.767	Not Supported
Relationship -> Selection	0.270	0.022	0.248	0.922	Not Supported

3.1.4. Moderating Effect of Company Origin on the Supplier Qualification Determinants

Table 12 shows the moderating effect of company origin on selecting the supplier for qualifying. For this study, the country origin has been divided into two groups: a) Europe, Asia, and other countries, and b) North America. For all of the relations: competence (p = 0.080), competitiveness (p = 0.834) and Socio-Cultural factors (p = 0.950) moderating effect of company size is found to be statistically insignificant (p > 0.50). Thus, H_{14b}, $H_{15b,}$ and H_{16b}were not supported.

Table 12: Moderating Effect of Company Origin on the Supplier Qualifying Determinants

Relations	Europe-Asia-others	North America	Comparison		Comments
	β	*β*	*β*	p-values	
Competence_ -> Selection	0.253	-0.259	0.513	0.080	Not Supported
Competitiveness -> Selection	0.507	0.801	0.294	0.834	Not Supported
Relationship -> Selection	0.031	0.398	0.367	0.950	Not Supported

3.2 Suppliers' Order Winning Factors for RMG Outsourcing

3.2.1 Measurement Model of Supplier Qualifying Factors for RMG Outsourcing

The measurement model assesses the reliability and validity of the proposed model.

3.2.1.1 reliability

The reliability is evaluated by Cronbach's alpha and composite reliability, for which a value of 0.70 is an indicator for acceptable internal consistency. From the following Table 13, it can be seen that all the constructs have Cronbach Alpha and composite reliability values of more than 0.725, which is higher than the recommended value. Thus, the constructs were deemed to have adequate reliability.

Table 13: Measurement Model for Supplier Selection as an Order Winner

Constructs	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Competence	0.873	0.899	0.527
Competitiveness	0.858	0.891	0.539
Relationship	0.846	0.889	0.616

Selection	0.725	0.879	0.784

3.2.1.2 Validity

The validity of this supplier order winning model for RMG outsourcing is assessed from two dimensions: convergent validity and discriminant validity. When measuring constructs have an average variance extracted (AVE) of at least 0.50 and items loading is above 0.50, convergent validity is considered adequate (Hair et al., 2013). Table 13that the average variance extracted (AVE) values are above 0.50, and the item loading values in table 14 are above 0.70. Therefore, conditions for convergent validity were met for the constructs and the items of this supplier order winning model.

Table 14: Item Cross Loading for Supplier Selection as an Order Winner

Items	Competitiveness	Competence	Relationship	Selection
COM1	0.806	0.553	0.369	0.675
COM2	0.703	0.403	0.365	0.483
COM3	0.715	0.314	0.292	0.406
COM4	0.728	0.326	0.394	0.474
COM5	0.728	0.354	0.314	0.489
COM6	0.731	0.382	0.429	0.466
COM7	0.724	0.447	0.348	0.536
COMT1	0.356	0.758	0.256	0.345
COMT2	0.324	0.725	0.332	0.418
COMT3	0.420	0.708	0.280	0.456
COMT4	0.373	0.700	0.406	0.345
COMT5	0.289	0.703	0.282	0.398
COMT6	0.605	0.721	0.441	0.623
COMT7	0.280	0.758	0.269	0.476
COMT8	0.460	0.733	0.386	0.446
RE1	0.392	0.296	0.750	0.347
RE2	0.310	0.414	0.854	0.526
RE3	0.288	0.327	0.705	0.269
RE4	0.441	0.316	0.765	0.422
RE5	0.477	0.441	0.838	0.497
S1	0.561	0.566	0.523	0.879
S2	0.675	0.542	0.446	0.892

The discriminant validity of this supplier order winning model is assessed by the square root of the AVE (Fornell-Larcker Criterion), cross-loading matrix, and Heterotrait-Monotrait Ratio (HTMT) ratio. The square root of a construct's AVE and cross-loading items must have greater correlation values with items of own constructs than those of other constructs, respectively, for satisfactory discriminant validity (Henseler, J., Ringle, C. M., & Sinkovics, 2009). For HTMT ratio criteria, the construct must have a ratio below 0.90 with other constructs under consideration to satisfy the discriminant validity. Table 14 represents the cross-loading, and Table 15 represents Fornell-Larcker Criterion, and Table 16 represents HTMT ratios. All of these tables show that constructs and items have good discriminant validity.

Table 15: Fornell-Larcker Criterion for Supplier Selection as an Order Winner

Constructs	Competence	Competitiveness	Relationship	Selection
Competence	0.726			
Competitiveness	0.553	0.734		
Relationship	0.464	0.488	0.785	
Selection	0.625	0.700	0.546	0.885

Table 16: Heterotrait-Monotrait Ratio (HTMT) for Supplier Selection as an Order Winner

Constructs	Competence	Competitiveness	Relationship	Selection
Competence				
Competitiveness	0.601			
Relationship	0.522	0.570		
Selection	0.758	0.868	0.671	

3.2.1.3 Test for Common Method Bias (CMB)

Firstly, using SPSS, Harman's single-factor test using exploratory, unrotated factor analysis for all of the items has been done. The result of factor analysis produced 22 distinct factors, the largest of which accounted for only 38.121 % of the variance of the model. The outcome is less than the threshold of 50% or above. Secondly, the correlation matrix of the constructs (using Pearson's correlations) was applied to test whether the indicators have a correlation value over 0.90, which gives evidence that data have shows, all the correlation values were below 0.90. Both tests indicate that our data is unlikely to have common method bias (CMB).

3.2.2 Structural Model for Supplier Order Winning Factors for RMG Outsourcing

The structural model helps to identify the path relationships among the constructs and access the connection for statistical significance through the VIF, R^2, f^2, Q^2 path coefficient (β), ρ-value, and *t*-statistics.

3.2.2.1 Collinearity Statistic (VIF)

Table 17 shows the VIF values of all combinations of endogenous constructs (represented by the columns) and corresponding exogenous (i.e., predictor) constructs (represented by the rows). As shown in table 18, all the VIF readings are well below the 5 (threshold value). As a result, collinearity among predictor components isn't a significant concern in the structural model.

Table 17: Collinearity Statistics (VIF) for Supplier Order Winning Determinants

Constructs	Competence	Competitiveness	Relationship	Selection
Competence				1.552
Competitiveness				2.598
Relationship				1.414
Selection				

3.2.2.2 Path Coefficient

Table 17 presents the path coefficient of the structural model for supplier order winning determinants for outsourcing RMG. Table 18 shows that Competence (β = 0.289, t = 3.378, and p = 0.001), Competitiveness (β = 0.445, t = 5.283, and p = 0.000) and Relationship (β = 0.195, t = 2.283, and p = 0.022) - all of the construct had significant effect on supplier

selection as an order winner. However, competitiveness exerts more influence than competence and relationship. Therefore, all the hypotheses H_{11b}, $H_{12b}$and H_{13b}were supported.

Table 18: Structural Model for Supplier Selection as an Order Winner

Relationship	β	t -Statistics	p -Values	Decision
Competence -> Selection	0.289	3.378	0.001	Supported
Competitiveness -> Selection	0.445	5.283	0.000	Supported
Relationship -> Selection	0.195	2.283	0.022	Supported

3.2.2.3 R Squared (R^2)

The endogenous latent variable R^2 value has been examined, and the result shows that the R^2 value of the selection (0.598) can be considered the moderate following rule of thumb (Ketchen, 2013).

3.2.2.4 Effect Size (f^2)

The effect size (f^2) values help access the endogenous constructs' contribution to an endogenous construct's R^2 value. The f^2 value of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively; however, any value less than 0.02 represent no effect (Hair Jr et al., 2017). Table 19 shows competence (0.134, and relationship (0.067) constructs have a small but competitiveness (0.309) has medium effect size on Selection construct's R^2 value.

Table 19: Effect Size (f^2) for Supplier Order Winning Determinants

Constructs	Selection	Effect Size (f^2)
Competence	0.134	Small
Competitiveness	0.309	Medium
Relationship	0.067	Small

3.2.2.5 Predictive Relevance (Q^2)

The path model has predictive relevance for a specific reflective endogenous construct if the Q^2 value is above zero. Table 20 shows the blindfolding results report for the supplier qualification determinant model. As can be seen, the Q^2 values of the endogenous constructs Selection are considerably above zero (0.406). These findings well support the model's predictive value for endogenous latent variables.

Table 20: Predictive Relevance (Q^2) for Supplier Order Winning Model

Constructs	SSO	SSE	Q^2 (= 1- SSE / SSO)
Competence	800.000	800.000	
Competitiveness	700.000	700.000	
Relationship	500.000	500.000	
Selection	200.000	113.697	0.406

3.2.2.6 Model Fit: Standardized root mean square residual (SRMR)

The SRMR allows assessing the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of (model) fit criterion. An SRMR value less than 0.10 or 0.08 (more conservative version) represents model fit (Hair Jr et al., 2017; Marsh et al., 2004). The supplier order winning determinant model's SRMR value was 0.089,

which is less than the threshold value of 0.10. This indicates that the supplier order winner determinant model has an acceptable level of model fit.

3.2.3. Moderating Effect of Company Size on the Supplier Order Winning Determinants

Table 21 shows the moderating effect of company size in the supplier order winning model of RMG outsourcing. For this study, the country size has been divided into two groups: a) Small Companies and b) Big Companies based on the company sales. The selection of the company size was arbitrary because of the nature of the data. Company size depends on the industry, country of origin, and many other factors. Moreover, not all companies come from the same country of origin to compare.

It can be observed from table 21data that competence (p = 0.184), competitiveness (p = 0.994) were not found to have a statistically significant moderating effect. However, for large enterprises, the relationship (p = 0.027) was statistically significant in selecting RMG suppliers as order winners. The company size category can explain 68.62 % variations in supplier selection for issuing RMG outsourcing orders. Thus, H_{16b} is supported, while H_{14b} and H_{15b} were not supported.

Table 21: Moderating Effect of Company Size on the Supplier Order Winning Determinants

Relations	Small	Big	Comparison		Comments
	β	*β*	*β*	p-values	
Competence -> Selection	0.173	0.327	0.154	0.184	Not Supported
Competitiveness -> Selection	0.653	0.262	0.391	0.994	Not Supported
Relationship -> Selection	0.055	0.388	0.332	0.027	Supported

3.2.4. Moderating Effect of Company Origin on the Supplier Order Winning Determinants

Table 22 shows the moderating effect of company origin on selecting suppliers as an order winner. For this study, the country origin has been divided into two groups: a) Europe, Asia, and other Countries, and b) North America. For all of the relations: competence (p =0.335), competitiveness (p =0.956) and Socio-Cultural factors (p = 0.0630) moderating effect of company origin is found to be statistically insignificant (p > 0.50). Thus, H_{14c}, $H_{15c,}$ and H_{16c} were not supported.

Table 22: Moderating Effect of Company Origin on the Supplier Order Winning Determinants

Relations	Europe-Asia-others	North America	Comparison		Comments
	β	*β*	*β*	p-values	
Competence -> Selection	0.273	0.353	0.080	0.335	Not Supported
Competitiveness -> Selection	0.424	0.477	0.053	0.356	Not Supported
Relationship -> Selection	0.222	0.157	0.064	0.630	Not Supported

4.0 Conclusion

This study revealed that international brand companies in the apparel sector go through a simple two-step process of supplier selection (Chroneer & Wallstrom, 2016; Fu et al., 2016) through quantitative and qualitative approaches. Firstly, they invite expression of interest (EOI) from the suppliers of readymade garments (RMG) to form a pool of qualified suppliers for outsourcing RMG. Secondly, the international brands give the order of RMG supply to some suppliers from that pool.
For supplier selection, criteria for qualification and order winning are different. To get selection in the qualifying pool, a supplier needs competence and competitive variables. For order winning, a supplier needs competence, competitive, and relationship variables. However, for the order allocation, big brands concentrate on the relationship. Data analysis did not find any significant moderating effect of brand origin for neither supplier qualifying variables nor supplier order winning variables.

4.1 Theoretical Implications

This study also contributed to the global supply chain management literature by identifying the resilience area of Bangladeshi RMG suppliers. Furthermore, these resilient characteristics also provide a foundation for further research in the apparel industry, where the literature on outsourcing regarding supplier determinants has scarcity.

Every industry is unique and hence possesses unique characteristics. In global supply chain management, supplier determinants are distinctive to the readymade garments industry. This study uniquely identified the salient factors of choosing the supplier for RMG outsourcing, which could be used for cross-validation in other locations for RMG outsourcing. This study also uniquely identified that supplier qualifying variables are different from supplier order winning variables. Finally, this study also uniquely identified that firm size (big firms) has a moderating effect on choosing the suppliers for order allocation for RMG outsourcing.

4.2 Practical Implications

To avoid public relations issues, international brand managers should emphasize the competitiveness followed by competence factors while choosing the RMG supplier for enlistment. Too much reliance on cheap labor might result in a loss in the long run. Therefore, cheap labor is no longer a primary issue in enlisting and getting work orders.

RMG suppliers must concentrate on competent issues such as compliance and certification to get enlisted in qualifying pools. After enlistment, the RMG supplier should build a relationship and be honest in the business dealing. Because for getting work order relationship plays a vital role.

Policymakers of Bangladesh must maintain the macroeconomic and political factors and competitive factors found in the study if not improved to retain existing buyers and attract new buyers of RMG. In addition, policymakers of Bangladesh should concentrate on keeping the RMG supplier compliant for fire safety, building safety, and other public relations issues. It will bring a win-win situation for all the parties involved in the RMG outsourcing.

RMG suppliers and policymakers must remember that competitiveness changes over time, especially labor cost advantages. While countries go through the development stages, labor costs and other related advantages evaporate. It happened in the USA and now happening in

China. Thus, the suppliers must concentrate on productivity, innovations, and high value-adding activities to neutralize the cost disadvantages.

4.3 Future Research Direction

This study can be used as a starting point for future research. Further research can be undertaken by augmenting with methodology, replicating this model in other industries, contexts, or countries, adding or removing variables that suit situations, and reversing the model to identify the factors affecting satisfaction, loyalty, and retention of foreign companies or apparel buyers.

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