

# PERFORMANCE OUTCOMES OF MANUFACTURING FIRMS IN BANGLADESH

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## Abstract

This study examined the performance outcomes of the sourcing strategy of manufacturing firms in Bangladesh. Furthermore, this study provides empirical evidence of the moderating effect of sourcing relationship quality on sourcing strategy and firm performance. A sample of 330 manufacturing firms from Bangladesh were analyzed to determine their sourcing strategy effect on performance. Partial Least Squares (PLS) approach applied to determine the hypothesized relationship. We have found positive effect of sourcing strategy on manufacturing firm performance. We provide empirical evidence of moderating effect of sourcing relationship quality on sourcing and firm performance relationship. Manufacturing firms deal with act as a supplier with buying firms and as buyer with supplying firms. Sourcing relationship quality thus provide a new insight to achieve better performance for manufacturing firms in emerging countries like Bangladesh.

**Keywords:** Sourcing Strategy, Competitive Strategy, Sourcing Relationship Quality, Firm Performance, Manufacturing Firm.

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## INTRODUCTION

Firms in the manufacturing sectors are facing the most inevitable challenge to decide whether products to make through internal effort, or solicit from outside independent suppliers (buy) with a high degree of economies-of-scale to enhance efficiency and productivity (Espino-Rodríguez & Lai, 2014; Hilman & Mohamed, 2011; Lafontaine & Slade, 2007). Efficiency and productivity thru reducing costs, maintain high quality, flexibility, improved delivery dependability, and prompt quick response enable a manufacturing firm to achieve competitiveness and performance (Su & Gargeya, 2012).

These perspectives assessment to decide in-house production (Make) by adapting the cost strategy or source externally (buy) by adapting differentiation. There are fewer studies to understand the long-term benefits of outsourcing to the firms (Hunter & Hall, 2011; Premuroso, 2008). Previous researches have hypothesized sourcing strategy and its effects on organizational performance, in which some of them emphasize on make or buy of sourcing (Espino-Rodríguez *et al.*, 2014; Hilman & Mohamed, 2011; Lamminmaki, 2011).

Extent literature considered sourcing as an evident governance modes or forms to achieve performance but little attention has been given to the underlying quality of relationship of sourcing firms which might influence performance. Extent literature to date about the relationship quality focused mainly on western culture and stable business environment and yet little know about the manufacturer's relationships with its key suppliers in emerging economies (Yang, Yu, Liu, & Rui, 2015). Thus this study aims to provide an integrated model of competitive strategy, sourcing strategy, sourcing relationship quality and firm performance. Thus, the corresponding objective of this study is to address the quotation on the assessment of the measurement model of this integrated strategic model proposed in this study. moderating effect of the sourcing relationship quality on the relationship between sourcing strategy and form's performance.

## THEORITICAL BACKGROUND

### Transaction Cost Economics

According to Williamson (1985), Transaction Cost Economics (TCE) focuses on transactions and the costs incurred via completing transactions by one institutional mode rather than another. The transaction either make or buy a product, is the unit of analysis in TCE, and the means of affecting the transaction is the principal outcome of interest (Tadelis & Williamson, 2012).

TCE suggests that the costs and difficulties associated with market transactions sometimes favour hierarchies (make) and sometimes favor markets (buy). Based on TCE, manufacturing firm makes decision either to produce a product through market based contract if this transaction cost is lower than producing internally (Jaklič *et al.*, 2012; Mohiuddin & Su, 2013). Therefore, based on the TCE assumption and theoretical basis the proposed model of this study is below in Figure 1.

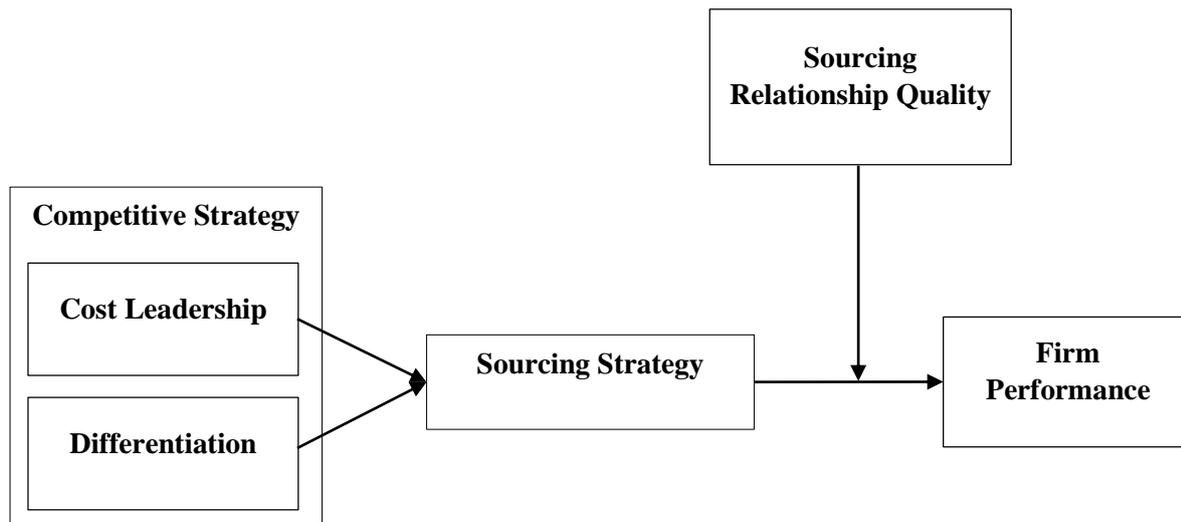


Figure 1. Proposed Model.

### Firm Performance

Firm Performance (FP) is defined as outcome of a firm's attempt to leverage relevant strategies and techniques to achieve organizational goals. The method by which it is measured is dependent upon (a) the industry in which the firm operates, and (b) the parameters of the research model used to typify it. Typically, firms gauge firm performance using financial and non-financial outcomes related to certain aspects of the quality and operations they employ (Lee *et al.*, 2015, 2011). To promote firm performance, manufacturing firms may seek to improve product quality, limit costs, and improve operational efficiency. Performance measures provide a set of mutually reinforcing signals that direct managers' attention to the important strategic areas that translate to organizational performance outcomes (Dixon *et al.*, 1990). Firm performance is the final outcome that is observed across the literature. It refers to the success of a firm in fulfilling its business goals (Yamin *et al.*, 1999; Li *et al.*, 2006).

### Competitive Strategy

Competitive strategy is one of the central area of strategic management research which gives strategic fit to firm. Competitive strategy/Porter generic strategies are three different choices strategies a firm pursue; cost leadership strategy, differentiation strategy or, focus strategy (Porter, 1980). Cost leadership strategy is an integrated set of actions taken to produce goods with unique features that are sold to customers at the lowest cost compared to competitors or at reduced cost to achieve superior profitability (Teeratansirikool, Siengthai & Badir, Charoenngam, 2013). On the other hand, differentiation strategy develops a competitive advantage by creating strategy as unique or alleged to be product/services which driven from internal resources that comprised capabilities, knowledge, and skills (Dadzie *et al.*, 2012; Hilman & Mohamed, 2011; Porter, 1980).

Competitive strategy represents that firm's business strategy orientation toward external environmental conditions that include competitors and customers (Abdullah *et al.* 2009; Dadzie *et al.*, 2012; Hitt, Ireland & Hoskisson, 2015). The literature suggested that resource-based view (RBV) and market-led view are useful but considered as oversimplify choices firms make to use resources and assets, identifying external opportunities, either new and existing markets or market niches of globally connected economy that create opportunity to establish

competitive advantage and achieve strategic fit which in turn increase the performance of the firm.

### **Sourcing Strategy**

Sourcing is a useful way to adapt the firm's boundaries by restructuring its activities in order to stimulate the growth of its core business (Bustinza, Arias-Aranda, & Gutierrez-Gutierrez, 2010). Sourcing is not simply a purchasing decision also represents the fundamental decision to reject to do an activity in-house (make) and look for outside to optimize productivity and increase performance of a firm (Größler *et al.*, 2013; Hilman & Mohamed, 2011; Quinn, 1999). Based on Transaction Cost Economics (TCE), manufacturing firm makes decision either to produce a product through market based contract if this transaction cost is lower than producing internally (Jaklič *et al.*, 2012; Mohiuddin & Su, 2013). This choice of cost leads a firm to consider sourcing as a strategic forefront of modern practice to compete in industry to achieve better performance and secure competitive advantage (Weele & Raaij, 2014).

*H1: Sourcing strategy in Bangladeshi manufacturing firms has positive effect on firm performance*

### **Sourcing Relationship Quality**

Strategic management literature has focused and recognized the significance of buyer–supplier relationship enlargement in successful economic exchanges between firms (Wang, Li, Ross, & Craighead, 2013). Previous literature suggested that, given differences in strategic priorities, there are differences in the types of characteristic firms look for in supply chain partner's quality, relationship and integration (Roh, Min, & Hong, 2011; von Massow & Canbolat, 2014). Therefore, this study conceptualizes the sourcing relationship quality to measure the moderating influence over sourcing strategy and firm performance relationship. Thus, the following hypothesis was developed:

*H2: Sourcing relationship quality has moderating effect on the relationship between sourcing strategy and firm performance.*

## **METHODOLOGY**

### **Study Design, Context, Sampling and data Collection Procedure**

This quantitative cross-sectional study was conducted in manufacturing sector in Bangladesh. This study deployed survey approach and developed the instruments used in previous studies to measure the variables in this study. Each items of the instruments were measured on a seven-point Likert scale which are ranging from strongly disagree (1) to strongly agree (7). Competitive strategy variable is the combination of the cost leadership strategy and differentiation strategy as endogenous variable. Cost-leadership strategy (6 items) and differentiation strategy (11) items were adapted and adopted from the Morrison, (1990), Allen *et al.* (2006) and Hilman (2009). Sourcing strategy was measured by 12 items which were adapted and adopted from Kotabe and Omura, (1989). Firm performance was measured by 7 items (Venkatraman & Ramanujam, 1986; Lee & Miller, 1996; Kaplan & Norton, 1996). Sourcing relationship quality Sourcing relationship quality is a one-dimension measurement with five items that is adapted from Lee (2001).

After developing the questionnaire from the previous studies face and construct validity assessment was conducted. Questionnaire was sent to two strategic management professors to

critique and check ambiguity, clarity, and suitability of the items used to operationalize each construct (DeVellis, 2016). Their assessment led to the further modification of the items to measure the construct.

Data were collected for this quantitative research to test the hypothesis of the causal effect of the exogenous latent constructs on endogenous latent constructs (Sekaran & Bougie, 2013). Initial number of sample was 381 manufacturing firms in Bangladesh which was determined according to Krejcie and Morgan (1970). The study used systematic random sampling technique to select each element of sample to distribute the questionnaire. In the systematic sampling technique equal-probability method is used to pick the sample unit (Black, 2010).

The completed and modified final version of survey questionnaires were sent to the manufacturing firm's key person (such as CEO, general manager, CFO, and/owner) who has overall strategic information about the firm and respective performance. To test hypotheses testing and analyzing Partial Least Squares (PLS) path modeling technique with SmartPLS 3.2.6 tools. Several previous studies argued the suitability of using PLS over other co-variance based analysis tool, and suggested that PLS is less restrictive, small sample size applicable, distributional assumption, and gives advantage if model is complex (Chaouali, Yahia, & Souiden, 2016; Hair et al., 2014; Ringle et al., 2012).

## RESULTS

This section of study reveals the analysis results relating to study's objectives. In addition to this present the results of hypotheses developed for the study. Analysis was carried out by splitting in two stages by using SmartPLS. In the first stage, we assessed the measurement model (Outer model) of the study for the purpose of validity and affirms that items measure the construct they were supposed to measure, consequently ascertaining that the instrument used is reliable. In second stage we assessed the structural model (inner model) to test the hypothesis of the study. Before proceed to this two stages it is required to screen the data for missing values and response bias.

Out of 762 distributed survey questionnaire we found 330 complete and usable questionnaires which represents 43.31% of response rate. Table 1 shows the demographic information of the study.

### Measurement Model

We ensured convergent validity of to show that the constructs' measures which should theoretically be related to each other are actually found related in such manner after the analysis. Hair et al. (2010) suggested three types of estimations viz. factor loadings, composite reliability (CR), and average variance extracted (AVE) to ensure the convergent validity of the measurement model. Firstly, all of the item loadings are examined and a loading value of 0.50 or more is suggested as acceptable in the literature of multivariate analysis (Fornell & Larcker, 1981; Hair et al., 2010).

At first attempt three items of differentiation construct were deleted for low loading. Second attempt loading of indicators of each construct were found above the suggested value, Table 2 presents convergent validity of the study which shows that all the constructs are meet the threshold value 0.05 of reliability and average variance explained. Whereas, Fawcett et al.

(2014) suggested for the discriminant validity should have higher loadings on their assigned constructs by the indicators than any other constructs. Table 3 represents the discriminant validity of this study. In addition,  $R^2$  of the two exogenous variables sourcing strategy and firm performance are 0.646 and 0.765 respectively.

Table 1.  
*Demographic Statistics of the Study*

<b>Title</b>	<b>Frequency</b>	<b>Percentage</b>
<i>Industry</i>		
Garments Manufacturing	121	36.67
Electrical & Electronics	48	14.54
Leather	46	13.94
Food and beverage	78	23.64
Others	37	21.21
<i>Number of Employee</i>		
Less than 50	32	9.7
51-100	21	6.4
101-200	97	29.4
201-400	96	29.1
401-600	59	17.9
601-1000	19	5.8
More than 1000	6	1.8
<i>Ownership</i>		
Private Limited Company	61	18.5
Public Limited Company	109	33.0
Sole Proprietorship	82	24.8
Partnership	78	23.6
Private Limited Company	61	18.5

Table 2  
*Convergent Validity of the study*

<b>Construct</b>	<b>Cronbach's Alpha</b>	<b>Composite Reliability</b>	<b>Average Variance Extracted (AVE)</b>
Cost Leadership	0.927	0.943	0.733
Differentiation	0.973	0.977	0.840
Firm Performance	0.935	0.948	0.722
Sourcing strategy	0.916	0.966	0.955
Sourcing relationship quality	0.917	0.938	0.751

Table 3  
 Discriminant Validity

Construct	COS	DIF	FOP	SOR	SRQ
Cost Leadership	0.86				
Differentiation	0.55	0.91			
Firm Performance	0.59	0.49	0.85		
Sourcing strategy	0.80	0.69	0.66	0.97	
Sourcing relationship quality	0.38	0.34	0.68	0.41	0.86

**Structural Model and Hypothesis Testing**

Before testing the hypothesis multicollinearity basement was carried out. We found that there is no multicollinearity issue in our model. The VIF value that we have found are sourcing strategy 1.549 and firm performance 1.209 which are the below than suggested value:

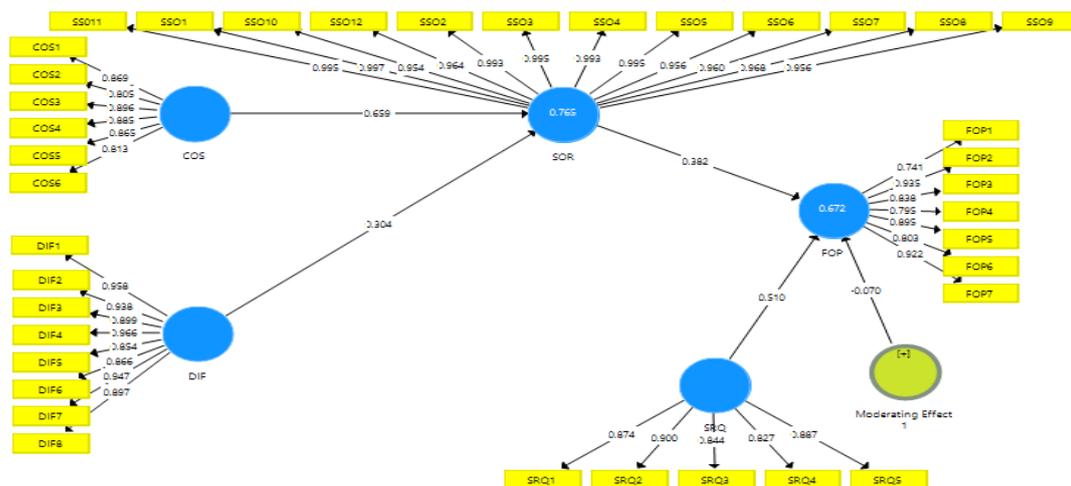


Figure 2. Path model results of the study

We have found the positive effect of sourcing strategy on firm performance. As it can be seen in Table 4, hypothesis H1 stating a significant positive effect on firm performance at 0.01 level of significance ( $\beta=0.462$ ,  $t=7.972$ ,  $p<0.01$ ).

Table 4  
 Result of Direct Path

Hypothesized Effect	Path Coefficient	Standard Error	T-Value	P-Value	Decision
Sourcing Strategy > Firm Performance	0.462	0.048	7.972	0.000	Supported

Hypothesis 2 specified a moderating influence of sourcing relationship quality with  $\beta=0.070$ ,  $t=3.406$ ,  $p<0.01$  (Table 5) on the relationship between sourcing strategy and firm performance of manufacturing firms in Bangladesh. It indicates that to achieve better performance manufacturing firms in Bangladesh has concern about the long term relationship quality with supplier/buying firms.

Table 5  
*Moderating Effect of sourcing relationship quality*

Hypothesized Effect	Path Coefficient	Standard Error	T-Value	P-Value	Decision
Sourcing Strategy*SRQ> Firm Performance	0.070	0.021	3.406	0.001	Supported

## DISCUSSION AND CONCLUSION

Previous researches have conceptualized sourcing in terms of its evident governance modes or forms but little attention has been given to its underlying processes or the mechanisms that govern the relationships in question. Relationship quality assesses the extent to which a business relationship between sourcing firms involves commitment and cooperation from both parties, and performance targets that are less clearly specified to achieve the performance and to remain competitive in this uncertain environment. However, the literature is not conclusive on whether contractual relation between buyer and supplier reduce goal misalignment therefore mitigate the risk and uncertainty in market. These perspectives, the construct of sourcing relationship quality in this study represents the longer-term business relationship between buyer and supplier impacted to enhance performance.

Our study also not without the short coming. When manufacturing firms concern about the sourcing to get advantage of the cost, a firm must have the bundle of competencies/capabilities to coordinate the process of sourcing options whether to buy or make. Therefore, future study can give clear picture of the sourcing relationship quality effect more on which option of sourcing strategy make and/or buy to achieve the firm's goals and performance. Teece (2009), if the outside independent supplier has the capability of meeting the buyer's demands and can convince the buyer that a high degree of quality service is an exclusive property, then the buyer will continue to outsource instead of internally perform the activity. However, it requires firms to coordinate its interdependent activities as to ensure buy or make strategy function as intended (Tang & Rai, 2012; Shapiro & Varian, 1999).

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