DETERMINANTS OF SELECTING COUNTRY-OF-ORIGIN (COO) AS AN INGREDIENT OF SOURCING STRATEGY: EVIDENCE FROM AN EMERGING ECONOMY

Jashim Uddin¹, Md. Lutfur Rahman² and Shehely Parvin³

Abstract

Bangladesh, an emerging economy with substantial dependence on import, necessitated her businesses to formulate international sourcing strategy. The study focuses on Bangladeshi retailers’ and wholesalers’ contemplations to choose country-of-origin (COO) as a part of their sourcing strategy. Retailers and wholesalers, dealing with ceramic tiles and sanitary wares and also undertake international sourcing activities, are the respondents of this study. Multiple regression analysis generated adjusted R² of 0.95, and identifies five significant factors responsible for deciding source country origin. Minimum possible price offer, quick adjustment with importers’ specifications, consumers’ positive impression about the country, source country’s ability to provide variety, and keeping promise of delivery time and quantity are the variables in the regression model. The significant variables have also been checked for the problem of multicollinearity. Hence, the findings of this study add value to the existing body of COO literature.

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INTRODUCTION

Globalization incessantly transforms the competitive landscape of nations in producing goods and services. Some dimensions of this transformation are unquestioned, such as single country dominance in any production process, intensification of number of countries offering identical products in international market, and increased variety of consumer motivations creating opportunities for different type and quality of products from different countries. Therefore, choosing among many sources is a prime consideration for sourcing decision making. In this study, we focused on sourcing decisions made by retailers and wholesalers regarding country-of-origin (COO). We examined the COO considerations from importers’ perspective, not from consumers’ perspective. The product category of the study was ceramic tiles and sanitary wares and the study location was Bangladesh.

LITERATURE REVIEW

Liang and Parkhe (1997) found that researches regarding international exchange were extensively imbalanced because of little concentration to the importer side and the associated motives. Moreover, conceptual and empirical study on retail sourcing has been scarce, albeit international retailers have actively engaged in global sourcing operations (Kacker 1986). Some researches regarding international retail sourcing are; Reichel (1989), Harris and Happell (1991), Stemquist (1994), and Liu and McGoldrick (1996). Studies dealing with international purchasing from COO perspective are available from Cavusgil and Yavas (1985), Thorelli and Glowacka (1995), and Zhan Li and Murray (2000). Two activities involved in international retail sourcing, defined by Liu and McGoldrick (1996), ‘determining market wants’ and ‘identifying, evaluating, and selecting overseas sources of supply’ are relevant with our study. Retail/wholesaling sourcing basically deviated from that of manufacturing, because manufacturers source raw materials or intermediate products for producing finished products and retailers/wholesalers generally source finished products for resale (Liu and McGoldrick 1996). Import of finished products should, have the quality of being comparable to or better than domestic goods and have cost advantages from an importer’s point of view (Liu and McGoldrick 1996). Monezka and Giunipero (1984), Frear et al. (1991), and Birou and Fawcett (1993) also identified some benefits of international sourcing by manufacturers. Among those benefits; low prices from foreign sources, global sourcing attitude within the firm, access to higher quality products, exploiting world-wide technology, and better customer service are also applicable for retailer/wholesaler firms. Another study identified important factors for global sourcing decisions are quality, availability, price, delivery dependability, service, product technology, etc. International purchasing initially used as a reactive strategy to secure materials availability and to reduce production costs (Birou and Fawcett, 1993). At present, international sourcing strategies are progressively more focused at gaining and maintaining competitive advantage (Monezka and Trent, 1991). Monezka and Trent (1992) also...
emphasized that firms must, regardless of their size, have access to world-class technological expertise and an ability to scan the best suppliers throughout the world. Research findings even endorsed that international sourcing is often importer instigated and not always exporter driven (Welch and Luostarinen, 1993; Korhonen and Welch, 1996; Liang and Parke, 1997) and international sourcing is not confined to large firms only (Servais and Jensen, 2001). Likewise, the main question for many firms is not whether to use or not use global sourcing, but how to use it optimally in order to achieve competitive advantage (Murray, Kotabe, and Wildt; 1995). Therefore, we became interested to delve into international sourcing considerations by retailers and wholesalers, regarding the choice of COO for achieving competitive advantage.

COO as an effect came into being after the seminal study of Schooler (1965). Until then, researches on COO influences and its implications became extensive. Origin preferences may be product dependent (Etzel and Walker, 1974; Kaynak and Cavusgil, 1983); hold positive home country bias in comparison to similar countries (Chao, 1993; Schoolar, 1965); or manifest a negative home country bias when home country is less developed than alternative sources (Jaffe and Martinez, 1995; Ettenson, 1993; Papadopoulos, Heslop, and Beracs, 1990; Tan and Farley, 1987; Wang and Lamb, 1983; Hampton, 1977; Krishnakumar, 1974; Gaedeke, 1973; Schooler, 1971). In a developing country like Bangladesh, consumers favor foreign brands for their association with higher prestige (kapferer, 1997). Foreign brands hold higher prestige owing to their higher price and relative scarcity in comparison to local brands (Batra et al. 2000; Bearden and Etzel, 1982). Above explanations of COO from consumer perspective provide some foundation to derive importers’ motivations for choosing COO as a part of sourcing strategy. Country preference differs according to consumer perception, which importers must bear in mind. Importers’ choice regarding COO also may differ for cost, quality, availability, delivery dependability, service, product technology; as identified earlier. Accurate measurement of lead times influences stock of optimum inventory, which significantly differ between domestic and foreign sources (Liu and McGoldrick, 1996). Developing countries, generally generate longer lead times and greater uncertainty (Liu and McGoldrick, 1996). The issue of ‘hard cost’ developed by Liu and McGoldrick (1996) considered transportation cost and damage in transit. Product category of this study is fragile in nature and has chances of damage not only in transit but also for any sort of handling. Therefore, superior packaging can reduce chances of damage. Consumers’ desire for final goods can have two forms of motivation, one is ‘Love of Variety Approach’ (Dixit and Stiglitz, 1977) and another is ‘Ideal Variety Approach’ (Lancaster, 1979). Retailers/wholesalers must consider greater variety of ceramic tiles and sanitary wares to woo customers, and capacity to create varieties can differ by country.
OBJECTIVES OF THE STUDY

Bangladeshi retailers/wholesalers dealing with ceramic tiles and sanitary wares to gain competitive advantage may have several considerations for making the choice of COO. This study is aimed at achieving following outcomes:

- Identifying multiple variables that lead to COO decision among many alternatives.
- Revealing the significance of the explanatory variables.
- Developing a model to understand the strength of relationship between the dependent variable and independent variables.
- Ascertaining the level of influence by each explanatory variable on dependent variable.

METHODOLOGY

The study used both primary and secondary information. Theoretical part of the article mainly used secondary sources such as review of scholarly journals, whereas the quantitative findings and interpretations are on the basis of primary data. The steps in sampling design process were as follows:

Target population: Our study focused the managers of retailing/wholesaling firms dealing with ceramic tiles and sanitary wares as sampling elements, who make purchase decisions regarding COO. Our sampling unit became retail/wholesale outlets. We have listed all the retail/wholesale outlets under the aforesaid criteria in a sequential manner. The locations of the study were Dhaka (two major ceramic tiles and sanitary ware market places named as Hatirpool-Banglamotor, and Green road) and Chittagong (the major ceramic tiles and sanitary ware market place named as Kajir Dewri- Noor Ahmed road- Lovelane), and the time period was July 2008.

Sampling technique: As we have developed the list of ceramic tiles and sanitary ware retailers and wholesalers, we have applied systematic sampling method according to the list and 170 respondents identified. Among the 170 respondents finally 153 were taken into account because of inconsistencies in responses and incomplete questionnaires.

Primary data was collected through structured questionnaire where dependent variable was ‘choice of COO is important for foreign sourcing decision (sourcing decision), which was measured by interval scale using five points where ‘5’ denoted strongly agree and ‘1’ denoted strongly disagree. Independent variables were also measured by five point interval scale as like as dependent variable. We employed multiple regression analysis, using SPSS program, to get the desired results.

Hypotheses Development

Review of related literature provided us insight to develop hypotheses for understanding the motivations to make COO choice for making sourcing decisions. We have developed the indepen-
dent variables by refining the thoughts from available literature and developed the hypotheses. Though, some of the independent variables can differ by company, but broader practices can differ country to country. We have developed the questionnaire focusing on country perspective. The hypotheses are consecutively placed in the following and the variable names are specified in parentheses after hypotheses:

**H1:** Lower the price offer (in cnf price) from a country, more likely it is to source from that country. *(price offer)*

**H2:** Quicker the adjustment with importer’s specifications by a country, greater the likelihood to source from that country. *(quick adjustments)*

**H3:** Higher the positive impression for a country by consumers, higher will be the chance to source from that country. *(consumer positive impression)*

**H4:** Superior is the packaging to ensure product safety, easy handling, and attraction; by a country, more will be the possibility to source from that country. *(superior packaging)*

**H5:** More the ability to provide variety by a country, more likely it is to source from that country. *(provide variety)*

**H6:** Closer the country location to reduce transportation time, greater the likelihood to source from that country. *(transportation time)*

**H7:** Greater is the frequency of keeping promises about delivery time and quantity by a country, greater will be the likelihood to source from that country. *(delivery time and quantity)*

**H8:** More the country specialization ensuring quality by a country, more it is likely to source from that country. *(country specialization)*

### The Proposed Model

In the previous section, we have proposed the independent variables that may influence the dependent variable ‘choice of COO, which is important for foreign sourcing decision’. Now we are proposing linear relationship between the explanatory variables and dependent variable according to the CLRM (classical linear regression model).

\[
Y (sourcing \ decision) = \alpha + \beta_1 (price \ offer) + \beta_2 (quick \ adjustments) + \beta_3 (consumer \ positive \ impression) + \beta_4 (superior \ packaging) + \beta_5 (provide \ variety) + \beta_6 (transportation \ time) + \beta_7 (delivery \ time \ and \ quantity) + \beta_8 (country \ specialization) + \epsilon
\]

Where,

- \(Y\) indicates the dependent variable ‘choice of COO is important for foreign sourcing decision’, \(\alpha\) is the constant term, \(\beta_1, \beta_2, \ldots \beta_8\) are the coefficients of explanatory variables, and \(\epsilon\) is the white noise error term.

### Results of Multiple Regression Analysis

We have employed various combinations of explanatory variables to get the best possible model. Moreover, combinations of explanatory variables were made to reduce the problem of multicollinearity (linear relationship between or among explanatory variables) as
much as possible, as the assumptions of CLRM is that there is no multicollinearity among the regressors (explanatory variables) included in the regression model (Gujarati, 2003). We are presenting the results of regression analysis in the following.

According to the Table 1.1 we can see that the explanatory variables can explain 95% of the total variability of the dependent variable ‘\(Y\) (sourcing decision)’ as the adjusted R\(^2\) of the model is 0.950.

The ANOVA table shows the significance of the combined effect of explanatory variables in the regression model. So, we can reject the null hypothesis (\(\beta_k = 0\)) and accept the alternate hypothesis (\(\beta_k \neq 0\)) at 1% level of significance.

The contribution of each explanatory variable requires individual coefficient (\(\beta\)) values (standardized and unstandardized), which are presented in the Table 1.3.

### Model Summary (Table 1.1)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.976</td>
<td>.952</td>
<td>.950</td>
<td>.1720</td>
</tr>
</tbody>
</table>

### ANOVA Table (Table 1.2)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F Statistics</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>85.887</td>
<td>5</td>
<td>17.177</td>
<td>105.796</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>4.348</td>
<td>147</td>
<td>0.02958</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90.235</td>
<td>152</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Coefficients of Explanatory Variables (Table 1.3)

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>t value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>Std. error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>COO offers minimum possible price</td>
<td>.509</td>
<td>.021</td>
<td>.795</td>
<td>24.083</td>
</tr>
<tr>
<td>COO capable of making quick adjustment with importer’s specifications</td>
<td>.681</td>
<td>.044</td>
<td>.646</td>
<td>15.554</td>
</tr>
<tr>
<td>positive impression for the COO by consumers/customers</td>
<td>0.045</td>
<td>.019</td>
<td>.058</td>
<td>2.383</td>
</tr>
<tr>
<td>COO’s ability to provide more variety</td>
<td>.080</td>
<td>.025</td>
<td>.108</td>
<td>3.209</td>
</tr>
<tr>
<td>COO keeps promised delivery time and quantity</td>
<td>.745</td>
<td>.028</td>
<td>1.022</td>
<td>27.075</td>
</tr>
</tbody>
</table>
Table 1.3 indicates the explanatory variables' significance for the model, where it is noticeable that five explanatory variables are included in the regression model and other three are excluded. Exclusion of three explanatory variables (superior packaging, transportation time, country specialization) was done to reduce multicollinearity problems, as inclusion of them turns some variance-inflating factor (VIF) very high. The variance in the dependent variable explained by each explanatory variable is expected to be independent. As multicollinearity is essentially a sample phenomenon, the significant distinction is not between the existence and nonexistence of multicollinearity, but between its various degrees (Gujarati, 2003). So, evidence regarding the extent of multicollinearity in our regression is required. Table 1.4 is providing TOL (Tolerance) and VIF statistics for multicollinearity.

Table 1.4 indicates that the multicollinearity problem in this regression analysis is not significant. As a rule of thumb, when the VIF of a variable exceeds 10 then we can consider it as a serious multicollinearity problem (Kleinbaum, Kupper, and Muller; 1988). So, we can ensure that collinearity among all the explanatory variables are acutely within considerable level. In contrast, TOL (can be used interchangeably with VIF) for two variables are .190 and .230 that can be somehow considered as close to zero (closer the TOL to zero the greater the degree of collinearity, as according to Gujarati; 2003) but the theoretical understanding of the variables and VIF statistics gesticulate us to ignore it.

**Interpretations of Results**

Table 1.1 indicating that the multiple coefficient of determination (R$^2$) is 0.950 means the explanatory variables can explain about 95% of the variation in dependent variable. According to the specification of Theil (1978), using adjusted R$^2$ is better than using R$^2$. From the best of our knowledge about regression, adjusted R$^2$ of 0.95 is impressive enough when the variables are qualitative in nature and not measurable by absolute value (ratio scale).

Table 1.2 explains the dependability of the model as the F statistic showed very high value and appeared significant at 1% level.

**Collinearity Statistics (Table 1.4)**

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>COO offers minimum possible price</td>
<td>0.301</td>
</tr>
<tr>
<td>COO capable of making quick adjustment with importer's specifications</td>
<td>0.190</td>
</tr>
<tr>
<td>positive impression for the COO by consumers</td>
<td>0.550</td>
</tr>
<tr>
<td>COO's ability to provide more variety</td>
<td>0.289</td>
</tr>
<tr>
<td>COO keeps promised delivery time and quantity</td>
<td>0.230</td>
</tr>
</tbody>
</table>
In the Table 1.3, we have got the significant explanatory variables. Additionally, the table provided the level of contribution by each explanatory variable to explain the dependent variable ‘Y (sourcing decision)’. According to the unstandardized beta (β) coefficient and standardized beta (β) coefficient, we can arrange them according to their importance in explaining the dependent variable. The impact of ‘delivery time and quantity’ became most important as its unstandardized beta (β) coefficient and standardized beta (β) coefficient are 0.745 and 1.022 respectively. The next important explanatory variable is ‘quick adjustments’, having unstandardized beta (β) coefficient of 0.681 and standardized beta (β) coefficient of 0.646. The third important contribution made by ‘price offer’, because its unstandardized beta (β) coefficient is 0.509 and standardized beta (β) coefficient is 0.795. The second and third important variables create confusion as the debate of using standardized and unstandardized coefficients is long been originated. One should give more preference on standardized coefficients to understand the impact of variables as measurement is made by Likert scale (answers.com), not by absolute values (by ratio scale). Fourth important attribute came up as ‘provide variety’, without any confusion between standardized and unstandardized coefficient, which has unstandardized beta (β) coefficient 0.080 and standardized beta (β) coefficient 0.108. The fifth important aspect is ‘consumer positive impression’, because of unstandardized beta (β) coefficient 0.045 and standardized beta (β) coefficient 0.058. All the variables in the model are significant at 1% level except ‘consumer positive impression’ significant at 5% level.

The revised model after the statistical analysis is in the following:

\[ Y \text{ (sourcing decision) = } \alpha + \beta_1 \text{ (price offer) + } \beta_2 \text{ (quick adjustments) + } \beta_3 \text{ (consumer positive impression) + } \beta_4 \text{ (provide variety) + } \beta_5 \text{ (delivery time and quantity) + } \epsilon \]

Implications for International Marketing

Marketing products in foreign land (export) and marketing foreign products in local land (import) have extensive significance in International marketing. As it was noted earlier that, in a developing country like Bangladesh, foreign products are holding superior image compared to that of local. Therefore, foreign ceramic tiles and sanitary wares are imported and sold in large quantities in Bangladesh, along with local options. But, buying products from a foreign source with business motive will obviously have different considerations than that of consumers. The result we revealed will have substantial importance for international marketers, importers, local producers, consultants, academicians, and consumers.

Promised delivery time and quantity of source country substantially influences retailers’/wholesalers’ customer service level regarding delivery commitments. Keeping delivery promises also facilitate retailers/wholesalers with better projection of inventory levels and cost. As overseas sourcing significantly increases delivery uncertainty
than local sourcing, Bangladeshi retailers/wholesalers emphasized on ‘delivery time and quantity’ component most. Moreover, country location reducing transportation time (transportation time) excluded from the model, seems logical as the retailer can predict the delivery time and quantity appropriately by concentrating on ‘delivery time and quantity’ variable.

The importance for minimum possible price offer (price offer) is very high according the regression model. Ceramic tiles and sanitary wares generally involve substantial cost from the economic viewpoint of Bangladeshi consumers. So, asking for specialized quality mostly exceeds Bangladeshi consumers’ buying capacity. Moreover, the intension of retailers/wholesalers regarding unit profit may be high enough for foreign sourced products, and that inhibits consumers to ask for specialized quality of products in a desired price. In the questionnaire we have considered CNF (Clearing and Forwarding) price offer, which reduces the implication of transportation cost on the total cost structure of any imported product.

Consumers’ positive country impression has very little importance to the retailers/wholesalers, which once again signifies higher profit intension by retailers/wholesalers on specialized country’s product. Consequently, minimum price offer appeared with high importance from the perspective of retailers/wholesalers.

Quick adjustment with importer’s specification played a significant role in explaining the dependent variable ‘sourcing decision’. Every country’s cultural preferences require some adjustments in product attribute, like color, size, etc. On the other side, changing some technical specification of product can contribute to make unit profit of producer/exporter, and importer/retailer/wholesaler more handsome. Putting relatively higher importance on ‘quick adjustments’ by retailers/wholesalers can be justified from the aforesaid perspectives.

Capacity to provide variety by a source county is a significant explanatory variable derived by the model. This variable generated little motivations among the retailers/wholesalers, as retailers/wholesalers mostly should consider this variable for consumers’/buyers’ benefits.

Packaging, an important aspect for ceramic tiles and sanitary ware, excluded from our developed model. This finding may explain that packaging quality may not differ significantly because of source country origin.

Limitations of the Study

The study selected samples according to systematic sampling procedure. So, the excluded samples (retailers/wholesalers) may have higher attachment with international sourcing activities. The retailers/wholesalers doing business outside major market places (considered in this study) had no chance to be selected as samples.
CONCLUSION

The study has identified the contributing factors for selecting COO regarding international sourcing decision for ceramic tiles and sanitary wares. At present, ceramic tile and sanitary ware is an integral part of urban lifestyles of Bangladesh. A significant portion of urban population desires to use foreign sourced ceramic tiles and sanitary wares. Therefore, revealing the factors that motivate retailers/wholesalers to choose source country origin is of significant importance. As our model became statistically significant with an adjusted $R^2$ of 0.95, we are prescribing the use of the model by the practitioners. The user of the model could explain almost the total variability in the ‘choice of COO for foreign sourcing decision’ (for products considered in this study). We have analyzed the implications of all the significant variables from the perspective of marketing, more specifically international marketing. Hence, the findings of this study add value to the existing body of COO literature.

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