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Internationalisation of SMEs and Firm Performance: Evidences from Bangladesh

Abstract:
One of the key objectives of this paper is to identify the impacts of internationalisation of SMEs on firm performance. Although there have been a number of research that examined the relationship between SME internationalisation and firm performance, research from the context of smaller developing economies are really scant. This is against the fact that SMEs are main vehicle for growth in those economies and extensive research on various dimensions of SMEs including its impact on firm performance may help to better understand the operational aspects of SMEs in those economies. Using primary data and structural equation modelling to analyse those data, the paper has found that internationalisation of SMEs has significant impact on both financial and non-financial performance of SMEs in Bangladesh. More specifically, the paper has found that internationalisation impacts in two dimensions (Financial impacts and non-financial impacts) with 8 indicators (higher sales, higher profit, assets maximization, market expansion, competitive advantage, better reputation, better customer service and added knowledge).

Relevant Track: Performance Management

Word Count: 6700.
Introduction:

Small and Medium Enterprises (SMEs) are critical for the economic welfare and social development particularly in income generation, employment creation and poverty reduction (Abdullah, 2002; Aziz & Mahmood, 2011; Syed, Ahmadani, Shaikh, & Shaikh, 2012). The role of SMEs is more important in developing countries compared to developed countries due to its low capital requirement and labour intensity (Ng & Kee, 2012). To support the contribution in economic development, SMEs need to ensure their growth first. Although there are several options (such as, local expansion, new products developments, overseas market operation), internationalisation has long been regarded as the engine of growth for the SMEs (Peng and Delios, 2006). Internationalisation of SMEs has several impacts on the SMEs, for example, higher sales (Lee, Kelley, Lee, & Lee, 2012), more profit (Chelliah, Sulaiman, & Yusoff, 2010), market expansion (Smolarski & Kut, 2011), improved reputation (Lu and Beamish, 2006) and better Knowledge (Zahra & Hayton, 2008). Although the number of studies on the internationalisation of SMEs is increasing, most of those studies are on developed countries or highly industrialized countries (Bruton, Ahlstrom, & Obloj, 2008; Mohamad & Ismail, 2009). Given the differences between developed and developing countries in relation to socio economic conditions and international business environment, findings from previous research focusing mostly on developed economies are not very useful for firms in the developing countries (Aulakh & Kotabe, 2008; O'cass & Julian, 2003). Therefore, it is reasonable to examine the impact of SME internationalisation on firm performance using the data from developing economy to see if the linkage between SME internationalisation and firm performance is different for developing economy compared to developed economies. To examine the research question, this paper used Bangladesh as the sample country. The choice of Bangladesh is reasonable as this is a unique example for its heavy dependence on SMEs particularly for economic growth and employment generation (Ahmed, Rahman, & Haque, 2011).

Conceptual Model and Hypothesis Development:

Based on the extant literature on internationalisation of SMEs, this paper proposes the following research model (see Figure 1). This model proposes that there are two major types of impacts of internationalisation for Bangladeshi SMEs. These are financial impacts and non-financial impacts. First, financial impacts consist of higher sales, higher profit, more assets and market expansion. Secondly, non-financial impacts consist of competitive advantage, better reputation, skill development, new knowledge.
In the above figure 1, there are 8 hypotheses on the impacts of internationalisation of SMEs on the basis of previous findings in the literature with particular attention to a developing countries. These 8 hypotheses are classified into two groups- financial impacts and nonfinancial impacts. Under the category of financial impact, there are 4 hypotheses based on 4 factors. These are- higher sales, higher profit, more asset and market expansion. On the other hand, there are 4 hypotheses based on 4 factors under non-financial impacts- competitive advantage, reputation, skill development and new knowledge.

Sale is commonly known as the exchange of goods, property or services between two or more parties in an agreed sum of money to pay in cash or credit. Higher sale is one of the most important determinants of business growth because it usually reflects market acceptance and firm success (Park & Jang, 2012). Although it is very important for the firms to ensure higher sales or higher growth, it is very difficult for the firms to maintain consistent growth (Zook & Allen, 1999). Due to this high importance, firms of all sizes use their resource based capabilities to ensure higher sales to ensure consistent growth. By nature, larger firms have better capabilities and so should be the growth. In contrast, it has been revealed that the small and medium enterprises grow faster than the large competitors (Kumar, 2013). There are various rationales behind this unusual result. For example, some of the studies stated that the SMEs try to grow faster to reach economies of scale (Kumar, 2013). McAdam (2000) claimed that the smaller firms are more concerned to allocate their limited resources more optimally than the larger firms to achieve higher sales or rapid growth. Although there are number of techniques (such as, product development, advertisement or market expansion) to increase the sale, internationalisation has long been regarded as one of the most effective ways to ensure growth of the firms (Singh et al, 2003; Park and Jang, 2009). Despite this important relationship between growth and internationalisation of firms, previous findings on higher sales as an important impact of internationalisation is still an unsettled issue. While
some of the studies (Dhanaraj & Beamish, 2003; Morgan, Kaleka, & Katsikeas, 2004; Lages & Lages, 2004; Smolarski & Kut, 2011) identify higher sales as an important outcome of internationalisation, some other studies (Albaum & Tse, 2001; Ling-yee & Ogumnokun, 2001) do not take into account higher sales as an important outcome of internationalisation. Considering the important relationship between higher sale and financial impact of internationalisation, this study proposes higher sales as a function of financial impact of internationalisation in the context of developing countries’ SMEs. On the basis of above discussions, following hypothesis is proposed:

H1: higher sales as a factor of financial impact and internationalisation of SMEs will not be independent from each other.

Profit is usually known as the financial return for taking the risk by a business. The term profit has been interpreted in different ways by different studies. For example, Clark (1939) explained it as the dynamic surplus that arises from variation in static standards. Again, Fernandez (2003) stated profits as the reward for taking risks and facing uncertainties. More recently Ghosh and McAfee (2011) has defined profit as the difference between turnover and costs of producing, selling and other associated expenses related to the associated products and services. From these definitions, it is clear that the expectation of profit should be higher to undertake more risky and uncertain business venture. It is, therefore, very usual that the internationalisation of firms should be motivated by the higher profit expectation as well. According to Pangarkar (2008), through internationalisation firms start their business in an environment where they face several constraints and risks with the motive to achieve several benefits. These benefits of internationalisation could be higher revenue as well as higher profit (Luostarinen, 1979). There are number of explanations to support this higher profit, such as, higher sale (Smolarski and Kut, 2009; Chelliah et al, 2010), cheap labour (Pangarkar, 2008), efficiency of production (Ghoshal, 1987; Thomas and Eden, 2004) lower taxes (Pangarkar, 2008) or due to the possibility of arbitrage (Allen & Pantzalis, 1996). Although many studies (Rose & Shoham, 2002; Balabanis & Katsikea, 2003; Dhanaraj & Beamish, 2003; Morgan, Kaleka, & Katsikeas, 2004) support the relationship between internationalisation and higher profit, some other studies notify the jeopardy to continue too many international expansions. For example, according to Gomes and Ramaswamy (1999, p. 174), ‘‘it can be argued that continued foreign expansion would be accompanied by decelerating profit growth and negative marginal returns beyond some optimal level’’. Some of the studies (such as, Stewart and McAuley, 2000; Baldauf, Cravens, and Wagner, 2000; Wolff and Pett, 2000; Yeoh, 2000) do not consider higher profit as an important impact of internationalisation. Therefore, the findings related to higher profit as an important impact of internationalisation is still inconclusive. Considering the important connection between higher profit and financial impacts of internationalisation, this study posits higher profit as a function of financial impact in the context of developing countries’ SMEs. On the basis of the above discussions, it has been hypothesized that:

H2: Higher profit as a factor of financial impacts and internationalisation of SMEs will not be independent from each other.
Asset is generally defined as the resources that are used to create positive value. In case of business, assets refer to the aspects that an organisation can obtain, build up, nurture or leverage for internal or external or for both purposes (Barney, 1991; Hunt & Morgan, 1995; Mahoney, 1992). According to Dobler (2008), assets are the lawful possessions of economic resources that exist at the financial statement. These asset based resources are vital for the business growth (Wiklund & Shepherd, 2005). To ensure the growth, firms take initiatives to purchase or share the assets. Due to the financial limitations SMEs might be more interested to share the assets than purchase as a resource based strategy. It has been argued that the small and medium enterprises simultaneously engage in different alliances to get access of complementary assets based resources of their strategic partners (George, Zahra, Wheatley, & Khan, 2001). Among the strategic partnerships, internationalisation is also very popular (Lavie & Miller, 2008). In fact, internationalisation of firms may facilitate bundle of resources that owners or managers may use to create value i.e. to increase assets of the firm (Javalgi and Todd, 2011). It has been identified by many studies that the internationalisation of firms have a positive impact with increase in assets (such as, Prasad, 2001; Ling-yee and Ogunmokun, 2001; Solberg, 2002; Brouthers and Xu, 2002; Lages and Lages, 2004; Chelliah et al, 2010). Some other studies (for example, Hoang, 1998; Wolff and Pett, 2000; Shoham, Evangelista, and Al-baum, 2002) do not consider increase in assets as an important impact of internationalisation. Therefore, the findings related to increase in assets as an important impact of internationalisation is not very consistent. Considering the important connection between increase in assets and financial impacts of internationalisation, this study considers more assets as a function of financial impact in the context of SMEs from developing countries. On the basis of the above discussions, it has been hypothesized that:

**H3: Increase in assets as a factor of financial impacts and internationalisation of SMEs will not be independent from each other.**

Generally, market is known as a place where the buyers and sellers carry on business transaction. Market expansion is directly related to the business growth. Although there are many ways of expanding markets, internationalisation is one of the most popular means of market expansion. In fact, origin of internationalisation is based on market seeking activity. Number of factors assists to make internationalisation as an important way of expanding market, such as, development in communication technologies, better transportation systems, and market liberalization (Barkema & Mannix, 2002). Considering this importance, growth of internationalisation is measured by market expansion since long (Cadogan, Diamantopoulos, & De Mortanges, A measure of export market orientation: scale development and cross-cultural validation, 1999). Although the international market expansion and internationalisation was initiated by the large firms initially, SMEs were also looking for a smaller market niche in abroad (Pangarka, 2008). It has also been claimed that a number of small and medium enterprises are even earning more money from the international market than their local market (Chelliah, Sulaiman, & Yusoff, 2010). Many studies find positive relationship between internationalisation and market growth (Dhanaraj & Beamish, 2003; Akyol & Akehurst, 2003; Morgan, Kaleka, & Katsikeas, 2004; Smolarski & Kut, 2011). Some other studies (Armario, Ruiz, & Armario, 2008; Kwon & Hu, 1995) also indentify mixed result on the relationship between internationalisation and market expansion. Supporting the important relationship between market expansion and financial impact of internationalisation, this study proposes market expansion as a function of financial impact of internationalisation in the context of developing countries’ SMEs. On the basis of above discussions, following hypothesis is proposed:
Competitive advantage has been explained by the leadership attained by a firm, in terms of performance over its competitors in a given industry by using the unique resources and skills developed over time (Porter, 1985). There are different traditions to achieve the competitive advantages. For example, according to Barney (1991, page 102), competitive advantage is achieved when a firm “is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors”. Porter (1985) further defined that competitive advantages may be achieved by reducing the overall cost or by offering product differentiation and economies of scale. Although the competitive advantage is important both for large and small firms, it is more important for the smaller firms because of their resource constraints (Bell, Crick, & Young, 2004; Bonaccorsi, 1992; Ghauri & Herbern, 1994). While large firms are financially capable to bring more variation in product, market or even skill, small and medium enterprises are more dependent on comparatively low cost high value business strategies. According to Hsu et al (2012; page 1), internationalisation assists these firms to achieve competitive advantages particularly for the firms having limited home market opportunities. Supporting this, number of studies suggests that the cost leadership or product differentiation is applicable for large firm and target market strategy or involving the realistic performance of contingent is more suitable for SMEs (Bamberger & Fiegenbaum, 1996; Kaynak & Kothari, 1984; Bonaccorsi, 1992). A positive relationship between internationalisation and competitive advantages are shown in some studies including Styles (1998), Albaum and Tse (2001), Cadogan et al. (2002), Rose and Shoham (2002), Balabanis and Katsikea (2003), Cadogan et al. (2003), Akyol and Akehurst (2003), Morgan et al. (2004), Chelliah et al. (2010). Some other studies (Yeoh, 2000; Dean, Menguç, and Myers, 2000; Wolff and Pett, 2000) ignore competitive advantage as the impact of internationalisation. Considering the important relationship between competitive advantage and non-financial impact of internationalisation, this study proposes competitive advantages as a function of non-financial impact of internationalisation in the context of developing countries’ SMEs. On the basis of above discussions, following hypothesis is proposed:

**H5: Competitive advantages as a factor of non-financial impact and internationalisation of SMEs will not be independent from each other.**

Reputation is commonly known as the beliefs of the target group about a person or a company. In case of business, reputation of the firm plays a very important role on buying decisions of the target customers (Cretu & Brodie, 2007). According to Christopher and Gaudenzi (2009), the reputation of the business organisation could be more important than the products or services sometimes. It is also a key factor to ensure the growth and success of the firms (Beners & van Riel, 2004; Heugens, Van Riel, & Van Den Bosch, 2004). Therefore, it is very important for the firms to understand the key issues related to good reputation (Barnett, Jermier, & Lafferty, 2006). The reputation of a firm could be determined by various means. According to Brammer and Pavelin (2004, p. 705), “A firm’s current reputation is determined by the signals that publics receive concerning its behaviours, whether directly from the firm or via other information channels, such as the media or the stock market”. It is generally agreed that the large firms have more financial capabilities to provide good signals of reputation due to their resource based advantages. In contrast the small and medium enterprises build the reputation very slowly, extra conscious about this and more dependent
on their networks. Main reasons for these features are based on the key characteristics of these firms, such as, inadequate resources and lack of sufficient experience (Lu and Beamish, 2001) and their focus on global niche markets (Knight, 2001). To overcome these constraints, firms take different initiatives including internationalisation of firms. More and more SMEs are getting active internationally (e.g., Covello and McAuley, 1999; Ruzzier et al., 2006). International partners of these firms are influencing their business from various angles including better reputation. Besides, making partnership with large international firms by becoming local suppliers or local distributor, SMEs can leverage the reputation of large firm (Lu and Beamish, 2006). According to Schweizer (2012), firms should select reliable international partners to have better reputation. Many of the studies identified positive relationship between added reputation of the firm and internationalisation including Myers (1999), Prasad (2001), Morgan et al (2004), Ruzzier et al (2007), Lu and Beamish (2006), Pangankar (2008). Some other studies (Such as, Hoang, 1998; Francis and Collins-Dodd, 2000; Wolff and Pett, 2000) do not consider better reputation as an important impact of internationalisation. Supporting the important relationship between better reputation and non-financial impact of internationalisation, this study recommends better reputation as a function of non-financial impact of internationalisation in the context of developing countries’ SMEs. On the basis of above discussions, following hypothesis is proposed:

H6: Better reputation as a factor of non-financial impact and internationalisation of SMEs will not be independent from each other.

Skill is the ability to carry on certain task efficiently. This is also considered as one of the most important requirements of success for both individual and business. It has been also argued that the success of small and medium enterprises is more dependent on the skill of owners and managers than that of large firms (Bryan, 2006; Jasra, Khan, Hunjra, Rehman, & Azam, 2011). In fact, the large firms are financially competent to higher skill labour in need whereas, the small firms have resource limitation very naturally. Although there are many ways of gaining skill, internationalisation is considered as one of the key source of skill development to enhance improved business performance (Morgan and Katsikeas, 1997). To become competitive internationally, firms try to develop their skill to the international level. According to Knight (2001; page 167), “for most companies, because it tends to link the firm to buyers and the external environment, skilful strategic competence appears to be a critical ingredient for international success”. International business skill assist the firms to become successful both in local and international market by developing business expertise, international orientation, environmental perceptions and demographic diversity (Manolova, Brush, Edelman, & Greene, 2002). Many studies found positive relationship between skill development and internationalisation including Morgan et al. (2004), Knight (2000), Aspelund and Moen (2005), Tagliavini et al (2001), Knight and Cavusgil (2004), Wolff and Pett (1999). Some other studies (Such as, Hoang, 1998; Francis and Collins-Dodd, 2000; Wolff and Pett, 2000) do not regard skill development as an important impact of internationalisation. Supporting the important relationship between skill development and non-financial impact of internationalisation, this study recommends skill development as a function of non-financial impact of internationalisation in the context of developing countries’ SMEs. On the basis of above discussions, following hypothesis is proposed:

H7: Skill development as a factor of non-financial impact and internationalisation of SMEs will not be independent from each other.
In general, knowledge is the familiarity of an individual in the form of awareness or understanding gained from study or experience. It is one of the most important success factors of business process management (Trkman, 2010; Kogut & Zander, 1993; Spender, 1996). Although knowledge is important both for local and international business operation, it is more important for international business negotiation to create long term successful commercial relationship (Lyles & Salk, 1996; Mowery, Oxley, & Silverman, 1996; Aharoni, Tihanyi, & Connelly, 2011). Firms try to gain knowledge from various sources but there is a lack of means for knowledge capturing, storing and disseminating and for organizational learning (Disterer, 2000; Prencipe & Tell, 2001). While large firms can hire the knowledgeable people more frequently in need, small and medium enterprises find it difficult as they have resource limitation. These small firms are more dependent on the knowledge they gain from the experience of operating business internationally. There is growing interest on the impact of internationalisation towards knowledge and learning from network partner or even vicarious learning (De Clercq, Meuleman, & Wright, 2011). Learning from international market may also be used to boost up the business in the local market. While Uppsala model of internationalisation identified newness as a major barrier for internationalisation of SMEs, Autio, Sapienza and Almeida (2000) claimed that some of the firms may enjoy “learning advantages of newness”. In fact, through the internationalization SMEs operate in many other countries which may open the possibility to leverage the knowledge about multiple markets and enhance performance (Preece, Miles, & Baetz, 1999; Pangarka, 2008). According to Hsu, Chen and Cheng (2012, p. 1), “the expansion into international markets and the use of resources from foreign sources by small- and medium-sized enterprises (SMEs) have increased dramatically”. Sometimes the effect of internationalisation on SMEs may not be direct, for instance, Ruigrok and Wagner (2003) claimed curvilinear relationships between added knowledge and internationalisation rather than straight relationship. While many studies (such as, Prasad, 2001; Kostova and Roth, 2002; Zahra and Hayton, 2008; Bradley and O’Reagain, 2001) consider new knowledge as an important impact of internationalisation, some other studies (Such as, Hoang, 1998; Beamish, Karavis, Goerzen, and Lane, 1999; Francis and Collins-Dodd, 2000; Wolff and Pett, 2000) do not consider it. By agreeing with the important relationship between new knowledge and non-financial impact of internationalisation, this study recommends new knowledge as a function of non-financial impact of internationalisation in the context of developing countries’ SMEs. On the basis of above discussions, following hypothesis is proposed:

H8: New knowledge as a factor of non-financial impact and internationalisation of SMEs will not be independent from each other.

Methodology:

This study develops and validates a partial least square based SEM (PLS-SEM) on the impacts of internationalisation for SMEs where it formulates a theory that is empirically testable and “law-like generalizations” (Orlikowski & Baroudi, 1991). As this study proposed a Mathematical (hierarchical reflective) model on the impact of internationalisation for Bangladeshi SMEs and it formulates a theory that is empirically testable, the research philosophy reflected in this study is positivistic in nature. The aim of using the empirical survey was to measure a casual network relationship (Jenkins, 1985) on the impacts of internationalisation for SMEs. To carry on the empirical investigation, cross sectional survey
technique was applied to extract views from the respondents only once (Malhotra, 2004). To achieve the maximum response rate from a developing country perspective, standard mail out procedure was applied rather than in home, telephone or online survey (Dillman, 1978). This study developed hypotheses on the basis of relevant literature review to propose hierarchical reflective models. To validate the model, an empirical survey was carried out later which followed deductive research approach. Data were collected from 4 major divisions of Bangladesh – Dhaka, Khulna, Chittagong and Rajshahi from July/2011 till September/2011. A total of 1000 questionnaires were distributed following cluster sampling technique. To ensure the equal opportunity for each firm to be selected, systematic random sampling technique was applied. Population for the survey was defined as the SMEs doing international business. Out of 1000 questionnaire, 219 responses were received. Among the 219 received questionnaires, 7 were unusable due to excessive missing data. Finally data from 212 questionnaires were analysed.

Table 1 Profile of the respondents

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Category</th>
<th>Percentage</th>
<th>Particulars</th>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>68.10</td>
<td>Sector of business</td>
<td>Primary Manufacturing Service</td>
<td>13.90</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>32.90</td>
<td></td>
<td></td>
<td>51.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34.70</td>
</tr>
<tr>
<td>Area</td>
<td>Dhaka</td>
<td>28.50</td>
<td>Business Type</td>
<td>Sole trader Partnership Family Co-operative Private Ltd</td>
<td>28.90</td>
</tr>
<tr>
<td></td>
<td>Chittagong</td>
<td>25.80</td>
<td></td>
<td></td>
<td>21.40</td>
</tr>
<tr>
<td></td>
<td>Rajshahi</td>
<td>22.10</td>
<td></td>
<td></td>
<td>09.10</td>
</tr>
<tr>
<td></td>
<td>Khulna</td>
<td>23.60</td>
<td></td>
<td></td>
<td>06.90</td>
</tr>
</tbody>
</table>

From table 1, it can be observed that data were collected from diverse cross sectional population. Out of 219 respondents, 68.1% are male and 32.9% were female. From business sector point of view, 13.9% from primary, 51.4 from manufacturing and 34.7 from service sector. 28.5% from Dhaka, 25.8% from Chittagong, 22.1% from Rajshahi and 23.6% from Khulna division. From business types’ point of view, 28.9% sole traders, 21.4% Partnership, 9.1% family business, 6.9% co-operative and 33.7% private limited company.

Items of the questionnaire were identified from systematic reviews of literature. All of the items of the questionnaire were measured in 5 point likert-scale. Before the final data collection, a piloting of the questionnaire were carried out among 20 samples and 5 academics to ensure the appropriateness of wording, contents, scales, sequence and format. Very minor amendments were made on the basis of pre-test results.
Specifying Impacts of Internationalisation as a Hierarchical Reflective Model

To assess the impacts of internationalisation on the performance of SMEs of Bangladesh, this study specifies hierarchical constructs which is defined as a construct with multiple dimensions at several hierarchies to capture an overall latent variable (Akter et al., 2010; Wetzels et al., 2009). This is supported by many studies that the hierarchical constructs is very effective to reduce the model complexity and increasing theoretical discretion (MacKenzie et al., 2005). Another key advantage of using the hierarchical construct in the research is related to the ‘level of abstraction for predictor and criterion variables’ (Chin and Gopal, 1995). This paper aims to identify the impacts of internationalisation on the performance of SMEs from Bangladesh perspective. Considering this explorations, this study specifies the impacts of internationalisation on the performance of Bangladeshi SMEs as a hierarchical reflective model with two reflective constructs (figure 1) - financial impacts of internationalisation and Non-financial impacts of internationalisation. Besides, both of this constructs share common theme, which is overall impacts of internationalisation on the performance of Bangladeshi SMEs. According to Bollen and Lennox (1991), the correlation between two measures is supposed to be highly positive for a reflective construct. This is also supported by Akter et al (2010) and Petter, Straub and Rai (2007) who have explained internal consistency as one of the most important elements of reflective constructs. Besides, the un-dimensional nature of the reflective measures assists to get rid of the individual measures for the purpose of improving the construct validity with no affect on the content validity (Petter, Straub and Rai , 2007). Table 2 below has shown the methods of estimating the impact of SME internationalisation as a hierarchical reflective model.

Table 2 Estimation of the impacts of internationalisation on the performance of SMEs as a hierarchical reflective model

<table>
<thead>
<tr>
<th>First Order</th>
<th>Second Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>$y_i = \Delta_y \cdot \eta_j + \epsilon_i$</td>
<td>$\eta_j = \Gamma \cdot \xi_k + \zeta_j$</td>
</tr>
<tr>
<td>$y_i$= manifest variables</td>
<td>$\eta_j$ = first order factors (e.g. financial)</td>
</tr>
<tr>
<td>$\Delta_y$ = loadings of first order latent variables</td>
<td>$\Gamma$ = loadings of second order latent variables</td>
</tr>
<tr>
<td>$\eta_j$ = first order latent variables (financial and non-financial)</td>
<td>$\xi_k$ = second order latent variables (profit related)</td>
</tr>
<tr>
<td>$\epsilon_i$ = measurement error of manifest variables</td>
<td>$\zeta_j$ = measurement error of first order factors</td>
</tr>
</tbody>
</table>
In the above figure 2, there are two orders- first order and second order. In the first order, there are two latent variables to assess the impacts of internationalisation on the performance of Bangladeshi SMEs- Financial impacts of internationalisation and Non-financial impacts of internationalisation that are related to the respective measures (manifest variables- MVs) each. In the second order, impacts of internationalisation on the performance of SMEs are shown in a hierarchical reflective model that is constructed by 8 MVs (4+4) of 2 first order constructs.
Analysis of Measurement Model

In order to assess the impacts of internationalisation of SMEs from Bangladesh perspective, this study has used PLS Graph 3.0 (Chin, 2001). By using the hierarchical model with PLS path modelling with a path weighting scheme for the inside approximation (Akter et al., 2010; Chin, 2001; Chin, 1998; Wetzels et al., 2009), this study developed path weighting scheme on the impacts of internationalisation on the performance of SMEs. Following the path weighting scheme, this study also used nonparametric bootstrapping (Akter et al., 2010; Chin, 2001; Chin, 1998; Wetzels et al., 2009) where the standard error of the estimates are attained by using 500 replications. Beside, the approach of repeated indicators are also used by this study to estimate the higher order latent variables as suggested by Akter et al (2010) and Wold (1982) and Lohmoller (1989, pp 130-133). Thus, the second order factors (impacts of internationalisation on the performance of Bangladeshi SMEs) are directly measured by the items (manifest variables) of first order factors (Financial impacts and Non-financial impacts).

Table 3 Psychometric properties for first order constructs

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items summary</th>
<th>Loadings</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FI- Financial Impacts</td>
<td>FI 1- Higher Sales</td>
<td>0.762</td>
<td>0.862</td>
<td>0.612</td>
</tr>
<tr>
<td></td>
<td>FI 2- Higher Profit</td>
<td>0.704</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FI 3- Increase in assets</td>
<td>0.863</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FI 4- Market Expansion</td>
<td>0.790</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NI- Non-financial Impacts</td>
<td>NI 1- Competitive Advantage</td>
<td>0.826</td>
<td>0.830</td>
<td>0.551</td>
</tr>
<tr>
<td></td>
<td>NI 2- Better reputation</td>
<td>0.693</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NI 3- Better customer service</td>
<td>0.730</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NI 4- Added knowledge</td>
<td>0.712</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Study conducted based on primary data requires the acceptability test of the data in the form of ‘reliability and validity’ to gain acceptability (Schwab, 1980). A confirmatory factor analysis (CFA) was carried out initially to estimate the model and assess reliability and validity. In the table 3, it can be seen that 7 out of 8 individual item loading is higher than 0.70 and significant at 0.01. Only one item loading is 0.69 which is also very close to the minimum threshold. In addition, to assess reliability of the scale, the Composite Reliability (CR) and Average Variance Extracted (AVE) were estimated (Chin 1998; Fornell and Larcker 1981). Here the calculated CR for Financial impacts (0.862) and non financial (0.830) impacts of internationalisation (Table 3) were higher than the modest threshold 0.70 (Hulland, 1999; Nunnally, 1978). This indicates that items of each scale are highly consistent. Furthermore, the calculated AVE for financial impacts (0.612) and non-financial impacts (0.551) of internationalisation (Table 3) were higher than the modest threshold 0.50 (Fornell and Larcker 1981), which indicates that each construct captures adequate variance from its items and all the constructs are conceptually distinct. Thus the convergent validity
requirement of all the scales was ensured. Finally, square root of AVE was calculated in Table 4 to ensure discriminant validity, which indicates that all the values (i.e., square root of AVE) are higher than the corresponding correlation coefficients in the correlation matrix (Chin, 1998; Fornell and Larcker, 1981; Hulland, 1999). Therefore, all the results related to the analysis of the measurement model were satisfactory having adequate reliability, convergent validity and discriminant validity.

### Table 4 Latent Variable Correlations

<table>
<thead>
<tr>
<th></th>
<th>Financial</th>
<th>Non-financial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial</strong></td>
<td>0.928</td>
<td></td>
</tr>
<tr>
<td><strong>Non-financial</strong></td>
<td>0.544941</td>
<td>0.911</td>
</tr>
</tbody>
</table>

#### Assessment of higher order model

Impacts of internationalisation on the performance of Bangladeshi SMEs are shown as a second order hierarchical construct model in figure 3 and table 2. The degree of explained variance in second order constructs (overall impacts) is reflected in the first order constructs, that is financial impacts (80%) and Non-financial impacts (75%). The entire path coefficient from overall impacts of internationalisation to second order (Financial and Non-financial) are significant at $P < 0.01$ (table 3). Besides, the CR and AVE value for the first order constructs (financial impacts and non-financial impacts of internationalisation) are higher than 0.70 and 0.50 respectively that indicate the validity of higher order reflective model.
In the above figure 3, overall impacts of internationalisation of SMEs are shown in two orders—first and second. In the first order model, overall impacts are categorised under two dimensions—financial impacts and non-financial impacts. Financial and non-financial impacts are then shown through second order hierarchical reflective model with 8 MVs (4+4).

Analysis of Structural Model and Results of Hypotheses Testing:

Further to the model assessment, structural validity also is needed validating in SEM. To assess the structural validity of this model (see figure 3), this study has estimated the relationship between the overall impacts of internationalisation on the performance of SMEs and its sub-dimensions (Financial impacts on internationalisation and Non-financial impacts of internationalisation) with beta of 0.893 and 0.864. All these path coefficients are significant at p<0.01 (please see table 6). Thus all the hypotheses are supported (please see table 6).
### Table 5 Path Coefficients (Mean, STDEV, T-Values)

| Overall Impacts -> Financial | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STERR|) |
|-----------------------------|---------------------|-----------------|----------------------------|-----------------|
| 0.893375                    | 0.894110            | 0.014665        | 60.917287                  |
| Overall Impacts -> Non financial | 0.863573          | 0.864119        | 0.018080                   | 47.763635       |

### Table 6 Results on Hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path coefficient</th>
<th>t-value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H1:</strong> Higher sales is positively related to the financial impacts on the performance of SMEs</td>
<td>0.762</td>
<td>15.182</td>
<td>Supported</td>
</tr>
<tr>
<td><strong>H2:</strong> Higher profit is positively related to the financial impacts on the performance of SMEs</td>
<td>0.704</td>
<td>18.082</td>
<td>Supported</td>
</tr>
<tr>
<td><strong>H3:</strong> Increase in assets is positively related to the financial impacts on the performance of SMEs</td>
<td>0.863</td>
<td>51.173</td>
<td>Supported</td>
</tr>
<tr>
<td><strong>H4:</strong> Market expansion is positively related to the financial impacts on the performance of SMEs</td>
<td>0.790</td>
<td>28.082</td>
<td>Supported</td>
</tr>
<tr>
<td><strong>H5:</strong> Competitive advantage is positively related to the non-financial impacts on the performance of SMEs</td>
<td>0.826</td>
<td>36.205</td>
<td>Supported</td>
</tr>
<tr>
<td><strong>H6:</strong> Better reputation is positively related to the non-financial impacts on the performance of SMEs</td>
<td>0.693</td>
<td>17.411</td>
<td>Supported</td>
</tr>
<tr>
<td><strong>H7:</strong> Skill development is positively related to the non-financial impacts on the performance of SMEs</td>
<td>0.730</td>
<td>14.411</td>
<td>Supported</td>
</tr>
<tr>
<td><strong>H8:</strong> New knowledge is positively related to the non-financial impacts on the performance of SMEs</td>
<td>0.712</td>
<td>14.691</td>
<td>Supported</td>
</tr>
</tbody>
</table>
Discussion

This study contributes to the existing knowledge by explaining the impacts of internationalisation on the SMEs through a hierarchical reflective model with particular attention to the Bangladeshi SMEs. By using the reflective hierarchical model, this study proposes the performance outcomes (financial and non-financial) in the form of impacts of internationalisation on the SMEs in Bangladesh (see figure 2). Each of these components of impacts of internationalisation of SMEs reflects a unique principle, while the group provides a solid and parsimonious foundation for hierarchical model of impacts of the internationalisation on the performance of SMEs.

There are 4 factors under the financial impacts of internationalisation, these factors are: higher sales, higher profit, more assets and market expansion. The association between higher sales and financial impacts of internationalisation ($\beta = 0.762$) was significant at $p < 0.001$. Thus, higher sales is confirmed as a significant factor in the context of financial impacts of internationalisation for the SMEs in Bangladesh (Please see the table 6). By empirical support, this study, therefore, supports the view of the studies identify higher sale as an important impact of internationalisation (such as, Dhanaraj and Beamish, 2003; Morgan et al, 2004; Lages and Lages, 2004; Lages and Montgomery, 2004; Murray, 2010; Lee et al, 2012; Smolarski and Kut, 2009; Chelliah et al, 2010; Pangankar, 2008). Similarly, the association between higher profit and financial impact of internationalisation ($\beta = 0.704$) was significant at $p < 0.001$. Thus, higher profit is confirmed as a significant factor in the context of financial impacts of internationalisation for the SMEs in Bangladesh (Please see the table 6). By empirical findings, this study, therefore, extends the view of the studies identify higher profit as an important impact of internationalisation (such as, Rose and Shoham, 2002; Balabanis and Katsikea, 2003; O'Cass and Julian, 2003; Cadogan et al 2003; Dhanaraj and Beamish, 2003; Morgan et al, 2004; Lages and Lages; 2004; Lages and Montgomery, 2004; Murray, 2010; Chelliah et al, 2010; Pangankar, 2008). The association between increase in assets and financial impacts of internationalisation ($\beta = 0.863$) was significant at $p < 0.001$. Thus, increase in assets is confirmed as a significant factor in the context of financial impacts of internationalisation for the SMEs in Bangladesh (Please see the table 6). By empirical support, this study, therefore, supports the view of the studies identify more asset as an important impact of internationalisation (such as, Prasad, 2001; Ling-yee and Ogunmokun, 2001; Solberg, 2002; Brouthers and Xu, 2002; Cadogan et al, 2002; Rose and Shoham, 2002; O'Cass and Julian, 2003; Lages and Lages, 2004; Chelliah et al, 2010). Similarly, the association between market expansion and financial impact of internationalisation ($\beta = 0.790$) was significant at $p < 0.001$. Thus, market expansion is confirmed as a significant factor in the context of financial impacts of internationalisation for the SMEs in Bangladesh (Please see the table 6). By empirical findings, this study, therefore, extends the view of the studies identify market expansion as an important impact of internationalisation including Styles (1998), Piercy et al. (1998), Moen (1999), Myers (1999), Styles and Ambler (2000), Albaum and Tse (2001), Cadogan et al. (2002), Rose and Shoham (2002), Balabanis and Katsikea (2003), Cadogan et al. (2003), Akyol and Akehurst (2003), Morgan et al. (2004), Chelliah et al. (2010).
There are 4 factors under the non-financial impacts of internationalisation, these factors are competitive advantage, better reputation, skill development and new knowledge. The association between competitive advantage and non-financial impacts of internationalisation ($\beta = 0.826$) was significant at $p < 0.001$. Thus, competitive advantage is confirmed as a significant factor in the context of non-financial impacts of internationalisation for the SMEs in Bangladesh (Please see the table 6). By empirical support, this study, therefore, supports the view of the studies identify competitive advantage as an important impact of internationalisation including Styles (1998), Piercy et al. (1998), Moen (1999), Myers (1999), Styles and Ambler (2000), Albam and Tse (2001), Cadogan et al. (2002), Rose and Shoham (2002), Balabanis and Katsikea (2003), Cadogan et al. (2003), Akyol and Akehurst (2003), Morgan et al. (2004), Chelliah et al. et al. (2010). Similarly, the association between better reputation and non-financial impact of internationalisation ($\beta =0.693$) was significant at $p < 0.001$. Thus, better reputation is confirmed as a significant factor in the context of non-financial impacts of internationalisation for the SMEs in Bangladesh (Please see the table 7.6). By empirical findings, this study, therefore, extends the view of the studies identify better reputation as an important impact of internationalisation including Myers (1999), Prasad (2001), Morgan et al (2004), Ruzzier et al (2007), Zyglidopoulos et al (2003), Lu and Beamish (2006), Pangankar (2008). The association between skill development and non-financial impacts of internationalisation ($\beta = 0.730$) was significant at $p < 0.001$. Thus, skill development is confirmed as a significant factor in the context of non-financial impacts of internationalisation for the SMEs in Bangladesh (Please see the table 6). By empirical support, this study, therefore, supports the view of the studies identify skill development as an important impact of internationalisation including Morgan et al. (2004), Knight (2000), Aspelund and Moen (2001), Tagliavini et al (2001), Knight and Cavusgil (2004), Wolff and Pett (1999), Ghachem (2007), Billou and Birkinshaw (2001). Similarly, the association between new knowledge and non-financial impact of internationalisation ($\beta = 0.712$) was significant at $p < 0.001$. Thus, new knowledge is confirmed as a significant factor in the context of non-financial impacts of internationalisation for the SMEs in Bangladesh (Please see the table 6). By empirical findings, this study, therefore, extends the view of the studies identify new knowledge as an important impact of internationalisation (such as, Gençtürk and Kotabe, 2001; Prasad, 2001; Kostova and Roth, 2002; Zahra et al, 2000; Bradley and O’Reagain, 2001).

**Conclusion:**

One of the key objectives of this study was to identify the major impacts of internationalisation on the performance of SMEs from Bangladesh perspective. To fulfil this objective this study has developed and validated a structural model on the impact of internationalisation model that is able to explain the key impacts of internationalisation on the performance of Bangladeshi SMEs. This study also contributes to extend our knowledge on the impacts of internationalisation for SMEs from Bangladesh perspective by categorizing the internationalisation impacts in two dimensions (Financial impacts and non-financial impacts) with 8 indicators (higher sales, higher profit, assets maximization, market expansion, competitive advantage, better reputation, better customer service, added knowledge). It has effectively enclosed impacts of internationalisation on the performance of SMEs in a second order reflective model where both two dimensions reflect overall impacts of internationalisation on the performance of SMEs. Hence it contributes theoretical support for OECD’s (2006), Pangarka’s (2008) and Sokfa & Zimmermann’s (2008) study. In fact, this
study extends all these conceptualization as the model of this study is also competent to provide the ranking of these impacts. In general, financial impacts of internationalisation seem to be most influential impacts of internationalisation on the performance of Bangladeshi SMEs as it explains 80% of overall variance followed by the nonfinancial impacts (75%). Though the ranking has been done on the basis of explanation power of individual constructs, the magnitude of difference is relatively very small. Thus, it can be suggested that all these constructs should be given equal attention.
References:


