Explaining the differential rate of the post-entry international expansion of the firms with a capability differential hypothesis

Abstract

This paper proposes a non-linear paradigm for explaining the firm's post-entry expansion in the international market. Firms mainly rely on their basic operational capabilities in the entry-phase of their internationalization, as the firms' international entry might not be an outcome of a systematic process and the higher 'psychic distance' might prevent the firms to deploy its special resources in the entry phase. Firm's post-entry expansion is surely a planned process and involves more complexities and multidimensional challenges. Firm's basic operational capabilities in their original shapes are not enough to support the firm's expansion. Operational capabilities are necessary in this phase too, but in adapted versions fitting to the demands of the expansionary phase. Adaptation of the operational capabilities is caused by a different set of organizational capabilities, which are more subtle in nature. These higher-order capabilities drive the firms in their post-entry expansion phase by generating required guidance for the adaptation of the operational capabilities. This paper tests this proposition with data from 30 exporting pharmaceutical firms from Bangladesh. It has been found that the propositions hold true, though there are rooms for further theoretical and methodological refinements.

Key words: Internationalization, Capabilities, Higher-order Capabilities, Post-entry expansion

1. Introduction

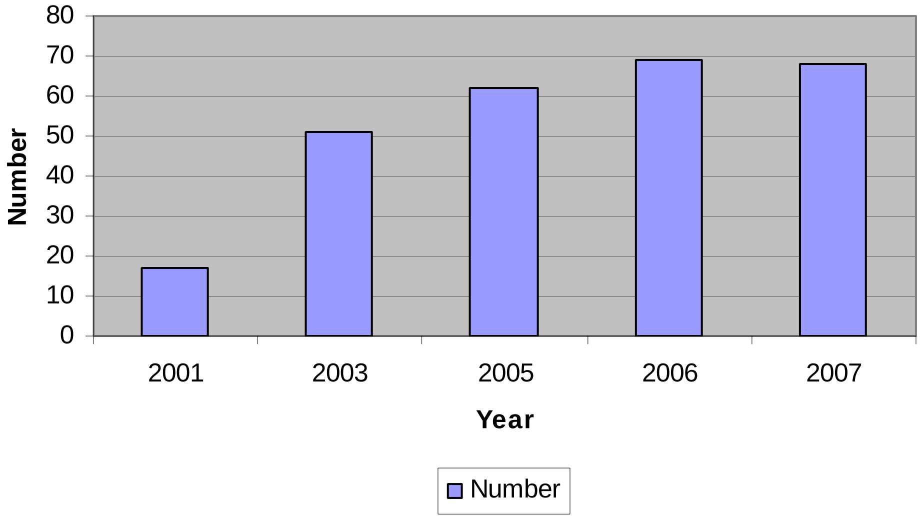
Let us hear a simple story developed in a part of the world, which is still struggling with chronic poverty and all other possible sets of economic, social, political and institutional voids. Bangladesh, a tiny South-Asian nation with a territory of 144000 km^2 neighboring to India with a whooping population size of 153 million. 40% of the population still earns less than US $ 1/day with a national per capita income of US $ 464 (ADB, 2008). For Bangladesh, 3/per 1000 people have access to internet, 0.6% of the GDP goes to R&D and there is no statistics for local patents (UNDP, 2008). When this technology scenario is coupled with the adult literacy rate of 54%, development of knowledge and high technology based industries in Bangladesh sounds a bit too much optimistic.

There is the story. Since the enforcement of the Drug Ordinance 1982', a well-fledged modern technology-based production-focused pharmaceutical industry has been developed in Bangladesh, which is the only modern pharmaceutical industry owned by the 49 Least Developed Countries (LDCs). Local firms are the producers of the generic drugs in their own brand name. There are 237 licensed drug manufacturers in Bangladesh and among them 150 are in operation (DDA, 2007)[1], while 138 are registered member of the 'Bangladesh Association of Pharmaceutical Industries (BAPI, 2007)'[2], the apex body of the pharmaceutical drug manufacturers of Bangladesh. This industry employs 65000 skilled people directly and 15000 unskilled people in indirect manner (Lincoln and Bhattacharjee, 2007). There are about 450 generics formulations in Bangladesh with the registration from the Drug Administration. Local producers supply 97% of the yearly domestic demand for the human pharmaceutical drugs of the country, while the rest 3% imported finished drug includes only high-tech therapeutic drugs (Faroque, 2006). After consolidating the positions in the domestic market, leading Bangladeshi pharmaceutical firms tried to explore markets outside Bangladesh. They initially went out to the neighboring non-regulated markets e.g. Nepal, Myanmar and Sri Lanka mainly with bulk formulations and few finished formulations (Begum, 2007). Today Bangladesh pharmaceuticals producers mainly export generic finished formulations in dosage and bulk form as well as a small amount API (World Bank, 2008). They mainly export to 'moderately regulated markets' i.e. where certification and registration rules are not as stringent as in the 'highly regulated market' e.g. USA, Canada, UK, Japan, Germany, France, Italy, and EU, and to the 'non-regulated markets' i.e. where the regulatory requirements are minimum (Chowdhury, 2006). Bangladeshi pharmaceutical products are exported to as many as 69 countries of Asia, Africa, North America, South America, and Europe including Russia, Ukraine, Malaysia, Tanzania, Vietnam, Philippines, Germany, Sweden, USA, Netherlands and Brazil to name a few.

[1] Professor Habibur Rahman, Director, Drug Administration (DDA) Bangladesh revealed in a press conference in Dhaka on 11. 04. 2007.

[2] Information collected from 'Bangladesh Association of Pharmaceutical Industries (BAPI)'

Chart 1. Geographic expansion of export market (2001 – 2007)



Source: Constructed from Begum (2007), Gehl Sampath (2007), and The Financial Express (2006)

Exporting pharmaceutical products is quite a different process than other commodity export. Every importing nation has its own regulations regarding drug specification, production process parameters, packaging and labeling requirements, drug marketing and promotion and drug pricing. Other than the regulatory requirements, imported drugs must attain the confidence from the physicians, pharmacists and patients, which is a complex and lengthy process as the adaptation to the norms of business and communication, national preferences, country of origin effect and cultural difference including language of the importing nation are involved in this process. The currency volume of export was US $ 37.5 million in 2008[3]. Though the monetary value of the Bangladesh pharmaceutical export is quite insignificant in terms of the national export-earning context, it is an important indicator of export diversification. Export diversification with a knowledge-based and technology-based product is highly encouraging for a knowledge and technology dearth country like Bangladesh, as it suggests that the country has received some success in technology and knowledge capability building which can be extended further. Such export can be extremely important, as exposure to competition and networks in the export market can be an important source of learning, capability building, and improvement for the sector (World Bank, 2008). In this context, country-wise expansion of export is an outstanding achievement of the Bangladeshi pharmaceutical manufacturers. In 2005, 30 firms were in export

[3] Pharma industry awaits boom http://www.24bangladesh.com/2008/12/13/pharma-industry-awaits-boom/ (accessed on 14.07.2009)

operation, where as in 2008 around 50 firms are expected to be in export operation, and a good number of firms are in preparatory stage[4] .

The later part of the story is particularly interesting that the increase in the number of export destinations in a short period. This provokes a general question that what causes such rapid expansion to happen. This paper looks forward to analyze this issue with a capability differential hypothesis i.e. the firm's international entry-level capabilities (basic operational capabilities) are not sufficient to support the firm's post-entry expansion with their original versions. Firm's international entry-level capabilities must be reconfigured to meet the demands of the post-entry expansion phase; such reconfiguration is driven by a set of capabilities originated through the development and deployment of intangible resources. These driver-types of capabilities are 'higher-order capabilities' that support the firm's more in their post-entry expansion phase.

2. Why a research on post-international entry expansion?

Stage models of firm internationalization (Johanson and Vahlne, 1977; Bikley and Tesar, 1977; Cavusgil, 1980; Reid, 1981; Czinkota, 1982) assume that initial export is a trial, which may not involve a significant of strategy formulation and implementation. Initial phase of the export involvement have not been of much emphasis in the stage models, rather it has been worked out in detail in the pre-export behavior model (Wiedersheim-Paul et al, 1978). Widersheim-Paul et al (ibid) mainly highlighted the export 'evokers' and their role in getting the firm into first time export venture, but didn't talk much about why some firms exit after their debut in the export market or become non-regular exporter. Later Welch and Widersheim-Paul (1980) comment that the likelihood of withdrawal is strongly related to the feedback of the earlier export attempt as well as export commitment. Welch and Widersheim-Paul (ibid) suggest that the strong mental commitment of the managers/entrepreneurs play a role in continuing export even the initial export experience, and note that continuing negative experience forces to modify the goals (Cyert and March, 1963). Welch and Wiedersheim-Paul (ibid), citing Johanson and Vahlne (1977), point to the absence of the internal abilities of the firm to make

[4] Export Promotion Bureau (EPB) in its export directory listed 30 exporters. Information of Export Permission Cell monitored by Bangladesh Bank suggests 30 in 2006, industry key persons guess that in 2007 number of exporters reached near about 50

necessary adjustments to respond to the emergent situations as one of the factors contributing to withdrawal from the export market. Rao and Naidu (1992) and Naidu and Rao (1993), in their analysis of the stage models of internationalization, present that there are some exporters who engage continuously in export market and look for expansion and some others are occasional exporters. Naidu and Prasad (1994) have presented a conceptual model of export strategy and performance, where they unveiled that 'continuous' and 'sporadic' exporters are the outcome of the different dimensions e.g. regular exporter are favored by their stocks of competencies, degree of management's preference to internationalize and strategic orientations e.g. 'prospectors' are more likely to be regular exporters than the 'reactors' (strategy-focused typologies of the firm are described in Miles and Snow (1978) and Snow and Herbeniak (1980)). Katsikeas (1996) has presented an export stimuli based differentiation of 'sporadic' and 'continuous' exporters. Matthyssens and Pauwels (2000), in their discussion of international market exit processes, comment that 'discontinuity drivers' are diverse e.g. Katsikeas and Morgan (1993) suggest 'internal drivers', Keida and Chhokar (1986) suggest 'external drivers'. Matthyssens and Pauwels (2000)'s comment is confirmed by the previous observation of Leonidou (1995) as to there is no consensus about the drivers of international market withdrawal. These literatures confirm the hypothesis that the firms who had been successful to handle with these diverse natured discontinuity drivers related to export marketing have been successful to live in the international market with continuity. This postulates that the firms have to have certain capability to continue in international market, which may or may not be similar to the capabilities required in their international entry phase. Johanson and Vahlne (1977) formulate this aspect by suggesting that firms should have internal capabilities matching to the emerging situations associated with the internationalization of the operations. Zou and Cavusgil (1996) mark that 'other than external environmental factors' have impacts on internationalization strategy formulation, implementation and performance in the global setting. Knudsen and Madsen (2002) have further worked on this cue and note that market and the firms are the co-evolving systems, while export strategy formation should contain both the connecting and disconnecting elements. Determination of which particular units to be connected and disconnected is composed of the interdependent coevolving modules ranging from markets to firms. Transitory knowledge is produced as the output of this interactive process, which help firms to choose certain sets of action. Knudsen and Madsen (Ibid.) propose that continuing export is the demonstration of the dynamic capability of the firm, as the firm accumulate knowledge, develop strategy and deploy resources depending on its stock of knowledge. This capability of the firm is conditioned by the emergence of the novelty, while emergence of novelty never comes to rest (Nelson and Winter, 1982; Hodgson, 1993; Veblen, 1994; Hamilton, 1999). Helfat and Lieberman (2002) argue that combining the resources and routinizing the organizational processes make up the capability for expansion, while different forms of expansions and markets ask for different set of resources and capabilities. Firms' capabilities evolve over time due to endogenous changes responding to the market and exogenous shocks, such evolution dislodges or adds to the yields of the firm's existing capabilities and there by influences firm's competitive position (Athreye et al, 2008). Teece et al (1997) comment that 'competitive advantage is not just a function of how one plays the game; it is also a function of the assets that one has to play with and how these assets can be deployed and re-deployed in a changing market (p.529)'.

3. Higher-order capability and the post-entry international expansion

Teece et al (1994)'s 'corporate coherence' and Teece et al (1997)'s 'dynamic capability' supply the sense that apart from the firm's publicly demonstrated capabilities relating to perform its basic operations (i.e. production, marketing, organizational management and market relations) efficiently, there exist the other type of capability in the firm that enable the firm to adjust all of its operational capabilities in response to the changes in the firm's internal and external environment. The later type of the capability makes the competitiveness differentials among the firms. Winter (2003) identifies such capability as the strategic substance of patterning in the way the organization designs and delivers its responses to the market and stakeholders. This pattern develops within the firm through complex and long run interactional process featuring the managers' philosophical and behavioral contents and the organizational learning cycles. Existence of such capability provides the firm with a fluid interface that interacts with the moving externalities and generates the drivers and guidelines to adjust the firm's basic operational capabilities of the firm to adjust with the externalities to keep the firm competitive. Athreye et al (2008) suggest that such capability of the firm is a higher-order capability in comparison to the operational capabilities.

Hannes and Fjeldstad (2000) argue that intangible resources are the sources of competitive advantage and their role differ in different in-house competitive conditions e.g. entrepreneurial competition (completely new solution creation), contractual competition (expanding performance by applying non-freely traded resources on a given technology) and the operational competition (transferring non-freely traded resources in actual product and service). Entrepreneurial competition demands for the most and operational one the least of the intangible resources. Export initiation resembles more to operational competition (ibid), as stage models (Johanson and Vahlne, 1977; Bikley and Tesar, 1978; Cavusgil, 1980; Reid, 1981; Czinkota, 1982) share the consensus that in pre-export phase or in export initiation phase, firms work more on consolidating their positions in the domestic market. Firms are reluctant or unaware about export or initiate export with skepticism, as experiential knowledge gap remain high. In this phase, firms concentrate on developing production and delivery efficiency primarily for the domestic market, which they simply try to leverage in export market in the initial phase, as they don't find substantial difference between the home market servicing and export market servicing. In the export expansion phase, firms keep on accumulating experiential knowledge and commit resources in their ways to gain from their knowledge stock (Johanson and Vahlne, 1977). Calof and Beamish (1995) didn't differentiate between export initiation and export expansion; they viewed export as the adaptation to foreign market conditions. The stage models have brought the issue of this 'adaptation to foreign market' via 'increased resource commitment as a function of experiential knowledge or feedback'. These competencies are mainly related to expanding the current sphere of activity and performances under a certain resources and technological conditions i.e. contractual competition (Hannes and Fjeldstad, 2000), where resources or capability requirement is not similar to the operational competition stage. Contractual competition demands for more intangible resources (ibid.). Tallman and Fladmoe-Lindquist (2002) describe that international expansion more relies on 'corporate level architectural capabilities' than 'business-level component capabilities'.

Hooley et al (1999) comment that marketing cultural is a higher-order capability, as it involves a great amount of causal ambiguity and complexity and hard to imitate, while the operational capabilities lay in the bottom of the tier. Superior performance is related to high quality market positioning (Hooley et al, 1992), while market positioning involves the deployment of capabilities and activities in action. Hooley et al (1999) suggest that marketing culture drives the marketing strategy, but in combination, they contain greater causal ambiguity. Handy (1990) comments that firm's organizational learning capabilities and knowledge assets are the higher-order capabilities than any other form of assets, as they are fluid in nature and they drive other asset creation over the time.

4. The organizational capabilities framework - The concepts and indicators

4.1 Basic Operational Capabilities of the Firm (BOC)

Amit and Schoemaker (1993) have identified that capabilities often develop in functional level or in corporate level. Collis (1994) has categorized the organizational capabilities as 1) the organization's ability to perform functional activities of the firm 2) the capability of dynamic improvement and 3) the metaphysical strategic capability. Henderson and Cockburn (1994) have divided the firm's capabilities into two types without making distinction between competence and capabilities, e.g. 'component competence' and 'architectural competence'. Component competence is the local abilities and knowledge that are fundamental for the day-to-day problem solving. Architectural competence is the ability to use the component competencies and turn them into a fresh set of capability by integrating them effectively. Henderson and Cockburn (1994)' component competence is alike Collis (1994) and Amit and Schoemaker (1993)'s 'functional capability' of the firm.

Rugman (1981) puts 'firm-specific advantage (FSA)' into the formal analytical framework of the competitiveness. Rugman and Verbeke (2003) define FSA as the unique capability proprietary to the organization that could be product, process, technology, marketing and distribution skills. For this paper, the idea of BOC has been drawn from Rugman (1981). Treacy and Wiersema (1993) categorically identify three valuable functions as firm's operational capability e.g. operational excellence, customer intimacy and product leadership. Operational capabilities develop through productive and unique deployment of both tangible and intangible resources i.e. what I can do particularly well with the resources of the firm (Penrose, 1959; Andrews, 1971; Wernerfelt, 1984;

Rumelt, 1984). In this paper, BOC include the basic functional capabilities, which are necessary for the firm for its existence in the industry complying with the broad parameters of the particular industry, of the firm.

4.2 Higher-order capabilities

4.2.1 Organizational Cultural Milieu (OCM)

Moran and Volkwein (1992) suggest that organizational climate consists of attitudes and values alone, whereas culture exists as a collection of basic assumptions in addition to the attitudes and values. Denison (1996), on his conclusion on reviewing the influential 1970s literatures relating to organizational climate, has commented that organizational climate includes i) multiple perceptual measurement of organizational attributes and ii) the multiple measurements of organizational attributes combining perceptual as well as objective measurements. This paper has adopted Moran and Volkwein (1992)'s and Denison (1996)'s version of the concept of the organizational climate to define OCM. In this paper, OCM has been perceived as both person and organization embedded concepts e.g. 'entrepreneurial orientation (EO)' and 'global mindset (GM)'.

4.2.2 Entrepreneurial orientation (EO)

Miller (1983) has explained EO on three dimensions e.g. innovation (inclination for newness), proactiveness and risk taking (moderate risk taking). Lumpkin and Dess (1996; 2001) have added other dimensions including autonomy and competitive aggressiveness. Miller (1983)'s framework has been widely tested in number of studies on entrepreneurial behavior and also in other areas e.g. corporate strategy (Hitt et al. 2002) and marketing (Stokes, 2000). In a huge bulk of researches, EO has been measured from the individual's intention perspective, though a numbers of researches have argued about the difficulties or the incompleteness of such measurement[5]. Woo et al (1991) have noted the difficulties of identifying EO from the firm's perspective, as there is non-compatibility between the personal attributes and the firm attributes. Foss and Klein (2005) have shown that the theory of entrepreneurship and the theory of the firm can be linked using the concept of entrepreneurship as a

[5] Schook et al (2003) has presented a good review on this discussion

judgment. Ripollés-Meliá et al (2007) have applied Miller (1983)'s version of EO in the firm's perspective in order to explain the relationship between EO and internationalization.

This paper relies on Foss and Klein (2005)'s arguments and views of EO from the firm's perspective. It defines EO with the Miller and Friesen (1983) and Miller (1983)'s dimensions[6].

4.2.2 Global Mindset (GM)

GM has both individual and corporate perspectives. Jeannet (2000) defines global mindset as an enabled state of mind to understand a business, an industry, a sector or a particular market on a global basis. Maznevski and Lane (2003) describe GM as the ability to develop and interpret the criteria for personal and business performance that are independent from the assumptions of a single country, culture and context and to implement these criteria appropriately in different countries, cultures and contexts.

Paul (2000) considers that mindset in corporate level is the aggregate mindset of all of the members of the organization shaped by the organization's heritage, structure and industry driver, which is quite difficult to measure (Dekker et al, 2005). Begley and Boyd (2003) state that a corporate level of GM refers to how firms balance their organizational processes between global and local priorities, requirements and challenges e.g. global formalization vs. local flexibility, global standardization vs. local customization and global dictating authority vs. delegation in local level. With particular reference to internationalization, corporate level global mindset has been mostly measured through the measurement of the managerial attitudes toward internationalization (Dekker, 2005). Nummela et al (2004) have measured firm-level global mindset with multi-dimensional perceptual constructs (e.g. proactiveness, commitment to internationalization and international vision) focused on international market.

[6] Lumpkin and Dess (1996) incorporated 'innovation' and 'risk taking' ; and Lee et al (2001) incorporated 'proactiveness' in their work on entrepreneurial orientation too

4.3 Marketing Program (MP)

Atuahene-Gima (1993) conceptualizes marketing capability as the exploitation of several organizational processes by the firms in order to reach the target customers with value-added products and services. Capability is woven in the strategy (Scheurer, 2005) and demonstrated through skilful execution of specific activities (Grant, 1991). Marketing strategy is the pattern of deployment of resources (capabilities) in the business unit level with a view to achieve predefined marketing objectives in the target market (Varadarajan and Clerk, 1994). Kotler (1991) identifies the dimensions of marketing strategy from core decisional aspects relating to marketing mix, marketing allocation and budgets. A marketing strategy is considered as ‘standardized’ when a common product, price, distribution and promotion program is offered on a worldwide base (Jain, 1989). Chung (2002) defines marketing program as the operational package of different dimensions of marketing mix decisions e.g. product, price, distribution and promotion. O¨zsomera and Simonin (2004) define standardized marketing program as the pursuit of similar marketing programs across different countries or regions with regard to product offering, promotional mix, price and distribution structure. This paper adopts O¨zsomera and Simonin (2004)’s view as its operational definition of standardized marketing program. Keeping in line with Chung (2002) and O¨zsomera and Simonin (2004) this research keeps its definitional scope of standardized marketing program limited to the standardization of price, promotion and distribution.

4.4 Market-based Learning (MBL)

MBL refers to an organization’s development of knowledge from the competitors and the markets and its interactions with the markets that may be created from and stored in the behavioral routines, and are generated through various information processes and enhanced by the distinctive organizational values (Morgan and Turnell, 2003). Morgan (2004) defines MBL as an organizational learning framework combining organizational learning values, capabilities, processes and behaviors focused on facilitating the dynamic fit between the organization and its marketplace environment.

This paper adopts Morgan (2004)'s view of MBL as its own definition. In operational level, this research defines market place environment with three components e.g. knowledge relating to customer and competitor (Li et al, 1999) and the institutions (Blomstermo et al, 2004).

6. Methodology

Consultation with the industry insiders revealed that 35 Bangladeshi firms had been exporting for at least 4 years. A personal interview-based survey was conducted with the key managers of 30 exporting firms in Bangladeshi pharmaceutical in the first quarter of 2008. 5-point attitudinal scale (a semantic differential scale) was used to measure the indicators. The detail listing of the indicators can be found in the appended part of the paper.

A PLS regression model was constructed using the SmartPLS 2.0 M software (Ringle et al, 2005) to analyze the hypothesized relationship based on the principle of 'moderated regression analysis'. A 200 resampling based bootstrapping process was run to test the external validity of the basic model.

7. Result and discussion

Model I, Model II and Model II in the Table 1. present the results relating to the latent hypothesis, ' BOC (Basic operational capabilities) of the firm are not the drivers of the post-entry international expansion (expanding existing international markets) of the firm. BOCs are necessary, but BOCs have to be conditioned by the higher-order capabilities (predominantly by the intangible resources), as the BOCs need to be fitting with the requirements of the newer international markets. The models are the valid PLS regression models, as each of the models pass the defined quality criteria for this research.

Table 1. Summary of the PLS regression models constructed for testing the latent hypothesis of the Capability Differential between the phases of Internationalization

Path	***Model I***		***Model II***		***Model III***	
	Path Coeff	**t**	**Path Coeff**	**t**	**Path Coeff**	**t**
HROR ->Expansion	-0.04	0.15				
TC ->Expansion	-0.01	0.02				
MC ->Expansion	0.15	0.63				
BOC ->Expansion			0.09	0.68	0.11	1.81**
BOC*OCM ->Expansion					0.04	0.36
BOC*MBL ->Expansion					0.44	4.82*
BOC*SMP ->Expansion					-0.01	0.17
R^2 Expansion	0.69		0,68		0.86	
F	19.66		29.21		45.63	
p	.000		.000		.000	
f^2	2.23		2.13		6.14	

*<.05 **<.10

Model I tests the relationship between the 1st level constructs of BOC, e.g. HROR (Human resources and organization routine), TC (Technological capabilities) and MC (Marketing capabilities) in relations to the firm's international expansion (Expansion). Model II presents the test results of the relationship between the construct BOC (aggregate of HROR, TC and MC) and Expansion. Model III presents the results of the tests of the moderating/conditioning effect of the higher-order capabilities (include the constructs, OCM (Organizational Cultural Milieu), MBL (Market-based Learning) and SMP (Standardized Marketing Program)) on the relationship between BOC and Expansion.

Results of Model I in the Table 1. show that the path coefficients of HROR, TC and MC are low and statistically insignificant in relation to Expansion . Result of the Model II shows that BOC (as the aggregate of HROR, 'TC' and 'MC') has a low and statistically non-significant path coefficient in relation to Expansion. Results of the Model III shows that the path coefficient of BOC is acceptable and significant in relation to Expansion, when BOC is moderated by the higher-order capabilities (OCM, MBL and SMP). The synthesis of the results of the three models in the Table 1. supplies the meaning that BOC alone are not capable of driving the firm's international expansion, BOC must be conditioned by the other capabilities mainly generated from the intangible resources. This finding, at the first place, confirms the operational validity of Teece's (1980; 1982)'s capability taxonomy and its supplementary extension (Chatterjee and Wernerfelt, 1991) i.e. 'specialized resources (resources and capabilities fitting to some particular settings)' and 'generalized resources (broadly applicable to all settings)'. Higher-order (as Teece et al, 1994; 1997 terms) capabilities enable firm to reconfigure its capabilities in response to the exogenous and the endogenous events to the organization. Zollo and Winter (2002) comment that intra-firm variation-retention-replication cycle takes place in the organizational routine level, generating modified routine and transformation of capabilities (Lavie, 2006). Lavie (ibid) suggests that an intermediate response to the change is supposed to involve objective-driven capability transformation, where some routines get modified, discarded and some new routines are acquired, which finally results into a transformed version of the organizational capabilities. Transformed capability incorporates both existing and new know-how. Lavie (ibid) further extends that a transformed capability can be distinguished from a completely new capability, as the transformed capability is retained in the organization with the same functional role but its pre-change and post-change configuration differs. Capability transformation involves learning from combination of internal sources and external sources (ibid). Senge (1990) presents 'generative' and 'adaptive' learning, while Nevis et al (1995) comment that both levels of learning are necessary to produce competitive advantage, as discontinuous change (generative learning) may be followed by incremental (adaptive) learning to consolidate the transformational learning. Winter (2003) explains the relationship between learning and higher-order capability[7] describing the higher-order capabilities as the first-order change capabilities, consisting of the capacity for search and learning and to create new zero-order (static) capabilities. The change of the results for BOC between the Model II and III extends empirical support for these whole discussions. Chittoor and Ray (2007) have shown that the successfully internationalized Indian pharmaceutical firms (with particular cases of Ranbaxy, Dr. Reddy's Laboratory and Cipla) were active in systematically identifying, acquiring and developing capabilities to reconfigure their initial capabilities to redefine their competitiveness in the changed market context. Interviews for the current research have revealed that the more successfully internationalized firms are deploying more firm-specific higher-order capabilities, by committing investments in intangible resources, to learn and integrate the learning to reconfigure their static capabilities. As one example, Beximco (a leading Bangladeshi pharmaceutical manufacturer and

[7] Winter (2003) speaks about dynamic capability which Teece et al (1994) conceptualized as higher-order capability.

exporter) is seeking knowledge reconfiguration through collaborative R&D with Ciba Specialty Chemicals (Switzerland), which is supposed to be an input for Beximco's production capability reconfiguration.

8. Conclusion

This research's proposition of the capability differentials in different phases of internationalization of the firms has been supported in this paper under the current theoretical foundations, dataset and methodology. The findings of the research certainly contribute to the development of a non-linear paradigm based explanation of the firms' growth and development with particular focus to internationalization of the firm. The findings of this research have practical implications too, as the managers get the cue that which capability development should be given priority in which phase to internationalize their firms successfully. There are still some open areas in research, which should be worked out. The higher-order capabilities described and tested in this research are not exhaustive, as the definition of higher-order capability could be context specific. Another interesting aspect of the further research on this issue could be exploring the exact mechanism of how the higher-order capabilities contribute to the reconfiguration of the operational capabilities to match with complex need of post-entry expansion phase of internationalization.

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Appendices

Indicators of Basic Operational Capabilities (BOC)

Human resources and organizational routines (HROR)

Galbraith (1978); Wright et al (1994); Barney and Wright (1998); Hatch and Dyer (2004) Grant (1996); Nelson and Winter (1991); Zollo and Winter (2002); Towmey (2002)

• Recruiting people with right skills and potentials	Koch and McGrath (1996) Narashima (2000)
• Continuous upgrading of HR by updating skills, knowledge and concepts	Mahoney and Pandian (1992) Narashima (2000) Hatch and Dyer (2004)
• Continuous performance based job assignment and reward mechanism	Amit and Schoemaker (1993) Hatch and Dyer (2004)
• Key managers' or functionaries' exposure to and experience of leading firms in local and international industry level	Egelhoff (1991) Roth (1995) Beibst et al (2005)
• Corporate planning and coordination is an open and team-based approach	Kanter (1983) Drucker (1992)
• Promoting cross-functional skill-based teams for non-routine functional decisions	Grant (1996) Towmey (2002)
• Greater amount of autonomy for the functional managers	Peters (1988) Towmey (2002)

Technological capabilities (TC)

Schumpeter (1950); Porter (1985); Peteraf (1993); Suarez and Utterback (1995); Rodriguez and Rodriguez (2005)

• Plant upgrading focusing on fundamental production capability	Porter (1985) Bou-Wen Lin (2003)
• Quality assurance system upgrading	Porter (1985) Bou-Wen Lin (2003)
• Technology benchmarking as a part of strategic technology planning	Elmuti and Kathawala (1997) Pemberton et al (2001) Mata et al (1995)

	• IT coordinated work environment	Bharadawaj (2000) Dehninga and Stratopoulos (2003)
Marketing and market intelligence (MC)		
Hall (1993); Barney (2004)		
	• Owning institutionalized market intelligence system	Day (1994)
	• Customer-focused delivery and logistic system	Day (1994)
	• Customer service and relations	Day (1994)
	• Treating channel members as strategic partners for growth	Day (1994) Ling-yee and Ogunmokum (2001)
	• Treating suppliers as strategic partners for growth	Day (1994) Ling-yee and Ogunmokum (2001)

Indicators of Organizational Cultural Milieu (OCM)

Entrepreneurial Orientation (EO)		
Miller (1983); Lumpkin and Dess (1996); Lee et al (2001)		
	• Pioneering new technology in industry	Ripollés-Meliá et al (2007) Jantunen et al (2005)
	• Adopting best practice of the sector	Ripollés-Meliá et al (2007)
	• Search for new practices	Jantunen et al (2005)
	• Propensity to grab on unexpected opportunity	Jantunen et al (2005)
	• Risk taking propensity under condition of uncertainty	Ripollés-Meliá et al (2007) Jantunen et al (2005)
	• Allocation of resources to new and promising business	Jantunen et al (2005)

Global Mindset (GM) Rhinesmith (1992); Jeannet (2000); Gupta and Govindarajan (2001)		
	• World as one big market	Nummela et al (2004)
	• Every market of world is important for our business	Nummela et al (2004)
	• International expansion is the key to future growth	Nummela et al (2004)
	• Rapid internationalization is important	Nummela et al (2004)
	• Substantial resource commitment in international market planning	Nummela et al (2004)

Indicators of Marketing Program Standardization (MPS)

Marketing Program Standardization (MPS) Quelch and Hoff (1986) Levitt (1983) Jain (1989)	• Similarity in pricing practice for different markets	O¨zsomera and Simonin (2004)
	• Similarity in promotional policies different markets	O¨zsomera and Simonin (2004)
	• Similarity of sales promotion in different market	O¨zsomera and Simonin (2004)
	• Similarly in customer service	O¨zsomera and Simonin (2004)
	• Similarity in channel structure used in different markets	O¨zsomera and Simonin (2004)
	• Similarity of channel relations in different markets	O¨zsomera and Simonin (2004)

Indicators of Market-based Learning (MBL)

Customer Learning Sinkula (1994) Li and Calantone (1998)	• Systematic and thorough information collection for each market	Li et al (1999)
	• Effective effort to understand customers' business	Li et al (1999)
	• Having a defined system to analyze information	Li et al (1999)
	• Regularity in integrating output of customer learning in international strategic marketing plan	Li et al (1999)

Competitor Learning Day and Wensley (1988) Dickson (1992) Li and Calantone (1998)	• Systematic and thorough information collection for each market	Li et al (1999)
	• Effective effort to understand competitors' business	Li et al (1999)
	• Having a defined system to analyze information	Li et al (1999)
	• Regularity in integrating output of customer learning in international strategic marketing plan	Li et al (1999)
Institutional Knowledge Eriksson et al. (1997)	• Collecting thorough information about rules of the governing institution in each market	Blomstermo (2004)
	• Actively monitoring changes in rules and institutions and adjust strategic plan accordingly	Blomstermo (2004)

International market spreading (post-entry expansion)

Piercy (1981) meant 'international market spreading' as many export as possible number of markets. Katsikeas and Leonidou (1996) define market spreading as exporting to as many export markets as possible, with no focus on any particular overseas market. This research adopts this concept of reaching to the maximum possible number of export markets in geographic sense as the meaning of 'international market spreading or the post-entry expansion'. In this paper, international market spreading has been measured by the number of the country market the exporter is currently exporting to.