

Dynamics of Firm Internationalization through a Capability-based Evolutionary Lens

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Growing parallel discussion of 'born global' and 'born-again-global' has necessitated a renewed discussion of two fundamental questions e.g. i). what enable firms to get into international market and ii). what enable firms to spread their existing international market. This paper focuses on answering these questions by proposing a model of firm internationalization from an evolutionary-capability perspective. It explains international expansion as a capability-driven process. State and the art of internationalization depend on development of certain capabilities in the firm. Composition of capabilities in interaction with the environmental settings determines whether the firm will enter into international market. The model proposes that international entry-level capabilities and the capabilities for expansion in the international market are not necessarily similar. Expansion level capabilities are more complex than entry-level capabilities. A qualitative study has been done with four Bangladeshi pharmaceutical firms who are recently in international expansion. The outcome of the investigation has confirmed the pattern of internationalization as argued in the theoretical model.

Introduction

Goldman Sachs (2003), in its economic paper relating to projection of BRIC (Brazil, Russia, India and China) economies beyond 2050, showed that based on the forecasting of the GDP, productivity, per capita income, purchasing capacity and currency appreciation rate forecasted that they would overtake G6 (USA, Japan, Germany, UK, France and Italy) by 2040. Euromonitor International (2009) again forecasts that emerging and developing countries' GDP is set to overtake advanced countries' by 2013. It also comments that due to heavy reliance on financial sectors which are passing through 'financial crisis' is going to affect the advanced countries' economies more than the emerging countries'.

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The emerging countries which are not only exporting products (e.g. Russia) but also have large domestic consumption base and young population (e.g. Brazil and India) are to be less likely affected by this crisis. This characteristic and geographical change in international economic landscape is being reflected in international business traffics with its changing participants' profiles and directions.

Despite the differences in their growth and development strategies, the emerging countries have made their impressions not only as the destinations of FDI but also as the exporters of capital (outward FDI), commodities and services (Deutsche Bank Research Report, 2008). Multinational companies are emerging out of countries like Brazil, China, Mexico, India and South-Africa which are quite nonconventional home ground of multinationals. These emerging country multinationals have grown in two phases as 'trade expansion (i.e. export)' and investment expansion (i.e. FDI) phases (Deutsche Bank Research Report, 2007). Once home brands like TATA and Haier are now representing international brands and conglomerates. Such developments have drawn attentions of academia too, as Mathew (2006) researches the international growth of east-Asian firms and terms them as 'dragon multinationals', 'Made in China' (Breslin, 1998) and 'Made in India' (Ramamurthi, 2008) have been focus areas of research concerning export-led growth and internationalization.

Not only the BRIC firms are in the changed game, Jansson (2007) points out that a 'third wave of internationalization' is on unfolding where previously mature domestic firms of Western countries are going into the emerging markets like BRIC. Jansson (2005) notes that this wave contains both 'pull (in terms of extended access to market and resources)' and 'push (as BRIC firms are coming into EU market)' elements which are not only applicable to large firms but also to 'small and medium enterprise (SME)'. Jansson and Sandberg (2008) note that under this context more SMEs are going for internationalization, although internationalization process has been more complex.

Traditionally MNCs received more attention in research on internationalization than SME, as SMEs are thought to be inherently disadvantageous due to their lack of resources and capabilities (Coviello and Munro, 1997; Meyer and Skak, 2002; Jansson, 2007). The changes perspective calls for renewed research in internationalization process of SME. This paper is devoted to answer two fundamental questions related to internationalization

- i.) What enables firms to enter into international market and
- ii.) What enables firms to spread into international market?

This paper initially proposed an integrative model of internationalization combining proposition from 'evolutionary economics' and 'resource-based view (RBV)'. In the later part this paper four Bangladeshi company cases have been discussed in light of the proposed model.

Do you need yet another model for firm internationalization?

Since the advent of the new century, firm internationalization process has been viewed from two alternative perspectives namely incremental internationalization and born global. Growth of BRIC as the players of the central stage of the economy, have put these two alternative approaches on a cross road.

Johanson and Vahlne (1977)'s Uppsala model (incremental internationalization) described the 'state' and 'change' aspects in internationalization process. Their view captures the inherent dynamics of internationalization process, which operates as the relationship between 'market knowledge' and 'resource commitment'. They concluded that firm's level of engagement in

international market vis a vis level of resources commitment in international operation is a positive function of firm's 'market knowledge', which typically follows an incremental pattern of internationalization starting with exporter who has substantial position in domestic market.

Rennie (1993), in McKinsey and Co report on Australian exporters, pointed out to a group of high-technology based small firms who started exporting quite as early as their inception unlikely to the conventional exporters. Oviatt and McDougall (1994) , in their typological description of firms' internationalization process based on its rapidity and path dependency, described 'Global start-ups' which are alike to Rennie (1993)'s description. This observation drew substantial attention in academia, as Cavusgil (1994) comments that incremental internationalization is dead.

Madsen and Servais (1997) pointed out that though born-global firms (BGs) looks like pop ups, they are the resultants of the same certain contextual and personal states e.g. new market conditions, new technologies and more and elaborate capabilities of the founders, entrepreneurs and managers. They marked it as an open question that when these contextual and personal states are subjects to the process of emergence, does the phenomenon based explanation of born-global is theoretically sustainable? Hashai and Almor (2004) have come up with an interesting finding that the traditional BGs (KIBS) follow an incremental process in their internationalization too, where they first export via agents in physically close markets, next they own marketing subsidiaries in foreign countries keeping all value adding activities in home country, finally internationalize R&D and production by the way of mergers and acquisitions and they expand to physically distant markets. This observation again put born global's validity as a self-sufficient theory.

Bell, McNaughton and Young (2001) put BG in other way round by putting the idea of 'Born Again Global', where they indicated a phenomenon that a group of firms started out as purely domestic firms and are established in the domestic market, are embarking to the road of internationalization quite aggressively and successfully.

None of the extant theories and empirical findings accommodate the new realities fully (Axinn and Matthyssen, 2002), as they started from any specific point and finished in another, which gives a cross-section view of the phenomenon. There is a need for reframing internationalization theoretical modeling, which will accommodate the whole dynamism of firm's graduation and expansion in international arena. Axinn and Matthyssen (2002) further notes that new model should neither be bound by how firms choose forms and linkages to enter into international market, nor only by the concept of 'firm', rather it should be endowed with flexibility to explain and predict firm's evolution to conduct global business.

Johanson and Vahlne (1990) suggested to 'renovate' or 'dynamise' process model with insertion of elements of RBV. Andersen (1997) also suggested that organizational capabilities perspective can be put into the most promising framework of process school (Melin, 1992). Axinn and Matthyssen (2002) welcomed dynamic modeling, whether it's adaptation or innovation, with consideration for environmental factors.

Investigating how firms get strengths for entering the international market and in the further stage how these similar firms progress into international market, needs a dynamic model which will tap firm's evolution towards international market as manger supervises firm-environment interaction process. Explaining such dynamics requires the integration of a number of components, which don't necessarily belong to a particular theoretical school, and it is particularly true for explaining internationalization decisions and trajectories of the firms (Bürgel, Fier, Licht and Murray, 2004). Adaptation and integration of theoretical propositions from different schools are necessary.

Proposition for an evolutionary and capability-based model of firm internationalization

Penrose (1959) puts forward that firms grow internally by the process of learning-by doing by the managers, as managers learn to configure and utilize firms' resources in a value creating way. Penrosian view emphasizes the focused role of the managers e.g. managers as resources developers, resource deployers and controllers and above all managerial experiences and talents as the core driver for the growth. Firm decides upon the direction of a growth by examining the strengths and weaknesses of its resource base (Barney, 1986). Firm's context is important in explaining its growth. This contextual dynamics severely restricts the strengths of static growth analyses. Dynamics of formation, survival and growth has been the central point in evolutionary economics, which has hugely impacted the discussion of industrial organization (Coad, 2007).

Alchian (1950) argues that the evolutionary mechanism of selection keeps economy on the path of moving on and up, as the fitter firms survive and grow while less viable firms lose market share and exit. This principle of 'growth and survival of fitter' served as the foundation for theoretical model building by the further influential proponents e.g. Nelson and Winter (1982).

Hodgson and Knudsen (2006) argue that any system that complies with variation-inheritance-selection framework is subjected to Darwinian evolution. They pitch this evolutionary mechanism as 'domain less', i.e. it can be equally present in a biological or economic system in spite of that they are different in nature. This proposition is widely known as 'general Darwinism' (Ibid.). Witt (1997) and Foster (1997) describe 'self-organizing' approach emphasizing the endogenous tendency for acquired knowledge and skills for the expansion in economic organization and complexity (Hodgson, 2002). Witt emphasizes on human intentionality for selection. Natural selection in the evolution of an economic system is not possible as anything with the exact properties of biological gene is not a feasible idea for economic organization (Witt, 1999). For the evolution of economic organization cultural knowledge plays the most crucial role (Witt, 2004)¹. Penrose (1959), in describing organic growth of firms, also emphasized the role human intentionality in selection of technology and routines. Firm growth is of course an evolutionary process, where human intentionality, intelligence and learning process play more dominant role in the selection process.

Internationalization is a process concerning adaptation of firm's operations, offers and resources to international environment (Calof and Beamish, 1995). While the point of variation concerned to internationalization is from firm's internal process perspective, internationalization process is related to 'adaptation' and 'exploration' (Cattani and Tschoegl, 2002). Adaptation is firm's behaviour of seeking opportunities in a similar environmental setting where the focal firm currently belongs to. Exploration is searching beyond the local optima (March, 1991; Levinthal, 1997) with prior justifications (Lamoureaux, 2001). Cattani and Tschoegl (2002) describe that external process includes 'selection', 'extinction' and 'generation'. Selection involves a systematic process, while extinction and generation is random (Ridley, 1996). Selection and extinction trim the variation that the internal processes generate, while generation provides new opportunities to which the firm may respond via adaptation or exploration (Cattani and Tschoegl, 2002).

The proposed model fundamentally stands on the premise that firm's first time getting into and further spreading into international market is the resultant of firm's evolution in terms of its capabilities. The model takes 'export' as the mean of first time international market entry

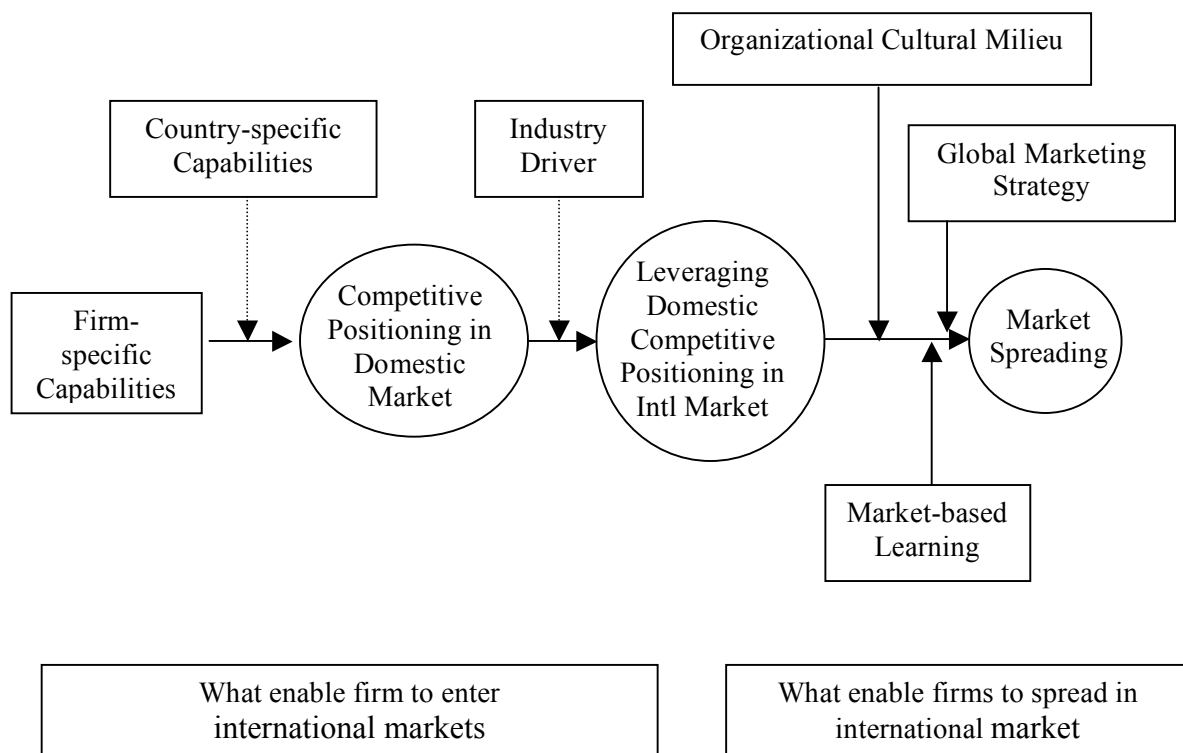
¹ Witt's view is prominently known as continuity hypothesis.

and ‘adding newer country market on export list’ as ‘spreading further’ in international market. This model captures the pathway of firm’s graduation from ‘any company’ in the home market to a company substantially propagated in different country markets with the philosophical indebtedness to ‘incremental process models’ of internationalization. The model assumes that firm’s capabilities (resources in the most functional aspects) are the drivers in this pathway. The model also assumes that no universal set of capabilities drive firm through this pathway, rather firms might need different sets of capabilities (or remoulding of the existing capabilities, which are in no way reproduction of the original set) in different turns of this pathway. Capability obsession of this model strongly ties it with RBV school. Such assumptions responses to the recent call of Barney et. al (2001), in the review of 10 years of RBV, to explore organizational resource and capability dynamics as an extension to resource-based explanation of the marketing dimensions and process (Srivastava, Fahey and Christensen, 2001).

The model

The proposed model starts with that the firms develop capabilities through competition being under a given set up. Firms start with a certain set of endowed resources (as envisioned as ‘genetic knowledge’ by Witt) and produced resources. Resources among the firms contain a natural amount of heterogeneity which gets translated to heterogeneous capabilities of the firms (later on ‘firm-specific capabilities’- FSC). Rugman (1981) and Rugman and Verbeke (2003) define ‘firm-specific advantage (FSA)’ as the unique capability proprietary to the organization which could be product, process, technology, marketing and distribution skills. This research defines FSC in terms of firm’s capabilities demonstrated in how the firm is doing its functional level jobs (Grant, 1991). RBV rests on the basic assumption that resources deployed in unique way to produce higher rent for the firm (Penrose, 1959). The act of deploying resources in a unique way is a capability itself, at the same time uniquely deployed resources produce distinct functional capability for the firms.

Figure 1. Evolutionary capability-based model of internationalization



Firms compete with each other, under a given rule of competition, on the basis of their heterogeneous FSC in order to attain 'competitive advantage over each other in home market' (later on described as 'CA'). This domestic competition generally contributes to strengthening firm's value producing and commercial skills (Grant, Jammine and Thomas, 1988; Porter, 1990). Wan and Hoskisson (2003) find that competition in domestic market increases the probability of successful internationalization.

Resources are context specific. Firms belong to a given locational environment consists of rules and institutions. This environment, as a whole, can be envisaged in terms of certain set of capabilities (later on described as 'country-specific capabilities' CSC). Wan (2005) describes CSC as country's resource context including factors and institutions which provides firms with resources for conducting transformational and transactional activities. RBV distances itself from environment and strategy dynamics of competitive advantage explanation, rather it takes an in-side-out approach that firm's heterogeneity in resource possession and deployment generate competitive advantage. Ghertman and Hadida (2006) put forward a question that whether firms belonging to the same industry but operating in different institutional set ups develop similar or divergent set of strategic assets to attain competitive advantage, and at the same time they answer that asset endowment and competitive advantage of the firm might not be fully understood without reference to its institutional environment. CSC are open to all firms in the similar manner. But firms' in the way of interaction with local environment should be heterogeneous due to asymmetric distribution of managerial talents and experience (Witt's 'cultural knowledge') among the firms. It's a distinct competency of the firms to absorb CSCs in their favorable ways. This absorbed CSC turns into FSC in the operational level. CSCs are non-firm specific, but they contain general potentials for firm-specific CA generation. Their impact on firm-specific CA generation is of 'moderating' in nature and of course non-linear. CSC casts an influence in determining the strength of relationship between FSC and CA in home market. Here, this model has integrated 'Porter's left over'² with RBV to explain generation of competitive advantage from evolutionary perspective.

The proposed model progress in the next phase by drawing on Johnson and Vahlne (1977) classic and their followers that firm's with consolidated positions in home market think for international expansion. Firms with superior competitive position in home market are more prepared to enter into international market. But this condition is sufficient alone for the firm to enter into international market. International entry should provide the firm sufficient amount of incentive (may be operational or strategic, or combined in certain interval horizon). Such incentives are complex products of both home and foreign contexts of the focal firm. These incentives are also products of facts and managerial perceptions. Export literature described both resources and information, external and internal to firm, capable of triggering internationalization process as 'stimuli' (Maisenbock, 1988; Katsikeas, 1996; Leonidou, 1995 and 1998). They define 'external export stimuli' as the products of firm's environment. Elango (1988), based on Yip (1989), defines industry drivers (ID) with particular reference to firm's internationalization as the external forces action prevalent in firm's external environment which might influence firm's international entry and growth. This model assumes that firm's international entry decision is influenced by the favorable position of ID. Position of ID is not sufficient enough to trigger internationalization; it must be combined with firm-specific capability clause. In analytical sense, this model assumes

² Porter (1990) recognized the role of government and policies but not included due to their bi-polar nature of effect on competitive advantage generation. From evolutionary perspective, evolution can not be perceived without counting on environmental setting.

that ID influences the relationship between CA and its internationalization (first time international entry). Influence of ID in this respect is ‘moderating influence’. Inclusion of ID in this model inserts the ‘environmental factor’ into ‘incremental process models’. Recognition of moderating impact of environmental factor loudly confirms the compliance of evolutionary principles of interaction and selection.

The proposed model viewed internationalization in its simplest form e.g. normal export. Initial entry in international market can be reactive e.g. experiment or accident (Li and Cavusgil, 1995). Incremental process models of internationalization mainly attributed ‘psychic distance’ as the source of such reactivity. It’s argued that easier access to information has substantially led to shrink psychic gap substantially, particularly from cultural aspects. Still differing natures and qualities of institutions and institutional services make the newly internationalizing firms to be more cautious in investing in internationalization efforts at the beginning. They rely on ‘experiential knowledge’ dominant resources commitment decision at least for a certain time until they have fair amount of understanding of their new business and trust on their newly found partners. The proposed model assumes that in the early level of internationalization (export in this model) a firm just replicates (leverages) its domestic capabilities in the international market. Such replication is important from evolutionary perspective, as the firm gets its capabilities tested against new environment. The feedbacks from such replication facilitate the firm to adapt its original set of capabilities or develop a new set for better positioning in international market in sustainable manner.

Knudsen and Madsen (2002) propose that continuing export is the demonstration of the dynamic capability perspective of the firm, firms accumulate knowledge, develop strategy, and deploy resources depending on its stock of knowledge which is conditioned by emergence of novelty and emergence of novelty never comes to rest (Nelson and Winter, 1982; Hodgson, 1993; Veblen, 1994; Hamilton, 1999). Firm capabilities evolve over time due to endogenous changes responding to market and exogenous shocks, such evolution dislodges or adds to the yields of firm’s existing capabilities and thereby influences firm’s competitive position (Athreye, Kale and Ramani, 2008). Teece, Pisano and Shuen (1997) comment ‘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)’. Morgan and Katsikeas (1997) suggest that in real export phase (export expansion) firms develop various mechanisms, skills, and competencies to accommodate the challenges of international competitive structures. These competencies are mainly for 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 operational competition stage, where contractual competition demands for more intangible resources (Ibid.). This can be concluded that sources of dynamic or higher-order capabilities include complex intangible resources.

The proposed model assumes that firm’s capabilities at the initial phase of its internationalization should necessarily not be equally important in the later phase, where the firm proactively engages itself in expanding its international market. This model describes this phase as ‘market spreading’ in reference to increasing number of foreign country market. International expansion offers new opportunities for the firm to squeeze more returns from current resources and builds new capabilities (Luo, 2000). While firm looks for spreading its international market, it gets itself exposed to variety of institutions, rules and

cultures. It can be described as ‘psychic complexity’, which the firm has to manage efficiently to keep its expansion on. Capability to handle such environmental complexities will guide the operationalization (might be again through replication, adaptation or installation of completely) of firm’s fundamental functional capabilities. This model assumes ‘pre-expansion’ FSCs as firm’s fundamental functional capabilities, while these capabilities were originally developed for home market in home context. Capabilities relating to address such ‘psychic complexity’ are expected not be ‘too much specific’ rather a composed of more flexible properties so that they can be applied to different context. Impacts of such capabilities are felt on the fundamental functional capabilities of the firm with a general sense of purpose.

The proposed model assumes that such set of higher order capabilities could include ‘organizational cultural milieu (OCM)’, ‘market-based learning (MBL)’ and ‘marketing program (MP)’.

Hooley, Fahy, Cox, Beracs, Fonfara and Snoj (1999) presented a hierarchy of marketing capabilities, based on previous works of Webster (1992) and Day (1994), suggesting that marketing operations is subordinated to marketing culture and marketing strategy. Pettigrew (1990) defines organizational cultural as the complex set of values, assumptions, and belief which defines the ways in which a firm runs its operation. 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 attitudes and values. This research adopts the idea of ‘cultural climate’ to conceptualize OCM. Denison (1996), on his conclusion on reviewing the influential 1970s literatures relating to organizational climate, has commented that organizational climate includes multiple perceptual measurements of organizational attributes and the multiple perceptual measurement of organizational attributes combining perceptual and more objective measurements.

Morgan (2004) defines MBL as an organizational learning framework combining organizational learning values, capabilities, processes and behaviours focused on facilitating the dynamic fit between organization and its marketplace environment. Capability is woven in the strategy (Scheurer, 2005) and demonstrated through skillful 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). A marketing strategy is considered as ‘standardized’ when a common product, price, distribution and promotion programme is offered on a worldwide base (Jain, 1989), where as the marketing program is the functional demonstration of a marketing strategy. Simonin (2004) defines standardized marketing program as the pursuit of similar marketing programs across different countries or regions with regard to product offering, promotional mix, and price and distribution structure.

In this model OCM has been perceived as the composition of ‘entrepreneurial orientation (EO)’ and ‘Global mindset of the managers (GM)’. MBL has been perceived as the externally (market) focused dual looped proactive learning mechanism. MP is perceived on the basis of more coordinated and pointed market servicing initiatives. The proposed model assumes that these three capabilities can deliver required impetus and fine tuning to the fundamental functional capabilities of the firm to exploit international market spreading opportunities. Such an approach is quite provoking both from firms’ evolution perspective and resource perspectives, while firm develops a new and more complex set of capabilities

in response to newly emerged environmental complexities and diversifying its resources base by emphasizing more on organic resources.

Empirical investigation

Pharmaceutical industry in Bangladesh

Traditionally modern allopathic human drug used to be imported in this region from developed countries till the withdrawal of British colonial rule, whatever produced locally was done by Transnational Corporations (TNC) with non-significant role of local firms (Taher, 2006). From post-colonial to pre-independence period, 1948 – 1971, pharmaceutical market of this region used to be dominated by imported drugs and TNC's production subsidiaries, where the role of locally owned firms was both technologically and commercially insignificant, and this situation continued even in early 1980s (Begum, 2007). In 1981-1982 period, 122 companies exported human drugs to Bangladesh from 23 countries including 29 UK, 12 USA, 10 Swiss, 9 German, 10 Indian companies (Chowdhury, 1995). Finally on 11th June 1982, the law was promulgated by 'Ministry of Law and Land Reforms (Law and Parliamentary Division)' to control manufacture, import, distribution, and sale of drugs in Bangladesh, with an official nomenclature of 'The Drugs Ordinance (Control) 1982'. Of the 1746 drugs, expert committee indentified as harmful, inappropriately formulated, or therapeutically ineffective, 176 were produced by TNCs, 617 were imported, and 994 were produced by 156 local manufacturers. The Drugs Ordinance 1982 has been successful to realize the radical objectives it proposed (e.g. ensuring quality essential drugs in affordable price and putting limits on unfair practices of TNCs) and laid down the foundation for a modern pharmaceutical industry in Bangladesh which is now an issue of discussion in international arena (Reich, 1994). Since then, Bangladesh's pharmaceutical industry has been successful to meet the demand of medication for the huge home population. Local firms are the producers of generic drugs in their own brand name. There are 237 licensed drug manufacturers in Bangladesh and among them 150 are in operation (DDA, 2007)³, while 138 are registered member of 'Bangladesh Association of Pharmaceutical Industries (BAPI, 2007)⁴. This industry employs 65000 skilled people directly, and 15000 unskilled people in indirect manner (Lincoln and Bhattacharjee, 2007). Nowadays local producers supply 97% of the yearly domestic demand for human drugs and the rest 3% imported includes only high-tech therapeutic drugs (Faroque, 2006). While import of finished drug decreased, import of raw materials and packaging materials for pharmaceutical production increased to meet the growing demand of manufacturing in the local level. There are about 450 generics registered in Bangladesh. Out of these 450 generics, 117 are in the controlled category i.e. in the essential drug list. The remaining 333 generics are in the decontrolled category, The total number of brands /items that are registered in Bangladesh is currently estimated to be 5,300, while the total number of dosage forms and strengths are 8,300 (Sarker, 2006). Local firms started to get into export venture systematically as a serious business option since 1992 (Lincoln and Bhattacharjee, 2007). Bangladesh mainly exports generic finished formulations and bulk drugs, where as it exports API (Active Pharmaceutical Ingredients) much less than it imports (Ibid). It mainly exports to 'moderately regulated markets' i.e. where certification and registration rules are not as stringent as in 'highly regulated market' e.g. USA, Canada, UK, Japan, Germany, France, Italy, and EU, and 'non-regulated markets' i.e. where regulatory requirements are minimum

³ Professor Habibur Rahman, Director, Directorate Drug Administration (DDA) Bangladesh revealed in a press conference in Dhaka on 11. 04. 2007.

⁴ Information collected from 'Bangladesh Association of Pharmaceutical Industries (BAPI)'

(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.

The four cases from Bangladesh

Square Pharmaceutical Ltd. (SPL)

SPL started its operation in 1958 as a partnership of three local entrepreneurs. SPL was among the very few locally owned pharmaceutical drug producers in Bangladesh market in that time, while the market was dominated by the TNCs. SPL entered into technical collaboration with Janssen Pharmaceutical – Belgium (a subsidiary of Johnson & Johnson USA) in 1975 and with F. Hoffman-La Roche - Switzerland in 1984. SPL invested heavily on technical, manufacturing and management capability building to position itself in the new market scenario due to the enactment of ‘Drug Control Ordinance 1982’ which strictly redefined the operational areas for the TNCs. SPL was the first national company to attain the market leadership in the local market in terms of annual sales volume in 1985. Since 1985, SPL has been maintaining this position. In 2007-08 financial years, SPL’s gross turnover was 9566 million Tk⁵. with an annual growth of 26.6 percent. Since 2003, SPL has been maintaining more than 15 percent annual growth rate on an average. Continuous renewal and extension of capabilities is at the core of SPL’s management and strategic planning. SPL had listed itself with the ‘Dhaka Stock Exchange (DSE)’ as a ‘public limited company’ in 1995. In 1996, SPL upgraded its technical capability with the assistance of Bovis Tanvec Ltd. UK. In 2005, SPL has acquired a state-of-the art antibiotic (Cephalosporin) production with assistance from Telstar SA Spain. Employment size in SPL was 3564 in 2007.

SPL manufactures pharmaceutical finished products, formulations and basic chemicals. SPL is among the pioneers to bring new and high-tech drugs in different disease and therapeutic classes in the local market. Till the first quarter of 2007, SPL had 497 offers in the market in different therapeutics, molecular and dosage form. In the first quarter of 2008, this offer size increased to 532 i.e. it has brought 35 new offers in this interval. Quality assurance of the drugs is the most important concern of SPL. Apart from WHO GMP, SPL obtained ISO 9000-1 certification in 1998. In 2007, SPL obtained ‘Medicines and Healthcare Products Regulatory Agency (MHRA) – United Kingdom’ compliance certification as the recognition of maintaining world class quality of its products. In 2008, SPL has once again invested 30.42 million Tk. to upgrade its quality control laboratory.

SPL has been engaged in exporting since 1987. The continuous capability extensions are pushing SPL to look beyond the horizon as a part of its regular growth options. In 2009, SPL has been exporting its products to 32 country markets, while exporting to another 22 country market are under processing phases e.g. obtaining quality, safety and administrative clearances from the importing nations. SPL has been proactively and aggressively looking forward to expand its market into European main markets. SPL has registered its own distribution subsidiary in London in 2007. SPL has committed resources to increase its presence in international market in different other forms. Since 2004, SPL has its production and distribution facilities in Vietnam under a licensing agreement with the local Vietnamese firm ROVIPHARM. During 2007-2008, SPL exported 212.49 million Tk., which is 10.13

⁵ National currency of Bangladesh – Taka (Tk.). 1€ = 89.75 Tk. 1 US\$ = 68.75 Tk. (28.04.2009)

percent higher than the previous year's. SPL is also a listed pharmaceutical drug supplier for the international agencies including WHO and UNICEF. SPL is engaged in 'toll manufacturing' for some of the European firms and is in the process of buying the licenses of the European manufacturers. SPL hopes that successful execution of these initiatives will expedite its efforts to enter into international market more intensively and in more diverse manner.

Beximco Pharmaceutical Ltd. (BPL)

Though BPL had been registered as a pharmaceutical manufacturing and marketing unit by the local entrepreneur in 1976, it started its production and marketing as the licensee of the products of Bayer AG Germany and Upjohn Inc. USA in 1980. BPL started production and marketing of its own brands in 1985. BPL has the second position in national market in terms of annual sales volume until 2008. During 2007-2008 BPL's sales revenue was 3597 million Tk, and the employment size was 2384.

BPL is among the leaders in technology pioneering in the local industry. In 1996 it introduced SR (Sustained Released) dosage form in its capability line, while it gain added 'Suppository' form of dosage and 'Metered Dosage Inhaler (MDI)' and 'Metered Dosage Spray (MDS)' in its line. In 2001, BPL had introduced 'Small Volume Parenteral (SVP)' products and established an Analgesic-Anti-inflammatory bulk drug plant. In 2006, BPL commissioned its US 'Federal Drug Administration (FDA)' compliance Oral Solid Dosage (OSD) plant. These technology introductions and upgrading were facilitated through agreement and collaboration with different suppliers including Pamasol (Switzerland), Pharmaplan-Germany (a sister firms of Fresenius AG), and Pharma Italia Carlo Erba (Italy). In 2006, BPL has produced CFC free ozone benign HFA inhalers being the first Bangladeshi company. BPL has collaborative R&D agreement with Ciba Specialty Chemicals (Switzerland).

BPL produced both generic finished pharmaceutical products and 'Active Pharmaceutical Ingredients (API)'. In 1990, BPL got its own API unit for the first time. BPL is among the leaders in the market to introduce new and high-tech drugs in different therapeutic classes in the local market. In 2008, BPL's total offer in market was 240 (excluding dosage and delivery forms). BPL was the first Bangladeshi firm to introduce Anti-HIV drugs in 2003, which was recognized while Roche granted BPL license to produce its ant-retroviral drugs in 2007. BPL has diversified itself in producing anti-cancer therapeutic drugs in 2003. Among its recent introduction includes drugs relating to treatment of Parkinson's, Avian Influenza, Herpes and Psoriasis. BPL has several compliance certifications in its credit which reflect the quality assurance strength of the firm. In 2008, BPL has achieved 'Therapeutic Goods Administration (TGA) – Australia' approval being the first Bangladeshi firm. TGA is recognized by more than 20 developed countries including Canada, Germany, UK, France, Italy and etc.

Besides consolidating in local market, BPL has quite significant presence in international market. It exported API in 1992 as the first Bangladeshi firm, and exported finished formulation for the first time in 1993. BPL is the first local pharmaceutical firm to receive 'National Export Trophy (Gold)' for its export performance during 1994-1995. BPL was the first local firm to export intravenous fluids in 1995 to Russia and Vietnam. Today BPL is known as the most internationally committed pharmaceutical firm of the country. It exports its products to as many as 26 country markets. In 2007, BPL has earned 122.75 million Tk. from export. BPL has its management and associates in as many as 8 foreign countries.

BPL's internationalization took a distinguished turn, when it was registered in 'Alternative Investment Market (AMI)' of 'London Stock Exchange (LSE)' as the first Bangladeshi firm. BPL is engaged with major TNCs as contract manufacturer. In 2000, BPL executed inhaler manufacturing job for GlaxoSmithKline (GSK). In 2005, BPL has entered into 'toll manufacturing contract' for manufacturing the liquids, ointments, creams and suppository products for Novartis. BPL is the listed suppliers of UNICEF. BPL has been planning for more aggressive internationalization using its recent quality certifications and enhanced capabilities.

Eskayef Bangladesh Ltd. (SK+F)

SK+F is a second generation local firm that sprouted directly in the backdrop of streamlining the TNCs in the local market through enactment Drug Control Ordinance 1982. Beecham, a UK pharmaceutical firm, merged with 'SmithKline & French (SKF)' - USA in 1986, which was operating in Bangladesh. Bangladeshi conglomerate TRANSCOM acquired the assets, business and management of SKF's Bangladesh interests in 1990. This move turned the Bangladesh interests of world renowned SKF into a Bangladeshi private limited company, Eskayef (SK+F), under full Bangladeshi ownership and management.

SK+F inherited the technology and management through its lineage to 'SmithKline & French'. In 2004-2007 period, SK+F further expanded its production facilities and made technological upgrading in cooperation with Elomatic and Elomatic-Pharmalab, a Finish and Finish-Indian pharmaceutical engineering and consulting firm, in order to upgrade its facilities to the European standards. SK+F has built its own separated R&D and QC facilities in line with its commitment toward capability building.

SK+F locally manufactures and markets 157 products (excluding dosage forms) in 59 therapeutic classes. Besides finished products, SK+F is the only manufacturer and marketer of 'timed release blended pellets' in Bangladesh since 2001. SK+F has been constantly introducing new drugs in its manufacturing and business line. In 2006 it introduced 15 new products, 13 in 2007 and 12 in 2008. SK+F has introduced many new products in the local industry e.g. in 2004 reduced osmolarity ORS and anti avian flu drug in 2007 to mention a few. Beside its local production, SK+F is the importer and distributor of ophthalmological products of Allergan Inc – USA (among the world leaders in ophthalmological products). In 2008, SK+F has received the accreditation of MHRA-UK for its world class production, quality control and management.

SK+F rose to the position of the 5th largest pharmaceutical firm of Bangladesh in 2007 and maintained its position amid intense competition in the local market in 2008. In 2007, its annual sales was 2600 million Tk. with a percent growth in the previous year's sale. In 2007, SK+F's employment size was 1300.

Since 2005, SK+F has turned to international expansion as one of its growth paths. SK+F has been exporting both bulk pellets and finished generics to 16 country markets of Asia and Africa and Latin America. SK+F is systematically stepping up to enter into mainland European markets. In 2008, SK+F has set up its own office in UK and has started negotiating with number of European producers in order to buy their product and brand licenses. SK+F plans to produce those products in their own production facilities and export them in the European markets. It hopes that this will give it a fast track entry into European and other markets. SK+F plans to increase its export operation in non-regulated markets with more intensity. SK+F has already signed up a 'toll manufacturing' deal with a UK firm to

manufacture their cardiac, diabetic and hormone product and is negotiating the similar deal with a German and a Dutch firm. SK+F is an enlisted supplier of WHO and UNICEF.

Incepta Pharmaceutical Ltd. (Incepta)

Incepta, started only in 1999, is the most aggressive and dynamic pharmaceutical firm of Bangladesh, which represents the third generation of Bangladeshi pharmaceutical firms. Incepta was initiated by Mr. Abdul Muktadir, a former senior manager of BPL, and some of the dedicated and highly skilled professionals without any foreign collaboration or license. Incepta has risen to the position of the 2nd largest firm in terms of the sales volume in Bangladesh market in 2008, while its position was 31st in 2000. Incepta's sales figure stood at 3.07 billion Tk. in 2007-2008 with a 17 percent growth on previous years. It has a plan to make it 4.50 billion Tk. in 2009. Incepta had 1700 employees in 2007.

Incepta has been heavily relying on its capability to introduce new drugs in the market since its inception. Incepta has introduced on an average 12 new generics in the local industry in every year during the period of 2000 – 2008. In 2007, Incepta offered 450 products (280 generics) in the local market in 50 therapeutic classes. Incepta has been successfully producing high-tech therapeutic and biotech products. Incepta has its own state-of-the-art production facility. Incepta has received 'European GMP Compliance Certificate' in 2008 from the 'European Agency for the Evaluation of Medical Products (EAEM)' as the first Bangladeshi firm. Incepta has created its own R&D Department to explore and exploit opportunities for introducing more new generics and cutting-edge technologies in the firm and in the local industry. Its own API plant is underway and expected to commence in 2009.

Incepta has turned its eyes to international market in 2006. It started with exporting its finished formulations in different countries. In 2007, it exported its products to as many as 10 country markets. Incepta is in the process of registering its products and making arrangements for exports in 10 more country markets. Incepta is looking for aggressive expansion in international market in different forms. Incepta has already executed a contract with Austria-based Bano Pharmaceuticals, where Bano will outsource its production to the newly built production facilities of Incepta. Besides, Novartis is outsourcing some of its productions to Incepta. Incepta management has set up a more than 10 million Euro export targets for European market only. Incepta is confident that it can aggressively expand into European markets in the coming years, as they have European recognitions and have been already successful to manage European partners. Simultaneously it wants to expand in other export markets in other continents to turn the firm as a global player in the coming days. Incepta is an enlisted supplier of WHO and UNICEF.

Analysis and discussion

The four cases are the representative of different development phases of Bangladesh's pharmaceutical industry. All the four of the different generations have demonstrated a common growth path. The firms presented here have primarily concentrated toward consolidation in the local market maintaining the conformity with the arguments presented in the initial part of the paper. The firms have capitalized on local regulation i.e. enforcement of Drug Control Ordinance 1982. Though this ordinance came as a form of protection for the local entrepreneurs, it was unlike the common form of fiscal and entry deterrence protective measures. This regulation placed a different set of rule for the game correcting the TNCs and left the game open for both TNCs and local entrepreneurs. Local entrepreneurs put this new scenario in the business perspective not rent seeking perspective. Local entrepreneurs made investments out of their own pocket in sourcing technologies, sourcing right people and

developing operations through creating organizations. Entrepreneurs initially sourced the capabilities from available factor market. Though the TNCs backed off strategically, it didn't leave a vacuum in the industry. It just changed the composition of the competition, instead of the TNCs local firms started to compete each other for the lucrative domestic market. In this phase, the local firms were forced to build capabilities in-house as the general sourcing from the factor market doesn't ensure uniqueness of the resources of the organization. They had to rely on managerial mechanisms to generate the superiority and to protect own resources being imitated. As for example, Incepta has grown so rapidly as it has been successful to draw the talents raised by the other firms. The firm's they started to compete on the superiority of the resources to secure their place in the domestic market. All of them have lived in the common factor market (CSC), but their resources bundle didn't grow up in similar composition. For getting competitive advantage in domestic market, they utilized the CSC in their own ways. Differential ways of utilization of the country resources by the firms have resulted in development of asymmetric resources bundle in the firms, which has produced asymmetric competitive strengths of the firms.

All the four firms have been observed to evaluate the incentives of getting their operations extended to the international market. Only recently, both the four firms are unfolding for aggressive export venture or other form of international export. Since all the firms are GMP compliant by default for the local regulations, they had opportunities to export to the unregulated markets from the beginning. None of the firms didn't so, SPL waited 30 years, BPL 8, SK+F 13 and Incepta 7 years to start export for the first time. The managers revealed that they were aware of the opportunities and they had the capabilities well ahead for the export commencement, still they wanted to stay in home market as they found that growth trend in home market could entail the performance outcome which might not be sustainably higher in terms of investment for foreign operation. Recent change in the competitive dynamic in the home market, e.g. competition on cutting-edge manufacturing technology, newer products and more involved pattern of market servicing and relations are forcing the firms to make huge investments as well as international regulatory changes e.g. TRIPS have been the sources of alternative incentives for the local firm. The local firms are only deciding for international entry when these incentives are matched with their long-term planning and economically rewarding. The firms studies have mentioned that though their export earning is negligible in comparison to their earnings from domestic market, they are exporting and investing in facility upgrading as they see bigger opportunities in future both in international and home market. Cashing these opportunities will rest on efficiency in cutting-edge technology exploiting. This finding supports the argument that domestic competitiveness is a necessary precondition for international entry, but it doesn't guarantee the entry. Industry incentives moderate the decision of international entry by a competitive domestic firm.

The four firms studied have shown that they have expanded their international market in quite a short span of time since their entry into international market. They have developed suitable operational facilities. But once they did it, they relied on soft capabilities in greater extent. Interviews with managers of the firms have revealed that they want to make their presence in the global level and the investments they are doing in facility upgrading is just one of the components in their globalization. They have revealed that in generic drug production, they have the similar expertise compared to Indian firms even in lower costs. They cited the analogy that if the Indian firms can systematically step up to the global generic markets, they can do it for them too. For doing this they have to make their presence felt in as many as country markets. Such mental frame has been argued as the 'organizational cultural milieu' in the theoretical discussion of higher order capability.

Another interesting point raised to the managers was about how they bundle of diverse foreign markets in respect of marketing. The four firms on an average operate in more than 15 countries spanning in Asia, Africa, South America and Europe. The individual markets are different in regulatory requirements and business and national cultures. In such situation the firms have developed their marketing strategy focusing on the nature of their products. Since their product is similar for each market, they deliberately try to draw a common set marketing program. The firms have developed a general package of marketing program involving pricing, promotion, and distribution and market relations for all the markets which mostly fit with the configuration of their offer. They only make necessary adjustments to such package with demand of the market and regulatory requirement of the market. Designing such a plastic marketing program signifies the firm's distinct capability, which is quite a higher-order capability than designing a regular marketing program in the domestic market.

Learning from one market and applying the knowledge in another market have been observed to be a proactive practice by the firms. The firms have reported that they choose the markets deliberately which is representative of a group of other markets. They learn from that reference market and apply this knowledge in other markets. As per example, BPL has committed substantial resources to get into Chilean market and has been successful in this regard. BPL describes this as a strategic move in terms of learning, as Chilean market is regarded as the most sophisticated market in Latin America. BPL hopes that its Chilean market knowledge would facilitate them to expand in other South American markets. Incepta has made the same reports about Austrian market as well as SPL and SK+F have made the similar assessment about their UK activities. Each of firms has mentioned their similar learning strategy about other markets in Asia and Africa. This type of experiential knowledge has been mentioned as market-based learning in the theoretical discussion. Such learning orientation and execution is definitely a higher order capability of the firms.

Conclusion

The case studies show that the firms have gone through different transformational phases in response to the developments related to the particular industry. In different phases of transformation, different set of capabilities emerged as the most featured capabilities. In the initial phase, the Bangladeshi firms fundamentally relied on operational capabilities including technology, human resources sourcing and positioning in the local market as a means of survival and growth. Once the firms succeed to develop and exploit the fundamental operational capabilities, they looked for further expansion and thought about internationalization as an option in this regard. Each of the firm included in this study has revealed that they entered into their initial engagements in international market without any predefined sustained motive of being an international firm. They merely tried to explore the international market. After a period of engagement in international market, the firms adopted internationalization as a systematic growth option. They started systematic efforts on learning about different markets, looking for strategies for entering and serving international market and incorporating in mental frame of managers that the firm places value on international expansion along with domestic growth. A sustained practicing of these functions turned them into the capabilities of the firms. These capabilities energized the firms to expand in the international market.

The cases have initially laid support to the proposed evolutionary capability-based model. Though the case studies were quite extensive in nature, the sustainability of the merit of the

model will depend on further empirical researches on this model in different industry aspects. Both qualitative researches and quantitative research outputs are required for the further validation and improvement of the model. This research has so far been successful to lay down a general theoretical framework for explaining internationalization process, which is could be helpful to research on internationalization of both old and new firm from both developed and developing nations.

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