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Identifying Organizational Distinctive Competence by Business Mapping in a Global Textile Complex

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ABSTRACT

The three-dimensional perspective along product, process, and supply chain, of any organization is essential for providing a holistic perspective for business portfolio mapping. Relating organizational business success, in terms of economic performance, for any company in the Global Textile Complex, according to their distinctive competencies – innovation and/or specialization is critical to understand the routine/pathway to be followed by building the fundamental blocks of 3-DCE for driving success. The paper develops a matrix for business competency mapping to streamline the organizations according to their pattern of distinctive competence deconstructed along the 3-DCE domain. Eighteen of the 25 surveyed companies recording a profit build-up in the last 5 years, had their success deconstructed along different combinations of product, process and supply chain attributes. It is argued that innovation and/or specialization are the routines to be successful, analysed subsequently through developed statistical models. Any firm not adjudged to be innovator and/or specialist in some respect cannot be successful long term. This is critical in identifying myriad of distinctive organizational competencies and success factors for all business architectures and deduce success pattern in it. A failure to do so can essentially lead firms running out of long term success as the remaining 7 respondent firms reflected.The research seems to be exemplary to identify and relate firm strategies to their critical success factors and devise solutions for the future.

Keywords: Organizational business mapping, Textile Value Chain, Supply chain management, 3-Dimensional concurrent engineering (3-DCE), Innovation, Dynamic capability development

1. Introduction

The European Textile, Clothing and Fashion Industries (mentioned as TCF Industries from now onwards in the paper) with the associated enterprises have undergone substantial change over the past few decades due to the heavy price competition from the Asian low-cost region – driven substantially by the wheels of globalization. The major trends in the industry can be classified into increasing shift of production to low cost regions, emergence of retailers in dominance, and restructuring from labour-intensive to knowledge-driven approaches. The TCF industries responded to these competitive pressures by adopting to, predominantly, three main strategies (Ludwig *et al.*, 2009) viz. (i) *cost-oriented approach* – by relocating production and

sourcing more into low-cost countries, (ii) *innovation-oriented approach* – through efforts in innovation in areas of technical & specialty textiles, fashion & branding, quality improvements, and product & market diversification and (iii) *productivity-oriented approach* – by increasing production flexibility based on technology. Considering these main changes and drivers in the TCF sectors, five principal adjustment strategies (IFM, 2007a, 2007b) viz. (i) brand and design strategy, (ii) partner strategy, (iii) industry-retail strategy, (iv) subcontracting strategy, and (v) technological leadership strategy are prescribed for more practical and business-related restructuring.

Schuh (2002) summarized the reaction by the TCF sectors to the pressures of globalization into six reference strategies: *design strategy, market leader strategy, lateral strategy, innovator strategy, technology focus strategy, and oligopoly strategy*; each placed between two different success factors classified under four broad domains of product innovation, manufacturing competence, brand and market access, and supply chain competence, as in Figure 1.

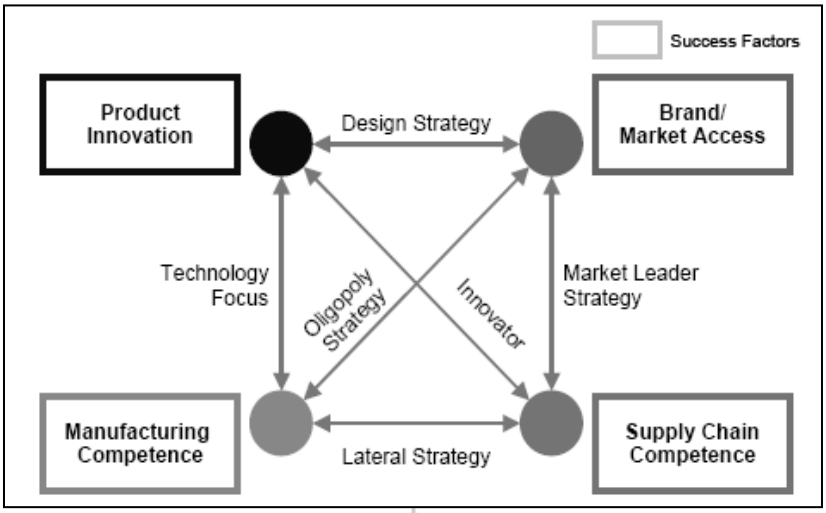

Figure 1. Competitive Strategies (Roesgen, 2003)

Success factors and hence company's strategies can be very individual with diverse categories for differentiation. However, in the lines of Porter (1990), companies succeed in globalized markets either by perceiving a new basis for competing – by exploiting new opportunities – innovation, and/or by finding better means for competing in old ways i.e. by specializing in what it is doing. Porter (1990) emphasized that every successful enterprise employs strategies that are different from each other yet there is an underlying mode of operation in character and trajectory that make them fundamentally similar. As opined by Mintzberg (1998), long-term business success lies in determining the market forces in the external environment (so-called market-based view) to identify the key opportunities and threats for the development of potential success factors in the future business climate. Choosing a particular trajectory for performance, a company needs to support its strategy with the related success factors to fulfil and defend it and thus avoid fuzzy alignment (Roesgen *et al.*, 2003). But as industries and, hence companies embedded in it, are stamped by many processes with different characteristics, requirements and competencies the success factors are myriad – even though assimilated under the four

broad domains, as in Figure 1. This more explicitly necessitates a proper mapping of the enterprise to determine the existing business skeleton to know the current strategies and devise future strategies eyeing the drivers of market forces (Fine, 1998). Fine (1998) corroborated this from the perspective of three-dimensional concurrent engineering (3-DCE), related to the key areas of product, process and supply chain views of the entire business process of any enterprise to deliver successful performance. Interpretations from the research (Roesgen *et al.*, 2003) suggested that critical success factors for any enterprise are also positioned in the domains of product, process and supply chain (3-DCE) competence. Thus, mapping is essentially based on taking the product or process view of an organization in the entire supply chain. The advantages of mapping the organizational business model permit a company to be more precise about its distinctive competencies and to concentrate on a set of product-process-supply chain alternatives.

The present research work is aimed to do the following:

(i) From the network perspective, identify how mapping extended organizational value chain (identifying the organizations, products & technologies and processes & capabilities involved in the supply chain) is beneficial.

(ii) Develop a matrix to classify/map individual enterprises based on their distinctive competence and orientation to explore the reason behind its possible successful performance.

2. Global Textile Complex

Mapping TCF value chains is relatively complex owing to the diversity in business portfolios, competencies & capabilities, success measures etc. of the embedded firms, due to inherent modularity of textile and apparel products and assorted functionalities leading to diverse processes. At this point it is quite critical to define the extended organizational value chain along various levels, as a Global Textile Complex (Dicken, 2003, Kunz *et al.*, 2005), which will provide a notion of the different tiers of the network.

The *textile complex* is the combination of textile-related businesses that supply soft goods to the world population. Soft good is classified primarily on their end uses: apparel, household goods and industrial goods (Kunz *et al.*, 2005). More recently this classification has been done into fashion apparels, furnishings, specialty textiles or industrial goods, and functional wears. Figure 2, explicitly characterizes the tiered extended value chain model of Textile, encompassing many industries – Chemical, Textile, Clothing, and Fashion Retail.

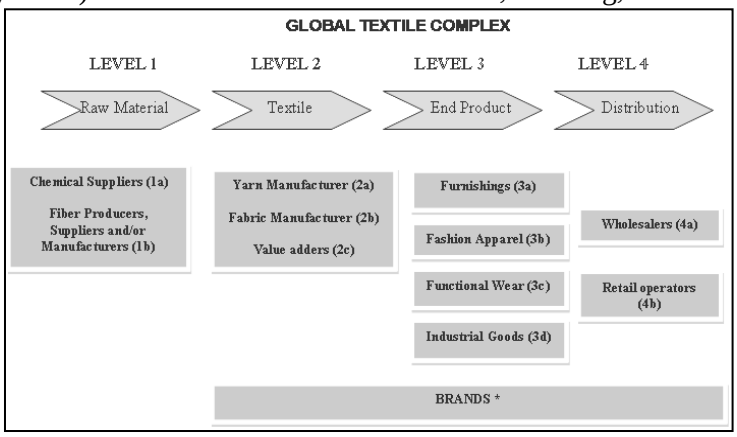

Figure 2. Global Textile Complex

This view of any organization in the value chain is essential to generate a business competency mapping vital to understand its key success factors and differentiated strategies. A similar mapping of the extended value chain from the capability perspective would essentially provide an understanding of the competency development and interaction along the chain and to potentially develop adjustment strategies for the future situations.

3. Basis of the New Matrix

Multi-dimensional supply chain mapping to identify the organizational process capabilities, products and technologies was introduced by Fine (1998). This essentially helps to understand the critical roles played by different organizations in the Global Textile Complex, both, at the network and individual levels their orientation and distinct competencies for successful performance in the extended value chain. Distinctive competencies that each organization should identify and exploit is essential to generate advantages over competitors to viably map the current organizational position according to the matrix to, possibly, determine the general factor behind its success; as expected in the present research. This is aimed at determining the building blocks of developing dynamic capabilities and critical pathways to be followed along innovation and specialization to lead organizational success.

4. Research Methodology

The paper addresses the need to devise a matrix for organizational mapping of firms in the TCF industries according to their competencies/capabilities based on the broad product, process and supply chain perspectives of 3-DCE broadened into mapping of extended value chain. The theoretical framework of the matrix is based on a deductive approach developed through extensive review and co-relation of different supply chain concepts and strategies for business excellence, product, process & supply chain innovation, specialization through volume-variety competencies, make-buy decisions, etc.; discussed and analyzed in detail in the next section of the paper. This is supported through a survey on Swedish TCF firms representing various levels of the Textile Complex, chosen considering their diverse business formats, to relate their organizational competencies to the framework for organizational mapping, to locate the factors behind their successful performances. The questionnaire for the survey is adopted to relate to the concepts behind the development of the matrix. Statistical analysis is conducted of the responses to determine the relationships constructed. Two exploratory company case studies are also conducted to support the research validity. Primary response is obtained from the companies through interviews of appropriate top management personnel who have the relevant knowledge related to the context of the survey and the right perspective of the company's business portfolio. This is followed by a response to an articulated questionnaire of similar kind for comparable validation of the interview data through data triangulation (Denzin *et al.*, 1994; Yin, 2003).

5. Organizational Competency Mapping

It is imperative to understand that successful competency/capability development is based on two primary drivers: by being different and exploring new opportunities through *innovation* and by representing better value by exploiting existing capabilities through *specialization*. As Porter (1990) opined, 'It is essential not only to innovate but sustain it through relentless improvements or upgradation'. Today's innovation, then, either modifies into improved innovation of the future or into specialization for efficient tomorrow. Successful organizations can hold their winning position based on innovation and/or specialization – dynamic enough to innovate or create a more specialized and efficient way of doing

things. Combining innovation and specialization along the domains of product, process and supply chain – the three fundamental agents in the system - gives realistic mapping of the organizations in terms of capability and strategic position. Figure 3 classifies organizations in the Global Textile Complex on the basis of their key distinctive competencies in business and attempts to map them along the matrix, essentially to determine their strategic position, core competencies and key success drivers (if any) by deconstructing their performance. Practical accounts of organizations like Zara (an agile supply chain innovator + specialist and product innovator) or Walmart (a *high variety-low volume* product specialist + process specialist) etc. and their business portfolios in earlier related researches are exemplary in validating the basis of the matrix, as proposed.

<table>
<tr><th>Innovation</th><th>Specialization</th></tr>
<tr><td>Product Innovation
- modified product range
- new model in product range
- new product outside existing product range but in the same field of technology
-New Product Development</td><td>Product Specialization
- Low Variety, High Volume
- High Variety, Low Volume
- High Variety, High Volume
- Hybrid</td></tr>
<tr><td>Process Innovation
- Process Management Innovation
- modified technology/equipment/operation
- redesigned technology/equipment/operation
New Process Development</td><td>Process Specialization
- Cost Efficiency
- Quality Level
- Responsiveness
- Value Addition</td></tr>
<tr><td>Supply Chain Innovation
Supply Chain Architecture
- sourcing decision
- make/buy decision
- contracting decision
Logistics/Coordination
- inventory, delivery, information systems</td><td>SC Specialization
<table><tr><td></td><td>Lean</td><td>Agile</td><td>Leagile</td></tr><tr><td>Producer-driven</td><td></td><td></td><td></td></tr><tr><td>Buyer-driven</td><td></td><td></td><td></td></tr></table></td></tr>
</table>

Figure 3. Matrix for organizational competency mapping

6. Deconstructing the matrix

6.1 Innovation

Successful organizations have innovation working along all stages, both inside the firm and outside in its value chain. Porter (1990) considered that companies succeed in international markets by implementing acts of innovation to achieve competitive advantage. In the broadest sense, this could be perceived in designing of products, processes and/or in organizational aspects (single company or network) conferred as a precondition for the survival of the European Textile, Apparel and Fashion Industries Ludwig *et al.* (2009). EURATEX (2006), the European Technology Platform – established in 2004 – formulated a new paradigm for future development of the European textiles and clothing industries classifying product and process innovations as the most demanding and critical sectors under the European Union Project for future success. Over the years, several organizations have demonstrated their success stories based on either incremental innovation through 'better, faster, cheaper' ways of introducing minor changes or through discontinuous innovation by complete transformational change into new products (Sheth *et al.*, 2002). Based on a correspondence of Mike Todaro, of the American Apparel Producers' Network (April, 2005) with Wal-Mart, he postulated Wal-Mart to be even more successful in the coming years because of their history of innovations – processes, products, formats, technology, and geography. Their capacity to think big and beyond incremental changes by creating sudden strategies of innovation

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to disrupt traditional businesses is indeed significant (Kunz *et al.*, 2005).

The present research identifies product innovation characteristics to include a wide array of activities ranging from researching new fabrics and styling trends to the creation of new designs, patterns and samples to transformational development of new products with distinctive unique functionalities. Gore-tex products of W.L. Gore & Associates or trademark fabrics like Nomex, Teflon or Lycra by DuPont, etc. illustrates the well-known trade brands having promulgated their success through revolutionized product innovations and consistent, breakthrough creativity. The fast fashion retail brands like Zara, H&M or Top Shop etc. and the luxury brands like Burberry, Gucci or Armani etc. have typically shown their unique identity and degree of innovation according to the business and target market portfolio and requirements.

6.1.1 Product Innovation

Product innovation, in the broadest way, can be defined as '*the development of completely new products, changes in design of established products, or use of new materials or components in the manufacturing of established products*', in short any new or altered products (White *et al.*, 1988). Based on this classification, Figure 4 highlights different distinguishing degrees or intensities of innovation efforts to systematically structure all levels of product developments and innovation pertinent to TCF firms.

Class I – a modified version of an existing product range
Class II – a new model in the existing product range
Class III – a new product outside the existing product range but in the same field of technology
Class IV – NPD (New Product Development)

Figure 4. Different classes of Product Innovation

The classes of innovation are graded from Level I to IV, based on the degree of intensity ranging from transitional change to transformational change from existing variety of products. Organizations can be engaged in different degrees of product innovation, as well. A product innovator or product innovating firm can be buyer-driven – innovating through branding and fashion like Zara, a *fast fashion innovator* or a *luxury haute couture* like Louis Vuitton or Armani. These firms have innovations mostly design- or fashion- led. On the other hand, higher degrees of technical product innovations can be seen in producer-driven textile value chains in the form of specialty textiles along the fields of material science, chemistry, or engineering (Ludwig *et al.*, 2009). Some prominent examples of such firms are W.L. Gore Associates or Du Pont etc.

Any new design of an existing product range with certain incremental developments or marginal changes or improvements is categorized as Class I innovation (particularly considering a change in size or colour in fashion apparels) or Class II if it is associated with change in the existing model or launch of a new model in the subsisting range of product. The myriads of new designs - styles, colours, fabrics etc. launched every season by the fashion companies and more definitively associated with redesigning of the shape, feel, colour etc. of the product can be termed as Class I- & II- product innovations (referred as marketing innovation by OECD in the Oslo Manual, 2005). Class III innovations are associated with some new textile consumer

good or industrial products outside the existing product range but in the existing domain of technology.

A good example of this differentiation is illustrated by categorizing jersey knit fabrics with diverse ranges of patterns and styles as Class I- & II- product innovations while knitting fibres of meat compound into continuous materials can be classified as a Class III type product innovation considering new product development outside the existing product range but under the same product technology (knitting). Class IV innovations are typified, in this context, as technological innovations requiring new knitting concepts. Global work-wear & professional clothing brands like Hard Yakka (Hard Yakka, n.d.) or Dickies (Dickies Work Wear, n.d.) with their commitment to innovative work-wear fabric technology and breakthrough design classifies itself at such higher levels of innovation. Product innovation is a distinctive force in determining success for the production- or technology- driven organizations like W.L. Gore, where innovation is more functional in the form of breathable Gore-Tex fabrics, its medical products, and other cutting-edge innovations with diverse product lines making it one of the most innovative companies in United States (Deutschman, 2004). Schoeller Textil AG is another exemplary firm which has developed pioneering new textile trends developing top products which improved protection, special clothing comfort and durability (Schoeller Textiles AG, n.d.).

6.1.2. Process Innovation

OECD in the Oslo Manual (2005) defined process innovation as, '*the implementation of new or significantly improved production or delivery method.*' Fine (2000) conceptualized process development to be related to three major aspects; process technologies and equipments, manufacturing systems' development, and operations systems design and layout. This includes significant changes in process technology and technical expertise, equipments for developing new products and/or software or by changing or inventing the process itself.

Considering the product modularity and increasing role of retailers in the Global Textile Complex, myriads of processes are associated with the TCF firms categorized either as manufacturing (spinning, weaving, knitting, cutting, garmenting etc.) or non-manufacturing (marketing, logistics & distribution, packaging, retailing etc.), value-adding (spinning, dyeing/printing, garmenting etc.) or non value-adding (distribution, inventory carrying etc.), or even as labour-, capital-, or knowledge-intensive (Ludwig *et al.*, 2009). In the paper, we classify process innovation or '*who can be called a process innovator*?' into four classes/categories viz. (i) Class I: process management innovation, (ii) Class II: modification of existing processes (technology, equipment, and/or operation), (iii) Class III: redesigning existing processes, and (iv) Class IV: new process developments.

Class I innovations highlight small improvements in existing sub-processes through planning and monitoring of process performances to enhance customer satisfaction by meeting the requirements. Workflow management and document or knowledge management techniques like introduction of electronic data interchange (EDI) and information systems (IS) can be classified as Class I type process innovation for decreasing lengthy processing times and inherent complexities. Simple process interchanges in the supply chain pipeline (interchanging processing stages) can be adjudged as minor innovations affecting firms' process efficiency as well. On the other hand, Marimekko, a Finnish clothing company, has been quite innovative in bringing back the old technique of silk-screen printing by hand on cotton generating non-uniform repeating lines to create attractive designs (Melaugh, 2008). Such production techniques could embark prominent Class II innovations through

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process modifications in technology and operations.

New process developments like the use of nanotechnology or employing techniques from molecular engineering to improve fabric performance, and the creation of smart fabrics etc. has been classified as Class III innovations considering that these technologies were not invented exclusively for TCF sectors but were incorporated after their established benefits and viabilities to other industries like electronics and pharmaceuticals. According the classification method developed, a smart textile developed using this Class III type process innovation could, however, be a revolutionary New Product Development (NPD). A prominent example in this category is Nano-Tex (Nano-Tex™, n.d.), a leading fabric innovator providing nanotechnology-based textile enhancements for commercial and residential interiors. This relentless process innovation by incorporating nanotechnology to transform the molecular structures of fibres and create fabrics offering unsurpassed performance and comfort is a mode of redesigning the technology to revolutionize the textile industry. However, in the product innovation domain Nano-Tex is a true Class IV innovator. Another excellent example of Class IV process innovation is the 1972 - revolutionary garment dyeing technique. This technical and operational process innovation, by Benetton, in manufacturing garments first and colouring later (form postponement) until demand information became available was a success due to obvious cost savings by delaying addition of expensive dyestuffs, better customer service, increased sales by having customer-desired stock available, and fewer mark-downs (Dapiran, 1992). Yet another application-based innovation of Class IV is the invention of the shuttle-less loom, though the associated technology of a projectile or jet was known much earlier. Perhaps a perfect example of a Class IV type process innovation across the domains of operation, technology and equipment is the Unit Production System (UPS) developed by Eton Systems (Eton Systems Inc., n.d.).

The paper highlights different classes of process innovations in firms along technology, equipments, and/or operations considering it essential for organizational business portfolio mapping.

6.1.3 Supply Chain Innovation

Supply chain (SC) design is an essential aspect in supply chain management concerning the structure of the supply chain, its configuration, resource allocation, information sharing, and processes at different stages (Chopra *et al.*, 2004).

Fisher (1997) aligned the product characteristics and SC design on a strict either/or relationship based on the aspects of demand predictability, manufacturing focus, lead-time focus, inventory strategy, supplier selection, and product design strategy. Finer aspects of the framework were proposed by Fine (2000) into developments and decisions related to *supply chain architecture* and *logistics/coordination systems*. Design of supply chain architecture embraces decisions on whether to make or buy products based on choosing what processes to outsource to suppliers and what to control on its own as a core aspect (Fine *et al.*, 1996). This requires the right choice of supplier base in the extended supply chain for strategic sourcing, and negotiating contracts of supply chain relationships. Structural relationships in the Global Textile Complex were opined by Gereffi *et al.* (2005) into different types of governance patterns. A control on these aspects is critical for supply chain innovators. Another key aspect of innovative supply chains is related to the logistics and coordination decisions included inventory, delivery, marketing, and information sharing to support the ongoing operation of the supply chain. By inter-relating the key concepts of supply chain development as discussed by eminent authors, the paper diagnoses the relevant fields for supply chain innovation.

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The focus on supply chain design for organizational mapping is a critical aspect for measuring success but with myriads of SC designing aspects it is rather complex to locate the exact parameters associated with one's differentiated supply chain. Critical mapping of each value chain is essential to reveal the position and hence the corporate strategy of the enterprises. Supply chain innovation is characterized into two broad categories viz. (i) supply chain architecture in designing the extended supply chain, choosing the interdependencies according to sourcing decisions: *choosing firms in the supply chain*, make/buy decisions: and contractual dynamics: *structuring relationship among SC members*, and (ii) logistics/coordination system in developing core capabilities along SC processes – inventory, delivery, marketing & sales, IS etc.

Big specialty chains like Zara, Benetton, and H&M and hypermarkets like Wal-Mart have been instrumental in designing very innovative supply chains emphasizing strategic control over most of the major supply chain functions. Zara has hit on a formula for supply chain success defying the conventional wisdom, by designing, producing and distributing in just fifteen days through a unique 'fast fashion' system. Zara's vertically integrated value chain has espoused business leadership through creativity, innovation, design, fast market response (Inditex, 1999) illustrating its classification (in the paper) as a SC innovator. The Inditex buying centre in Beijing completely controls the raw material sourcing, booking flexible production capacities with its suppliers while the rest of the supply chain activities, both in knowledge and capacity, are controlled internally; ranging from the product designing process to centralized warehousing, cutting, finishing, merchandizing and retailing. Zara operates its internal logistics and coordination with the exclusive sewing assembly cooperatives quite proactively (INSEAD, 2002). This highlights its comprehensive control in designing its supply chain architecture and relationship, and coordination decisions. For H&M, a Swedish fast fashion retailer, and the German clothing retailer Karstadt, the core strategy is a mix of super-efficient SC management, logistics, and branding. H&M represents a classic story of outsourcing its production to low-cost countries and maintaining an efficient network of suppliers mediated by its production offices to negotiate between its internal buying department and large network of independent suppliers. Its centralized logistics and warehouse system, close coordination of the procurement staffs with the production offices, intelligent use of ICT tools, purchasing flexibility and overall a central governing model, has incredibly reduced the lead time and improved logistics to have a lightning-fast turnaround speed of just 20 days, making it a truly unique supply chain innovator (EMCC, 2004).

6.2 Specialization

Most organizations like to think of themselves as being particularly good relative to their competitors in certain areas. They successively develop certain distinctive competence in products, processes and/or supply chain rather than simply being based on innovation, to narrow the focus of the business unit's activities and greatly enhance the chance of success for the organization (Hayes *et al.*, 1979a). Global textile value chains are still driven, to a large extent, by cost efficiency, high standardization of products and processes, and the optimal use of international labour by relocating production to low-cost areas (Ludwig *et al.*, 2009). Moreover, there is relentless onslaught of competition in the turbulent market scenario which demands sufficient specialization by exploiting existing capabilities. Prominent examples of some big companies which have suffered a decline, losing out in the competition to specialize are Kmart, GAP, and Marks & Spencer etc. Kmart, a retailing giant of the 1980s, has lost out the battle to Wal-Mart, unable to compete with the latter's brutally

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efficient cost-cutting techniques and low prices (Thomas *et al.*, 2009; Bhatnagar, 2004). M&S, on the other hand recorded a major setback in 1998, as suggested by Merrill Lynch, due to the mismatch that existed in the traditional nature of its supply chain and its fast fashion product line requiring fairly rapid turnaround (INSEAD, 2002). All these are noteworthy examples to signify the need to specialize across 3-DCE domain.

6.2.1 Product Specialization

Products have several characteristics that influence the manufacturing process type, the SC design, and the planning system (Selldin, 2005). Competitive priorities establish that companies can compete in a wide array of aspects besides the price of the product like cost, quality, delivery performance and speed, volume flexibility and product mix flexibility. Product specialization classified in terms of *variety* and *volume* varies between the extremes of *low volume-high variety* products generally with high margins and *high volume-low variety* products generally with low margins can be considered key to render success to many firms thus making it sn inevitable domain of the competency matrix.

In this domain of product specialization, companies seek to succeed by choosing some niche strategy (low volume-high variety) or high-capacity strategies (high volume-low variety) (Fine, 1998). However, a strategy reaping high margins from *high variety-high volume* or having a hybrid portfolio of both *low volume-high variety* products and *high volume-low variety* products has been an alternative, especially, for the supply chain dominators like Wal-Mart, Zara or H&M who tend to offer wide product range to maximize their contributions and profits from the business.

The dominant competitive mode in case of *low volume-high variety* product specialization rests on the laurels achieved through customized design of niche products with high flexibility and quality and/or specialization in own innovative product range. According to the product-process matrix described by Hayes *et al*. (1979a, 1979b, 1984), *low volume-high variety* products are one-of-a-kind products emphasizing maximum performance based on the related competitive priorities (Leong *et al.*, 1990) - quality, delivery speed and dependability, and product mix flexibility for specialization. A typical example of *low volume-high variety product specialist* is Tailor Store (Tailor Store Sweden AB, n.d.) in Sweden, specialized in manufacturing tailor-made made-to-measure shirts meeting individual customer requirements. Along the other end of the combination are the more flow-oriented products with high product demand volume and standardization but limited in product mix (Selldin, 2005). Enterprises specialize in delivering such products by competing on the basis of cost and volume flexibility. The general mass-market manufacturers of commodity or standardized products are mostly *high volume-low variety* product specialists relying on performance attained through cost minimization through economies of scale. However, most of the big brand manufacturers, marketers and retailers operate with a hybrid strategy reaping high margins from both *low volume-high variety* seasonal fast-fashion products and also from the *high volume-low variety* continuous or basic products.

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6.2.2. Process Specialization

Process specialization in many ways leads to superior organizational performance, in terms of the value drivers such as increased speed, lower cost, higher quality, more innovation or value addition (Rubman *et al.*, 2009). In a recent study by Kurt Salmon Associates (KSA), analysis of 101 leading retailers outperforming in the retail and apparel industry, it has been generalized by categorizing the major processes in the value chain in terms of these value drivers according to the benefit level. The paper highlights this framework in all process

linkages in the SC network prioritized according to the enterprises' desired benefit in terms of speed, cost, quality, and innovation or value addition. Adoption of best demonstrated practices for process efficiency by implementing one value driver or the other or combining them would lead to process specialization in terms of the four classified criteria viz. (i) cost efficiency, (iii) quality level, (iii) responsiveness or speed, and (iv) value addition.

Many textile and apparel enterprises, mainly in the low-cost production regions of the world have specialized in cost-efficient production processes and manufacturing techniques to be profitable in their business. Retailers and marketers in United States and Western Europe, like Wal-Mart, Kmart etc., dominating the global commodity chains through *high variety-high volume* products have positioned themselves to bring the lowest possible prices to its customers, driven by economies of scale from a vast base of nearly 21,000 suppliers. Brand retailers like H&M and JC Penney are also, predominantly, running leagile supply chains based on moderately high quality and medium-range cost model to generate business success. On the other hand, the luxury brands and haute couture like Louis Vuitton, Gucci and Burberry have built on their high brand identity through specialization in value adding processes for exclusive products. Value of such luxury brands have been built on intangible brand image and exquisite product quality. It is critical to identify the exact value driver for the exact process for mapping organizational success through process specialization.

6.2.3. Supply Chain Specialization

The product-process specialization is related to designing the supply chain and devising appropriate strategies to match the nature of demand for products (Fisher, 1997). Focus on the variety-volume combination of product characterization and its corresponding value drivers have led to identification of the right supply chain paradigm. Product strategy and lifecycle decisions are two critical elements influencing supply chain designs and specialization. For functional products Fisher (1997), characterized as *low variety-high volume* with low margins, the need to eliminate wastes, including time, is critical for leading efficient supply chains (Womack *et al*., 1996). The demand for specializing in cost reduction measures, level scheduling, minimizing wastes and inventory has been pivotal in improving business performance (Stratton *et al.*, 2003). This can be characterized into efforts to minimize costs and improve quality. Typical example of such a lean traditional apparel value chain is M&S based on extensive supplier network, run by the buying team with 'state of the art' logistics system to coordinate the warehouses and overseas manufacturing facilities. The stores' network is in majority owned by M&S to collaborate the shops, warehouses and offices through electronic data interchange (EDI) (INSEAD, 2002). M&S has been extremely efficient in controlling its supply chain through specialization in coordinating a lean value chain.

On the other hand, for innovative products, organizations must acquire the capability to react to volatile demand fluctuations considering *low volume-high variety* in the assortment. The high stock turn requirement caters the need for agility in operations to respond quickly to increasing pressure on lead time (Hiebelar *et al.*, 1998, Hewitt, 1999). It is required to sustain the extended enterprise in such volatile pressures by acting quick and adopt the best agile practices. Specialization through quick response (QR) has been leveraged by Zara as a key aspect of its speed-to-market strategy as a critical success factor (Kansupada *et al.*, 2008). However, it is quite rigid to view supply chains strictly as either lean or agile rather than promulgating the concept of differentiated supply chains (Van Hoek, 2000; Mason-Jones *et al.*, 2000; Naylor *et al.*, 1999) combining lean and agile approaches by decoupling agile

strategies and leanness. We determine the essentiality of specializing in a supply chain by, generally, being lean/leagile in producer driven value chains to maximize efficiency and agile in buyer driven chains dominated by the retailers and brands.

7. Competency Mapping and Organizational Success

A survey was conducted on Textile, Clothing and Fashion Enterprises in Sweden representing various levels of the Textile Global Complex as in Figure 2. A mailing list of nearly 200 TCF firms was developed by contacting TEKO (TEKO, n.d.) - the business and employers' organization for the Swedish textile and fashion companies - and searching through Europages directory. A convenience- and judgement- based non-probabilistic sampling techniques were combined for selecting the companies based on the following selection criteria: all the companies were Alla Bolag (public listed in Sweden), were common in both the lists and had a proper contact detail convenient for mailing survey. The questionnaire design method was chosen in an orderly and specific manner by conducting a pilot test with one of the case study companies. Usable responses were gathered from 25 respondents out of the 200 mailed ones by December, 2009 making a response rate of 12.5% which was quite justifiable for such wide-ranged exploratory research survey and subsequent validation of the matrix for organizational competency mapping (Figure 3). A testing is conducted by formulating a hypothesis as follows:

Hypothesis (H1): *Economically successful Swedish TCF firms innovate and/or specialize across the 3-DCE domain and Non-successful firms do not innovate and/or specialize across these competency matrix domains.*

The semi-structured questionnaire for the survey broadly focuses on the 3-DCE perspectives of product, process and supply chain; aimed to evaluate the positioning of the firms, in general, across the 3-DCE domains and relate it to their business success, reported in terms of increasing profit-ratio build-up in the last 5 years. The 5-step Likert scale representing 'very low'/'not important'/'not at all' to 'very high'/'critically important'/'completely' was transformed to a scale of 1 to 5. A scale number of one corresponds to the lowest value and the highest value corresponds to a value of five. Similarly, the dependent variable of organizational success, measured in terms of profit ratio (profit/turnover), from 'declining' to 'much better' was also transformed into the same scale.

A model has been constructed using statistical softwares, PHStat2 and Minitab (Version 16.0). The model construction uses the following variables:

- Z denotes organizational success; in terms of build-up of profit-ratio (2005-2009).
- X_1 denotes the product innovation characterized by brand value of the product (X_{11}), new product design (X_{12}), new model (X_{13}) or material (X_{14}), better functionality (X_{15}) and/or new product technology (X_{16}).
- X_2 denotes different classes of process innovation in the organization denoting (process management innovation (X_{21}), modification, redesigning or development of technology(X_{22}), equipment (X_{23}), or operation (X_{24}).
- X_3 denotes supply chain innovation averaged over the Likert ratings of SC innovation attributes; sourcing decision (X_{31}) make/buy decision (X_{32}) SC relationship decisions (X_{33}) and SC coordination (X_{34}).
- Y_1 is a dummy variable representing product specialization of the organization as follows: $Y_1 = 1$ if product specialization is positioned on the *variety-volume* scale as high variety-low volume, low variety-high volume, high variety-high volume,

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hybrid of any two or unique customized products; else 0.

- Y_2 is also a dummy variable representing process specialization characterized as follows: $Y_2 = 1$ if the organization is specialized in its engaged processes through higher value addition, more responsiveness, higher quality, more cost efficiency and/or more innovation; otherwise 0.
- Y_3 denotes supply chain specialization averaged over the Likert ratings of SC specialization characteristics of a lean, agile or leagile producer-/buyer-driven supply chain. They are classified as the basic characteristics of lean and agile supply chains (Fisher, 1997) as collaborative product development (Y_{31}), cost minimization (Y_{32}), quick response (Y_{33}), quality of service (Y_{34}), and flexibility & coordination (Y_{35}). The increasing consideration of sustainability has also been considered as an important attribute of supply chain specialization (Y_{36}).

Initially, the variance inflationary factor (VIF) for all the independent variables (X_1, X_2, and X3, Y_1, Y_2, and Y_3) are calculated to determine the collinearity of the variables. Table 1 show that all the variables are able to provide unique information regarding organizational success and the effects of the variables on success (Z) can be easily distinguished. Analysis of the firms with success measure 1-2 (declining or lower) yielded VIFs > 5, for X_3, Y_2, Y_3 (collinearity), thus neglecting these variables, from consideration, in the Best-Subsets regression model 2 (Table 3).

Table 1. Results for degree of collinearity of success (Z) to 3-DCE components of innovation (X) and specialization (Y)

Z	X_1 av.	X_2 av.	X_3 av.	Y_1	Y_2	Y_3 av.
VIF*	1.35	1.04	1.25	1.31	1.39	1.28
VIF**	2.31	2.42	5.09	8.31	3.52	7.47

* Calculated for all 25 respondents

** Calculated for 8 respondents showing declining/lower profit-ratio in last 5 years

The best-subsets approach is being used to evaluate all the possible multiple regression models for a given set of independent variables to determine the possible models for success. Table 2 show the positive results for the test at 95% confidence level and choosing the validity of only those models whose C_p statistics is less or equal to k+1 (k = number of parameters) (Berenson *et al*., 2009). The models listed as Model 1-7 in Table 2 represents all the considerations having minimum difference between the fitted regression model and the true model. An adjusted R^2 value ranging from 23-28 % shows the acceptance of several equally appropriate model (Model 1-7), to broadly relate success (Z) to different combinations of the 3-DCE attributes. The p-values of the F-tests of 0.03, 0.032, 0.045, 0.03, 0.048, 0.05 and 0.05 for Models 1-7 respectively suggest that there exists sufficient linear relationship between organizational success (in terms of profit-ratio build) and at least one of the 3-DCE components of the value chain (in each model) for (H_0: $\beta^2 = 0$; no linear relationship; H_A: $\beta^2 \neq 0$; sufficient linear relationship exists) as we reject H_0 (p-value of F-test < F_α= 0.05). Thus we argue that dynamic capability development by building across different combinations of product, process and supply chain attributes through the routines of innovation and/or specialization is a pillar/building block for achieving business success for many TCF organizations.

Table 2. Best Subsets regression model for Success (Z) to 3DCE components of innovation (X) and specialization (Y)*

Number	Variables	Model	Cp	k+1	R^2	Adjusted R^2	Standard Error (σ)
1	**3**	$X_1X_3Y_1$	3.79	4	0.34	0.25	1.35
2	**3**	$X_3Y_1Y_2$	3.95	4	0.34	0.24	1.36
3	**4**	$X_1X_2X_3Y_1$	4.81	5	0.37	0.25	1.35
4	**4**	$X_1X_3Y_1Y_2$	3.94	5	0.39	0.28	1.32
5	**5**	$X_1X_2X_3Y_1Y_2$	5.26	6	0.42	0.27	1.33
6	**5**	$X_1X_3Y_1Y_2Y_3$	5.69	6	0.41	0.25	1.35
7	**6**	$X_1X_2Y_1Y_2Y_3$	7	7	0.43	0.24	1.36

Confidence level for regression co-efficient is 95%
***** For all 25 respondents

An analysis for the enterprises showing consistent decline or lowering profit-ratio (economic performance), according to the survey, relates the mapping of the organizations across domains listed in Table 3.

Table 3. Best Subsets regression model for Success (Z) to 3DCE components of innovation (X) and specialization (Y)*

Number	Variables	Model	Cp	k+1	R^2	Adjusted R^2	Standard Error (σ)
1	**1**	X_1	0.82	2	0.31	0.19	0.46
2	**1**	X_2	1.91	2	0.15	0.01	0.51
3	**2**	X_1X_2	2.17	3	0.40	0.16	0.47
4	**2**	X_1Y_2	2.79	3	0.32	0.04	0.51
5	**3**	$X_1X_2Y_2$	4	4	0.43	-0.00	0.52

Confidence level for regression co-efficient is 95%
***** For respondents showing declining or lower profit-ratio build-up (2005-2009)

The F-Test to examine the overall relationship existing in the business model for the firms showing declining/lower profit-ratio (as in Table 3) suggested p-value of F-test of 0.15, 0.33, 0.27, 0.55, and 0.55 for models 1-5 respectively. Considering the hypothesis as (H_0: $\beta^2 = 0$; no linear relationship; H_A: $\beta^2 \neq 0$; sufficient linear relationship exists) we do not reject H_0 (α= 0.05) as p-values of F-tests > F_α. Moreover, a considerably low value of adjusted R^2 in all cases sufficiently questions the acceptance of the generated models to represent business portfolio mapping of the organizations showing consistent decline/lower profits. It is argued that the business models developed for representing success does not hold true for the organizations showing signs of declining/lower profit margin.

A stepwise regression analysis of the data reveals that X_1, X_3 and Y_1 i.e., product innovation, supply chain innovation and product specialization to be the key requirements for being successful. Matching the different degree of product innovations to the extent of aligning the supply chain architecture, accordingly, is essential for successful businesses along with competence in exploiting the capabilities of producing the exact product variety.

8. Discussion and Analysis

Interpreting the results of the business models as in Table 2, organizational success can be interpreted along the basis of the matrix as in Figure 5.

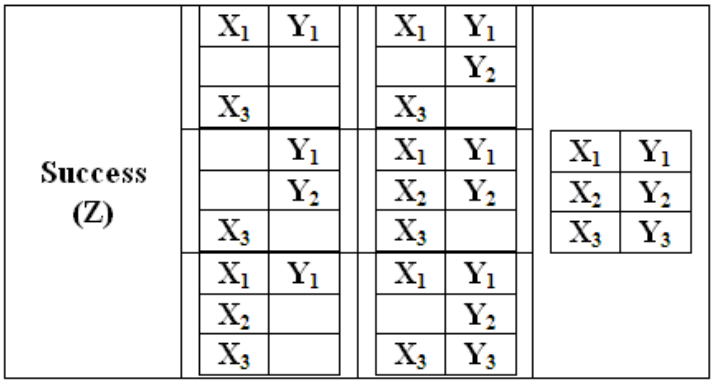

Figure 5. Representation of success models along the organizational competency matrix

It is evident that efficient and innovative firms are able to overtake their competitors to yearn for long-term organizational success (Sheth *et al*., 2002). Right product innovation and the right supply chain to suit the requirements have been very essential for organizations at various levels of the Global Textile Complex to gain long-term success (Fisher, 1997). Interpretation of Figure 5 suggests that there is no unique formula for success based on individual organizational capabilities, resources, circumstances and opportunities. Yet it can be argued that building blocks and critical paths/routines for achieving business success for these organizations can be mapped along the 3-DCE domains achieved through innovation in products and conforming supply chains and then specializing in such product lines. Nearly 80% of the respondent firms either showed considerable product innovation or supply chain innovation or sufficient product *variety-volume* development competence, but only 50% of them demonstrated them simultaneously, with only 36% of them recording growing profit-ratio build-up.

The 2nd model suggested that success for the firms was depended on specializing in product lines (*high variety-low volume* to *low variety-high volume*) and matching complementary process competencies to support it. The firms analyzed to have built their capability in developing *low variety-high volume* products mainly concentrated on cost-efficient processes with responsive distribution system relying on high quality. They sufficiently involved in innovating supply chain either by determining sourcing and make/buy decisions or through SC partnership and coordination. Among two-third of the firms showing their business portfolio mapped across product and process specialization, around 50% showed sufficient supply chain innovation criteria also. The enterprises specializing through *high variety-low volume* products mainly concentrated on high quality and value-added processes with sufficient focus on innovating compliable SC coordination systems and determining supplier base for apposite make/buy decisions. 16% of the firms were mapped with similar business models to cater success. Companies concentrating on unique products had to emphasize process specialization through more cost efficiency and innovations while the full-line generalists with large product base of *high variety-high volume* products concentrated on economies of scale and attracted consumers through cost minimization, much like the business model of Wal-Mart.

The 3rd model represents business model for the consistent innovators, like Gore-Tex or DuPont, relying mostly on innovation along products and adjusting processes and supply chains, accordingly. These firms dominate

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their own value chain by innovating through new- design, models and product technology averaging quite high showing routines of completely revamping their business models and products and redesigning the processes like product development and marketing to conform to the requirements. These firms also reported considerably higher process innovation, 3.7 on 5-point likert scale compared to the average value for all the respondents (2.21 out of 5). Along the lines of Fisher (1997) this also catered developing supply chain relationship and coordination. It was evident that firms following this business model reported higher supply chain innovation as well. Product specialization based on positioning through variety-volume is also essential to enhance the level of fit between the innovative product offerings and specializing in it.

Business model of organizations spanned over product and supply chain innovations (X_1, X_3) and product and process specializations (Y_1, Y_2) are anticipated to be quite similar to those following model 1 for driving higher economic performance considering process specialization a prerequisite for matching to the product *volume-variety* characteristics as opined by Hayes *et al.* (1979a, 1979b, 1984). 36% of the all responding firms - successful by following such business model owe to above-average product innovation (3.77) and supply chain innovation (3.86). Considering the success pattern of organizations fitting model 4, many companies had lower degrees of product innovation related to just modifications in design to change product lines, specially the medium-sized retailers and brands or some manufacturers of textile products along the Global Complex. Their considerable level of SC innovation (3.78) through specific sourcing and make/buy decisions is to match the product characteristics and business portfolio. Product and process specialization is also inherent to such model to be efficient. Small- and medium- sized retailers have to gain sufficient margin through proliferation of its product line controlling the value-adding processes while the manufacturers strive for more cost minimization through economies of scale.

Business Model 5 is quite similar to Model 3 but emphasizes simultaneous consideration of process capability development as well, for efficient operations through higher value addition, responsiveness, higher quality, or cost efficiency. This is instrumental in complementing the business success Model 3 striving further for higher process differentiation and efficiency needed to support differentiated products, services and supply chain characteristics. Models 6 and 7 mostly represent business models for organizations showing holistic capability development through simultaneous considerations of product, process and supply chain designing by innovating and also exploiting existing capabilities. Success to such organizations are brought through relentless innovations and then sufficiently gaining competitive advantage through specialization in its own business portfolio.

It was quite evident that the 7 business models discussed above can deconstruct organizational business portfolios of Swedish TCF firms along the building blocks of 3-DCE attributes along the critical paths of innovation and specialization. It has been argued that it is instrumental for the firms to generate profit and hence long-standing economic viability thus long-term success by simultaneous and concurrent considerations of designing across these 3-DCE domains.

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9. Case Studies

In the paper, exploratory researches based on studying the fit of real-business portfolios to the distinctive competency framework of two companies has been conducted to strengthen the validity of the concept. However, it should be noted that the case studies are unique and are not longitudinal over time, meaning that the drivers of success/failure can change depending on the changing business climate. In-depth interviews were carried out with the

company key persons representing the senior management followed by proper documentation and study of a number of internal documents and reports.

9.1 Case 1: Alpha

Alpha is a Swedish high-performance woven fabric manufacturer with its clients as suppliers to the automotive industry and sportswear producers. The company carries out nearly 95% of its production in-house in 2 owned production plants resulting in a complete control of its fully-integrated production process (weaving-dyeing-finishing-coating-quality control). The high-technology driven product portfolio (fabrics) is mostly characterized by high quality and new product developments with optimized developmental clock speed from 2-36 months depending on the innovation intensity. Low levels of product modifications are quite continuously done, however, the high-tech product designing and development evolves in every 1-3 years. *Alpha* has shown moderate profit margin (around ~16% in 2009, and ~5% in 2010).

In the extended value chain, *Alpha* operates closely with its suppliers and customers providing technical fabrics with high-end innovation and functionalities. Upstream it conducts its business by sourcing directly from the European suppliers without seeking the help of intermediary trading agents (except for its supplier from the far-east), however on the buyer-side *Alpha* maintains a sales network through agents working particularly for its business with small and medium customers. It prefers to work directly with its big customers, without any intermediaries. From the perspectives of transnationality (Dicken, 2003), *Alpha* neither has international offices or subcontracted producers nor owned overseas operations but it works closely with its suppliers and customers by jointly sharing knowledge, skills and creativity to develop high-grade fabrics. For its R&D purposes, the company engages into process coordination and cooperation with shared decision making, normally having scheduled meetings with suppliers, twice annually, along with systemic upgrading of quality for future development. In a similar way, *Alpha* exchanges its technical know-how with the suppliers, often, taking up joint R&D efforts and investments for NPD. It engages in modifying or upgrading the existing technologies and equipments quite frequently, within less than a year and also redesigning operations and related management processes like line management and vendor management to align the processes to the demands of its high-tech products and supply chain. Being in the high-end segment of the market *Alpha's* order winners/value drivers can be categorized as quality and innovation rather than cost.

Alpha is familiar to its supplier's processes, their capacity and their turn-key suppliers but considering its fairly selected supplier base of big firms it seldom associates itself to their capability development. Sharing of information with the suppliers is constant but not on a real-time. In some cases, along the length of the value chain *Alpha*, with its suppliers and customers maintain a fairly integrated relationship but not under the same ownership giving it a quasi-hierarchical relationship though one of the parties usually is dominant and governs the chain (mostly the retailer). However, *Alpha* is fairly independent to choose its own suppliers and customers and in a way determines the design of its supply chain on its own. However, inspite of being fairly independent in determining its own supply chain partners and hence its structure, *Alpha* has a generic lean production-driven value chain leveraging multiple strategies to stay competitive and innovative. Driving a fairly high-tech value chain, innovation and productivity are on the fore front of its strategic build-up trying to be better and smarter in investing '*less for more*'. This calls for sufficient lean strategy by the company by relying on forecasts of raw or semi-ready materials in stock for its *low variety-high volume* products. Preferentially

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it employs a manufacturing strategy *deliver to order* or *dye to order*, accordingly. Considering inventory management by the company itself, this is a key issue. Till recently, the company has been instrumental in making structural deals in making acquisition of its close competitors in the Scandinavian market. Protection of its technology has been quite essential in developing the company as a brand name to its customers based on quality, innovation and long-term relationship.

Alpha being independent in capacity and knowledge in its production has proven to follow technological leadership strategies (according to Figure 1) with limited delocalization. This eventually illustrates *Alpha*'s distinctive competence across the domains of innovation of high-tech products (X_1) and supply chain architecture (X_3) and specialization through production of *low variety-high volume* products (Y_1) through quality manufacturing competence (Y_2) and an efficient lean/leagile supply chain (Y_3) as shown in Figure 6. This highlights the company management's consideration of success factors across the organizational business mapping matrix based on dynamic capability development by combining innovation and specialization.

INNOVATION	***SPECIALIZATION***
High-tech product development (High Priority)	***Low variety-high volume (High Priority)***
Process modifications (Low Priority)	***Value-added product development (High Priority)*** ***High quality manufacturing (High Priority)*** *Value-added marketing (Moderate Priority)*
One-of-kind SC structure (High Priority) ***Fairly unique make-buy decision (High Priority)*** ***Collaboration (High Priority)***	*Lean/leagile production (Moderate Priority)*

Figure 6. Organization business competence mapping of Alpha

9.2. Case 2: Enterprise Beta

Another company *Beta* (a Swedish e-retailer) having its own production facilities in Asia (as a sister concern) is fairly integrated in the value chain engaged in sourcing, designing, manufacturing, marketing and e-retailing on its own to enhance its integrated e-retail business. The company operates as an apparel manufacturer through its own international production facility in some low-cost Asian base, considering tailor-made customized shirts as its main product range. Its customer selections are realized during the design phase, before the shirt enters the production line. This ensures higher degrees of functionality and design adjustments possible. High brand image, design and model are inherent characteristics of *Beta's* product line. The company utilizes a strategy with high degree of customization, but is also striving to gain scale advantages of a high volume production strategy. The level of adaptive and collaborative customization (Pine *et al*., 1999) for *Beta* facilitates sufficient collaborative product development efforts with a fast clock speed of product evolution in terms of design, model and NPD, averaging around 2 months, in general.

Beta has a fairly integrated production process owned by it which has undergone sufficient shift from employing hand-stitched traditional tailoring techniques to a line system divided into 8-step production operations. Recently, the line system was modified into stitching teams forming assembly lines equipped with minimal

workforce to increase the process efficiency, better workflow management and minimize cost. The company also maintains a fairly large and reliable base of fabric and trim suppliers. *Beta* is a transnational organization with a quasi-hierarchical relationship with its fabric suppliers (integrated relationship but not under the same ownership) and it is sufficiently involved in joint product development with customers. The company chooses its suppliers base by considering the production capacities, technological know-how and manufacturing specialization of its partners. However, the company has an effective communication system ensuring organizational management including tasks like web development, order receipt & inquiry management, product development, and process management carried out under the head-office. Production process for *Beta* emphasizes product quality characteristics and code of conduct issues to be of prime importance. Two quality checking sections are incorporated in *Beta's* process viz. fabric control and final quality control, where individual shirt is thoroughly inspected before final packing. Efficient and high-quality unit-batch processes ensure production lead time of just 2 days from greige fabric to final dispatch of product through third-party logistics. A distribution time of around 1-4 weeks is common for its products, directly to the distribution centre. This makes *Beta* a dominator in its own supply chain controlling the most of it and ensuring a very wide arc of integration. It has a fairly agile demand-driven value chain leveraging multiple strategies to stay competitive and specialized. Responsiveness is the key word in *Beta's* strategic build-up striving for success through quick response, collaborative product customization and quality production processes. Maintaining strategic inventory sufficiently upstream as greige fabric *Beta* preferentially employs *package to order* or *make to order* strategies, accordingly. This caters tasks for configuring the supply chain capabilities and design actively.

Beta being successful in its responsiveness value chain of made-to-measure product line has proven to follow lateral strategies (according to Figure 1) with high customer involvement. This deconstructs *Beta*'s distinctive competencies across the domains of innovation in own production-controlled supply chain (X_3) and customized unique products (Y_1) through responsive and quality manufacturing competence (Y_2) for specialization into an leagile supply chain. All these have sufficiently resulted in an increase in profit margin of the company from just 1% in 2007 to ~12% in 2009. Figure 7 shows *Beta*'s organizational success along the business mapping matrix as shown in.

INNOVATION	***SPECIALIZATION***
Unique designs & models (Moderate Priority)	***Unique Customized Products (High Priority)***
Efficient workflow mgmt. (Low Priority)	*Responsive manufacturing (Moderate Priority)* ***Quick Response (High Priority)*** *Value-added marketing (Moderate Priority)*
Fairly integrated SC structure (High Priority) ***Information sharing (High Priority)***	*Leagile buyer-driven (Priority)*

Figure 7. Organization business competence mapping of Beta

10. Conclusion & Further Work

The textile/clothing pipeline is in itself complex due to shorter product life cycles, staggering variations, overwhelming effects of fashion and unique pipeline structures; affected massively by globalization. While

some organizations prosper in such a global perspective, many failed to manage and disappeared totally. Why have such developments taken place and how did some firms manage to be successful, while others collapsed?

It is apparent that though organizations may have/had myriads of competitive factors to drive success, still there is some underlying commonality to their business success based on a broader – holistic, adaptive, targeted and synergistic – approach. It is indeed critical to understand these performance dimensions and dynamic capabilities, deconstructed to differentiated recipes of success factors for developing winning strategies. The attempt to relate organizational business success for any company in the Global Textile Complex, in the paper, according to their distinctive competencies – innovation and/or specialization – based on a three-dimensional view of product, process and supply chain is exemplary and critical to understand the routine/pathway to be followed by building the fundamental blocks for driving successful performance. The analytical part of the work concludes through a model building, relating business success to the realms of innovation and specialization. 18 out of the 25 surveyed companies that recorded a build-up in profit-ratio in the last 5 years, had their success deconstructed across simultaneous and concurrent considerations of product, process and supply chain attributes of the 3-DCE domain. It is evident that more efficient and innovative firms are able to overtake their competitors to yearn for long-term organizational success. A failure to understand the organizational business portfolio, deconstructed in terms of the 3-DCE attributes of innovation and specialization can essentially lead to enterprises running out of long-term success. Such classification locates the organizations correctly in the matrix to determine their current strategic position and the required adjustment strategies to hold success in the future. The regression analysis reveals that product innovation, supply chain innovation and product specialization are the most important requirements for internal holistic alignment for being successful.

For the 7 firms recording a decrease/decline in financial performance transcended into organizational failure were not aligned internally along the 3-DCE domains. Moreover, the case studies highlighted how business mapping of organizations help to prioritize organizational activities, locate the strengths and characterize them along product, process and supply chain attributes (3-DCE) to develop into critical factors for success.

The overall reliability of the work could have been further improved by choosing a larger sample size of respondents for proving the claim - relating economic success to innovation and/or specialization. However, considering the exploratory nature of devising a matrix - the research seems reasonably pertinent with a detailed content analysis, statistical analysis followed by in-depth case analysis for triangulation. of making a piloting of more enterprises and their extended value chains to corroborate each class identified in the matrix for successful performance. Scopes for further related research lies in conducting extensive survey of the enterprises to relate their success or failure in terms of profit ratios and other competitive priorities to achievements or drawbacks in the domains of designing products, processes, and supply chains to devise success factors, and analyze them in diverse market scenarios.

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