Late Globalization and Evolution, Episodes and Epochs of Industries

Romeo V. Turcan
Aalborg University
Department of Business and Management
rvt@business.aau.dk

Nikhilesh Dholakia
University of Rhode Island
College of Business Administration
nikdholakia@gmail.com

Behnam Boujarzadeh
Aalborg University
Department of Business and Management
 behnam@business.aau.dk

Abstract

While the empirical focus of this paper is the Danish Textile and Fashion Industry (DTFI) – specifically the episodes and epochs in the emergence and evolution of DTFI, in essence the micro and macro time-slices – the theoretical intent is wider. We aim to explore the conceptual terrain of what we term “late globalization”, a terrain that has temporal and spatial aspects along with many other dimensions. DTFI as a late globalizer with its specific pattern, with ups and downs as well as innovations and adaptations, provides a specific window into late globalization processes; and sets a stage for further exploration of the late globalization phenomenon. To get to the empirical case study, we follow a macro-conceptual to a micro-empirical path. We discuss the multidisciplinary and multifaceted field of late globalization and employing the historic-analytic approach to study DTFI we draw out very specific, empirically derived, conceptual themes about the patterns of global interactions that characterized the evolutionary trajectory of DTFI. We return to a final macro-conceptual section on late globalization where the particular DTFI case study advances the knowledge register only slightly; and we end with some suggested future research directions for late globalization.

Jelcodes:F43,L67
Late Globalization and Evolution, Episodes and Epochs of Industries

1. Introduction

While the empirical focus of this paper is the Danish Textile and Fashion Industry (DTFI) – specifically the episodes and epochs in the emergence and evolution of DTFI, in essence the micro and macro time-slices – the theoretical intent is wider. We want to explore the conceptual terrain of what we term “late globalization”, a terrain that has temporal and spatial aspects along with many other dimensions. The Danish Textile and Fashion Industry (DTFI) is a late globalizer. Its specific pattern, with ups and downs as well as innovations and adaptations, provides a specific window into late globalization processes; and sets a stage for further exploration of the late globalization phenomenon.

To get to the empirical case study, we follow a macro-conceptual to a micro-empirical path. The next section discusses the multidisciplinary and multifaceted field of late globalization. Then, since DTFI is a specific case of late globalization, we have a section on the historic-analytic approach that we employed to study DTFI. We then draw out very specific, empirically derived, conceptual themes about the patterns of global interactions that characterized the evolutionary trajectory of DTFI. We do return to a final macro-conceptual section on late globalization where the particular DTFI case study advances the knowledge register only slightly; and we end with some suggested future research directions for late globalization.

2. Late globalization: Conceptual terrain

Late globalization is a relatively new phenomenon. While not using the term “late globalization” explicitly, Appadurai (1990), recognizing the five cross-national interconnecting and intermingling “scapes”, namely ethnoscapes, technoscapes, finanscapes, mediascapes, and ideoscapes, provided a first major window on what late globalization (in the “lifecycle of globalization” sense) looks and feels
like. Literary theorist Moraru (2011) has gone a step beyond, and introduced the term “late globalization”, in a lifecycle-of-globalization sense.

In contrast to economic and entrepreneurship theorists, to culture theorists, “globalization” has been happening for a very long time, even a couple of millennia, if we take the early perilous journeys of Silk Road and similar merchant-adventurers, traveling perilous routes by long caravans or in very early sailing boats. Indeed, from the culture theory perspective, globalization has gone through a long life cycle – incipience in the early adventure-explorer days, growth in the long European phase of first merchant and later gunboat explorers, and a maturity phase that lasted through much of the 20th century, with American ascendance contested to some extend by Japan and Germany. In this sense, globalization is now likely in a late maturity phase, with the intensity of cultural traffic at an all-time high. Such long-historical views, however, are of limited utility when nations, sectors, industries, companies, specific individual or institutional actors are grappling with practical aspects of late globalization affecting their situations, fortunes, and prospects. The DTFI case, discussed later, shows the much greater complexity of the actual late-globalizing aspects when the focus is on a country and a specific industrial sector.

There is clearly a need to push the cultural lifecycle-of-globalization concept(s) of late globalization in several other disciplinary dimensions – economic, political, sociological and more. This paper takes a small step in this respect. It develops fine-grained, substantive details of the DTFI case that would contribute towards the development of a theory (or theories) of late globalization.

2.1 Late Globalization: Multiple Senses

The “late globalization” angle is new (Turcan, 2016), but it has to be very developed carefully. The act of being late in whatever aspect of globalization – whether it is deliberate, serendipitous, or for other reasons – often means many opportunities were grabbed by the early globalizers and are thus
became scarce or were closed for the late globalizer. There may be benefits to lateness also – the timing of a late globalizer may correspond so well with some external events that the late globalizer can grab a very large share of opportunities.

The qualifiers “early-late” could be applied to countries or nations, functions or aspects of industries or sectors, as well as companies. The term “late” may refer to the timing of various steps/forms of internationalization and globalization. Overall, the notion “late” produces a number of issues or questions. “Late” by whose standard or definition? In the context of DTII, e.g., is the nature of “lateness” about (a) Danish firms in general? (b) Danish firms in textiles? (c) Scandinavian firms in textiles? (d) British firms in textiles? or (e) American firms in textiles? Or, switching tracks, “late” on what dimension: (a) manufacturing? (b) supply chain development? (c) market- or resource-seeking? International angles bring more “Late”-“Early” combinations or intersections: (a) Denmark late globalizer but China early globalizer; (b) Denmark late globalizer in textiles and Belarus also late globalizer (as supply source); (c) USA early globalizer in textiles and also China early globalizer (as supply base). “Late” at what level of analysis: country (Denmark)?, industry (textiles)?, company (Kvadrat)?, process (manufacturing, R&D, marketing)?, strategic alliances (value chains, value locations, intellectual property issues)?

From the above, it is evident that there are several “stage-setting contexts” or levels of analysis which could shed light on the phenomenon of late globalization, including its causes and effects: meta-theoretical level, macro or nation-state level, meso level and micro level. At the micro level, an enduring question remains: how does late globalization affect massively complex human behavior? At meta-theoretical level, it is useful to understand the distinction between globalization and internationalization. Are they distinct, separate phenomena or two sides of the same coin (capitalism)? Globalization is often an outside-in process: strong external forces (generally a giant global corporation) motivate a supplier firm to go international to support the global giant’s
operations and strategic goals. Internationalization, by contrast, is inside-out: forces inside the nation motivate (sometimes compel) a firm to go to foreign markets.

As Giddens (1991) maintains, globalization is “‘what is out there’, remote and far away”, but at the same time “‘in here’ phenomenon”, influencing all aspects of our lives. Giddens suggests that globalization ‘pushes downwards’, creating new pressures for local autonomy; ‘pulls away’ power or influence from local communities and nations into the global arena, and ‘squeezes sideways’, creating new economic and cultural zones within and across nations. In this, Giddens (2002) refers to Daniel Bell who says that “the nation becomes not only too small to solve the big problems, but also too large to solve the small ones”.

At macro, nation-state level, the role of timing (being early or late) in terms of globalizing is an interesting area of inquiry. What are the benefits or downsides of late (early) globalizing? Nations like UK, France, USA and Japan globalized early, though Japan clearly much later than others. In the post-World War II period internationalization of firms from the nations in the Soviet bloc was slow, as import-substituting industrialization was a key goal of developing nations, and globalization practically non-existent for many decades. Comparing China and India, China started these processes in 1971 and was an ‘early globalizer’ compared to India, a ‘late globalizer’ that opened the doors to outside-in forces and processes only in 1991. In this context, it might not be so much about timing as about whether to globalize or not in the first place? Should nations oppose globalizing and opt for protectionism, or open up, embrace globalization and integrate fully into global economy? Partly, the answers to these questions would depend on whether globalization is or is perceived to be a negative or positive phenomenon. Indeed, as Anthony Giddens (2002) warns, globalization “…is by no means wholly benign in its consequences”.

4
The above presupposes some sort of conscious (policy) decision about globalizing or not globalizing. What about being inadvertently or unintentionally late globalizer or not globalizing at all (despite a policy discourse that states the opposite)? In late 2008 and early 2009, as the financial crisis was unfolding, the relatively insular Republic of Moldova, which at the time of crisis was considered one of the poorest countries in the European Union, got ranked as the fifth most stable economy in the world (Piggott, 2009), not much affected (compared to other nations) by global economic and financial crisis. Invulnerability to the global economic and financial crisis came from its non-globalized economy. Moldova’s primitive financial system, low level of outstanding credit, and agricultural rather industry based economy made Moldova less susceptible to the global financial and economic crisis.

At meso level, the impact of late globalization on industries and sectors is yet to be well understood. As an outside-in phenomenon, how has late globalization driven and still drives the fragmentation of value chains within national borders? What are the effects of globalization on organizations and industries value chains? This level also offers an opportunity to explore the interplay between globalization and internationalization. For example, local small-and-medium enterprises or SMEs become captive to multinational enterprises and eventually follow the multinational enterprises or MNEs abroad, abandoning the national markets completely. Being constantly driven by economy of scale and scope, these MNEs reconfigure their own value chains, especially in times of crises. Some of the first victims of such reconfigurations are SMEs that de-internationalize as a result, going back home. Will their sectors have survived and, if yes, will there be room for the returning firm? SMEs become victims of globalization, de-internationalization or withdrawal from international markets. In recent years, MNEs have been involved in back-shoring – reversing previous off-shoring by bringing manufacturing back home. Practitioners and policymakers acknowledge the relevance of back-shoring for MNEs and international trade policies (UNCTAD, 2013). Growing empirical data adds to the relevance of this phenomenon. For example, in Germany, 400 to 700 firms per year perform
back-shoring activities (Bals, 2015). Despite compelling empirical evidence of de-internationalization, including back-shoring, academic research lags behind.

Furthermore, at meso level, context indeed matters. The role of context and institutions in globalization era needs more research by altering levels and units of analysis. For example, focusing solely on how MNEs adapt to or are affected by international or target country contexts limits our contemporary understanding of globalization and internationalization and their effects. Investigating different forms of organizing or different organizations may generate interesting, sometimes contradictory findings. Consider universities, which are almost always non-profit entities. Compared to MNEs, universities are late globalizers. Many major universities have gone global but an increasing number of internationally renowned universities have also recently started to withdraw from emerging or developing international countries. The primary reason for such de-internationalization is the incompatibility between institutional university autonomy that defines a modern university and the oft-heavy-handed context in the target foreign nations. Unwillingness to compromise on university freedom and autonomy makes advanced internationalization of universities to emerging or developing countries – campus building, off-shoring – not only impossible, but also unethical. Such contradictory findings have an impact not only on internationalization and globalization policies and practices, but also question the explanatory power of extant organization and international business theories and models.

2.2 Industries Emerging and Evolving

How industries emerge and evolve, particularly in a very global world, is an enduring question that has received scant attention in academic research and needs to be further explored and studied. We emphasize ‘and’: traditionally the emergence of industries and evolution of industries have been studied independently from one another.
Van de Ven and Garud (1989) and Aldrich and Fiol (1994) made one of the first attempts to conceptualize the emergence of new industries. Van de Ven and Garud (1989) identify two levels at which the emergence of an industry could be studied: individual firm or entrepreneur level, and aggregate, system level. Van de Ven and Garud (1989) suggest exploring the motivations, purposeful intentions and business ideas of entrepreneurs and argue that the emergence of a new industry is the result of ‘...cumulative achievements of a new "community" of symbiotically related firms and actors who, through individual and collective action, invest resources in and transform a technological invention into a commercially viable business’ (p. 200). To the above, Turcan and Fraser (2016) argue that the initial catalyst is a new venture that is the seed for the birth of the new industry and conjecture that ‘unless at least one new venture achieves legitimacy threshold in a new industry there is no possibility for that industry to become institutionalized’ (p. 81).

Aldrich and Fiol (1994) extend Van de Ven and Garud’s model suggesting that new ventures and new industries lack cognitive and socio-political legitimacy, defined respectively as knowledge about the new activity and what is needed to succeed in an industry, and as the value placed on the new activity by cultural norms and political authorities. Their model, however, does not capture the process of (co)-emergence and (co)-legitimation of new venture and new industry, and assumes the presence of emerging competition as well as of sophisticated institutional context – these gaps remain in the literature (Turcan and Fraser, 2016).

Hannan and Freeman (1977) were among the first who pioneered the study of the evolution of industries form the population-ecology perspective advancing a population-ecology theory of birth, survival, and death of organizations. According to Hannan and Freeman (1977; 1993), a set of general processes affect the rate of organizational population: competition within and between population for capital, members, and other limited resources; legitimation; aging, in the case of
mortality; and environmental abundance and constraints. At this level, the population and not the individual firm or individual entrepreneur is the unit of analysis. That is, the population-ecology theory treats organizations as black boxes, closed to inspection of their inner workings (Bygrave and Hofer, 1991). Moreover, its probabilistic predictive power for populations has never been proven (Bygrave, 1993).

The extant research and policy papers on the evolution of Danish Textile and Fashion Industry (DTFI) focus mainly on the impact of labour and employment (Olsen et al., 2004), industrial relations (Christensen, 2010), location (EMCC, 2008), strategic marketing and current trends (Pedersen, 2008) and value chain strategies (Jensen and Poulsen, 2013) on growth, and changes in DTFI as well as on key decisions related for example to shifting or relocating production or switching to mass-production of fashion clothing or enacting protectionism or de-regulation. In this paper we build on these studies by conducting a systematic, fine-grained analysis of emergence and evolution of DTFI aiming to contribute to a better understanding of emergence and evolution of industries.

3. DTFI Case: Research approach, basic findings

To investigate the episodes and epochs in the emergence and evolution of DTFI we collected historical unobtrusive measures between 1945 and 2015 in the form of running records such as mass media and government records and episodic and private records such as sales, industrial and institutional records (Webb et al., 2000). We consulted a number of sources such as Business History Yearbooks, Industry case studies, National statistics, Global Association databases, Institutional reports, Private company reports and industry online news, yielding approximately 450 pages of unobtrusive data. We employed NVivo software package to code, memo, analyze, and interpret the data (Appendix 1).
We identified three frames of reference to accurately code, classify and analyze the data: (1) macro, meso and micro levels: global, country, industry, company, process and strategy; (2) context level: DTFI’s size, mission, location, knowledge, growth and structure; and (3) time level: evolution, epochs and episodes. We employed events listing, critical events, and case dynamics matrixes as well as causal mapping (Miles and Huberman, 1994) to explore the data, especially explore what led to what, when, and why. Using these tools helped us map the chronological flow of critical events and turning points, identify main institutional players who enacted various changes in DTFI and in the textile sector internationally, understand how the quality of their decisions impacted the evolution of the industry, and explore the consequences or effects on DTFI evolution and metamorphoses. Appendix 2 provides a summary of major critical events in the evolution of DTFI and Appendix 3 maps causal links between various frames of reference and levels of analysis across and within evolution periods. The emerging findings of the effects of late globalization on evolution and metamorphoses of DTFI are summarized in Table 1.

[Table 1 about here]

We borrow the MNE international evolution framework from Kutschker et al. (1997) to examine the evolution of DTFI; it consists of three ‘Es’: evolution, episodes and epochs. Our data analysis points to four epochs and six episodes that DTFI went through between 1945 and 2015 (Figure 1). The emerged epochs are: Changing production type; Resisting relocating production; Accelerated globalization; Focusing on e-commerce. The emerged episodes are: Abolishing protectionism; In-house design; Change from within; Breaking-up global value chains; Strategic outsourcing; Acquisition of global R&Ds and e-shops.

[Figure 1 about here]
Industry evolution represents “small variations” (Kutschker et al., 1997, p. 105) in macro, meso and micro levels of the industry over time. Industry episodes mark critical events or turning points in the life of the industry. A critical event is an event that deviates significantly, either positively or negatively, from what is normal or expected (Edvardsson, 1992). A turning point refers to two points in time, i.e., for a turning point to exist, there should be a passage of sufficient time between the two points, making sure that the direction of the course (trajectory) has been changed either in direction or in nature (Abbott, 2006). According to Abbott (2006), a turning point is also a process that involves a course correction: it redirects the path, and requires certain strategies and choices. Industry epochs “...are characterized by a specific pattern and an underlying idea which dominates the stream of ...activities for a certain period” (Kutschker et al., 1997, p. 106).

To conduct further in-depth analysis of each episode, we employ radar charts to display and discuss the observations of the industry variables: size, mission, location, knowledge, growth and structure (Figure 2). Size represents number of companies and number of workers in the industry. Mission indicates herein the primary purpose and focus of the industry. Location denotes relocating decisions mainly of the production. Knowledge represents knowledge accumulation and sophistication. Growth indicates industry revenue. Structure signifies institutional – regulatory, normative and cognitive – structural changes of the industry. The degree of change for a specific variable represents the effects of critical effects, turning points and relative decisions on that variable within each episode. Each chart displays a degree of change for a variable: the farther away a variable is from the centre of a radar chart, the higher is the degree of change of that variable.

[Figure 2 about here]
4. DTFI Case: Detailed findings and discussion

4.1 Epoch I: Changing Production Type

The post-war economic optimism contributed to the transformation of textile and clothing industry worldwide. Fashion culture started to re-emerge in the form of a global demand for “ready-to-wear” clothing. To meet this demand for “ready-to-wear” clothing, textile and clothing companies had to rethink their ways of production and manufacturing, as well as acquire new knowledge of fashion design. Data suggest that protectionism dominated the course of activities and decisions during this period. The dilemma was whether to reinforce or abolish protectionism.

4.1.1 Episode 1: Abolishing Protectionism

Danish Government abolished any protectionism to encourage demand-driven production and exporting of clothing products. Abolishing protectionism had an adverse effect on DTFI and its companies. On one side, abolishing protectionism made local companies vulnerable to global free trade competition. On the other, local companies not only were not ready to cope with international and global competitors, they were inefficient and at time resistant or reluctant to respond to new fashion trends and new challenges and requirements of international markets. Globalization trends indeed were forcing the sector to consider changing its mission from ‘labour-intensive mass-production’ to ‘demand-driven production’ and becoming more knowledge-intensive sector.

Embracing ‘demand-driven production’ was a trade-off between sacrificing the size of the sector and staying flexible against global competitors. This shift in the mission of the sector also demanded new professions from a local labour market: not just production-line workers, but also design specialists. Towards the end of this period, DTFI could be characterized as downsized sector with demand-driven mission that was in need for fashion design knowledge. Data suggest that there was disconnect or incongruity between governmental policies and sector companies’ capabilities. This led to significant shrinkage of DTFI; those companies that continued their ‘going concern’ were preoccupied mainly
with their survival trying to export on demand. Toward the end of this epoch, overall performance (growth) of the sector increased substantially.

4.2 Epoch II: Resisting Relocating Production

This period is characterized by continuous shrinkage of DTFI. The reason for this mainly is twofold. On one side, globalization trends such as low-cost-labour arbitrage, exposure to global free trade and global economic recession made textile and clothing sectors worldwide remarkably smaller. On the other, Danish Government enacted protectionism policy in an attempt to mitigate the trading threats from new, stronger competitor from Southern European countries, like Spain and Portugal. Data suggest that resistance to relocate production, notwithstanding global trends, dominated the course of activities and decisions during this period. Data analysis singles out two episodes that are related to this epoch. One episode reflects survival by shrinkage and in-house design; the other episode is about failure of protectionism and change from within.

4.2.1 Episode 2: In-house Design

Danish Government protectionism policy was coupled with a sector-wide mission to keep the whole value-chain in-house, in the country, mainly to maintain the level of employment. The decision to keep companies’ value-chains in-house was taken in spite of the fact that global economic recession changed public consumption toward cheaper clothing and that international competitors started relocating their production to low-cost countries. The intention was to balance this decision with manipulation of imports of clothing products from low-cost countries.

Such protectionism policy and the ‘advice’ to keep the whole value-chain in-house, however, created tensions among local companies and eventually led to the decrease of sector performance. Those companies that follow the policy and the advice had to downsize by laying off employees, whereas some even ceased trading – hence contributing further to the shrinkage of DTFI. Others decided to
go against the established regulations and norms and commenced partial re-location of low-value parts of their value chains.

In fact, this resistance sparked the emergence of Danish MNEs in DTFI along the emergence of MNEs (initially) from Southern Europe. Another outcome of these tensions was that Danish companies started appreciating the idea of breaking down own value chains and creating instead global value chains while keeping value-added activities such as design in-house. By the end of this period, design knowledge had become a truly global commodity.

4.2.2 Episode 3: Change from within

During this episode, low-cost production centres mushroomed in Eastern Europe, Latin America and South East Asia. Labour-intensive industries, incl., textile and clothing, were going truly global giving rise to numerous MNEs, encouraging re-location of production to low-cost countries as well as giving birth to the notion of ‘outsourcing’. ‘Fast-fashion’ culture was emerging demanding shorter lead-time from design to production to sales and thus challenging the way companies were organizing and managing their value chains.

The Association of Danish Employers responded to these global trends by initiating a strategic development project called "change from within" targeting Danish manufacturers. Key idea of this project was to compete through "automation" as an alternative to low-cost global competition. This project – that in a way was a revised protectionism policy - however failed to deliver expected results, especially to decrease lead-time and prices. This led to further shrinkage of the sector: companies had to lay off employees and in the middle of 1980 the level of workforce started to decrease again. In the end this revision of protectionism policy failed to offer cheaper products compared to those offered by Asian and Southern European manufacturers and eventually led to a decline of exporting.
A by-product of the revised protectionism policy was an increase of the level of outflow FDI that towards the end of the period exceeded dramatically the inflow of FDI. This tendency was caused by the decision of Danish textile and clothing companies to relocate their production the countries with location advantages and accessible global networks as well as to engage in subcontracting and outsourcing – phenomena that were just getting traction during this period.

It was interesting to observe – interesting for that period dominated by MNEs – that smaller companies were frontrunners in changing and adapting their business models and engaging way earlier than MNEs and without any regard for actual policies in relocation of production and outsourcing. The above movements prompted the Association of Danish Employers to reformulate the sector development policy in 1987 and to recommend relocating and engaging in outsourcing. Towards the end of the period, the value of Danish exports increased, especially to Norway, Sweden, Finland, Germany and Great Britain, demonstrating the potential advantages from international and global integration.

4.3 Epoch III: Accelerated globalization

Data suggest that this epoch is characterized by accelerated globalization. End of the Cold War, fall of Berlin Wall, collapse of Soviet Union, radical reforms in China, Denmark joining EU and WTO are examples of major global trends that took place during this period and drove this break-up process. Opening up Eastern European market brought up numerous market opportunities as well as cheap labour arbitrage opportunities but also new competition. Radical reforms in China started making impact on its growth, witnessing an increase in exporting from China that threatened local clothing and textile companies. Two episodes mark this epoch: breaking-up global value chains and strategic outsourcing.
4.3.1 Episode 4: Breaking-up Global Value Chains

The Danish Government eventually gave in resisting globalization and embraced globalization, accepting ‘anti-protectionism’ policy for the sector. Danish companies started breaking up their value chain and actively seek cost-efficient relocation of production, while keeping design and branding in house. Data suggest that Danish companies were successful in pursuing relocation and outsourcing strategies. Embracing globalization and responding to global trends by splitting up companies’ value chains, offshoring, acquisitions and outsourcing contributed towards the enhancement of sector competitiveness and development of sector core value adding activities, such as ‘in-house design’. Demand for knowledge in fashion design and shop in shop branding was increasing as well. During this period, Danish companies initiated the restructuring of their value chain strategies from CMT (Cut, Make and Trim) and OPT (Outward Processing Traffic) in 1980s to SOD (Sourcing from Own Design), putting more emphasis on high value add activities such as design and branding.

At the same time, data point to a number of casualties: companies with more than 600 employees were not able to adapt and reformulate their growth strategy – e.g., re-locate or source – and eventually ceased trading. It is important to mention that these same strategic activities led to further shrinkage of the sector in number of employees and restructuring of the sector.

4.3.2 Episode 5: Strategic Outsourcing

In this period the role of China in global trade continued increasing, including an attractive import policies that had a tremendous impact on manufacturing sectors worldwide. Toward the middle of this period Bulgaria, Romania and Croatia joined EU. This allowed Danish companies to access new trading and production partners as an alternative to South European expensive partners. Another global trend that had a negative impact not only on DTFI was the financial crisis in 2008.
Danish companies took full advantage of these new offshoring and outsourcing opportunities. Such wilful, determined strategic outlook towards outsourcing contributed to further shrinkage of the sector as many sector companies moved production abroad; some even change their business model from production just to design, sales and marketing. Also during this period consolidation of the sector took place: larger companies started acquiring smaller companies that had specific knowledge, high-tech or know-how capabilities.

Gradually the core mission of the sector moved towards ‘intelligent textile’ concept that included primarily wearable electronics as well as new materials, textures and surfaces. This change of sector identify to high-tech fabric required new knowledge in design, R&D, and production. This led to a launch of new study programs in Danish Higher Education sector that were training future employees for DTFI sector. This new mission contributed to a split between textiles manufacturing that was concerned with production of high tech fabrics and selling it to B2B niche markets and clothing production that redirected clothing value chains toward fast fashion market trends. It could be argued that in this period DTFI became truly global.

4.4 Epoch IV: Focus on E-Commerce

Focus on e-commerce characterizes this epoch’s course of activities and decisions. During this epoch, new global trends were emerging and getting traction quite rapidly, namely social media, e-commerce and on-line shopping. Thanks to these trends, the number of companies in the fashion-sector increased; however, an increase in costs of raw material had a negative impact on companies from the textile sub-sector – several manufacturers ceased their trading due to this trend. At the same time, traditional global trends were present in this epoch as well, such as rise of labour and material costs in China and India which made DTFI companies to search for new low-cost locations to relocate or outsource such as Bangladesh, Vietnam, Cambodia, Egypt, and Myanmar. The episode related to this epoch is about acquiring global R&D centres, global brands and e-shops.
4.4.1 Episode 6: Acquisition of Global R&Ds and E-Shops

SMEs from the fashion sub-sector were quicker in adopting e-commerce compared to their counterparts from the textile sub-sector. To keep up with global trends, policy makers changed the name of the sector from ‘Textile and Clothing’ to ‘Textile and Fashion’. New education programs were launched to support this new identity of the sector. Given the new identity or mission of the sector, i.e., intelligent textile or high-tech fabric, textile companies were searching globally for companies that possessed respective knowledge and capabilities, especially knowledge in latest R&D, sales and marketing for the purpose of acquiring such companies or entering strategic alliances. This strategy was also aimed at ensuring quality control and production costs at the foreign partner premises. At the same time fashion companies during this period pursued aggressively acquisition strategy in Europe by acquiring European fashion brands and e-shops. These acquisition strategies inter alia were aimed to deter entry of competitors from Asian on-line shops. DTFI witnessed slow but steady increase in size during this period and was becoming an e-sector taking advantage of digitalization trend as well as new modern infrastructure and knowledge built and created.

5. Concluding observations

5.1 Late Globalization: Key conclusions from DTFI Case

The data suggest that DTFI is a late globalizer. It emerges that government policies were instrumental in shaping the development and growth of the sector. Especially protectionist policies held back DTFI from globalizing earlier. DTFI started to globalize in early 1990s by relocation and offshoring of production and in early 2000s actively pursued strategic outsourcing.

5.2 Late Globalization: Microgeographies of DTFI

DTFI is largely concentrated geographically around the big Danish cities. The Copenhagen and Jutland geographies – historically separated by bodies of water (and only recently connected by bridges and
tunnels) – also split up the two main sectors in DTFI, reflecting a symbolic manifestation of the diversity of the business. The evolution of the Industry has led to a divided and separated Textile and Fashion industries, a separation that was only healed in 2012 by changing the label of industry to DTFI (Jensen & Poulsen, 2013). Currently, in Jutland the industry exists around the cities like Herning, Ikast, and Brande, which are mostly large Textile manufacturers and clothing companies. The other great part of the industry, the high-value fashion design part, however, is concentrated around Copenhagen, mainly design driven SMEs. The other large areas are concentrated around Ringkøbing as well as Vejle, which belong to the Danish traditional era within the textile production sites. Furthermore, two major design colleges are located at Kolding School of Design and TEKO design school in Jutland, so that about 10% of the design companies are located in each area, and there is Aarhus – the largest city in Jutland – that also counts for approximately 10% of the total (Lars K. Christensen, 2010).

5.2.1 Pre-Epoch I

Although the first cotton manufacturing company, publicly known as Manchester Factory, was established in 1779 outside Copenhagen, the most significant early step in the mechanization of textile production was I.C. Modeweg, which was founded as a cloth (textile) manufacturer in the centre of Copenhagen in 1809, which, later, in 1831, relocated to Brede, in the countryside north of Copenhagen.

Between 1840 and 1865, modern industry gained footing in Denmark, and in 1846 Modewegs cloth mill in Brede was the first to adopt multiple new technologies. In 1892, a spinning plant was established in Vejle on the east coast of Jutland, using ring spinning machines for the first time in Denmark. Another spinning plant was established in the same town a few years later, and together with some major cotton weaving plants, and other plants were established in the following years, among them a large one in Valby, Copenhagen (Lars K. Christensen, 2010).
5.2.2 Epoch I

There is no concrete evidence indicating the relocation of the industry within Denmark during Epoch I, as changes in production type led to inevitable changes in the vulnerable older Danish textile and clothing sector. At the start of Epoch I, post-war economic optimism and emergence of fashion culture were the main legacy for the industry. Production by demand dominated the coping strategy to survive. Several manufactures that held large single-production sites were forced to bring up-, mid- and downstream activities to Denmark (Spandet-Møller, 2011).

5.2.3 Epoch II

New countries were becoming active textile producers and exporters, able to compete on the world market, based on their comparatively lower wages. In Herning-Ikast-Brande district, specifically, employment continued to increase. Thus, the area experienced considerable absolute and relative increases in employment levels up to the early 1970s. In the 1980s and 1990s, a large proportion of the cluster’s manufacturing activities were relocated to low-cost countries in Europe. Generally, the area of Herning-Ikast-Brande became recognised in the international and national literature on company clusters, of both a theoretical and an empirical nature, describing it as a well-established cluster within the textiles and clothing sector (EMCC, 2008).

At the same time, Egetæpper, a successful carpet factory, was among the first in Europe to invest in computer-controlled dyeing technology, in this region. The last surviving major cloth mill, Kjærs Mølle in Ålborg, however, gave up producing textiles for wearable clothing in favour of high quality furniture fabrics, under the trade name of Gabriel. In the 1980s, also, this concentration was particularly important to the companies located in the cluster, as it attracted many potential customers to the area (Laursen, Hansen, & Andersen, 2002).
5.2.4 Epoch III

This development signifies the first wave of change in terms of the location of activities in the Industry in Denmark, mainly from the Copenhagen area of the Danish island of Zealand in eastern Denmark to the Jutland area in western Denmark, which includes the Herning-Ikast-Brande district (EMCC, 2008).

5.2.5 Epoch IV

With the emergence of e-commerce in the Danish fashion sector 2010, many Danish SMEs attempted to improve core activities like sales and marketing using internet. In this regard, divesting small markets abroad and increasing focus on local market became inevitable. In doing so, the location of DTFI started to be driven by design trends (Spandet-Møller, 2011). Also, in April 2013, the World Trade Organization (WTO) dealt officially with the subject of e-commerce (Jensen & Poulsen, 2013). It was a major reason for the larger companies located in the centre of Jutland like Bestseller, BTX Group, and DK Companies to start producing trend-driven fashion. The Copenhagen area – home to mainly small- to medium-sized fashion companies – engaged with design-driven fashion, often trend-setting rather than driven by trends. In Denmark specifically, small- and medium-sized enterprises (SMEs) made up more than 30% of export in the early 2010s (Lars K. Christensen, 2013), and the Copenhagen Fashion Council was established in April 2010 with the purpose of ensuring an even stronger Copenhagen Fashion Week for the future. Interestingly, the number of companies in fashion industry in Zealand (Copenhagen region) increased in 2012, even as the overall DTFI firm numbers kept declining (statistikbanken, 2015).

5.3 Late Globalization: Research challenges ahead

While this is just a longitudinal one-country-and-industry case study of late globalization, it already points to a number of key factors that influence the lateness (or earliness) of globalization: government policies toward domestic and foreign players in an industry, global competition that
shapes and continually reshapes (cost as well as quality-driven) location of key value chain activities (and the concomitant global distribution of core competencies and skills), and the growing role of information technologies that enable globally-dispersed value chains to function in cohesive and unified ways.

5.4 Late Globalization: Some final thoughts

Of course, these are just some of the major factors, and myriad specific factors were at work in the DTFI case. The situation circa 2015 in Denmark clearly shows intersections of globalization and microgeographies. The trend-driven larger firms in Denmark are under intense cost-competitive pressure and likely to shrink, affecting Jutland region. The design-driven, trend-setting smaller firms, mainly clustered in Copenhagen-Zealand region, have strong future prospects, boosting not just their own fortunes but also the larger art-culture scene in vibrant Copenhagen. As we continue our research exploration of late globalization through other countries and industries, we hope to uncover and conceptually reinforce these and other building blocks for a theory of late globalization.

References


Table 1: The effects of late globalization on evolution of DTFI

<table>
<thead>
<tr>
<th>Critical events/Turning points</th>
<th>Global trends</th>
<th>Key Development Policy</th>
<th>Strategies and choices</th>
<th>HOW/WH/DF/ Institutional level</th>
<th>WHAT?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945-70 The legacy of WWII and fashion (re)emerging</td>
<td>Economic optimism after the end of WW II</td>
<td>Change in type of production</td>
<td>Abolish protectionism</td>
<td>Government and Textile Institutions (Regulative)</td>
<td>Size</td>
</tr>
<tr>
<td>1971-80 Survival by shrinkage and in-house design</td>
<td>Denmark joins EEC</td>
<td>Resistance to re-locate production</td>
<td>Protectionism</td>
<td>Export of clothing products</td>
<td>Mission</td>
</tr>
<tr>
<td>1981-90 Failure of protectionism and change from within</td>
<td>Emergence of low-cost Eastern Europe and Asian products worldwide</td>
<td>Delay in re-location of production</td>
<td>Revised protectionism</td>
<td>Fully-fledged value chain strategy at home in MNEs</td>
<td>Location</td>
</tr>
<tr>
<td>1991-2000 Accelerated globalization via production offshoring</td>
<td>Denmark joins WTO and GATT</td>
<td>Relocation of production sites</td>
<td>Anti-Protectionism</td>
<td>Growing number of MNEs in Southern Europe</td>
<td>Knowledge</td>
</tr>
<tr>
<td>2001-2010 Willful globalization via strategic outsourcing</td>
<td>China joins WTO</td>
<td>Breaking-up the value chains globally</td>
<td>Relationship with China</td>
<td>Growing number of MNEs in Eastern EU</td>
<td>Economy</td>
</tr>
<tr>
<td>2011-2015 Acquisition of global R&amp;Ds and e-shops</td>
<td>Price increase for textile and clothing raw material</td>
<td></td>
<td>Fashion life education</td>
<td>Growing number of MNEs in China</td>
<td>Structure (Subsectors)</td>
</tr>
</tbody>
</table>

**Key Development Policy**
- **Change in type of production**
- **Resistance to re-locate production**
- **Delay in re-location of production**
- **Relocation of production sites**
- **Breaking-up the value chains globally**

**Strategies and choices**
- **Demand-driven Production**
- **In-house design**
- **Change from within**
- **Production offshoring**
- **Strategic outsourcing**

**WHAT?**
- **Size**
  - Downsizing
  - Remarkable Downsizing
  - Growth
- **Mission**
  - Demand driven
  - N.A
  - Cheap export
- **Location**
  - N.A
  - Somewhat relocation
  - Re-location by offshoring
- **Knowledge**
  - Increase
  - N.A
  - Design knowledge increase
- **Economy**
  - Growth
  - Decline
  - Remarkable Growth
- **Structure (Subsectors)**
  - No change
  - Fashion
  - Fast fashion

**Effects on the sector**
- **Downsizing**
- **Growth by the number of SMEs in fashion business**
- **Cheap export**
- **Design as demand - B2B era**
- **Re-location by offshoring**
- **Re-location by partnership**
- **Hi-tech knowledge/design increase**
- **Hi-tech knowledge/design increase; knowledge compromised in partnerships**
- **Unsteady growth**
- **Stability and steady Growth**
- **New, B2B niche in hi-tech fabric**
- **Clothing sector replaced by fashion and embraced e-commerce**
Figure 1: Evolution, episodes and epochs of DTFI

Level of Evolution

Epoch I  Epoch II  Epoch III  Epoch IV


Note:
Industry evolution (zigzag line) represents small variations in macro, meso and micro levels of the industry over time.
Industry epochs are characterized by a specific pattern and an underlying idea which dominates the stream of activities for a certain period.
Industry episodes mark critical events or turning points in the life of the industry.

Epoch I: Changing production type; Epoch II: Resisting relocating production; Epoch III: Accelerated globalization; Epoch IV: Focusing on e-commerce.

E1: Abolishing protectionism; E2: In-house design; E3: Change from within; E4: Breaking-up global value chains; E5: Strategic outsourcing; E6: Acquisition of global R&Ds and e-shops.
Figure 2: Evolution of DTFI variables: size, mission, location, knowledge, growth and structure

Note:
The farther away a variable is from the center of a radar chart, the higher is the degree of change of that variable.
Appendix 1: Example of using NVivo to code, memo, analyze, and interpret the data
## Appendix 2: critical event matrix

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Global Event</th>
<th>Country/Industry Event</th>
<th>Company/Process/Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945-1970</td>
<td>Post WWII economic optimismboom, Emergence of “Fashion Culture” followed by “ready to wear” trend</td>
<td>Protectionism in Denmark abolished, Emergence of Danish welfare state, Emergence of free trade agreements, Publication of DFTI sector journal, Price competition rises</td>
<td>Large and oldest Danish manufacturers with single production line closed down, Decline of traditional production of fabrics, Demand-driven production emerges, Propensity toward export on demand</td>
</tr>
<tr>
<td>1971-1980</td>
<td>Global free trade regulations established, Western economic recession unfolds, South Europe, Latin America and South East Asia join clothing market, Low-cost labor arbitrage emerges, Lead-time from design to production shortened</td>
<td>Demand for consumer goods declines, ECC members and Multi-Fiber Arrangement imposed import quotas, Change in public consumption toward synthetic fabrics, Relocation of labor-intensive industries to low-cost countries takes place, Increased demand for design knowledge in production</td>
<td>Investing in computer-controlled dyeing technology (first in Europe by Egetæpper A/S), Switching from production of textile for clothing toward high quality furniture fabrics (Gabriel), Danish MNEs emerge, Beginning to relocate low-stream value chain activities to Southern Europe and keep value added activities like design in Denmark</td>
</tr>
<tr>
<td>1981-1990</td>
<td>Price liberalization as part of European integration, Regulations set to support free flow of capital in ECC, Trend of “fast-fashion” culture accelerates, Collapse of Berlin Wall</td>
<td>Customer demand for design increases, Emergence of relocation of mid-stream production to low cost countries, Outsourcing trends get traction, Fashion cloths became available in supermarkets “Change from within” policy initiated by Association of Danish Employers, Automation introduced to fight low-cost global competition</td>
<td>Brandtex started offshoring to Poland, Vanggard (&gt;600 employees) ceased trading, Growing number of Danish MNEs offshore to Southern and Central Europe, Setting High expectations for lead-time from design to production, Rise of OPT (Outward Processing Traffic) strategy, Adopting innovation-driven branding strategies and individual design</td>
</tr>
<tr>
<td>1991-2000</td>
<td>European Union established; launch of euro, Denmark joined EU and WTO</td>
<td>Anti-protectionism sentiments rise, Outsourcing takes traction and reshapes sector</td>
<td>Axcel, newly founded company, started investing in fashion brands</td>
</tr>
<tr>
<td>Year</td>
<td>Global</td>
<td>Country/Industry</td>
<td>Company/Process/Strategy</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Cold War ends</td>
<td>Integration of Denmark clothing into GATT/WTP</td>
<td>Emergence of shop-in-shop opportunities</td>
</tr>
<tr>
<td></td>
<td>Soviet Union collapses; opening of Eastern Europe</td>
<td>Increased pressure from fast fashion</td>
<td>‘Cut, Make and Trim’ and ‘Sourcing form Own Design’ shaped offshoring and value chain globalization</td>
</tr>
<tr>
<td></td>
<td>Dot-com Bubble</td>
<td>Globalizing value chain activities became main stream</td>
<td>Fully-integrated value chain strategy failed</td>
</tr>
<tr>
<td></td>
<td>Chain’s rapid economic growth began</td>
<td>Growth Fund created</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trade liberalization in India</td>
<td>Danish companies preferred free trade</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2001-2010</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financial crisis; EU recession</td>
<td>Increased demand for fashion apparels such as shoes and jewelry</td>
<td>Increased success in subcontracting production</td>
</tr>
<tr>
<td></td>
<td>China joined WTO/Trade liberalization in China</td>
<td>Growing Danish production in China</td>
<td>Outsourcing of production becomes part of growth strategies</td>
</tr>
<tr>
<td></td>
<td>Emergence of Internationalization of design education</td>
<td>Emergence of new material such as intelligent textiles</td>
<td>Continued focus on high-value adding activities</td>
</tr>
<tr>
<td></td>
<td>Eastern European countries join EU</td>
<td>Copenhagen becomes capital of innovation-driven fashion</td>
<td>Partnership strategy</td>
</tr>
<tr>
<td></td>
<td>Multi Fibre Arrangements expired</td>
<td>Increased concerns about losing production know-how due to outsourcing</td>
<td>Acquiring new non-Danish brands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rise of equity funds in DTFI</td>
<td>Main internationalization destinations were China, South East Asia, US, Vietnam, South Africa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Initial wave of Danish e-commerce</td>
<td>SMEs were contributing more than 30% in exports</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DTFI shifted focus away from production towards high-value adding and knowledge intensive activities, such as design and branding</td>
<td></td>
</tr>
<tr>
<td>2011-2015</td>
<td>Recovery of German, Swedish and Norwegian economies</td>
<td>Women’s clothing was on top in online shopping</td>
<td>Globalization via acquisitions accelerates aiming to develop architecture &amp; design brands in Europe and Asia in fabric and textile sector</td>
</tr>
<tr>
<td></td>
<td>Chinese companies move toward value-added products charging premium prices</td>
<td>New record in online spending: 5 billion DKK</td>
<td>Acquisitions of high-tech suppliers in textile sector</td>
</tr>
<tr>
<td></td>
<td>India increased price pressure on cotton</td>
<td>Higher education institutions offer a range of short-cycle study programs in design</td>
<td>Acquisition of e-shops</td>
</tr>
<tr>
<td></td>
<td>Global increase of price for raw materials</td>
<td>DTFI reached 30 billion DKK annual turnover becoming the 4th largest exporter</td>
<td>Clothing companies focus at home on sales and marketing</td>
</tr>
<tr>
<td></td>
<td>China: Manufacturing base is reduced following global recession; Increased competition</td>
<td>Industry changes its name to ‘Textile and Fashion’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E-commerce in WTO spotlight</td>
<td>Government recommendations to outsource to Bangladesh, Vietnam, Cambodia, Egypt, and Myanmar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asia’s e-commerce growth rates in double digits</td>
<td>Developing online shopping regulations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Opportunities open up in developing economies</td>
<td>Increased demand for high-tech products</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E-commerce becomes mainstream</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>