Servitisation of an Industry and National Competitive Advantage in International Business: The Case of Taiwan Textile Manufacturing and Sri Lankan Apparel Manufacturing Industries

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Abstract
Servitisation studies in extant literature contribute to the resource-based view and relational view where industrial organisation view was largely ignored due to the focus on individual manufacturing units. In international business industry, competitiveness is required to enhance the performance of individual organisations. Following post-positivism epistemology, a multi-case study approach has been employed in this study. The unit of analysis is the network consisting of manufacturer, supplier and the customer. Two such units of apparel manufacturing industry in Sri Lanka and two units from textile manufacturing industry in Taiwan were selected. This study establishes the link between servitised industry and national competitive advantage. The collaboration with suppliers, indirect competitors and other partners were identified as critical factors to differentiate a business-to-business (B2B) manufacturing industry in an international business.

Keywords
Servitisation, collaboration, industry, competitive advantage, textile and apparel

Introduction
The origin of service marketing and relationship marketing have been inspired by many research communities and practicing bodies (Berry, 2002; Regan, 1963). Combining product and services was identified as one of the key strategies of manufacturers in the twenty-first century to stay competitive (Baines & Lightfoot, 2013; Wise & Baumgartner, 1999). The term servitisation was introduced by Vandermerwe and Rada (1988) to refer to the manufacturer’s effort in combining goods and services to add value to core product offerings. They further explained that servitisation as a global trend. Researchers explained the trend of manufacturers to move from product dominance towards a service orientation for business benefits (Brax, 2005; Cohen, Agrawal, & Agrawal, 2006; Kohtamaki, Hakala, Partanen, Parida, & Wincent, 2015; Martin & Horne, 1992; Neely, 2008). Servitisation studies in extant literature are mainly focused on individual company strategy of delivering solutions to its customers to enhance competitive advantage. The existing findings are underpinned with resource-based theory (Penrose, 1959; Wernerfelt, 1984). The school of thought of competitive advantage through industry is ignored in servitisation literature (Porter, 1998). The current study focuses on industry-level national competitive advantage through servitised industry. The research problem of this study is to understand the industry-level servitisation in international business.
business and competitive advantage derived through servitised industry. The relevant research questions are derived in following section.

**Literature Review**

Companies achieve competitive advantage and superior performance through servitisation. Servitisation of business can be seen as a strategic alternative that generates competitive advantage and superior performance (Bustinza, Bigdeli, Baines, & Elliot, 2015; Wise & Baumgartner, 1999). It is apparent that manufacturers seek competitive advantage through service infusion approaches that are based on diverse product service strategies (Raddats & Kowalkowski, 2014). Manufacturers offer industrial product services to secure financial, strategic and marketing benefits (Parida, Sjödin, Wincent, & Kohtamäki, 2014). There is a positive link between a service-oriented business strategy and company performance (Gebauer, 2009; Homburg, Hoyer, & Fassnacht, 2002). Studies related to competitive advantage due to industrial services consider the impact of servitisation on firm’s profitability (Gebauer, Ren, Valtakoski, & Reynoso, 2012; Neely, 2008), firm’s market value (Fang, Palmatier, & Steenkamp, 2008) and sales growth (Kohtamäki, Partanen, Parida, & Wincent, 2013). Moving along the transition line of product and service creates additional competitive advantage for product-manufacturing companies, leading to a different competitive positioning (Gebauer, 2008), which is more sustainable and are difficult to imitate (Gebauer, Friedli, & Fleisch, 2006; Oliva & Kallenberg, 2003). Scholars have already established the importance in service in gaining a competitive advantage in manufacturing companies (Dachs et al., 2013; Gebauer et al., 2012; Kowalkowski, Kindström, Alejandro, Brege, & Biggemann, 2012). The individual company has been the unit of analysis in most of the cases. There are few studies focused on multilevel supply chain perspectives (Matthyssens & Vandenbempt, 2008).

Servitisation literature refers widely to theories in strategic management and relationship marketing to justify the benefits and possible product service-based competitive advantage in manufacturing companies. Resource-based view encourages to develop resources and competencies to enhance competitive advantage (Barney, 1986; Barney, 1991; Penrose, 1959; Prahalad & Hamel, 1990; Wernerfelt, 1984). Dynamic capability view accounts for unpredictable external factors and importance of dynamic resources and competences (Barreto, 2009; Teece, 2007; Teece, Pisano, & Shuen, 1997; Zollo & Winter, 2002). Resource advantage theory considers the comparative advantage of resources to enhance performance (Hunt, 1997, 2012; Hunt & Morgan, 1997) that have been widely used as underpinning theories to study the organisational competitive advantage through servitisation. Some scholars have used network resource view, which explains the relational competitive advantage by leveraging resources and capabilities with its supplier network (Dyer & Hatch, 2006; Thorelli, 1986). The relational view, which explains the importance of interfirm linkages for superior performance and competitive advantage (Dyer & Singh, 1998; Lavie, 2006), has been used when studying the servitisation and competitive advantage in a network.

This study underpins the view of industrial attractiveness and competitive advantage in international business through servitised industries, which have given minor attention in the literature. Strategy scholars advice that industry- and firm-specific effects are both important for organisational performance where strategy and performance as an ongoing sequence of capabilities conditioned adaptations by firms which in turn become exogenous events in the environments of the managers (Henderson & Mitchel, 1997; Spanos & Lioukas, 2001). Servitised industries are able to retain competitive advantage in international business. Industry attractiveness and competitive position can both be shaped by a firm (Porter, 1998). Further research questions are posed to address the existing gaps in the literature.

**RQ1** How collaborative intensity of industry contributes to servitisation of an industry in international business?

**RQ2** How an industry retains competitive advantage through servitisation in international business?

The objective of the study is to understand the industry upgrade through servitisation and study the collaborative product service offering in business-to-business (B2B) manufacturing industry to create competitive advantage in an international business.

The traditional approach to international competitiveness is explained by Porter (1998) on the basis of the importance of factor conditions, demand conditions of the home country, related and supporting industries, firm strategy, structure and rivalry as the key factors in competitive advantage. These factors have been argued as basics and sometimes not applicable to different context outside the empirically tested industries (Rugman & D’cruz, 1993). The competitive priorities have evolved over the period. Hill (2000) extended the previous competitive priorities cost, quality, delivery, flexibility and added services as a competitive priority when organisation thrive to maximise value to their customers. The collaboration between the industry partners has become the source of competitive advantage in international business. The inter-firm linkages are important for superior performance (Dyer & Singh, 1998; Lavie, 2006). Figure 1 shows the type of partnerships which an organisation can establish with different parties. This framework has been used to guide the semi-structured questionnaire to check the collaborativeness in the industry.

Interdependence between the partners and ability to function as one business entity is important when services
are integrated into the products (Barnett, Parry, Saad, Newnes, & Goh, 2013). Strategic relationships with suppliers are important when providing solutions to the customers (Davies, Brady, & Hobday, 2006). As per Saccani, Visintin and Rapaccini (2013), manufacturers undergoing servitisation resort to an increased number of suppliers and managing upstream relationships is considered particularly critical. According to Neely, Benedettini and Visnjic (2011), servitisation need to deliver solutions instead of products. Hence, transactions need to be converted into long-term relationships. It is important to network with different suppliers when manufacturers offer services (Bikfalvi, Lay, Maloca, & Waser, 2012; Reim, Parida, & Örtqvist, 2015). Interdependence between the partners and ability to function as one business entity is important when services are integrated into the products (Barnett et al., 2013). Strategic relationships with suppliers are important when providing solutions to the customers (Davies et al., 2006). As per Lockett, Johnson, Evans and Bastl (2011), supply chain relationship in product service strategy can be summarised under five themes, such as supplier engagement in product-service strategy and delivery, alignment of incentives, planned business developments, information sharing and overall life cycle considerations. Dynamic service enterprise comprising the customer, provider and suppliers based on close internal relationships will potentially overcome many of the problems in the servitisation process (Barnett et al., 2013). The collaboration within industry partners is important to deliver superior product service bundles to international customers and sustain competitive industry particularly when an industry cannot compete based on cost. Conceptual framework in Figure 2 is derived based on the literature, and hypotheses are derived further to find the solutions to the research questions.

H1: Availability of supporting industry partners enhance the collaborative intensity of industry partners.

H2: Collaborative intensity of industry partners contributes to servitised industry.

H3: Collaborative intensity of industry partners contributes to collaborative intensity with customer.

H4: Collaborative intensity with customer contributes to servitised industry.

H5: Servitised industry contributes to competitive advantage of an industry in international business.

Methodology

Following post-positivism epistemology, a multi-case study approach has been employed to achieve the objectives of the study. Case studies are suitable to study complex phenomena, which involve multiple variables (Yin, 2009). Case study strategy is well-suited instrumentally to understand research problems, which have not been deeply investigated before (Eisenhardt, 1989; Yin, 2009). The data are collected using semi-structured interviews and a questionnaire for triangulation. The company reports also used to enhance the validity. Semi-structured questionnaire is developed based on collaborative intensity among related industry partners, servitisation of the industry and industry competitiveness. Deductive content analysis was carried out following the method explained by Elo and Kyngäs (2008). Inductive content analysis is used in cases where there are no previous studies dealing with the phenomenon and deductive content analysis is carried out when the aim is to test a previous theory in a different context (Elo & Kyngäs, 2008). Deductive content analysis is employed in this research.

Research Context and Cases

Two industries, which have evolved as solution provision industries to overcome the cost-based competition, have been selected in the study. In multiple-case study design, special sampling techniques are not required to apply (Yin, 2009). Due to the limited number of cases which can practically be studied, it is reasonable to select cases from extreme situations (Eisenhardt, 1989). Apparel export industry in Sri Lanka and Textile export industry in Taiwan is selected. As a proxy to the industry, the supplier, manufacturer and the customer are identified as a case. The four cases are named as ASL, BSL, XTW and YTW and details are explained in Table 1.

The apparel export in Sri Lanka is USD 4.6 billion industry and one of the country’s main export earning industries (Srilankaapparel.com, 2016). The industry in Sri Lanka has been evolving as a full package manufacturing from pure manufacturing (Athukorala & Ekanayake, 2014). The industry has evolved with servitisation in the last decade (Mataraarachchi, 2015). Apparel industries in Sri Lanka are providing total solutions to their customers as a strategy to compete (Srilankaapparel.com, 2016). Textile export of Taiwan in 2015 is USD 10 billion (World Trade Organization, 2016). Collaboration among industry players (Chang, Fu, Li, & Lee, 2009; Chen, 1999) and servitisation is a key priority of the industry (Liu, 2015).

Findings

Related and Supporting Industry

As per the data, it is evident that both apparel manufacturing industry in Sri Lanka and Textile manufacturing in Taiwan have strong supporting industries. The Taiwan textile industry is strongly supported by spinning, yarn manufacturing and chemical industries. The Sri Lankan apparel manufacturing is supported by fabric, elastic, lace and
thread manufacturing. Customers of all cases are accepting the fact that these countries do have strong supporting industries to manufacture their products. As per customer of case Y 'Taiwan has a strong supporting industry for synthetic fabric manufacturing and is the leader for synthetic knits. Due to the strong industrial support they are outstanding from the competitors’. Customer of case B explains that Sri Lanka is competitive in intimates apparel due to the supporting industry it has established over the period of time.

**Collaborative Intensity of the Industry**

The collaborative intensities of both industries have evidence to be high. The collaboration between the supplier and the manufacture is high in all four cases. However,
it is evident that collaboration between direct and indirect competitors is lower in Sri Lankan apparel industry. The collaboration between direct competitors are low and indirect competitors are high in Taiwan manufacturing. Business director in apparel manufacture 2 explains ‘we do have a strong collaboration with suppliers and customers but do not collaborate with competitors’. The business manager in manufacturer 1 further illustrated that ‘our customers do not encourage collaboration with competitors due to the competitive reasons in fashion industry’. Textile manufacturer 1 in case x explained the strong collaboration with suppliers and customer for research and development and sharing of resources with indirect competitors. He explained further ‘we do share same knitting and dye house with other synthetic knit fabric manufactures and this way the capacity is effectively being utilized’. However, they try to avoid the joint work with direct competitors.

Collaborative Intensity with the Customer

Customers in all four cases explained the strong collaboration with the manufacturers. Collaborative industry positions which satisfies their product demand have been a key factor for them to continue business with these countries even though the manufacturing cost is high. Customer in case BSL mentioned ‘Sri Lanka is well positioned for intimate apparel and we are collaborating for many special projects’ customer in case A explained that ‘we have collaborated with manufacturer in BSL and set up a research and development alliance in Sri Lanka’. Customer in case BSL explains that ‘our company consider Taiwan as a key material destination and strongly collaborate with industry for research and development and they do have liaison office to closely work with the industry’.

Servitisation of the Industry and Competitive Advantage

As per the customer’s opinion the industries in these countries are offering solutions instead of pure manufacturing. Manufacturers explained that as per the customers of cases, XTW and YTW textile industries in Taiwan are providing technical services for advanced materials, delivery services (Oliva & Kallenberg, 2003), technical support for similar products (Raddats & Kowalkowski, 2014), product tailoring service, feasibility studies, research services, procurement service, customer seminars, warehousing services, financing and insurance services (Homburg et al., 2003). International customers in B2B markets understand the value bundle delivered in Taiwan textile industry. Similarly, the apparel manufacturing industry in Sri Lanka

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**Table 1. Details of Selected Cases**

<table>
<thead>
<tr>
<th>Cases/Product</th>
<th>Units</th>
<th>Country</th>
<th>Respondent</th>
<th>Other Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apparel industry in SL chain (ASL) sportswear Apparel</td>
<td>Supplier (Fabric)</td>
<td>Sri Lanka</td>
<td>GM—Marketing</td>
<td>Annual report 2016, company profile, company document, market analysis</td>
</tr>
<tr>
<td>Apparel industry in SL chain 2 (BSL) intimates Apparel</td>
<td>Supplier (Fabric)</td>
<td>Sri Lanka</td>
<td>Business Director Product dev Manager</td>
<td>company document, company profile</td>
</tr>
<tr>
<td>Apparel industry in SL chain 2 (BSL) intimates Apparel</td>
<td>Customer (Brand)</td>
<td>USA</td>
<td>Head of sales &amp; Marketing</td>
<td>Annual report 2016, company profile, company document</td>
</tr>
<tr>
<td>Apparel industry in SL chain 2 (BSL) intimates Apparel</td>
<td>Supplier (Fabric)</td>
<td>Sri Lanka</td>
<td>Business Manager</td>
<td>company document</td>
</tr>
<tr>
<td>Apparel industry in SL chain 2 (BSL) intimates Apparel</td>
<td>Customer (Brand)</td>
<td>USA</td>
<td>Merchandising Manager</td>
<td>company document, company profile</td>
</tr>
<tr>
<td>Textile industry in Taiwan chain 1 (XTW) Synthetic Knit</td>
<td>Supplier (Yarn)</td>
<td>Taiwan</td>
<td>Director sales</td>
<td>company document</td>
</tr>
<tr>
<td>Textile industry in Taiwan chain 1 (XTW) Synthetic Knit</td>
<td>Textile manufacturer 1</td>
<td>Taiwan</td>
<td>Head of sales &amp; Marketing</td>
<td>company document</td>
</tr>
<tr>
<td>Textile industry in Taiwan chain 1 (XTW) Synthetic Knit</td>
<td>Customer (Apparel manu)</td>
<td>Sri Lanka</td>
<td>Head of supply chain</td>
<td>company document, company website</td>
</tr>
<tr>
<td>Textile industry in Taiwan chain 2 (YTW) Synthetic woven</td>
<td>Supplier (Yarn)</td>
<td>Taiwan</td>
<td>Regional sales Manager</td>
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<td>Textile industry in Taiwan chain 2 (YTW) Synthetic woven</td>
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<td>Head of sales &amp; Marketing</td>
<td>company document</td>
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<tr>
<td>Textile industry in Taiwan chain 2 (YTW) Synthetic woven</td>
<td>Customer (Brand)</td>
<td>USA</td>
<td>Materials Manager</td>
<td>company document, company website</td>
</tr>
</tbody>
</table>

**Source:** Authors’ own.
offer solutions to their customers. Customer in case BSL explains that industry offer solutions and continuously advance them to sustain the competitive advantage. He mentioned ‘the industry predicts the problem of the customer and provide solutions and continuously improving them by advancing the services they offer’. He further illustrated that ‘industry has crashed the traditional garment delivery lead time of 80 days to 10 days with the collaborative work with customer and supplier and continuously looking at further improvements, this has helped our brand to react very fast to the market requirements’. The customer is impressive about the solution that industry has offered. Customer of ASL explains the enhancement of collaborative partnership with the manufacture due to solution offering and opportunity to knowledge-sharing between the customer and the supplier. As per the data, all hypotheses are supported by the data in all four case studies. Table 2 exhibits the summary.

**Discussion**

As per Bustinza et al. (2015), manufacturing companies use services as an opportunity to differentiate from goods and achieve higher customer satisfaction. Differentiation and high customer satisfaction are fundamental to achieving competitive advantage and superior performance with services. This study attempts to understand the national competitive advantage in international business through the supporting industry, collaboration and servitisation where existing studies are predominantly looking at individual organisation.

Servitisation trend in apparel and textile manufacturing industry can be seen globally (Li, Lin, Chen, & Ma, 2015; Pal, 2016). Apparel manufacturing is a single unit manufacturing, which requires services to differentiate manufacturing capabilities (Dachs et al., 2013). Due to the fashion, short life cycle and higher competition, the brands are looking for industrial partners who can deliver solutions. The case study dealt with two industries, which differentiated as solution provision industries and sustain the competitive advantage through a strong collaboration with industry partners and customers. Sri Lankan apparel industry has been evolved from pure manufacturing to full package manufacturing in last decade, and servitisation is a key strategy in manufacturing in Taiwan (Athukorala & Ekanayake, 2014; Liu, 2015; Mataararachchi, 2015). This study identifies the importance of related industries, collaborative intensity of the industry players and collaborative intensity with customers for servitised industry. The industry servitisation model is shown in Figure 3.

Creating customer value is a way of generating competitive advantage (Parasuraman, 1997). The only way to sustain the competitive advantage is to continuously upgrade from current position (Porter, 1990). Two industries in the case study have been upgraded and evolved as solution

![Figure 3. Industry Servitisation Model](image-url)

**Source:** Authors’ own.

### Table 2. Details of Selected Cases

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Case ASL</th>
<th>Case BSL</th>
<th>Case XTW</th>
<th>Case YTW</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>supported</td>
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<td>Supported</td>
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<td>H2</td>
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<td>H3</td>
<td>supported</td>
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<td>H4</td>
<td>supported</td>
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</tr>
<tr>
<td>H5</td>
<td>supported</td>
<td>supported</td>
<td>Supported</td>
<td>supported</td>
</tr>
</tbody>
</table>

**Source:** Authors’ own.
providing industries for their international customers. The data show continuous upgrade of servitised offering to retain the competitive advantage and thereby achieve sustainable competitive advantage through industry servitisation.

**Contribution and Limitations**

Existing research on servitisation is mainly focused on an organisation as a unit of analysis. This study has looked at servitisation in industry and consider the industry upgrade through servitisation as a phenomenon to generate competitive advantage. The existing research have mainly used resource-based theory, Dynamic capability view, resource advantage theory to explain the servitisation and business performance where this study focuses on enhancing knowledge of servitisation using industry organisation view (Porter, 1981). This study contributes to the theory of national competitive advantage through industry servitisation. This study further contributes a model for industry servitisation where future research can use in different settings to empirically test the model. This research identifies the importance of industry-level servitisation to generate a competitive advantage for the industries hence useful guide to policymakers and government organisations when developing industrial strategies. The findings would be beneficial for the senior managers in the leading organisation to upgrade the industry and enhance competitive advantage through the collaboration.

This study focuses only on four case studies, and generalisation beyond the cases is a major limitation in the research method applied in this study. Industry generally consist of more partners than the firm, supplier and customers hence data collection needs to be widen to other industry partners in future studies.

**References**


