Collaboration and competition in export firms: The link between co-opetition and export innovation

1. Introduction
Co-opetition (cooperation with competitors) has recently emerged and gained its popularity in the last several decades, emphasizing better usage of comparative advantage, value creation, and sharing R&D risks and costs (Dittrich and Duysters, 2007; Ritala, 2012). Extant literature on co-opetition provides evidence that this strategy can positively affect innovation and market performance (Belderbos et al., 2004; Quintana-Garcia and Benavides-Velasco, 2004; Ritala, 2012). The majority of these studies were conducted in particular sectors, such as the automotive sector (Gwynne, 2009; Segrestin, 2005) and air transport (Garrette, Castaner and Dussauge, 2009; Oum et al., 2004). Generic studies exploring the relationship between co-opetition, innovation and performance remain scarce.

Innovation has been widely acknowledged by both practitioners and scholars as an important determinant of modern firms’ success due to its advantageous effects in various organizational activities, such as improved financial performance (Sorenson, 2002), higher productivity (Geroski et al., 1993), expanding markets (Danneels and Kleinschmidt, 2001), and achieving sustainable competitive advantages (Lengnick-Hall, 1992). In an export context, there is also evidence of a positive and significant relationship between innovation and export performance (e.g. Lages et al., 2009; Roper and Love, 2002). Despite the vital importance of innovation, there are many factors constraining firms’ innovation activities, such as resources and capability constraints (Hewitt-Dundas, 2006), and risks (Raz et al., 2002). Especially in the current economic downturn, companies are seeking new strategies to more efficiently utilize limited and valuable corporate resources.

Due to the potential benefits of co-opetition strategy on product innovation and the importance of innovation on companies’ exporting activities, this study aims to bridge the literature gap by exploring the links between co-opetition and export innovation. Resource dependency theory, agency theory, and organizational learning are used to underpin the conceptual framework and explore the relationship between co-opetition strategy and product innovativeness of export innovation.

The remainder of this paper is split into five sections, namely literature review, conceptual model and hypotheses, research methodology, expected results and contribution, and references.

2. Literature review
2.1 Co-opetition
The term ‘co-opetition’ was first introduced by Raymond Noorda in the 1980s (Luo, 2007). Definitions of ‘co-opetition’ are relatively concentrated in scope. Bengtsson and Kock (2003) simply define co-opetition as a situation where competitors simultaneously cooperate and compete with each other. The antecedents of co-opetition include increasing ability to
innovate, compete and strengthen market position (Gnyawali and Park, 2009), and reducing the timespan for R&D (Mccutchen and Swamidass, 2004). The outcomes of co-opetition have also been studies by scholars. Gnyawali and Park (2009) suggested that co-opetition create economies of scale, reduce uncertainty and risk and increase the speed of product innovation. Morris et al. (2007) found evidence that co-opetition can mitigate risk and leverage resources. Moreover, Quintana-Garcia and Benavides-Velasco (2004) showed that co-opetition contributes to the development of product line and technological diversity.

It can be seen that co-opetition strategy has been closely linked with innovation, new product development, resources, and reducing risks in the extant literature. In companies’ export activities where innovation plays an important role and high uncertainty and risks exist (Madsen, 1989), co-opetition strategy could be beneficial and therefore worth exploring. Being different from domestic co-opetition, in which scholars found that competitors cooperate in upstream activities such as R&D while compete in downstream activities such as marketing (Bengtsson and Kock, 2000; Walley, 2007), I propose that export companies may cooperate at both upstream and downstream activities, especially when first entering a new foreign market, to reduce not only R&D resources but also share market uncertainty and risks. This will be tested in our future research. 

2.2 Innovation and product innovativeness
As a multi-dimensional and multi-disciplinary construct, innovation has long been studied and defined by scholars and practitioners (Damanpour and Schneider, 2006). Thompson (1965, p.2) straightforwardly defines innovation as “the generation, acceptance and implementation of new ideas, processes, products or services”. Other scholars from various disciplines define innovation from different perspectives, such as entrepreneurship (e.g. Drucker, 1985), technology (e.g. Mogee and Schacht, 1980), knowledge management (e.g. Plessis, 2007), marketing and economics (e.g. Porter, 1990). OECD (1991, p. 44) defines innovation by combining technological improvement and new market perception: “Innovation is an iterative process initiated by the perception of a new market and/or new service opportunity for a technology-based invention which leads to development, production, and marketing tasks striving for the commercial success of the invention.”

The innovativeness construct has mainly been used in two distinct ways in the existing literature: at a product level (product innovativeness) and a firm level (firm innovativeness). According to Garcia and Calantone (2003), product innovativeness is frequently used as a measure of the degree of ‘newness’ of an innovation. My study focuses on the innovativeness of export product innovation and looks at innovativeness from two distinct perspectives: technological and marketing perspectives. Garcia and Calantone’s (2002) further categorize technological and marketing innovations into macro level and micro level. Measurement of product innovativeness will be developed based on this approach.

2.3 Agency theory, resource dependency theory, and organizational learning
Agency theory, resource dependency theory and organization learning will be used together to underpin the model and to generate potential variables. Agency theory has been used by
scholars in various disciplines such as economics (e.g., Spence and Zeckhauser, 1971), marketing (e.g., Basu et al, 1985), and organizational behaviour (e.g., Kosnik, 1987). According to Eisenhardt (1989), agency theory refers to the situation in which one party (the principal) delegates work to another (the agent), who performs that work. Conflicts arise when the desires, goal, or interests of both parties are not aligned.

Resource dependency theory characterizes the links among organizations as power relations determined by resources exchange (Pfeffer and Salancik, 1978). RDT proposes that organizations lacking essential resources will seek to establish relationships with (i.e., be dependent upon) others in order to obtain those essential resources. Organizations also attempt to alter the dependence relationship by minimizing their own dependence or by increasing other organizations’ dependence on them.

Organizational learning states that organizations must continuously change their goals and actions and renew their capabilities to remain competitive in a changing environment (Fiol and Lyles, 1985). It has been suggested that organizational learning involves three steps: data acquisition, interpretation, and adaptation/action (Slater and Narver, 1995).

3. Conceptual model and hypotheses

Technological exchange, market exchange. From the resource dependency lens, firms interact with their social environments to secure scarce resources (Pfeffer and Salancik, 2003), and in our context, they achieve this by forming co-opetitive relationships as a means to gain access to or acquire such resources. In the new product development, R&D resources and other technological resources are of paramount importance and co-opetitors allocate, exchange, and combine such resources to develop new products together. Moreover, as stated above, innovation is either pushed by technologies, or pulled by market. Thus an understanding of the export market is necessary and ensures the market success of the new product, which leads to the sharing of market knowledge and other relevant resources.

The organizational learning theory suggests that strategic alliances can act as an important vehicle by which firms learn or transfer knowledge, particularly tacit knowledge, from each other (Inkpen, 1995). This knowledge can become a source for creating a sustainable competitive advantage for firms, since it is usually valuable and rare and difficult to imitate and substitute (Barney, 1991). By absorbing competitors’ technological and market know-how, companies can transfer such knowledge into corporate capabilities via organizational learning. Therefore through the exchange of technological and market resources with competitors, I propose that:

H1: In export firms’ co-opetitive relationships, technological exchange will be positively associated with partner firms’ technological capabilities through organizational learning.

H2: In export firms’ co-opetitive relationships, market exchange will be positively associated with partner firms’ market capabilities through organizational learning.
Conflictual interaction. According to agency theory, in the co-opetition relationship, co-opetitors are mutually principals and agents, and conflicts arise when the interests of partners are not aligned. This can potentially be minimized through a normative approach, which means it can be planned in advance by setting up common goals, rules that both parties should abide by, and potential solutions when conflicts arise. However, not all conflicts are foreseeable therefore companies still need to improvise and remain flexible and agile when facing conflicts. Both approaches can enhance a firm’s dynamic capabilities, which is defined as a firm’s ability to proactively address challenges from turbulent environments (Helfat and Peteraf, 2003; Talke, 2007). Thus:

H3: In export firms’ co-opetitive relationship, conflictual interaction will be positively associated with partner firms’ dynamic capabilities through organizational learning.

Product innovativeness is concerned with technical and marketing discontinuities (Danneels and Kleinschmidt, 2001; Garcia and Calantone, 2002). It is chosen because it is one of the key dimensions of new product development and relates to product success (Kleinschmidt and Cooper, 1991). Correspondingly the export firms’ technological and market capabilities can positively related to the product innovativeness. Evidence also exists that dynamic capabilities is a mechanism to create new knowledge which leads to continuous refinement of processes and routines as means of achieving competitive advantage (Zollo and Winter, 2002), ultimately facilitating product innovation (Salomo, 2008). Thus I propose:

H4: An export firm’s technological capabilities are positively related to the innovativeness of product innovation.

H5: An export firm’s market capabilities are positively related to the innovativeness of product innovation.

H6: An export firm’s dynamic capabilities are positively related to the innovativeness of product innovation.

4. Research methodology
The above conceptual model and hypotheses are based upon the existing literature and author’s assumptions, which need to be complemented by qualitative research. According to Handfield et al (2001), qualitative research helps to bridge the gap between theory and practice. Qualitative research will take the form of in-depth interviews with key informants (i.e., export decision-makers) from export manufacturers in the UK using the Kompass database. This stage is mainly designed to gain insights into export practice, complement the conceptual model and hypotheses, and create item pools of measurements to facilitate quantitative research.

In the second stage, an online survey will be conducted. In this context, the population will remain the same (i.e., export manufacturers in the UK). The objective is to test the framework
developed on the basis of the literature review and qualitative research. A minimum sample of 200 respondents will be sought to acquire representativeness and higher generalizability, and to enable the use of sophisticated structural equation modeling techniques. It is anticipated that the Lisrel software will be used to test the psychometric properties of key measures, and test for relationships between them.

5. **Expected results**

As aforementioned I propose that co-opetition in export companies is distinctive from those in non-export companies in terms of the activities they cooperate on, i.e. both upstream and downstream activities. I expect this can be evidenced in my qualitative research. With regard to the hypotheses, I expect the three key aspects, i.e. technological exchange, market exchange, and conflictual interaction, can all be positively related to organizational learning and correspondingly enhance export firms’ technological capabilities, market capabilities, and dynamic capabilities. Last but not least, the three identified types of capabilities can also be positively related to the innovativeness of product innovation in export firms.

6. **Contribution**

There will be several theoretical implications of my study. Firstly, this study will contribute to the co-opetition literature by extracting three key aspects of co-opetitive activities, i.e. technological exchange, market exchange, and conflictual interaction, that are potentially beneficial to product innovation. This study also firstly explores the co-opetitive activities in export firms. Secondly, this study will also provide implications to the export literature by introducing a potential corporate strategy (co-opetition) which is potentially beneficial to export performance. Thirdly, my study will also make a contribution to the innovation literature by pointing out the capabilities needed to develop highly-innovative products.

The managerial implications of this study lie in the light it sheds on the mechanisms under which co-opetition, as a corporate strategy, can be effectively used by export decision-makers to drive high-innovativeness new product development. My study also reminds exporters to be conscious about the conflicts in the co-opetitive relationship, and the embedded organizational learning opportunities to develop own company’s vital capabilities.
Figure 1: Conceptual model

Technological exchange

Market exchange

Conflictual interaction

Organizational learning

Technological capabilities

Export innovativeness

Market capabilities

Dynamic capabilities
References:


