

Exploring Factors that Enable Coopetition Strategy Success in Private Universities in Jordan: A Mixed Method Research Approach

Zeyad Abdulazeez Al-Najaifi, Dorothy Andrews, Omer Ali

University of Southern Queensland, Australia

ABSTRACT

Coopetition strategy means organisations cooperate and compete with each other simultaneously. Research studies have examined this strategy in various industries in different contexts, and even though researchers have emphasised the increasing importance and benefits of coopetition for business today, there has been comparatively little attention paid to the factors that lead to successful sustainable coopetition. In addition, there have been very few studies that have reported on the strategy being used in the tertiary educational sector, and in particular in Jordan. The main objective of this research is to explore the critical success factors for coopetition strategy management in private Jordan Universities. To achieve this objective, mixed method research approach will be used based on a two-phase sequential method. The qualitative phase (Phase one) data collection will consist of semi-structured in-depth interviews organised with 18 participants, selected from the dean's councils of nine private Jordan universities. In phase two (the quantitative phase) a questionnaire will be used to collect data from 355 participants at the management level who can be deemed to be the decision makers and business managers in the organisation. Also, to confirm and provide further understanding on the outcomes from phase one. The contribution of this study will address a gap in the research-based literature regarding the coopetition success factors studies that can contribute to improve the efficiency and effectiveness of universities performance in Higher Education Sector in Jordan.

Keywords: Coopetition, Competition, Cooperation, Coopetition success factors, Coopetition strategy model

1. INTRODUCTION

1.1. Background of study

Coopetition strategy (CS) is an emerging organisational form in the strategic management field still in its early developmental stages (Dagnino & Rocco 2009; Niemczyk & Stańczyk-Hugiet 2014). This form is used to refer to the strategies in which organisations can cooperate and compete to create common value in many aspects (Walley 2007). Nalebuff and Brandenburger (1997) described CS as two or more competing organisations that cooperate to create a bigger business pie. In addition, Luo (2005) defined CS as the phenomena of integrating cooperation and competition. Further, Bouncken et al. (2015) add that CS as an inter-organisational relationship that combines cooperation and competition, and is a reflection of the interdependence among competitors.

CS is important for organisations because of its potential to support innovation initiatives, especially in high technology environments such as universities (Carayannis & Alexander 1999). According to Bengtsson and Johansson (2012) CS can create new opportunities for organisations such as new markets, new customers and even new resources. Furthermore, successful CS has enabled organisations to expand and develop locally or internationally (Bengtsson & Kock 2000; Bigliardi et al. 2011). San Martín-Rodríguez et al. (2005) and Morris et al. (2007) argued that successful CS is an essential strategy to improve organisational performance because it enables them to cooperate in some activities when they need others and to compete when they can stand-alone. More importantly, Niemczyk and Stańczyk-Hugiet (2014) mentioned that successful CS is crucial for the educational sector because this sector needs intensive sharing of resources such as knowledge and infrastructure. This sharing may lead to enhance organisational performance and enable them to obtain sustainable competitive advantage.

Previous research in business has contributed to remove much of the ambiguity surrounding CS (Nalebuff et al. 1996; Lado et al. 1997; Bengtsson & Kock 1999, 2000; Dagnino & Padula 2002b; Zineldin 2004; Niemczyk & Stańczyk-Hugiet 2014).

Also, Ritala (2012); Ritala and Hurmelinna-Laukkanen (2013); Niemczyk and Stańczyk-Hugiet (2014) supported the finding that co-competition success factors (COSFs) are very important to improve organisational performance, however, these factors are still neglected or under researched in the higher education sector (Czachon & Mucha-Kuś 2014; Muijs & Rumyantseva 2014; Niemczyk & Stańczyk-Hugiet 2014). Therefore, this study will focus on the exploration of COSFs in the higher educational sector in Jordan.

1.2. Significance of this study

Whilst there has been recent, rapid growth of CS in many organisations, especially the business sector (Dagnino 2007; De Ngo & Okura 2008; Gnyawali, D. et al. 2008; Bengtsson et al. 2010) there has been a lack of scholarly publications examining sustainable COSFs (Adnett & Davies 2003; Muijs & Rumyantseva 2014; Niemczyk & Stańczyk-Hugiet 2014). Further, one major challenge for almost all sectors is the high cost of failure of CS management, with researchers (Sivadas & Dwyer 2000; Gerwin 2004; Wittmann et al. 2009) reporting failure rates of 70% of competitors using this strategy.

While private universities in the HESJ are using CS they need to consider success factors as the ultimate objective of such a strategy to reduce costs, sharing knowledge, obtain complementary capabilities and achieve sustainable competitive advantages. According to CS studies, improving organisational performance depends on COSFs (Chan 2007; Abdallah 2011; Park 2011; Ruijun & Zhiman 2011). Despite repeated calls that COSFs are important, little attention has been paid to this aspect in CS studies (Zineldin 2004; Chin et al. 2008; Czachon & Mucha-Kuś 2014; Petter et al. 2014; Bouncken et al. 2015).

Previous studies that examine COSFs have paid little attention to the education sector (Cheng & Li 2002; Zineldin 2004; Lam & Chin 2005; Morris et al. 2007; Perera et al. 2016). Considering that the Higher Education Sector in Jordan (HESJ) is a billion-dollar industry and plays a vital role in the Jordan's economy (Ministry of Higher Education in Jordan 2016) and the investment in HESJ is about 9.5% per year (Badran 2014; Sabri 2011) indicates such a study would be beneficial. This is especially the case when according to a number of studies and reports (Sabri 2011; Badran 2014; Ministry of Higher Education in Jordan 2016) universities in Jordan need to undertake work to develop more cooperation with each other to reduce costs and risks, and increase the sharing of knowledge so as to improve their performance. Moreover, the dearth of the COSFs research in CS literature and the high cost of failure management and of maintaining cooperative relationships between competitors provides further justification for this research.

1.3. The Study Problem within Context

Jordan has a rapidly increasing number of students in Higher Education. The numbers have increased between the years 2000/2001 and 2006/2007 from 77,841 to 218,900 students while currently universities have 236,000 students (Sabri 2011; Ministry of Higher Education in Jordan 2016). However, while the numbers are increasing, the authorities in the Ministry of Higher Education in Jordan (MHEJ) have reduced the level of funding to this sector, persuading the sector to act like other business. The reduced level of funding as well as to the lack of resources in this sector may lead universities to increase the level of cooperation with their competitors for many benefits it has the potential to offer, especially in reduced cost and risk. However, as there are limited research studies of CS applied in higher education sectors (Adnett & Davies 2003; Czachon & Mucha-Kuś 2014; Muijs & Rumyantseva 2014; Niemczyk & Stańczyk-Hugiet 2014) especially studies that show critical factors that sustain the success in co-competition strategy, and make this inter-organisational relation successful. An exploration of these factors, which currently enable private Jordan universities to achieve and sustain the success of co-competition strategy, could inform future use of CS to develop and sustain successful growth in this sector.

1.4. Study Contribution

The contribution of this study will be for literature and practical aspects in the strategic management field. *For the literature*, this study will enhance the research relating to CS and COSFs in two ways. Firstly, it will address a current gap in the body of the knowledge regarding how organisations can manage successful CS. Secondly, it will make a contribution to CS research by not only exploring COSFs in education sector, but also by adding and developing a new model of COSFs and managing successful co-competition among PJUs.

For the practical, this study is expected to make a number of contributions. Firstly, it will help universities better understand COSFs that can be used to improve the efficiency and performance such as cost reductions, sharing knowledge, access to new resources and capabilities. Secondly, it will help universities in HESJ to understand and manage successful CS. Finally, the

study is useful for providing CS to Vice Chancellors and top management levels of private Jordan Universities (PJUs) who are responsible for the management of successful cooperation with competitors.

2. LITERATURE REVIEW

2.1. Coopetition Strategy

The word “co-opetition” is a combination of “cooperation” and “competition” intended to name a complex relationship of organisation interdependence between competitors where both these phenomena coexist (Dagnino 2007). Coined in the early ‘90s by Raymond Noorda, Novell’s CEO, to describe a strategy where “you have to compete and cooperate at the same time” (Luo 2007; Ritala 2010) it was some time later that it appeared in the literature. Coopetition terminology was introduced to the strategic management field by Brandenburger and Nalebuff in 1996 (Bagshaw & Bagshaw 2001; Dagnino & Padula 2002a; Luo et al. 2006; Dagnino 2007; Choi et al. 2009; Ritala 2010; Stein 2010; Zhang & Frazier 2011; Katsanakis & Kossyva 2012).

More recent studies have highlighted CS definitions, for example, Dagnino (2007); Dagnino and Rocco (2009); Niemczyk and Stańczyk-Hugiet (2014). In these studies, the definitions of cooperation have been grouped in three parts. *The first group* based on Brandenburger and Nalebuff (1996) and Lado et al. (1997) who agreed that CS is a dynamic balance between cooperation and competition. *The second group* of scholars have viewed coopetition as a paradoxical relationship between independent groups cooperating and competing simultaneously, whereby they cooperate to achieve mutual goals, but at the same time compete with each other as well as with other organisations for the ultimate benefit in the marketplace (Bengtsson & Kock 2000; Zineldin 2004; Luo 2007; Ross Jr & Robertson 2007; Ritala 2010; Gnyawali & Park 2011; Bouncken et al. 2015; Gast et al. 2015; Kedia et al. 2015; Lindström & Polsa 2015; Snow 2015; Song et al. 2015; Czernek & Czakon 2016). *The third group* based on Dagnino & Padula (2002b) & Niemczyk & Stańczyk-Hugiet (2014) who suggested a different definition for CS by introducing the idea of shared interest and goals as a core of the relationship between actors or interdependent organisations. After close examination of the literature, the second group provides a more comprehensive definition of a CS and will be used in this study.

2.2. Coopetition Strategy Types

The literature on CS shows that there are different types of coopetition (Abdallah 2011; Bigliardi et al. 2011). For the purpose of this research, Luo (2004) model will support the researcher in investigating the current relationships between PJUs. This model also identifies four types of CS with regard to the level of competition and cooperation adopted by the actors involved (see Figure 1). This model is adapted from many scholars such as (Luo 2004; Chin et al. 2008; Abdallah 2011; Bigliardi et al. 2011; Park 2011; Perera et al. 2016).

The universities which used competition strategy need to know in which type they are located and how this strategy provides success between competitors. Each type of coopetition strategy presumably needs to specific coopetition success factors and therefore every type in coopetition strategy model could be affected by different factors. In addition, there are critical factors to sustain the success and increase the chance of success. These factors could be very important to make these relationships successful. Therefore, it is useful to know the critical success factors to make these factors work.

2.3. Coopetition Success Factors

Through a comprehensive and intensive literature review of success factors for CS studies, some success factors are highlighted by previous researchers, for example, Morris et al. (2007); Ruijun and Zhiman (2011); Thomason et al. (2013);

High Competition	Type 2 Contender (High competition, Low cooperation)	Type 4 Adapter (High competition, Low cooperation)
	Type 1 Monoplayer (Low competition, Low cooperation)	Type 3 Partner (Low competition, High cooperation)
Low	Low	High

Figure 1: Different types of coopetition strategy model, Source: Luo, 2004, p 437

Lindström and Polska (2015). According to Lindström and Polska (2015) identified COSFs become increasingly important to obtain sustainable competitive advantages and improve organisational performance. Although these factors occurred in different context such as industrial and service sectors, Ruijun and Zhiman (2011) claim it can give instructive direction for an initial exploration of the success factors of a CS for HESJ. Therefore, universities need to identify the critical success factors that increase the chances of successful rate and sustain the successful of coepetition strategy among PJUs. This research will explore the success factors of CS, which have been found in the literature as they may or may not apply to the Higher Education sector.

2.4. The Gap in the Literature

As indicated earlier, research on CS is still at a conceptual phase (Dagnino & Rocco 2009) and studies are relatively small and fragmented (Yami 2010). Previous studies have explored many aspects essential for CS, for instance, the relationship between CS and organisational performance (Ritala et al. 2008), CS and innovation (Quintana-Garcia & Benavides-Velasco 2004), CS and competitive behaviour (Gnyawali & He 2006). In the same context CS has been studied in avariety industries, such as transportation (Gnyawali & Park 2009; Himpel 2012), finance (Czakon 2009; Gonggrijp et al. 2013), tourism (von Friedrichs Grängsjö 2003; Kylanen & Mariani 2012), healthcare (Barretta 2008; Peng & Bourne 2009), aerospace (Salvetat & Géraudel 2012), as well as information technology (Gueguen 2009; Pellegrin-Boucher et al. 2013).

Previous studies have been conducted on COSFs in various sectors (Morris et al. 2007; Chin et al. 2008; Ruijun & Zhiman 2011; Thomason et al. 2013; Lindström & Polska 2015; Perera et al. 2016). These factors have still not been examined in the educational sector (Czachon & Mucha-Kuś 2014; Muijs & Rumyantseva 2014; Niemczyk & Stańczyk-Hugiet 2014) particularly in HESJ. There were rare studies of CS applied in higher education sectors (Adnett & Davies 2003; Czachon & Mucha-Kuś 2014; Muijs & Rumyantseva 2014; Niemczyk & Stańczyk-Hugiet 2014) but they constitute only about 4% of total studies in coepetition researches in general (Czachon & Mucha-Kuś 2014). In addition, CS studies have been adopted by different scholars in different countries but these studies were still rare especially in Asia, including Jordan (Czachon & Mucha-Kuś 2014). Thus, this study will attempt to clarify the ambiguity surrounding COSFs by exploring these factors in PJUs.

3. THE PROPOSED MODEL STAGES

This study will follow three stages to provide a proposed conceptual model to guide this research in exploring the potential success factors for CS in HESJ.

3.1. Stage 1: Chin, Chan & Lam Model

On the basis of the information emerging from the literature review, stage 1 of the proposed research framework draws upon Chin model (see Figure 2). The purpose of using this model is that it covers many of the coepetition success factors, it has been applied in industrial sector in Hong Kong and had the validity and reliability as other researchers in other sectors like services sector have used the Chin model in their studies such as (Ruijun & Zhiman 2011; Alves 2013; Lindström & Polska 2015).

3.2. Stage 2: Factors from other Studies

Based on the intensive literature review of other studies, the researcher has identified some factors that were not mentioned in Chin model. These factors such as organisational resources and capabilities, flexibility to change and management perception to coepetition (see table 1) provide a more in depth understanding for the proposed model for this study.

3.3. Stage 3: The Proposed Model

To guide the process of this research, a framework for exploring COSFs has been adapted by merging key factors and components from the two previous stages and as presented in Figure 3. This research framework is based on the assumption that COSFs have been mentioned in Chin model and in addition to the other researchers who studied CS. However, as there have been few studies in the education sector this research will adopt modified Chin model (Figure 3) to provide this research proposed conceptual framework. There is an expectation that other factors could emerge as a result of this research and assist in developing a model for success CS management.

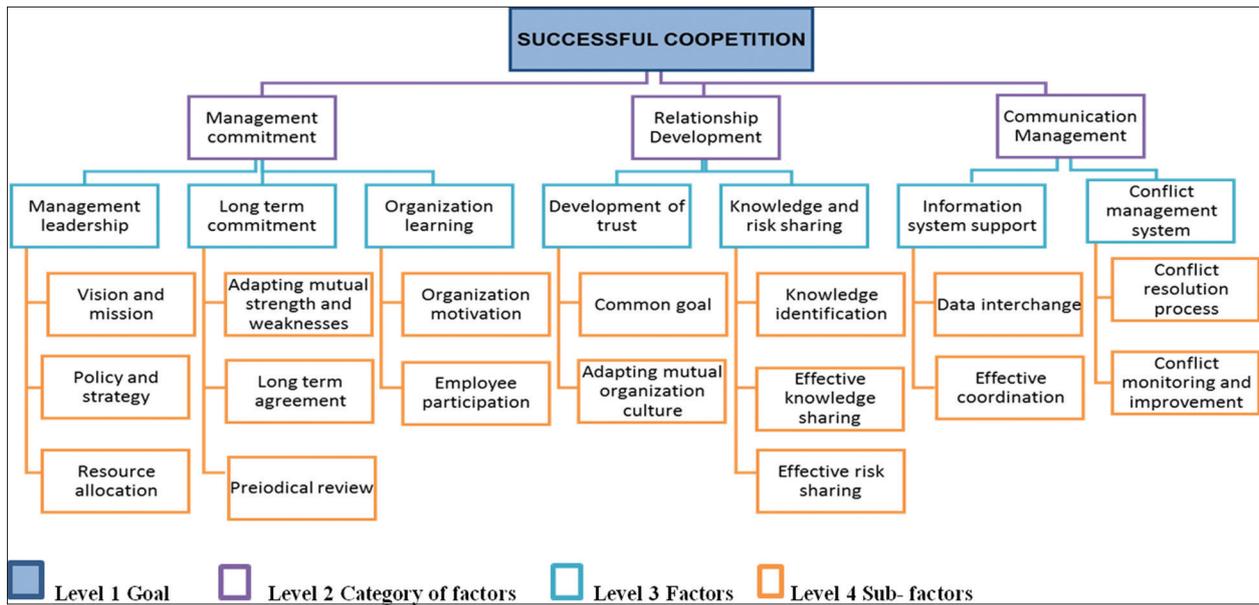


Figure 2: Chin, Chan & Lam Model (2008); Source (Chin, Chan & Lam 2008) p.442

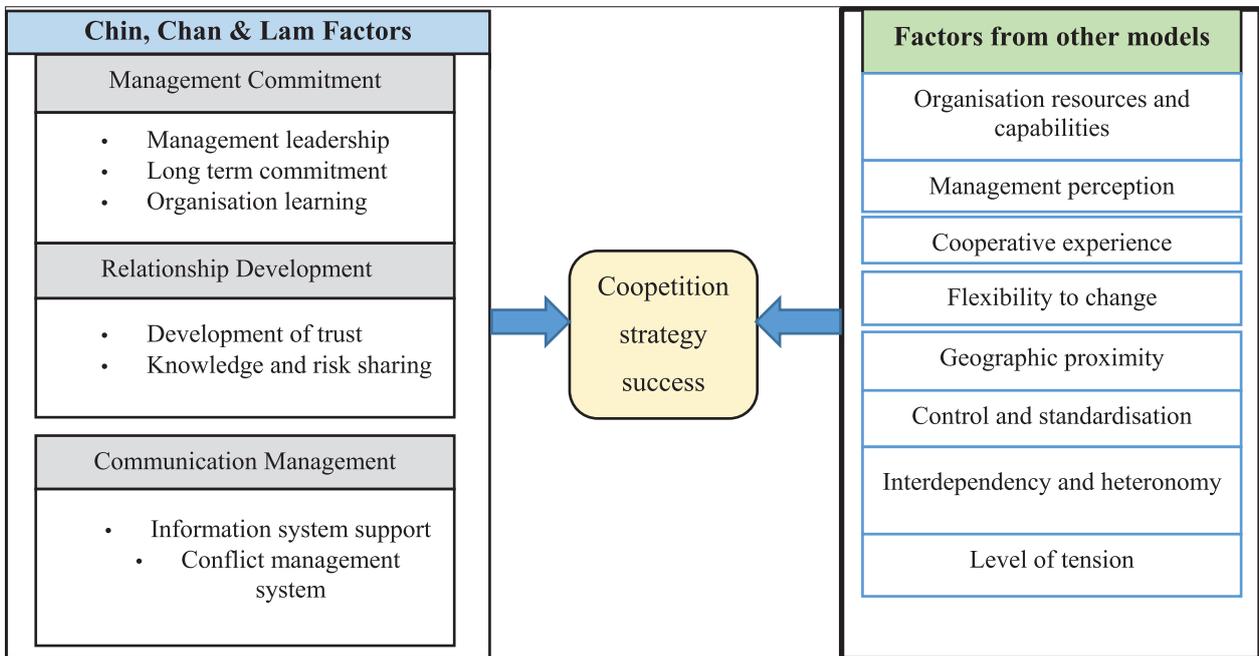


Figure 3: Proposed Model adapted from Chin, Chan & Lam Model (2008); and Other Researchers outlined in Table 1

4. RESEARCH METHODOLOGY

4.1. Research Methods

This study will use a sequential mixed methods (Venkatesh et al. 2013; Borbasi & Jackson 2015). This method has been selected because the purpose of this study is to explore and then complement and confirm information. When the purpose of the study is to explore and confirm information, mixed method can be used in order to assess the credibility of inferences obtained from one approach. According to (Greene et al. 1989; Creswell et al. 2003; Tashakkori & Teddlie 2003; Bhattacharjee & Premkumar 2004; Tashakkori & Teddlie 2008; Venkatesh et al. 2013) quantitative study is conducted to confirm the finding from a qualitative study. In addition, mixed methods approach is used in order to gain complementary views about the same phenomena. The qualitative study is used to gain additional and depth insight for the finding of study then the finding will be confirmed by quantitative study (Greene et al. 1989; Creswell et al. 2003; Tashakkori & Teddlie 2003; Bhattacharjee & Premkumar 2004; Soffer & Hadar 2007; Tashakkori & Teddlie 2008; Venkatesh et al. 2013). Therefore, as a sequence, this study has proposed a model and mentioned the success factors from different sectors except educational sector. Then the study

Table 1: Factors from other studies

Factors	Authors	Theory
Organisational resources and capabilities	(Lee 2001;Walley 2007; Wu 2007 ; Bengtsson <i>et al.</i> 2010 ; Ruijun & Zhiman 2011; Gnyawali and Park 2011; Petter <i>et al.</i> 2014; Nuojua, Tähtinen & Palo 2014; Perera, Weerawardena & Fonseka 2016; Bengtsson <i>et al.</i> (2016).	Resource based view theory
Flexibility to change	(Burn & Szeto 2000; Terry Anthony Byrd 2000); Cheng & Li 2002; (Nadkarni & Narayanan 2007); (Jiang <i>et al.</i> 2008; Wu <i>et al.</i> 2009; Niu 2010; Zhou & Wu 2010); Petter <i>et al.</i> 2014)	Inter- organisational theory
Geographic proximity	(Asheim & Gertler 2005; Ganesan <i>et al.</i> 2005; Fontana <i>et al.</i> 2006; Robst <i>et al.</i> 2007); (Abramovsky <i>et al.</i> 2007); Ruijun & Zhiman 2011; (Laursen <i>et al.</i> 2011) ; Nuojua, Tähtinen & Palo 2014; Petter <i>et al.</i> 2014)	Transactional cost theory
Management perception to cooperation.	(Cheng & Li 2002; (Hornsby <i>et al.</i> 2002); (Elsbach 2003) ; (Powell <i>et al.</i> 2006) ; Walley 2007;(Wu <i>et al.</i> 2009); (Gnyawali & Park 2011); (Jankowska & Bartosik-Purgat 2012); (Bergman <i>et al.</i> 2017)	Inter-organisational theory
Tension	(Bradford <i>et al.</i> 2004; Eckert & Rinehart 2005; Chen <i>et al.</i> 2007; Gnyawali, D. R. <i>et al.</i> 2008; Li & Ferreira 2008; Bengtsson <i>et al.</i> 2010; Fang <i>et al.</i> 2011; Tidström 2014; Bengtsson & Kock 2015)	Inter-organisational theory
Competitive experience within the organisations	(Jiang <i>et al.</i> 2008; Pansiri 2008; Buckley <i>et al.</i> 2009; Luo & Deng 2009; Wu <i>et al.</i> 2009; Chang <i>et al.</i> 2010; Hong <i>et al.</i> 2010; Osarenkhoe 2010; Fang 2011; Gnyawali & Park 2011)	Inter-organisational theory
Control and standardization	(Zineldin 2004);(Luo 2008; Pansiri 2008; Costa <i>et al.</i> 2009; Wu <i>et al.</i> 2009; Catalina 2010; Moeller 2010; Niu 2010; Rank <i>et al.</i> 2010) Petter <i>et al.</i> 2014)	Inter-organisational theory
Interdependence and heteronomy	(Zineldin <i>et al.</i> 1997; Narula 2002; Belderbos <i>et al.</i> 2004; Zineldin 2004; Caglio & Ditillo 2008; Sammarra & Biggiero 2008; Peng 2011)	Inter-organisational theory

Source: the author

will explore and then complement and confirm these factors in educational sector. There is an expectation that this study will find others factors in educational sector in Jordan.

4.2. Research Scope, Sample and Participants

There are nineteen PJUs and these universities are a very important part of HESJ (Ministry of Higher Education in Jordan 2016). Due to the financial and time constraints of this project, it is impossible to investigate the phenomena in all PJUs (Zikmund et al. 2012). Therefore, this study will focus on nine universities located in Amman, the capital of Jordan. These nine universities were selected as they are the leading of the private Jordan universities and have a significant impact of the national economy (Badran 2014; Sabri 2011). Further, as the focus of this study is on CS success factors, the researcher established which universities cooperate and compete with each other's and the domains of this cooperation and competition by accessing the database of the Ministry of Higher Educational in Jordan MHEJ. Table 2 shows the result of this scanning and analysis.

Purposive sampling technique based on criteria will be used in this study. According to Zikmund et al. (2012):

[This technique is] 'a nonprobability sampling technique in which an experienced individual selects the sample based on personal judgment about some appropriate characteristic of the sample member. Researchers select samples that satisfy their specific purpose, even if it is not fully representative' (p. 393).

Furthermore, Marshall (1996) noted that if the study aims to explore or develop a framework depending on several factors, purposeful sampling is the most common technique, therefore different sample sizes will be used for each Phase in this study.

The participants in this study will be drawn from the top management level. The study justifies this selection on three grounds. First, the top management level of universities have the authority to make a strategic decisions and graft a strategic plan in universities (Durmaz & Düsün 2016) and, they have the authority for vision, actions, methods, and tactics related to actions

to be taken (Huber & Power 1985). Second, they have a good experience in HESJ and a high level of knowledge and skills about the work in their faculties. Third, they are the main person that makes decisions related to their universities and have the governance to take these decisions (Ministry of Higher Education in Jordan 2016).

4.3. The Phases of the Sequential Mixed Method

4.3.1. Phase 1: Qualitative Method

4.3.1.1. Selection Criteria, Participants

A qualitative Phase will be used to explore factors, gain additional and depth insight for the finding of study. As the research objective is to understand the occurrence of a phenomena, then as proposed by Zikmund et al. (2012), qualitative tools are appropriate. The participants selected were required to have worked for at least three years in this position and have a PhD degree of education. This will ensure that they will be able to assist in capturing the information and to build a comprehensive picture about COSFs in HESJ. 102 Deans work in nine private universities (see Table 3) and this study takes a sample of 18 (2 Deans from each university). This size is expected to be sufficient for the purpose of this study (Zikmund et al., 2012). However, the sample will be increased or decreased according to the saturation level. The saturation level will be reached when no novel information is added (Guest, Bunce, & Johnson, 2006).

Participants will be recruited by an invitation letter sent to the dean councils by email, requesting their participation in this study. From the positive responses the researcher will make a random selection of 18 deans, ensuring a cross section of universities in the sample. Once agreed the participants prior to the interview will be asked to sign the consent form as outlined in the approval document and contacted to arrange a suitable date and time for the interview.

Table 2: Scanning and analysing method for private Jordan universities websites

University code	Website	*Cooperation	*Competition	Both
AAU	www.aau.edu.jo	√	√	√
MEU	www.meu.edu.jo	√	√	√
AMM	www.ammanu.edu.jo	√	√	√
ASU	www.asu.edu.jo	√	√	√
PHI	www.philadelphia.edu.jo	√	√	√
IU	www.iu.edu.jo	√	√	√
UOP	www.uop.edu.jo	√	√	√
ZUJ	www.zuj.edu.jo	√	√	√
PSU	www.psut.edu.jo	√	√	√

Source: author based on universities sites

*Areas of Cooperation: collaborative teaching, research projects, courses, conferences, seminars, symposia,

*Areas of Competition: Students, quality assurance, universities ranking, academic reputation, and students.

Table 3: Numbers of participants of the study

University code	Trustees Councils	Universities Councils	Deans Councils
AAU	15	12	8
MEU	15	17	13
AMM	15	15	11
ASU	15	14	11
PU	14	15	15
IU	16	16	12
PU	15	9	11
ZUJ	15	12	12
PSU	14	9	9
Total	134	119	102

Total numbers of top management level: 355

Source: author based on private Jordan universities sites

4.3.1.2. Data Collection and Analysis

A semi-structured interview with guiding questions will be used to collect data from the selected participants and achieve study objectives. Russell (2002) advises that semi-structured interviewing have a freewheeling quality of unstructured interviewing and thus needs similar skills. Sweet (2002) suggests that qualitative researchers prefer to use interview techniques as they help uncover the views of participants. An interview also allows for immediate clarification of any phrase or word used by both the respondent and researcher. Further, the semi-structured and in-depth interview will enable the researcher to explore and further illuminate factors that emerge during the interview.

The interviews were designed to be either face to face and by phone. This enabled flexibility, cost, speed issues and each interview will take approximately 45-60 minutes. An opening question followed by probing questions will help to explore and obtain a detailed information about the phenomena of interest (Qu & Dumay 2011; Zikmund et al. 2012). All participants will be invited to answer freely in their own words, which will help in the exploration of the main objectives in the responses. These interviews will be audio recorded based on the agreement between the researchers and participants. Transcribed verbatim.

Transcribing the data word by word is a critical step in preparing for accurate data analysis. To ensure the quality of the transcription in this study, the researcher will send one interview transcript in Arabic and the same one in English (translated by this researcher) to a professional translator. Once the quality of the English transcript is ensured, the researcher will apply the same transcription and translation approach to all other eighteen interviews. By following this approach, the researcher will be able to retain the quality and accuracy of data while conducting the analysis.

Transcribed interviews will be analysed using Leximancer 4.5. Content analysis will enable the analysis of written, verbal or visual communication messages (Hsieh & Shannon 2005; Elo & Kyngäs 2008). This analysis is expected to provide information that will add further clarifying information to Phase 2. The purpose of qualitative data analysis as recommended by Polit-O'Hara and Beck (2006) is "to organise, provide structure to and elicit meaning from the data" (p. 397). However, the analytical methods used will be based on the skills, insight, analytical abilities and style of the investigator (Hoskins & Mariano 2004).

4.3.2. Phase 2: Quantitative

4.3.2.1. Selection Criteria, participants

A quantitative method (Phase 2) will be used to confirm the results of the qualitative method (Phase1) and to develop the questionnaire survey. The participants included in Phase 1 and 2 were required to have worked for at least three years in high level of management (Trustees, universities, and Dean's councils) and have a bachelor or above Degree in their profession. For the quantitative phase, the sample is larger (Marshall, 1996). The number of top-level management in nine private universities is about 355 staff members (refer Table 3). In Phase 2 of the study all members of top management level will be invited to participate in the questionnaire. This should ensure a high response rate (Zikmund et al., 2012). The researcher assumes that the response rate will be about 50-60%. However, several techniques will be used to increase the response rate such a personal invitation, follow-up email, and reminders (Fan & Yan, 2010; Zikmund et al., 2012). Managers in top management level will be recruited through using a hyperlink to the secure questionnaire.

4.3.3. Data Collection and Analysis

Based on the research objectives of this study, a draft of questionnaire will be formulated by researcher and checked by supervisory team. As the participants use English as their second language, the questionnaire will be translated from English to Arabic by a professional translator. This will ensure that participants will understand the questions and be able to answer them appropriately.

The questionnaire will be designed to obtain information from participants by using structured closed questions (Schneider 2003). The content of the questionnaire will be drawn from the qualitative study to design a list of questions using Likert seven scales. The nature of the information required will be made clear to the respondents in order to ensure accurate feedback. Consideration will be paid to the ease of use and the flow of questions to encourage the participants to complete each part of the questionnaire.

5. CONCLUSION

Coopetition strategy is believed to be an essential strategy in the higher education sector in Jordan because it can create new opportunities for universities such as new markets, new customers and even new resources. Universities also have adopted

these strategy in different level to improve their performance. However, exploring coepetition success factors is considered to be the main issue in this field. In the context of Jordan, this issue is believed to be more complicated because the decreasing the level of government funding to this sector as well as the rare of resources and increase the intensive competition among Jordan universities. In the same context coepetition strategy has been studied in a variety industries, such as transportation, finance, tourism, and healthcare as well as information technology. In spite of these attempts, there remain a strong arguments about the factors which are most effective to achieve coepetition success.

Based on prior work, a proposed model has been designed to explore coepetition success factors in Jordan universities context. Four views have been considered in designing this model the causality approach has been adopted to show the causal relationships among the constructs of the model. The study will be conducted with top level management group of private Jordan universities. Sequential mixed method approach has been designed to collect data; each one is collected to a specific participants group. The diversity of their opinions will shape a clear picture about the factors affecting coepetition strategy success.

A recognised limitation of this study is the reliance on data from a private universities institutions in Jordan. Temporal, financial and access constraints restrict the scope of the research sample. However, the researcher will recommend that the proposed model and instruments be tested and further refined in the future with different institutions and with different context. This work benefits universities and non-educational organisations that use coepetition strategy to identify the critical success factors of coepetition strategy in the Jordan universities.

6. REFERENCES

- Abdallah, F 2011, 'Co-opetition: Strategy and performance of firms in standard setting organizations. The case of the postal sector', *École polytechnique fédérale de lausanne*.
- Abramovsky, L, Harrison, R & Simpson, H 2007, 'University research and the location of business R&D', *The Economic Journal*, vol. 117, no. 519.
- Adnett, N & Davies, P 2003, 'Schooling reforms in England: from quasi-markets to co-opetition?', *Journal of Education Policy*, vol. 18, no. 4, pp. 393-406.
- Alves, JA 2013, 'Partner Selection in Domestic Co-Opetition: The Effect of Personal Ties-An Exploratory Analysis on Factors Leading to the Choice of Partners in Co-Opetition'.
- Asheim, BT & Gertler, MS 2005, 'The geography of innovation: regional innovation systems', in *The Oxford handbook of innovation*.
- Badran, A 2014, 'New trends in higher education in Jordan,' in *Education, economic and development 4th arab-turkish congress of social sciences*,: Proceedings of the Education, economic and development 4th arab-turkish congress of social sciences, Arab Thought Forum Amman – Jordan (ed.), Turkey.
- Bagshaw, M & Bagshaw, C 2001, 'Co-opetition applied to training-a case study', *Industrial and Commercial Training*, vol. 33, no. 5, pp. 175-177.
- Belderbos, R, Carree, M, Diederen, B, Lokshin, B & Veugelers, R 2004, 'Heterogeneity in R&D cooperation strategies', *International Journal of Industrial Organization*, vol. 22, no. 8-9, pp. 1237-1263.
- Bengtsson, M & Kock, S 1999, 'Cooperation and competition in relationships between competitors in business networks', *Journal of Business & Industrial Marketing*, vol. 14, no. 3, pp. 178-194.
- Bengtsson, M & Kock, S 2000, 'Coopetition" in business Networks—to cooperate and compete simultaneously', *Industrial marketing management*, vol. 29, no. 5, pp. 411-426.
- Bengtsson, M & Johansson, M 2012, 'Managing coepetition to create opportunities for small firms', *International small business journal*, vol. 0, no. 0, pp. 1-27.
- Bengtsson, M & Kock, S 2015, 'Tension in Co-opetition', in *Creating and delivering value in marketing*, Springer, pp. 38-42.
- Bengtsson, M, Raza-Ullah, T & Vanyushyn, V 2016, 'The coepetition paradox and tension: The moderating role of coepetition capability', *Industrial marketing management*, vol. 53, pp. 19-30.
- Bengtsson, M, Wilson, T, Bengtsson, M, Eriksson, J & Wincent, J 2010, 'Co-opetition dynamics-an outline for further inquiry', *Competitiveness Review: An International Business Journal*, vol. 20, no. 2, pp. 194-214.
- Bergman, J-P, Hajikhani, A, Ritala, P, Blomqvist, K & Ahonen, T 2017, 'Managerial perception on technology driven industry change and competitive advantage', in *ISPIM Innovation Symposium*, The International Society for Professional Innovation Management (ISPIM), p. 1-10.
- Bhattacharjee, A & Premkumar, G 2004, 'Understanding changes in belief and attitude toward information technology usage: a theoretical model and longitudinal test', *MIS quarterly*, pp. 229-254.
- Bigliardi, B, Dormio, AI & Galati, F 2011, 'Successful co-opetition strategy: evidence from an Italian consortium', *International Journal of Business, Management and Social Sciences*, vol. 2, no. 4, pp. 1-8.
- Borbasi, S & Jackson, D 2015, *Navigating the maze of research: Enhancing nursing and midwifery practice*, Elsevier Health Sciences.
- Bouncken, RB, Gast, J, Kraus, S & Bogers, M 2015, 'Coopetition: a systematic review, synthesis, and future research directions', *Review of Managerial Science*, pp. 1-25.

- Bradford, KD, Stringfellow, A & Weitz, BA 2004, 'Managing conflict to improve the effectiveness of retail networks', *Journal of Retailing*, vol. 80, no. 3, pp. 181-195.
- Brandenburger, AM & Nalebuff, BJ 1996, *Co-opetition*. New York, Bantam Doubleday Dell Publishing Group, Inc.
- Buckley, PJ, Glaister, KW, Klijn, E & Tan, H 2009, 'Knowledge accession and knowledge acquisition in strategic alliances: the impact of supplementary and complementary dimensions', *British Journal of Management*, vol. 20, no. 4, pp. 598-609.
- Burn, JM & Szeto, C 2000, 'A comparison of the views of business and IT management on success factors for strategic alignment', *Information & Management*, vol. 37, no. 4, pp. 197-216.
- Caglio, A & Dittillo, A 2008, 'A review and discussion of management control in inter-firm relationships: Achievements and future directions', *Accounting, Organizations and Society*, vol. 33, no. 7-8, pp. 865-898.
- Carayannis, EG & Alexander, J 1999, 'Winning by co-opeting in strategic government-university-industry R&D partnerships: the power of complex, dynamic knowledge networks', *The Journal of Technology Transfer*, vol. 24, no. 2-3, pp. 197-210.
- Catalina, R 2010, 'Need and potential risks of strategic alliances for competing successfully', *Economia. Seria Management*, vol. 13, no. 1, pp. 165-199.
- Chan, L 2007, 'Development of critical success factors and assessment system for co-opetition management', City University of Hong Kong.
- Chang, SC, Tu, CJ, Li, T-J & Tsai, B-K 2010, 'Social capital, cooperative performance, and future cooperation intention among recreational farm area owners in Taiwan', *Social Behavior and Personality: an international journal*, vol. 38, no. 10, pp. 1409-1429.
- Chen, M-J, Kuo-Hsien, S & Tsai, W 2007, 'Competitive tension: The awareness-motivation-capability perspective', *Academy of Management journal*, vol. 50, no. 1, pp. 101-118.
- Cheng, EW & Li, H 2002, 'Construction partnering process and associated critical success factors: quantitative investigation', *Journal of management in engineering*, vol. 18, no. 4, pp. 194-202.
- Chin, K-S, Chan, BL & Lam, P-K 2008, 'Identifying and prioritizing critical success factors for co-opetition strategy', *Industrial Management & Data Systems*, vol. 108, no. 4, pp. 437-454.
- Choi, P, Garcia, R & Friedrich, C 2009, 'The drivers for collective horizontal co-opetition: a case study of screwcap initiatives in the international wine industry', *International Journal of Strategic Business Alliances*, vol. 1, no. 3, pp. 271-290.
- Costa, AC, Bijlsma-Frankema, K & de Jong, B 2009, 'The role of social capital on trust development and dynamics: implications for cooperation, monitoring and team performance', *Social Science Information*, vol. 48, no. 2, pp. 199-228.
- Creswell, J, Tashakkori, A, Jensen, K & Shapley, K 2003, 'Teaching mixed methods research: Practices, dilemmas, and challenges', *Handbook of mixed methods in social and behavioral research*, pp. 619-637.
- Czachon, W & Mucha-Kuś, K 2014, 'Coopetition Research Landscape-a Systematic Literature Review 1997-2010', *Journal of Economics & Management*, vol. 17, pp. 122-150.
- Czernek, K & Czakon, W 2016, 'Trust-building processes in tourist co-opetition: The case of a Polish region', *Tourism Management*, vol. 52, pp. 380-394.
- Dagnino, BG 2007, 'Preface: Coopetition Strategy—Toward a New Kind of Inter-Firm Dynamics?', *International Studies of Management & Organization*, vol. 37, no. 2, pp. 3-10.
- Dagnino, BG & Padula, G 2002a, 'Coopetition strategy', *A new kind of interfirm dynamics for value creation. Coopetition strategy. Towards a new kind of Interfirm dynamics*.
- Dagnino, BG & Padula, G 2002b, 'Coopetition strategic: towards a new kind of interfirm dynamics', in *The European Academy of Management. Stockholm: Second annual conference-innovative research in management*.
- Dagnino, BG & Rocco, E 2009, *Coopetition strategy: theory, experiments and cases*, Routledge.
- De Ngo, D & Okura, M 2008, 'Coopetition in a mixed duopoly market', *Economics Bulletin*, vol. 12, no. 20, pp. 1-9.
- Durmaz, Y & Düşün, ZD 2016, 'Importance of Strategic Management in Business', *Expert Journal of Business and Management*, vol. 4, no. 1, pp. 38-45.
- Eckert, JA & Rinehart, LM 2005, 'CONSTRUCTIVE CONFLICT OUTCOMES: CONCEPTUALIZATION, MEASUREMENT AND INITIAL VALIDITY', *Marketing Management Journal*, vol. 15, no. 2.
- Elo, S & Kyngäs, H 2008, 'The qualitative content analysis process', *Journal of advanced nursing*, vol. 62, no. 1, pp. 107-115.
- Elsbach, KD 2003, 'Organizational perception management', *Research in organizational behavior*, vol. 25, pp. 297-332.
- Fang, E 2011, 'The effect of strategic alliance knowledge complementarity on new product innovativeness in China', *Organization science*, vol. 22, no. 1, pp. 158-172.
- Fang, S-R, Chang, Y-S & Peng, Y-C 2011, 'Dark side of relationships: A tensions-based view', *Industrial marketing management*, vol. 40, no. 5, pp. 774-784.
- Fontana, R, Geuna, A & Matt, M 2006, 'Factors affecting university-industry R&D projects: The importance of searching, screening and signalling', *Research Policy*, vol. 35, no. 2, pp. 309-323.
- Ganesan, S, Malter, AJ & Rindfleisch, A 2005, 'Does distance still matter? Geographic proximity and new product development', *Journal of Marketing*, vol. 69, no. 4, pp. 44-60.
- Gast, J, Filser, M, Gundolf, K & Kraus, S 2015, 'Coopetition research: towards a better understanding of past trends and future directions', *International Journal of Entrepreneurship and Small Business*, vol. 24, no. 4, pp. 492-521.
- Gerwin, D 2004, 'Coordinating new product development in strategic alliances', *Academy of Management Review*, vol. 29, no. 2, pp. 241-257.
- Gnyawali, D, He, J & Madhavan, R 2008, 'Co-opetition: promises and challenges', *21st Century Management: a Reference Handbook*, pp. 386-398.

- Gnyawali, DR & Park, B-JR 2011, 'Co-opetition between giants: Collaboration with competitors for technological innovation', *Research Policy*, vol. 40, no. 5, pp. 650-663.
- Gnyawali, DR, He, J & Madhavan, R 2008, 'Co-opetition: promises and challenges', *21st Century Management: a Reference Handbook*, pp. 386-398.
- Greene, JC, Caracelli, VJ & Graham, WF 1989, 'Toward a conceptual framework for mixed-method evaluation designs', *Educational evaluation and policy analysis*, vol. 11, no. 3, pp. 255-274.
- Hong, J, Shao-jie, Z & Yu, H 2010, 'Research on stability of competitive strategic alliance by analytic hierarchy process (AHP)', in *Management Science and Engineering (ICMSE), 2010 International Conference on, IEEE*, pp. 631-645.
- Hornsby, JS, Kuratko, DF & Zahra, SA 2002, 'Middle managers' perception of the internal environment for corporate entrepreneurship: assessing a measurement scale', *Journal of business Venturing*, vol. 17, no. 3, pp. 253-273.
- Hoskins, CN & Mariano, C 2004, *Research in nursing and health: Understanding and using quantitative and qualitative methods*, vol. 23, Springer Publishing Company.
- Hsieh, H-F & Shannon, SE 2005, 'Three approaches to qualitative content analysis', *Qualitative health research*, vol. 15, no. 9, pp. 1277-1288.
- Huber, GP & Power, DJ 1985, 'Retrospective reports of strategic-level managers: Guidelines for increasing their accuracy', *Strategic Management Journal*, vol. 6, no. 2, pp. 171-180.
- Jankowska, B & Bartosik-Purgat, M 2012, 'Perceptions of the results of cooperation with rivals-the perspective of Danish, Japanese and Polish companies. Does the cultural background matter?', *The Poznan University of Economics Review*, vol. 12, no. 4, p. 14-24.
- Jiang, X, Li, Y & Gao, S 2008, 'The stability of strategic alliances: Characteristics, factors and stages', *Journal of International Management*, vol. 14, no. 2, pp. 173-189.
- Katsanakis, I & Kosyva, D 2012, 'C-Business: A Theoretical Framework for the implementation of Co-opetition Strategy in E-Business', *Procedia-Social and Behavioral Sciences*, vol. 58, pp. 259-268.
- Kedia, BL, Rhew, ND, Gaffney, NT & Clampit, JA 2015, 'Emerging Market Multinationals: Coopetition for Global Growth', *Thunderbird International Business Review*.
- Lado, AA, Boyd, NG & Hanlon, SC 1997, 'Competition, cooperation, and the search for economic rents: a syncretic model', *Academy of Management Review*, vol. 22, no. 1, pp. 110-141.
- Lam, P-K & Chin, K-S 2005, 'Identifying and prioritizing critical success factors for conflict management in collaborative new product development', *Industrial marketing management*, vol. 34, no. 8, pp. 761-672.
- Laursen, K, Reichstein, T & Salter, A 2011, 'Exploring the effect of geographical proximity and university quality on university–industry collaboration in the United Kingdom', *Regional studies*, vol. 45, no. 4, pp. 507-523.
- Li, D & Ferreira, MP 2008, 'Partner selection for international strategic alliances in emerging economies', *Scandinavian Journal of Management*, vol. 24, no. 4, pp. 308-319.
- Lindström, T & Polska, P 2015, 'Coopetition close to the customer—A case study of a small business network', *Industrial marketing management*.
- Luo, X & Deng, L 2009, 'Do birds of a feather flock higher? The effects of partner similarity on innovation in strategic alliances in knowledge-intensive industries', *Journal of Management Studies*, vol. 46, no. 6, pp. 1005-1030.
- Luo, X, Slotegraaf, RJ & Pan, X 2006, 'Cross-functional "coopetition": The simultaneous role of cooperation and competition within firms', *Journal of Marketing*, vol. 70, no. 2, pp. 67-80.
- Luo, Y 2004, 'A coopetition perspective of MNC–host government relations', *Journal of International Management*, vol. 10, no. 4, pp. 431-451.
- Luo, Y 2005, 'Toward coopetition within a multinational enterprise: a perspective from foreign subsidiaries', *Journal of World Business*, vol. 40, no. 1, pp. 71-90.
- Luo, Y 2007, 'A coopetition perspective of global competition', *Journal of World Business*, vol. 42, no. 2, pp. 129-144.
- Luo, Y 2008, 'Procedural fairness and interfirm cooperation in strategic alliances', *Strategic Management Journal*, vol. 29, no. 1, pp. 27-46.
- Ministry of Higher Education in Jordan 2016, 'Law No. (20) and its Amendments Jordanian Universities Law,2009'.
- Ministry of Higher Education and Scientific Research 2016, The Hashemite Kingdom of Jordan Ministry of Higher Education and Scientific Research, <http://www.mohe.gov.jo/en/Pages/default.aspx>.
- Ministry of Higher Education in Jordan 2016, Ministry of Higher Education in Jordan, viewed 22/9/2016, <<http://www.mohe.gov.jo/ar/pages/BriefMohe1.aspx>>.
- Moeller, K 2010, 'Partner selection, partner behavior, and business network performance: An empirical study on German business networks', *Journal of Accounting & Organizational Change*, vol. 6, no. 1, pp. 27-51.
- Morris, MH, Koçak, A & Özer, A 2007, 'Coopetition as a Small Business Strategy: Implications for Performance.', *Journal of Small Business Strategy*, vol. 18, no. 1, pp. 35-55.
- Muijs, D & Rummyantseva, N 2014, 'Coopetition in education: Collaborating in a competitive environment', *Journal of Educational Change*, vol. 15, no. 1, pp. 1-18.
- Nadkarni, S & Narayanan, VK 2007, 'Strategic schemas, strategic flexibility, and firm performance: The moderating role of industry clockspeed', *Strategic Management Journal*, vol. 28, no. 3, pp. 243-270.
- Nalebuff, BJ & Brandenburger, AM 1997, 'Co-opetition: Competitive and cooperative business strategies for the digital economy', *Strategy & leadership*, vol. 25, no. 6, pp. 28-33.
- Nalebuff, BJ, Brandenburger, A & Maulana, A 1996, *Co-opetition*, HarperCollinsBusiness London.
- Narula, R 2002, 'R&D collaboration by SMEs: some analytical issues and evidence', *Contractor, FJ and In Contractor, FJ and Lorange, P.(2002). Cooperative strategies and alliances. Emerald Group Publishing*, pp. 439-460.

- Niemczyk, J & Stańczyk-Hugiet, E 2014, 'Cooperative and Competitive Relationships in High Education Sector in Poland', *Journal of Economics & Management*, vol. 17, pp. 5-23.
- Niu, K-H 2010, 'Industrial cluster involvement and organizational adaptation: An empirical study in international industrial clusters', *Competitiveness Review: An International Business Journal*, vol. 20, no. 5, pp. 395-406.
- Osarenkhoe, A 2010, 'A study of inter-firm dynamics between competition and cooperation—A co-competition strategy', *Journal of Database Marketing & Customer Strategy Management*, vol. 17, no. 3-4, pp. 201-221.
- Pansiri, J 2008, 'The effects of characteristics of partners on strategic alliance performance in the SME dominated travel sector', *Tourism Management*, vol. 29, no. 1, pp. 101-115.
- Park, B-JR 2011, 'The Effects of Co-competition and Co-competition Capability on Firm Innovation Performance'.
- Peng, T-JA 2011, 'Resource fit in inter-firm partnership: intellectual capital perspective', *Journal of Intellectual Capital*, vol. 12, no. 1, pp. 20-42.
- Perera, C, Weerawardena, R & Fonseka, A 2016, 'Factors Affecting the Success of Co-competition in the Sri Lankan Banking Industry'.
- Petter, RRH, Resende, LM, de Andrade Júnior, PP & Horst, DJ 2014, 'Systematic review: an analysis model for measuring the cooperative performance in horizontal cooperation networks mapping the critical success factors and their variables', *The Annals of Regional Science*, vol. 53, no. 1, pp. 157-178.
- Polit-O'Hara, D & Beck, CT 2006, *Essentials of nursing research: Methods, appraisal, and utilization*, vol. 1, Lippincott Williams & Wilkins.
- Powell, TC, Lovallo, D & Caringal, C 2006, 'Causal ambiguity, management perception, and firm performance', *Academy of Management Review*, vol. 31, no. 1, pp. 175-196.
- Qu, SQ & Dumay, J 2011, 'The qualitative research interview', *Qualitative Research in Accounting & Management*, vol. 8, no. 3, pp. 238-264.
- Rank, ON, Robins, GL & Pattison, PE 2010, 'Structural logic of intraorganizational networks', *Organization science*, vol. 21, no. 3, pp. 745-764.
- Ritala, P 2010, *Co-competitive advantage—How firms create and appropriate value by collaborating with their competitors*, Lappeenranta University of Technology.
- Robst, J, Polachek, S & Chang, Y-C 2007, 'Geographic proximity, trade, and international conflict/cooperation', *Conflict Management and Peace Science*, vol. 24, no. 1, pp. 1-24.
- Ross Jr, WT & Robertson, DC 2007, 'Compound relationships between firms', *Journal of Marketing*, vol. 71, no. 3, pp. 108-123.
- Ruijun, C & Zhiman, L 2011, 'Co-competition strategy management in SMEs: A case study of Nyhammers and Bäckströms Company'.
- Russell, BH 2002, *Research Methods in Anthropology: Qualitative and Quantitative Approaches*, AltaMira Press, Walnut Creek, CA.
- Sabri, HA 2011, 'The Impeding Drivers of Risks at Private Higher Education Institutions in Jordan: An Analytical Approach', *Education and Vocational Research*, vol. Vol. 2, no. No. 4, pp. pp. 120-131.
- Sammarra, A & Biggiero, L 2008, 'Heterogeneity and specificity of Inter-Firm knowledge flows in innovation networks', *Journal of Management Studies*, vol. 45, no. 4, pp. 800-829.
- San Martín-Rodríguez, L, Beaulieu, M-D, D'Amour, D & Ferrada-Videla, M 2005, 'The determinants of successful collaboration: a review of theoretical and empirical studies', *Journal of interprofessional care*, vol. 19, no. sup1, pp. 132-147.
- Schneider, Z 2003, 'Approaches in Quantitative Research'.
- Sivadas, E & Dwyer, FR 2000, 'An examination of organizational factors influencing new product success in internal and alliance-based processes', *Journal of Marketing*, vol. 64, no. 1, pp. 31-49.
- Snow, CC 2015, 'Organizing in the Age of Competition, Cooperation, and Collaboration', *Journal of Leadership & Organizational Studies*, pp. 433-442.
- Soffer, P & Hadar, I 2007, 'Applying ontology-based rules to conceptual modeling: a reflection on modeling decision making', *European Journal of Information Systems*, vol. 16, no. 5, pp. 599-611.
- Song, D-W, Cheon, S & Pire, C 2015, 'Does size matter for port co-competition strategy? Concept, motivation and implication', *International Journal of Logistics Research and Applications*, no. ahead-of-print, pp. 1-21.
- Stein, HD 2010, 'Literature overview on the field of co-opetition', *Verslas: teorija ir praktika*, no. 3, pp. 256-265.
- Sweet, L 2002, 'Telephone interviewing: is it compatible with interpretive phenomenological research?', *Contemporary Nurse*, vol. 12, no. 1, pp. 58-63.
- Tashakkori, A & Teddlie, C 2003, 'Issues and dilemmas in teaching research methods courses in social and behavioural sciences: US perspective', *International Journal of Social Research Methodology*, vol. 6, no. 1, pp. 61-77.
- Tashakkori, A & Teddlie, C 2008, 'Quality of inferences in mixed methods research: Calling for an integrative framework', *Advances in mixed methods research*, pp. 101-119.
- Terry Anthony Byrd, DET 2000, 'Measuring the flexibility of information technology infrastructure: Exploratory analysis of a construct', *Journal of Management Information Systems*, vol. 17, no. 1, pp. 167-208.
- Thomason, SJ, Simendinger, E & Kiernan, D 2013, 'Several determinants of successful co-competition in small business', *Journal of Small Business & Entrepreneurship*, vol. 26, no. 1, pp. 15-28.
- Tidström, A 2014, 'Managing tensions in co-competition', *Industrial marketing management*, vol. 43, no. 2, pp. 261-271.
- Venkatesh, V, Brown, SA & Bala, H 2013, 'Bridging the Qualitative-Quantitative Divide: Guidelines for Conducting Mixed Methods Research in Information Systems', *Mis Quarterly*, vol. 37, no. 1, pp. 21-54.
- Walley, K 2007, 'Co-competition: an introduction to the subject and an agenda for research', *International Studies of Management & Organization*, vol. 37, no. 2, pp. 11-31.
- Wittmann, CM, Hunt, SD & Arnett, DB 2009, 'Explaining alliance success: Competences, resources, relational factors, and resource-advantage theory', *Industrial marketing management*, vol. 38, no. 7, pp. 743-756.

- Wu, WY, Shih, H-A & Chan, H-C 2009, 'The analytic network process for partner selection criteria in strategic alliances', *Expert Systems with Applications*, vol. 36, no. 3, pp. 4646-4653.
- Zhang, J & Frazier, GV 2011, 'Strategic alliance via co-opetition: Supply chain partnership with a competitor', *Decision Support Systems*, vol. 51, no. 4, pp. 853-863.
- Zhou, KZ & Wu, F 2010, 'Technological capability, strategic flexibility, and product innovation', *Strategic Management Journal*, vol. 31, no. 5, pp. 547-561.
- Zikmund, W, Babin, B, Carr, J & Griffin, M 2012, *Business research methods*, Cengage Learning.
- Zineldin, M 2004, 'Co-opetition: the organisation of the future', *Marketing Intelligence & Planning*, vol. 22, no. 7, pp. 780-790.
- Zineldin, M, Johannisson, B & Dandridge, TC 1997, *Strategic Relationship Management: A Multi-dimensional Perspective: Towards a New Co-opetive Framework on Managing, Marketing, and Organizing*, Almqvist & Wiksell International.