Innovation and Hyper-competition in a Global Context

In this research project, the applied methods are primarily quantitative, as I am only using the qualitative method in my fourth and last articles. As I am planning to submit the fourth article in year 2021, I have not yet started the investigation. Therefore, my reflections of the qualitative methodological issues will be very theoretical.

Introduction

Is the world becoming hyper-competitive? Many scholars have pointed out that the nature of competition has changed over the last few decades as a result of a combination of globalization, demographical shifts, financial instability, new technological developments, and digitalizing, and that this is posing a potential challenge to strategy making (D’Aveni & Dagnino, 2010; Harvey & Griffith, 2007; Hermelo & Vassolo, 2010; Ilinitch, D’Aveni, & Lewin, 1996; Longin, 2016; Thomas & D’Aveni, 2009).

Scholars argue that the change in the competitive environment are decreasing the companies opportunities to get sustainable competitive advantages, and leaving managers “coping as best they can” (Harvey & Griffith, 2007; Ilinitch et al., 1996: 211; Pacheco-De-Almeida, 2010). Managers are now restructuring their organizations in response to hyper-competition and making decisions on behalf of their organizations based on their shared subjective perceptions of reality (Daft & Weick, 1984; Ilinitch et al., 1996; Sund, 2015), instead of making decisions, based on objective realities of the environment.

A number of empirical studies have sought to measure hyper-competition and claim to have found some evidence (e.g. D’Aveni, 1994, 1997; Farjoun & Levin, 2011; Ilinitch et al., 1996; Lee et al., 2010; Thomas & D’Aveni, 2009). However, scholars disagree that there is some clear evidence of hyper-competition (Makadok, 1998; McNamara, Vaaler, & Devers, 2003; Porter, 1996; Vaaler & McNamara, 2010). Some even argue “that the phenomenon of ‘hyper-competition’ is largely psychological or perceptual in nature” (Makadok, 1998: 693).

The key problem with the studies of hyper-competition is the lack of methodological consistency. There is not a clear definition of how we can measure hyper-competition. Until now studies have used different techniques and samples to measure very different variables that may or may not indicate a change in competition (Wiggins & Ruefli, 2005). In this project, the aim is to build empirical models, using US, European, and Chinese data, to measure the existence of hyper-competition.
Research questions

The general research question for this PhD project is: ‘Is the rate of industry environmental change accelerating towards hyper-competition’. To answer this research question, the following sub-questions will be investigated in four separate, but related articles.

1. What is Hyper-competition and how can it be measured?
2. Applying these variables to measure hyper-competition, is there any evidence for hyper-competition in Europe, China, and the United States?
3. How has the competition across sectors and regions in Europe, China, and the United States developed over the last 20 years?
4. Are the perceptions of competition of top managers’ calibrated with the objective measurable reality?

Methodological issues

The applied methods

In this project, the applied methods will be mixed methods, as stated above primarily quantitative and secondary qualitative. Scholars have argued (Kelle, 2006; Salehi & Golafshani, 2010) that both the quantitative and qualitative methods hold some components that are strong and weak in its research methodologies. Some scholars suggests that combining the two types of methods will on one hand maximize the strength of the methodologies and on the other hand minimize the weaknesses (Kelle, 2006; Salehi & Golafshani, 2010).

This project aims to draw together the known knowledge on the factors creating hyper-competition and identify the measurements used within the literature on hyper-competition. Scholars have often resort to linear regressions more specifically ordinary least squares, autoregressive models, and generalized least squares (McNamara et al., 2003; Thomas & D’Aveni, 2009; Vaaler & McNamara, 2010; Wiggins & Ruefli, 2005). However, given the likely problem of endogeneity of this type of variables, I will use the Generalized Methods of Moments (GMM) (Hansen, 1982; Hansen & Singleton, 1982) to measure hyper-competition in Europe, China and the United States.

In the last article, I will both make a statistical analysis the competitive environment the last 40 years and conduct 10 semi-structured interviews with managers’ from companies chosen from the C20 index. I will interview the managers’ about how they perceive and analyze their organizations external environment. The advantage with this mixed methods design is, that I can both statistical measure the rates of change in competition in Denmark and investigate how managers’ perceive these changes, and see how the results from the statistical analysis and the interviews are calibrated.
**Mixed methods**

The methodological issues concerns the use of mixed methods. Combing different methodologies is not easy (Bazeley, 2004; Kelle, 2006; Salehi & Golafshani, 2010).

One of the methodological issues could be that the applied methods in this project often are associated with different epistemologies and philosophical frameworks. In this project, the applied methods will be both quantitative and qualitative. The quantitative and qualitative approaches can be distinguished on the type of data, the logic employed, the type of investigation, the method to analyze the data, and for some, on the presumed paradigm (positivist or critical; rationalistic or naturalistic) (Bazeley, 2004). For years, scholars have argued how one’s paradigmatic view of the world influences the research and understanding of the data (Bazeley, 2004). However, some scholars believe there is no reason to tie the research to a specific epistemology (Bazeley, 2004; Matthew B. & A. Michael, 1994).

Another issue could be that the assumptions in each of the paradigms will not get the same value or attention, which could be important for the validity of the findings (Salehi & Golafshani, 2010). However, other scholars disagree “quantitative and qualitative approaches can be combined in these ways regardless of which approach has priority in the study” (Onwuegbuzie, A., J. & Johnson, B., 2006: 53). In this project, I will use both the quantitative and qualitative method to investigate hyper-competition, as the quantitative method will be used in three out of four articles it will get more attention, than the qualitative method in this project. However, some scholars argue that the pragmatism increasingly have overruled the purity as the perceived benefits of mixing the methods (Bazeley, 2004). It seems that getting the research done have become more important than the philosophical difficulties in the use of mixed methods (Bazeley, 2004; Matthew B. & A. Michael, 1994; McKim, 2017). In deeper sense, the issue should not be about quantitative or qualitative, but the approach you are taking to understand the research (Matthew B. & A. Michael, 1994). Therefore, “The question, then, is not whether the two sorts of data and associated methods can be linked during study design, but whether it should be done, how it will be done, and for what purposes” (Matthew B. & A. Michael, 1994).

Some scholars raises the question of the validity of the findings in mixed method research designs (Bazeley, 2004; Salehi & Golafshani, 2010). To insure the validity of the mixed method design there are four conditions, which should be met (Matthew B. & A. Michael, 1994): (1) both the quantitative and qualitative data should be collected separately, but at approximately the same time. (2) neither the quantitative or the qualitative data analysis may be built on the other during the stage of data analysis. (3) the results from each of the data analysis may not be consolidated at the data interpretation stage, until both datasets have been collected and analyzed separately, and (4) after the collection and interpretation of the data from the quantitative and qualitative components, an metainference must be drawn, to integrate the inferences from the separate data and findings. However, the findings through a mixed method design could still contradict
each other, and make the validity of one of the methods questionable (Bazeley, 2004). This could be an issue for the validity of the findings (Bazeley, 2004). So if my statistical results would show that hyper-competition do not exist, but the interviews would show that managers’ perceive the competitive environment as more unstable and fast changing, would there then be an issue with the validity. I suppose if the four conditions (Onwuegbuzie, A., J. & Johnson, B., 2006) are met, the above example would still be valid even though the findings of each method contradict.

**Qualitative method**

In qualitative research it can be a challenge to determine how many interviews you need to get sufficient knowledge of the phenomenon (Kvale & Brinkmann, 2015). Scholars (Kvale, 1997; Kvale & Brinkmann, 2015) have argued that it is the purpose of the interview that determines how many interviews are needed. If the purpose is to investigate “the relationship between a particular behavior and its context and figure out the logic of the relationship between individual and situation” (Kvale, 1997: 109), a few individual interviews will be enough.

In this project, I am going to interview managers from 10 of the largest Danish companies. In this regard, one of the issues could be the selection of participants for the qualitative component of the study. In the quantitative study of hyper-competition, I am investigating more than 400 Danish companies, but I am only planning to interview 10 managers, and how they perceive their organizations external environment. I find it challenging to determine whether I am using a too small sample of managers, because it is the aim with the article to compare my qualitative findings with my quantitative findings. Most often, it would be sufficient to conduct interviews, until the interviews do not contribute with significant new knowledge (Kvale & Brinkmann, 2015).

Another concern is in regard to confidentiality, identity protection, and data processing. It will be a practical challenge to anonymize my qualitative interview data. Some scholars stated that “many research participants still wish their identities to be concealed and that they often do not have a clear idea about how their words will be used, such that the future harm from naming participants cannot always be reliably predicted” (Saunders, Kitzinger, & Kitzinger, 2015: 618). However, concealing identities can sometimes be impossible (Saunders et al., 2015). The unit of analysis is managers from 10 companies listed at the C20 index, and as the index only contains 20 companies, it might be identifiable even when granted full anonymity. When possible the respondents in the fourth article will be granted full anonymity and sign informed consent forms before participating. The anonymization in this project will be particularly important, because the participants will share their view of the competitive environment, some sensitive company information, and they could also share personal information, not only about themselves, but also about third parties. However, participants will also be made aware of the limitation of the anonymity I can offer, as well as some of the challenges that can be posed to maintaining their anonymity. Furthermore, I will have to take into
consideration, how I will write my method for selection of participants in the article and make the participants anonymous in this research project.

**Quantitative method**

One of the most important assumptions is the statistical methods randomness and the lack of bias (Panter & Sterba, 2011). Within this project, some of the areas of both methodological and ethical concerns are in the collection of data. The needed data will be collected from Thomson Reuters. One concern with collecting data from a specific database such as Thomson Reuters is that the whole population is probably not represented, but with a random sampling procedure I will ensure that, each potential observation within this data source have an equal chance of being selected.

Another issue could be in the data collection. In data cleaning “two types of problems are encountered: missing data and errors” (Davis, 2010: 2). The company data I have collected have only been available from the 1980s to now. Furthermore, the data are also missing some values in the years between 1980 and 2019. This could be a problem for the statistical analysis (McClave, Benson, & Sincich, 2014). The presence of “dirty data” or missing data could reduce the reliability and validity of the measurements (Davis, 2010). The missing data will reduce the sample size available for the research. Scholars argue that a research design with missing data would require more than 100 respondents or companies in order to have sufficient power to test and investigate the hypotheses in the study (Davis, 2010; McClave et al., 2014). In this project, I will use data from companies across sectors in Europe, China and the United States during the period of roughly 1980 to 2017. In the fourth article, I will use more than 400 Danish companies. Therefore, it should be possible to do a valid research, even though there should be missing data.

**Bibliography:**


