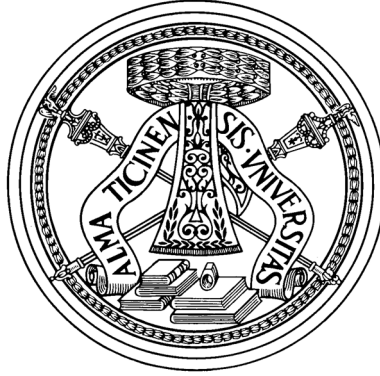


UNIVERSITY OF PAVIA
DEPARTMENT OF ECONOMICS AND MANAGEMENT
ECONOMICS AND MANAGEMENT OF TECHNOLOGY PROGRAM



**Exploring the Impacts of Dynamic and Ordinary Capabilities on
Firm Performance across Service and Manufacturing Sectors**

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PH.D. THESIS

By

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29th CYCLE
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Dedication

This thesis is dedicated:

To My beloved Parents,
To My Great Wife
To My Gorgeous Kids Layan, Abed-alrahman, and Myar

Belal ALBASHITI

Abstract

Different schools of thought focus on the role of resources and capabilities in the development of sustainable competitive advantage and superior performance. The resource-based view (RBV) of the firm considers the firm's resource-base including its capabilities as the starting point of strategic decision-making, and the main driver of organizational performance (Barney, 1991). Dynamic capabilities (DCs) emerged as a complement to the RBV in an attempt to explain competitive advantage in a rapidly changing environment. Strategy scholars have argued that capabilities can influence firm performance through a variety of means and mechanisms. Building on the logic of the resource-based view we empirically address the following research questions: (1) What is the impact of dynamic capabilities on performance? (2) What is the impact of ordinary capabilities on performance? (3) To what extent do ordinary capabilities mediate the relationship between dynamic capabilities and firm performance? (4) Does the dynamic Palestinian environment impact the outcome of dynamic capabilities? Dynamic capabilities have been conceptualized into sensing, seizing, and reconfiguring. Ordinary capabilities are identified by their functional area including operations capabilities (quality, cost, delivery, flexibility and social responsibility capability) and marketing capabilities (pricing, customer services, marketing communication and product development).

Prior research shows an ongoing debate of the causal relationship between the identified capabilities and firms' performance. We contribute to resolving these issues by considering this ambiguity in the specific context of manufacturing and services sectors in Palestine. We performed a survey receiving 240 useable responses from senior managers chosen from 27 firms across manufacturing and services sectors in Palestine. We analyzed our research

Abstract

model using the smart PLS structural equation model to predict the direct and indirect effect of dynamic capabilities on firm performance, where the indirect impact is mediated by ordinary capabilities. We also studied the impact of the various sub-constructs of marketing capabilities and operations capabilities on firm performance within a separate theoretical framework. We provide statistical evidence supporting the hypothesized relationship between dynamic capabilities, ordinary capabilities and a firm's performance. We find that environmental dynamism has a negative moderating role on the impact of dynamic capabilities on firm performance, which goes against the prevailing theoretical viewpoint in the existing literature.

Declaration

I hereby declare that this thesis represents my own work which has been done after enrolment for the degree of PhD at the University of Pavia. I certify that this work has not been submitted previously either in whole or in part, to qualify for any other academic purposes. I declare that this thesis embodies the findings of my own works.

Acknowledgement

Indeed it has been a long hard journey in completing this research project. Days and nights have been spent in producing this work. Many sacrifices have been made, but the whole research would not have been possible without specific people. It is my privilege to express my sincere appreciation to them.

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Chapter 1

Introduction

Chapter 1

Introduction

Ongoing environmental changes, such as technological innovation, regulatory change and economic cycles, create new business opportunities and at the same time potentially make current strategies obsolete. Firms will ultimately respond to changes whenever their performance is at risk, and it is always expected that firms will do something to defend their current position in the marketplace. Two schools of thought exist in literature on what primarily determines firm performance. Some claim firm performance is primarily determined by the internal factors of a firm (Barney, 1991; Grant, 1991; Teece et al., 1997) while others claim that it is the firm's environment by considering the external forces (Chandler, 1962; Porter, 1985, 1996). More recently those deriving from the evolutionary theory of a firm have emerged as dominant approaches for explaining persistent heterogeneous performance differences advocating that such performance variation is attributable to differences in resources and capabilities. The resource-based view (RBV) of a firm considers the organizational resource base including its capabilities as the starting point of strategic decision making, and the main driver of organizational performance (Barney, 1991).

During the early years of the RBV's development, those espousing the RBV considered the term resources quite broadly and, in turn, treated the theory on capabilities as part of the RBV (Barney, 1991). A resource refers to an asset or input to production (tangible or intangible) that organization owns, controls, or has access to on a semi-permanent basis. An organizational capability refers to the ability to perform a coordinated

set of tasks, utilizing a firm's resources, for the purpose of achieving a particular result (Helfat, 2000; Helfat and Peteraf, 2003). One should note that although a firm's resources and capabilities have their own roles, they are also interdependent and mutually support and reinforce each other (Tanriverdi 2006). We are interested in capabilities because they are critical to competitive heterogeneity as management scholars generally accept that organizational capabilities can be a major source of firm performance (Wernerfelt, 1984; Peteraf, 1993; Barney, 1991; Teece, 1994). One could argue that much of the early work on capabilities had as much to do with the rise of the RBV as many of the RBV's foundational articles (Lippman and Rumelt, 1982; Barney, 1989, 1991; Peteraf 1993). Recent research on competitive heterogeneity suggests that firms are characterized by unique knowledge and experience held by their members, unique relationships between their members, and taken for granted routines (Hoopes & Madsen, 2008). Winter (2000) define an organizational capability as a high-level routine or a collection of routines that, together with its implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of a particular type. To some extent Eisenhardt and Martin (2000) consider that routines can also be capabilities whereas inputs such as experience and resources are not themselves capabilities (Eisenhardt & Martin, 2000).

According to Drnevich and Kriauciunas (2011) prior research has made great strides to develop and refine the conceptualizations and definitions of various types of capabilities (e.g. generic, organizational, ordinary and dynamic). Dynamic and ordinary capabilities have emerged as two important terms interdependent on each other. Dynamic capabilities emerged as a complement to the RBV in an attempt to explain competitive advantage in a rapidly changing environment, while ordinary capabilities involve operations, administration, and governance, they are rooted more firmly in routines than are dynamic capabilities (Teece 2014). Dynamic capabilities govern the rate of change of ordinary capabilities. The latter are about doing things right and the former are about doing the right things (Teece, 2014). We consider operations capabilities and marketing capabilities as ordinary capabilities as their function is to sustain the day to day operational activities. These two types of ordinary capabilities are found in recent articles as the central important types of ordinary capabilities, they reflect business issues for different industries (M.U. Ahmed et al., 2014; Nath et al., 2010).

Despite the importance of contribution of capabilities to the RBV, many theoretical and empirical issues remain a source of debate (Barreto, 2010; Teece, 2014). Our literature review of the theoretical constructs of RBV suggests the need for more empirical evidence. The first issue we consider is differentiating the impact of ordinary and dynamic capabilities on firm performance, as there is insufficient empirical testing of the contributions of both. Teece (2014) suggests that, to understand Dynamic capabilities, one should compare them with ordinary capabilities. Secondly, the nature of firms capabilities differ across industries and the existing empirical findings often derive from studies of single industries particularly high-tech industries. Barreto (2010) suggests that DCs should be studied empirically across a wider sample of firms and industries hence we are motivated to study both manufacturing and non-manufacturing industries. Moreover, testing the conceptualized relationship in our model gives a better understating of the role of DCs in these industries. Thirdly, most prior studies have under-examined alternative relationships between environmental dynamism and the contribution of capabilities to firm performance. We fill these gaps in the literature by examining how ordinary and dynamic capabilities contribute to firm performance in several sectors covering both manufacturing and non-manufacturing firms. Also we examine the significance of the moderating role of the Palestinian dynamic environment on dynamic capabilities. This study aims to provide empirical findings in this research gap by asking managers in Palestinian firms through a questionnaire. The following sections outline the background of our thesis.

1.1 Context and Scope of Research

The central focus is on firm level capabilities as the starting point of strategic decision-making, which is the main driver of organizational performance (Barney, 1991). Our research context is the Palestinian market. We feel that it is interesting to investigate the effect of dynamic capabilities on firm performance in a rapidly changing business environment such as Palestine. It is because we could test the proposed model in any other similar settings, for example, such as Egypt, Tunesia, Lybia and so forth of developing countries. The same proposed conceptual model can be tested focusing on any other local contexts. Indeed previous studies have focused on high-tech firms in developed countries where the environment is more stable, despite the fact that dynamic capabilities are arguably more relevant in more dynamic markets. The particular choice of Palestine is natural as the author has prior knowledge of the Palestinian economy. Specific challenges for Palestinian firms arise from the political situation which denies free access to markets,

notably in the lack of resources and difficulty in bringing products to market. We still see that the Palestinian economy is gaining more and more recognition both within Palestine and around the rest of the region. The scope of our research is the Palestinian firms including manufacturing firms and banks, insurance, and telecommunications firms. Many of these firms fail to compete successfully with foreign products particularly Israeli products, mostly due to competitive pressure from large firms with far more resources, economies of scale and more experienced management. The surveyed firms for this thesis were selected from manufacturing and service sectors, which are vital drivers of domestic consumer spending in Palestine. In chapter 5 we discuss the research context further and provide some relevant statistical information regarding the Palestinian industries and sectors.

1.2 Motivation of Study

The resource-based view and dynamic capabilities approach have been applied in strategy research to analyze and explain the resources and capabilities that have the potential to create and sustain competitive advantage and, in turn, superior performance among firms (Barney, 2001). Prior research shows an ongoing debate of the causal relationship between typologies of capabilities and firm performance which has been garnered substantial attention in the strategic management field. And hence, the concept of dynamic capabilities still remains a ‘black box’ and consequently a clear understanding of how dynamic capabilities precisely impact strategy and critical performance outcomes remains unclear (Eisenhardt and Martin 2000; Winter 2003; Barreto, 2010; Teece, 2014). Wang and Ahmed (2007) summarized key empirical studies pertinent to dynamic capabilities showing that most of them are grounded in developed countries. There has been no empirical research in Palestine to date which investigates the resource-based view (RBV) and dynamic capabilities approach (DCA) to explain differences in firms' performances. The unstable environment often found in developing areas like Palestine increases the need for more dynamic models when analyzing how to gain superior performance. To meet this demand, the dynamic capability framework is a very promising effort to better understand superior enterprise performance over time.

1.3 Contribution of Study

The contribution lies in bridging a research gap by developing and empirically testing a hypothetical model which tests the roles of dynamic and ordinary capabilities on firm performance across diverse industries. The study potentially makes a number of contributions to existing knowledge in the strategy field. Prior studies have only empirically investigated a few resources and capabilities that are perceived to be important for competitive advantage. This study identifies several typologies including dynamic and ordinary capabilities in a comprehensive framework that explores salient variables which were previously studied separately. This tends to clarify how exactly dynamic capabilities affect firm performance by verifying the mediating role of ordinary capabilities (marketing and operations capabilities) in the relationship between dynamic capabilities and performance, and how this depends on the dynamism of the external environment. Furthermore, testing marketing and operations functions within the resource capability framework extends the resource-based theory to the marketing and operations field. The contribution we provide is also regarding the nature, origin and evolution of dynamic and ordinary capabilities attempting to reduce some of the conceptual and definitional confusion in the current literature by developing and then validating a conceptual framework. Also providing contribution to strategic management methodology by conceptualizing and improving the existing operationalization into formative-reflective constructs. Last but not least, we provide managerial implications in terms of the importance of developing and implementing dynamic and ordinary capabilities for achieving superior firm performance. We discuss this section in detail in the final chapter.

1.4 Research Problem

As we mentioned in the previous sections, empirical research shows an ongoing debate about the nature of output of DCs, in particular the mechanism by which DCs shape performance is still not well understood (Zott, 2003). Also it has been argued that firm performance is a core issue in the research on DCs and the question of whether and how they affect performance is still open (Helfat et al., 2007). Some authors suggest direct link between DCs and performance whilst others tend to link DCs indirectly to a firm's

performance through the firm's resources and capabilities. Firms across sectors in developing countries fail to compete successfully particularly against foreign products. One should note that firms in developing countries have limited resources, knowledge base and expertise in building and integrating diverse capabilities (Zahra et al., 2006). Therefore, the research problem of this study is 'what role do dynamic capabilities and ordinary capabilities (marketing and operations) play in enhancing the performance of firms in the manufacturing and services sectors in Palestine?'

1.4.1 Research Questions

Based on the research problems, this thesis seeks to answer the following questions: (1) What is the impact of dynamic capabilities on performance? (2) What is the impact of some key ordinary capabilities (operations and marketing) on performance? (3) To what extent do ordinary capabilities mediate the relationship between dynamic capabilities and firm performance? (4) Does the dynamic Palestinian environment moderate the relationship between dynamic capabilities and firm performance?

1.4.2 Research Objectives

The main objective is to develop a coherent conceptual framework derived from the existing literature and empirically test it in the Palestinian context. The framework visualizes the relationship between dynamic and ordinary capabilities on firm performance. The sub-objectives are to illustrate the linkages between our constructs across the Palestinian manufacturing and services sectors: (1) examine the impact of dynamic capabilities on firm performance, (2) examine the mediating role of ordinary capabilities which reflects the indirect impact of dynamic capabilities on firm performance, (3) examine the moderating role of environmental dynamism on dynamic capabilities, (4) examine the impact of the marketing and operations capabilities respectively on firm performance in separate theoretical framework.

1.5 Conceptual Model

The research hypotheses for this study derive from the below conceptualized research model, showing sequential models of linkages that represents the direct relationship between DCs and

performance; the effect of ordinary capabilities (marketing and operations) on a firm's performance; the relationship among DCs and ordinary capabilities and a firm's performance; and the role of the Palestinian environmental dynamism on DCs. Dynamic capabilities considered as independent variables of the model on a firm's performance, either directly or mediated through ordinary capabilities including marketing and operation capabilities. The following are summary of the main and sub hypotheses.

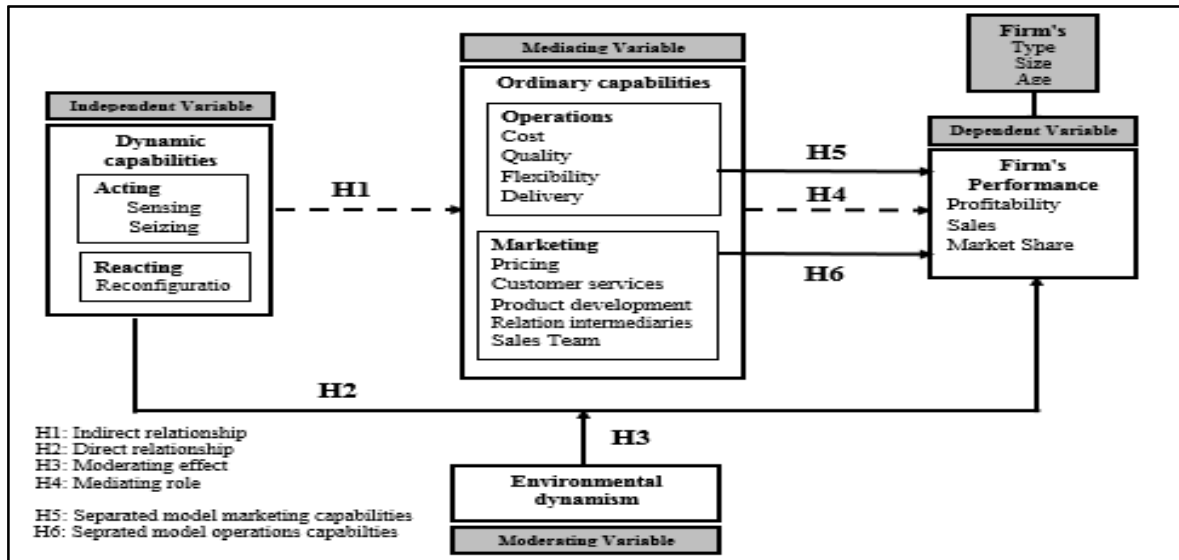


Fig.1.1 Research Model

Hypothesis 1	Dynamic capabilities have indirect effect on firm performance mediated by ordinary capabilities of a firm.
Hypothesis 1 (a)	Sensing capability has indirect positive effect on a firm's performance.
Hypothesis 1 (b)	Seizing capability has indirect positive effect on a firm's performance.
Hypothesis 1 (c)	Reconfiguration capability has indirect positive effect on a firm's performance.
Hypothesis 2	Dynamic capabilities have a direct positive effect on a firm's performance.
Hypothesis 2 (a)	Sensing capability has a direct positive effect on a firm's performance
Hypothesis 2 (b)	Seizing capability has a direct positive effect on a firm's performance
Hypothesis 2 (c)	Reconfiguration capability has a direct positive effect on a firm's performance

<i>Hypothesis 3</i>	The higher the environmental dynamism, the more positive the impact of dynamic capabilities on firm performance.
<i>Hypothesis 4</i>	Ordinary capabilities marketing and operations affect firm performance to different degrees as mediating constructs.
<i>Hypothesis 5</i>	Marketing capabilities positively affect a firm's performance.
<i>Hypothesis5 (a)</i>	Product development capability has a direct positive effect on a firm's performance.
<i>Hypothesis5 (b)</i>	Relation with intermediaries' capability has a direct positive effect on a firm's performance.
<i>Hypothesis5 (c)</i>	Pricing capability has a direct positive effect on a firm's performance
<i>Hypothesis5 (d)</i>	Marketing communication capability has a direct positive effect on a firm's performance.
<i>Hypothesis5 (e)</i>	Customer service capability has a direct positive effect on a firm's performance.
<i>Hypothesis 6</i>	Operations capabilities positively affect firm's performance.
<i>Hypothesis 6 (a)</i>	Cost capability has a direct positive effect on a firm's performance
<i>Hypothesis 5 (b)</i>	Quality capability has a direct positive effect on a firm's performance
<i>Hypothesis 5 (c)</i>	Delivery capability has a direct positive effect on a firm's performance
<i>Hypothesis 5 (d)</i>	Flexibility capability has a direct positive effect on a firm's performance
<i>Hypothesis 5 (e)</i>	Social responsibility capability has a direct positive effect on a firm's performance

1.6 Methodology Design

This thesis adopts a positivist perspective which influences the design of the research. In positivism, the researcher's impact is limited in the processes of hypothesis formation, concept operationalization and research design (Gill, 2014). This means that the researcher must be independent of what is being studied. Accordingly, we test the interrelationship of dynamic and ordinary capabilities on firm performance across different industries in Palestine. Based on the nature of our problem and our research philosophy, we perform

quantitative research using a survey distributed to a large sample of firms across the Palestinian sectors. The purpose of survey research is to describe characteristics, opinions, attitudes or behaviors as they currently exist in a target population (Saris et al., 2014). Through the questionnaire managers can give their opinions on such practices that measure firms dynamic and ordinary capabilities in a firm they work for. The sample was chosen from significant firms that reflect business issues in strategic business studies, particularly in the Palestinian context.

We obtained a list of the Palestinian manufacturing firms from the Palestinian Federation of Industries that presents the firm's type, size, and age. Regarding the service industry, the Palestinian market has a limited number of firms operating in this sector particularly in the telecommunication and internet industries, hence we took all firms from this sector. Before data has been analyzed, both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were carried out to test the reliability and validity for model measurement.

1.7 Structure of Thesis

Chapter 1 Introduction: This chapter provides an introductory background and overview of the study that presents the importance of studying two research streams; dynamic and ordinary capabilities, leading to the development and statement of the research problem and objectives. The contributions of this study are briefly explained to present knowledge advancement for future study.

Chapter 2 Literature Review: Dynamic capabilities: We review the extant literature relating to the dynamic capabilities to shape our understanding of the nature and characteristic of the dynamic capabilities. Then, the definition of DCs and the dimensions conceptualization of DCs are discussed.

Chapter 3 Literature Review: Ordinary capabilities: Ordinary capabilities are discussed and classified considering in particular operation capabilities and marketing capabilities. After discussing the domain constructs, the chapter provide definitions, conceptualization and related knowledge to marketing and operation capabilities.

Chapter 4 Literature Review: Theoretical Framework: This chapter sets the boundary of the research showing how our research objectives are translated into a set of very specific questions. Based on the previous findings in related studies a conceptual framework is produced depicting all relevant constructs and their associations.

Chapter 5 Research Context: This chapter gives details of the research context that discusses general business environment, institutional variables, characteristics of the economy and economic structure (industries, size of firms, etc.) in Palestine.

Chapter 6 Research Methodology: This chapter presents and describes the methodology used in this research: first a discussion of the epistemological position our research, this leads to the choice of research methods, data collection, sampling design and construct measurements and data analysis techniques.

Chapter 7 The Empirical Study: Data Preparation: Before testing the proposed hypotheses, first it was necessary to study the survey data set by using Cronbach's alpha and confirmatory factor analysis. Second descriptive statistics was performed to present the Mean Value and (ANOVA) F test, also the correlations coefficients between constructs for firms across sectors.

Chapter 8 The Empirical Study: Data Analysis: The chapter begins with an explanation of statistic analytical methods, namely multiple regression and structural equation analyses. After reporting the statistical findings, the chapter confirms hypotheses testing and the results.

Chapter 9 Discussion: This chapter discusses the findings within existing knowledge. The theoretical and managerial implications are also presented. Finally, the limitations of the study are discussed and suggestions for future research are outlined.

Chapter 2

Dynamic Capabilities

Chapter 2

Dynamic Capabilities

Different schools of thought deriving from the evolutionary theory of the firm specifically focus on the role of firm-internal factors (resources and capabilities) in the development of sustainable competitive advantage and superior performance. The resource-base view (RBV) of the firm considers the organization's resource-based including its capabilities as the starting point of strategic decision-making, and the main driver of organizational performance (Barney, 1991). Dynamic capabilities (DCs) emerged as a complement to the RBV in an attempt to explain competitive advantage in a rapidly changing environment. This theory draws its tenets from pervious literature adapting organizational routine, core competence, core capability and rigidity, and absorptive capability (Rugami & Aosa, 2013). This chapter introduces an overview of the RBV, provides definitions and historical background, and explores definitions of resources and capabilities. It then moves on to introduce the concept of a DC, provides definitions, the hierarchical level of DCs and conceptualize the DCs. Subsequently, the discussion will go deeper into the existing relevant literature of capabilities. Chapter 3 based on the RBV theory explores ordinary capabilities that are relevant to operations and marketing. In the following chapter 4 a conceptual framework for this study will be developed based on the literature review and research questions to address the existing gaps in our knowledge will be identified.

2.1 Resource Based View

The resource-based view is a theory of a firm's performance that focuses on the resources and capabilities controlled by a firm as sources of competitive advantage (Barney 1986a, 1991). The fundamental intention in the RBV theory is to analyze and interpret a firm's internal resources to understand how organizations achieve and sustain competitive advantage. The RBV theory argues that firms have resources which enable them to achieve competitive advantage and superior performance (Barney, 1999; Collis et al., 2008). It also expands the body of knowledge of differential firm performance and elevates the understanding of strategic management (Mahoney & Pandian 1992). The theoretical roots go back to the seminal work of Penrose (1959), in which the author brought back to light the importance of the individual firm. She argues that it is the heterogeneity, not the homogeneity, of the productive services available from its resources that give each firm its unique character (Penrose, 1959). Thus the RBV theory has become the dominant paradigm in strategic management over the past decades, establishing how performance differences persist in situations of open competition (Lippman & Rumelt 1982; Rumelt 1984; Wernerfelt 1984, Barney 1986a, 1991, Dierickx and Cool, 1989, Amit & Schoemaker, 1993, Peteraf 1993). Wernerfelt (1984; 1995) and Barney (1986; 1991) examined resources and categorized them as tangible resources namely human, physical, organizational and financial and intangible resources namely reputational, regulatory, positional, functional, social and cultural. Barney (1991) suggests that the search for sources of sustainable competitive advantage must focus on resource heterogeneity and immobility, considering the four major resource attributes necessary for sustainable competitive advantage: value, rarity, imitability, and non-substitutability, the four dimensions known as VRIN (Barney, 2001). Nevertheless, the VRIN characteristics are individually necessary, but not sufficient condition for a sustained competitive advantage (Dierickx & Cool, 1989; Priem & Butler, 2001a). Moreover, according to Chatterjee and Wernerfelt (1991) a firm diversifies, in part, to use excess productive resources. In particular, empirical evidence corroborates that excess physical resources and most knowledge-based resources lead to more related diversification. Amit and Schoemaker (1993) emphasize the role of resources and

capabilities, considering the transferability or imitability of a firm's resources and capabilities in addition to adopting and deploying a firm's resources. We mainly focus on a firm's capabilities, because they play a vital role in exploiting a firm's resources (Teece et al., 1997). Therefore, we will conceptualize DCs and ordinary capabilities including marketing and operations capabilities to explain the differences among firms performance. A review of the historical background of the RBV theory is shown below in table 2.1.

Table 2.1 Development of RBV

Development	View	Source
Resource-Based View	The competitive advantage of a firm lies primarily in the application of a bundle of valuable tangible or intangible resources at a firm's disposal.	<i>Penrose (1959); Wernerfelt (1984); Barney (1991); Rumelt (1984).</i>
Core Competence:	Particular type of resource identified by customer value competitor differentiation and extendibility.	<i>Prahalad & Hamel (1990).</i>
Knowledge-based View:	Heterogeneous knowledge bases and capabilities among firms are the major determinants of superior performance.	<i>Nonaka (1991); Grant (1996 b.); Nonaka (2002).</i>
Dynamic Capabilities:	Focuses on a firm's ability to develop its resource base in order to meet environmental expectations.	<i>Teece, (1994); Teece et al. (1997); Eisenhardt & Martin (2000); Teece (2007; 2014)</i>

According to the approaches listed in the above table, there are sequential advances among the history of theories of a firm. For example Foss (1996) argues that there are complementarities between a contractual approach (e.g., transaction costs theory and property rights theory) and a knowledge-based approach (e.g., resource-based theory and knowledge-based theory) to strategic management. These complementarities are argued to be particularly fruitful for analyzing the strategic issues of the boundary and internal organization of the firm. The origins of the resource-based view can be traced back to earlier research, retrospectively, elements can be found in works by Penrose (1959), Stigler (1961), Williamson (1975), and Chandler (1990) where emphasis is put on the importance of resources and its implications for firm performance and its relationship to the market.

The resource-based view (RBV) as mentioned above considers that the a basis for the comparative advantage of a firm lies primarily in the application of a bundle of valuable tangible or intangible resources at the firm's disposal, and hence firm's position depends on the quality of the resources that a firm possesses (Wernerfelt, 1984, pg. 172; Rumelt, 1984, pg. 557-558; Penrose, 1959. The influential body of research within the field of strategic management contains Wernerfelt's article on the RBV of the firm (1984). Two contributions closely following Wernerfelt's initial article came from Barney (1986a, 1986b).

The competence-based perspective is another theoretical approach that emerged in the early 90s. Prahalad and Hamel (1990) view core competencies as the collective learning across the corporation which is a physical embodiment of core competencies. Johnson et al. (p. 97, 2008) define a core competence as “the skills and abilities by which resources are deployed through an organization’s activities and processes such as to achieve competitive advantage in ways that others cannot imitate or obtain.” Johnson et al. (2008) argue that core competencies are related to a firm's product portfolio via core products, and core products contribute to the competitiveness of a wide range of end products. Also Hamel and Prahalad (1994) claim that core competences offer benefits to customers because they can add value to a product or service.

The knowledge-based view emerged as a complementary approach to the RBV in which focus on the specific type of knowledge that differentiate one firm from another. The ability of a firm to create value is not based as much upon physical or financial resources as on a set of intangible knowledge based capabilities (Grant, 1996a; Foss 1996). Some authors focus on the types of knowledge (Grant, 1996a; Nonaka & Takeuchi, 1995), while others discuss difficulties and costs of transfer (Szulanski, 1996). Nielsen (2006) links the KBV to the dynamic capabilities as a particular type of knowledge demonstrating that, DCs are composed of concrete and well-known knowledge management activities. Nielsen identifies eight knowledge management activities: knowledge creation, acquisition, capture, assembly, sharing, integration, leverage, and exploitation. He then assembles these activities into the three dynamic capabilities of knowledge development, knowledge re-combination, and knowledge use. (Nielsen, 2006).

Dynamic capability was first introduced in a working paper in 1989 and was influenced by Hamel, considered the multinational strategy research leading to core competences of the corporation (Prahalad & Hamel, 1990). In the late nineties, Teece, Pisano and Shuen (1997) introduced the dynamic capabilities prospective based on the assumption that core competencies are used to modify short-term competitive positions that can be used to build longer-term competitive advantage (Teece, et al. 1997). This focuses on a firm's ability to develop its resource base in order to meet environmental expectations. However elements of the dynamic capability prospective (Teece et al., 1997) can be traced from the RBV based on previous works by Schumpeter (1934, 1950), Nelson and Winter (1982) and Teece (1982), who uses term routine and learning. The dynamic capability prospective will be discussed in details in this chapter.

2.1.1 Limitations of the RBV

In the history of the resource-based view theory, the capability literature as critical factor is often ignored; yet it provides an important support for the RBV. One could argue that much of the early work on capabilities had as much to do with the rise of the RBV as any of the RBV's foundation. Yet, during the early years of the RBV's development, those considering the RBV generally considered the term "resources" quite broadly and, in turn, treated the theory on capabilities as part of the RBV (Barney, 1989, 1991). Furthermore, the RBV over time is static in nature (Lockett et al. 2009; Newbert, 2007). Priem and Butler (2001a) states that 'much of the subsequent literature has been static in concept'. According to Barney (2001a, p. 33) "the processes through which particular resources provide competitive advantage remain in a black box in the RBV". Most of the resource-based approaches have their roots in the strategy field with a common notion of resources, and neglect typologies of capabilities for different businesses. Moreover the fundamental question of what type of business a firm is currently does and how a firm deploys its resources still not clearly answered. Moreover, the RBV a theory of a firm neglecting the managerial applications for managers in describing types of strategic resources and capabilities for a firm, therefore, it lacks substantial managerial implications or operational validity (Priem & Butler, 2001a).

2.2 Dynamic Capabilities Approach

The dynamic capabilities approach evolves from the resource-based view (RBV) of the firm attempting to explain the conditions under which firms achieve competitive advantage based on their resources and capabilities (Barney, 1991). The RBV has been criticized as a static theory, inadequate to explain a firm's sustainable competitive advantage in today's changing environments (Teece *et al.* 1997). Teece and Pisano (1994) introduce the concept of DCs to overcome the limitation of the static nature in the RBV. The concept of DCs has gained rapid recognition as a potential source of achieving and sustaining competitive advantage in organizations (Eisenhardt & Martin, 2000; Easterby-Smith, *et al.*, 2009; Teece, 2007, 2011; Teece, 2014; Pisano, 2015; Lin & Wu, 2014). The original definition of dynamic capabilities proposed by Teece *et al.*, (1997) is "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece *et al.*, 1997 p. 516). The term dynamic refers to the capacity to renew ordinary capabilities, so as to achieve congruence with the changing business environment, whereas the term capability refers to a firm adapting, integrating and reconfiguring internal and external organizational skills, resources, and competencies to match the requirements of the changing environment (Teece *et al.*, 1997, p.515). Therefore dynamic capabilities are the ability or capacity of firms to change their static capabilities to match the requirements of both internal and external changing environments. At times, dynamic capabilities come to be a vital theoretical lens for investigating capabilities at the organizational level (Teece *et al.*, 1997; Teece, 2014), and it can be tailored to the setting in which they function, including different industries, technologies, functional areas and organizations (Teece, 2014; Lin & Wu, 2014). Hence, this particular type of capabilities allow organizational development and renewal of capabilities enabling firms to respond to changes in external environments (Teece *et al.*, 1997; Pisano, 2015) and renew resources (Zahra *et al.*, 2006). These authors contend that even small differences in dynamic capability among firms can result in differential firm performance (Adner & Helfat, 2003; Zott 2003).

2.2.1 Definitions of Dynamic Capabilities

Multiple definitions of dynamic capabilities exist, which is often seen as a hindrance to the advancement of empirical investigation of the field (see Table 2.2). Various authors define dynamic capabilities using a wide range of different conceptualizations: activities, abilities, resources, processes, capabilities, and sources of competitive advantage. The core definitions of dynamic capabilities emerge from the previous literature, we can see some commonalities among the definitions (e.g., Eisenhardt and Martin, 2000; Teece et al., 1997; Zahra et al., 2006; Zollo & Winter, 2002; Winter, 2003). Others have made efforts to develop widely held definitions in the field for example (Helfat et al., 2007). The dynamic capabilities literature has become mired in endless debates about definitions which has led to introduction of even more terminology (Pisano, 2015). It has been argue that, still no definite definition of DCs can reduce ambiguity in literature (Zahra et al., 2006). Perhaps the largest source of confusion is the lack of agreement about a definition of DCs and the interplay between dynamic and ordinary capabilities (Winter, 2003; Zahra et al., 2006). Authors define underlying individual and collective actions that generate, shape and maintain DCs (Eisenhardt et al. 2010). Some divide DCs into processes and components (e.g. Teece, 2007; Ahmed, 2007) to explain how they work. Others suggest a variety of learning mechanisms and practices that can be used to develop DCs.

Table 2.2 Definitions of Dynamic Capabilities

Author	Definition
<i>Collis (1994)</i>	The capability to develop the capability that innovates faster or better.
<i>Teece et al. (1997)</i>	The firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments.
<i>Helfat (1997)</i>	The subset of competences/capabilities which allow the firm to create new products and processes and respond to changing market circumstances.
<i>Eisenhardt & Martin (2000)</i>	The firm's processes that use resources, specifically the processes to integrate, reconfigure, gain, and release resources to match or even create market change.
<i>Zahra & George (2002)</i>	Change oriented capabilities that help firms redeploy and reconfigure their resource base to meet evolving customer demands and competitor strategies.
<i>Zollo & Winter (2002)</i>	Learned and stable pattern of collective activities through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness.
<i>Winter (2003)</i>	Capabilities that operate to extend, modify or create ordinary capabilities.
<i>Helfat et al. (2007)</i>	Capacity of an organization to purposefully create, extend or modify its resource base.
<i>Wang & Ahmed (2007)</i>	a firm's behavioral orientation constantly to integrate, reconfigure, renew and recreate its resources and capabilities and, most importantly, upgrade and reconstruct its core capabilities in response to the changing environment to attain and sustain competitive advantage.
<i>Teece (2007)</i>	dynamic capabilities can be disaggregated into the capacity (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and when necessary, reconfiguring the business enterprise's intangible and tangible
<i>Barreto (2010)</i>	The firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base.
<i>Helfat & Winter (2011)</i>	Dynamic capabilities enable a firm to alter how it currently makes its living.

Source: Author

We discuss significant aspects regarding the definitions of dynamic capabilities (e.g. nature, role, context, creation and development, outcome, degree of heterogeneity, and purpose of DCs) which they highlight the major theoretical underpinnings of dynamic capabilities (Barreto, 2010).

There is disagreement between authors concerning the nature of dynamic capabilities. For example some authors follow the view of Teece et al. (1997), who consider dynamic capabilities as abilities, capabilities or capacities (e.g. Helfat et al., 2007; Winter, 2003/2001; Zahra et al., 2006). For others like Eisenhardt and Martin (2000), view that, dynamic capabilities are not abilities but processes which comprise “specific and identifiable routines” to address or initiate market change. Zahra and George (2002) regard DCs neither as a firm’s abilities nor processes but as capabilities to match customer demands and competitor strategies routines (Zott, 2003). Helfat and Raubitschek (2000) demonstrate a clear prospective that DCs are embedded in organizational processes. Eisenhardt and Martin (2000) propose that several processes are as examples of dynamic capabilities such as product development, strategic decision making, and alliance and acquisitions routines.

Regarding the role of DCs, some definitions build on the reasoning of the RBV, using definitions including the ability to adapt the resource-base and capabilities (Teece et al., 1997; Eisenhardt and Martin, 2000; Winter, 2003; Helfat et al., 2007). Winter (2003) proposes different roles of DCs, by taking a position that zero-level capabilities are concerned with the day-to-day operations and higher-level capabilities are needed to develop and modify them. Some refer to zero-order capabilities as ordinary, substantive or substantive capabilities (e.g. Eisenhardt and Martin, 2000; Zahra et al., 2006). Similarly, Zollo and Winter (2002) have a similar prospective using the terms operational routines and dynamic capabilities.

The issue concerning when dynamic capabilities are effective is a fundamental disagreement between Teece et al. (1997) and Eisenhardt and Martin (2000), in particular whether the external environment matters and how dynamic capabilities operate in such environment. For example for Teece et al. (1997) dynamic capabilities are effective in rapidly changing environments, whereas Eisenhardt and Martin (2000) argue that dynamic capabilities act in both stable and dynamic environments. Zahra et al. (2006) state that the dynamic features of a market are not in themselves a necessary component. Zollo and Winter (2002) agree with this view, stating that dynamic capabilities exist even in an environment with low rates of change, however become more valuable in more dynamic markets. Ambrosini et al. (2009) suggest that in stable environments dynamic capabilities

are often small adaptations of resources, whereas in high-velocity environments more radical modifications and changes in the resource base are needed. However, in every industry adaptation is needed in order to achieve long-term survival and the rate of market dynamism can assist the value of dynamic capabilities impact. Considering the developing countries like the case of Palestine, the rate of market dynamism is high and complicated by political issues. Hence we fill this gap responding to the above argument by investigating dynamic capabilities and ordinary capabilities in this new context.

Regarding the creation of dynamic capabilities, some argue that repeated practice embodied in a consequent experience, such as past mistakes and previous experience are likely the main mechanisms in developing dynamic capabilities (Eisenhardt & Martin, 2000). Zahara and colleagues argue that, creating dynamic capabilities are based on learning mechanisms and the importance of deliberate cognitive processes, trial and error, improvisation and imitation (Zahra et al., 2006). Some argue that the improvisational learning-by-doing or trial and error approach is more relevant for new ventures, while learning-before-doing from experience is more relevant for established firms (e.g. Eisenhardt and Martin, 2000; Zahra et al., 2006).

The outcomes of DCs is the central argument in the field, and we will use this essentially important part to support our conceptual model developed in the following chapter. However some argue that DCs do not affect the output of the firm (i.e. products or services) directly, but indirectly their effect on other capabilities, which are applied for producing the firm's output. Hence, there are some authors taking positions for a direct effect of dynamic capabilities on performance (e.g. Teece et al., 1997; Makadok, 2001; Zollo & Winter, 2002; Teece, 2007). Others consider indirect effect of dynamic capabilities; for example Eisenhardt and Martin (2000) consider dynamic capabilities as necessary but not sufficient conditions for competitive advantage. Zahra et al. (2006) argue that their value is only as high as the quality of the resulting capabilities and add that they may actually have a negative influence on performance when misused. Winter (2003) argue that dynamic capabilities involve substantial costs and are without any benefit when they are not utilized, so he states that it often could be better to rely on more cost efficient ad hoc problem solving.

We are interested in the impact of dynamic capabilities on firm performance as opposed to investigating the concept of DCs per se. Thus, we will approach the empirical data with an open mind without first “taking sides” regarding the nature, role, context etc. of the concept. However, some commonalities between the predominant views exist and make the concept easier to grasp.

2.2.2 Hierarchy of Capabilities

Firm capabilities are considered to be distinct constructs, and the basic differentiation between ordinary and dynamic capabilities have been suggested by different authors. Table 2.3 shows some differentiate between dynamic and ordinary capabilities in a clear distinction, while others made a wider distinctions amongst ordinary, dynamic, and amongst dynamic capabilities themselves.

Table 2.3 Capabilities Levels

Colls 1994	Winter 2003	Wang and Ahmed 2007	Zahra et al. (2006)	The author
First Category	Zero-order Operational capabilities	Zero-order Cap[Substantive capabilities	Low Level Ordinary capabilities
Second Category		First-order capabilities	Dynamic capabilities	Higher level Dynamic capabilities
Third Category	First-order Dynamic capabilities	Second-order capabilities		
Fourth Category		Third -order capabilities		

Collis (1994) has split organizational capabilities into four categories. The first-category are functional capabilities which are essential for running the basic functional activities of the firm. The second concerns dynamic improvements which includes activities of the firm such as continues improvement activities. The third is closely related and difficult to differentiate from the second category, specifically about being able "to recognize the intrinsic value of other resources or to develop novel strategies before competitors" (Collis 1994, P. 145). Collis labelled the fourth category as higher order or

meta-capabilities, and it relates to learning-to-learn capabilities. According to Collis (1994), it is not simple to distinguish the first three categories of capabilities since they all concern the ability of firms to perform an activity more effectively than their competitors. Hence, as Collis has pointed out, the focus should be on the fourth capability as a higher-order or meta-capability, which is related to the learning capability that wins tomorrow and develops the capabilities that enable the firm to innovate (Collis 1994).

However, the categorization by Collis is not the only of its kind. Winter (2003) further developed the idea of a capability hierarchy proposing a three-tiered hierarchical classification of capabilities consisting of zero, first, and second-order capabilities. Zero-order are ordinary capabilities consist of collections of routines used to configure resources in a best manner (Winter, 2000), while first-order is a type of dynamic capability allowing firms to integrate and extract value from zero-order capabilities in a dynamic fashion (Winter, 2000). The second-order capabilities according to Winter consist of higher-order dynamic capability operating on the lower order capabilities.

Wang and Ahmed (2007) provide wider distinctions not only between ordinary and dynamic capabilities, but also between dynamic capabilities themselves. Zero-order capabilities include the resources and ordinary capabilities that necessarily to a firm's survival; first order are the ability to deploy resources to attain a desired goal; core capabilities as second order are a bundle of a firms resources and capabilities that are strategically important to its competitive advantage at a certain point. Dynamic capability as a third order are a firms constant pursuit of the renewal, reconfiguration and re-creation of resources, capabilities and core capabilities to address the environmental change (Wang and Ahmed, 2007). Their hierarchy of capabilities makes the distinction between typologies of capabilities vague as they consider several types of capabilities and places the entire dynamic capabilities in the last level.

Zahra et al. (2006) made a clear and simple distinction considering substantive capabilities and dynamic capabilities. Dynamic capabilities, as they demonstrated, are affected by and operate on substantive capabilities. However they have asserted that over time their relationship becomes more complex and interwoven.

As we noted authors have proposed different typologies of capabilities in view of the degree of internal change. Some explicitly use the term dynamic, while others have decided on a more general characterization or even apply a new one. Other authors outside the table explicitly use terms of typologies of dynamic capabilities, for example Teece (2007) uses sensing, seizing, and transforming forming different levels of dynamic capabilities, and the lowest order termed as ordinary capabilities.

We argue that the boundary between the categories is hard to determine explicitly (Collis, 1994). This all leads to the conclusion that capability is really an abstract term, whose specific meaning always depends on the situation. In different firms different things could be vital capabilities, but also different capabilities could be important in the same firm during different periods. However, authors claim dynamic capabilities are the ultimate organizational capabilities and therefore the source of sustainable competitive advantage instead of simply a subgroup (Lopez, 2005) or subset of capabilities (Teece, Pisano, & Shuen, 1997). The more common usage seems to be equating first-order with ordinary, while dynamic capability lays in a higher order (Teece, 2014). Therefore we consider ordinary capabilities as low-order capabilities under the static nature of the RBV which sustain the day to day activities, while dynamic capabilities are higher-order capabilities which operate on the resources-base for renewal and creating changes. We treat the dynamic capabilities as a main construct of our study, and accordingly we later conceptualize dynamic capabilities into different capabilities.

2.2.3 Conceptualization of Dynamic Capabilities

Table 2.4 proposes conceptualization of dynamic capabilities that have commonalities but are distinct. For example sensing capability, absorptive capability, integrative capability and innovative capability.

Table 2.4 Conceptualization of dynamic capabilities

Sources	Research	Conceptualization of dynamic capabilities
<i>Eisenhardt & Martin (2000)</i>	Conceptual	Resource integration, resource configuration, resource gaining and releasing
<i>Teece (2007)</i>	Conceptual	Sensing, seizing, reconfiguring/transforming
<i>Wang & Ahmed (2007)</i>	Conceptual	Absorptive, adaptive and innovative capabilities
<i>Barreto (2010)</i>	Conceptual	Sensing opportunities, making timely market-oriented decisions, changing the resource base
<i>Jantunen, Ellonen & Johansson(2012)</i>	Empirical	Sensing, seizing and reconfiguring
<i>Li a, & Liu (2014)</i>	Empirical	Sense-making capacity, timely decision-making capacity , and change implementation capacity
<i>Wang, Senaratne & Rafiq (2015)</i>	Empirical	absorptive and transformative capabilities

Source: Author

In fact these are the most important components of DCs and underpin a firm's ability to integrate, reconfigure, renew and recreate its resources and capabilities responding to external changes. Absorptive capability highlights the importance of taking in external knowledge, combining it with internal knowledge and absorbing it for internal use. Integrative capability impacts DCs by effectively allocating resources, assigning tasks, and synchronizing activities (Rugami & Aosa, 2013). Innovative capability effectively links a firm's inherent innovativeness to new opportunities (Rugami and Aosa, 2013). Sensing capability reflects the ability to sense the environment and understand customer needs and market dynamics better than competitors. In particular a number of different conceptualizations have alternately suggest related conceptualization of DCs. They build on Teece (2007) who disaggregates DCs into three elements: sensing, seizing, transforming, i.e. sensing and shaping opportunities and threats, seizing opportunities which have been sensed , and maintaining competitiveness through enhancing, combining, protecting and reconfiguring/transforming organizational resources (Wang et al., 2015). Barreto (2010) propose three process of DCs, sensing opportunities, making timely market-oriented decisions, changing the resource base capability. As mentioned all these components proposed by different authors correlated, but conceptually distinct. They are outward-looking and inward-looking (Wang et al., 2015).We describe outward-looking capabilities

which act outside a firm by e.g. sensing and seizing, or observing business the environment and grasping such opportunities, while inward-looking capability by modifying operating routines embodied in the ordinary capabilities (Teece, 2014). Following Teece we propose a simple definition of DCs that is appropriate for all type of businesses. Consistent with this argument we define dynamic capabilities as the following:

".....The timely capacity of a firm to "act" and "react" with the external environment, and hence timely reconfiguration and adaptation of resources and capabilities"

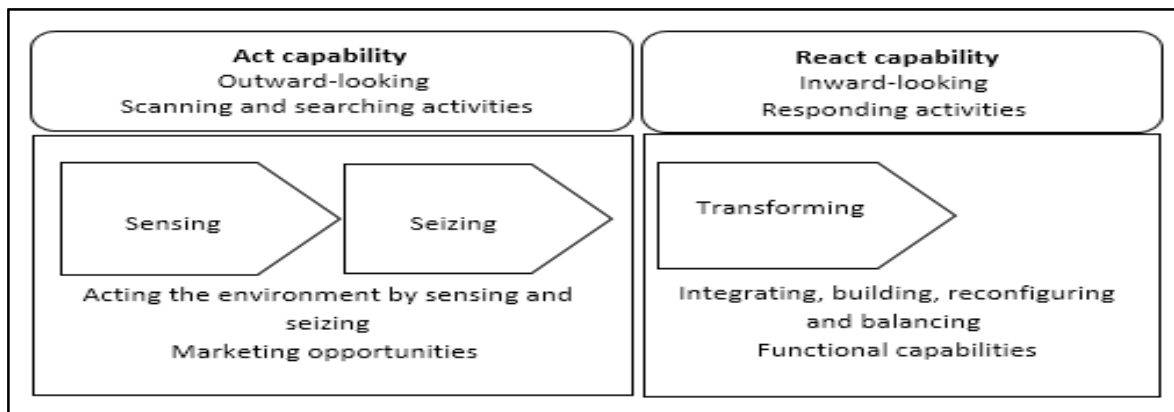


Fig.2.1 Dynamic capabilities process

Source: Author

Figure 2.1 considers classifying DCs according to whether they "act or react". The first represents the outward-looking capabilities, while the second represents the inward-looking capabilities, even though both are internal (Wang et al., 2015). Building on Teece (2007) we divide these processes into two parts in accordance with our definition. DCs begin in a proactive manner with acting capabilities which comprise sensing, and seizing capabilities, while reacting capabilities responding to the sensed and seized information in the acting capabilities. Acting capabilities are the transforming or reconfiguring capabilities that operate on ordinary resource and capabilities of a firm. In line with the definition, this study adopts the sensing, seizing, and transforming or reconfiguration capabilities of dynamic capabilities based on Teece (2007). The most influential contributions concerning these components (e.g. Di Stefano, Peteraf and Verona, 2010; Kindström et al., 2013; Wilden et al., 2013; Wilhelm, 2015 etc.). The next section is a detailed discussion of each of the three types.

Sensing: For the sensing process, firms require learning, interpretation and creative learning by scanning the business environment to gaining knowledge from inside and outside in order to making decisions about strategic direction (Teece, 2007; Teece, 2014). Teece (2007) argue that for effective sensing firms use “analytical systems (and individual capacities) to learn and to sense, filter, shape, and calibrate opportunities” (Teece 2007, p. 1342). The process of sensing is described by Wilhelm et al. (2015, P. 4) as "activities directed towards scanning the environment and identifying relevant changes and opportunities". Teece (2014) views sensing as a typology of DCs to identify such opportunities for a firm. Helfat and Peteraf (2014) argue that a critical component of entrepreneurial activity is the ability to sense opportunities before they fully materialize (Denrell, Fang & Winter, 2003). Sensing involve activities that obtaining particular valuable knowledge firm's about competitors such knowledge, exploring technological opportunities, probing markets, listening to customers or suppliers, distilling new product and service opportunities (Teece, 2007). Teece (2007) further explains that the ability to identify opportunities is dependent not only on the firm's learning and knowledge capacities but also those of the individuals within the firm.

Seizing: Primarily refers to the process of decisions made by managers in a timely manner followed by sensing a new opportunity for the next step is to seize the opportunity. Seizing an opportunity requires determining your business model, understanding resource needs, making decisions pertaining to investing in technology and other resources and then beating others to re-act by making timely and appropriate changes (Teece 2007, Teece 2014). Further, seizing opportunities requires firms to make unbiased strategic decisions about whether to exploit opportunities and to design business models that enable firms to create and capture value (Pitelis & Wagner, 2015). Similarly by emphasizing the value of knowledge, Jantunen et al. (2012) describe this seizing as a firm's capacity to adjust and incorporate knowledge and use it to commercial ends. Teece (2007) recognizes the fact that firms may sense an opportunity but may not be able to seize the opportunities in the right time and manner, as they are two completely different actions. Hence, it is possible that a firm can sense the right opportunities and not be able to seize them at the right time. Also Teece (2014) basically say it is more than just seizing that opportunity, but it is about how it is absorbed into the firm and incorporated with other variables.

Transforming: Following the seizing of an opportunity, ongoing reconfiguration of resources is necessary once the right opportunities have been sensed and seized. Jantunen and colleagues (2012) refer to this as reconfiguration and this third component as the ability of a firm to reassemble resources and knowledge to accomplish the desired innovation. Transforming capability has been recently defined by Wilhelm et al (2015, P. 4) as "activities directed at reorganizing existing operating routines". It concern a final end, while "learning facilitates response patterns and provides alternative solutions in case of failures, and reconfiguring enables the prompt yet systematic implementation of such solutions" Wilhelm et al. P. 8, 2015). We argue that transforming is a capability that operates on ordinary resources and capabilities as a result of the sensed seized information, and accordingly transforming capability makes changes in a firm.

Summary

We summarize the concept of DCs in sensing and seizing as outward-looking capabilities embodied in acting capability as the starting point of DCs in a proactive manner, they involve assimilating new external knowledge with existing internal knowledge that firm exhibit strong. Teece (2014) argue that, DCs effectively sense and shape opportunities, address these opportunities by seizing them, hence both are internal capabilities but outward-looking (Wang et al., 2015). However re-acting capability is inward-looking as the ability to transform and reconfigure resources-base (ordinary capabilities) by coordinating and executing strategic renewal and corporate change embraces corporate positions, paths, processes and management performance (Teece, 2007; Wang et al., 2015). Therefore, transforming capability depends on firms' sensing and seizing marketing information.

Chapter 3

Ordinary Capabilities

Chapter 3

Ordinary Capabilities

That means ordinary capabilities are a particular set of capabilities that help firms to function operationally and generate revenues on a continuous basis (Winter, 2003; Helfat and Winter, 2011). Specifically, ordinary capabilities are about producing and selling a defined of static set of products and services (Teece, 2014). Authors have made great efforts to conceptualize and refine dynamic and ordinary capabilities. Teece (2014) emphasizes that ordinary capabilities support technical fitness, while dynamic capabilities support evolutionary fitness. This concerned with specific role that each types of capabilities perform in which described from internal to external roles. Newey and Zahra (2009) emphasize the hidden role of ordinary capabilities, which might affect DCs “by influencing the knowledge that is available for the latter to undertake future reconfigurations of the former” (Newey & Zahra, 2009 p. 97). Many authors have constructed a hierarchy which distinguishes low-level capabilities and higher level capabilities as discussed in previous chapter hierarchy of capabilities. In line with that view, low-level capabilities refer to ordinary capabilities, the ability to make money and enhance firm performance in the short term (Winter, 2003), or substantive capabilities, the ability to solve a problem (Zahra et al., 2006). In contrast dynamic capabilities are capabilities of a higher level, they rebuild and reconfigure ordinary capabilities, and accordingly impact firm performance (Winter, 2003; Zahra et al., 2006). Ordinary capabilities can be broken into operational, administrative, and governance capabilities (Teece, 2014). Hence, it’s logical that ordinary capabilities are concerned with ordinary activities such as producing and selling a defined set of products and services. We conclude that ordinary capabilities

are important for a firm as they enhance firm performance in the short term across firms' functions (Teece, 2014). Therefore, we define ordinary capabilities as:

"....Those capabilities that directly contribute towards firm performance through which a firm makes its living in the short term"

One should note that ordinary capabilities may be viewed at different levels in the firm, many of which cross different functional areas (e.g., Eisenhardt & Martin, 2000; Barney & Hesterly, 2012). The best functional capabilities are those that increase speed, quality, and efficiency, and are directly concerned with the creation or delivery of a product or service (Teece, 2014). Each of these capabilities are linked to one another to improve their effectiveness and efficiency (Barney & Hesterly, 2012). For example marketing capability focuses on creation of customer demand and how to offer customers a unique value proposition, while operations focuses on the management of supply to fulfill customer demand (Nath et al., 2010). Financing capability relate to a firm's ability to obtain and use the financial resources across the firm that enhance financial stability within the firm. HRM capability includes staffing, performance appraisals, training and development, rewards and career planning across a firm functions (Barney & Hesterly, 2012). Surely, there will be many different functions across a firm which makes it outside our scope to research all ordinary capabilities.

We focus on marketing and operations which have traditionally been studied separately in the management literature (Karmakar, 1996). Porter (1985) argued that all functional areas of business contribute towards delivery of goods and services but marketing and operations are the two key functional areas that add and create value to customers. Nath et al. (2010) emphasize that, marketing and operations are two key business functions that create value for the firm (Nath et al., 2010). Also studies found a significant output of the combination of operational and marketing capabilities, which they can be sources of competitive advantage for firms (Hsu et al., 2009; Ketokivi and Schroeder, 2004; Nath et al., 2010; Vorhies and Harker, 2000). Therefore, we have selected two important capabilities functional-based include operations capability and marketing capability, as the most important functions along the value chain (M.U. Ahmed et al., 2014). Hence this study aims to fill this gap by investigating operations capability and marketing capability, and respectively comparing their relationship with DCs and firms performance. The following will be detailed explanation of operations and marketing capabilities.

3.1 Marketing Capabilities

Marketing capability demonstrates an organization's ability to understand and forecast customer needs better than competitors and to effectively link its offerings to customers (Krasnikov & Jayachandran, 2008; Kotler et al., 2009). However, "marketing" in its primary definition is concerned with decisions relating to customer market segmentation, targeting and positioning based on product, price, distribution and promotion decisions (Kotler et al., 2009; Kotler & Armstrong, 2010), and also, activities related to maintaining a value of product or service to customers, once it's been purchased (Kotler et al., 2009; Lindgreen et al., 2012). Thus, marketing capabilities build-on established empirical evidence of the resource-based view and market orientation: For example pricing and product development (Dutta et al., 1999), channel management (Weitz & Jap 1995), marketing communications (McKee, 1992), selling (Shapiro, 2001), market information management (Day 1994; Menon & Varadarajan 1992), marketing planning (Morgan et al. 2002), and marketing implementation (Noble & Mokwa 1999). However, to be aware of market orientation capabilities, it is necessary to understand the foundation upon which capabilities are built (Day, 1994; Vorhies & Harker). They developed through "learning processes when the firm's employees repeatedly apply their knowledge to solving the firm's marketing problems" (Vorhies & Harker, 2000, P. 4). Knowledge is an important aspect of developing marketing capabilities, particularly the way in which knowledge is integrated (Day, 1994; Vorhies & Harker, 2000). Therefore, as knowledge-based processes that become embedded over time, such capabilities may be difficult for competitors to imitate (e.g., Teece et al., 1997). Marketing capability requires knowledge; about competition, customers, skills in segmenting and targeting markets, advertising and integrating marketing activities (Nath et al., 2010). Also marketing capabilities develop by combining employees' knowledge and skills with the available resources, which once built may be hard to imitate, usually develops over time through learning and experimentation (Yu et al., 2014). However, this particular type of knowledge is a complex and not accessible for all firms. Research reveals that, a substantial part of market knowledge is difficult to codify because of its socially complex nature, implying that market knowledge is distributed across multiple groups and people (Simonin, 1999b; Kotler et al., 2009)). Hence, knowledge for marketing capabilities are particular skills of "understanding and satisfying" customers (Day 1994, p.37).

Nevertheless, marketing capabilities are a multi-dimensional concept and can be defined simply as organizational capability within the marketing context (Moore & Fairhurst, 2003), thought of as an organization's practices, routines, and work patterns applying the resources of the firm to the market-related needs of the business (Vorhies & Morgan, 2005). Some define marketing capabilities as a process of different capabilities. For example, Weerawardena (2003a) define the marketing capabilities as integrative processes designed to apply the collective knowledge, skills, and resources of the firm to the market-related needs of the business, enabling the business to add value to its goods and services and meet competitive demands. Similarly, Day (1994) and Vorhies et al., (2000) considered marketing capability as integrative processes designed to apply collective knowledge, skills, and resources of the firm to the market related needs of the business, enabling the business to add value to its goods and services and meet competitive demands. Ahmed et al. (2014) define marketing capability as "The ability to use inputs and resources, such as financial resources and the existing customer base, efficiently to generate desired sales"(Ahmed et al., 2014, p. 61).

Accordingly, research has conceptualized marketing capability into sub-dimensions according to different functional areas (e.g. Fahy et al., 2000; Vorhies & Harker, 2000; Wang et al., 2004; Vorhies & Morgan, 2005; Afzal, 2009; Morgan, 2012; Ruiz, 2014). Particularly Vorhies and Morgan (2005) propose eight distinct marketing capabilities that significantly contribute to value creation for customers and firms, which include: product development capability, pricing capability, channel management capability, marketing communications capability, selling capability and marketing information. Consequently we observe that authors conceptualize marketing capabilities to propose a way forward in terms of understanding and explaining firm behavior in the realm of deploying marketing resources for achieving superior performance. Competing firms are expected to advance similar, but not identical marketing capabilities (Day, 1994; Afzal, 2009), which develop differently as individuals combine their particular knowledge and skills with the resources available to them (Weerawardena, 2003a). Hence, the impact of the various dimensions of marketing capability is to increase revenue for a firm by adapting related skills, knowledge and resources to create routines that maximize price and quantity (i.e. to sell as much as possible at the best price for a firm). Consistent with this discussion, we define marketing capability as follows:

".....Integrated capabilities embodied in a marketing context that generate value for a firm through the collective knowledge, skills, and resources of the firm"

Following our definition we conceptualize marketing capabilities according to Vorhies and Morgan (2005) who proposed eight interrelated specialized capabilities. According to the RBV approach, these capabilities may be rare, valuable, non-substitutable, and inimitable sources of advantage that can lead to superior firm performance (e.g. Dutta et al., 2003; Vorhies and Morgan, 2005). We shall discuss the proposed eight marketing capabilities in the following section.

Product development capability refers to firm's ability to design products that meet customer needs and internal organizational goals, and are able to outperform competitors' products (Li and Calantone 1998; Vorhies & Harker 2000; Kotler et al., 2009)). A strong product development capability can enhance the exploitation of firms' customer knowledge, internal resource and development strength (Li & Calantone 1998). Consequently, firms can provide new products with differentiated attributes (e.g., quality, novelty, and uniqueness) from competitors' that in turn enhance brand image and customer satisfaction (Zou et al. 2003; Kotler et al., 2010)). Additionally, fast developing new products and/or services quality is an integral component of winning an innovation-driven competition.

Pricing capability is considered a specialized marketing capability (Vorhies, Morgan, & Autry, 2009). It's thought of as the ability to extract the optimal revenue from target customers (Dutta et al., 2003). It involves a process setting competitive price for a firm's product/services, and monitoring prices in the markets that respond to competitors' challenges and customer changes (Vorhies and Harker 2000 ; Zou et al. 2003). Dutta et al. (2003) argue that firms use in the price-setting process routines, skills, types of expertise, coordination mechanisms, and other capabilities difficult to imitate to gain and sustain a competitive advantage (Dierickx & Cool, 1989; Peteraf, 1993; Wernerfelt, 1984). Firms operating in new and unknown environments without referential prices usually struggle with pricing and this leads to the danger of under- or overpricing (Kotler et al., 2009; Flatten et al., 2014).

Channel management capability is a firm's ability to establish and maintain distribution channels that effectively and efficiently reach and deliver value to end customers (e.g., Weitz and Jap 1995). The base for channel management capabilities is to develop close relationships with channel members, hence is concerned with the relationships management across several channel levels (Morgan & Hunt 1999). Cavusgil and Zou (1994) emphasize the role of valuable and timely information offered by channel members, which is critical for firms to design their marketing strategies. Morgan (2012) argues that variety of potential channel management related capabilities exist and are reflective of the high levels of variation seen in organizations for example if selling directly to customers, companies are expected to develop only those channel capabilities that relate to order processing, shipping, return processing, and customer service.

Marketing communications capability is a firm's ability to effectively use marketing communications to manage customer value delivery (Vorhies and Morgan 2005; Morgan, 2012). The marketing literature suggests that such communications capabilities are built upon fundamental marketing activities such as advertising, social media participation, sponsorship, public relations, and corporate image management (e.g., Aaker, 2008). Communicating the benefits of the firm's new products and services to potential customers, reminding current users of the product about product benefits and availability, and reinforcing the purchase decision to reduce cognitive dissonance are essential skills that firms must have in order to possess a strong marketing communications capability (e.g., Vorhies and Morgan 2005; Lindgreen, et al., 2012).

Selling capability is simply the firm's ability to acquire customer orders. Morgan (2012) argue that selling capabilities may be viewed as comprising two related elements; first concerned with competencies of personnel who perform the selling activities, and second concerned with the systems and structures required to ensure efficient and effective management of the sales force (e.g., Challagalla & Shervani 1996). Also Weerawardena (2003a) considered two main aspects that shape selling capability, first is concerning the promotional activities (e.g. advertising, sales promotions, publicity and personal selling, are widely used to communicate with the markets, sell products and subsequently gain growth in market share and sales avenues, and second is concerning the quality of sales people reflects the extent of sales volume.

Marketing information management capability are the processes by which firms learn about their markets and use market knowledge (Day 1994). This capability is embodied in marketing research (Vorhies & Harker, 2000), providing a particular type of information which forms the knowledge base of a firm. Information about customers, channel members, and competitors are important inputs for marketing activities such as pricing, advertising, product development, and marketing planning (e.g., Day 1994; Morgan et al. 2009). The information doesn't provide decisions itself, but it does support and guide the decision making process in terms of the development of firms' marketing planning and implementation (Vorhies & Morgan 2005; Lindgreen et al., 2012). Hence, marketing information help to meet external market needs and is a key asset for a firm (Lindgreen et al., 2012).

Marketing planning capability refers to the ability to conceive marketing strategies that match the firm's resources and conditions in its marketplace in ways that enable the firm to achieve the desired objectives (Vorhies & Morgan 2005; Kotler et al., 2009)). The planning activities (e.g. market segmentation, customer and competitor analysis, internal company analysis, market targeting, and envisioning desirable value propositions) are the most essential elements of marketing planning capability (e.g., Menon et al. 1999). However, marketing planning capability from a management prospective is also indirectly related to organizational success through firm's marketing implementation capability (Vorhies & Morgan 2005).

Marketing implementation capability the processes following the planning phase by which intended marketing strategy is transformed into realized resource deployments (e.g., Noble & Mokwa 1999). The processes requires the ability to acquire, combine, and deploy needed resources (Morgan, 2012). Capabilities such as acquiring and allocation resources; monitoring internal and marketplace forces; and appropriate organizing design central to a firm's adaptive performance (Morgan, 2012). Morgan considers less important capabilities in implementation capability termed as "lower-level capabilities e.g., compensation system design, hiring and training needed personnel, product and service delivery" (Morgan, 2012, P. 7).

We conclude that, marketing capabilities enable the business to add value to its goods and services, adapt to market conditions, take advantage of market opportunities, and overcome competitive threats (Day, 1994). Marketing capabilities are believed to be one of the essential capabilities as a key success of firms to outperform their competitors, especially during economic recessions (Srinivasan et al., 2011), in high-tech sectors (Dutta et al., 1999), in developing countries (Su et al., 2013) and transition economies (Fahy et. al., 2000). Firms in Palestine operate in a specific and challenging business environment, they are often young and private-owned, and usually have less marketing skills than established foreign firms.

3.2 Operations Capabilities

The operations function is to produce goods and services required by customers through the transforming activities that change inputs into outputs to be sold to customers (Davis et al., 2005). The tasks or activities typically include" high conformance quality, low manufacturing cost, and fast introduction of new products/processes" (Peng et al., 2008, P. 26). Hence, managers on the operation/manufacturing floor must be capable to make decisions at a more micro level to identify best ways for accomplishing the desired output (Peng et al., 2008). It has been argued that superior manufacturing capability provides long lasting comparative benefits to a firm in the market (Jain & Adil, 2014) Accordingly, the importance of operations or manufacturing capability is to successfully implement an operations strategy (Davis, 2005). There is a considerable ambiguity in the existing literature regarding the definition of operations capability, some refer the concept to manufacturing and others to services operations (Davis, 2005). This terminology of this concept depends on the type of business either operations or manufacturing, hence it considers as a multifaceted complex concept ((Fritz, 1996). Authors have different ideas as to what information is required for defining and measuring operations capabilities. However operations capability is defined in most argument as a process, tasks or approaches to produce/provide goods and services that satisfy customer's needs. From the manufacturing prospective, Dutta et al., (1999) and Hayes, et al., (1988) define operations capability as the integration of a complex set of tasks performed by a firm to enhance its output through the most efficient use of its production capabilities, technology, and flow of materials. Similarly, Peng et al., (2008) define operational capabilities as approaches to

integrate equipment, technology, and other resources (Peng et al. 2008). Nath et al, (2010) view operations capability as a process, technology, reliability and quality of the overall operations of the firm (Nath et al., 2010). Recently, Rosenzweig and Easton (2010) refer to competitive manufacturing capabilities, defined as the ability to compete on the dimensions of quality, delivery, flexibility, and cost relative to primary competitors in its target markets.

Operations capability has been conceptualized based on basic four dimensions of competitive priorities in the content of strategically relevant capabilities include; low cost, quality, delivery, and flexibility (Skinner, 1969; Berry et al., 1991; Ward et al., 1998). While others in the same line suggest innovativeness and service as additional priorities they also consistently stress the four basic dimensions (Schmenner and Swink, 1998; Ward et al., 1998; Boyer and Lewis, 2002; Schroeder et al., 2002). In the field of operation management and strategy literature, several labels have been used to refer to competitive priorities for example; organizational priorities, dimensions of competition, or core content, manufacturing tasks (Skinner, 1969; Adam and Swamidass, 1989; Ferdows & De Meyer, 1990; Fitzsimmons et al., 1991). Others refer them to competitive capabilities or manufacturing/operations capabilities (Wheelwright, 1984; Rosenzweig & Easton 2010), and operations excellence (Ferdows & De Meyer, 1990).

We argue that the general dimensions which include quality, cost, delivery and flexibility are significantly important for effective operations. It should be noted that operations could become more capable if the function were allowed to promote social responsible practices towards employees. Although previous research proposes additional competitive priorities (e.g. innovation and service and dependability), it disregards the social practices within the operations function. Particularly in developing countries like Palestine, workers/employees mainly on the operation floor face long hours, poor working conditions, and job instability. This may due to the lack of effective government regulation, which led to unsafe, unhealthy work sites, and inequitable treatment among employees. We note that Black and Hartel do propose the construct of social responsibility capability, arguing that "firms can develop capabilities that foster socially responsive management, and that these capabilities contribute to competitive advantage by maintaining a firm's social license to operate" (Black & Hartel, 2003, p. 2). Litz (1996) emphasizes that the

ethical responsiveness of a firm has a positive effects on firm's competitiveness. Hence, being capable in running the operations function is more to do with being than having. Hence we include the SRC as a new dimension of operations capability to the basic four dimensions. This contribution fills the gap by re-conceptualizing the concept of operations capability with a social responsible practices and empirically testing its impact. In the next section we shall look at the dimensions of operation capability according to our definition of operations capability which consistent with the previous discussion as following:

"...The ability of the operations function to utilize the dimensions of quality, delivery, flexibility and cost, together with socially responsible practices towards employees"

Social responsibility capability (SRC) is the ability of a firm to promote responsible business practices towards its employees, particularly we focus on the operations function level. The term SRC has been developed from the so called corporate social responsibility framework and resources-base view. This issue has gained attention in strategy research, e.g. (Litz, 2006) social capability for organization changing, and Black (2006) social responsibility capability towards stakeholders, and is still gaining considerable attention. In this research we focus on the employee's level in the operation department e.g. working conditions, and employee's rights as these two factors are most important in international reports (e.g. World Bank, 2015). The social responsibility capability in our case relies on the assumption that social responsibility is not a discretionary activity, but arises in the day to day interactions in relationships between firms and their workers in the operation function. Black (2006) understands the meant by social responsibility capability as "it is how firms and their managers respond to the diverse expectations that different stakeholders may have of a given company (Black, 2006, P.2). The SRC is an extension to the operations capability dimensions, due to the big issues concerned with the social practices in the operations floor. Customers are very important to satisfy through quality, cost, delivery, and flexibility capability). However employees should be not less important for firms as the main assets (Black, 2006). Hence, SRC is an essential dimension for operations together with the basic dimensions.

Qualities capability is concerned with product/service's performance, specification and feature which provide benefits to customers (GroBler & Grubner, 2006). However, the

level of quality in a product's design and characteristics varies and depends on the target market that firm wish to serve (Davids et al., 2005). Process quality embodies in the follow of manufacturing process in which to be effective and documented routes that guarantee error-free products as well as the conformance of product performance (GroBler & Grubner, 2006). This depends on the desired output and is critical in every market segment to meet customers' needs and expectations (Davids et al., 2005).

Delivery capability is the ability of a firm to provide consistent and fast delivery and allows it to charge a premium price for its products, considering the reliability of delivery by the due time (Davids et al., 2005; Corbett and Claridge 2002). Also, delivery capability is defined as competition on the basis of quick and reliable deliveries (Nobel, 1997). When considering the dimensions of delivery performance, Li (2000) suggests that delivery is concerned with a time, and usually defined in the following aspects: how quickly a product is delivered, how reliably the products are developed and brought to the market, and the rate at which improvements in products and processes are made. Similarly, Wacker (1996) suggests three meanings concerned with capable delivery: delivery reliability or delivery dependability, speed of delivery for current products, and new product delivery. However, it has been argued delivery performance should emphasize customer service as indicated by delivery reliability and delivery speed (Ward and Duray, 2000).

Cost capability is the ability to produce or provide products/services efficiently over competitors. This can include some factors depending on the type of a business's elements such as materials, overhead costs and labor productivity, and inventory turnover. Usually in service and industrial businesses there is segment of the market that buys strictly on the basis of low cost (Davids et al., 2005). For example to successfully compete in this niche, a firm must necessarily, therefore, be the low-cost producer. Many philosophies in the field have sought to enhance firms' price competitiveness by driving down inventory, production and overhead costs (Cua et al., 2001).

Flexibility capability is the ability to offer high flexibility in changing operations. It's concerned with the ability to change the volume of production, to change the time taken to produce, to change the mix of different products or services produced, and to innovate and introduce new products and services (GroBler & Grubner, 2006). Authors have certainly emphasized that flexibility is a competitive priority that enables

organizations to cope with uncertainty (Davis et al., 2005; Tachizawa & Thomsen, 2007). Hence the increasing dynamism of markets, variety of customer needs as well as increasing competition in the market place requires the adoption of a high flexibility of operations (Collins & Schmenner, 1993). Hence, flexibility is competitive priority concerned with speed rather than cost, required to respond effectively to changing circumstances resulting from internal and external environments (Davis et al., 2005).

The interrelationship between operations capabilities quality, cost, delivery, flexibility and SRC are important for effective operations function as the way in which these capabilities relate to each other plays a major role when constructing operations strategies to improve performance (Grobler & Grubner 2006; Davis, 2005). Ferdows and De Meyer (1990) proposed the San-cone model which includes quality, cost, dependability and flexibility) which provides a distinct approach to explain the complex relationships among manufacturing capabilities. They maintain that there is an ideal sequence in which operational capabilities should be developed. The model started with quality capability as the foundation for achieving the other three capabilities on a higher level. Similarly, actions on quality and dependability need to continue whilst building flexibility. Then efforts to reduce costs take place alongside continuing efforts to improve quality, dependability and flexibility (Corbett & Claridge, 2000; Davis et al, 2005). Adding the SCR relies on the assumption that social responsibility is not a discretionary activity, but arises in the day to day interactions in the operation function. Ferdows and de Meyer (1990) claim that operational capabilities developed in this way are more likely to endure than individual capabilities developed at the expense of others. Furthermore, operational capabilities are also involved in operation strategy (Porter 1985). Operations strategy refers to how the operations management function contributes to a firm's ability to achieve competitive advantage in that marketplace (Davis et al., 2005). By enhancing the capacity of a firm to design, produce/provide and bring products quickly to market (Davis et al., 2005). Thus, operations capabilities are integrated in an appropriate fit with a functional strategy and the entire business strategy (Li, 2000). In the case of Palestine, firms operate in a complex and very competitive environment. They need to be able to reduce a product's cost to customer, and make the product more readily available (e.g. provide the product online and customize the product to the customer's specific needs. Also the ability to provide services to customers by providing such facilities can make transaction faster to customers. The ability to promote social business practices is also important since many customers take this issue into consideration.

Summary

We sum-up the literature review emphasizing the relationship between RBV capabilities as ordinary capabilities and DCs. Fig. 3.1 illustrates the effect of the process of DCs (sensing, seizing and transforming) and the ordinary capabilities (operations and marketing). We have seen that the typologies of capabilities dynamic and ordinary (operations and marketing capabilities) reside in a hierarchy levels.

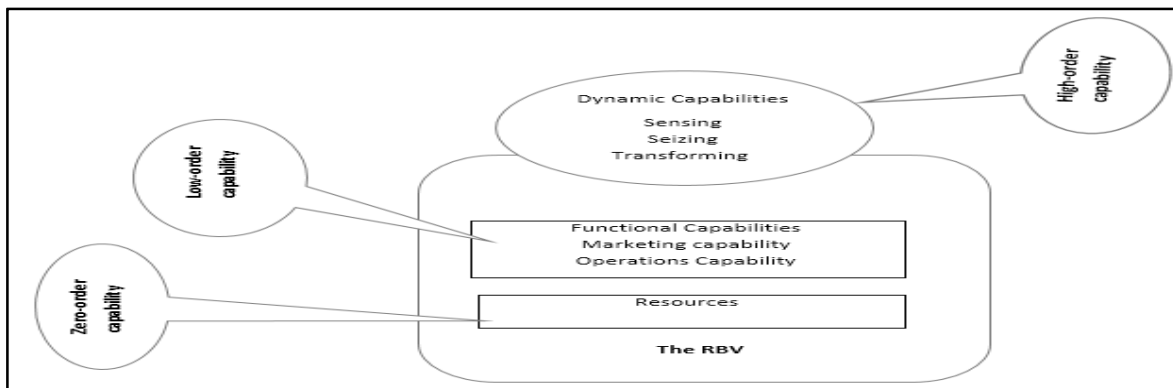


Fig.3.1 Hierarchy of Dynamic Capabilities and ordinary Capabilities

Source: Author deliberation

For avoiding ambiguous words and phrases, we considered ordinary capabilities as low order and DCs should be considered as higher order capabilities. The role of the ordinary capabilities under the static nature of the RBV prospective enable firms to perform definable tasks that sustain the day-to-day activities. Such ordinary capabilities we identified; the operations capabilities (quality, cost, delivery, flexibility and SRC) and the marketing capabilities (pricing, customer services, marketing communication and product development). However, these constructs involve collections of routines along a company's value chain by which a firm usually earns profits. On the other hand DCs sense and seize market opportunities and reconfigure the ordinary capabilities, creating, extending and modifying operating routines embodied in the ordinary capabilities to balance to environmental changes (Helfat et al., 2007; Teece, 2007; Winter, 2003; Teece, 2014). DCs often involve assimilating new external knowledge with existing internal knowledge and the ability of a firm to undertake internal transformations and update its prior knowledge can feed back into the development of its sensing capability (Wang, 2015).

Chapter 4

Theoretical Framework

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Theoretical Framework

The logic of the RBV provides the foundation of our reasoning for approaching the study's constants and hypotheses. Also the dynamic capabilities framework provides a further aspect to this logic, adapting it to the increasingly dynamic features of markets (Teece et al., 1997). Despite a significant volume of research on the relationship of a firm's capabilities to its performance, the findings regarding this relationship often vary substantially in terms of context of the study. Despite the evidence that supports the significant impact on a firm's performance, to our knowledge, there has been no research to integrate the relative impact of DCs and ordinary capabilities on firm performance.

The DCs were conceptualized in the earlier chapters as higher-order capabilities incorporating the sub-dimensions of acting capabilities (sensing, seizing adopted from Teece 2007), and reacting capabilities (transforming in Teece 2007). The contemporary definitions of dynamic capabilities attempt to adopt the mechanism in which DCs are altering and reconfiguring their source base to overcome path dependencies and firm inertia, so that firms are able to enhance their performance under changing environmental circumstances.

The other set of capabilities are ordinary capabilities, they have been demarcated according to their different functional areas. In this research we limit our focus to two types of capabilities; marketing capabilities (pricing, marketing communication, customer services, marketing channel, and product development); and operations capabilities

(quality, cost, delivery, flexibility and SRC). Fundamentally, marketing is the function that is responsible for meeting customer needs, while operations is focused on performing organizational activities efficiently and flexibly to produce the product/service with a minimum wastage of resources. We consider the motivation for selecting these critical functions (marketing and operations functions) either in manufacturing or nonmanufacturing industries. The literature reveals that they are a fundamental for a firm's success as core organizational functions involved in developing and implementing a strategy that results in sustained performance advantage.

However, we do not claim that the identified capabilities in the context of our structural equation model are exhaustive. Rather, the study confines itself to the effect of the most widely examined capabilities on performance which reflect critical aspects of business issues for most businesses. Therefore the study seeks answers to the following questions: What is the impact of DCs on performance? Does the impact go directly or indirectly through ordinary capabilities? What is the impact of ordinary capabilities on performance? Does the impact on performance differ between for marketing and operations capabilities?

The following sections discuss the prior research related to the interrelation between the DCs, marketing and operations capabilities as a part of the resource-base of a firm and a firm's performance, in addition to the role of environmental dynamism that may affect the role of DCs.

4.1 Dynamic capabilities and firm performance

The empirical research shows an ongoing debate about the nature of output of DCs, in particular the mechanism by which DCs shape performance is still not well understood (Zott, 2003). Also it has been argued that firm performance has been a core issue in the research on DCs and the question of whether and how they affect performance is still open (Helfat *et al.*, 2007). Some authors suggested an indirect link between DCs and performance whilst others tend to link DCs indirectly to a firm's performance. However the indirect effect on firm's performance likely occurs through firm resource and capabilities. In these circumstances DCs cannot directly be a source of superior performance; rather they contribute to the achievement of superior firm performance.

According to Teece et al (1997) DCs enable firms to sense the need for change, to acquire and integrate necessary knowledge to react to external challenges (Teece et al., 1997; Teece, 2007), and to reconfigure the firm's resource base (Eisenhardt & Martin, 2000; Teece, 2007). Teece et al. (1997) as shown in Fig. 4.1 insist that organizational processes and opportunities are significantly shaped by the assets position of a firm, the evolutionary path it has adopted throughout its history, and previous investment. Hence DCs rest on those processes that can alter current positions, leading to an effect on firm performance and competitive advantage, as well as new positions and paths (Helfat et al., 2009). Also Teece and colleagues have argue that, DCs operate on organizational skills, resources, and functional competences, (Teece et al. p. 1997), hence DCs enhance the firm performance through their impact on static capabilities.

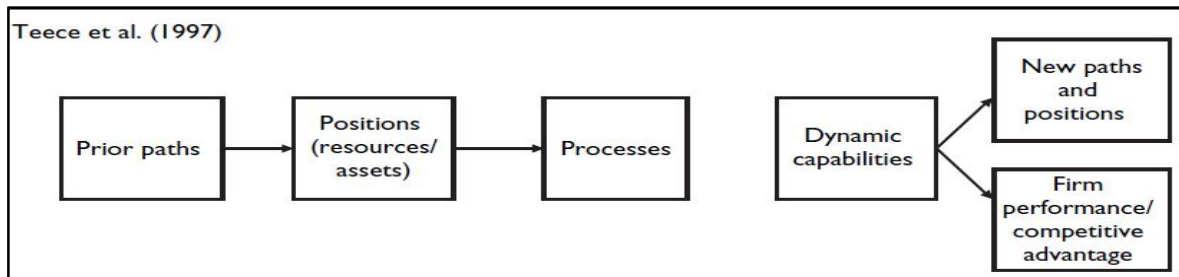


Fig.4.1 Basic Chain of logic in Teece et al. (1997)

Source: Helfat & Peteraf (2009)

Teece (2007) puts the DCs in a chain of logic shown in (Fig. 4.2). He argues that DCs of opportunity identification ('sensing') and investment in these opportunities ('seizing') lead to new positions and paths, which then affect firm performance in terms of growth, profits and competitive advantage. Teece (2007) argues that "the ambition of the DCs framework is nothing less than to explain the sources of enterprise-level competitive advantage over time" and that "dynamic capabilities lie at the core of enterprise success." (Teece, 2007, p. 1320). Through re-combination and re-configuration, DCs can alter the accumulated asset base of the organization further, leading to an additional effect on firm performance and competitive advantage, and to new positions and paths (Teece, 2014). The chain of logic developed by Teece (2007) works as a sequential process that effects one another. For example the effect of sensing capacity on the performance was mediated by seizing and reconfiguring capacity, and wrong sensing in turn may result in wrong investment decisions (Teece, 2014). The

phenomenon that the sensing capability is expected to have an indirect effect on the changes in the resource base, hence lead to indirect effect on firm's performance was empirically analyzed by Maijanen and Jantunen (2014).

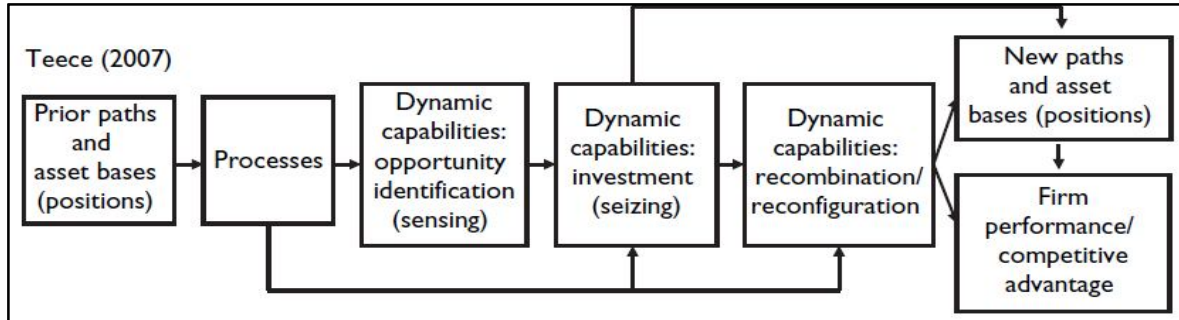


Fig.4.2 Basic Chain of logic in Teece (2007)

Source: Helfat & Peteraf (2009)

Zahra et al. (2006) differentiate substantive capabilities from dynamic capabilities as in (Fig. 4.3). They argue that the direct output from using DCs in a firm does not result in competitive advantages or high performance. They state that "We have suggested that the creation of DCs is not necessarily associated with higher performance" (Zahra et al., p. 33, 2006). The emphasis is on the role of DCs that enhancing ordinary capabilities, "building DCs allows firms to conceive of new resources and explore new uses for their resources" (Zahra et al., 2006, p. 33). Hence the impact of DCs occurs through substantive capabilities and depends upon the quality of the knowledge upon which the choices are based.

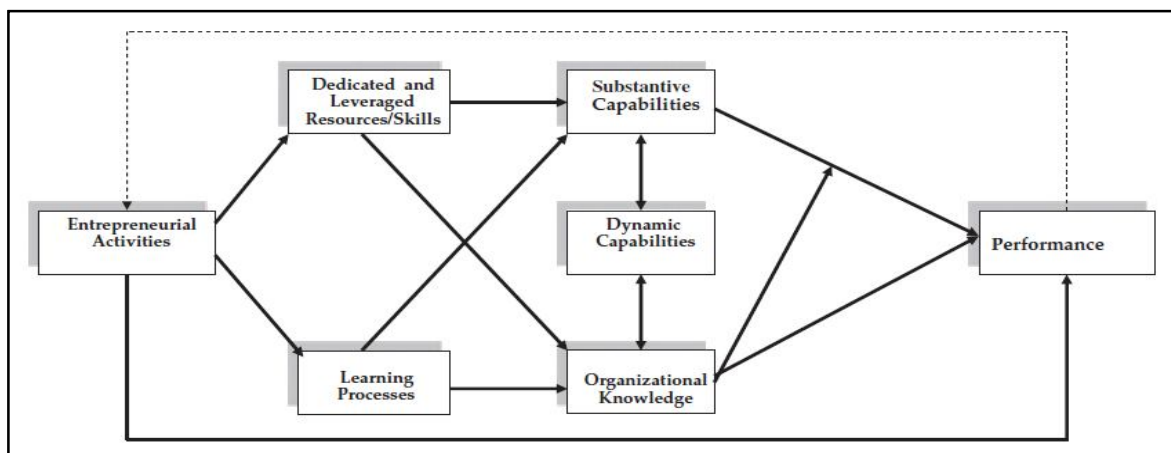


Fig.4.3 Firm's Capabilities and Performance

Source: Zahra et al (2006)

Eisenhardt and Martin (2000) (Fig. 4.4) view DCs as processes that firms use to obtain, integrate, reconfigure and release resources, leading to new resources and resource configurations or new positions as in Teece's terms. Eisenhardt and Martin argue that the 'functionality of DCs can be duplicated across firms, their value for competitive advantage lies in the resource configurations that they create, not in the DCs themselves' (Eisenhardt & Martin, 2000, P. 1106). Helfat et al agree with Eisenhardt and Martin (2000) that DCs have a direct effect on firm performance as well as an indirect effect through resource reconfiguration (Helfat et al., 2009). However, according to Helfat et al. (2009), Eisenhardt and Martin (2000) consider a competitive advantage as more difficult to achieve through DCs than Teece does, even though their basic chain of logic is very similar to Teece and Helfat et al. (2007).

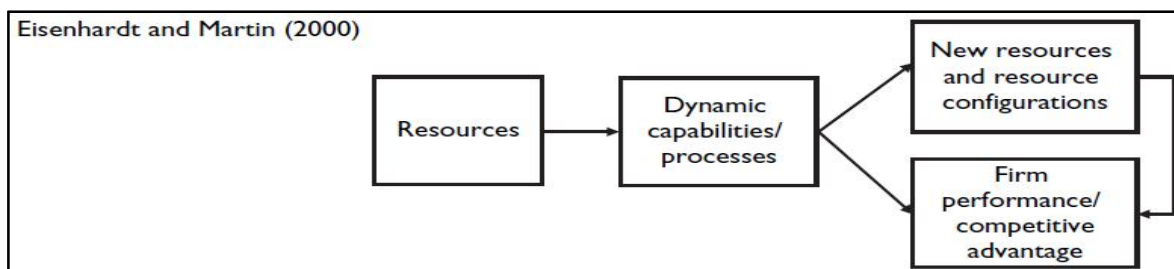


Fig.4.4 Basic Chain of logic in Eisenhardt and Martin (2000)

Source: Helfat & Peteraf (2009)

Ambrosini and Bowman (2009) suggest four different outcomes which may result from the deployment of DCs: DCs can lead to sustainable competitive advantage if the resulting resource is inimitable for a long time and the returns are sustained. DCs can result in competitive advantage that can only be enjoyed for a short period of time. DCs may only give competitive parity if the resulting resource base simply allows the firm to operate in the industry rather than to outperform rival firms. Finally, DCs may lead to failure if the resulting resource is irrelevant to the market. For example: Helfat et al. (2007) stated the value of DCs depends on whether or not they perform a function and create value, and to what degree. The value created varies with time and circumstance, as environmental opportunities change. Helfat et al. (2007) argued that DCs do not necessarily lead to competitive advantage. They explain that, while the DCs may change the resource base, this renewal may not be necessarily valuable, as they may not create VRIN resources or currently needed resources. Thus, they disconnect DCs from advantage, suggesting that the

performance of DCs should be evaluated. They argue that any assessment depends on the context in which DCs are embedded. To overcome this, Helfat et al. (2007) add two measures to their concept named 'evolutionary fitness': firm survival and firm growth. They state that "evolutionary fitness refers to how well DCs enables an organization to make a living by creating, extending, or modifying its resource base" (Helfat et al. p. 7, 2007). Survival indicates whether a firm can adapt to its external environmental turbulence. If an organization can survive in the long-term, this implies that it is successful in maintaining evolutionary fitness, however survival is a necessary condition for organizational growth. This measure "incorporates the extent of evolutionary fitness in the form of increased organizational size over time, whether in terms of revenue, assets, or other measures of size" (Helfat et al., 2007, p. 15).

Furthermore, Zott (2003) explains that DCs indirectly impact a firm's performance by modifying its routines or resource bundle, stating that DCs are indirectly linked with firm performance by aiming at changing a firm's bundle of resources, operational routines, and competencies, which in turn affect economic performance. Wang and Ahmed (2007) argue that the inspection of the effects of DCs should be long-term performance, but the relationship emerges by the mediation of capability development. Bowman and Ambrosini (2003) following the RBV, suggest that the VRIN resource base is directly linked to rents, but as DCs are one step removed from rent generation, their effect is indirect. They find DCs useful in moderately changing environments, because resource base changes are needed there as well (Eisenhardt & Martin, 2000; Helfat et al., 2007; Ambrosini and Bowman, 2009). Similarly, Zahra et al. (2006) argue that the direct output from using DCs in a firm does not result in competitive advantages or high performance, but rather results from the idea that DCs originate and define the firm's individual resource configuration, which enhance the firm's competitiveness and therefore performance. Zahra and colleagues emphasize the risk of practicing DCs that can even damage performance if they are misused (Zahra et al., 2006). Zollo and Winter (2002) demonstrate a direct link between DCs and superior performance or survival in changing environmental conditions, however, they argue that both superior performance and viability of firms are transient for firms without DCs. In other words, their study implies that "both superiority and viability will prove transient for an organization that has no dynamic capabilities" (Zollo & Winter, p. 341, 2002). Also, Drnevich and Kriauciunas (2011) argue that dynamic capabilities enable a

firm to respond to opportunities through developing new processes or improving the speed, effectiveness, and efficiency with which it operates. Nevertheless the firm still operates based on its operational capabilities, whose improvement through DCs increases its performance. From this observation it follows that DCs improve the relative quality of operational capabilities, which positively contributes to relative firm performance. Recently, Makkonen et al. (2014) also found that DC's have a positive effect on organizational change include ordinary capabilities, which in turn positively affects product innovation. And thus, firms are better able to develop and introduce new products in the market, this positively influencing the growth of the firm.

Empirical ambiguity continues over exactly how DCs affect firm performance as it is also proposed that DCs have a direct effect on firm performance. According to Helfat et al. (2009) that "DCs jump directly to modeling the change–performance relationship without considering underlying organizational factors" (Helfat & Peteraf, p. 89, 2009). Likewise Lin and Wu (2014) applied the resource-based view to study directly the moderating effect of DC's on improved performance and found a positive correlation between them. Li and Liu (2014) study the role of environmental dynamism and competitive advantage, they were able show that DCs have a significant positive impact on firm's performance (Li & Liu, 2014). (Wu, 2010) proposed a hypotheses that a firm's DCs relate positively to competitive advantages and that volatile markets do not weaken the positive relationship between DCs and competitive advantage. The findings indicate that DCs in highly volatile markets effectively enhance the firm's competitive advantage (Wu, 2010, p. 30). These findings correspond to the findings of Li and Liu (2014). Also Hung et al., (2007) found a positive and significant relationship linking DCs and superior firm performance in the form of market share, profit, cost, total sales revenue, and customer satisfaction. Naldi et al. (2014) test Teece's conceptualization of DCs in the context of small and medium-size enterprises, finding that both sensing and seizing capabilities have a positive effect on firms' innovative performance, but only after overcoming a threshold level. Recently Gao and Zhu (2015) investigate dynamic capabilities on the Chinese context without considering mediating variables, they found that, building dynamic capability always positive and enhance innovation performance and overcome latecomer disadvantages.

The outcomes of DCs have been examined them mainly in terms of either the economic performance of the firm or changes in a firm's static resource and capabilities. Some authors depict a direct relationship or as influenced by mediating factors implies when DC is examined as a mediating variable between resources/capabilities and performance. Also others depict an indirect relationship suggests an influence on ordinary capabilities demonstrate the ability of firms to be dynamically capable to induce change.

Therefore, the mechanism by which DCs shape performance is still not well understood (Zott, 2003). Given that, the previous studies mostly on dynamic capabilities are conceptual studies, or empirically examine high-tech industries based in developed countries. We will investigate firms from different sectors as well as the role of DCs in the Palestinian business environment. This allows us to draw the following hypothesis:

Hypothesis 1: Dynamic capabilities (sensing, seizing, and reconfiguration capability) have a direct positive effect on a firm's performance.

Hypothesis 2: Dynamic capabilities (sensing, seizing, and reconfiguration capability) have indirect effect on firm performance mediated by ordinary capabilities of a firm.

4.2 The Moderating role of Environmental Dynamism

The moderator variable is one that influences the strength of a relationship between two other variables, while the mediator variable is one that explains the relationship between the two other variables. We consider environmental dynamism as a moderator's variable that influences the relationship between dynamic capabilities and firm performance. Dynamism is defined as the rate in which competition, customer preferences and technology change within an industry (Eisenhardt & Tabrizi, 1995). Environmental dynamism describes the rate and unpredictability of changes in a firm's external environment (Dess & Beard, 1984). Firms in highly dynamic environments face substantial fluctuation in competitors, alterations in competitive conduct, and changes in customer demand and updates in technology (Wilhelm, 2015). Hence DCs can enhance changes in operating routines by sensing and seizing opportunities in the rapidly changing environment (Teece, 2014). It has been suggested by Teece and colleagues that DCs occur only in rapidly changing (Teece et al., 1997), while

Eisenhardt and Martin (2000) argue that DCs act in both stable and dynamic environments. Furthermore they argue that causal link between dynamic capabilities and firm performance is less clear in more volatile environments (Eisenhardt & Martin, 2000). In a stable environment, DCs are dependent on current knowledge and stable processes, while in the highly dynamic markets, dynamic capabilities are dependent on the rapid creation of new knowledge and more unstable processes (Eisenhardt & Martin, 2000). Many scholars argue that dynamic capabilities in a volatile environment have more value than in a stable environment (e.g. Teece, 2007; Wu, 2010; Teece, 2014; Maurer et al., 2015). They emphasize that firms operate within highly dynamic environments are confronted with the challenge of adjusting, renewing and reconfiguring their static resources and capabilities to fit to shifting environmental conditions. One should note that the path for investigating dynamic capabilities is also context dependent and a function of the external environment in which the firm operates (Teece et al., 1997).

We fill a gap in the literature by investigating the effect of dynamic capabilities on firm performance in a complex and very a rapidly changing business environment such as Palestine. Whatever the state of the environment is, dynamic capabilities appear to be an important source for improving firm performance. Building on the logic of dynamic capabilities we draw the hypothesis:

Hypothesis 3: The higher the environmental dynamism, the more positive the impact of dynamic capabilities on firm performance.

4.3 Ordinary capabilities (marketing and operations) on firm's performance

The definition of ordinary capabilities is agnostic regarding the influence on resulting performance. Prior research indicates that ordinary capabilities contribute to performance by increasing revenue (e.g., Brush and Artz, 1999; Peng and York, 2001), as well as by reducing the costs associated with providing services (e.g., Brush and Artz, 1999; Kaleka, 2002).

However, based on the DCs argument that ordinary capabilities mediate the relationship between DCs and firm performance. DCs aiming at changing a firm's bundle of resources, operational routines, and competencies, which in turn affect economic performance (Zott, 2003). To evaluate which ordinary capabilities contribute to relative firm performance, we consider both marketing and operations capabilities together to determine if we can expect that both types of capabilities contribute to improved relative firm performance. Our review in previous sections of ordinary capabilities operations and marketing literature indicates that no previous empirical research has hypothesized a negative relationship between ordinary capabilities and firm performance. A major reason would be that a firm is incurring a cost with such ordinary capability without a corresponding return. This situation may occur if a firm concentrates on using a capability that provides a return, even though using a more effective capability would provide an even greater return (Tallon, 2008). Also a firm may employ a capability that is disconnected entirely from its profit performance (Makadok, 2010).

Accordingly, marketing and operations capabilities may differ with respect to the imitability and mobility of the knowledge that supports them, hence their impact on the performance could vary (Krasnikov & Jayachandran, 2008). Karsnikov et al. (2008) evaluated the effect of marketing and operations and research and development, on the performance of banking industry in the US. They found that the marketing capability has more positive impact on performances of banks than the operations capability. Nath and Ramanathan (2010) examined the effects of marketing and operations capabilities on the performances of one hundred transportation firms in the UK, finding that marketing capability impacted more positivity on a firm's performance than operations capability. Niromand and Balaghar (2012) investigate the effects of marketing and operations capabilities, product diversification and international diversification strategies on the financial performances of hundreds of manufacturing firms based in Tehran. They found that marketing and operations capabilities have significant positive impacts on financial performances of firms and that the operations capability has a greater effect. Jiang (2014) studied different capabilities among Chinese manufacturing firms. He found that marketing capability is more important than manufacturing and managerial capabilities. However, (Yu et al., 2014) found that marketing capabilities have no relationship to financial performance unless when mediated by the operations capabilities. Consistent with these findings, we

expect one capability to explain greater variance in firm performance than another among the manufacturing and service sectors in Palestine, it is thus hypothesized that:

Hypothesis 4: Ordinary capabilities (marketing and operations) have significant effect on firm performance as a mediating role.

We also wish to study the impact of the various sub-constructs of marketing capabilities and operations capabilities on firm performance. We will do this within a separate theoretical framework where we consider only marketing capabilities and operations capabilities respectively. This will provide some insight into the relative importance of the sub-constructs, and the overall results may be contrasted with those obtained within the more realistic conceptual model we develop within this chapter.

4.3.1 Marketing Capability and Firm Performance

The empirical evidence concerning the impact of marketing capability on firm performance is varied. Marketing capabilities have significant effects that enable firms to achieve their strategic goals and consequently obtain a desired performance advantage (Vorhies & Morgan, 2005; Morgen, 2012; Kamboj & Rahman, 2015). Vorhies and Morgan (2005) suggested eight marketing capabilities pricing, product development, channel management, marketing communications, selling, and market information management, marketing planning and marketing implementation. They argue that the eight marketing capabilities are interdependent with each other, and this independency factor is strongly linked with firm performance (Vorhies & Morgan 2005). On further investigation, they found that certain individual marketing capabilities such as selling, marketing planning and selling have the highest significant effect on business performance (Vorhies & Morgan, 2005). Zou et al. (2003) studied Chinese manufacturing exporters for twenty industries. They found that distribution, communication and product development capabilities contribute to firms' low-cost advantage and branding advantage, in turn strongly influences firms' financial performance. Tooksoon and Mohamad (2010) studied the impact of marketing capabilities on agro-based exporting firms in Thailand, finding that, the product capability is most important followed by channel capability, pricing capability and promotion capability. Eng

and Spickett-Jones (2009) studied manufacturing firms, finding that product development and marketing communications capabilities are the most important marketing capabilities. Furthermore, marketing capability can have a mediating role that affects a firm's performance. For example, Karanja et al. (2014) studied mobile service providers and emphasize the significance of marketing capability through training in areas of marketing research, effective pricing, new product and range extension, channel relationship management and promotions to boost MSP intermediary organization performance. Similarly Mohammed et al. (2014) examine the mediating role of marketing capability in the hotel industry, indicating that marketing capabilities play a mediating role between knowledge management and hotel performance.

Consistent with the above studies we believe that marketing capabilities have an effect of firm performance. Based on Vorhies and Morgan, (2005), we will examine pricing, marketing communication, customer service, marketing channel, product development capabilities. This leads to the following:

Hypothesis 5: Marketing capabilities (product development, relation with intermediators, pricing, marketing communication, and customer service capability) positively affect firm's performance.

4.3.2 Operations Capability and Firm Performance

Operations capabilities are always strongly associated with competitive success through: flexibility, low cost and product quality. However, prior research highlights the role of different operations capabilities that have positive effects on firm performance (Li, 2000; Flynn et al., 2004; Niromand, et al., 2012; Jiang, 2014; Yu et al., 2014). For example; Huete & Roth (1988), studied 230 manufacturing firm based in North America, finding that manufacturing capabilities don't have strong association with strategic direction except flexibility capability does. Ferdows and De Meyer (1990) emphasize the importance of quality as and delivery capabilities, showing that plants which develop quality and delivery confidence respond to market faster and achieve even lower costs. Other empirical research

found the quality and flexibility capabilities are of fundamental importance in explaining firm performance and in achieving strategic goals (Ward et al., 1998; Bessant et al., 1999; Shah and Ward, 2003). Tracey et al., (1999) demonstrated that high levels of competitive capabilities leads to better performance, mediated by customer satisfaction and performance marketing. Kathuria (2000) emphasized that companies using the four competitive priorities for longer have better performance in customer satisfaction than the beginners. Li (2000) studied Chinese firms, and indicated that flexibility capability is highly required in market economy, and is vital to increase market share, sales revenue and improvement of return on investment. Flynn (2004) found evidence that cumulative capabilities are related to plant performance. Recently Jiang (2014) studied Chinese manufacturing firms, showing that cost, quality, delivery and adaptability have a positive impact on a firm's performance, he also validates that adaptability and cost are two distinct dimensions of manufacturing capability.

We have seen in different contexts including manufacturing/operations firms the significant role of capabilities that impact on firm performance. Therefore, possessing strong manufacturing/operations capability is important for Palestinian firms to improve their business performance. In line with our earlier definition which focuses on the value of quality, cost, delivery, flexibility and SRC capabilities. We consider following hypothesis:

Hypothesis 6: Operations capabilities (cost, quality, delivery, flexibility and SRC capability) positively affect firm's performance.

4.4 Conceptual Model

Prior research shows an ongoing debate of the causal relationship between the identified capabilities and firms' performance. We analyze this empirical ambiguity in the context of manufacturing and services sectors in Palestine, where the role of the environment is completely different in comparison to in developed countries such as the US and those of the EU. Note that, by definition, dynamic capabilities operate on the ordinary capabilities of a firm, and so it is interesting to consider to what extent their potential effect on firm performance is mediated by the ordinary capabilities of the firm. Following the existing

literature, we find no reason to postulate the converse mediating relationship. Fig. 4.5 Visualizes the conceptualized model showing sequential models of linkages that represents the effect of dynamic capabilities (sensing, seizing and transforming), considered as independent variables of the model on a firm's performance, either directly or mediated through the two ordinary capabilities functional-based marketing and operations capabilities.

We argue that DCs can create value indirectly by changing ordinary capabilities (Eisenhardt & Martin, 2000), zero-order capabilities (Winter, 2003), operational routines (Zollo & Winter, 2002) or operational capabilities (Helfat & Peteraf, 2003), the value of ordinary capabilities (Helfat et al., 2007) and, through them, affect performance. Hence, indeed DCs are expected to enhance the effectiveness of operations and marketing capabilities as ordinary capabilities by enabling the firm to better detect and take advantage of opportunities and threats vis-à-vis their competitors. Authors also tend to link possession of DCs to firm success as a direct relationship to firm performance (e.g. Li & Liu, 2014; Wu, 2010). Moreover, the model emphasizes the role of environmental dynamism in that DCs are triggered by environmental turbulence, i.e. external activities such as changes in consumer demand, technological advances, political changes etc. Thus, the impact of dynamic capabilities through both pathways is moderated by the environmental dynamism given that previous studies have shown dynamic capabilities to be more effective in a rapidly changing environment (e.g. Teece et al., 1997).

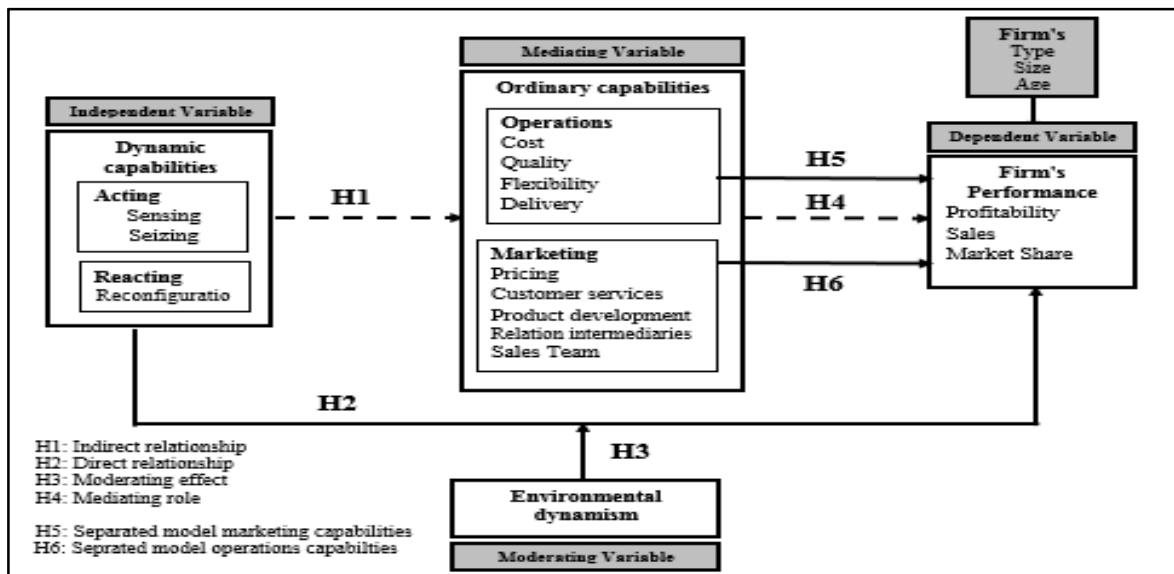


Fig.4.5 Conceptual Model

Summary

This chapter introduced a theoretical framework considering previous empirical and conceptual studies. The designed hypothetical model we reached, empirically will be tested on the Palestinian context including services and manufacturing sectors, using multiple regression and (SEM) structural equation model. Our model sets forth four key hypotheses as shown earlier sections. The next chapter will discuss the context of our research considering the general business environment, institutional variables, characteristics of the economy and economic structure include industries, size of firms... etc.

Chapter 5

Research Context

Chapter 5

Research Context

The Palestinian economy is gaining more and more recognition both within Palestine and around the rest of the region. Restrictions on the movement between the West bank, the Gaza Strip, and external markets imposed by the government of Israel continue to have a deleterious effect on the private sector and limit economic growth. The Palestinian GDP has been steadily increasing and registered a growth of 5.9% in 2012 (Palestinian Central Bureau of Statistics, 2012). This growth is largely the result of augmented development activities, which significantly expanded at the end of 2007 and the beginning of 2008 (Palestinian Central Bureau of Statistics, 2012). The most prominent feature of the development activity is that it involved all sectors in the West Bank, whereas the development in the Gaza Strip is still disabled due to the Israeli blockade that has been in place for years and till present. Nevertheless, the Palestinian economy has a diversified structure in which different sectors contribute to the gross domestic product (GDP). In 2009, the sectorial contributions to GDP as shown in Fig 5.1 are 13.7%, agriculture and fishing 4%, mining, manufacturing, water and electricity 12.3 %, construction 10.3%, transport, storage and communications 6.5%, financial and insurance service 4.8%, VAT on import and customs duties 12.9%, service 20.8 %, tourism 3 % and the wholesale, retail trade 9.4%.

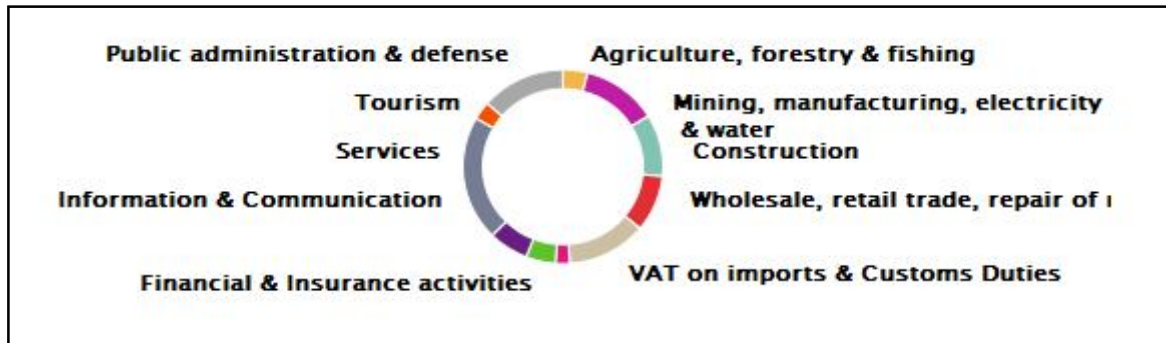


Fig. 5.1 Structure of the Palestinian economy

Source: Palestinian Federation of Industries (2009)

The Palestinian market is dominated by small and medium family-owned businesses. More than 85% of all establishments are owned by a single individual, whereas the private and public shareholder companies and partnerships such as banks and many in the telecommunication and education sectors constitute less than 11% of all firms (Palestinian Central Bureau of Statistics, 2012). Almost 97% of the small and medium-sized enterprises employ less than nine workers, and 99% of them employ less than 20 workers. The labor force counts for almost 650,000, the distribution of the workforce by sector is as follows: agriculture (17%), industry (15%) and services (68%). Because of the small size of the local market, access to foreign markets through trade is essential for private sector growth (Palestinian Central Bureau of Statistics, 2012). To limit the scope of the study we have selected the most important sectors that make up the Palestinian economy industries which are often subject to strategic management failure (PFI, 2009).

These sectors contain firms which we expect to practice dynamic capabilities, and our sampling procedure is designed to select large firms which we know to have well-developed strategic management capabilities. These firms are important for the Palestinian economy in terms of their contribution to GDP and employment. Smaller firms are generally family business, which we expect not to consciously make management decisions in the same way as the selected firms in the following sectors.

5.1 Services Sector

The expanding services sector in Palestine comprises 65 percent of the GDP and employment led by finance, insurance, engineering, accounting, communications and

information. It is the leading sector in terms of growth and expansion since 1994. We highlight the most important industries in this sector taking into account the limited scope of the study in which we want good cases to study firm capabilities.

5.1.1 Communication Industry

The communication industry in Palestine has shown huge growth in the last 10 years and become more competitive internationally. Palestinian Telecommunication Group (Paltel Group) is the leading private company in the industry, having started their operations as a public shareholding company in 1997 to provide latest telecoms technologies for Palestinian subscribers. The Group which belong to the Paltel plays a key role in the Palestinian economy as it contributes about 5% of the Palestinian GDP. Paltel Group as a private firm has become the biggest employer in Palestinian private sector with more than 3000 employees. Being the leader of telecommunications sector in Palestine, the Group uses and applies latest technology in order to secure the best and most up to date telecom services. Today Paltel Group consists of the following subsidiaries (1): Palestine Telecommunications Company (Paltel) which provides fixed line, internet access via BSA and other value-added services. (2): Palestine Cellular Communications Company (Jawwal) the first mobile operator in Palestine. (3): Hadara Technology Investment Company the biggest internet service provider in Palestine. (4): Reach for Communications Services Company the first contact center in Palestine. (5): Palmedia for Multimedia Services Company the media arm of Paltel Group. (6): Hulul IT Company the IT arm of Paltel Group. However, the communications industry in Palestine operates in a highly competitive market particularly when we consider the Israeli tele market.

5.1.2 Insurance Industry

The Palestinian National Authority has been supervising the insurance sector in Palestine since 1993 and its geographical scope in this sector expanded in 1994. According to the Palestine Capital Market Authority (PCMA), the total insurance premiums reached approximately USD 145 million in 2012. However, the Palestine Insurance Federation (PIF, 2011) indicates that less than 3.5% of the total population benefits from insurance

services, compared to 60% in developed countries). Amongst total insurance premiums, automobile insurance constitutes 61%, health insurance 14%, labor insurance 10%, insurance against fire 6%, maritime insurance 1%, life insurance 2% and other types of insurance 6%. Thus, there is a great potential in the Palestinian insurance sector to expand the penetration of life, home, and civil liability insurance, and to offer new insurance products, such as medical malpractice and other professional liability coverage (ICC, 2013). During 2014, PCMA continued its efforts directed at improving its supervisory role over the insurance sector. The insurance portfolio increased around by 7.75% in 2014 compared to 2013, with a total value of approximately \$171 million, while number of insurance companies remained 10. Meanwhile, total value of paid-up claims reached approximately \$108 million in 2014 compared to \$89 million in 2013 (Palestinian Central Bureau of Statistics, 2012).

The insurance firms in the Palestinian insurance market established as a shareholding, they operate in the West bank and Gaza strip in a highly competitive market. The ranking based on the largest insurance firms is the following: (1) Trust Insurance firm, it was established in 1994, providing fire, property damage, marine, health, motor, and life insurance. (2) National Insurance firm, it established in 1993, the insurance types provided fire insurance, property damage, and marine. (3) The Palestine Insurance firm, it was established in 1994, the insurance types provided are fire, property damage, marine, health, Motor. (4) Ahleia insurance group fir, it was established in 1994, the insurance types provided are fire, property damage, marine, health. (5) Global united insurance firm, it was established in 2010, the insurance types provided are fire, property damage, marine, life, health, motor. (6) Almultazem for Insurance & Investment, established in 2008, the insurance types provided are fire, property damage, health and motor.

5.1.3 Banking Industry

There are seventeen banks which operate within Palestine, seven of which are Palestinian. The potential growth for the banking sector in Palestine is very promising. There are currently 232 branches that serve the entire Palestinian population of 4.2 million (Bank of Palestine, 2014). However, the sector remains vulnerable due to its dependence on the Jordanian banking system and, from an operational point of view, on the Israeli one. Due to

a large extent to the current political instability and to the depressed economic activity, banks play a very limited role in the financing of the Palestinian economy. The cautiousness of the banks reflects various structural problems such as the lack of suitable collateral and the uncertainty of outcomes in debt collection. Important steps have been taken by the Palestine monetary authority to develop the banking system and improve its stability (credit bureau, payments system, capital requirements and regulations on secured credit). The major banks in the industry are Bank of Palestine, Arabic Bank, Cairo Aman Bank, Bank of Jordan and Alquds Bank. From the strategy prospective banks should be able to sustain their high quality of services provided to clients.

5.2 Manufacturing Sector

This sector plays an important role in the process of economic development in Palestine. Manufacturing exists as the base of the pyramid, through which many of the forward and backward linkages in services and other economic areas stem. The manufacturing sector in Palestine includes 15,000 registered companies in the West Bank and Gaza. The majority of these companies are small and medium family-owned businesses, and only about 100 of the manufacturing, mining and construction enterprises in Palestine have a workforce of more than 100 employees. The percentage contribution of this sector in total GDP has increased from 8% in the mid-eighties to 17% in the late-nineties, then dropped down during the first years of the intifada and now approached nearly 16%. During 2007, the manufacturing sector has employed an average of 81586 sector workers, an average of 13% of the total work force (PFI, 2009; Palestinian Central Bureau of Statistics, 2012). Manufacturing sectors represented by the Palestinian Federation of Industries include food and beverages, construction, stone and marble, pharmaceuticals, chemicals, metal and engineering, textiles, garments and leather, paper, printing and packaging, handicrafts, plastic and rubber, and furniture. Nevertheless the sector suffers from a number of obstacles and impediments against its growth, the major obstacle is the political instability and restricted movement of goods. Moreover, according to recent report by Palestinian Federation of Industries the manufacturing industry is a real victim of free trade arrangements especially with low cost producing countries. The sector was heavily dependent on the Israeli market and on the subcontracting relations with Israeli marketers. The availability of raw materials and the increase in production costs decreased the

competitiveness of the industry. Besides as many small firms are run by family members, the adequate management, and marketing knowledge needed for running the businesses competitively is often lacking. Due to the limited scope of the study we considered the food and plastic industries as significant industries within the Palestinian economy that can reveal strategic business issues.

5.2.1 Food Industry

The food sector is growing rapidly both vertically and horizontally. The official figures of the sector indicate that there are more than 1600 working firms in this sector including bakeries. Excluding bakeries, the actual number of firms becomes 224 manufacturing firms including the large scale milk cow farms. The food basket of a household is around 42% of all other living expenses (PFI, 2009). This indicates the importance of this sector. The majority of sales are targeting the Palestinian population in the West Bank and Gaza, very few products are sold in Jerusalem and nothing is being sold in Israel. The major obstacle facing food industry is the current local market mechanisms. The weak inspections over market products; their compatibility, validity, composition and source of origin created an unfair competition with the locally produced products. (PFI, 2009).

5.2.2 Plastic Industry

The sector produces a wide range of products including plastic pipes and fittings, sanitation fittings, plastic bags and sacks, different size and multipurpose plastic containers, drinking water containers, polystyrene, rubber and kitchen wear (PFT, 2009). The industry is working at 49% of its total capacity and has great potential in developing and diversifying its products. Training for skilled labor is needed, and ways of decreasing the electricity power consumption rate are worth considering as electricity is a major cost component (PFI, 2009). The industry sales are distributed over the West Bank 66%, Gaza Strip 15%, Jerusalem 2% and Israel 10%. It is clear that the local market is the core of this industry. Exports are rarely seen in this industry, but industrialist's feel that they can export to neighboring countries. The whole issue needs checking if it is viable or not. Assessment will cover issues such as regulations, certificates, competitiveness, quality and marketing channels (PFI, 2009). The

plastic industry has some problems and needs: for example; firms consider organizing the local market will enhance local competitiveness among the producers and ensure fair treatment of legally licensed firms. Cutting taxes and providing cheap infrastructure and utilities will decrease manufacturing costs. Training is needed for the top management of the sector. Family inheritance can be developed by introducing good management practices. Upgrading machinery and preventive maintenance are some major problems in this sector (PFD, 2009).

Summary

The turbulent business environment in Palestine, coupled with specific challenges should encourage firms in Palestine to develop such capabilities in order to react to changes. We find it a vital research idea to examine the role of dynamic and ordinary capabilities across the manufacturing and services sector in the specific context and the impact the dynamic Palestinian environment has on dynamic capabilities.

Chapter 6

Research Methodology

Chapter 6

Research Methodology

The previous chapters provided an in-depth examination of the relevant literature from which the conceptual model and several hypotheses were developed. This chapter provides an overview of research methodology employed in this study, beginning with the explanation of the research design and the several phases of the research activities. We discuss research philosophy explaining the main epistemological ideologies in social science research. Then several sections consider the research strategy and methods, sampling design and the measures of constructs. We also clarify the questionnaire design and the content, choice of scaling, and the statistical procedure.

6.1 Research Design

Research design is considered to be the most important element of the research process in order to conduct a research project with detailed procedures necessary for obtaining the information needed to solve research problems (Malhotra, 2007; Picardi, 2014). An overview of our research design in several phases is explained in (Fig. 6.1). **Phase 1** starts with an extensive literature review including RBV, DCA including most related topics from strategic management articles. During this phase, the literature review and discussions with professors exposed that dynamic capabilities are often described and conceptualized in a very complex

and abstract manner (Teece, 2014). Finally but not least through the review of relevant literature, key constructs including other typologies (operation and marketing capabilities) were identified and conceptualized and the relationships among constructs were discussed. This led to the following chapter of the development of the research propositions and the conceptual framework (See Chap 4).

Phase 2 started with the preliminary design of structured questionnaire, which was the main instrument for collecting the primary data. This is discussed in the section of measures of constructs and included extracting and modifying existing measures, and developing new measures. However, for ensuring validity, the measures of constructs' results were developed from existing studies, and were adapted to be closely relevant and appropriate to the context of the Palestinian sectors. The measures of constructs were assessed by experts to clarify industry and organizational idiosyncrasies and translation issues (from English to Arabic) in the questionnaire for ensuring the applicability of constructs to be measured and the appropriateness of measurement items. Meanwhile, a sample frame was developed, and further refinement to the questionnaire was made based on the feedback from pilot sample to ensure the appropriateness of language and ease of understanding in a cross section of industries.

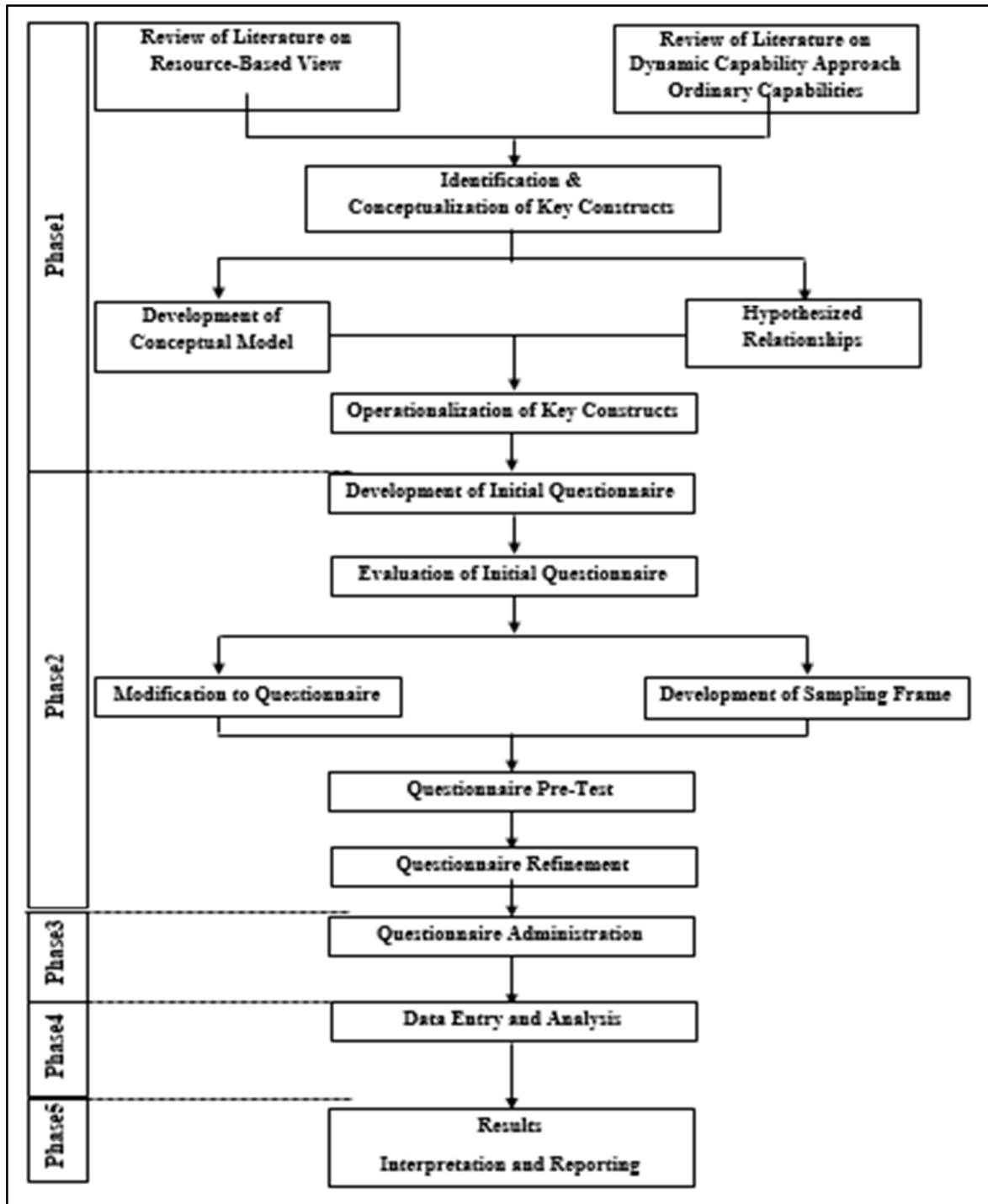


Fig.6.1 Research design

In **phase 3**, personal and mail surveys were carried out as the primary data collection method across Gaza strip and West-Bank. Surveys involve the systematic collecting of data, whether this is by interview, questionnaire or observation methods (Saris et al., 2014). We considered that performing the survey questionnaire using mail and personal contacts as the most appropriate technique rather than other survey methods such

as telephone and personal interview. These were considered impractical due to the wide geographic dispersion of the firms within the sample, the Israeli check points and restrictions within Palestine and the associated economic costs. Finally using the statistical software packages, data entry and analysis were carried out in **phase 4** and findings and analyses was undertaken in phase 5 (See Chap 7 and 8).

6.2 Research Philosophy

As the argument goes, the way we think about the development of knowledge affects, albeit unwittingly, the way we go about doing research, and only if we understand the assumptions made on how the world is viewed can we examine and challenge such assumptions (Saunders et al. 2007; Gill, 2014). This argument stresses the importance of having a research philosophy in any kind of research whether in the natural sciences or social sciences (Saunders et al. 2007). Easterby-Smith et al. (2002) emphasize that if one fails to think on philosophical issues in conducting research it can seriously affect the quality of research itself. Hence, prior to conducting research one has to think about the underlying philosophy, as philosophy is central to the notion of research design (Saunders et al. 2007; Gill, 2014). The research philosophy that is adopted contains important assumptions, and these assumptions will underpin the research strategy and the methods that are chosen as a part of research strategy (Bickman & Rog 2008). Easterby-Smith et al. (2002) again argue that, for understanding the philosophy in business and management research is an essential step very for several reasons; it can help to clarify research designs, and which design best fit to our research.

Epistemology deals with what is considered as acceptable knowledge in a field (Bryman & Bell, 2003; Saunders, 2009; Gill, 2014). Scientific philosophers and researchers particularly in the social science field have engaged in long epistemological debates on how best to conduct research studies. There are many philosophies such as rationalism, positivism, empiricism, and interpretivism (Gill, 2014), however, the debate has been based fundamentally on two types of philosophies, positivist and interpretivist philosophies, because they are considered as the two major philosophies in social research. Interpretivists use qualitative and naturalistic approaches, of an inductive and holistic form, to understand the human experience in a given context, while the logical positivists use quantitative

methods and experiments to test hypothetic deductive generalizations (Saunders, 2009). The following brief discussion explains the positivism and interpretivist epistemologies used in social science (see Table. 6.1).

Table 6.1 Positivism V.S Interpretivist

Assumptions	Positivism	Interpretivist
Ontology &	Researcher and reality are separate.	Researcher and reality are inseparable (life-world).
Epistemology	Objective reality exists beyond the human mind.	Knowledge of the world is intentionally constituted through a person's lived experience
Goal of research	Explanation, strong prediction	Understanding, weak prediction
Focus of interest	What is general, average and representative	What is specific, unique, and deviant
Desired information	How many people think and do a specific thing, or have a specific problem	What some people think and do, what kind of problems they are confronted with, and how they deal with them
Techniques	Deductive- Quantitative Statistical Inference (hypotheses testing) Cause/effect relationships Measurement and others	Inductive Qualitative Generation of hypotheses, speculative Interactions Processes
Sample	Large	Small

Sources: Author deliberation (Adopted from Carson et al., 2001; Pizam and Mansfeld, 2009)

Philosophers contrast the positivism with interpretivist according to their different assumptions. The former assumes that an objective reality exists which is independent of human behaviour and is therefore not a creation of the human mind (Saunders, 2009; Gill, 2014). Positivists believe that reality is stable and can be observed and described from an objective viewpoint (Levin, 1988; Saunders, 2009; Gill, 2014). Opposite of positivism and post positivism paradigms is the interpretivist approach described as a "bottom-up", "inside-out" research approach (Mangan et al, 2004). According to Saunders et al. (2007: P. 106) interpretivism is an “epistemology that it is necessary for the researcher to understand differences between humans in our role as social actors.” Interpretivist studies assume that

people create and associate their own subjective and inter-subjective meanings as they interact with the world around them (Saunders et al. 2007). This means that attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. (Gill, 2014). Therefore, the role of researcher when following the positivistic approach is to discover specific nature of cause and effect relationships, while interpretivism which is associated with phenomenology, is to provide rich insights into the complex world (Bryman, 2004; Saunders et al. 2007; Gill, 2014). The nature of the data obtained also differs in both philosophies. Positivism depends on quantifiable observations that are empirical evidence that lend themselves to statistical analysis (Gill, 2014). And the interpretivist leans towards the collection of qualitative data and uses methods such as unstructured interviews and participant observation that provides this type of data (Gill, 2014).

One should note that positivism dominates entrepreneurship research (Crook, et al. 2010). We do recognize its limitations as in most social science research no perfect approach. Studies conducted in dynamic capabilities often depart from a positivistic viewpoint (e.g. Lin et al., 2012; Molina et al., 2010; Teece, 2007; Im & Workman, 2004). Exceptions, albeit, exist, namely Shang et al. (2009) that aims at a deeper understanding which is consistent with the proclaimed domain of this specific study's paradigmatic position. The earlier research contributions to dynamic capabilities are almost exclusively theoretical and conceptual in nature (Wernerfelt, 1984; Teece et al., 1997; Makadok, 2001). Thus selecting the philosophy should be based on the research question and the nature of the study.

We take a positivist prospective which influences the design of the research. In positivism, the researcher's impact is limited in the processes of hypothesis formation, concept operationalization and research design (Gill, 2014). This means that the researcher must be independent of what is being studying. The purpose of positivism is "...to generate hypotheses that can be tested and that will thereby allow explanations of laws to be assessed" (Bryman, 2001, p.12) or so-called deductivism. Accordingly, we study the theory of resource-based view (RBV) and the DC approach as a foundational theories for conceptualizing sufficient typologies of capabilities that reflect business issues for business management research. We then deductively testing the interrelationship of those capabilities on firm's performance across different industries in Palestine.

6.3 Research Strategy/ Methods

Within research design, methodology represents that part of the process and model, which is concerned with research strategies, and also data gathering methods (Wheeler, 2003). According to Cohen and Manion (1994) research methods refer to “the range of approaches used in research to gather data which are to be used as a basis for inference and interpretation, for explanation and prediction”. Research strategy refers to the approach a researcher adopts (Saunders et al., 2000). The research strategy will be a general plan of how we will answer the research question we have set. It will contain clear objectives, derived from the research question, specify the sources from which we intend to collect data and consider the constraints we may have (Saunders et.al, 2000). The plan of this research is to formulate hypotheses and explain the causality of different typologies of capabilities (dynamic and ordinary capabilities) on a firm's performance under the resource-based view (RBV) framework. Yin (2003b) and Saunders et al (2009) acknowledged that although various research strategies exist, there are large overlaps among them, hence the important consideration would be to select the most advantageous strategy for a particular research study.

Several types of research strategies including quantitative and qualitative strategies. There is now an increasing awareness that using both quantitative and qualitative methods of research may have a contribution to make to a research project (Wood & Welch, 2010). According to Yin (1994) there are several research strategies available when conducting quantitative research, for example; survey studies concerned with finding patterns in data, experiments which to test hypotheses; and a qualitative research include for example case studies to study the characteristics of a real-life instance, action research iteratively solve a problem with a community of practice (Saris et al., 2014; Saunders et al., 2009).

Based on the nature of our problem and our research philosophy, we perform quantitative research using a survey distributed to a large sample firms across the Palestinian sectors. The purpose of survey research is to describe characteristics, opinions, attitudes or behaviours as they currently exist in a target population (Saris et al., 2014). Through the questionnaire managers can give their opinions on such practices that measure firms dynamic and ordinary capabilities in a firm they work for.

6.4 Sampling Design

The sampling process in social science research is concerned with the size of the sample population. The sample size should neither be excessively large, nor too small but should be optimum taking the research limitations into consideration (Rayn, 2013). The study focuses on two important sectors from the Palestinian markets; (1) the services sector including banks, insurance and telecommunication industries, (2) the manufacturing sector including food and plastic industries. The sampling procedure used in this study is summarized by Shahjahan, (2004): defining the population, specifying the sampling frame, specifying the sampling unite, specifying the sampling method, determining the sampling size, specifying the sampling plan, and finally selecting the sample. The sample was chosen from significant firms that reflect business issues in strategic business studies. Particularly the Palestinian context (see the research context Chap 5).

6.4.1 Sampling Frame

The sampling frame is the list of units of the population from which the sample is drawn (Rayn, 2013). The sampling elements are the entities that make up the population, while the sampling units are the entities of the frame (Rayn, 2013). Based on the related literature and after considering the Palestinian context we were able to consider an number of criteria that define the sampling frame: firstly we consider (1) firms from the food and Plastic manufacturing sector and firms from services sector including banks, telecommunication, and insurance industry, (2) should cover the firms from Palestine including West-bank and Gaza strip, (3) firms of medium and large firms according to the Palestinian standards given by the ministry of economics, (4) firms should have been in business for more than 5 years. Secondly, based on the previous criteria we consider employees who currently work as a fulltime in selected firms with current or previous managerial titles. The selection of the prospective respondents from the population frame was carefully done to ensure that only the targeted individuals were selected. To confirm correctness of the selection, elements of the sampling frame were verified by some officials from the HR department in the selected firms.

6.4.2 Sampling Technique and Size

There is no one best sampling strategy because which is best will depend on the context in which researchers are working and the nature of their research objectives (Rayn, 2013). The sampling technique used in this study is a non-probability, specifically purposive survey. Saunders et al (2009, p.598) describe purposive sampling as a “non-probability sampling procedure in which the judgement of the researcher is used to select the cases that make up the sample”. We found this sampling technique best for our study because the aim of this study is to investigate firm capabilities from samples drawn from different sectors, considering particular limitations related to the research context. For example the nature of the study only can be logical for a certain type of firms particularly the large and developed firms. Hence, researchers chose the sample based on who they think would be appropriate for research (Rayn, 2013).

The sample size should fulfill the requirements of efficiency, representativeness, reliability and flexibility (Rayn, 2013). An increased sample size will, in general, improve the quality of the statistical results (Malhotra et al., 2007). To determine the sampling size of respondents, we consider various points particularly the research context, nature of the study and similar studies conducted before. Generally, researchers suggest sample size should be five to ten times the number of variables to be tested (Tabachnick and Fidell 2007). First we identify firms across the service and manufacturing sectors, and accordingly we identify the respondents who work for the selected firms in which they will represent our sample size.

We obtained a list of the Palestinian manufacturing firms from the Palestinian Federation of Industries that presents firms' type, size, and age. Regarding the service industry, the Palestinian market has a limited number of firms operating in this sector particularly in the telecommunication and internet industries, hence we took all firms of this sector. A mail and in person survey was considered as the most appropriate form for questionnaire administration (Churchill et al. 2010). For example a mail survey has its advantages mainly in cost efficiency, ability to reach a wide geographic scope in particular covering our sample in the West Bank as the researcher is based in the Gaza strip. Also both methods provide respondents with greater flexibility in completing the questionnaire at a convenient time, which is likely to improve the accuracy of the data (Churchill and Dawn Iacobucci, 2005).

6.4.3 Survey Administration

After identifying the selected firms, the survey was conducted in the period June 2015-October 2015. A copy of the questionnaire was distributed to 466 individuals belonging to different managerial grades (e.g. functional managers, unit manager, product managers). The surveys were all confidential, no names were mentioned and no payment was given to respondents for completing the questionnaire. A follow-up phone call was made to some firms whose contact numbers were available to make sure everything was fine and ask them to be in touch once they are ready. We have received (310) questionnaires including 242 usable ones, 66 unusable. The unusable questionnaires were incomplete so we excluded them. This gives respondent rate of 55 %, which statistically considers sufficient sample size to proceed statistical analysis (Tabachnick and Fidell 2007).

6.5 Content of Questionnaire

The primary purpose of using a questionnaire is to collect necessary information for decision-making about a research problem. In appendix 1, we attached a copy of the questionnaire. The questionnaire was strictly structured according to the research objectives. Initially the questionnaire was designed in English, and translated into Arabic by the researcher and reviewed by expert editors. The questionnaire consisted of four pages, the first page provided instructions guiding respondents to answer all questions even if some questions appeared repetitive.

Section 1: General information: The questionnaire began with some general information regarding the respondent and the firm. It consisted of seven points (name of firm, industry type, age of firm, number of full time employees in the organization they belong to, current position within the firm, number of years respondent has been in this position, number of years respondent has been working for a firm).

Section 2: Dynamic capabilities: This section moves on to investigate the practices of DCs by asking the respondents to determine to what extent their firm is practicing dynamic capabilities at his organization. The questions in this section were sub-divided into three groups as previously conceptualized sensing, seizing and reconfiguring.

Section 3: Ordinary capabilities: This section is concerned with typologies of ordinary capabilities marketing and operation. The respondents were asked how important these capabilities are as regular practices in the firm. The questions in this section were sub-divided into two groups each group divided into five sub-groups: Marketing capabilities (product development, relation with intermediaries, and pricing, marketing communication and customer services). Operations capabilities (cost, quality, delivery, flexibility and social responsibility capability).

Section 4: Firm performance: This section subjectively evaluate the performance of a firm by asking the respondents to determine to what extent each of the following has changed in the past three years: the profitability, sales and market share of the firm.

Section 5: Environmental dynamism: This section is to evaluate the dynamism of the environment where the selected firms operate, by asking the respondents about the market conditions in the principal business industry. The questions in this section were sub-divided into groups concerning industrial environment, competitor behaviors, technological progresses, customer demands and political issues.

6.6 Measurement Models

Research in social science often identifies structural relationships among latent, unobserved constructs by studying the covariance between the latent constructs and the observed variables of the latent constructs. Two alternative measurement models that suggest latent variables can be modelled using either reflective or formative indicators or both (Diamantopoulos & Siguaw, 2006). The differences between the two measurement models lies in the causal direction of the relationship between the construct and its measures, items or sub-constructs.

Reflective measures are determined by their latent construct, so that changes in the construct should cause changes in all associated indicators or measures that reflecting the construct (Diamantopoulos & Siguaw, 2006). The reflective measures or indicators should

therefore exhibit a high correlation since they are all reflecting the same underlying construct. Hence, reflective indicators should be interchangeable, and eliminating an indicator should not change the meaning of the construct in the given model (Diamantopoulos & Siguaw, 2006; Hair et al., 2014). Therefore, the internal consistency should be checked through processes that test the reliability, convergent validity, and average variance extracted AVE, cross loading, and discriminate validity of reflective measures (Diamantopoulos & Siguaw, 2006).

A formative or causal index results where causality flows in the opposite direction, from the indicators (or sub-constructs) to the main construct. Unlike reflective measures, formative measures do not correlate to each other, rather it supposes that the measures have an impact on (or cause) a single construct (Hair et al., 2014). Hence such indicators are not interchangeable, and removing an indicator from the model will change the nature of the construct (Hair et al., 2014). That is, formative measures presents different aspects of a construct and together cause changes in the construct (Hair et al., 2014).

Becker, Klein & Wetzels (2012) propose different component models that researcher can adopt the one fits to their study based on the logic of formative and reflective approaches. These models comprise of first-order components which are the dimensions that represent the second-order components (Hair et al. 2014). The differences among the models are in the following aspects; (1) the relationships of the first-order constructs and the observable indicators and (2) the relationship among the second-order construct and the first-order constructs. The four hierarchical component models are shown in (Fig. 6.2).

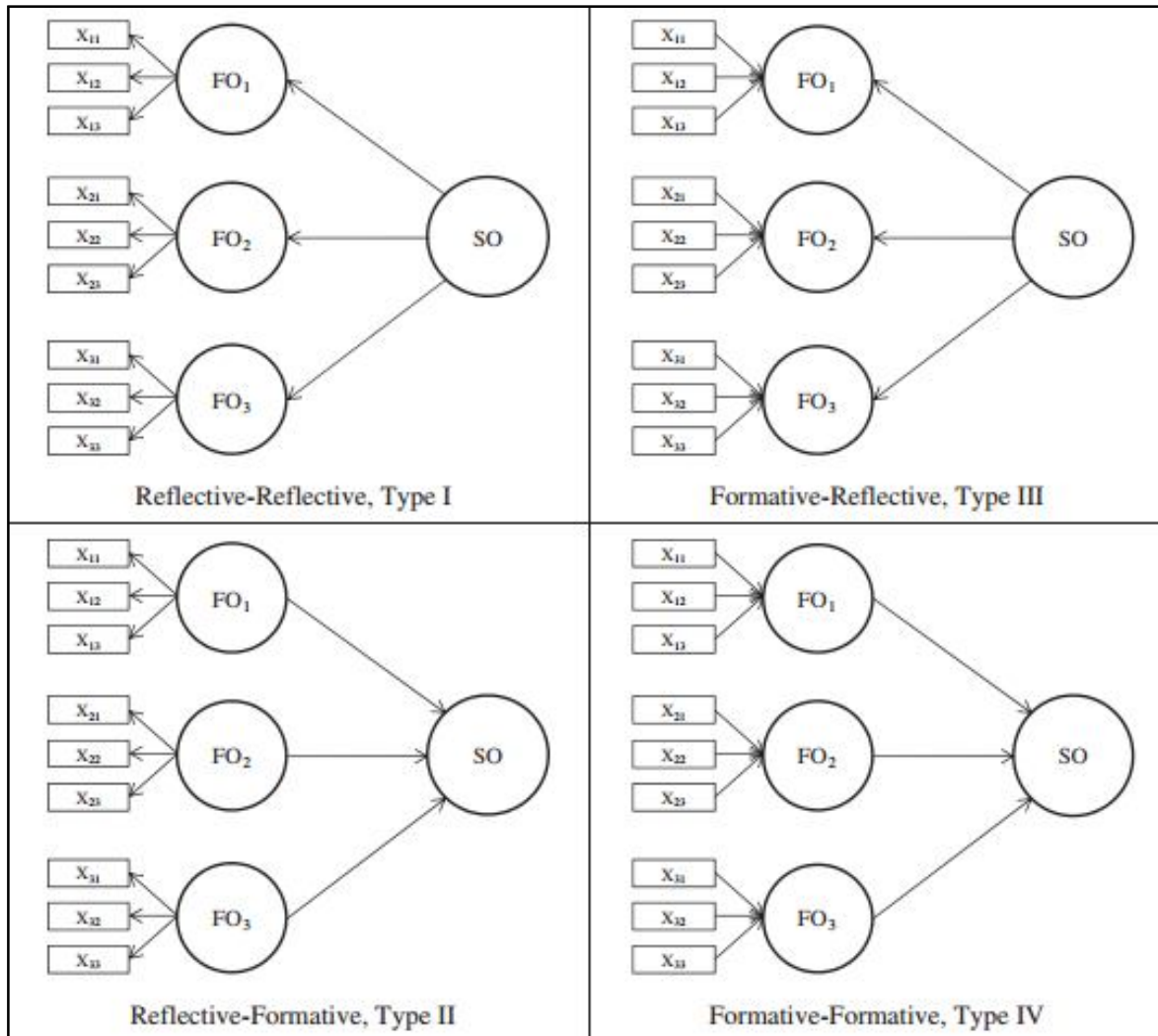


Fig.6.2 The four types of hierarchical latent variable models

Source: Becker, Klein & Wetzels (2012)

The above models have been used in empirical research even though some models are less frequently employed than others (Becker, Klein & Wetzels 2012). The (FO) is first order construct, while the (SO) stands for second order construct and (Xi) is indicators for FO. Lee and Cadogan (2013) argue that researchers should avoid using reflective measures as second-order because such models are meaningless and misleading. When there are multiple dimensions underpinning the second-order construct should be constructed as formative, as a reflective construct is not represented by different dimensions (Lee and Cadogan, 2013). The Reflective-Formative is the most common type considered in strategic management research; for example Wilden et al., (2013) operationalize dynamic capabilities into formative sub construct and reflective indicators, also Lee (2015) operationalizes operational capabilities into two type formative sub constructs and reflective indicators.

Thus, the distinction between formative and reflective measures is important because proper specification of a measurement model is necessary to assign meaningful relationships in the structural model, theoretical work in construct validity, structural equation modeling, and enhances our understanding and appropriately helps to achieve construct validity (Diamantopoulos et al., 2008). Next section we identify the measurement types of our constructs either reflective, formative or both, then in chapter 7 we validate both identified measurements models.

6.7 Measures of Constructs

It is important to determine the appropriate measurement model, as the use of PLS-SEM enables us to deal with both reflective and formative measurement. This step guides our research to select the appropriate data-analysis methods and the relevant criteria for reliability and validity assessment (Diamantopoulos and Winklhofer, 2001). All construct except the environmental dynamism are conceptualized as a Type II multi-dimensional second-order index (reflective-formative type). The environmental dynamism measured by reflective measures that reflecting the meaning of construct. Wherever possible, existing reflective measures were employed, and minor modifications were made to ensure the measures were applicable in the context of the study. At the same time, effort was made to ensure each measurement item was consistent with its original meaning. The measurements of construct operationalization begins with independent variables, followed by mediators, dependent variables and lastly control variable.

6.7.1 Dynamic Capabilities

The construct of dynamic capability was measured using existing model developed Wilden, et al. (2013). Dynamic capability was operationalized as a second order construct into a reflective-formative type of Hierarchical Component Model (HCM) consisting of three first order constructs (sensing, seizing and reconfiguration). As shown in table 6.2 the measures for reflective constructs were borrowed from (Wilden et al., 2013). The last items in each category (i.e. A-5, A-12 and A-17) we added as modification given the changing Palestinian environment.

Table 6.2 Measures of dynamic capabilities

Source	Construct	Original and final measures	Item
<i>Wilden, Ralf, Gudergan, Siegfried P., Nielsen, Bo Bernhard, & Lings, Ian (2013)</i>	Sensing	People participate in professional association activities	A-1
		We use established processes to identify target market segments, changing customer needs and customer innovation	A-2
		We observe best practices in our sector	A-3
		We gather economic information on our operations and operational environment	A-4
		We can perceive environmental changes before competitors	A-5
	Seizing	We invest in finding solutions for our customers	A-6
		We adopt the best practices in our sector	A-7
		We respond to defects pointed out by employees	A-8
		We change our practices when customer feedback gives us a reason to change	A-9
		We can make timely decision to address opportunity and threats	A-10
	Reconfiguring	Implementation of new kinds of management methods	A-11
		New or substantially changed marketing method or strategy	A-12
		Substantial renewal of business processes	A-13
		New or substantially changed ways of achieving our targets and objectives	A-14
		We can reconfigure resources/capabilities in time to address environmental changes	A-15

6.7.2 Marketing Capabilities

The operationalization of marketing capabilities can be found in several prior studies (Vorhies 1998; Vorhies and Morgan 2005; Vijande et al., 2012; José 2014). Some researchers conceptualize marketing capabilities as a multi-dimensional construct, whilst others view it as a uni-dimensional measure. In this study marketing capability was operationalized as a second order construct into formative-reflective type. The formative construct consisted of five constructs that form the marketing capability construct: pricing, marketing communication, customer services, channel distribution and product development. Each of these constructs represents features of marketing capabilities that

could be separate constructs but remain important parts of marketing capabilities at a more abstract level (Vorhies & Morgan 2005). Also these constructs of marketing capabilities are unchangeable and dropping one of these capabilities would alter the conceptual domain of the overriding index (Vorhies and Morgan 2005). The measurement items of reflective constructs were adapted from previous empirical works as seen in table 6.3.

Table 6.3 Measures of marketing capability

Source	Construct	Original measure	Items
<i>Vorhies and Morgan 2005</i>	Pricing	<i>Using pricing skills and systems to respond quickly to market changes</i>	
		<i>Knowledge of competitors' pricing tactics</i>	
		<i>Monitoring competitors' pricing and pricing changes</i>	
		Final measure used	
		Ability to use pricing skills and systems to respond quickly to market changes	B-16
		Ability to effectively price products and services	B-17
		Ability to monitor competitors' prices	B-18
<i>Vijande et al., 2012</i>	Marketing communication	Original measure	
		<i>Giving the salespeople the training they need to be effective.</i>	
		<i>Providing effective sales support to the sales force</i>	
		<i>Developing and executing advertising programs</i>	
		Final measure used	
		Ability to train sales people to be effective	B-19
		Ability to communicate the benefits of new products/services.	B-20
		Ability to develop and execute adverting programs	B-21
<i>Vijande et al., 2012</i>	Customer services	Original measure	
		<i>Ability to provide rapid response to clients</i>	
		<i>Superior levels of service customization</i>	
		<i>Rapid response to customer complaints</i>	
		Final measure used	
		Ability to provide rapid response to customers	B-22
		Ability to response to customer complaints	B-23
		Ability to give additional services to customers	B-24
<i>Vijande et al., 2012</i> <i>Vorhies and Morgan 2005</i>	Product development	Original measure	
		<i>Ability to develop new products/services adapted to customer needs</i>	
		<i>Successfully launching new products/services</i>	
		<i>Ability to develop better products than the competition</i>	
		Final measure used	
		Ability to develop or offer new product/service adopted to customer needs	B-25
		Ability to launch new product/services	B-26
		Ability to develop or offer product than our rivals.	B-27
<i>José 2014</i>	Distribution channel	Original measure	
		<i>Relation with intermediaries</i>	
		Final measure used	
		Ability to enhance relationship with the reliable intermediaries	B-28

6.7.3 Operations Capabilities

This construct is operationalized as a second order construct into reflective-formative (Lee, 2015) consisting of five first order constructs (quality, cost, flexibility, delivery and social responsibility capability). Table 6.4 shows the measures of the reflective constructs. The basic four components of operations capabilities borrowed from prior literature, and fifth the measures of the SRC developed by the author as a new component that enhancing the basic operations capabilities.

Table 6.4 Measures of operations capability

Source	Construct	Original measure	Final measure used	Items
<i>Li 2000 and Awwad 2011</i>	Cost	Labor productivity cost	The ability to increase labor productivity	B-29
		Product cost	The ability to offer or produce products/services with comparative cost	B-30
	Quality	Product reliability	The ability to offer or produce products/services that are highly reliable	B-31
		Product quality	The ability to offer/produce high quality products/service to our customers	B-32
<i>Jain and Adil 2014</i>	Delivery	Dependability of delivery	The ability to meet delivery schedules or promises	B-33
		Delivery speed	The ability to react quickly to customer orders	B-34
	Flexibility	Product Mix	The ability to react quickly to changes in types of products Manufactured	B-35
		Volume	The ability to react quickly to volume changes of a given product mix.	B-36
<i>Author deliberation</i>	SRC	Working conditions	The ability to enhance SR by improving working conditions	B-37
		Equity	The ability to enhance SR by being equality to all employees	B-38

6.7.4 Firm Performance

This can generally be considered as a complex, multidimensional construct (Chakravarthy, 1986; Kaplan and Norton, 1996). Some studies may benefit from employing both objective and subjective measures. The use of subjective performance measures is a common practice in strategy, and this is particularly important when financial statement data are unavailable or they do not allow for accurate comparisons amongst firms (e.g. Dess, 1987; Powell, 1992; Lubatkin, Simsek, Ling & Veiga, 2006). In Palestine to get such series data is somewhat difficult for the lack of such a database, and firms may be not willing to provide their financial data. (Chakravarthy, 1986; Kaplan and Norton, 1996). Therefore, we will use the subjective measure for firm's performance, and will be operationalized as reflective-formative. The formative measures consist from three constructs (profitability, sales and market share) that form the latent variable of firm's performance, adopted from (Lubatkin, Simsek, ling & Veiga (2006). The firm's profitability is measured with items reflecting profit margin, return on assets and net profits relative to competition. Sales is measured based on sales volume and increase in sales volume. And finally market share is measured based on the market share and rate of growth in it. Respondents are asked to indicate their firm's performance (for all the above mentioned items) relative to competition for the last five years. Table 6.5 shows the measures for the firm's performance based on the operationalization adopted from (Lubatkin et. al., 2006).

Table 6.5 Measures of a firm performance

Source	Original Constructs	Final measures	Items
<i>Lubatkin, Simsek, ling and Veiga (2006)</i>	Profitability	Profit growth rate	D-39
		Return on own capital	C-40
		Net profit	C-41
	sales	Sales volume	C-42
		Increase in sales volume	C-43
	Market share	Market share	C-44
		Increasing in market share	C-45

6.7.5 Environmental Dynamism

We operationalize the environmental dynamism as reflective type consist from five reflecting items that measuring the environmental conditions, four prominent measurement were adapted from (Li & Liu, 2014). As shown in the (Table 6.6), authors considered the effects of the industrial environment, competitor behaviors, technological progresses and customer demands deriving from (Dess & Beard, 1984; Duncan, 1972; Tan & Litschert, 1994; Wu, 2010). In addition, we introduce a new reflecting items concerned with the political issues that are an important consideration for the Palestinian businesses.

Table 6.6 Measures environmental dynamism

Sources	Construct	Original measure	Items
<i>Li and Liu 2014</i>	Industrial environment	Product or service in our industry updates quickly	
	Competitor behavior	The acts of competitors are difficult to predict	
	Technology progresses	The technology in our industry progresses quickly	
	Customer demands	To predict the change of customer needs is difficult	
Final measure used			
<i>Author deliberation</i>	Industrial environment	Product or service in our industry updates quickly	D-46
	Competitor behaviors	The acts of competitors are difficult to predict	D-47
	Technological progresses	The technology in our industry progresses quickly	D-48
	Customer demands	To predict the change of customer needs is difficult	D-49
	Political issues	Political issues moving toward the direction of market economy	D-50
	Political conflicts	Political conflicts hamper the activities of your firm.	D-51

6.7.6 Control Variables

Following on the existing literature on dynamic capabilities and RBV, we measures controle variables as formative measures. The formative measures controlling firm's size, age, and industry, which might affect the relationships among dynamic capabilities, ordinary capabilities, environmental dynamism and a firm's performance. Firm size was measured by indicates as the total number of employees within the firm, as single item representing the number of employees, the answers were divided into categories: (i.e., less than 10 employees; 10-20 employees; 21-40 employees; 41-100 employees; 101- 200 employees; more than 200 employees), We measured firm age in terms of the natural logarithm of the number of years since the establishment of the firm (i.e., 5 years or less; 5-10 years; 11-15; 16-20 years; 21-25years; 26 years or above). Additionally, respondents were asked to classify their firm's sector amongst manufacturing plastic and food, insurance, banking, telecommunications and internet.

6.8 Choice of Scaling

The most widely used is the Likert Scale (1932) developed the principle of measuring attitudes by asking people to respond to a series of statements about a research topic, in terms of the extent to which they agree with them, and so tapping into the cognitive and affective components of attitudes (Adams, 2014). Respondents may be offered a choice of five to seven or even nine pre-coded responses with the neutral point being neither agree nor disagree (Adams, 2014). The use of an odd number of response options provides a midpoint that represents a position of neutrality on the scale (Malhotra 2007). Given the abstract nature of dynamic capabilities, their operationalization provides a considerable challenge (Zahra et al., 2006). We developed multi-item 7-point Likert scales, with responses from “strongly disagree” to “strongly agree” for each dimension of the study. The seven-point scale and nine-point scale are argued to be superior over a five-point scale in terms of increasing reliability and construct variance, and reducing measurement error (Churchill et al., 2005). It has been noted that the seven-point scale "could generate a more effective response rate than nine-point scale due to the time needed in completing the questionnaire" (Jiang, 2014, p. 145). The DCs were measured on a scale from (1) not high at all to (7) extremely high. The

items regarding to ordinary capabilities were measured from (1) not important at all to (7) extremely important. The items concerned with the firm performance were measured from (1) decrease of more than 20% to (7) increase more than 20%. Finally, the items related to environmental dynamism were measured from (1) strongly disagree to (7) strongly agree. In addition to Likert-type scale, the questions regarding profile of respondents and their organizations were measured using nominal scales.

6.9 Data Coding and Editing

Following the quantitative data obtained from the conducted survey, the data were checked for missing values, inconsistencies and any other response errors. A coding manual was constructed which contained general instructions on how each variable was coded. The coded data were rechecked visually for the detection of any possible data entry errors. Descriptive statistics were computed for all the variables for accuracy of inputs as follows: the range of each variable was checked for out-of-range values; frequency counts were performed; the distribution of each variable was analyzed to detect irregular answers and cases with extreme values; and the means and standard deviations were computed.

6.10 Statistical Packages

After coding and processing the data, results were statistically analyzed using the statistical Packages. Chapter 7 is data preparation, in which before the data is analyzed we refine the measures of the instrument items. We use two pieces of statistical software in the analysis of our data. SPSS and its package AMOS is used for preliminary analysis and subsequently PLS for testing our structural equation model. IBM SPSS Statistics is one of the world's leading statistical software solutions as an integrated family of products.

The SPSS software name stands for Statistical Package for the Social Sciences. It provides a broad range of capabilities for the entire analytical process, from planning and data collection to analysis, reporting and deployment. The use of SPSS was for the preliminary analysis of our data was our preferred choice. The most common statistics in business research are included in the base software: descriptive statistics, cross tabulation, frequencies, means, F-test, ANOVA, correlation, linear regression, factor analysis and cluster analysis .

AMOS (Analysis of Moment Structures) is a package of SPSS mainly used for performing the goodness-of-fit measurement used in confirmatory factor analysis. The most important fit measures used by AMOS include CFI and RMSEA. The comparative fit index (CFI) analyzes the model fit by examining the discrepancy between the data and the hypothesized model, CFI values range from 0 to 1, with larger values indicating better fit; a CFI value of .90 or larger is generally considered to indicate acceptable model fit. The Root Mean Square Error of Approximation RMSEA of 0.05 or less indicates a close fit.

Partial Least Squares Structural Equation Modeling (PLS-SEM) provides much value for causal inquiry in communication-related and behavioral research fields (Hair et al., 2014). The number of PLS-SEM applications in strategic management has increased in recent years (Hair et al., 2014; Wilden et al., 2013). The key advantage of the PLS-SEM for modeling latent constructs is that it allows both formative and reflective measurement models (Hair et al., 2014), whereas covariance-based structural equation modeling (SEM) like in AMOS has some limitations when modeling in formative mode (Chin, 1998; Wilden et al., 2013; Hair et al., 2014). The results of our hypothesis testing are obtained using the software implementing the PLS-SEM (Wilden et al., 2013). The fit power of the model in the PLS-SEM was assessed using the average R-squares for endogenous constructs.

Summary

This chapter discussed the research methodology for the empirical study of the conceptual framework described in Chap 4. The research design was outlined giving several phases of the research activities. The research design influenced the research philosophy adopted (positivism theory), and methodological consideration suggested the survey as the appropriate data collection method for this research. Second, the sample design was outlined, and the sampling size, frame and selection criteria were explained and justified. Third, the measures of constructs was delineated, in order to minimize measurement errors. The following chapter of data preparation describes and investigates the collected data.

Chapter 7

Data Preparation

Chapter 7

Data Preparation

The measurement model of formative and reflective constructs are performed for insuring construct reliability and validity. Before proceeding the data analysis we organize the collected data from the survey questionnaire, and illustrate it in detail The descriptive statistics, and correlation analyses considered to summarize a set of observations in order to communicate the information of our population and constructs as simply as possible. The first section presents the findings about the respondents' profile.

7.1 Profile of Respondents

This section discusses the demographic attributes of firms and respondents that participated in this study. After carefully selection of the surveyed firms across the manufacturing and services sectors, the sampling frame for this study consists of managerial employees appointed by the HR department of each firm. The selected firms are Palestinian firms of medium and large size from the services and manufacturing sectors.

Table 7.1 shows the distribution of the obtained survey data beginning with the number of the observed firms in both sectors; 9.9%are plastic manufacturing, 14.9% are insurance, 17.8% are food manufacturing, 23.6% are banks, and 33.9% are communication and internet. Regarding the age of firm, the results shows that; 0.4% less than 5 years, 8.3% from 5 to 10 years, 4.1% from 11 to 15 years, 4.1% from 16 to 20 years, 47.5% of firms

range from 21 to 25 years; and 35.5 form 26 years and above. The information regarding the employees who work as a fulltime in each firm; 7.9% from 10 to 20, 16.5% from 21 to 40, 17.8% from 41 to 100, 7.4% from 101 to 200, and 50.4% are more than 200 as a full time employees. The results regarding the managerial title of the employees; 3.7% are president and general managers, 5.4% are CEO and deputy general managers, 11.4% are branch managers and 72.7% are considered as other positions. Also the number of years in the current position that, 38.7% are in their current position from less than 5 years, 30.2% are in their current position from 6 to 10 years, 15.3% are in their current position from 11 to 15 years. 9.9% are in their current position from 16 to 20 years, 4.5% are in their current position from 21 to 25 years, and 1.7% are in their current position more than 25 years.

Table 7.1 Profile of respondents

General Information	Frequency (N)	Percent (%)
Industry type		
Foods	43	17.8
Plastic	24	9.9
Banks	57	23.6
Communications & Internet	82	33.9
Insurance	36	14.9
Age of firm		
5 years or less	1	0.4
5 to 10 years	20	8.3
11 to 15 years	10	4.1
16 to 20 years	10	4.1
21 to 25 years	115	47.5
26 years or above	86	35.5
Number of full time employees		
10 – 20	19	7.9
21 – 40	40	16.5
41 – 100	43	17.8
101 – 200	18	7.4
More than 200	122	50.4
Current position within the organization		
President	6	2.5
CEO	13	5.4
General manager	8	3.3
Deputy general manager	11	4.5
Branch manager	28	11.6
Other	176	72.7
Number of years in this position		
Less than 5	93	38.4
6 – 10	73	30.2
11 – 15	37	15.3
16 – 20	24	9.9
21 – 25	11	4.5
More than 25	4	1.7

7.2 Reliability and Validity

Validity and reliability are concepts that capture the measurement properties of a survey, questionnaire or another type of measure. Reliability is necessary for establishing the validity of a measure and ensuring accurate interpretation (Churchill & Brown, 2007). The validity of an assessment is the degree to which it measures what it is supposed to measure (Malhotra, 2007). This is not the same as reliability, which is the extent to which a measurement gives results that are consistent (Golafshani, 2003). Therefore, reliability analysis of the constructs needs to be undertaken prior to testing their validity and hypothesized relationship (Churchill & Brown, 2007). We give an initial assessment of the reliability of construct measurements through exploratory factor analysis (EFA) and Cronbach's alpha using SPSS 21 version. Then their validity is established in two different ways: one for reflective constructs and the second for formative constructs using the PLS packages. A different assessment is needed for each, in particular the second doesn't require internal consistency and convergent validity.

7.2.1 Reliability

The establishment of unidimensionality is required for effective use of Cronbach's alpha as the Cronbach alpha can underestimate the reliability of a multidimensional measure (Anderson & Gerbing, 1988). Cronbach's Alpha is widely used in social science and business for testing internal consistency of the survey items (Cronbach, 1951). The Cronbach alpha statistic indicates the level of reliability. Its values could range from 0.0 to 1.0 with a value closer to 1.0 indicating a higher level of reliability. There is no total agreement on the acceptable level of Cronbach's alpha; a high alpha value indicates the combination of items share high communalities (Lee et al., 2015). In our research the values of reliability coefficient (Cronbach's alpha) for each scale and the factor loadings resulting from EFA should be above the suggested thresholds of 0.7 and 0.5 respectively (Fornell & Larcker, 1981).

7.2.1.1 Exploratory Factor Analysis

The purpose of factor analysis is used to examine the dimensionality of the constructs (Malhotra 2007). There are a variety of extraction methods that can for performing EFA, however, principal components method is the best for our purpose as data reduction (De Vaus 2002). To determine if the data is likely to factor well, before proceeding with EFA, we consider the Kaiser-Mayer-Olkin (KMO) measure of sample adequacy and Bartlett's Test of sphericity (Sekaran, 2003). KMO aims to compare the size of the observed correlation coefficients to the size of the partial correlation coefficients to determine sampling adequacy. The measure's values are between 0 and 1, and values below 0.50 are not acceptable (Kim & Mueller, 1978). Bartlett's Test of Sphericity (BT) tests for unidimensionality according to whether the variances of measures associated with the same construct are equal (Williams et al., 2010). Eigenvalues of the correlation matrix were examined to decide the number of factors to extract. Kaiser (1960) proposed the most common method which is called the Kaiser criterion, which extracts only the components that have an eigenvalue greater than 1. A block is usually accepted as unidimensional if the largest is higher than 1 (Kaiser, 1974).

After determining the number of factors, the items are distributed on factors as shown in the below component matrixes according to loading coefficients that indicate the correlations between the item and the components/factors. The higher the loading, the more that item belongs to that component. Since the interpretation of the component matrix is difficult, then rotation methods are used to simplify this interpretation. (Williams et al., 2010). Thus, a factor rotation is recommended for differentiating the components. The optimal factor rotation method has to be identified including orthogonal rotation and oblique rotation (Tabachnick & Fidell, 2007). Orthogonal rotation is when the factors are rotated 90° from each other, and it is assumed that the factors are uncorrelated. Orthogonal rotation is the most widely used and are the preferred mode when the goal of factor analysis is data reduction, removing all items whose factor loading is less than 0.5 (Fornell & Larcker, 1981)

Two common orthogonal techniques are Quartimax and Varimax rotation. Quartimax involves the minimization of the number of factors needed to explain each variable. Varimax minimizes the number of variables that have high loadings on each factor

and works to make small loadings even smaller. Varimax rotation is used in this study as we found it to be the most common rotation method in social research (Yong & Pearce, 2013). The extraction method of principal component analysis and the Varimax rotation method which seem to give a clearer separation of the factors (Hair et al., 2010).

The following tables show the results of Cronbach alpha to assess the reliability and the results of EFA by using the KMO and 'Bartlett's test of sphericity'. To determine the number of the factors, firstly, the EFA was conducted based on eigenvalue greater than one and the results give one factor for each construct. The results of reliability statistics using Cronbach alpha for the constructs including dynamic capabilities, marketing capabilities, operations capabilities a, performance, and environmental dynamism are presented below.

Table 7.2 shows the results of EFA and reliability statistics for the construct of dynamic capabilities, we notice that the test of KMO measure was greater than 0.5 (0.963), and Bartlett statistic is large and significant, this shows the appropriateness of factor analysis. The high value of Cronbach Alpha is (0.981) indicates that the data is reliable. As factor loading above the suggested level (0.50) for all items, the items were distributed as in the original distribution in the used questionnaire.

Table 7.2 Exploratory factor analysis and reliability statistics for dynamic capabilities.

Sub Dimensions	Items	Factor 1	Factor 2	Factor 3	Reliability
Sensing	A.1			0.790	Cronbach Alpha=0.952
	A.2			0.744	
	A.3			0.735	
	A.4			0.689	
	A.5			0.637	
Seizing	A.6	0.763			Cronbach Alpha=0.973
	A.7	0.753			
	A.8	0.785			
	A.9	0.760			
	A.10	0.742			
Reconfiguring	A.11		0.735		Cronbach Alpha=0.966
	A.12		0.771		
	A.13		0.783		
	A.14		0.739		
	A.15		0.690		

KMO = 0.963, Bartlett test (Chi-Square =5366.899, df = 105, Sig = 0.000) and Cronbach Alpha=0.981

Table 7.3 shows the results of EFA and reliability statistics for marketing capability; the measure of the KMO test was greater than 0.5 (0.947), and the statistical Bartlett test is large and significant, this shows the appropriateness of factor analysis. In addition, Cronbach Alpha was high (0.979) which indicates that the data is reliable. Hence, the items were distributed as in the original distribution in the used questionnaire.

Table 7.3 Exploratory Factor analysis and reliability statistics for marketing capability

Dimensions	Items	Factor1	Factor2	Factor3	Factor4	Factor5	Reliability
Product development	B.1				0.722		Cronbach Alpha=0.936
	B.2				0.771		
Relation with intermediaries	B.3					0.640	Cronbach Alpha=0.961
	B.4					0.684	
Pricing	B.5		0.691				Cronbach Alpha=0.952
	B.6		0.731				
	B.7		0.676				
Marketing communication	B.8			0.648			Cronbach Alpha=0.929
	B.9			0.559			
	B.10			0.770			
Customer services	B.11	0.721					Cronbach Alpha=0.965
	B.12	0.768					
	B.13	0.745					

KMO = 0.947, Bartlett test (Chi-Square =4518.648, df = 78, Sig = 0.000) and Cronbach Alpha=0.979

Table 7.4 shows the results of the EFA and reliability statistics for operations capability; the measure of the KMO test is greater than 0.5 (0.937), and the statistical Bartlett test is large and significant, this shows the appropriateness of factor analysis. Cronbach Alpha was high (0.970) indicates that the data is reliable. The items were distributed as in the original distribution in the used questionnaire except for delivery and flexibility capabilities, as they have been distributed on one construct. This due to the similarity of their measures.

Table 7.4 Exploratory Factor analysis and reliability statistics for operations capability

Dimensions	Items	Factor1	Factor2	Factor3	Factor4	Factor5	Reliability
Cost	B.14				0.711		Cronbach Alpha=0.895
	B.15				0.819		
Quality	B.16			0.747			Cronbach Alpha=0.947
	B.17			0.763			
Delivery	B.18		0.613				Cronbach Alpha=0.928
	B.19		0.691				
Flexibility	B.20		0.674			0.112	Cronbach Alpha=0.922
	B.21		0.798			-0.060	
Social responsibility	B.22	0.804					Cronbach Alpha=0.959
	B.23	0.845					
	B.24	0.795					

KMO = 0.937, Bartlett test (Chi-Square =3400.509, df = 55, Sig = 0.000) and Cronbach Alpha=0.970

Table 7.5 shows the results of factor analysis and reliability statistics for firm performance; the measure of the KMO is greater than 0.5 (0.885), and the statistical Bartlett test is large and significant, indicating the appropriateness of factor analysis. The Cronbach alpha is high (0.971) which indicates that the data is reliable. As the factor loadings for all items are above the suggested level 0.50, the items were distributed as in the original distribution in the used questionnaire.

Table 7.5 Exploratory Factor analysis and reliability statistics for Firm Performance

Dimensions	Items	Factor 1	Factor 2	Factor 3	Reliability
Profitability	C.1	0.831			Cronbach Alpha=0.972
	C.2	0.808			
	C.3	0.843			
Sales	C.4			0.689	Cronbach Alpha=0.956
	C.5			0.730	
Market share	C.6		0.840		Cronbach Alpha=0.963
	C.7		0.817		

KMO = 0.885, Bartlett test (Chi-Square =2578.966, df = 21, Sig = 0.000) and Cronbach Alpha=0.971

Table 7.6 shows the results of factor analysis and reliability statistics for the environmental dynamism; the measure of the KMO test is greater than 0.5 (0.726) and the statistical Bartlett test is large and significant, this shows the appropriateness of factor analysis. The Cronbach alpha was high (0.826) which indicates that the data is reliable. However, the two items (D.2 and D.4) were loaded into (Factor 2) separate from the majority of remaining items, this will be confirmed in the CFA whether to be excluded or included with the construct.

Table 7.6 Exploratory factor analysis and reliability statistics for environmental dynamism

Dimensions	Items	Factor 1	Factor 2	Reliability
Environmental Dynamism	D.1	0.842		Cronbach Alpha=0.884
	D.3	0.792		
	D.5	0.885		
	D.6	0.867		
	D.2		0.845	Cronbach Alpha=0.771
	D.4		0.885	

KMO = 0.726, Bartlett test (Chi-Square =761.82, df = 15, Sig = 0.000) and Cronbach Alpha=0.826

Table 7.7 indicates that the exploratory factor analysis for all items of all constructs; the test of KMO measure is greater than 0.5 (0.963) and the statistical Bartlett test is large and significant, that shows the appropriateness of factor analysis, and according to loading coefficients, the items were distributed on four factor/constructs as the original distribution in the questionnaire.

Table 7.7 Exploratory Factor analysis for all items of the studied constructs

Items	Factor 1	Factor 2	Factor 3	Factor 4	Items	Factor 1	Factor 2	Factor 3	Factor 4
A.1		0.693			B.14	0.787			
A.2		0.765			B.15';	0.666			
A.3		0.779			B.16	0.713			
A.4		0.761			B.17	0.707			
A.5		0.730			B.18	0.716			
A.6		0.636			B.19	0.237	0.351		
A.7		0.681			B.20	0.758			
A.8		0.630			B.21	0.692			
A.9		0.696			B.22	0.780			
A.10		0.688			B.23	0.747			
A.11		0.670			B.24	0.767			
A.12		0.710			C.1			0.882	
A.13		0.716			C.2			0.908	
A.14		0.733			C.3			0.899	
A.15		0.711			C.4			0.907	
B.1	0.674				C.5			0.899	
B.2	0.609				C.6			0.856	
B.3	0.699				C.7			0.865	
B.4	0.692				D.1				0.625
B.5	0.769				D.3				0.569
B.6	0.772				D.5				0.662
B.7	0.770				D.6				0.499
B.8	0.746				D.2				0.798
B.9	0.766				D.4				0.799
B.10	0.656				Kaiser-Meyer-Olkin Measure.				0.963
B.11	0.812				Bartlett's Test of Sphericity		Chi- square		18199.44
B.12	0.831				Df.				1326
B.13	0.816				Sig.				0.000

7.2.2 Validity

Validity should be assessed by diverse criteria including content or face validity, construct validity and criterion validity (Malhotra, 2007). In this research we consider content validity and construct validity as suggested by many scholars (e.g. Bagozzi et al., 1991; Hair et al. 2010). Content validity is to ensure the content of instruments by different ways, while the assessment of construct validity requires that the correlations of the measure be examined in regard to variables that are known to be related to the construct (Churchill & Brown, 2007). For construct validity we performed confirmatory factor analyses (CFA) using Partial Least Squares Structural Equation Modeling PLS-SEM to handle the issues in which the relationship between indicators and latent variables are formulated in both formative and reflective modes. Factor Loadings, Composite Reliability and Average variance Extracted (AVE) values should be examined in order to investigate the convergent and discriminate validity of reflective constructs (Hair et al., 2013 & Lee et al., 2015). The formative constructs' validity must be assessed externally, as internal consistency measures (e.g. Cronbach's alpha) is not appropriate. The measurement assessment for formative constructs includes the outer weights of an item, and Variance Inflation Factors (VIF) that test the issue of multicollinearity (Hair et al., 2013).

7.2.2.1 Confirmatory Factor Analysis

The confirmatory factor analysis (CFA) is used to test how well our theoretical specification of the factors represent latent constructs (Hair et al., 2010). We conducted principal-component factor analyses for all independent and dependent variables, to test for construct validity of the multi-item constructs. To achieve this purpose using CFA, a path diagram is drawn using smart PLS-SEM, the convergent loadings and the outer weight of construct, see figures 7.1, 7.2, 7.3, 7.4, 7.5 in Appendix 1.

We assess the model adequacy by checking the goodness of fit of the CFA model for all constructs. GOF indices summarize the discrepancy between the observed values and the values expected under a statistical model. There are many of goodness-of-fit indices. namely chi-square/degree of freedom (χ^2/df) ratio, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the Normed Fit Index (NFI), the goodness of fit index (GFI),

the root mean square error of approximation (RMSEA) and the expected cross validation index (ECVI) (Hancock, et al., 2015). We relied on CFI, TLI, GFI and RMSEA to assess test goodness-of-fit of our model for each constructs.

The CFI ranges between 0 and 1, and CFI values above 0.90 are usually associated with a model that fits well. The Tucker-Lewis index (TLI) is employed for which the cut-off point is greater than 0.90 to show a reasonable fit. The Goodness-of-fit index (GFI) is the third criterion used to test the goodness-of-fit; it ranges in value from 0 to 1. The higher GFI values indicate a better fit. Root mean square error of approximation (RMSEA) values of about 0.08 or less indicates a reasonable error of approximation. The range of RMSEA values from 0.03 to 0.08 is considered good (Hancock, et al., 2015), values between 0.08 and 0.10 suggest a mediocre fit, and values > 0.10 are not acceptable.

The results of the GFI are shown in Table 7.8. The values of all constructs should reach the cut-off level: the CFI (≥ 0.90), TLI (≥ 0.90), GFI (> 0.90) and RMSEA (≤ 0.10). The values of model fit indices reach the cut-off level for most of the constructs except the environmental dynamism dimension that has lower than the threshold values. However, this not important because we will re-code the construct of environmental dynamism to dummy variable (0 = low and 1 = High) to use it as a moderate variables between dynamic capabilities variable and performance variable in the separate analysis without the SEM. Appendix 1. Diagrams illustrate the results of the CFA to assess the convergent validity (See Fig. 7.1, 7.2, 7.3, 7.4 and 7.5). The standardized factor loadings for all tested items are represented on the path between the extracted construct and the observed item. The standardized factor loadings are above the recommended minimum of 0.50.

Table 7.8 Summary of goodness-of-fit indices for all constructs

Main Dimensions	CFI	TLI	GFI	RMSEA	CMIN/DF
Dynamic Capabilities	0.965	0.958	0.871	0.094	3.140
Marketing Capabilities	0.984	0.977	0.928	0.074	2.314
Operations capability	0.986	0.977	0.947	0.073	2.286
Environmental Dynamism	0.886	0.787	0.893	0.211	11.740
Performance	0.990	0.981	0.960	0.098	3.316

7.2.2.2 Construct Validity

Construct validity refers to how well a test or tool measures the construct that it was designed to measure. There are two broad types of construct validity: convergent and discriminant validity. In order to assess convergent and discriminant validity we performed confirmatory factor analysis. Further the Cronbach's α , average variance extracted (AVE), factor loadings, and composite reliability have been calculated. Then we discuss the assessment of formative constructs which requires Variance Inflation Factors (VIF).

7.2.2.2.1 Convergent Validity

Convergent validity is the extent to which the scores on one measure are related to scores collected from similar or different measures. To establish convergent validity, we need to show that measures that should be related are in reality related (Hair et al., 2010). We follow three steps in assessing the convergent validity of measurement items (Fornell & Larcker, 1981; Hair et al., 2010). First the factor loadings of the same construct calculated using CFA should be higher than 0.7, second the (AVE) should be higher than 0.5, and third the composite reliability should be higher than 0.7 for all constructs of a measurement model (Hair et al., 2013). AVE measures the level of variance captured by a construct versus the level due to measurement error, values above 0.7 are considered very good, whereas, the level of 0.5 is acceptable (Hair et al., 2013). Composite reliability produces more precise estimates of reliability than those initially provided by alpha (Fornell & Larcker, 1981). The composite reliability index is a measure of the overall reliability of a collection of heterogeneous but similar items (Hair et al., 2013).

Table 7.9 shows the findings that confirming the convergent validity that all items of a construct load strongly, ranging between 0.8-0.9 above the critical level of 0.7. The figures in Appendix 1 shows the convergent factor loadings for all reflective constructs. The table shows each construct's AVE is larger than 0.5, ranging between 0.55 and 0.95. The data shows very good levels of internal consistency as their CR are between 0.877 and 0.983. This indicates that each of these constructs explains more than 50% of the variance of its indicators (Hair et al., 2013). Cronbach's alpha is above the recommended minimum of 0.70 for all constructs as suggested by Maurer et al. (2015). Subsequently, we can confirm that the items measure just one construct and the model shows convergent validity.

Table 7.9 Convergent and discriminant validity

	items	Alpha	CR	AVE	1	2	3	4	5
Dynamic Capabilities	15	0.981	0.983	0.794					
Sensing	5	0.952	0.964	0.842	<i>0.918</i>				
Seizing	5	0.973	0.979	0.903	0.734	<i>0.950</i>			
Reconfiguring	5	0.966	0.974	0.880	0.711	0.769	<i>0.938</i>		
Marketing Capabilities	13	0.979	0.981	0.802					
Product development	2	0.936	0.970	0.941	<i>0.970</i>				
Relation with intermediaries	2	0.961	0.981	0.962	0.753	<i>0.981</i>			
Pricing	3	0.952	0.969	0.913	0.648	0.701	<i>0.913</i>		
Marketing communication	3	0.929	0.955	0.877	0.642	0.692	0.776	<i>0.936</i>	
Customer services	3	0.965	0.977	0.934	0.654	0.676	0.719	0.721	<i>0.966</i>
Operations Capabilities	11	0.970	0.974	0.772					
Cost	2	0.895	0.951	0.906	<i>0.952</i>				
Quality	2	0.947	0.974	0.950	0.594	<i>0.975</i>			
Delivery & Flexibility	4	0.928	0.965	0.872	0.596	0.738	<i>0.934</i>		
Social Responsibility	3	0.922	0.973	0.924	0.581	0.602	0.648	<i>0.961</i>	
Performance	7	0.971	0.976	0.855					
Profitability	3	0.972	0.982	0.949	<i>0.974</i>				
Sales	2	0.956	0.979	0.958	0.752	<i>0.979</i>			
Market share	2	0.963	0.982	0.956	0.630	0.738	<i>0.978</i>		
Environmental Dynamism	6	0.826	0.877	0.554					

Note: The diagonal (in italics) shows the square root of the AVE for each constructs

7.2.2.2.2 Discriminant Validity

Discriminant validity ensures that a construct measure is empirically unique and represents phenomena of interest that other measures in a structural equation model do not capture (Hair et al. 2010). Based on this definition we should test whether believed unrelated constructs are, in fact, unrelated. This is examined using the Fornell and Larcker (1981)

criterion, comparing the square root of the AVE of each construct to the correlations of the construct with all the other constructs (Hair et al., 2014).

Table 7.9 confirms the construct discriminant validity confirmed as the square roots of the AVE values are greater than the correlations between constructs (all constructs share more variance with their own measures than with others). All cross loadings values and discriminant test meet the recommended values: the cross loadings of all indicators go beyond the recommended value 0.70 as presented in the Appendix 1. Thus, it can be concluded that all reflective constructs form part of an adequate measurement model.

7.2.3 Formative Constructs (validity)

In formative measurement models, validity of a formative indicators refers to the importance of each individual indicator of the related formative construct (Andreev et al., 2009). Internal consistency is not an appropriate standard for evaluating the validity of formative models (Hair et al., 2013). It requires validity measures such as the assessment of the indicator relevance outer weight, the evaluation of the indicators significance, and the determination of the multicollinearity of indicators (Diamantopoulos & Winklhofer, 2001). An essential concern for a formative measurement model is to establish whether multicollinearity is present among the formative constructs (Hair et al., 2013). High levels of multicollinearity will make it difficult to assess the unique contribution from each component (Hair et al., 2013).

We follow the procedure of evaluating the validity of a formative measurement model provided by Diamantopoulos and Winklhofer (2001) and Hair et al. (2013). The formative models were tested using the PLS-SEM approach with a bootstrapping method to calculate item weights (or PLS scores or outer weights), and their statistical significance, and Variance Inflation Factors (VIF). VIF factors indicate the extent to which an indicator's variance is explained by the other indicators of the same construct. High VIF values are signs of redundant indicators (Hair et al., 2013). The VIF coefficient for dynamic capabilities for example refers to the variance inflation factor between sensing, seizing, and reconfiguration capability, a measure of lateral collinearity between these three latent variables. Measures have a multicollinearity problem if their VIF are greater than 10 as

suggested (e.g. Petter et al. 2007; Hair et al., 2013). A construct's weight refers to the relative contribution of an indicator to a construct, that is, the effect of an indicator on a construct, controlling for the effects of all other indicators on that construct (Hair et al., 2013).

The figures in (Appendix 1) show a graphical representation of the hierarchical components model in PLS-SEM Path Modeling for all formative-reflective constructs (marketing, operations, dynamic capabilities, and firm's performance).

Table 7.10 Inter-construct correlations

		No. of items	VIF	Weights
Dynamic Capabilities	Sensing	5	4.428	0.334
	Seizing	5	5.504	0.364
	Reconfiguring	5	4.993	0.352
Marketing Capabilities	Product development	2	4.688	0.163
	Relation with intermediaries	2	5.585	0.171
	Pricing	3	5.828	0.248
	Marketing communication	3	5.808	0.238
	Customer services	3	4.821	0.252
Operations Capabilities	Cost	2	3.075	0.187
	Quality	2	4.405	0.205
	Delivery & Flexibility	4	4.489	0.391
	Social Responsibility Capability	3	3.429	0.299
Performance	Profitability	3	4.196	0.455
	Sales	2	5.934	0.306
	Market share	2	3.971	0.297

As shown in (Table 7.10) the VIF values for all the first-order constructs associated with second-order constructs range from 3.075 to 5.828 indicating that multicollinearity is not an issue in our data. On the other hand, the values of the outer weights for the formative indicators show evidence of relative contributions to the main construct, as the values are all significantly different from zero ($p < 0.05$). Thus the analysis revealed that these indicators are relatively important to the main construct.

7.2.4 Content Validity

Content validity refers to the extent to which a measure represents all facets of a social construct. This refers not to what the test actually measures, but to what it superficially appears to measure (Sarantakos, 2005). To demonstrate content validity, testers investigate the degree to which a test is a representative sample of the content of whatever objectives or specifications the test was originally designed to measure. (Churchill & Brown, 2006). It's concerned with the question of whether the instrumentation includes a sufficiently representative number of items to ensure that all ways to measure the content of the studied construct (Sarantakos, 2005). Hence, content validity includes any validity strategies that focus on the content of the test. Following Churchill and Brown (2006) suggestions for assessing the content validity; this achieved through literature reviews and borrowing from existing, validated and internationally accepted instruments. Interviews with experts are another way to support content validity by consulting well-trained colleagues to make judgments about the degree to which the test items matched the test objectives or specifications (Brown, 2001).

We have evaluated the questionnaire in two forms, first the English version was assessed by four international professors, and five from who are familiar with the Palestinian context. The questionnaire was translated to Arabic version and assessed by experts for the wordings and content of the instruments and pre-testing was used for item refinement. Pilot test is performed by distributing a questionnaire to a small number of respondents from diverse firms across the manufacturing and services sectors, and accordingly we refined it in terms of terminology issues.

7.3 Descriptive Analysis

Once a dataset is ready, it is wise to use descriptive statistics to get some idea of what your data look like. We describe our data using the MEAN value, standard deviation and perform one way ANOVA tests. The MEAN is a statistic describing the data set by giving the average of respondent rate for each construct. The standard deviation is a measure of the dispersion of a set of data from its mean. The more spread apart the data, the higher the deviation. Standard deviation is calculated as the square root of deviation is a measure of

the dispersion of a set of data from its mean. The more spread apart the data, the higher the deviation. Standard deviation is calculated as the square root of variance. One way ANOVA is a collection of statistical models indicates whether there is a statistically significant difference among group means by industry. Tables 7.11 show the descriptive statistics for the constructs of the study.

The Mean of the responses on the items of the dynamic capabilities for the surveyed firms is 4.73 out of 7 degrees. The minimal responses were in the foods industry with a value of 4.50 (sensing = 4.61 ± 1.65 , seizing = 4.58 ± 2.00 reconfiguring = 4.31 ± 1.70). The maximum of dynamic capabilities practices was in the insurance industry with a value of 5.10 (sensing = 4.96 ± 1.36 , seizing = 5.46 ± 1.47 , reconfiguring = 4.87 ± 1.47). The results of ANOVA test show that, there is no significant difference between the studied industries in dynamic capabilities level ($F = 0.748$, $P\text{-value} = 0.560$).

The Mean of the responses on ordinary capabilities items (marketing and operations) for all surveyed firms is 4.84 out of 7 degrees. The minimal responses were in the food industry with a value of 4.57 (Marketing = 4.67 ± 1.68 , Operations = 4.47 ± 1.53). The maximum of ordinary capabilities practices was found in the Plastic industry with a value 5.50 (Marketing = 5.41 ± 1.10 , Operations = 5.59 ± 0.89). The results of ANOVA test shows that, there are insignificant differences between the studied industries in ordinary capabilities level ($F = 1.844$, $P\text{-value} = 0.121$).

The Mean of the responses on environmental dynamism items is (5.02 ± 1.19); the minimal responses were in the bank industry with (4.81 ± 1.56). The maximum was in the Plastic industry with (5.53 ± 0.69). The results of ANOVA test indicate that, there are highly significant differences between the studied industries considering the environmental dynamism ($F = 1.988$, $P\text{-value} = 0.097$).

The Mean of the responses on performance items is (4.30 ± 1.67); the minimal responses were in the plastic industry with a value of (3.35 ± 1.21), while the maximum of performance was found in the banking industry with (4.97 ± 1.73). The results of ANOVA indicate that, there are highly significant differences in a firm's performance between the studied industries with a value of ($F = 7.319$, $P\text{-value} = 0.000$).

Table 7.11 Descriptive statistics for variables of the study (Dynamic and Ordinary Capabilities).

Dimensions	Sub Dimensions		Foods	Plastic	Insurance	Banks	Communications	All Firms	F-Statistic	P-value
Dynamic Capabilities	Sensing	Mean	4.61	4.88	4.96	4.42	4.60	4.64	0.622	0.647
		Std. Dev.	1.65	1.49	1.36	1.81	2.03	1.77		
	Seizing	Mean	4.58	5.37	5.46	4.62	4.88	4.90	1.890	0.113
		Std. Dev.	2.00	1.62	1.47	1.86	1.92	1.85		
	Reconfiguring	Mean	4.31	4.44	4.87	4.76	4.74	4.66	0.734	0.570
		Std. Dev.	1.70	1.35	1.47	1.79	1.98	1.76		
Total		Mean	4.50	4.89	5.10	4.60	4.74	4.73	0.748	0.560
		Std. Dev.	1.71	1.33	1.35	1.74	1.91	1.71		
Marketing Capabilities	Product development	Mean	4.78	5.60	5.08	4.81	4.90	4.95	1.242	0.294
		Std. Dev.	1.92	0.86	1.32	1.96	1.92	1.77		
	Relation with intermediaries	Mean	4.85	5.67	5.33	4.72	4.79	4.95	1.074	0.370
		Std. Dev.	1.98	1.08	1.41	1.88	1.92	1.80		
	Pricing	Mean	4.52	5.35	5.06	4.70	4.78	4.81	1.806	0.128
		Std. Dev.	1.86	1.22	1.60	1.89	1.77	1.75		
	Marketing communication	Mean	4.47	4.96	4.92	4.64	4.79	4.73	1.123	0.346
		Std. Dev.	1.74	1.39	1.49	1.88	1.98	1.79		
	Customer services	Mean	4.84	5.61	5.46	4.69	4.77	4.95	0.487	0.745
		Std. Dev.	1.83	1.48	1.33	1.99	1.93	1.83		
Total		Mean	4.67	5.41	5.17	4.70	4.80	4.87	1.242	0.294
		Std. Dev.	1.68	1.10	1.24	1.86	1.80	1.67		
Operations Capabilities	Cost	Mean	4.16	5.25	4.72	4.71	4.73	4.67	2.987	0.020
		Std. Dev.	1.87	0.90	1.28	1.67	1.66	1.61		
	Quality	Mean	4.53	5.85	5.15	4.86	4.71	4.89	1.928	0.106
		Std. Dev.	1.82	0.89	1.41	1.77	1.90	1.74		
	Delivery	Mean	4.67	5.92	5.54	4.73	4.70	5.03	2.793	0.003
		Std. Dev.	1.80	1.19	1.20	1.77	1.85	2.16		
	Flexibility	Mean	4.78	5.58	5.31	4.72	4.77	4.92	4.540	0.001
		Std. Dev.	1.62	1.24	1.39	1.64	1.75	1.62		
	Social Responsibility Capability	Mean	4.29	5.42	4.99	4.69	4.59	4.70	2.031	0.091
		Std. Dev.	1.66	1.13	1.77	1.73	1.79	1.71		
Total		Mean	4.47	5.59	5.13	4.74	4.69	4.82	2.683	0.032
		Std. Dev.	1.53	0.89	1.15	1.62	1.69	1.53		
Ordinary Capabilities		Mean	4.57	5.50	5.14	4.72	4.74	4.84	1.844	0.121
		Std. Dev.	1.58	0.97	1.12	1.70	1.71	1.57		

Table 7.11 (cont..) Descriptive statistics for variables of the study (Performance and Environmental Dynamism)

Dimensions	Sub Dimensions		Foods	Plastic	Insurance	Banks	Communications	All Firms	F-Statistic	P-value
performance	Profitability	Mean	3.44	3.07	4.43	4.94	4.09	4.12	7.362	0.000
		Std. Dev.	1.88	1.38	1.79	1.80	1.64	1.81		
	Sales	Mean	3.58	3.33	4.54	5.04	4.45	4.33	7.096	0.000
		Std. Dev.	1.93	1.22	1.61	1.69	1.64	1.75		
	Market share	Mean	3.83	3.77	5.14	4.96	4.52	4.52	5.429	0.000
		Std. Dev.	2.01	1.13	1.32	1.81	1.58	1.71		
Total		Mean	3.59	3.35	4.66	4.97	4.31	4.30	7.319	0.000
		Std. Dev.	1.79	1.21	1.46	1.73	1.53	1.67		
Environmental Dynamism		Mean	4.83	5.53	5.02	4.81	5.12	5.02	1.988	0.097
		Std. Dev.	0.86	0.69	0.92	1.56	1.22	1.19		

Correlation

A Pearson correlation coefficient is a statistical measure of the degree of linear dependence between two variables. It was developed by Karl Pearson from a related idea introduced by Francis Galton in the 1880s. According to Selvanathan et al. (2000), the measure of the linear correlation between two variables X and Y , gives a value between $+1$ and -1 inclusive, where 1 is total positive correlation, 0 is no correlation, and -1 is total negative correlation. Since the formula for calculating the correlation coefficient standardizes the variables, changes in scale or units of measurement will not affect its value. For this reason, the correlation coefficient is often more useful than a graphical depiction in determining the strength of the association between two variables.

Table 7.12 shows the correlation coefficients between the studied constructs for each industry: Dynamic capabilities found to be correlated positively significant to a firm's performance in all firms except in firms in the plastic industry for which the correlation was insignificant and negative. The positively significant correlations ranged from $R=0.325$ for firms of the food industry, and the upper value of $R=0.664$ for banks. We also calculated the correlation for the sub- constructs of dynamic capabilities. Sensing capability found to be positively significantly correlated to a firm's performance in all surveyed firms except in the plastic industry and foods industry where the correlation was insignificant. The positively significant correlations ranged from $R=0.441$ in the insurance industry's firms to $R=0.579$ in banks. The correlation of seizing capability to a firms' performance was positively significant except in the plastic industry's firms with a negatively insignificant correlation. The positively significant correlations for seizing range from $R=0.311$ in foods firms to $R=0.624$ in banks. Reconfiguring capability has a positively significant correlation to a firms' performance in all surveyed firms except in plastic industry's firms with an insignificant correlation. The positively significant correlations for reconfiguring range from $R=0.354$ for foods industry firms and to $R=0.699$ in banks.

The ordinary capabilities (marketing and operations capabilities) show a positively significant correlation to a firm's performance in all surveyed firms, except for firms in the plastic industry, where the correlation was insignificant and negative. The positive significant correlations range from $R=0.346$ for insurance industry's firms to $R=0.769$ for

banks. The marketing capability is positively significantly correlated to a firm's performance for all surveyed firms, except firms in the insurance and plastic industry insignificant correlation. The positively significantly correlations ranged from $R=0.364$ in the foods industry's firms to $R=0.726$ in Banks. The operations capability is also found to be positively significantly correlated to a firm's performance in all industries, except in the plastic industry's firms in which we found significant correlation. The correlations ranged from $R=-0.401$ for firms in the foods industry to $R=0.778$ in banks. Finally the moderating variable (environmental dynamism) found to have a significant correlations in communication industry $R=.398$ and banks $R=.645$. While found to have insignificant correlation in foods, insurance and plastic industry.

Table 7.12 Pearson correlation coefficients between the main variables of the study

Firms	Variables	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8
Foods	1.Dynamic Capabilities	1								Plastic	1							
	2. Sensing	.962**	1								.915**	1						
	3. Seizing	.959**	.883**	1							.894**	.718**	1					
	4. Reconfiguring	.953**	.890**	.859**	1						.881**	.745**	.658**	1				
	5. Ordinary Capabilities	.911**	.842**	.899**	.871**	1					.747**	.521**	.772**	.714**	1			
	6. Marketing	.919**	.843**	.897**	.896**	.984**	1				.700**	.484*	.695**	.706**	.980**	1		
	7. Operations	.869**	.811**	.868**	.811**	.981**	.932**	1			.762**	.536**	.829**	.674**	.956**	.878**	1	
	8. Environmental Dynamism	.399**	.298	.430**	.410**	.411**	.401**	.408**	1		.471*	.498*	.359	.414*	.132	.063	.223	1
	9. Performance	.325*	.270	.311*	.354*	.388*	.364*	.401**	.032		-.045	.126	-.381	.183	-.201	-.091	-.347	-.040
insurance	1.Dynamic Capabilities	1								Banks	1							
	2. Sensing	.937**	1								.937**	1						
	3. Seizing	.942**	.819**	1							.968**	.858**	1					
	4. Reconfiguring	.948**	.837**	.838**	1						.954**	.822**	.907**	1				
	5. Ordinary Capabilities	.843**	.806**	.873**	.704**	1					.883**	.779**	.864**	.881**	1			
	6. Marketing	.822**	.819**	.822**	.686**	.944**	1				.839**	.721**	.822**	.856**	.979**	1		
	7. Operations	.753**	.683**	.814**	.630**	.929**	.755**	1			.887**	.805**	.867**	.863**	.972**	.903**	1	
	8. Environmental Dynamism	.552**	.449**	.562**	.545**	.397*	.374*	.370*	1		.707**	.619**	.684**	.720**	.811**	.804**	.776**	1
	9. Performance	.428**	.441**	.342*	.430**	.346*	.246	.412*	.229		.664**	.579**	.624**	.699**	.769**	.726**	.778**	.645**
Communications & internet	1.Dynamic Capabilities	1								ALL	1							
	2. Sensing	.954**	1								.945**	1						
	3. Seizing	.977**	.889**	1							.959**	.857**	1					
	4. Reconfiguring	.973**	.877**	.950**	1						.952**	.843**	.877**	1				
	5. Ordinary Capabilities	.912**	.835**	.919**	.898**	1					.881**	.795**	.880**	.838**	1			
	6. Marketing	.907**	.831**	.915**	.891**	.981**	1				.870**	.781**	.864**	.839**	.983**	1		
	7. Operations	.879**	.803**	.884**	.867**	.978**	.919**	1			.851**	.774**	.858**	.796**	.972**	.914**	1	
	8. Environmental Dynamism	.550**	.520**	.561**	.516**	.580**	.564**	.573**	1		.564**	.507**	.561**	.543**	.599**	.589**	.584**	1
	9. Performance	.485**	.448**	.490**	.472**	.520**	.523**	.494**	.398**		.436**	.385**	.376**	.485**	.453**	.442**	.444**	.326**

** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed).

Chapter 8

Data Analysis

Chapter 8

Data Analysis

The first section in this chapter contains the structural equation analysis performed using the Smart-PLS software. In particular our structural model investigates the extent of the direct and indirect impact of dynamic capabilities on a firm's performance. The indirect impact is mediated by ordinary capabilities (marketing and operations). The SEM also considers the moderating role that the Palestinian dynamic environment has on the relationship between the dynamic capabilities and firm performance. Following our analysis of structural equation model, as additional analysis we wish to study the impact of the various sub-constructs of marketing capabilities and operations capabilities on firm performance. We will do this within a separate theoretical framework using a linear regression model considering only capabilities of the same type.

8.1 Structural Equation Modeling (SEM)

In general the structural equation modeling (SEM) represents the dependency of causal relations in multivariate data in the behavioral and social sciences (McDonald & Ringo Ho, 2002). Although similar in appearance, SEM is fundamentally different from regression. In a regression model, there exists a clear distinction between dependent and independent variables (McDonald & Ringo Ho, 2002). In SEM, however, such concepts only apply in relative terms since a dependent variable in one model equation can become an independent variable in other components of the SEM system (Hancock et al., 2015). The causal

relationships in a hypothesized mediation process, the simultaneous nature of the indirect and direct effects, and the dual role the mediator plays as both a cause for the outcome and an effect of the intervention are more appropriately expressed using structural equations rather than regression analysis (Hancock et al., 2015).

We recall that the analytical methodology involves Partial Least Squares-Structural Equation Modeling (hereafter, PLS-SEM). The key illustrations of the PLS-SEM applications, because we have both formative and reflective measurement models of a second-order measurement model with a demonstration of a first-order reflective (Hair et al., 2014). It has been also recommended by many to use the partial least squares path modeling PLS-PM, which allows estimating complex cause-effect relationship models with latent constructs (e.g. Sanchez, 2013; Hair et al., 2014). For example an intermediate variable, called the mediator, that helps explain how or why an independent variable influences an outcome. Also considering the mediating effect that influences the relationship between independent and dependent variables. The PLS-SEM is composed of two sub-models: the measurement model and structural model. (1) The measurement model which was achieved in the previous chapter that represents a set of p observable variables as multiple indicators of a smaller set of m latent variables, (2) The structural model represents the relationships between the observed data and the latent constructs, which will be considered in the following step. This include the independent variable (dynamic capabilities) mediating variable (ordinary capabilities), moderating variable (environmental dynamism), the firm performance (dependent variable), and the control variables (firm's age, size and type).

8.1.1 SEM mediating analysis; impact of dynamic capabilities, ordinary capabilities on firm's performance.

We run the PLS-SEM twice showing the results in two tables, whereas the two steps repeated respectively with a moderating effect. First in table 8.1 we considered dynamic capabilities as one variable presented (fig 8.1 and 8.2) and secondly we inter dynamic capabilities as three variables (sensing, seizing and reconfiguring) presented in (table 8.2 and fig 8.3 and 8.4). The findings indicate that the proposed model explains 34-36 % of the variance in firm performance. ΔR -square refers to the amount of R-square increases or

decrease when a variable or a set of variables is added. Beta (β) is the average amount of the dependent variable increases when the independent increases by one standard deviation and other independent variables are held constant. The P-value is the probability of observing the data, given that the coefficient is zero. If this probability is lower than the conventional ($P < 0.05$) the coefficient is called statistically significant. The R^2 index of the variables demonstrates a satisfactory level of predictability (Chin, 1998). The average R-squares (for endogenous constructs) was used to assess the overall model fitness and explaining the power of model in the PLS-SEM. The average R-squares are more than 0.5 which indicate that our structural models are fit and powerful. The bootstrapping resampling method were performed (with a number of 500 bootstrap resampling include 242 bootstrap cases) that assessed the path coefficients and their significance values of the parameter estimates in the structural model (Chin, 1998). Also it has been recommended by some reviewer for this thesis to run (Sobel test) for examining the statistical significance of the mediation effects.

In order to test our hypothesis, we first entered the control variables in the PLS path models including firm size, age, and industry sector, in order to control for the effects they may have on firm performance. We found firm size and firm age are not significant predictors of firm performance, but the type of industry does. The insurance industry does not differ from the mean, whereas the banking industry has the highest firm performance in comparison to other industries of our sample. We consider the mediation effect in the structural equation, which illustrates whether the ordinary capabilities (marketing capability and operation capability) are mediating the relationship between dynamic capabilities and a firm's performance. The full mediation occurs when the direct effect of dynamic capabilities on firm performance is insignificant, but the indirect effects are significant, while the partial mediation occurs if both the direct and indirect effects are significant.

The effect of dynamic capabilities on ordinary capabilities (marketing and operations) was significant as follows; before adding the moderating variable ($\beta = 0.892$, $P < 0.000$), after adding the moderating variable ($\beta = 0.893$, $P < 0.000$). The results regarding the mediating path shows that dynamic capabilities have a significant indirect effect on firm performance through ordinary capabilities ($\beta = 0.422$, $p = 0.007$), but an insignificant direct effect ($\beta = -0.015$, $p = 0.928$). Similarly after adding the moderating variable the indirect

effect of dynamic capabilities becomes ($\beta=0.373$, $p = 0.017$), and the direct effect ($\beta=0.005$, $p = 0.975$). These results indicate that, dynamic capabilities in the surveyed firms positively and significantly contribute to firm performance. And the relationship is fully mediated through ordinary capabilities as the direct effect was insignificant, while the indirect effects was significant. Moreover, we found that marketing capabilities have an insignificant impact on firm performance as follows; before adding the moderating variable ($\beta= - 0.190$, $p < 0.238$), and after adding the moderating variable ($\beta=0.124$, $p = 0.473$). Whereas operations capabilities do have a significant positive effect as follows; before adding the moderating variable ($\beta= 0.334$, $p < 0.043$), and after adding the moderating variable ($\beta=0.325$, $p = 0.044$). However, as we mentioned earlier marketing and operations capabilities separately will be analyzed and discussed further outside our structural equation model to gain more insight into them.

The results of the SEM concerning the sub-constructs of dynamic capabilities before adding the moderating variable to the SEM are as follows. Sensing capability has an insignificant positive indirect effect through ordinary capabilities on firm performance ($\beta=-0.053$, $P = 0.143$), and an insignificant direct effect ($\beta=0.029$, $p = 0.803$). Seizing capability has a significant positive indirect effect through ordinary capabilities on firm performance ($\beta=0.309$, $p = 0.009$) and a significant negative direct effect ($\beta= -0.409$, $p < 0.005$). While reconfiguring capability has an insignificant indirect effect through ordinary capabilities on firm performance ($\beta=0.111$, $P= 0.139$), but is found to have a significant positive direct effect ($\beta=0.360$, $p < 0.017$). We conclude that the relationship between sensing capability has no significant impact on firm performance. The positive effect of seizing capability is mediated through ordinary capabilities whereas it has a negative direct impact. The relationship between reconfiguring capability and firm performance was a direct relationship. These results could be explained by sequential actions of the typologies of dynamic. This will be discussed further in the following chapter where we also consider the Palestinian context.

We examined the statistical significance of the mediation effect using the Sobel Test as recommended by some reviewer. Formulae for the tests provided here was drawn from MacKinnon, Warsi, and Dwyer (1995):

$$\text{Sobel test equation} \quad z\text{-value} = a*b/\text{SQRT}(b^2*sa^2 + a^2*sb^2)$$

Table 8.3 shows the results of the Sobel Test that gives support for our earlier statistical significances for all mediation links. The statistical significance of mediation effect for the main construct ordinary capabilities in the main model was (Statistic = 2.73, P-value = 0.006), and the same test after adding the moderating variable (Statistic = 2.41, P-value = 0.016). This indicates that there is significance effect of mediation variable (ordinary capabilities) that mediated the relationship between dynamic capabilities and performance. The same process of this examination was employed on the sub-constructs and found to be supported statistical significances (seen the following tables 8.1, 8.2 and Sopel test 8.3).

8.1.2 SEM analysis; the moderating of the environmental dynamism on dynamic capabilities firm performance.

Two approaches are available to test moderating effects in PLS-SEM: the group comparison approach and the product term approach (Sanchez, 2013). The former has to do when the moderator can be categorized, while the second approach has to do when the moderator variable is treated as a latent variable (Sanchez, 2013). Chin et al. (2003) who first transfer the product term to PLS path modeling. This approach still most promising for testing the moderating effect in the PLS, as this method is the most effective approach in identifying interaction terms in complex path models (Chin et al., 2003). We split the total sample into subgroups based on the median of the hypothesized moderating variable (above the median is high dynamism and below is low dynamism). A moderating effect is caused by a variable (M) whose variation influences the relationship between an independent variable (X) and a dependent variable (Y). We have as independent variable X (dynamic capabilities), dependent variable Y (firm performance), moderator M (environmental dynamism). Our initial step is to create the product-indicators by multiplying XM whose indicators will be the products of the indicators of X and M. As shown in the below formula, if the effect of XM is significant, then the effect of X on Y depends on the levels of (M). Hence plotting interaction effects aids in the interpretation of moderation to show how the slope of Y on X is dependent on the value of the moderator variable.

$$Y = b_0 + b_1X + b_2M + b_3XM$$

In the left side of the (tables 8.1 and 8.2) the results of PLS model without moderating effects while in the right side the results with moderating effects. I first ran the main effects model in order to estimate and evaluate the main effects of Palestinian environmental dynamism as a latent variable scores. The interaction terms are then built up as the element-wise product of the latent variable scores of the predictor and moderator variables (dynamic capabilities and environmental dynamism). The results shows the total effect of dynamic capabilities as one latent construct before added moderate variables was ($B = 0.438$, $P = 0.000$), after adding moderating product, the effect decreases ($B = 0.378$, $P = 0.000$). The effect of the interaction term on firm performance is ($B = -0.139$, $P = 0.049$). The interaction term is significant at 0.05, this indicates that the environmental dynamism negatively moderate the relationship between dynamic capabilities and firm performance. Based on this result we reject our hypothesis (H3) as we expect the higher environmental dynamism leads to higher impact of dynamic capabilities.

The moderating effect on the (sensing seizing, reconfiguration) also shown in the (below table) and in detailed PLS-SEM in Appendix 2. Sensing capability before adding the moderator variables ($B = 0.082$, $P = 0.505$), with moderate becomes ($B = 0.117$, $P = 0.384$), whereas the effect of interaction term between environmental dynamism and sensing capability ($B = -0.111$, $P = 0.360$). The effect of seizing before adding the moderator ($B = -0.100$, $P = 0.478$), then with the moderate became ($B = -0.178$, $P = 0.272$), whereas the effect of interaction term environmental dynamism seizing capability ($B = -0.013$, $P = 0.922$). The effect of reconfiguring capability before adding the moderate variables ($B = 0.471$, $P = 0.001$), then with the moderator became ($B = 0.446$, $P = 0.001$), whereas the effect of interaction term between environmental dynamism and reconfiguring capability ($B = -0.052$, $P = 0.680$).

Table 8.1 Direct effects of control variables, the overall dynamic capabilities and ordinary capabilities and indirect effects of dynamic capabilities on firm performance

Relationships between variables	SEM-Base model without moderate						SEM-model with moderate variables					
	Direct effect		Indirect effects		Total effect		Direct effect		Indirect effects		Total effect	
	B	P	B	P	B	P	B	P	B	P	B	P
Control Variables → Performance												
Firm Age → Performance	-0.076	0.310			-0.076	0.310	-0.056	0.452			-0.056	0.452
Firm Size → Performance	0.073	0.372			0.073	0.372	0.066	0.424			0.066	0.424
Firm Type: ref. (Banks)												
Foods → Performance	-0.267**	0.001			-0.267**	0.001	-0.260**	0.001			-0.260**	0.001
Plastic → Performance	-0.339**	0.000			-0.339*	0.000	-0.336**	0.000			-0.336**	0.000
Insurance → Performance	-0.108	0.190			-0.108	0.190	-0.086	0.345			-0.086	0.345
Internet → Performance	-0.226**	0.002			-0.226**	0.002	-0.206**	0.006			-0.206**	0.006
Dynamic Capabilities → Performance	0.015	0.928	0.422**	0.007	0.438**	0.000	0.005	0.975	0.373*	0.017	0.378**	0.000
Dynamic Capabilities → Ordinary Capability	0.892**	0.000			0.892**	0.000	0.893**	0.000			0.893**	0.000
Ordinary Capabilities → Performance	0.473**	0.006			0.473**	0.006	0.418*	0.016			0.418*	0.016
Environmental Dynamism → Performance							0.070	0.340			0.070	0.340
Moderate effects → Performance							-0.139*	0.049			-0.139*	0.049
Endogenous variables	R - Square		Adjusted R-Square				R - Square		Adjusted R-Square			
Performance	0.353		0.331				0.369		0.341			
Ordinary capabilities	0.796		0.795				0.797		0.796			
Average R - Squares	0.575		0.563				0.583		0.569			

Environmental dynamism was recoded to low dynamism and high dynamism based on median value whereas the above of median is high and the below is low.

Sobel test for model without moderate (Statistic = 2.73, P-value = 0.006) and with moderate (Statistic = 2.41, P-value = 0.016).

All average R-Squares are greater the 0.5 indicating the fitness of PLS-SEM.

Notes: N=242; *P<0.05, **P<0.01.

Table 8.2 Direct effects of control variables, dynamic capabilities (sensing, seizing, reconfiguring) and ordinary capabilities (marketing and operations) and indirect effects of dynamic capabilities on firm performance

Relationships between variables	SEM-Base model without moderate						SEM-model with moderate variables					
	Direct effect		indirect effect		Total effect		Direct effect		Indirect effect		Total Effects	
	B	P	B	P	B	P	B	P	B	P	B	P
Control Variables → Performance												
Firm Age → Performance	-0.066	0.409			-0.066	0.409	-0.041	0.607			-0.041	0.607
Firm Size → Performance	0.043	0.583			0.043	0.583	0.032	0.682			0.032	0.682
Firm Type: ref. (Banks)												
Foods → Performance	-				-		-				-	
	0.246**	0.002			0.246**	0.002	0.241**	0.004			0.241**	0.004
Plastic → Performance	-				-		-				-	
	0.294**	0.000			0.294**	0.000	0.288**	0.000			0.288**	0.000
Insurance → Performance	-0.064	0.435			-0.064	0.435	-0.038	0.646			-0.038	0.646
Internet → Performance	-0.189*	0.011			-0.189*	0.011	-0.162*	0.042			-0.162*	0.042
Dynamic Capabilities → Performance												
Sensing → Performance	0.029	0.803	0.053	0.143	0.082	0.505	0.071	0.580	0.046	0.197	0.117	0.384
Seizing → Performance	-				-		-				-	
	0.409**	0.005	0.309**	0.009	-0.100	0.478	0.451**	0.004	0.273**	0.007	-0.178	0.272
Reconfiguring → Performance	0.360*	0.017	0.111	0.139	0.471**	0.001	0.360*	0.016	0.085	0.225	0.446**	0.001
Dynamic Capabilities → Marketing capability												
Sensing → Marketing capability	0.091	0.165			0.091	0.165	0.090	0.177			0.090	0.177
Seizing → Marketing capability	0.470**	0.000			0.470**	0.000	0.471**	0.000			0.471**	0.000
Reconfiguring → Marketing capability	0.359**	0.000			0.359**	0.000	0.358**	0.000			0.358**	0.000
Dynamic Capabilities → Operation capability												
Sensing → Operation capability	0.107	0.136			0.107	0.136	0.108	0.170			0.108	0.170
Seizing → Operation capability	0.659**	0.000			0.659**	0.000	0.660**	0.000			0.660**	0.000
Reconfiguring → Operation capability	0.128	0.106			0.128	0.106	0.126	0.107			0.126	0.107

Table 8.2 (cont..) Direct effects of control variables, dynamic capabilities (sensing, seizing, reconfiguring) and ordinary capabilities (marketing and operations) and indirect effects of dynamic capabilities on firm performance

Relationships between variables	SEM-Base model without moderate						SEM-model with moderate variables					
	Direct effect		indirect effect		Total effect		Direct effect		Indirect effect		Total Effects	
	B	P	B	P	B	P	B	P	B	P	B	P
Ordinary Capabilities → Performance												
Marketing capability → Performance	0.190	0.238			0.190	0.238	0.124	0.473			0.124	0.473
Operation capability → Performance	0.334*	0.043			0.334*	0.043	0.325*	0.044			0.325*	0.044
Environmental Dynamism → Performance							0.077	0.282			0.077	0.282
Moderate effects → Performance												
Sensing*M → Performance							-0.111	0.360			-0.111	0.360
Seizing*M → Performance							-0.013	0.922			-0.013	0.922
Reconfiguring*M → Performance							-0.052	0.680			-0.052	0.680
Endogenous variables	R - Square		Adjusted R-Square		R - Square		R - Square		Adjusted R-Square		Adjusted R-Square	
Performance	0.374		0.344		0.396		0.396		0.356		0.356	
Marketing capabilities	0.782		0.779		0.782		0.782		0.779		0.779	
Operation capabilities	0.754		0.751		0.755		0.755		0.751		0.751	
Average R - Squares	0.637		0.625		0.644		0.644		0.629		0.629	

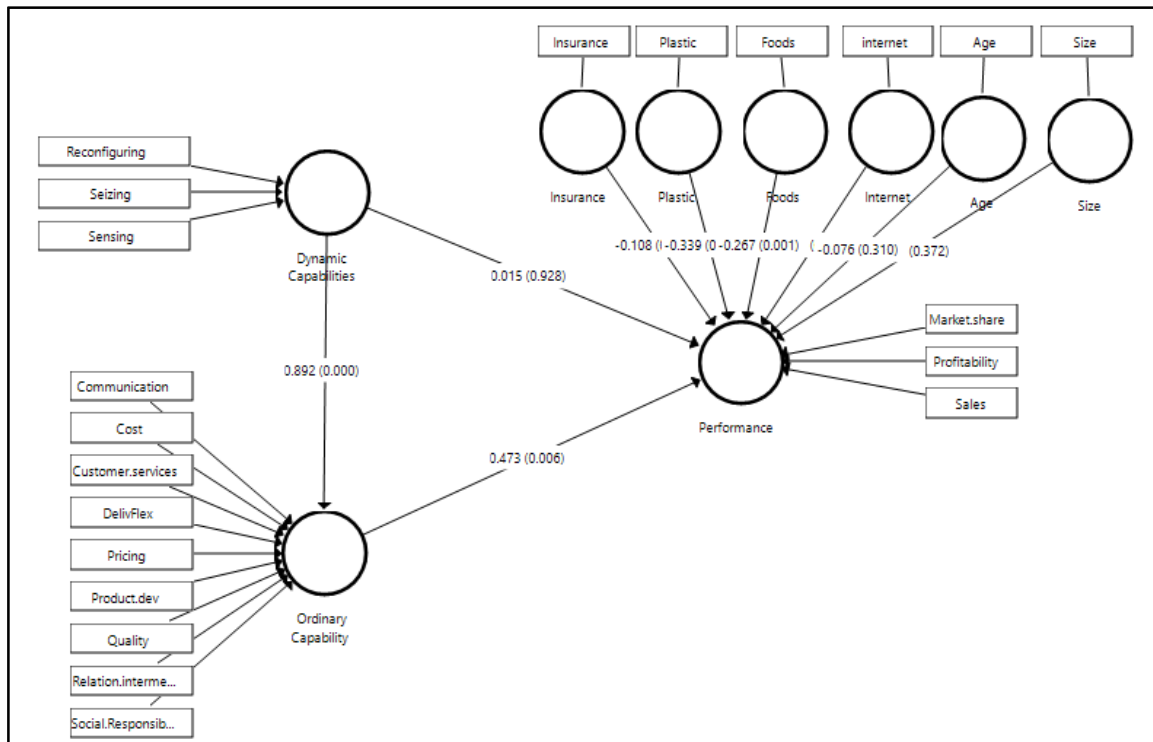
Environmental dynamism was recoded to low dynamism and high dynamism based on median value whereas the above of median is high and the below is low.

All average R-Squares are greater the 0.5 indicating the fitness of PLS-SEM.

Notes: N=242; *P<0.05, **P<0.01.

Table 8.3 Sobel Test for SEM models testing the statistical significance of the mediating effects

Independent	Mediating	Without moderator		With moderator	
		Sobel test	P-value	Sobel test	P-value
Dynamic capabilities	Ordinary Capabilities	2.73	0.006	2.41	0.016
Sub-construct	Sub-construct				
reconfiguring	Marketing	1.14	0.254	0.71	0.476
Seizing	Marketing	1.16	0.248	0.72	0.474
Sensing	Marketing	0.90	0.367	0.64	0.524
reconfiguring	Operation	1.25	0.206	1.26	0.207
Seizing	Operation	1.97	0.049	1.95	0.051
Sensing	Operation	1.19	0.231	1.14	0.254

**Fig.8.1** Bootstrapping of Structural Model — control variables, dynamic capabilities, ordinary capabilities (mediating variable), and firm performance.

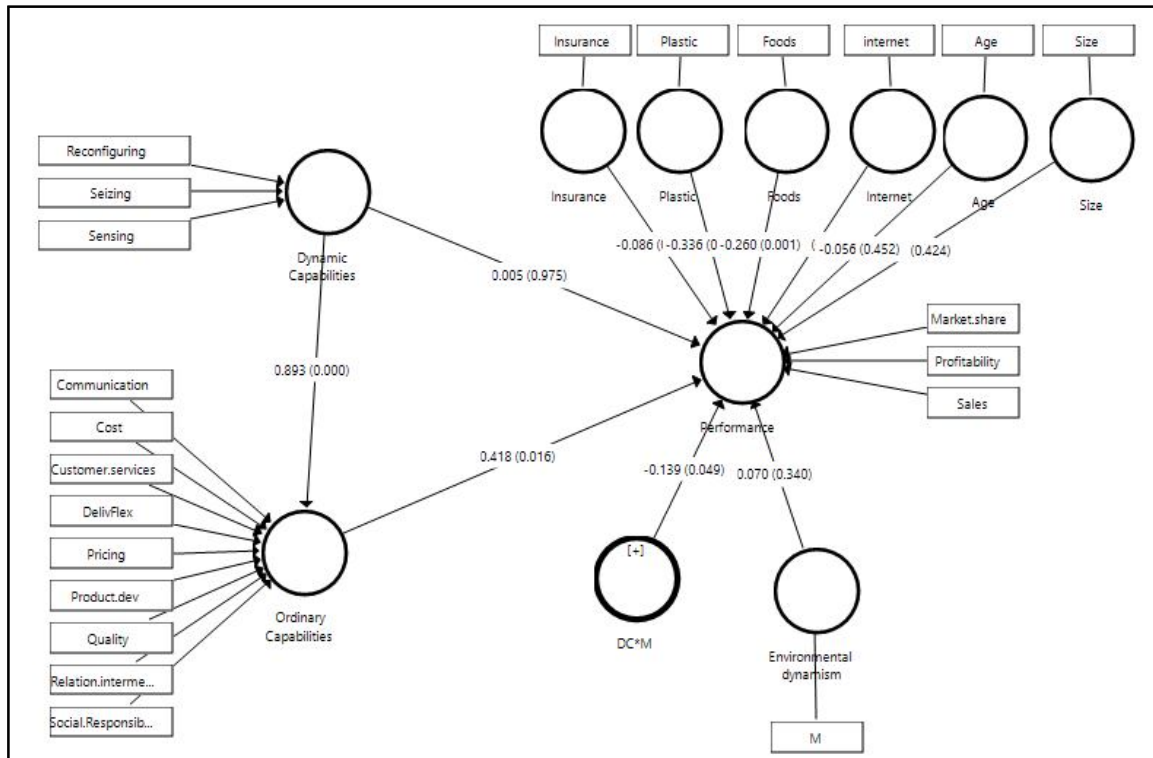


Fig.8.2 Bootstrapping of Structural Model — control variables, dynamic capabilities, ordinary capabilities (mediating variable), environmental dynamism (moderating variable), and firm performance.

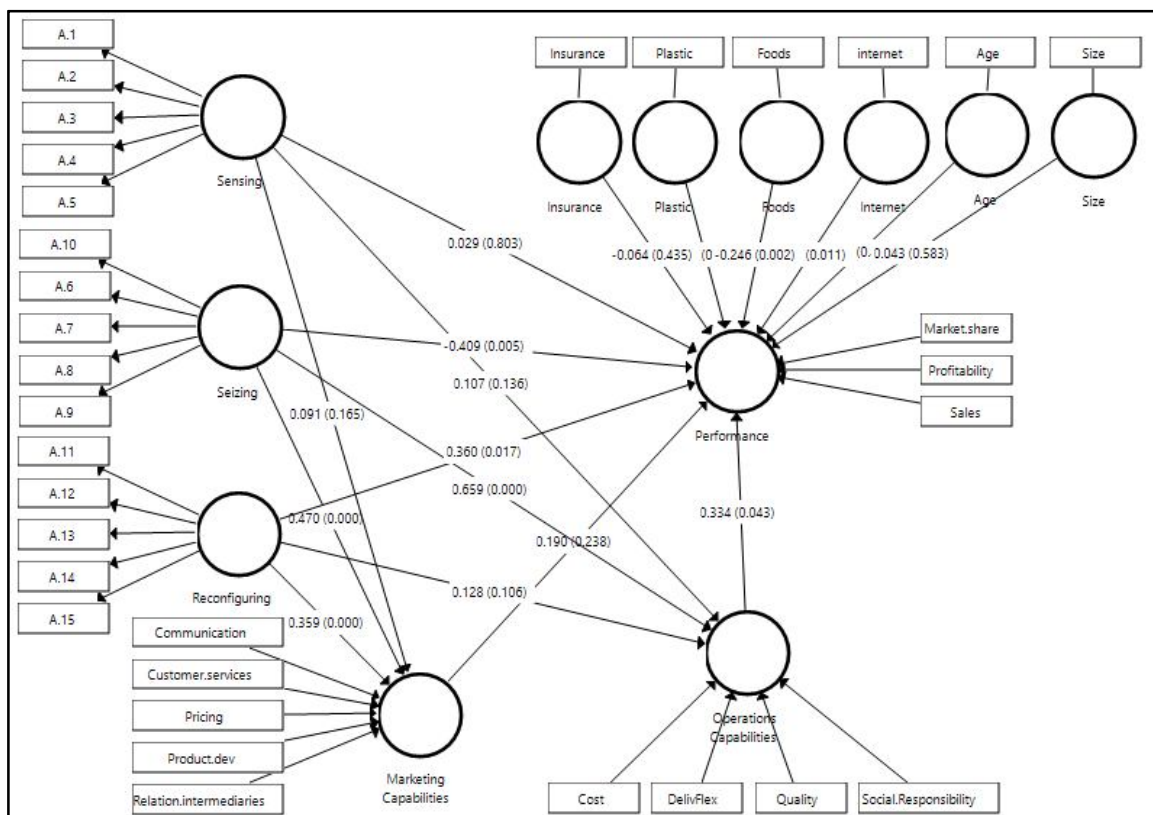


Fig.8.3 Bootstrapping of Structural Model— control variables, dynamic capabilities (sensing, seizing, reconfiguration), ordinary capabilities (marketing, operation capabilities) and firm performance.

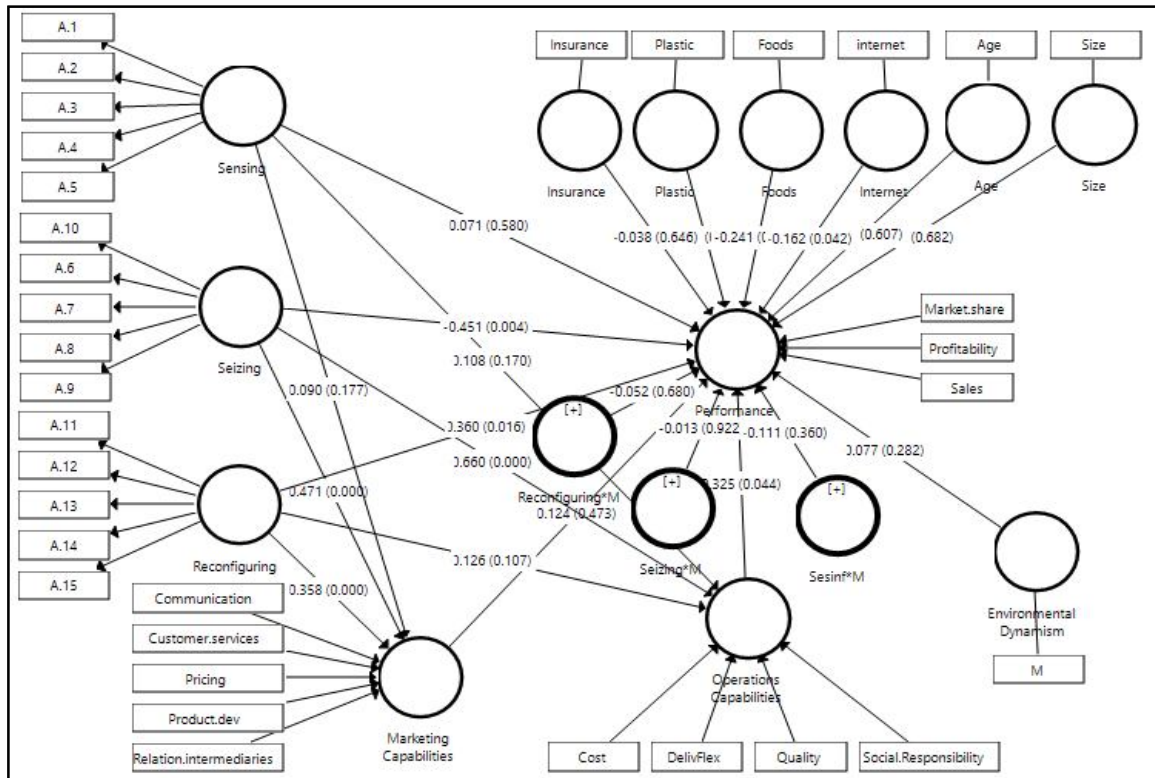


Fig.8.4 Bootstrapping of Structural Model — control variables, dynamic capabilities (sensing, seizing, reconfiguration), ordinary capabilities (marketing, operation capabilities), environmental dynamism (moderating variable) and firm performance.

8.2 Multiple Regression Analysis

Multiple regression is a powerful and flexible statistical method of analyzing the direct relationship between a set of independent variables and a single dependent variable (Malhotra et al., 2007). The term multiple regression was first used by Pearson in 1908 (Hill & Lewicki, 2007). Several stages of the multiple regression were conducted to explore the significance of additional variance explained by additional sets of independent variables on dependent variables. One should note that as suggested by (Punch, 2003, p.106) “testing a control variable is a first step towards investigating how the independent variables affect the dependent variable”. Therefore, control variables were entered at stage one of the regression to control the variation of contribution to firm's performance. This allows the evaluation of the relationship between a set of independent variables and the dependent variable, controlling for or taking into account the impact of a different set of independent variables on the dependent variable (Malhotra et al., 2007). The unknown parameters are denoted β . The independent variables, X . and the dependent variable, Y . In our research the multiple regression model have more than independent variables, donated p independent

variables. F-tests was used to compute the significance of each added variable or set of variables to the variance of dependent variable explained (adjusted R). F-Ratio indicates the significance of R-square, adjusted R-square, ΔR -square and the regression model as a whole. Thus the model takes the following form.

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_p X_{ip} + e_i.$$

8.2.1 The Multiple regression analyses of firm performance on marketing capabilities.

Table 8.4 present presents the direct contribution of control variables (firm's age, size and type and marketing capabilities (product development, relation with intermediaries, pricing, marketing communication and customer services) on firm's performance on controlling firm's type, age and firm size. The results of the multiple regression at the stage one the relationship between control variables and firm performance R-square is 0.123. This indicates that, the control variables explain 12.3% of the variance in the firm performance which significantly contribute to the regression model ($F = 5.48$, $P < .000$). Further examination included additional sub-constructs of marketing capabilities. Model (1) adding the product development capability into the hierarchical regression, the findings show that the adjusted R-square is **0.280** which indicates product development capability has additional contribution of 15.7% over the control variables on explaining the variance in firm's performance in the model regression ($F = 14.38$, $P=.000$). Model (2) examines additional contribution included, the product development and relation with intermediaries capabilities over control variables, the model did not have a significant contribution compared to Model (1) ($F = 12.55$, $P= .001$, adj R-square = **.277**) decreasing by 0.3%. In model (3) we examine additional contribution of pricing capability over Model (2), the model was a highly significant contributed compared to model 2 ($F = 13.14$, $P = .014$, adjusted R-square = **.312**), increasing by 3.5 %. Model 4 examines additional contribution that, the marketing communication capability over model (3), this was significantly contributed compared to model (3) with contribution to regression model ($F = 12.30$, $P = .028$, adjusted R-square = **.319**), increasing by 0.7%. Model 5 examines the additional

contribution of customer services capability over model 4, the contribution was insignificant compared to Model 4 with decreasing in the regression model ($F = 11.15$, $P = .027$, adj R-square = .317). According to the results confirming the hypothesized relationships of marketing capabilities on firm's performance. First the total effect of marketing capabilities as one variable was positive significant ($B = 458$, $P = 0.000$).

All sub – constructs marketing capabilities (product development, pricing, marketing communication) have significant effects on firm' performance except (customer services capability) has no significant effect ($B = -.040$, $P = .738$). However the effects of significant of the sub-constructs were positive except the relation with (intermediaries' capability) has negative effect on firm performance. ($B = -.224$, $P = .083$). Hence, the min hypothesis for marketing capability was supported, as well as the sub hypothesizes for product development, pricing, marketing communication, while hypothesis for relation with intermediaries and customer services capabilities were rejected.

Table 8.4 Multiple regression model for firm performance on firm 'age, size and type and marketing capabilities (product development, relation with intermediaries, pricing, marketing communication and customer services)

Variables	Performance									
	Model1		Model2		Model3		Model4		Model5	
	B	P	B	P	B	P	B	P	B	P
Control Variables										
Firm Age	-.074	.340	-.074	.337	-.062	.412	-.061	.415	-.060	.425
Firm Size	.089	.286	.090	.280	.075	.358	.058	.480	.059	.470
Firm Type: ref. (Banks)¹										
Foods	-.276**	.000	-.276**	.000	-.264**	.000	-.267**	.000	-.264**	.000
Plastic	-.327**	.000	-.329**	.000	-.325**	.000	-.314**	.000	-.311**	.000
Insurance	-.082	.239	-.085	.227	-.082	.231	-.083	.226	-.078	.262
Internet	-.231**	.003	-.231**	.003	-.227**	.003	-.230**	.002	-.230**	.002
Independent Variables										
Marketing capabilities²									.458**	.000
Product development	.429**	.000	.393**	.001	.281*	.014	.252*	.028	.260*	.027
Relation with intermediaries			.042	.708	-.167	.178	-.228	.075	-.224	.083
Pricing					.366**	.000	.232	.063	.244**	.006
Marketing communication							.235	.062	.248**	.006
Customer services									-.040	.738
R-Square.	.301		.301		.338		.347		.348	
Adj R-Square.	.280		.277		.312		.319		.317	
F Statistic	14.38**		12.55**		13.14**		12.30**		11.15**	

Notes: N=242; *P<0.05, **P<0.01, Standardized Coefficients reported in table.

¹ Banks industry not inserted with other firms (Food, Plastic, Insurance and Internet) because made it as reference industry for other industries.

² The independent variables in the model: Firm's age, size, type, and marketing capabilities as one variable (R-square = .325, adj R-square = .305, F = 16.11, P = 0.000).

8.2.2 The Multiple regression analysis for firm performance on operations capabilities.

Table 8.5 presents the direct contribution of operations capabilities (cost, quality, delivery, flexibility and social Responsibility) over the control variables on firm's performance. The contribution of the control variables is 12.3 %. The adjusted R-square for Model (1) is 0.234 that examines additional contribution of cost capability over control variables on explaining the variance in firm's performance, this leads to a contribution of 11.1% of the cost capability in regression model ($F = 11.5$, $P < .000$). Model 2 examines additional contribution of cost and quality capabilities over control variables, this has a significant contribution compared to Model 1, that increases the regression model by 4.9% ($F = 12.87$, $P < .000$, adjusted R-square = .283). Model 3 examines the additional contribution of delivery and flexibility capability over Model 2, which a significantly contributed compared to Model 2, that increases the regression model by 2.1 % ($F = 12.71$, $P < .000$, adjusted R-square = .304). Model 4 examines additional contribution of social responsibility capability over Model 3, which it has insignificant contribution compared to Model 3, that increases the regression model by 0.3% ($F = 11.70$, $P < .000$, adjusted R-square = .307).

According to the results in the below table which clarify the hypothesized direct relationships; First (H6) the total effect of operation capabilities was positive significant with ($B = 0.468$, $P = 0.000$). Whereas the delivery and flexibility capabilities have significant positive effects on firm performance include ($B = .270$, $P = .029$), the other sub constructs of operation capabilities have insignificant impact on firm's performance include (cost with $B = -.040$, $P = .680$), (quality with $B = .125$, $P = .279$), and (social responsibility with $B = .145$, $P = .151$). This led us to conclude that, the main hypothesis for operations capability was supported as well as the sub hypothesis for flexibility and delivery, while the sub hypothesis for cost, quality and social responsibility capabilities were rejected.

Table 8.5 Multiple regression model for firm performance on firm's age, size and type and operation capabilities (cost, quality, delivery, flexibility and social responsibility)

Variables	Performance							
	Model1		Model2		Model3		Model4	
	B	P	B	P	B	P	B	P
Control Variables								
Firm Age	-.116	.142	-.089	.014	-.073	.333	-.090	.242
Firm Size	.090	.293	.101	.271	.075	.364	.078	.342
Firm Type: ref. (Banks)¹								
Foods	-.230**	.003	-.235**	.002	-.274	.000	-.267**	.000
Plastic	-.307**	.000	-.338**	.000	-.363**	.000	-.360**	.000
Insurance	-.074	.305	-.081	.243	-.124	.078	-.126	.072
Internet	-.239**	.003	-.212**	.006	-.214**	.005	-.217**	.004
Independent Variables								
Operations Capabilities²							.468	.000
Cost	.373**	.000	.094	.285	.000	.998	-.040	.680
Quality			.364**	.000	.155	.172	.125	.279
Delivery & Flexibility					.331**	.005	.270*	.029
Social Responsibility							.145	.151
R-Square.	.256		.307		.330		.336	
Adj R-Square.	.234		.283		.304		.307	
F Statistic	11.50**		12.87**		12.71		11.70	

Notes: N=242; *P<0.05, **P<0.01, Standardized Coefficients reported in above table.

¹ Banks industry not inserted with other firms (Food, Plastic, Insurance and Internet) because made it as reference industry for other industries.

² The independent variables in the model: Firm's age, size, type, and operations capabilities as one variable (R-square = .330, adj R-square = .310, F = 16.49 , P = .000).

Chapter 8

Table 8.6 Summary of Hypothesis Results

Hypothesis NO	Hypothesized Relationship	Supported YES/No
Hypothesis 1	Dynamic capabilities have indirect effect on firm performance mediated by ordinary capabilities of a firm.	YES
Hypothesis 1 (a)	Sensing capability has indirect positive effect on a firm's performance.	NO
Hypothesis 1 (b)	Seizing capability has indirect positive effect on a firm's performance.	YES
Hypothesis 1 (c)	Reconfiguration capability has indirect positive effect on a firm's performance.	NO
Hypothesis 2	Dynamic capabilities have a direct positive effect on a firm's performance.	NO
Hypothesis 2 (a)	Sensing capability has a direct positive effect on a firm's performance	NO
Hypothesis 2 (b)	Seizing capability has a direct positive effect on a firm's performance	NO
Hypothesis 2 (c)	Reconfiguration capability has a direct positive effect on a firm's performance	YES
Hypothesis 3	The higher the environmental dynamism, the more positive the impact of dynamic capabilities on firm performance.	NO
Hypothesis 4	Ordinary capabilities marketing and operations affect firm performance as mediating role.	YES
Hypothesis 5	Marketing capabilities a positively affect firm's performance.	YES
Hypothesis5 (a)	Product development capability has a direct positive effect on a firm's performance.	YES
Hypothesis5 (b)	Relation with intermediators' capability has a direct positive effect on a firm's performance.	NO
Hypothesis5 (c)	Pricing capability has a direct positive effect on a firm's performance	YES
Hypothesis5 (d)	Marketing communication capability has a direct positive effect on a firm's performance.	YES
Hypothesis5 (e)	Customer service capability has a direct positive effect on a firm's performance.	NO
Hypothesis 6	Operations capabilities positively affect firm's performance.	YES

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Hypothesis NO	Hypothesized Relationship	Supported YES/No
Hypothesis 6 (a)	Cost capability has a direct positive effect on a firm's performance	NO
Hypothesis 5 (b)	Quality capability has a direct positive effect on a firm's performance	NO
Hypothesis 5 (c)	Delivery capability has a direct positive effect on a firm's performance	YES
Hypothesis 5 (d)	Flexibility capability has a direct positive effect on a firm's performance	YES
Hypothesis 5 (e)	Social responsibility capability has a direct positive effect on a firm's performance	NO

Chapter 9

Discussion

Chapter 9

Discussion

The purpose of this chapter is to discuss the results of the analyses performed in the previous chapters 7 and 8 for testing the hypotheses as in the conceptual model. After a brief introduction we discuss the main descriptive statistics for dynamic capabilities, environmental dynamism, and ordinary capabilities (operations and marketing capabilities). Then we discuss the findings from structural equation analysis and further multiple regression, and provide critical analysis regarding the effect of our constructs on firm performance. Further, as the intent of this study is to provide contributions to theory and management, we discuss the implications of the findings pertinent to these areas. Before we conclude our thesis, we explain some limitations of the study and some potential avenues for future research.

We designed the study to answer the main research question of what are the impacts of dynamic and ordinary capabilities on firm performance across the Palestinian manufacturing and services sectors. Firm performance has been a core focus in research on dynamic capabilities since the seminal article of Teece et al. (1997), and the question of whether and how they affect performance is still not fully addressed (Helfat et al., 2007). We have conceptualized dynamic capabilities as timely capacity of acting and reacting, acting refers to sensing and seizing business opportunities, while reacting refers to reconfiguration of firm resources and capabilities. Ordinary capabilities include the marketing capabilities (a) product development, (b) relation with intermediators, (c)

pricing, (d) marketing communication, and (e) customer service capability; and the operations capabilities (a) cost, (b) quality, (c) delivery, (d) flexibility and (e) SRC capability. The designed hypothetical model sets key hypotheses: the direct relationship between DCs and firm performance; the direct and indirect effect of dynamic capabilities mediated through the ordinary capabilities (marketing and operations) on a firm's performance; and the role of the Palestinian environmental dynamism on DCs. Also we have separated framework include hypotheses for ordinary capabilities on a firm's performance, first marketing and second operations capabilities that will be discussed too.

We first had to validate the measurement scales used to assess the dependent and independent variables in the Palestinian context. Factor analyses have been performed for all independent and dependent constructs that test reliability and validity. The standardized factor loadings of all items were all significant ($p < .05$) and generally above the threshold levels (0.50) (Edvardsson et al., 1997). The remaining standardized factor loadings of the items are close to or above 0.80. The items show also strong internal consistency with Cronbach's alphas above 0.70 (Nunally, 1978). In the following sections we discuss the findings regarding the relationships we conceptualized earlier as in our research model. All reflective construct have been approved construct the measurement model for construct validity (convergent and discriminant validity). Also no multicollinearity exist amongst formative constructs. Moreover the average R-squares were evaluated for endogenous constructs to assess the fitness of the overall model and explaining power of model, this found to be positive (greater than 0.5). We have also employed the Sobel test for examining the statistical significance of the mediation effect, and the results were found similar statistical significances as in our models. In the following sections we shall discuss the findings concerning the hypothesized relationship in our research model.

- Dynamic capabilities (sensing, seizing, and reconfiguration capability) have a direct positive effect on a firm's performance.
- Dynamic capabilities (sensing, seizing, and reconfiguration capability) have indirect effect on firm performance mediated by the ordinary capabilities of a firm.

The mean value of the extent of practicing dynamic capabilities in the surveyed sectors as follows; the minimum practice of DCs was in the foods industry with a value of 4.50, while the maximum was in the insurance industry with a value of 5.10. Also we found no significant difference in practicing dynamic capabilities between the surveyed firms across different industries. The dynamic capability literature posits that dynamic capabilities influence firm performance through ordinary capabilities. Prior studies examine the linear relationship between dynamic capabilities and firm performance rather than a relationship mediated by ordinary capabilities. Our PLS structural equation model was useful to unpack the black box of the effects that dynamic capabilities have on firm's performance. The structural equation model has integrated measures of a firm's dynamic capabilities, ordinary capabilities (marketing and operations), moderating variable and controls for the firm's age and size. Therefore, it has allowed us to evaluate how independent, mediating and moderating variables impact together the dependent variable of firm performance.

Our structural model strongly supports hypothesis (1) that dynamic capabilities have a significant indirect effect on performance through the mediation of ordinary capabilities (marketing and operations) before adding the moderating variable ($\beta=0.892$, $P < 0.000$), and after adding the moderating variable into the PLS-SEM ($\beta=0.893$, $P < 0.000$). We argue that the indirect link between dynamic capabilities and performance may hold the most promise in the dynamic capabilities framework. Dynamic capabilities operate on ordinary capabilities through reconfiguring them according to the sensed and seized information. This argument is fully consistent with (Eisenhardt & Martin, 2000; Helfat & Peteraf, 2003; Zahra et al., 2006; Ambrosini & Bowman, 2009). For example; Eisenhardt & Martin, 2000; Zahra et al., 2006) argue that the effect of dynamic capabilities appears when they operate on resources and capabilities. Helfat and Peteraf (2003) argue that, dynamic capabilities do not directly concern the production of a good or the provision of a marketable service and therefore do not directly affect a firm's output. Ambrosini and Bowman (2009) argue that the resources and capabilities base is directly linked to rents, but as dynamic capabilities are one step removed from rent generation, their effect is indirect. However, these arguments are inconsistent with (e.g. Makadok, 2001; Teece et al., 1997; Zollo and Winter, 2002) who make a direct link between dynamic capabilities and firm performance as in hypothesis (H2). This hypothesis was rejected as a result of PLS- SEM which shows an insignificant direct effect on firm performance as follows; before adding

the moderating variable ($\beta=-0.015$, $P=928$), and after adding the moderating variable ($\beta=-0.005$, $P=975$). We argue that the findings of the surveyed firms across the Palestinian manufacturing and service industries are consistent with the first argument approving indirect relationship between dynamic capabilities and performance with a full mediation through ordinary capabilities. That dynamic capabilities build and reconfigure resource ordinary capabilities and, through them, affect performance (Winter, 2003). The role of the moderating effect of the Palestinian business environment also highlighted in the following section.

It should be noted that previous studies have often left the relationship between dynamic capabilities and its underlying processes unstated or implicit (Helfat et al. 2007). Our empirical findings reveal that the sensing, seizing, and reconfiguring capabilities seem to be related in a special way to each other as a process when affecting the ordinary capabilities and firm performance. Sensing capability found to have an insignificant positive indirect effect on a firm's performance through ordinary capabilities, also gaining marketing information through sensing capability do not contribute directly to a firm's performance. Hence we reject the two hypothesizes of direct and indirect impact for sensing capability (H1a and H2a). Seizing capability found to have a significant positive indirect effect on a firm's performance through ordinary capabilities and significant negative direct effect. The findings related to sensing and seizing capabilities are consistent with Helfat et al. (2007) who argue that not all dynamic capabilities are directly targeted to modify operational capabilities. They also argue that the sensed information can be regarded as a potential continuing source, leading to practical changes in a firm carried out by the seizing and reconfiguring capacities. For example Jantunen (2014) found sensing capability indirectly affecting firm performance mediated by seizing and then reconfiguring capabilities.

Reconfiguring capability as a reacting capability responding to the information sensed and seized, has an insignificant indirect effect on firm performance through ordinary capabilities but it has significant positive direct effect, this leads to reject the sub-hypothesis H1b and accept H2b. We argue that effects appear in a sequential process from sensing to seizing marketing information, and it's reasonable that these do not directly affect firm performance as the process of dynamic capabilities not completed at this point. Because of reconfiguring capability as a reacting capability operates on a firm's resource

and capabilities, as it's more close to firm performances. Therefore the success of reconfiguration capability depends on the sensed and seized information that give marketing opportunity (Teece 2014; Helfat & Peteraf, 2009). Where the success of enhancing firm performance should be depends on reconfiguring capability as its role is to operate on ordinary resources and capabilities.

Accordingly, my analysis of dynamic capabilities supports the theoretical presumptions and fulfills the expectations. We argue that sensing and seizing opportunities reflect the ability of a firm to act upon new knowledge or information, and this doesn't always lead to action. And the effects occur in a sequential manner, hence some effects don't appear directly on firm performance. From those different capabilities the reconfiguring capability seems to have the strongest effect directly on firm performance. We consider this logical because ordinary capabilities are strongly linked with knowledge sharing and integration and experimenting which in turn are the main themes underlying the reconfiguring capability (Teece, 2014). Also firm's capacity to reconfigure is not unlimited, it depends on a set of 'higher-order' routines that shape firm's adaptability (Pisano, 2015).

- The higher the environmental dynamism, the more positive the impact of dynamic capabilities.

We now turn to whether and to what extent the value of dynamic capabilities depends on the level of environmental dynamism. Our hypothesis states that the interaction between dynamic capabilities and environmental dynamism is positively associated with firm performance, whereas we in fact find that the coefficient of the interaction term is negative ($\beta = -0.139$, $P = 0.049$). Recent research on dynamic capabilities is divided into two groups. The larger first group consider dynamic capabilities in a volatile environment to have more value than in a stable environment (e.g. Teece, 2007; Wu, 2010; Teece, 2014; Maurer et al., 2015). Our findings are consistent with the second group, they argue that the causal link between dynamic capabilities and firm performance is less clear in more volatile environments (Eisenhardt & Martin, 2000; Qianqian et al., 2014). On this basis Qianqian makes the argument that dynamic capabilities should have positive value when the environmental dynamism is not too low and not too high.

One should note that the path for investigating dynamic capabilities is also context dependent and a function of the external environment in which the firm operates (Teece et al., 1997). According to the previous research the externally perceived changes arising from a dynamic environment might include competitors introducing new products, shifts in government legislation, or changes in customer needs. We believe it may be that specific issues such as political conflicts can impact negatively business practices reacting to these changes particularly in the short run. For example Palestinian managers might sense and seize marketing information but their reaction might be ineffective if circumstances could suddenly change.

We also consider the knowledge how managers of Palestinian firms have built dynamic capabilities in a rapidly changing environment. Eisenhardt and Martin (2000) argue that dynamic capabilities are dependent on current knowledge and stable processes in a moderately dynamic environment, while in highly dynamic markets, they are dependent on the rapid creation of new knowledge and more unstable processes. Hence, when firms' managers have inadequate knowledge and the environment turns turbulent and involves rapid changes in economic, political conflicts and industrial forces, dynamic capabilities might no longer be sufficient, indeed they become costly and ineffective. Furthermore Winter (2003) argues that dynamic capabilities involve substantial costs and are without any benefit when they are not utilized. Zahra and colleagues emphasize the risk of practicing dynamic capabilities that can even damage performance if they are misused (Zahra et al., 2006) and so the impact of dynamic capabilities on ultimate firm performance may be negative. They do not guarantee success or even insure a firm's survival particularly when they not be in a line with the environmental conditions.

In the view of the Palestinian business environment it is critical whether a firm's managers are able to perceive changes in the external environment and their degree. The complexity and dynamism of the transitional environment in Palestine means that firms often confront the challenges of political issues by adopting less risky and costly practices (Teece et al., 1997). However whatever the state of the environment is, dynamic capabilities appear to be an important source for improving firm performance, and indeed we have observed earlier that they have indirect impact on firm performance in our study.

- Ordinary capabilities (marketing and operations) affect firm performance to different degrees as a mediating constructs.

In this section, we discuss the results regarding the overall ordinary capabilities jointly (operations and marketing) in mediating the relationship between dynamic capabilities and firm performance. In testing hypothesis 4, we observed support for the argument that ordinary capabilities have a positive contribution to relative firm performance ($\beta = 0.473$, $p = 0.006$). Based on the overall impact of ordinary capabilities we accept hypothesis (4) that ordinary capabilities affect firm performance as a mediating construct. Precisely, marketing ordinary capabilities do not have a statistically significant impact on firm performance, whereas operations do have a significant positive effect.

This finding is consistent with Yu et al. (2011) but inconsistent with Nath and Ramanathan (2010); these authors studied both marketing and operations capabilities in single study. Nonetheless it's not always the case that overall firm performance in the Palestinian context is dominated by operations capabilities more than marketing capabilities. But considering both ordinary capabilities together, operations capabilities have a greater contribution to firm performance.

The next sections discuss the findings for marketing and operations capabilities separately outside our research framework using multiple regression analysis.

- Marketing capabilities (product development, relation with intermediators, pricing, marketing communication, and customer service capability) positively affect firm performance.

Regarding the marketing capabilities, the mean value shows that the plastic manufacturing firms practice marketing capabilities more than other firms in both manufacturing and services industries, while the communications firms do so less compared to firms in other industries. Significance differences between the surveyed industries are exposed by the F test. We provide evidence showing that marketing capabilities has positive significant effect on firms performance in the surveyed firms ($\beta = 0.458$) for hypothesis (H3). In response to dissected analysis of marketing capabilities proposed by Vorhies and Morgan (2005); our analysis reveals different effects of marketing capability components on

performance. We demonstrate that certain marketing capabilities have positive and significant effects on firm performance: product development, pricing, and marketing communication. Customer services capability has no significant effect ($\beta = -.040$), and the capability of relation with intermediaries has insignificant negative effect ($\beta = -0.224$).

Based on our hypothetical relationship between marketing capabilities and firm performance in the Palestinian manufacturing and services industries; the hypotheses related to overall marketing capabilities H5 and for sub-constructs product development, pricing, and marketing communication were supported, while the hypothesis for customer services and relation with intermediaries were rejected. The overall finding is consistent with empirical studies that support the positive effect of marketing capabilities on firm's performance, (Nath et al., 2010; Song et al., 2005; Vorhies & Morgan, 2005; Eng & Spickett-Jones, 2009; Karanja et al., 2014). Those studies also reveal certain marketing capabilities that contribute directly to a firm's performance. For example; Vorhies and Morgan (2005) reveal that marketing planning and selling have the highest significant effect on firm's performance. Zou et al. (2003) found distribution, communication and product development capabilities contribute to firms' low-cost advantage and branding advantage, which in turn strongly influences firms' financial performance in Chinese manufacturing exporters across twenty industries. Eng and Spickett-Jones (2009) found product development and marketing communications capabilities are the most important marketing capabilities in manufacturing industry. Karanja et al. (2014) studied the mobile service industry, where the effective capabilities found in pricing, new product and range extension, channel relationship management and promotions to boost MSP intermediary organization performance. We argue that previous empirical studies have identified specific examples of capabilities that effect firm's level performance such as new product development, service delivery and order fulfillment, R&D, distribution capability, product innovation, pricing, client-specific capabilities etc. Those capabilities are interdependent each other, and this interdependency factor is strongly linked with firm performance (Vorhies & Morgan 2005).

Hence, certain marketing capabilities appear in previous studies and in our thesis to be more effective than others. The Palestinian market is not as transparent as other more stable countries where most previous studies derive from. The most important capabilities

of the Palestinian firms turned out to be pricing capability, followed by product development and marketing communication capabilities. We believe that considering the specific issues of the Palestinian context leads to expected findings. Marketing literature suggests that firms use capabilities to transform resources into outputs based on their marketing mix strategies and such marketing capabilities are linked to their business performance (Vorhies & Morgan, 2005). We argue that the Palestinian firms develop particular marketing capabilities to meet the specific conditions under which the marketing strategy of a firm is developed.

- Operations capabilities (cost, quality, delivery & flexibility and SRC capability) positively affect firm's performance.

We have demonstrated the importance of operations capabilities. Following the findings of the statistical analysis, we revealed that plastic manufacturing firms practice operations capabilities more than other industries, while the communications industry do so less compared to other industries. The dissected analysis of operations capabilities reveal varying significances among operations capabilities. Our statistical model strongly supports hypotheses H6, as the overall operations capabilities have a positive significant effect on the performance of the surveyed firms ($B = 0.468$). We demonstrate that delivery and flexibility capabilities have a significant positive effect on firm performance, while other operations capabilities have an insignificant effect including cost, quality and social responsibility capabilities. Hence superior operations capabilities of those firms are reflected in efficient and reliable delivery and flexibility processes of their operations.

Therefore, the main hypothesis for operations capability is supported, and the hypothesis for flexibility and delivery capability is also supported, while other operations capabilities were rejected. The positive effect of operations capabilities is consistent with prior studies which highlight the role of different operations capabilities that have positive effects on firm performance (Li, 2000; Flynn et al., 2004; Niromand, et al., 2012; Jiang, 2014; Yu et al., 2014). For example flexibility and delivery capability appears to be an extremely important operations capability, consistent with Huete & Roth (1988) who studied 230 manufacturing firms in North America, finding manufacturing capabilities don't have strong association with strategic direction and firm performance except the

flexibility capability. The importance of flexibility capability is also consistent with Li (2000) who studied Chinese firms revealing that flexibility capability is highly required in a market economy, and is vital to increase firm performance. Other empirical research found the quality and flexibility capabilities also are of fundamental importance in explaining firm performance (Ward et al., 1998; Bessant et al., 1999; Shah and Ward, 2003).

However, our findings in the Palestinian manufacturing and services industries fail to prove a positive association linking quality, cost, and social responsibility capabilities to firm's performance, which is consistent with Hayes & Ablernathy 1980; Hayes & Gravin, 1982) who argue that firms can rely on certain type of operations capabilities to sustain a competitive advantage and hence to improve firm's performance. Prior studies and our study indicate that flexibility and delivery are the most important type of operations capability that contributes to firm's performance. This is possibly because customers are interested in satisfying their needs and want to have the right quantity at the right time which is linked to the flexibility capability. We conclude that the Palestinian firms seem to rely on certain types of operations capabilities to sustain desired performance such as flexibility and delivery.

Theoretical Contribution

Research on the RBV and DCs either merely focuses in theoretically explaining the contribution of resources and capabilities on firm performance, or has only empirically investigated a few resources and capabilities that are perceived to be important for competitive advantage. We fill a gap in literature, as the limited empirical work has been done to incorporate dynamic capabilities and ordinary (marketing and operations) capabilities and investigate their roles in increasing firm performance across several industries. The primary contribution is to study and understand the impact of dynamic capabilities in a new context where we witness a very complex and rapidly changing environment. In addition to the empirical investigating of our unique research model, we contribute to the existing literature of dynamic and ordinary capabilities in terms of providing new definitions, conceptualization, operationalization, constructs measurement, and research methodology.

We consider the link between ordinary capabilities and dynamic capabilities, which has received great attention, but so far there are limited empirical studies in this area. Teece (2014) suggested that, to understand DCs, one should compare them with the ordinary capabilities of a firm. Important clarifying distinctions between ordinary and dynamic capabilities are developed. One should note that ordinary capabilities unlike dynamic capabilities can be measured against the requirements of specific tasks and are visible to the public (Teece, 2014). As we have seen the current literature suggests different hierarchical levels that dynamic and ordinary capabilities reside in. We considered dynamic capabilities as higher order and ordinary capabilities as lower order, helping to avoiding ambiguous phrases.

Our second contribution is regarding dynamic capabilities. We have extensively reviewed the literature concerning the identification of dynamic capabilities as well as their associations with firm performance. Research shows an ongoing debate of the causal relationship between typologies of capabilities and firm performance. Still much remains to be tested about the underlying mechanisms, processes and intermediate outcomes associated with dynamic capabilities. The current definitions of dynamic capabilities are found to be vague and hold tautological terminologies, and hence dynamic capabilities as a paradigm is being claimed as doubtful. We emphasize that dynamic capabilities encompass explicit identifiable and measurable factors suggesting that dynamic capabilities are not vague abstractions, but specific processes such as acting and reacting capabilities which can be further investigated and explored.

One novelty of this research lies in studying firm capabilities in the context of a developing country, where we witness rapidly a changing environment due to political, technological, social and economic changes. After a careful assessment we identified and verified the existing measures for environmental dynamism considering important factors such as political changes which were absent in the previous studies. Most literature on dynamic capabilities argues that a rapidly changing environment is an essential for the practicing and impact of dynamic capabilities, but there is little empirical evidence for this. Our findings reveal instead that a dynamic environment can have a negative effect on the contribution of dynamic capabilities to firm performance. We have developed context-specific measures of environmental dynamism and consider that this is important in understanding its moderating role.

Our contribution also concerns the uniqueness of our research sample which includes both manufacturing and nonmanufacturing firms. Barreto (2010) emphasizes that DCs should be studied empirically across a wider sample of firms and industries. This enhances our contribution by investigating dynamic capabilities amongst diverse firms, unlike the existing literature where the focus is on high-tech firms.

We contribute to the literature by developing and empirically testing a conceptual model that involves both dynamic and ordinary capabilities modeled in a particular path. Based on the literature review we modeled dynamic capabilities as independent, and ordinary capabilities as mediating constructs. Therefore, our contribution lies in bridging a research gap by developing and empirically testing an integrated model incorporating three dynamic capabilities, four marketing capabilities, five operations capabilities and firm performance. We provide empirical support across diverse industries that dynamic capabilities significantly contribute to firm performance, and the contribution is indirectly mediated by ordinary capabilities. Hence, we open the ‘black box’ concerning how dynamic capabilities precisely impact strategy and critical performance outcomes, either by directly impacting firm performance or indirectly through reconfiguration of ordinary resources and capabilities. This gives empirical support to assumptions in the existing RBV and DCs literature that ordinary capabilities are shaped by and dependent on dynamic capabilities (Zahra et al., 2006).

A fifth contribution is to the ordinary capabilities and marketing and operations management literature. Our findings provide a theoretical contribution to the current literature for marketing and operations management and brings back the resource-based view in to the picture. The integrated model incorporates different marketing and operations capabilities. One should note that there is limited work that integrates important functional capabilities such as operations and marketing in explaining variances in firm performance. As noted earlier, the empirical findings of this study support the conceptual arguments regarding those capabilities. For example Grant (2002) and Nath et al. (2010) suggest that specialized capabilities are integrated into broader functional capabilities such as operations and marketing capabilities. Our empirical findings imply the significant contribution of ordinary capabilities (marketing and operations) on firm performance and their potential mediating role in the relationship between dynamic capabilities and firm

performance. We also provide definitions for both marketing and operations capabilities containing specific elements for empirical research.

Last but not least, we contribute to strategic management research methodology. Most research conducted on DCs is either theory developing or of an exploratory nature. This study makes a contribution to methodology by conceptualizing and improving the existing operationalization into formative-reflective constructs. Considering the environmental setting of developing countries, new measures were developed in addition to the existing ones. The new measures were tested and approved using various statistical techniques. The findings from the model simulation serve as guidelines regarding the use and estimation of reflective-formative type hierarchical latent variable models in PLS-SEM.

Managerial Contribution

We analyzed data drawn from the Palestinian industries, so the results are likely to be useful for managers from similar contexts. First, the vital practical contribution is related to the findings indicating the importance of dynamic capabilities for superior firm performance. Second, following the RBV, it is important for firms to invest and exploit their ordinary capabilities (such as marketing and operations) in order to achieve competitive advantages and superior firm performance. Thus, it is believed that this can provide a new way for managers to understand the mediation linkage of dynamic capabilities, ordinary capabilities (operations and marketing) and firm performance. Our findings indicate that dynamic capabilities are a set of identifiable, measurable constructs and, therefore, managerially amenable options that can be used to address changing environments. Hence we expect firms' managers to be encouraged to improve their firm's dynamic capabilities starting with acting in the business environment by sensing and seizing business opportunities as well identifying the business threats, then reacting by reconfiguring ordinary resources and capabilities.

The findings indicate that the contribution of operations capabilities is greater than marketing capabilities. However, firms' managers should place greater emphasis on the development of both operations and marketing capabilities as they directly affect firm performance. We emphasise that product development, pricing, and marketing

communication are the most important marketing capabilities, while flexibility and delivery operations are most important type of operations capabilities that contribute directly to firm performance. Thus, it is believed that this can provide a new way for managers to understand different dynamic and ordinary capabilities and careful deployment of their firm's resources.

Limitation and Future Research

Findings and implications of this research should also be considered in light of its limitations which present a number of opportunities for future research. This study attempted to improve our understanding of the role of dynamic and ordinary capabilities of a firm and its performance across diverse industries. A first limitation is that firm dynamic and ordinary capabilities may serve the same purpose among a number of firms, but performance may still be an outcome of certain resource combination. Hence future research may wish to consider firm capabilities across industries controlling for particular resources that affect firm performance. A second limitation concerns the cost of building and maintaining dynamic capabilities that reconfigure a firm's ordinary resources and capabilities. This concern has not been explicitly studied, and Winter (2003) argues that ad hoc problem solving could perhaps have comparable or superior outcomes. Hence we expect future research might consider the costs and benefits of dynamic capabilities and evaluate their cost-effectiveness in comparison to ad hoc problem solving.

Thirdly, we consider the limitations of the measurement and operationalization. Firm performance was measured using items reflecting the firms' activities and performance relative to entire industries base. This reflects the aggregate activities of some firms but ignores factors that could be relevant to other firms, such as the type of business including location, experience with the buyer, component complexity, product complexity, etc. In attempting to extend this work, future researches may recommend to consider the inclusion of additional items for each surveyed firm. It would be ideal also if firm performance data could be collected from multiple sources or directly use objective data to measure firm performance. Fourth, this study adopts a cross sectional study design in which leads to such limitation that the results represent a snap shot of reality. The extent of dynamic capabilities is measured through the views of managers at an instant in time,

whereas they are asked to assess their firms' prior performance. This chronology does not therefore reflect that of the causal relationship we wish to study. The period of time we relied on, i.e. the previous three years, is admittedly also short to capture any business cycle effects or transient problems. Hence, a longitudinal study would be desirable for testing a causal relationship over time between firm's capabilities and firm performance.

Fifth, we consider limitations related to methodology aspects, although considerable efforts were made to ensure the quality of data, both during the data collection and construct validation phases. The potential of survey biases cannot be excluded, as the perceptions of the respondents might not necessarily coincide with the objective reality. Hence personal interview is recommended as an additional research method. There are also limitations related to the sampling design, as our sample includes only plastic and food firms, insurances and banking and telecommunication industries. The generalization of the results might be limited to those surveyed industries, so we suggest that further research may consider other context sectors to extend the generalizability of the dynamic capabilities framework. A last limitation concerns the nature of the Palestinian context which presents a potential limitation to generalize the results to other emerging or developed economies. The role of institutional factors (e.g., policies, regulations, industry norms) certainly deserves more attention, because unlike in western countries. Therefore, future research could investigate how these interact with firm resources and capabilities to impact dynamic capabilities and firm performance.

Following the above discussion of the research limitations, several challenges still remain for future studies. We first suggest future studies to consider an interaction model that studies the feedback in the relationship between typologies of capabilities and firm performance. There is a need also to provide more focused studies considering how other ordinary mediators link dynamic capabilities to firm performance, for example by looking at how they link to managerial capabilities, and also financing capabilities as many firms struggle to finance their firms. These considerable capabilities should be investigated to further verify the robustness of any future research model on dynamic capabilities. Also the moderating effect should consider the link between all variables on firm performance in our model rather than being limited for dynamic capabilities on firm performance. The relationships between dynamic capabilities and those intermediate outcomes should better assess which dynamic capabilities and intermediate outcomes deserve more attention for a

firm in such moderating business environment. As we noted that most studies tend to focus most frequently on obviously dynamic industries, such as biotechnology. Future research should explore the research constructs in other contexts for instance; traditional industries and the public sector. The education sector is also a vital context for studying dynamic capabilities as suggested by David Teece through email conversation in January, 2015. As we consider this limitation in our study, future studies should consider not only firm managers as respondents but also document analysis e.g., financial analysts to mitigate potential bias in the responses from the former group, and hence triangulating the research's findings.

Conclusion

We build on the logic of the resources based view (RBV) and dynamic capabilities view (DCs). The RBV provides the foundation of our reasoning for approaching the study's constructs and hypotheses. Also the dynamic capabilities framework provides a further aspect to this logic, adapting it to the increasingly dynamic features of markets (Teece et al., 1997). Ordinary capabilities according to the static nature of the RBV prospective enable firms to perform definable tasks that sustain the day-to-day activities. The conceptual model of dynamic and ordinary capabilities in a volatile environment has helped to understand these two constructs' interaction and their effects on firm performance. We have DCs which are acting capabilities which sense and seize market opportunities and reacting capabilities referred to reconfiguring capabilities that create, extend and modify operating routines embodied in the firm's ordinary resources and capabilities to balance to environmental changes. Ordinary capabilities we identified as operations capabilities (quality, cost, delivery, flexibility and social responsibility capability) and marketing capabilities (pricing, customer services, marketing communication and product development). Empirically we test the interrelationship of dynamic and ordinary capabilities on firm performance across different industries in Palestine. Based on the nature of our problem and our research philosophy, we perform quantitative research using a survey distributed to a large sample of firms across the Palestinian sectors. Before data analysis both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were carried out to test the reliability and validity.

We have offered evidence that dynamic capabilities indirectly affect firm performance. Our findings suggests that firm performance depends on the ordinary capabilities that firms build and reshape using dynamic capabilities, not in the dynamic

Conclusion

capabilities themselves. Dynamic capabilities are therefore the tools by which ordinary capabilities can be reconfigured and manipulated by firms' managers to form new and innovative forms of competitive advantage. We also provide evidence which shows that the environmental dynamism has a negative moderating role on the impact of dynamic capabilities on firm performance, which goes against the prevailing theoretical viewpoint in the existing literature. We have further offered evidence illustrating that different dynamic and ordinary capabilities contribute differently to a firm's performance either directly or indirectly. Dynamic capabilities that sense and seize opportunities reflect the ability of a firm to act upon new knowledge or information, and this doesn't always lead to action. Some effects don't appear directly on a firm's performance. From those different capabilities the reconfiguring capability is found to have the strongest direct effect on firm performance. Regarding ordinary capabilities, certain marketing capabilities have positive and significant effects on firm performance like product development, pricing, and marketing communication. In operations capabilities delivery and flexibility capabilities are seen to have a significant positive effect on a firm's performance, while other operations capabilities have an insignificant effect including cost, quality and social responsibility capabilities.

Accordingly, we recommend Palestinian firms to invest more on certain capabilities which found to have a low impact on firm performance. Palestinian managers should look over the marketing customer services capability and the capability of relation with intermediaries. Also operations cost, quality and social responsibility capabilities are such important variables that enhance firm performance, and hence managers need to invest to insure these capabilities are effective. Regarding the dynamic capabilities we do not claim one is better than another, they work as a process, and hence DCs are excellent for a firm particularly on the long run. Its worth to mention the shared view among scholars that dynamic capabilities must be managed and deployed consciously in order to lead to superior performance (Eisenhardt & Martin, 2000). Based on the role of the moderating environment, firms should practice dynamic capabilities as most industries in Palestinian operate in a particularly highly rapidly changing environment. Thus, the Palestinian managers should consider particular programs for enhancing the recommended capabilities either by internal or external consultants. Finally, along with substantial implications for managers, this study also provided an important contribution to achieving superior firm performance in dynamic and uncertain market environments.

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Appendix

Appendix 1: Confirmatory Factor analysis Figures

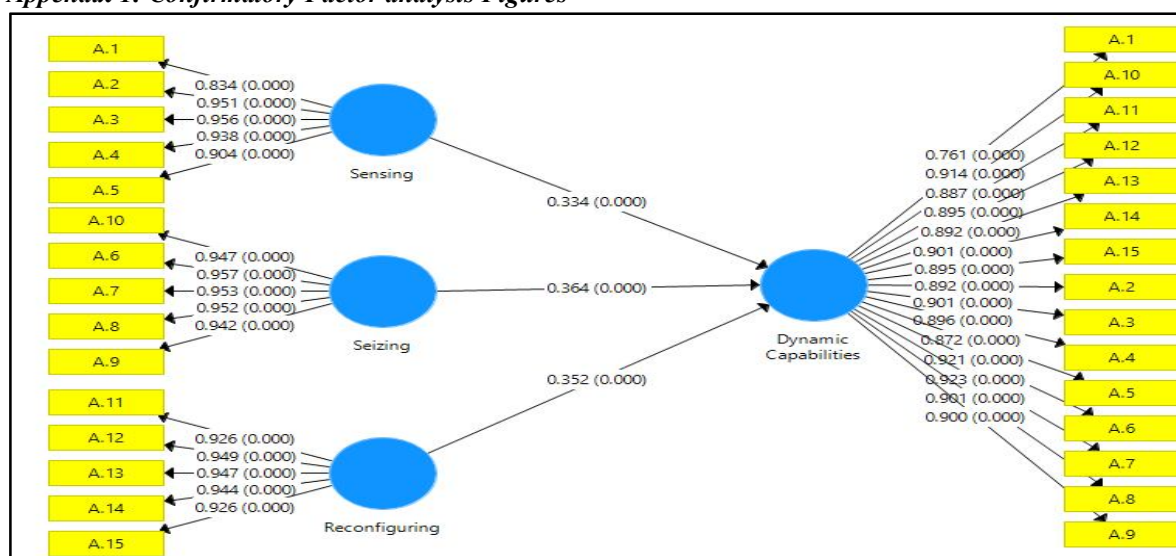


Fig.7.1 Conceptual representation of hierarchical components model for dynamic capabilities.

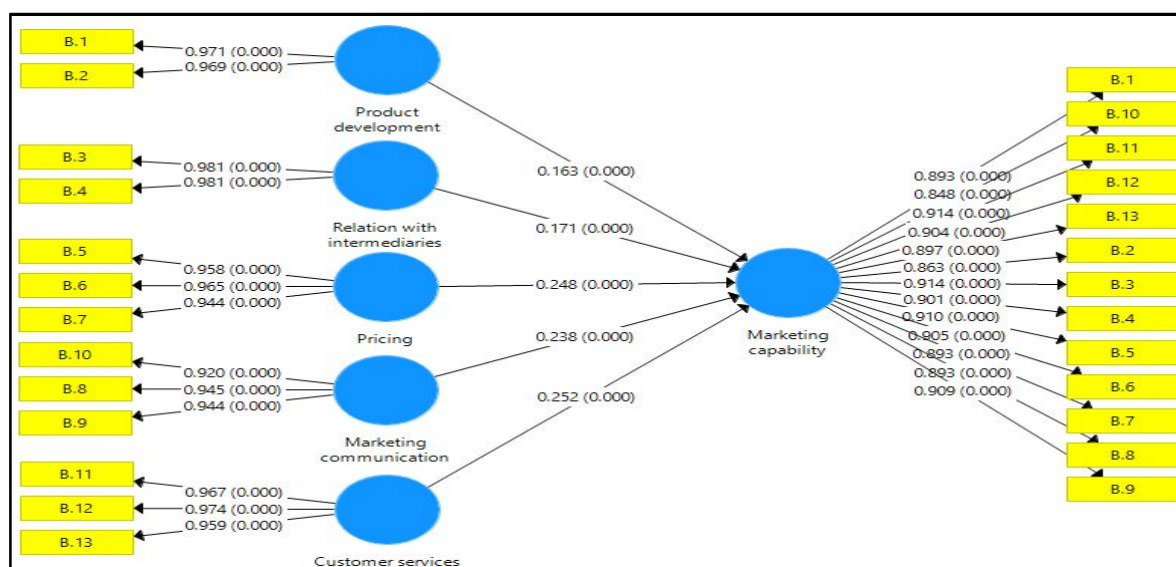


Fig.7.2 Conceptual representation of hierarchical components model for marketing capabilities.

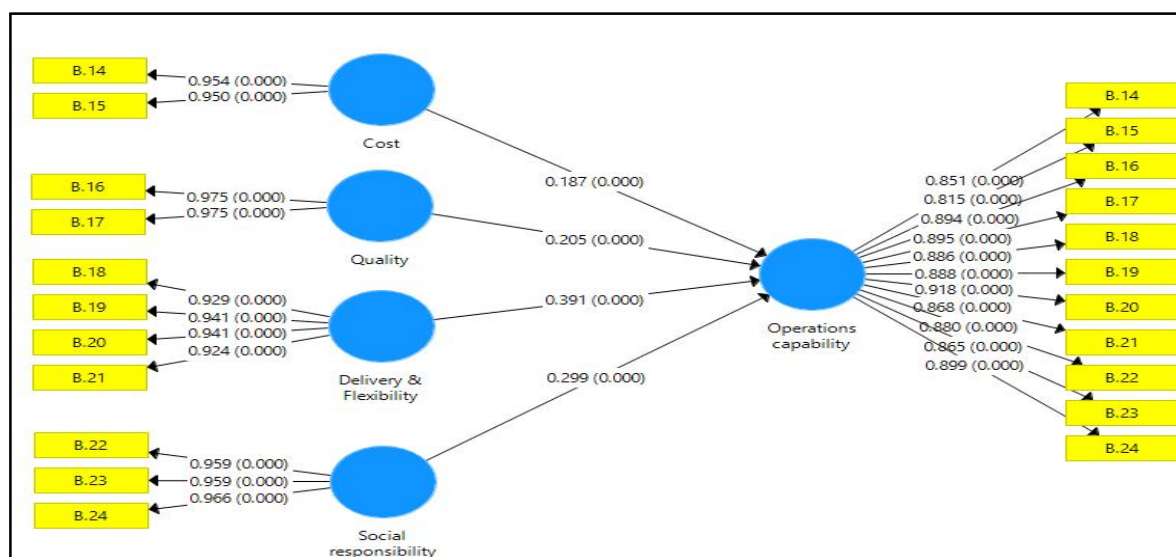


Fig.7.3 Conceptual representation of hierarchical components model for operations capabilities.

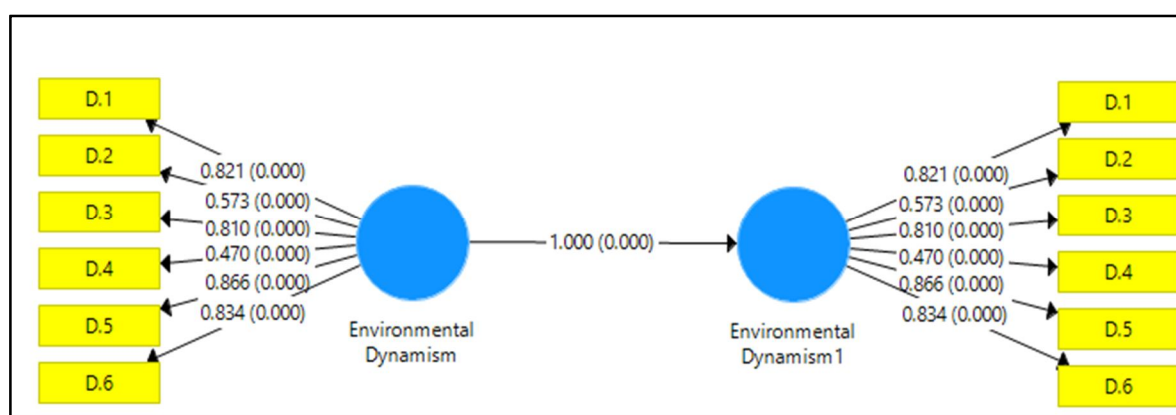


Fig.7.4 Conceptual representation of hierarchical components model for environmental dynamism capabilities.

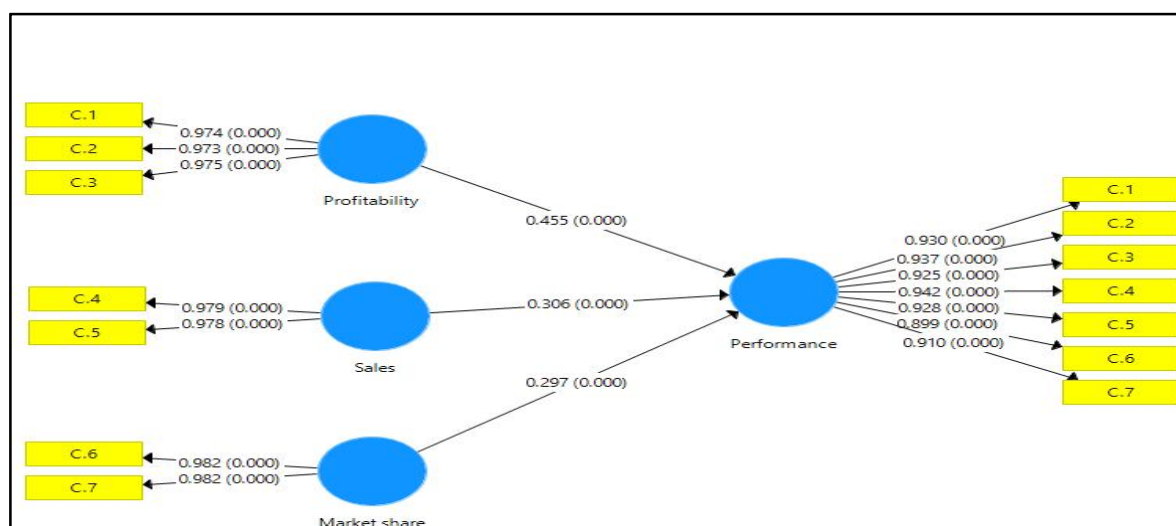


Fig.7.5 Conceptual representation of hierarchical components model for firm performance.

Appendix 2: Survey Questionnaire-Arabic version



جامعة بافيا - إيطاليا

قسم الاقتصاد والإدارة

برنامج الدكتوراه

السيد/ المحترم،

تحية طيبة، وبعد...

الموضوع: تعبئة الاستبانة

يقوم الباحث بتحرير رسالة الدكتوراه في جامعة بافيا بإيطاليا في الإدارة الاستراتيجية بعنوان:

"القدرات الديناميكية والعادية وأثرها على أداء الشركة"

دراسة تطبيقية على القطاعات الصناعية والخدمية في السوق الفلسطيني

فندرجو التكرم بالإجابة عن جميع الأسئلة المدرجة في الاستبانة من خلال وضع علامة (✓) أمام التقييم المناسب لكل فقرة من وجهة نظركم، ويجدر بنا في هذا المقام أن نذكركم بأن البيانات الواردة في هذه الاستبانة ستستخدم لأغراض البحث العلمي فقط، ولن يذكر أسماء الشركات المشاركة ولا مانع بتزويد هذه الشركات بنتائج البحث بناءً على طلبهم بصورة فردية، لذا من المهم جداً الإجابة على جميع الأسئلة حتى ولو كانت متكررة وذلك للتأكد من الحصول على معلومات صحيحة وموثوق بها.

مشاركتم في تعبئة هذا الاستبيان سوف يساعدني في الحصول على معلومات قيمة.

شاكرين لكم حسن تعاونكم

الباحث

بلال زكي البشيتي

إشراف

الأستاذ الدكتور/ انطونيل زوكيلا

الأستاذ الدكتور/ ماجد الفرا

القسم الأول: المعلومات الشخصية

اسم المؤسسة / الشركة:

النوع/

صناعية	خدماتية
<input type="checkbox"/> أغذية	<input type="checkbox"/> بنكية
<input type="checkbox"/> بلاستيكية	<input type="checkbox"/> اتصالات وإنترنت
<input type="checkbox"/> ألعاب	<input type="checkbox"/> أخرى.....
<input type="checkbox"/> أخرى.....	

عمر المؤسسة / الشركة

<input type="checkbox"/> أقل من 5 سنوات	<input type="checkbox"/> من 5 إلى أقل من 10 سنوات	<input type="checkbox"/> من 10 إلى أقل من 15 سنة
<input type="checkbox"/> من 15 إلى أقل من 20 سنة	<input type="checkbox"/> من 20 إلى أقل من 25 سنة	<input type="checkbox"/> 25 سنة فأكثر

عدد العاملين دوام كلى فى المؤسسة / الشركة

<input type="checkbox"/> أقل من 10 عمال	<input type="checkbox"/> من 10 إلى أقل من 20 عامل	<input type="checkbox"/> من 20 إلى أقل من 40 عامل
<input type="checkbox"/> من 40 إلى أقل من 100 عامل	<input type="checkbox"/> من 100 إلى أقل من 200 عامل	<input type="checkbox"/> 200 عامل فأكثر

المسمى الوظيفي داخل المؤسسة / الشركة

<input type="checkbox"/> الرئيس	<input type="checkbox"/> المدير التنفيذي	<input type="checkbox"/> المدير العام
<input type="checkbox"/> نائب عام	<input type="checkbox"/> مدير فرع	<input type="checkbox"/> غير ذلك.....

عدد سنوات الخدمة بهذا المسمى

<input type="checkbox"/> أقل من 5 سنوات	<input type="checkbox"/> من 5 إلى أقل من 10 سنوات	<input type="checkbox"/> من 10 إلى أقل من 15 سنة
<input type="checkbox"/> من 15 إلى أقل من 20 سنة	<input type="checkbox"/> من 20 إلى أقل من 25 سنة	<input type="checkbox"/> 25 سنة فأكثر

القسم الثاني: القدرات الديناميكية

يرجى الإجابة على العبارات التالية، من خلال الإشارة إلى أي مدى تمارسون النشاطات الآتية في عملم حيث كلما اقتربت الإجابة من (1) دل على ممارسة ضعيفة لما ورد في العبارة، وعلى العكس كلما اقتربت الإجابة من (7) دل ذلك على ممارسة قوية.

القدرة الديناميكية							ممارسة ضعيفة			ممارسة قوية		
درجة كبيرة جداً	درجة كبيرة	إلى حد متوسط	درجة كبيرة جداً	درجة كبيرة	إلى حد متوسط	إلى حد متوسط	إلى حد متوسط	إلى حد متوسط	إلى حد متوسط	إلى حد متوسط	إلى حد متوسط	إلى حد متوسط
1	2	3	4	5	6	7	8	9	10	11	12	13
نشارك في أنشطة المؤسسات والتقانات المهنية في قطاع عملنا	نستخدم عمليات منظمة لتحديد السوق المستهدف وتغيير احتياجات ورغبات الزبائن	نرصد أفضل الأعمال التي تمارس في قطاع عملنا.	نجمع المعلومات الاقتصادية اللازمة لعملياتنا اليومية ولبيئة العمل التشغيلية	نستطيع أن ندرك التغيرات البيئية قبل المنافسين.								

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7	6	5	4	3	2	1	الاستيلاء: نحن في شركتنا (مؤسستا)
							6 نستثمر كل الإمكانيات لإيجاد الحلول لزيائنا
							7 نطبق أفضل الأعمال التي تتبع في مجال عملنا
							8 نستجيب إلى الأخطاء التي يشار إليها من قبل الموظفين
							9 نغير في طرق العمل بناءً على التغذية الراجعة من الزبائن
							10 نستطيع اتخاذ القرار في الوقت المناسب لاقتناص الفرص ومعالجة التهديدات
7	6	5	4	3	2	1	التحول وإعادة التكوين: نحن في شركتنا (مؤسستا)
							11 نطبق الأساليب الإدارية الحديثة
							12 نقوم بتجديد أو تغيير جوهرى للاستراتيجيات والأساليب التسويقية
							13 يتم عمل تغيير جوهرى لعملياتنا الإنتاجية والتسويقية
							14 نستخدم طرق جديدة أو تغييرات جوهرية من أجل تحقيق الأهداف المرجوة
							15 يتم إعادة تشكيل الموارد والقدرات لمواجهة التغيرات البيئية

القسم الثالث: القدرات الساكنة أو العادية (غير ديناميكية)

يرجى الإجابة على العبارات التالية، من خلال الإشارة إلى مدى قدراتكم في ممارسة النشاطات التالية في عملكم حيث كلما اقتربت الإجابة من (1) دل على ممارسة ضعيفة لما ورد في العبارة، وعلى العكس كلما اقتربت الإجابة من (7) دل ذلك على ممارسة قوية.

القدرة التسويقية		قدرة ضعيفة			قدرة قوية		
		درجة كبيرة جدا	درجة كبيرة	إلى حد متوسط	إلى حد كبير	درجة كبيرة	درجة كبيرة جدا
7	6	5	4	3	2	1	قدرة تطوير المنتج
							1 لدينا القدرة على تطوير أو تقديم منتجات (أو خدمات) جديدة تتماشى مع حاجات ورغبات الزبائن
							2 لدينا القدرة على تقديم منتجات (أو خدمات) جديدة
7	6	5	4	3	2	1	قدرة قناة التوزيع
							3 لدينا القدرة على تعزيز العلاقة مع الوسطاء الموثوق بهم
							4 لدينا القدرة على العمل مع كل الوسطاء في قناة التوزيع التسويقية
7	6	5	4	3	2	1	قدرة التسعير
							5 لدينا القدرة على استخدام مهارات التسعير للاستجابة السريعة للتغيرات السوقية
							6 لدينا القدرة على تسعير المنتجات والخدمات على نحو فعال
							7 لدينا القدرة على رصد أسعار المنافسين والتغير في الأسعار
7	6	5	4	3	2	1	قدرة فريق المبيعات
							8 لدينا القدرة على تدريب فريق مبيعات أكثر فعالية
							9 لدينا القدرة على توصيل قيمة وفائدة المنتج (أو الخدمة) للزبائن
							10 لدينا القدرة على تطوير وتنفيذ البرامج الإعلانية

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قدرة تقييم الخدمات							
7	6	5	4	3	2	1	11 لدينا القدرة على الاستجابة السريعة لخدمة الزبائن
							12 لدينا القدرة على الاستجابة لشكاوى الزبائن
							13 لدينا القدرة على تقديم خدمات إضافية للزبائن
قدرة قوية			قدرة بدرجة متوسطة	قدرة ضعيفة			القدرات التشغيلية
بدرجة كبيرة جدا	بدرجة كبيرة	إلى حد ما		إلى حد ما	بدرجة كبيرة	بدرجة كبيرة جدا	
7	6	5	4	3	2	1	التكلفة
							1 لدينا القدرة على زيادة إنتاجية الفرد العامل
							2 لدينا القدرة على تقديم أو إنتاج المنتجات (أو الخدمات) بأقل تكلفة
7	6	5	4	3	2	1	الجودة
							3 لدينا القدرة على توفير أو إنتاج المنتجات التي يثق بيها الزبائن بدرجة كبيرة
							4 لدينا القدرة على إنتاج أو توفير سلع أو خدمات ذات جودة عالية للزبائن
7	6	5	4	3	2	1	التوصيل
							5 لدينا القدرة على تلبية طلبات العملاء وفق الجداول الزمنية المحددة
							6 لدينا القدرة على الاستجابة السريعة لطلبات الزبائن
7	6	5	4	3	2	1	المرونة
							7 لدينا القدرة على الاستجابة السريعة للإنتاج بما يتناسب مع التغيرات الخارجية
							8 لدينا القدرة على الاستجابة السريعة لإنتاج الكمية المناسبة بناءً على التغير بالطلبات
7	6	5	4	3	2	1	تعزيز المسؤولية الاجتماعية
							9 لدينا القدرة على تعزيز المسؤولية الاجتماعية من خلال تحسين ظروف العمل المادية
							10 لدينا القدرة على تعزيز المسؤولية الاجتماعية من خلال تطبيق العدالة على جميع العاملين
							11 لدينا القدرة على تعزيز المسؤولية الاجتماعية من خلال ضمان الظروف البيئية الملائمة

القسم الرابع: أداء المنظمة

يرجى الإجابة على العبارات التالية، من خلال الإشارة إلى مدى تغيرات العوامل المذكورة في عملكم خلال الثلاث سنوات الماضية، حيث كلما اقتربت الإجابة من (1) دل ذلك على انخفاض في مستوى العامل الوارد في العبارة، وعلى العكس كلما اقتربت الإجابة من (7) دل ذلك على ارتفاع مستوى العامل الوارد في العبارة.

أداء المنظمة		ينخفض بنسبة			لم يحدث تغير	يرتفع بنسبة		
		أكثر من 20% 1	11 - 20% 2	1 - 10% 3		1 - 10% 5	11 - 20% 6	أكثر من 20% 7
الربحية (نسبة التغير في أرباح المؤسسة)		1	2	3	4	5	6	7
1	نسبة نمو أرباحكم خلال الثلاث سنوات السابقة							
2	نسبة العائد على رأس المال خلال الثلاث سنوات السابقة							
3	نسبة أرباحكم الصافية على رأس المال خلال الثلاث سنوات السابقة							
معدل المبيعات (نسبة التغير في المبيعات)		1	2	3	4	5	6	7
4	كمية مبيعاتكم خلال الثلاث سنوات السابقة							
5	زادت كمية مبيعاتكم خلال الثلاث سنوات السابقة							
الحصة السوقية (نسبة الحصة السوقية)		1	2	3	4	5	6	7
6	حصة الشركة في السوق خلال الثلاث سنوات السابقة							
7	زادت حصة التسويق خلال الثلاث سنوات السابقة							

القسم الخامس: ديناميكية بيئة العمل

يرجى الإجابة على العبارات التالية، من خلال الإشارة إلى وجهة نظرك حول مرونة السوق في بيئة العمل الخاص بكم حيث كلما اقتربت الإجابة من (1) دل ذلك على عدم موافقة مرتفعة على ما ورد في العبارة، وعلى العكس كلما اقتربت الإجابة من (7) دل ذلك على موافقة مرتفعة.

بيئة العمل		غير موافق بشدة 1	غير موافق 2	غير موافق إلى حد ما 3	محايد 4	موافق إلى حد ما 5	موافق 6	موافق بشدة 7
		1	2	3	4	5	6	7
1	يتم تحديث المنتجات أو الخدمات في قطاع عملكم							
2	يصعب التنبؤ بسلوك المنافسون في سوق عملكم							
3	تتطور التكنولوجيا بشكل متسارع في قطاع عملكم							
4	يصعب التنبؤ بحاجات ورغبات الزبائن							
5	يؤثر الوضع السياسي على نشاط سوقكم الاقتصادي							
6	يؤثر الصراع السياسي على نشاط شركتكم							

Appendix 3: Survey Questionnaire-English version**University of Pavia - Italy**

Department of Economics and Management

PHD (DREAMT)



I am Belal Albashiti pursuing a Ph.D. in the University of Pavia, Italy. The research area is in strategic management with the topic: “The interrelationship of dynamic and static capabilities to firm performance”. Your participation in the following survey will help me by providing valuable data for analysis. This questionnaire is designed to understand the impact of dynamic capabilities, marketing and operation capabilities on firm performance. Please be assured that the information you provide is **STRICTLY CONFIDENTIAL**. Individual organizations participating in this study will not be identified. Only aggregated data will be published. A summary of the aggregated findings will be provided to all participants if they would like such a summary. It is important that you **ANSWER ALL THE QUESTIONS IN THE QUESTIONNAIRE** even if some questions look repetitive. This is necessary to ensure information is valid and reliable. Please indicate whether the given features exist in your organization using the key below.

Section 1: General Information*1.1 Name of Firm:**1.2 Industry Type:*

2.1 Trading	2.2 Manufacturing	2.3 Services
<input type="checkbox"/> Foods	<input type="checkbox"/> Foods	<input type="checkbox"/> Banks
<input type="checkbox"/> Clothing	<input type="checkbox"/> Plastic	<input type="checkbox"/> Communications & internet
<input type="checkbox"/> Electronic	<input type="checkbox"/> Toys	<input type="checkbox"/> Other -----
<input type="checkbox"/> Other -----	<input type="checkbox"/> Other -----	

1.3 Age of Firm:

<input type="checkbox"/> 5 Years or Less	<input type="checkbox"/> 5 Years or Less	<input type="checkbox"/> 11 to 15 Years
<input type="checkbox"/> 16 Years to 20	<input type="checkbox"/> 21 to 25 years	<input type="checkbox"/> 26 or above

1.4 Number of Full time employees in your organization:

<input type="checkbox"/> less than 10	<input type="checkbox"/> 10-20	<input type="checkbox"/> 21-40
<input type="checkbox"/> 41-100	<input type="checkbox"/> 101-200	<input type="checkbox"/> More than 200

Appendix

1.5 Your current position within the organization:

<input type="checkbox"/> President	<input type="checkbox"/> CEO	<input type="checkbox"/> General Manager
<input type="checkbox"/> Deputy Manager	<input type="checkbox"/> Branch manager	<input type="checkbox"/> other -----

1.6 Number of years you have been in this position

<input type="checkbox"/> less than 5	<input type="checkbox"/> 6-10	<input type="checkbox"/> 11-15
<input type="checkbox"/> 16-20	<input type="checkbox"/> More than 20	

1.7 Number of years you have been working for this position

<input type="checkbox"/> less than 5	<input type="checkbox"/> 6-10	<input type="checkbox"/> 11-15
<input type="checkbox"/> 16-20	<input type="checkbox"/> More than 20	

Section 2: Dynamic Capabilities

Please indicate to what extent you are practicing the following dynamic capabilities at your organization. The scale is interpreted as (1): not high at all (2): not very high (3): somewhat low (4): neither high nor low (5): somewhat high (6): very high (7): extremely high.

2.1 Sensing: In my organization...		1	2	3	4	5	6	7
A.1	People participate in professional association activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.2	We use established processes to identify target market segments, changing customer needs and customer innovation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.3	We observe best practices in our sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.4	We gather economic information on our operations and operational environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.5	We can perceive environmental changes before competitors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Seizing: In my organization...		1	2	3	4	5	6	7
A.6	We invest in finding solutions for our customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.7	We adopt the best practices in our sector.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.8	We respond to defects pointed out by employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.9	We change our practices when customer feedback gives us a reason to change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.10	We can make timely decision to address opportunities and threats.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix

2.3 Reconfiguring: <i>How often have you carried out the following activities?</i>		1	2	3	4	5	6	7
A.11	Implementation of new kinds of management methods.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.12	New or substantially changed marketing method or strategy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.13	Substantial renewal of business processes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.14	New or substantially changed ways of achieving our targets and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A.15	Reconfiguration of resources/capabilities in time to address environmental changes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 3: Ordinary Capabilities

Please indicate how important the following capabilities (marketing and operations) as regular practices in your firm. The scale is interpreted as (1): not important at all (2): very unimportant (3): somewhat unimportant (4): neither important nor unimportant (5): somewhat important (6): very important (7): extremely important.

3:1 Marketing Capability								
3:1:1 Product development		1	2	3	4	5	6	7
B.1	Ability to develop or offer new product/service adapted to customer needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.2	Ability to launch new product/services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3:1:2 Relation with intermediaries		1	2	3	4	5	6	7
B.3	Ability to enhance relationship with reliable intermediaries.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.4	Ability to work with intermediaries in the marketing channel.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3:1:3 Pricing		1	2	3	4	5	6	7
B.5	Ability to use pricing skills and systems to respond quickly to market changes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.6	Ability to effectively price products and services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.7	Ability to monitor competitors' prices and price changes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix

<i>3:1:4 Marketing communication</i>		1	2	3	4	5	6	7
B.8	Ability to train sales people to be effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.9	Ability to communicate the benefits of new products/services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.10	Ability to develop and execute advertising programs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>3:1:5 Customer services</i>		1	2	3	4	5	6	7
B.11	Ability to provide rapid response to customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.12	Ability to respond to customer complaints.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.13	Ability to give additional services to customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>3:2 Operations capability</i>								
<i>3:2:1 Cost</i>		1	2	3	4	5	6	7
B.14	The ability to increase labor productivity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.15	The ability to offer or produce products/services with less cost.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>3:2:2 Quality</i>		1	2	3	4	5	6	7
B.16	The ability to offer or produce products/services that are highly reliable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.17	The ability to offer/produce high quality products/services for our customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>3:2:3 Delivery</i>		1	2	3	4	5	6	7
B.18	The ability to meet delivery schedules or promises.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.19	The ability to react quickly to customer orders.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>3:2:4 Flexibility</i>		1	2	3	4	5	6	7
B.20	The ability to react quickly to changes in the types of product manufactured.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.21	The ability to react quickly to volume changes of a given product mix.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>3:2:5 Social Responsibility Capability</i>		1	2	3	4	5	6	7
B.22	The ability to enhance SR by improving working conditions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.23	The ability to enhance SR by being equitable to all employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B.24	The ability to enhance SR by ensuring environmentally friendly conditions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 4: Firm performance

Please indicate to what extent each of the following has changed in the past 3 years. The scale is interpreted as (1): decrease of more than 20 % (2): decrease of 11-20 % (3): decrease of 1-10 % (4): no change (5): increase of 1-10 % (6): increase of 11-20 % (7): increase more than 20%.

<i>4.1 Profitability</i>	1	2	3	4	5	6	7
C.1 Profit growth rate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C.2 Return on own capital.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C.3 Net profit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>4.2 Sales</i>	1	2	3	4	5	6	7
C.4 Sales volume.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C.5 Increase in sales volume.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>4.3 Market share</i>	1	2	3	4	5	6	7
C.6 Market share.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C.7 Increase in market share.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5: Environmental Dynamism

Please indicate your opinion about the market situation in your principal business industry. The scale is interpreted as (1): strongly disagree (2): disagree (3): somewhat disagree (4): neither agree nor disagree (5): somewhat agree (6): agree (7): strongly agree.

<i>5.1 Industrial environment</i>	1	2	3	4	5	6	7
D.1 Product or service in our industry updates quickly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>5.2 Competitor behaviors</i>	1	2	3	4	5	6	7
D.2 The acts of competitors are difficult to predict.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>5.3 Technological progresses</i>	1	2	3	4	5	6	7
D.3 The technology in our industry progresses quickly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>5.4 Customer demands</i>	1	2	3	4	5	6	7
D.4 To predict the change of customer needs is difficult.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>5.6 Political issues</i>	1	2	3	4	5	6	7
D.5 Political issues in the direction of the market economy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D.6 Political conflicts hamper the activities of your firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Questionnaire Referees

Prof. Antonella.Zucchella
Prof. Khaleel Hajjaj

Prof. Fianneta Corradi
Prof. Mohammed Fares

Prof. Majed El Farra
Prof. Wael Thabet