

**ABSORPTIVE CAPACITY IN SMEs:
A COMPARATIVE STUDY OF THE FINANCIAL
AND THE TOURISM SECTORS
IN MALTA**

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Abstract

Many modern economies are largely characterised by knowledge intensive service industries, constantly battling the ferociously competitive business environment. As a result, the management of a firm's knowledge has become crucial in determining the sustainable competitive success of an organization. This research compares the knowledge management practices of service sector firms, particularly those service sector firms that are knowledge intensive, such as the financial services sector, and those that are less knowledge intensive, such as firms in the tourism sector. The study was conducted using a mixed methodology comprising in-depth face-to-face interviews and a qualitative survey. Structural Equation Modelling has been used to interpret the data collected from the survey.

This study proposes a framework designed specifically to explain the absorptive capacity in service sector SMEs. The framework being presented (figure 9.2, p.404) shows how in small service sector firms, power relationships act as driving factors the internal and external processes and routines of the firm, which, in turn, shape ACAP. This analysis exposes seventeen points of interest, which identifies the Knowledge Management (KM) behaviour of firms in the tourism and in the financial services sectors and reveals eleven convergent practices across both sectors. The study proceeds to identify six divergent KM practices across the industries and a further three points wherein the firms in the financial services sector gave evidence of differing practices amongst themselves. The overarching conclusion from this study, however, is that the behaviour of SMEs is greatly influenced by their size, which, in turn dictates the extent of the influence and control, which the owner exercises on the operation.

Keywords:

Absorptive Capacity, ACAP model, Knowledge Management, SME, Service Sector Firms, Financial Services, Knowledge Intensive Business Sector (KIBS), Tourism Services, Non Knowledge Intensive Business Sector (NKIBS), Structural Equation Modelling, Leadership, Firm Size.

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Abbreviations

ACAP	Absorptive Capacity
EVA	Equal variances assumed
AVE	Average variance explained
CB-SEM	Co-variance based structural equation modelling
EFA	Exploratory factor analysis
EU	European Union
EVNA	Equal variances not assumed
GDP	Gross Domestic Product
GoF	Goodness of fit
GVA	Gross value added
H	Hypothesis
KIBS	Knowledge intensive business sector
KM	Knowledge management
KMO	Keiser-Meyer-Olkin Test for Sampling
M	Mean
MHRA	Malta Hotels and Restaurants Association
MICE	Meetings Incentives Conferences and Events
MM	Mixed Methods
NKIBS	Non knowledge intensive business sector
NACE	Nomenclature statistique des activités économiques dans la Communauté européenne
NSO	National Statistics Office
PLS	Partial least squares method
RO	Research Objective
SD	Standard deviation
SME	Small and medium sized enterprises
SRMR	Standardized Root Mean Square Residual

Chapter 1

Introduction

“In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge” (Nonaka, 1991, page 96)

1.1 Background to the research

Innovation is not a new notion; neither is it a phenomenon restricted only to modern times. An analysis of the world today acknowledges the fact, that we live in an environment of constant change. Baumol (2002) contends that the larger part of the economic growth that has ensued since the eighteenth century, is, in great part, attributed to innovation. Change, opportunity, and innovation are all harvested by the entrepreneur and exploited for commercial gain (Burns, 2011).

We are living in an era characterized by fierce competition and constant change - a very challenging business environment, where only the best and most versatile survive (Baggio and Cooper, 2010; Fasnacht, 2009). Firms no longer aim and aspire to achieve sustainable competitive advantage at the local or national level only, but many have their sights set on the global sphere, as it is only in this manner, that they can mitigate the difficulties posed by this modern ecosystem. In this context, innovation is seen as an indispensable tool at the hand of entrepreneurs, a tool that will enable them to exploit change (Drucker, 1993). Policy makers see a very important correlation between innovation and business and economic growth (Baumol, 2002, 1985; Oke, Burke, Myers, 2007; Porter and Ketels, 2003).

Innovation puts the firm in a position where it can carry on enjoying existing advantages, whilst endeavouring to create new ones. Innovation is the only source of sustainable competitive advantage that equips the firm to compete successfully with other firms (Morris, 2013; Porter, 1990). Indeed, Porter (1990, page 125) concedes *“invention and entrepreneurship are at the heart of national advantage.”* By this, Porter ties together two important aspects of national success: primarily, that there is a relationship between invention and

entrepreneurship, as it is, fundamentally, the entrepreneur who takes an invention to the market; and, secondly, that there is a positive correlation between invention, entrepreneurship and national advantage. With the above assertion, Porter is in support of Schumpeter (1934), one of the earliest scholars to associate these three concepts of entrepreneurship, innovation, and growth.

Innovation is very closely dependent upon the market: it gravitates around the entrepreneur's ability to identify and ably penetrate and enable a new market to grow, as much as it depends on the entrepreneur's ability to preserve an already established and mature market. Innovation is measured by the firm's ability to commercialise new products. This feature is not limited only to goods, but it extends also to embrace any organization's capability at developing services. This clarification is specifically relevant in today's economic scene, where, particularly in developed countries, the services sector dominates the economy, both in terms of value and growth (Uppenberg and Strauss, 2010). In fact, data from the World Bank reveals that the services sector has contributed between 72%-74% of the Gross Domestic Product of the European Union for the period 2005-2014, a proportion that is in excess of the world average, which stands between 66% and 68% for the same period (World Bank, 2017). Indeed, Fasnacht (2009) reveals that the service sector accounts for in excess of 70% of the gross domestic product across the Organization for Economic Cooperation and Development (Gallouj & Djellal, 2010; Gallouj & Windrum, 2009). The services sector is also responsible for as much as 75% of cross-country differences in economic growth across individual European Union (EU) countries. The rationale of innovation to embrace also services is, therefore, of great relevance to the modern economies.

It is imperative for small and medium sized enterprises (SMEs) to embrace innovative practices, if they wish to remain competitive and secure their market position (OECD, 2014). SMEs are the pillar of an economy and should not be overlooked when assessing the relevance different-sized firms play in the economy. As many as 70-95% of all firms can be classified as micro enterprises (i.e. employing fewer than ten employees) in countries across the OECD (OECD, 2014), revealing the importance of SMEs in generating wealth

and creating employment across economies. Unfortunately, across the OECD, innovation activities are in the main part carried out by larger firms, in contrast to SMEs, affirming that due priority must be given to the innovative capacity of small and medium sized firms in order to fuel economies and enhance competitiveness.

The innovative SME is recognised as the engine that will fuel this new post-modernist knowledge-era (Warren, 2008). Thanks to their size and flexibility, SMEs are more agile than large firms, and therefore, are better positioned to respond to market changes more speedily than larger firms. Indeed, radical innovation is a vital entrepreneurial activity, and is considered to be the lifeblood of SMEs (Oke, Burke, Myers, 2007; Simon, Houghton, Savelli, 2002). There is no doubt that competitive pressures on all organizations are increasing significantly, particularly, from low-cost developing nations. This, in itself, is rendering the corporate environment an increasingly more challenging one.

A closer look at the performance of firms within EU member states reveals that these have been successful at improving their innovative performance over the years 2008-2015, although a reversal in the trend has been recorded, when comparing the years before and after 2012. Malta is a small island state in the Mediterranean, and an EU member since 2004. It is classified as a *moderate* innovator revealing a steady improvement in its performance index for the period 2013-2015. Malta's innovative performance index, relative to the EU, stood at 69% in 2010 and reached almost 85% in 2015 (EU Innovation Score Board, 2018). Furthermore, the Global Competitiveness Report 2017-18 shows Malta climbing to the 38th position out of 137 countries, with an innovation index of 3.8 (measured out of a range from 0 to 7; from 3.6 in 2010). The common enablers of this innovative performance transpire to be enhanced collaboration between innovative SMEs; increases in the introduction of new products and processes by SMEs; and a growth in the license and patent revenues from abroad. Further analysis of this report reveals a divide within the EU, particularly, between the well-performing Northern and North Eastern European countries and the Southern and Central and Eastern European countries.

A closer look at Malta's current innovation performance reveals that, although overall the nation has improved its performance in the area, this modest

innovator is, at times, severely underperforming against the EU average. This is mostly evident in areas relating to human resources, research systems, innovative environments, finance, firm investments, innovators, linkages, and sales impacts (European Commission, 2017). Malta exceeds the EU average in only 2 categories, namely, intellectual assets and employment impacts.

The global economy has shaped an economic environment in which ruthless and ferocious competition prevails. Successful firms need to strive to maintain their sustainable competitive advantage in order to secure their success in today's environment (Johannessen, Olsen, and Lumpkin, 2001). Various authors (Davenport, De Long and Beers, 1998; Davenport and Prusak, 1998; Grant, 1996; Kogut and Zander, 1992; Nonaka and Takeuchi, 1995, Wuryaningrat, 2013) have identified knowledge as the most crucial resource in shaping the innovative competitive advantage for organizations. Darroch (2005) links the firm's innovative ability directly to the effective management of its knowledge resources (Wuryaningrat, 2013). Given that innovation depends greatly on the leadership of an organization, then owner/managers in SMEs become crucial players in determining the success of SMEs in the modern knowledge-based economy (Gray, Gonsalves, 2002).

Owner/managers in SMEs are required to create an organizational climate that fosters learning, knowledge transfer, and sharing, in a bid to stir their firms on the innovation path to sustainable competitive advantage. Cohen and Levinthal (1990) have coined the term Absorptive Capacity (ACAP) to explain the set of internal procedures adopted by organizations to enhance their ability to assess, assimilate, and apply new knowledge for commercial ends. ACAP is, therefore, directly associated to the firm's innovation success (Indarti, 2010).

The swift and far-reaching development of emerging markets and globalisation emphasises the necessity to build capacity for global learning and knowledge transfer. Studies have shown that there is a strong relationship between organizational learning and firm performance as well as between learning and the exploitation of knowledge (Easterby-Smith and Lyles, 2011). Davenport and Prusak (1998) posit that knowledge management (KM) is pinnacle to a firm's success. Since its emergence as a management strategy in the 1990's, KM has revealed itself to be one of the most powerful management tools

(Easterby-Smith and Lyles, 2011). Over this period, the contribution by writers towards developing KM frameworks was prolific (Choo, 1998; Easterby-Smith, Crossan and Nicolini, 2000; Nonaka and Takeuchi, 1995; Nonaka and von Krogh, 2009; von Krogh, Ichijo and Nonaka, 2000).

Reports affirm that small and medium sized firms are the predominant form of enterprise in the European Union (EU Commission, 2012; Spence, 1999; Spence and Rutherford, 2003). Malta is one of the smallest countries in the EU where there are 28,696 firms (estimates for 2016 taken from European Commission, 2017). With the exception of 60 large firms, the rest employ less than 250 workers. The reality of the Maltese economy is that it is dominated by micro-sized firms (93.4% in 2016). Small and medium-sized firms in Malta account for 6.4% of business organizations (EU average 6.7%), employ 47.9% of the labour force and account for 46.2% of the island's value-added. Micro firms employ 31.5% of the labour force in Malta and alone account for 35.9% of the value added (EU average 20.9%).

It is clear that SMEs are significant in shaping the economic activity that ensues in many countries (Desouza and Awazu, 2006; EU Commission, 2012; Spence, 1999; Spence and Rutherford, 2003). SMEs feature a myriad of characteristics, which distinguish them from large firms. In particular, they suffer from severe resource constraints (Jarillo, 1989) and over-reliance on the skills and competences of the owner/manager (Bridge and O'Neill and Cromie, 2003; Daft, 2007). Owing to their distinct characteristics, which differentiate them from large firms, small firms must not simply be considered as miniature versions of the larger organizations (Curran and Blackburn, 2001). The fundamental dissimilarities between SMEs and large firms, which translate primarily into the increased need and urgency of SMEs to share and propagate their knowledge base, are increasingly pronounced. Fundamentally, SMEs differ from large firms as the very characteristic that drives innovation in smaller firms (i.e. resource limitation) indeed, acts as an obstruction in the larger counterparts, which, given their considerable financial backing, are led to believe that, in an attempt to enhance knowledge, they can stand alone without interacting with other firms (Dobni, 2006).

Notwithstanding the prolific literature on KM, its relevance for SMEs has been overlooked (Durst and Edvardsson, 2012). Authors (Durst and Edvardsson,

2012; McAdam and Reid 2001) advance that knowledge management, like other management practices, was designed and developed in large organizations, later to be also applied to small and medium sized enterprises (SMEs), using the same exact formula and frameworks as those applicable to the larger organizations. The fundamental dissimilarities between SMEs and large firms have thus been ignored. This implies that by ignoring the important and specific characteristics that distinguish SMEs from large firms, current KM theory is not well suited to expound on the learning process implemented in the firms in question.

The larger part of the knowledge found in SMEs is tacit in nature, particularly, in the form of knowledge from face-to-face meetings and brain storming sessions. It is very difficult to transform this tacit knowledge into its explicit form. Hence, knowledge sharing in SMEs is essential (Wong and Radcliffe, 2000). Authors (Du, Ai and Ren , 2007; Lee and Choi, 2003) argue that KM costs are unaffordable for SMEs (Kuan and Aspinwall, 2004; McAdam and McCreedy, 1999) and make a strong case for the creation of a knowledge sharing environment in SMEs. For this reason, systematic KM strategies are usually absent in SMEs (Daft, 2007; McAdam and Reid, 2001), or at best, not at all sophisticated (Wong and Aspinwall, 2005). In spite of this, it is essential for SMEs to manage their knowledge effectively as their success depends on this strategic asset (Durst and Edvardsson, 2012).

Earlier discourse has established that in recent years, the understanding and acceptance that service industries have become critical to the advancement of industrialised economies have been recognised (Carlborg, Kindsrom, Kowalkowski, 2014; Miles, 1993). However research (Barras, 1986; de Vries, 2006; Drejer, 2004; Ostrom, Bitner, Brown, Burkhard, Goul, Smith-Daniels, Demirkan and Rabiovich 2010; Page and Schirr, 2008, Hjalager, 2010; Toivonen and Tuominen, 2009) shows that the theoretical models of innovation do not take into account the specific features of service innovation, but rather, that there is still an insistence on the application of models relevant to manufacturing processes to be applied to service sector firms (Carlborg, Kindsrom, Kowalkowshi, 2014; Utterback & Abernathy, 1975).

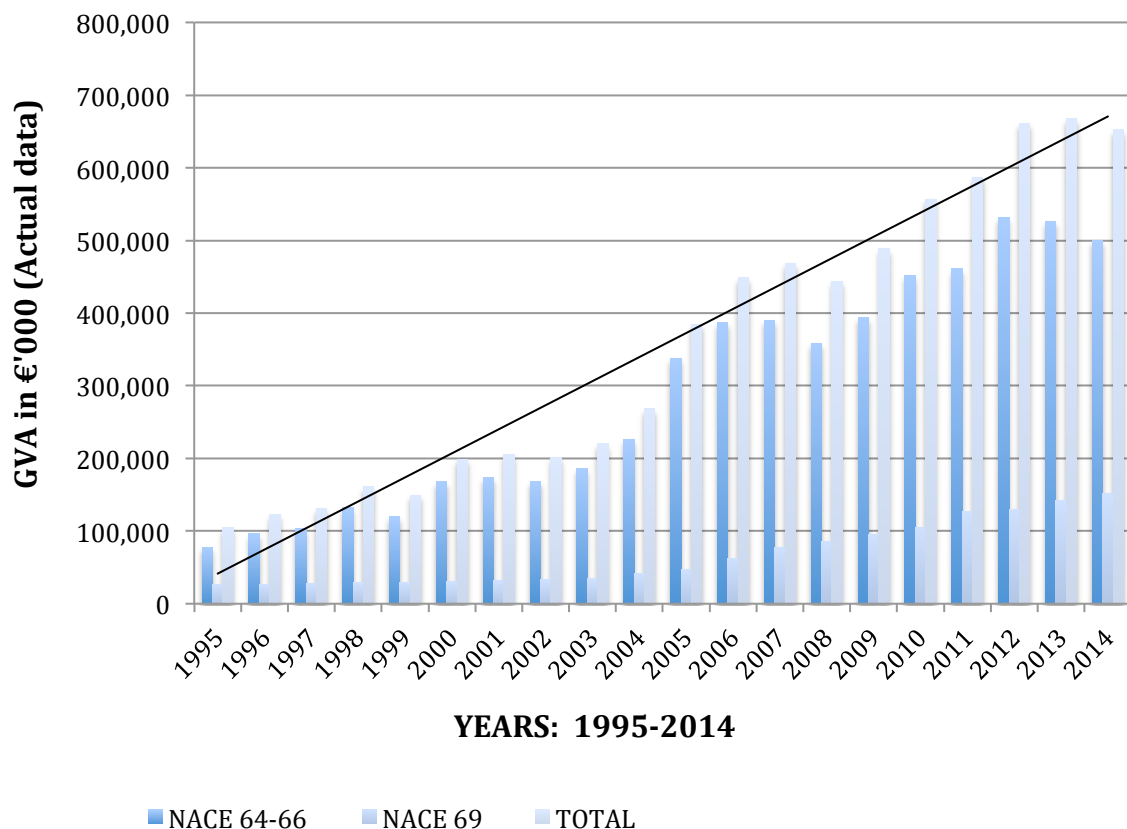
The Maltese economy is currently dependent on five main pillars, namely, agriculture and fishing, construction and quarrying, manufacturing, market services and the public sector (Briguglio 2011). Based on data collected from the National Statistics Office (2017) for the year 2015, the Market Services sector contributes close to seventy per cent of the total gross value added of the economy. At present, the Market Services sector comprises a number of identifiable sub-segments (namely, energy, education, I-gaming, business services, distributive services, water and waste management, financial intermediation, ICT, real estate, tourism, creative industries, transport, communication and advanced logistics, community services and other personal services, including health and education) which are of varying relevance and importance to the development and growth of the economy. Given Malta's mild climate and geographic position, tourism is one of the oldest, and strongest pillars of the Maltese economy (Blouet 1964).

Assessing the magnitude of innovation in tourism is problematic (Camison & Monfort-Mir, 2012; Hertog, Gallouj, & Segers, 2011; Krizaj, Brodnik, & Bukovec, 2014; Orfila-Sintes, Crespi-Cladera, & Martinez-Ros, 2005). This reflects significant unresolved differences of opinion on how it should be measured and on the factors that influence its form in various sectors, locations and over time (Arta & Acob, 2003; Carlisle, Kunc, Jones, & Tiffin, 2013; Hall, 2009; Hjalager & Flagestad, 2012; Sorensen, 2007). It has been repeatedly claimed that rigid innovation research has been applied to tourism to only a limited extent, and empirical tests of the phenomenon have been modest (Hjalager, 2002; Hjalager, 2010; Sundbo, Orfila-Sintes, & Sørensen, 2007). As a result, recent reviews of the literature on innovation in tourism have all highlighted the need for more theorising and empirical research on almost all aspects of the phenomenon (Hall & Williams, 2008; Tejada & Moreno, 2013; Williams & Shaw, 2011). One aspect of tourism that has been neglected in the literature is the absorptive capacity of hotels and other tourism businesses in spite of the extensive 'mainstream' (notably manufacturing) literature on this aspect (Thomas & Wood, 2014). This study aims to address this gap in the research literature.

Over the years, Malta has been able to identify changes in its macro environment and has learnt how to respond to global changes in an agile and nimble manner. It is in response to such global changes that the Maltese economy has been transformed and regenerated and, today, also relies on a fast expanding Financial Services sector, amongst other grown services sub-sectors, such as I-gaming. Figure 1.1 illustrates the growth trend of the financial services sector in Malta over a period of 20 years (1995 to 2014). NACE 64-69 (NACE: nomenclature statistique des activités économiques dans la Communauté européenne) represent the gross value added of financial services, insurance and auxiliary services, whereas NACE 69 accounts for the contribution of accounting and professional services, both categories representing the overall contribution to the economy of the Financial Services sector.

Figure 1.1 Actual Growth in the Financial Services Sector in Malta, 1995-2014

Source: National Statistics Office, Malta



New product development and speed-to-market are critical factors in securing competitive advantage for firms in the financial services sector (Drew, 1995). The unique and rapid growth of this industry has been driven by constant, incremental innovation and by the compatibility of these innovations, which have been integrated to multiple uses (Dobni, 2006). In the landscape that financial services firms face in the post crisis period, owner-managers have to balance the requirement for innovation with increased sectorial regulation, seen as the response to restore financial market safety and confidence (Cognizant, 2012). Although there is abundant scholarly and policy literature on financial innovation, a significant limitation of this literature is the relative paucity of empirical research on innovation in financial services (Frame and White 2004; Tufano 2003; Wolfe, Davis, Hepburn, Mills and Moore, 2011).

1.2 Aims and Objectives

This research aims to address the gaps present in the current literature and the concerns for enhanced competitiveness of SMEs, in an ever-increasing dynamic and fluid economic environment. This study will analyse knowledge management practices within service sector firms with the aim of examining the spectrum of practices and processes that are implemented with the aim of capitalizing on knowledge for the purpose of innovative commercial ends.

The aim of this research is to explore models of knowledge management adopted in distinct services sectors (notably, the Tourism and Financial Services sectors) with the view of examining the extent to which knowledge-intensive business firms and non knowledge-intensive business firms converge in their treatment of and reliance upon firm knowledge and its effect on the sustainable competitive advantage of firms. The aim is supported by the following objectives:

1. To assess the effect that firm size and leadership have on ACAP and to understand how firms overcome any limitations posed by these features.

SMEs tend to be treated as a homogenous group of firms, irrespective of the fact, that this broad category embodies very diversely configured organizations. This objective will explore the extent of the impact of the size of the SME shaping the manner in which the firm behaves in view of the accumulation and management of knowledge. It is accepted that small and medium sized firms rely greatly on their leaders. This aim will proceed to probe into the extent of the reliance on the leadership figure across SMEs.

2. To explore the external strategies, policies and procedures which SMEs adopt in order to acquire and manage knowledge.

The collaborative ability of SMEs is significant in facilitating the acquisition of new knowledge by small firms. The ability of small firms to establish and participate in knowledge networks supports such organizations in defeating the scale-related challenges associated with knowledge acquisition, creation, and exploitation. The investigation will examine the manner and degree to which, SMEs collaborate, formally and informally, to overcome the challenges encountered by their relative small size.

3. To explore the internal strategies, policies and procedures, which SMEs adopt to expand and capitalise on their knowledge resources.

It has previously been established that small firms are not miniatures of their larger counterparts, and, are characterized by distinct features (Curran and Blackburn, 2001). Small firms are disadvantaged in terms of resource scarcity and finance availability. They, generally, lack formal structures and procedures, yet, they are still subjected to the same threats and opportunities posed by globalization and advances in technology, as the larger firms (Valentim, Lisboa, Franco, 2015). The significance of these attributes is more severe, in smaller scale organizations. Absorptive Capacity refers to a set of organizational

routines, which are required in order to identify and utilize knowledge (Zahra and George, 2002). This project will investigate the degree to which 'non large' firms, (i.e. micro, small and medium firms) employ internal processes and procedures to identify, implement and capture the benefits of new knowledge.

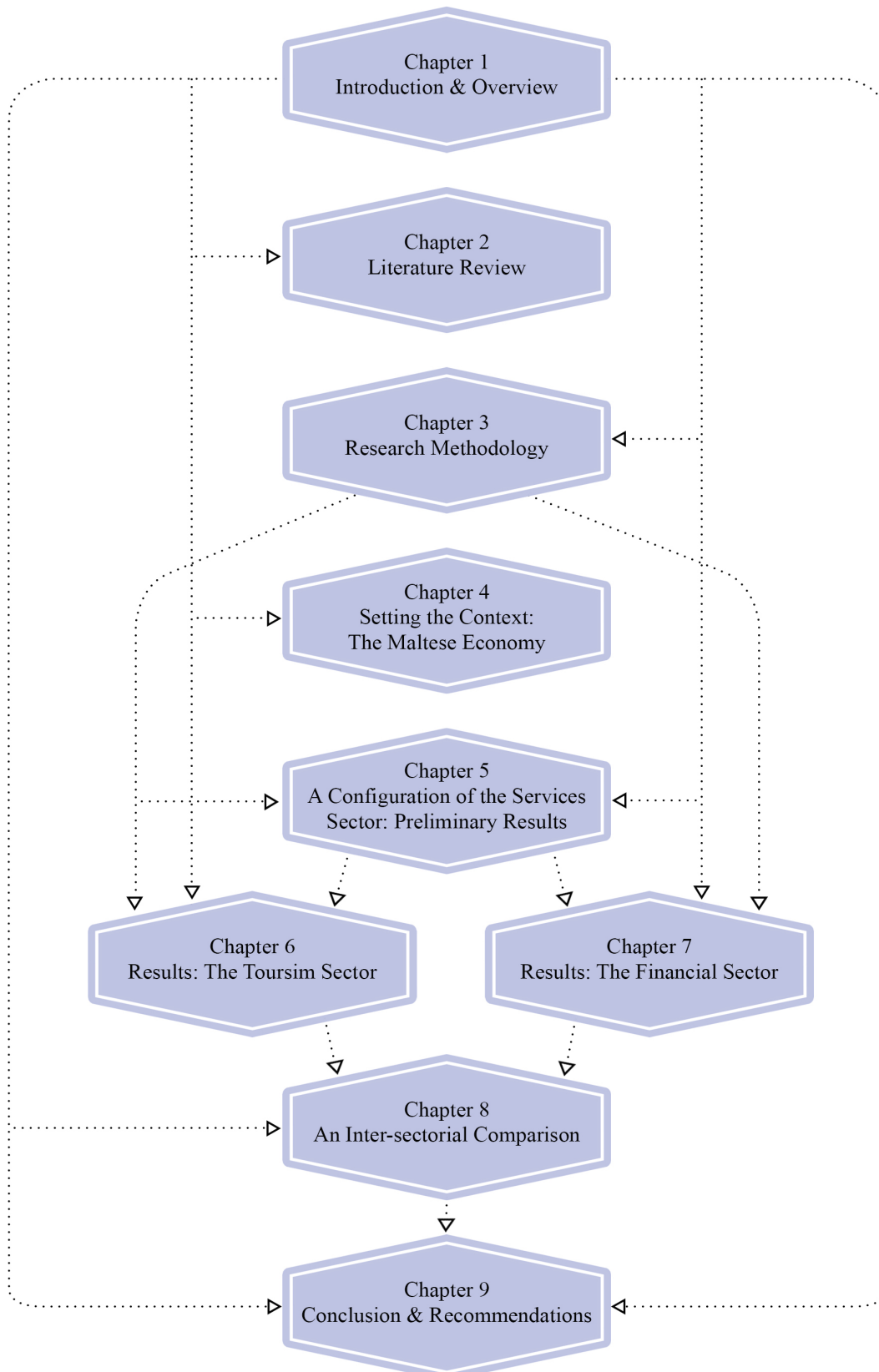
4. To study the congruencies and divergences that exist in the management of knowledge and ACAP in firms, across the Knowledge Intensive Business Services (in particular, the financial industry) and the Non-Knowledge Intensive Business Services Sector (in particular, the tourism industry).

The literature that focuses on knowledge management in manufacturing firms is rich and vast, and there is now, a developing body of knowledge management literature, which has been specifically set around the tourism industry (Camison and Monfort-Mir, 2011; Williams and Shaw, 2011), but the same cannot be claimed for the literature discussing knowledge management in the financial services sector, typically a knowledge-intensive business sector. This research endeavours to address this deficiency in the existent literature. The analysis will consider the knowledge management practices and processes adopted by service sector firms. In this way, this work will contribute to the growing literature relating to ACAP in service sector firms. Moreover, the investigation will challenge the idea that all service sector firms adopt the same routines to manage their knowledge. The analysis will focus on identifying any correspondence or otherwise in the methods used by firms to exploit the benefits of new knowledge in the knowledge intensive business sector (KIBS), and the non-knowledge intensive service sector (NKIBS). The study will evaluate whether the methods used in different KIBS firms and NKIBS firms are industry and/or firm specific.

1.3 Structure of the Thesis

Figure 1.2 The structure of the thesis and the interlinking of the different sections

Source: Personal collection



The structure of this thesis is as follows (figure 1.2):

Chapter two reviews the literature that is pertinent to the study. The study commences by reinforcing the direct relationship between innovation and organizational competitiveness and sustainability. As the study is mainly planted in the development of innovation in firms, it begins by outlining a definition of innovation and puts forward different models, which have been advanced to explain innovation in firms. The discussion moves on to trace the development of the knowledge management literature, showing that most literature is based on large manufacturing firms, with little importance given to SMEs operating in the service sector, particularly, in the in the tourism sector and in the financial services sector.

Chapter three discusses the methodology adopted by the study. The chapter begins by discussing the different elements of the research process, giving both a theoretical and an applied exposition of the main components: ontology, axiology, epistemology, and methodology. The nature of the methodology that has been adopted for this study is that of mixed methodology - complex, sequential, and multiphase. Mixed methodology captures the best of both qualitative and quantitative approaches, as it is possible to generalize findings to a population, and to develop a detailed view of a phenomenon (Creswell, 2003). A sequential design has the strength of exploring the mechanisms behind revealed associations or to test hypotheses (Morse 1991, 2003; Small, 2011; Smith 2008; Tarrow 2004). The qualitative methodology was guided, primarily, by the principles of purposeful sampling, constant comparison of data using the context/action/consequence model and theoretical saturation guidelines (Charmaz, 2003; Glaser and Strauss, 1967; Strauss, 1987; Strauss and Corbin, 1990)., This analytical framework provided a robust structure for the analysis of the qualitative data. The purpose of the qualitative analysis was to understand the interaction occurring between the contextual nature of the environment within which the organizations operate, the actions taken by the entrepreneurs in the different industries, and the resultant consequences, which, in turn, also influenced the contextual reality. The objective of the analysis emanating from the interview data was the development of a contextual model, which was used to develop the survey instrument adopted in

the second phase of the research. The methodology also assumes a reflective and retrospective perspective, as the researcher leads the respondents to explore previous years' experiences. The first phase of the research includes a number of qualitative interviews held with players from both interested industries, in order to identify salient themes pertaining to the research objectives. The themes emanating from phase 1 of the research have been used to develop the survey instrument, which formed the basis of the quantitative part of the project.

Chapter four sets the scene within which the research is conducted by giving a detailed overview of the contextual reality within which Maltese SMEs operate. The Maltese economy is a small, insular island state in southern Europe, with a long history of colonialisation. It has been a member of the European Union since 2004 and of the Euro zone, since 2008. The development of Maltese industry has taken place over the past 60 years or so. The Maltese economy is currently dependent on five main pillars, namely, agriculture and fishing, construction and quarrying, manufacturing, market services and the public sector (Briguglio, 2011). The Maltese economy has progressed from one harnessed to the needs of the British colonial administration up to the mid-1960s to a market-driven economy, with an emphasis on higher value added economic activities in services (today comprising around 70% of the Maltese Gross Domestic Product, (NSO, 2018), notably, financial services and tourism (NSO, 2017).

Chapters five, six, and seven discuss the results of the qualitative and quantitative research pertaining first to the overall service sector and, in subsequent chapters, to the tourism sector and the financial services sector respectively. Each chapter commences with an analysis of the contextual features of the particular industry in terms of number and size of firms, profile of owner-manager and employees, in addition to a detailed outline of the innovation perspective held within the industry. Each chapter proceeds to address the first three research objectives detailed earlier on pages 29 and 30, and will, therefore, elaborate on the effect of size and leadership on the knowledge management and leadership of the SMEs, and on the internal and

external policies, procedures, and strategies of the said firms in each of the identified sectors.

Chapter eight presents an inter-sectorial comparison of the results in the tourism and the financial services sector, thereby addressing the fourth research aim (page 30). Undoubtedly, the regulatory frameworks within which firms in the financial services sector operate pose strict operational boundaries for the firms. However, despite the obvious constraints imposed by this reality, the particular characteristics of the owner-manager of the firm also have a strong bearing on the innovative efforts of the firm and, in particular, on the learning capabilities of the industry. The tourism sector, on the other hand, is not subject to severe operational regulations; in theory, the industry should be characterised by learning and innovation, which take place at the speed dictated by the leadership of the firm, resources at hand, the thirst for learning of the employees, demands of the market and the competitive environment. This chapter contrasts the ACAP practices implemented in these two service sectors, the subject of this research, revealing any differences, which exist across the industries, as well as within the firms in the same industry.

Chapter nine concludes this study by presenting the research findings presented in the form of seventeen points, grounded in the research aim and objectives, which the study set out to address. The chapter will proceed to relate the research findings to literature on knowledge management and ACAP, and will highlight the extent to which the research findings contribute to fill the gaps in the existing literature. Here, the author will present a generalized model, emanating from the research findings and grounded in the literature, to explain ACAP workings in service sector SMEs. This section underlines the study's key contributions to knowledge and its usefulness to researchers and managers, the latter in their quest to achieve sustainable competitive advantage for their organization. The underpinning limitations of the study are identified, such that the reader can immediately qualify the findings of this study. Lastly, recommendations for further research have been presented with the view of attracting new research interest in the areas focused upon.

The ensuing chapter of this study, chapter 2, will proceed to identify and critique the development of the literature relating to the theme of absorptive capacity, starting with the initial presentation of the subject in 1988, to the present day. This is the period covered by the literature review. This review is organised into a series of sections, discussing aspects of ACAP such as theoretical frameworks, dimensions of ACAP, measurement of ACAP, antecedents of ACAP. The review will proceed to discuss a definition of the term SMEs (Small and Medium Sized enterprises), ACAP research undertaken on SMEs as well as ACAP research within the service industries, with particular interest in the financial services industry and in the tourism industry.

Chapter 2

Literature Review

2.1 Introduction

Irrespective of the size and nature of business, firms now have to contend with global competition (Barrett and Peterson, 2000). Innovation is the catalyst which firms need to adopt to thrive in today's modern aggressive business environments. Innovation is not a new notion, neither is it a phenomenon restricted only to modern times. Indeed, history reveals to us that there seems to be a constant inherent quest by mankind to execute things in a new, improved and better manner. One has but to analyse the world we live in today to acknowledge the fact, that, indeed, we live in an environment of constant change. According to Drucker, (1993), *'innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service.'* (page 20). Porter (1990) concurs and emphasizes, *"national prosperity is created not inherited"*. Indeed innovation is recognised to be at the basis of the competitive economy (Porter and Ketels, 2003). Much is, therefore, reliant on the management of innovation processes within organisations (Balachandra and Friar, 1997; Rothwell, 1992) since organisations will achieve competitive advantage as they embrace new technologies, markets and processes. Innovation is the *'core renewal process'* within an organization (Tidd and Bessant, 2009), allowing entrepreneurs to turn ideas into reality and securing value from them. The term 'innovation' is multifaceted as it encapsulates several variables: the concept of new opportunities, new markets, and new products and services. Innovation is sometimes about creating completely new and different opportunities. Innovation is very closely dependent upon the market: it gravitates around the entrepreneur's ability to identify and ably penetrate and grow a new market, as much as it depends on the entrepreneur's ability to preserve an already established and mature market.

Innovation is necessary for firms to enjoy sustained competitive advantage (Hadjimanolis, 1999, Damanpour and Gopalkarishnan, 2001; Mei, Arcodia and Ruhanen, 2012; Nicolau and Santa-Maria, 2013; Paget, Dimanche and Mounet, 2010; Tseng, Kuo and Chou, 2008) and is closely correlated with firm growth and enhanced organizational performance (Freeman, 1982). Firms that foster innovation are better endowed to weather the high dynamism and volatility of modern market conditions (García-Zamora, González-Benito and Muñoz-Gallego, 2013; Jansen, Van den Bosch and Volberda, 2006).

In today's business environment, competition is increasingly knowledge-based (Lane and Lubatkin, 1998). Knowledge is recognised as being one of the firm's most important strategic assets (Grant, 1996; Kogut and Zander, 1992; Spender, 1996; Teece, Pisano, Shuen, 1997), as the only sure source of lasting competitive advantage (Nonaka, 1991); it propels innovation (Dobni, 2006) and is closely associated with the firm's capability of achieving sustainable competitive advantage (Bhatt, 2001; Fiol, 1996; Grant, 1996; McEvily and Chakravarthy, 2002; Teece, 2001). It is not knowledge *per se* that constitutes this vital strategic asset for organizations, but the processes that are adopted within the firm to integrate the knowledge (Grant, 1996). Knowledge can be identified as explicit knowledge and tacit knowledge (Nonaka and Takeuchi, 1995). Formalised knowledge is of the explicit type and can be found in manuals, and other recorded formats. The very methodical nature of collecting and storing this type of knowledge lends itself to it being shared and transferred within an organization (Nonaka, 1994; Gorman, 2002). The same cannot be said of tacit knowledge. This category of knowledge breeds out of learning experiences, participation, know-how, and personal contact. This makes its transmission particularly arduous (Afiouni, 2007; Nonaka, 1994; Polyani, 1957). Knowledge Management (KM) and Absorptive Capacity (ACAP: the preparedness of firms to absorb and exploit new knowledge), thus become a crucial management process, closely related to firms' innovation capabilities and financial success (Kostopoulos, Papalexandris, Papachroni, Ioannou, 2011). Researchers (Squier and Snyman, 2004; Wiig, 1993) maintain that managing employees' knowledge in order to exploit this key resource for the benefit of the organization is a major challenge for management. Furthermore, research shows (Enz and Walsh, 2006) that firms tend to routinely neglect the knowledge that lies with support and service staff in, say, the hospitality industry, or, in the retail sector. Instead, the focus is mainly on investing in the intellectual capital of the professional workers, as the service and support workers, especially, in tourism and retail, are seen as dispensable and easily replaceable. Scholars claim that research revolving around innovation focuses principally on large firms (Damanpour, 1988, 1991; Kim 1980; Kimberly and Evanisko, 1981), with smaller organizations being treated merely as miniature of the larger counterparts (Durst and Edvardsson, 2012). Essentially, there is

insufficient research, which focuses on knowledge management frameworks, specifically designed for SMEs (Ergazakis, Ergazakis, Flamos and Charalabidis, 2009).

The focus of this chapter is on two related themes. Firstly the chapter will discuss the development of the concept of Absorptive Capacity (ACAP) by presenting and contrasting the arguments stemming from the literature regarding the dimensions, measurement, and antecedents of ACAP. A systematic review is presented in this section. This analysis gives a representation of the different themes of the literature around ACAP. The section proceeds with a literature map, visually illustrating the development of the different aspects of the study of ACAP in the literature. In the second part of the chapter, a more focused approach is adopted, which focuses on developing the themes, which emanate from the literature map, as well as the development and adoption of ACAP in service sector SMEs, with a particular interest in financial services and tourism firms, the two industries being considered for the purpose of this study.

2.2 A systematic review and Literature Map of Absorptive Capacity

Systematic reviews and meta-analyses are valuable tools at the disposal of the social sciences researcher (Davis, Mengersen, Bennett, Mazerolle, 2014). A systematic review involves the location and analysis of the available and relevant literature on a theme, which, therefore, allows for a comprehensive study of prior research, permitting an in-depth understanding of the problem and the interpretation given to it by different researchers. A systematic review is a simple statistical representation collated from the multiple studies in the systematic review. Meta-analyses were initially designed purposely for use in the social sciences, particularly, psychology, (Glass, 1976), but the technique quickly spread to other fields, including the medical field (Davis, Mengersen, Bennett, Mazerolle, 2014). Meta-analyses help to illustrate the state of the literature over a chosen period, and to visualize the different lenses through

which the diverse researchers have looked at a problem or concept, and to integrate findings. The value of systematic reviews is to establish a rigorous structure and procedure to the research process and to the summarizing of research findings (Möser and Schmidt, 2014), which have been the outcomes of previous research (Card, 2012). Systematic reviews have been found useful in aiding readers to evaluate and review research results (Stanley, 2001) and, they are particularly useful in combining evidence from prior research in order to inform and direct new research (Davis, Mengersen, Bennett, Mazerolle, 2014).

The systematic review (Table 2.1) of the extant literature on ACAP aims to provide a simplified, statistical, and systematic representation of the sourced research papers, which have been published around the theme of Absorptive Capacity (or Knowledge Management). Many of these have been referenced through the research process of this study. The purpose of this review is to summarize, evaluate, as well as to analyze and synthesize the empirical research on the theme in discussion.

For the purpose of the systematic review and, as a foundation to the review of the literature on Absorptive Capacity, the author has undertaken an analysis of the peer reviewed research on ACAP (sourced on the Google Scholar platform), starting with the seminal works published by Cohen and Levinthal (1989, 1990, 1994), Zahra and George (2002) Lane, Koka and Pathak, (2006) and Todora and Durisin (2007). The author then proceeded, in a cascading manner, to review literature that related to the different perspectives of the ACAP construct adopted by individual researchers, sourced via a search through the Google Scholar platform. An evaluation of the meta-table indicates that the published research has focused on the definition and conceptualizing of ACAP; on different elements of Potential and Realised ACAP; on the measurement and on the antecedents of ACAP.

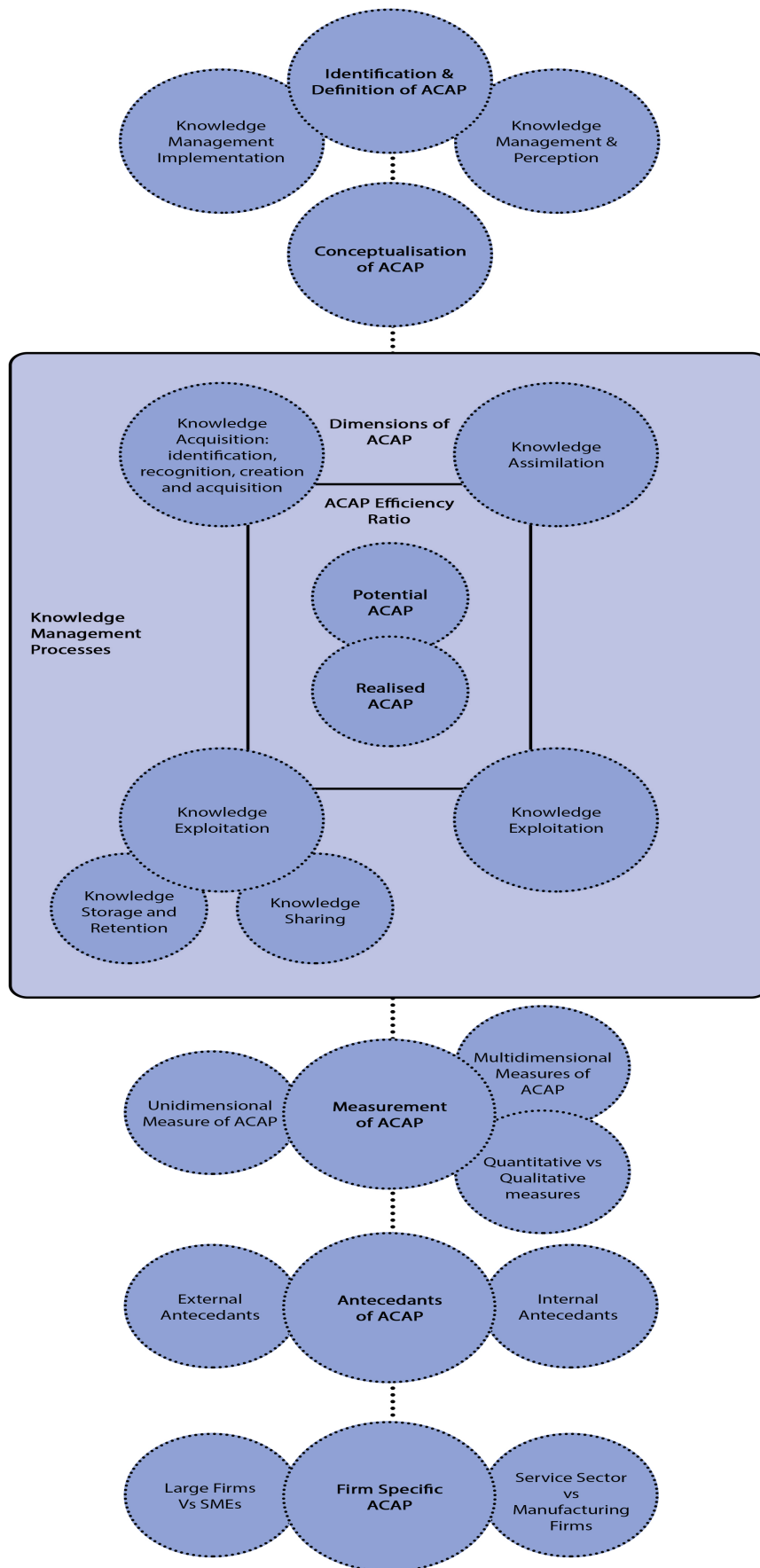
A thematic analysis of the two hundred and forty-four, peer reviewed articles from 1973-2018, reveals that, to date, there has been a balanced volume of literature around several facets of ACAP: knowledge implementation, perception, transfer, knowledge identification, creation/acquisition/generation, knowledge utilization, transformation and exploitation; unidimensional,

quantitative measures of ACAP, the measurement of intellectual capital, the extent of the relationship of leadership and management structures on ACAP and the extent of the strategic orientation of the organization on the effectiveness of ACAP. There is, however, very little attention dedicated to any of these variables from the specific angle of small and medium sized firms. Instead, all firms are taken to belong to a homogeneous sample of large firms. The analysis reveals that only two of the reviewed studies considered firm size as a variable in their analysis. The systematic review also indicates that there is enhanced interest in the dimension of Realised ACAP (i.e. those aspects of knowledge transformation and exploitation) when compared to the number of publications relating to Potential ACAP (i.e. the aspects of knowledge acquisition and assimilation), with the single area of knowledge transfer recording the highest research interest. Equitable research interest is evidenced in the realms of the measurement of ACAP and the conceptualization of ACAP, although the area where by far the highest research interest is present is in the antecedents of ACAP, in particular, the more controllable, internal antecedents. The study revealed contemporary interest in the study of ACAP in emerging countries, as well as the impact of social media as a facilitator of ACAP.

Figure 2.1 is a Literature Map, showing how the ACAP concepts are connected and associated together. Literature mapping is adopted to establish the patterns found in the published research. It is a visual summary of the literature (Creswell, 2008). The benefit of a literature map is that it is a helpful method of visualizing the development traced by the construct and to indicate the main contributors at each of the different stages.

Figure 2. 1 A Map identifying the development of the Literature on ACAP

Source: Personal collection



2.3 The Theoretical Framework: The Development of the Construct of Absorptive Capacity and its Definition

There has been a growing interest in the organizational phenomenon of Absorptive Capacity (ACAP) across all fields of management (Koka and Pathak, 2008; Lane and Lubatkin, 1998; Teece, Pisano, Shuen, 1997). Cohen and Levinthal (1990) explain how firms that have enriched ACAP capabilities are proactive towards market opportunities, whereas organizations with lower ACAP capabilities merely adopt a reactive approach to market conditions. Scholars (Hamel and Prahalad, 1994; Liao, Welsch and Stoica, 2003; Volberda, 1998) have recognised the importance of organizational proactivity as a necessary condition for firms to cope with unstable economic and business environments. However, despite the heightened attention being dedicated to the construct, a considerable extent of ambiguity and divergence of definitions features around this area of management (Zahra and George, 2002) resulting in a substantial degree of obscurity when discussing ACAP.

Kedia and Bhagat (1988) first coined the term Absorptive Capacity (ACAP), in their study on international technology transfer. However, the work of Cohen and Levinthal (1989, 90) is generally accepted to mark the origin of this construct. ACAP represents *'the firm's ability to identify, assimilate and exploit knowledge from the environment... a firm's ability to imitate new process or product innovations'* (Cohen and Levinthal, 1989, page 569).

In their initial article on the theme, scholars Cohen and Levinthal related ACAP closely to the Research and Development (R&D) efforts of the firm, arguing that *'our model postulates that a firm's capacity to absorb externally generated knowledge depends on its R&D efforts'* (page 571). In subsequent research conducted by the same authors, Cohen and Levinthal (1990) refine their ACAP model to include other vital factors, which determine this construct, such as, the firm's existing knowledge base, its learning experience, and prior related knowledge. The refined ACAP model is now defined, not simply as the firm's ability to acquire and assimilate information, but more importantly, to exploit this

information to commercial ends. Indeed this is the whole scope of business in the first place. In this new scenario, it becomes imperative to evaluate also the firm's problem solving abilities and communication processes for knowledge sharing and knowledge transferring, as, under the refined definition, these abilities have a strong bearing on the firm's ACAP.

In a study published in 1994, Cohen and Levinthal argue that their ACAP models thus far were incomplete, as a firm's ability to exploit new knowledge for commercial aims also depends on variables such as, past behaviour, uncertainty, and competitive interaction. They examine the extent to which firms invest in enhancing their knowledge base and processes, even though the return of their efforts may be unknown.

Welch (2001) argues that firms reap benefit as a result of the speed with which workers learn, transfer their knowledge across the firm, and act upon the newly acquired knowledge; all three processes being very difficult to forecast with any degree of accuracy. Firms can never anticipate the return that their investment in intellectual capital will render, because it is always challenging to manage (identify, record and retrieve and share) knowledge held by workers. Cohen and Levinthal proceed also to analyse the effect that different competitive environments have on a firm's investment in knowledge acquisition and assimilation, and argue the case of spillovers. They claim that employees' mobility between firms causes the spillover of acquired knowledge by the original firm to the receiving organization. Another form of spillover is also considered in this ACAP model: the knowledge that other firms acquire of a firm's expected return on investment in new technology. This analysis of absorptive capacity also considers the effect of the degree of market competition on the firm's investment in learning and ACAP. It is argued that market competition may result in an underinvestment in ACAP, especially in the case where learning has a rather non-cumulative nature, and, where it is mostly restricted to an updating of knowledge.

Other scholars (Arbussà and Coenders, 2007) have extended Cohen and Levinthal's (1994) evaluation of the effect of spillovers on ACAP. They disclose that firms will invest in increased R&D activities when they are able to reduce

outgoing spillovers, by reverting to appropriation regimes, such as, patents, trademarks, copyright (Antonelli, 1999; Buzzacchi, Colombo and Mariotti, 1995). Such instruments give firms the assurance that their investment benefits are not being illicitly transferred to other firms in the industry, as workers move from one firm to another. Further, they establish that the impact of incoming spillovers on a firm's innovation, is industry specific, varying greatly between two groups of firms: on the one hand, manufacturing and high tech industries and, on the other hand, service firms and low tech industries; and again, is more substantial for those firms that invest in appropriation regimes, as once the knowledge has filtered into the organization, it cannot be replicated by other firms, and gives the original incumbent a competitive advantage.

Figure 2.2 A model for ACAP

Source: Todorova and Durisin (2007),

adapted from Cohen and Levinthal, (1989, 90, 94)

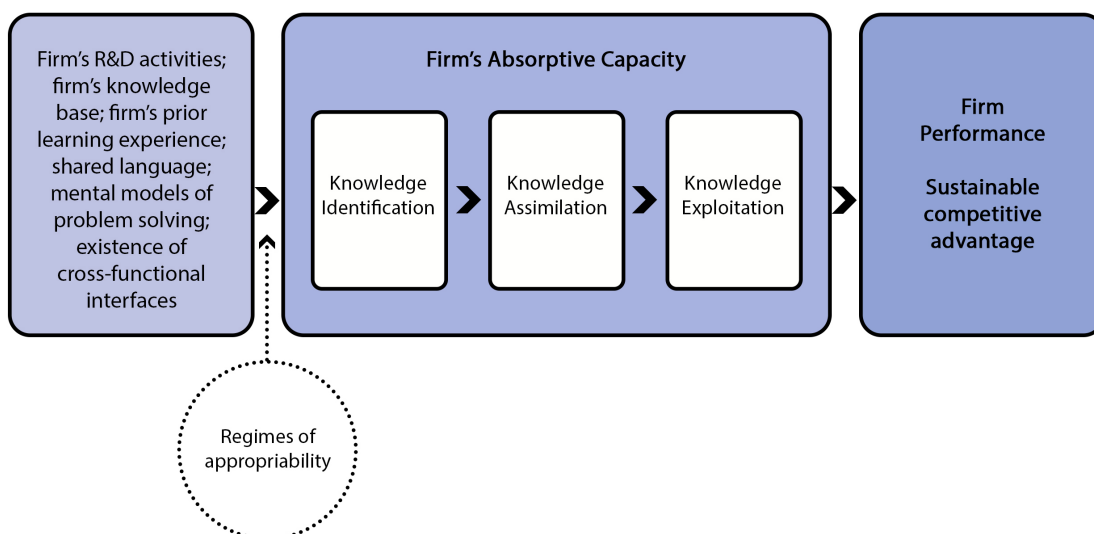


Figure 2.2 illustrates the ACAP model based on the research done by Cohen and Levinthal. The model shows the final development of the authors' theory, with the variables in the firm's environment which play upon the firm's ability to manage firm's knowledge; the firm's practice of relying on regimes of appropriability to secure its investment in knowledge acquisition; absorptive capacity with its three dimensions of knowledge identification, knowledge assimilation and knowledge exploitation and, finally, the outcome of the firm's

investment in knowledge, i.e. enhanced firm performance and sustainable competitive advantage. The pioneering model of ACAP presented by Cohen and Levinthal (1989,1990,1994) was subsequently revisited several times with different researchers adding their own specific perspective and interpretation of the phenomenon.

Heely (1997) was one of the first scholars to revise the initial model proposed by Cohen and Levinthal. He proposed to decompose ACAP into three main components: external knowledge acquisition, intra-firm knowledge dissemination, and technical competence, thereby, contrasting with Cohen and Levinthal's ACAP dimensions of knowledge identification, knowledge assimilation and knowledge exploitation. Heely contended that the acquisition of new knowledge is, on its own, irrelevant, and relies on the internal sharing and dissemination of the new knowledge for the benefit of the firm. Technical competence, Heely explains, emanates mainly from previous activities in R&D.

Lane and Lubatkin (1998) were also among the first researchers to reconsider the original ACAP model. Their main argument was that relevant knowledge is generally contextual and inlaid in what they refer to as '*specific knowledge-processing systems*' (Lane and Lubatkin page 473, cited in Leonard-Barton, 1992; Spender, 1996; Teece and Pisano, 1994). In their analysis of ACAP they transfer the focus of the model from being solely on the firm, to what they refer to as the '*learning dyad*' (page 462), i.e. the learning couple: the learning firm and the teaching firm. It is in this way that Lane and Lubatkin's interpretation of ACAP differs from that presented by both Cohen and Levinthal and Heely (the latter only focused on the factors in the firm's environment). Lane and Lubatkin distance themselves from the model, which simply presents the 'learning, or knowledge-receiving organization', but, instead, prefer to focus on the context that exists between the learning firm *and* the firm from whom the knowledge is being learnt, i.e. the teaching firm, and they coin this as Relative Absorptive Capacity. The authors argue that the ability of an organization to acquire and assimilate external knowledge is not only reliant on the characteristics and features of the firm itself, but rather also depends upon an additional three factors, which enrich the context of the analysis of the ACAP framework. Lane and Lubatkin (1998) posit that the form and nature of the knowledge being

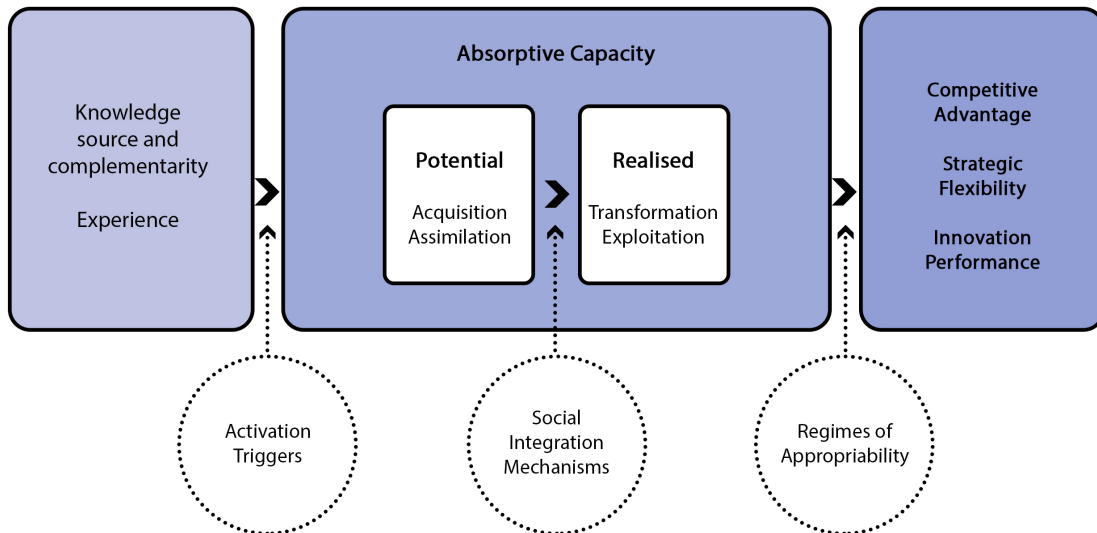
transferred, as well as the affinity between the processes and structures of the learning and teaching firm, together with the firm's appreciation of the context within which the original knowledge emanated from (i.e. compensation policies and familiarity with organizational problems), all impact on the level of ACAP of the learning organization. In general, the authors argue, that the greater the relative similarity between the characteristics of the learner and the teacher, the greater is the learning firm's *relative* absorptive capacity.

Zahra and George (2002) focus on the relevance of the dynamic capabilities (Eisenhardt and Martin, 2000; Teece, Pisano and Shuen, 1997; Raff, 2000; Sun and Anderson, 2010) of firms, as it is such competences that equip the firm to realign its knowledge base and enable it to respond effectively to the ever-changing competitive business environment, thus being better positioned to secure its sustainable competitive advantage. Zahra and George redefine the ACAP framework to reduce its ambiguity by recognising it as a firm's ability to acquire, assimilate, *transform* and exploit knowledge and proceed by saying that this ability is engrained in a firm's own processes and routines. They therefore reconfigure Cohen and Levinthal's three-dimensional model into a four-pillar model. Furthermore, the authors propose that the four components of ACAP (acquisition, assimilation, transformation and exploitation of knowledge) are complementary and support the firm in developing its dynamic capability. Zahra and George's definition of ACAP, indeed, incorporates definitions by other researchers (Cohen and Levinthal, 1989,1990, 1994; Kim, 1998; Mowery and Oxley, 1995) and relates each of these differing versions of the ACAP definition to one of the four components of the construct. This indicates that Zahra and George embrace the work of prior scholars and moreover, they enhanced upon it by discussing the complementarity of the ACAP dimensions and the importance and the link between ACAP and firm processes and routines. Mowery and Oxley's (1995) and Kim's (1998) definition focuses on the acquisition of knowledge, whilst Cohen and Levinthal's definition features the acquisition and exploitation dimensions, whereas Kim's version highlights the firm's ability to problem solving, hence, illustrating the transformation dimension of ACAP. Zahra and George present a model, which, at its origins, brings together previous literature on the construct of ACAP.

Figure 2.3 illustrates the model of ACAP as presented by Zahra and George (2002).

Figure 2.3 A Revised Model of ACAP

source: Zahra and George (2002).



This model focuses on knowledge flows within organizations, giving the construct a process-like perspective, dynamic rather than static. The model also highlights the antecedents of ACAP; activation triggers (Walsh and Ungson, 1991; Winter, 2000) i.e. events that compel the firm to act to stimuli in its environment; knowledge mechanisms, which enable employees to learn from one another, and which also enable problem solving (Garvin, 1993, Sheremata, 2000) besides driving knowledge exploitation (Chaudhuri and Tabrizi, 1999). Other studies (Liao, Fei and Chen, 2007) bear evidence to the fact that knowledge sharing, enhanced by social integration mechanisms, enables absorptive capacity and innovation capability. Social integration mechanisms are new elements to the ACAP construct, one, which had not been considered by earlier scholars and, which puts the focus on the extent and quality of communication with which employees engage. The model also includes the firm's use of regimes of appropriability. Zahra and George (2002), like Cohen and Levinthal (1994), and Lane and Lubatkin (1998) before them,

show how, when substantial regimes of appropriability are in place, the payoff from ACAP will be greater, as firms can better protect their knowledge assets and generate profits from them (Anton and Yao, 2000).

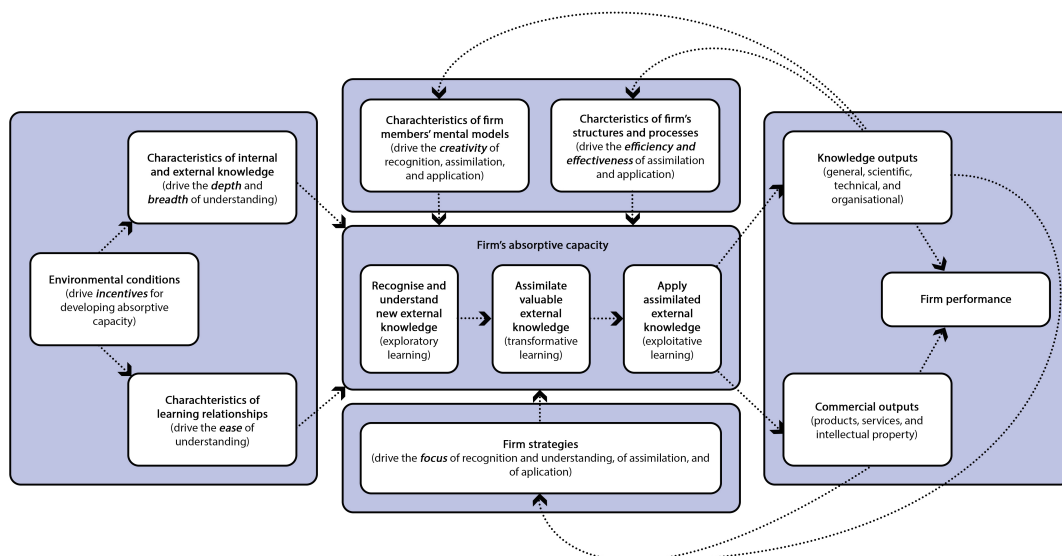
Zahra and George posit that the four dimensions of knowledge acquisition, assimilation, transformation, and exploitation are complementary and correlative. They propose further similarities between them. They argue that the aspects of knowledge acquisition and assimilation can be regarded as Potential ACAP (PACAP), whilst those of knowledge transformation and exploitation can be considered as Realised ACAP (RACAP). PACAP positions the firm to be responsive to external knowledge acquisition and assimilation, whilst RACAP is a measure of the firm's ability to use its knowledge transformation and knowledge exploitation capabilities to its advantage. The authors use the ratio of RACAP to PACAP to measure the absorptive capacity efficiency, i.e. the rate at which the firm is capable of exploiting its acquired knowledge to create sustainable advantage. Zahra and George (2002) contend that firms cannot incorporate (assimilate) new knowledge into their firm, unless they have first acquired the said knowledge. Moreover, even when firms have developed processes to acquire and assimilate knowledge, they do not necessarily have the ability to transform and exploit this knowledge to commercial advantage, an element that had been overseen by previous scholars. Therefore, the four components of the model are complementary to each other. The authors claim that firms, which have well developed PACAP capabilities, are well positioned to continually update and renew their stock of knowledge, and to identify market trends to compete in changing markets.

A further development in the model for ACAP is that proposed by Lane, Koka and Pathak (2006). Following a detailed analysis of previous studies on the theme, Lane Koka and Pathak (2006) develop a definition of ACAP that encompasses three sequential processes: exploratory learning, transformative learning, and exploitative learning. Figure 2.4 illustrates these processes and the interaction between each phase and element. The model is presented with the antecedents of ACAP, which are categorised into (a) those variables determining the breadth, depth, and ease of understanding, and (b) those,

which drive the incentive for developing ACAP feeding into the ACAP process, which consist of exploratory, transformative and exploitative learning. Other elements, such as the firm members' mental models, the firm's structures and processes, as well as the firm's strategies are also seen to impact on the process of ACAP. The exploitation of knowledge drives the production of knowledge and commercial outputs, which impacts on the firm's performance and success. In turn, the knowledge outputs created by the firm will shape the mental modes of the firm members and the structures, process and strategies adopted by the firm, which in turn will again drive the exploratory, transformative and exploitative learning. This learning process is illustrated in Figure 2.4 below.

Figure 2.4 A Further Revised Model of ACAP

source: adapted from Lane and Pathak (2006)



Lane, Koka and Pathak, (2006), therefore define ACAP as the 'firm's ability to utilize externally held knowledge through three sequential processes: (1) recognizing and understanding potentially valuable new knowledge outside the firm through exploratory learning; (2) assimilating valuable new knowledge through transformative learning, and (3) using the assimilated knowledge to

create new knowledge and commercial outputs through exploitative learning' (page 856)

The above model is one of the first to distinguish between internal and external drivers of ACAP. The internal antecedents include factors such as internal organizational structures, strategies and processes, and the mental models of the organization's members. Only a few other researchers (Lane and Lubatkin, 1998; Lane, Salk and Lyles, 2001; Van den Bosch, Volberda and De Boer, 1999) include this perspective in their studies. The external antecedents include an evaluation of the firm's alignment between the internal knowledge and the new knowledge that needs to be learnt, the environmental conditions within which the firm is operating, as well as the cultural, structural, strategic and compensation fit between the firms.

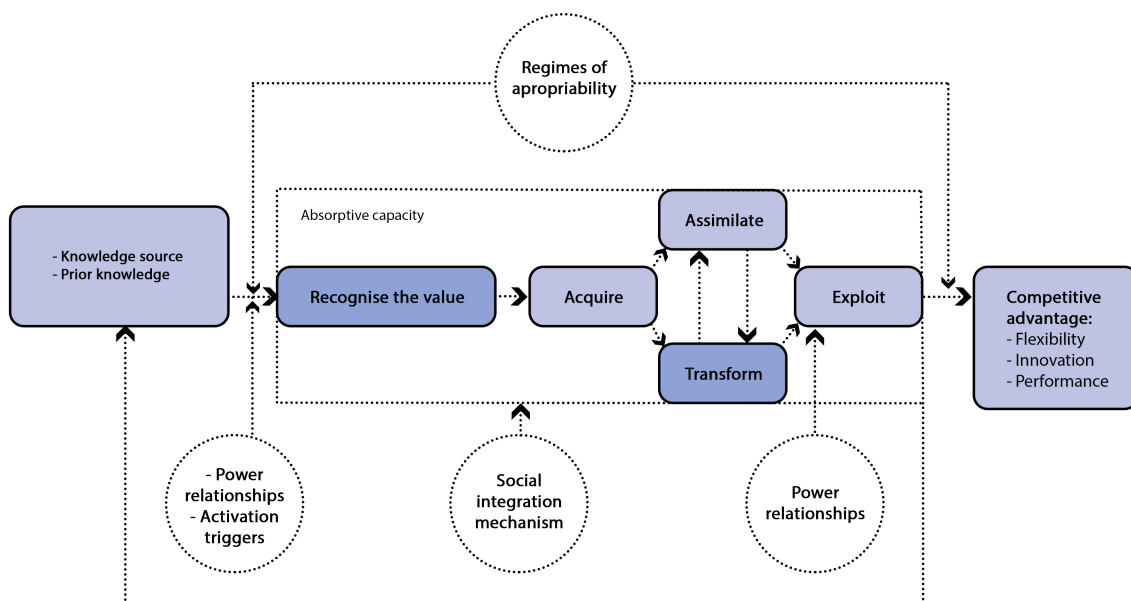
Jansen, Van den Bosch and Volberda (2006) explain ACAP as emanating from a triad of combinative organizational capabilities, or building blocks: coordination capabilities, systems capabilities and socialization capabilities (Van den Bosch and Volberda, 1999), these being regarded as the antecedents to ACAP. In addition, they argue that ACAP is the antecedent to the organization's adaptation and performance. Here, the authors are inspired by previous work (Verona, 1999), which linked a firm's ability to absorb external knowledge as being closely linked to management structures, procedures and systems as well as social mechanisms. The authors prove that the success of a unit at exploiting both the potential and the realised aspect of ACAP depends on the combinative organizational mechanisms. They show how, coordination capabilities, such as, those associated with job rotation and participation, enhance PACAP. They argue, that different coordination capabilities will enable diverse aspects of ACAP, revealing how, for example, participation can only enable the acquisition of knowledge, but not its assimilation. Organizational socialization mechanisms, on the other hand, reinforce realised absorptive capacity. They reveal how different organizational units possess different abilities at managing PACAP and RACAP, and support the claim that the capabilities required to transform knowledge are different from those essential to exploit it. They contend that tight networks within work units encourage employees to support and help each other, thus enabling RACAP in

the form of the assimilation, transformation and exploitation of new external knowledge.

Todorova and Durisin (2007) present a further definition of ACAP, wherein they contend that presented by Zahra and George in 2002. Todorova and Durisin argue the importance of learning and innovation in the ACAP framework. Zahra and George (2002) argue that firms transform already assimilated knowledge, whereas Todorova and Durisin (2007), contend this, and propose a different viewpoint. Calling on extensive research on innovation and learning, Todorova and Durisin propose that knowledge is transformed when it cannot be assimilated. This happens when the new knowledge cannot be adapted to ‘fit’ with the already existing knowledge base. They thus present knowledge transformation as an alternative, not a sequence of knowledge assimilation. Furthermore, the model suggests that knowledge may bounce back and forth several times between assimilation and transformation mechanisms, before it is adapted and ready for exploitation.

Figure 2.5 A Refined Model of Absorptive Capacity

source: Todorova and Durisin, (2007), page 776.



The above illustration in Figure 2.5 shows the model of ACAP as proposed by Todorova and Durisin (2007) proposing changes to the contingent factors presented in the seminal work of Zahra and George (2002). Others, namely, Amit and Shoemaker, (1993); Dierickx and Cool, (1989); Grant, (1991, 1996); Prahalad and Hamel, (1990) show how social interactions enhance the capabilities of the resources working together. Here, it is argued that social integration mechanisms must affect all the components of ACAP, and not only the process between PACAP and RACAP, as proposed earlier. Cohen and Levinthal (1990) establish that a relationship exists between levels of appropriability and incentives to invest in knowledge. They show how markets, where low appropriability regimes exist, experience lower returns to knowledge. The new proposed model provides for a deeper understanding of the moderating effect of the regimes of appropriability on the outcome of ACAP. The authors propose to measure the relationship between the antecedents of ACAP and the absorptive capacity itself and again between ACAP and its outcomes. A third contingent factor, power relationships, is also included in this redefined model of ACAP. Research (Contu and Willmott, 2003; Dosi, Levinthal and Marengo, 2003) shows that power relationships, i.e. the nature and type of communication engaged into by actors to enable them to achieve their desired objectives (Pfeffer, 1981), are influential on learning and capabilities in an organization. An understanding of how power structures impact on ACAP better equips researchers to understand why some firms are superior than others at exploiting knowledge.

Other scholars (Camisón and Forés, 2010) develop the ACAP model proposed by Zahra and George (2002) and introduce the dimension of knowledge transformation into the framework. Camisón and Forés advance a two-dimensional ACAP model, with measures of PACAP and RACAP. Camisón and Forés, are in agreement with the interpretation of PACAP and RACAP used by Zahra and George (2002) in their model. PACAP describes the firm's ability to value, acquire, and assimilate new, external knowledge, whereas RACAP aims to integrate and reconfigure already existing external knowledge with the newly acquired knowledge as well, so as to enable knowledge transformation activity through the firm's activities, systems, procedures and routines. Camisón and Forés (2010) show how RACAP is the main influence on

innovation outcomes; PACAP being the essential element to continually renew the firm's knowledge base to secure sustainable competitive advantage. They improve the firms' understanding of ACAP by designing a measurement instrument that is both valid and reliable. This measurement instrument presents ACAP as two subsets, PACAP and RACAP, containing various processes, capacities and organizational procedures and routines.

Other scholars (Biedenback and Müller, 2012; Kim, Akbar, Tzokas and Al-Dajani, 2013; Schleimer and Pedersen, 2013) have evidenced the role of the transformative capability of the firm as being complementary to the firm's exploratory and exploitative learning processes. Since the situation in developing markets does not allow that firms immediately exploit the knowledge that they would have assimilated, it becomes necessary for the organizations to store their knowledge and retrieve it, ready for commercial use at the appropriate time. This, therefore, implies that the ability of the firm to transform knowledge links to the firm's ability to explore and exploit that knowledge, as these learning processes are dependent upon one another and ultimately affect the firm's innovation capability.

More recently, researchers (Cepeda-Carrion, Leal-Millán, Martelo-Landroguez, Lean-Rodriguez, 2016; Valentina and Passiante, 2009) have evaluated ACAP to identify its relevance for stakeholder value creation. Valentina and Passiante (2009) argue that firms' participation in networks, positions the firms more favourably for value creation. This is more strongly felt the smaller the size of the firm. Small and medium sized firms (SMEs) are, generally, expected to face extensive innovation challenges than their larger counterparts, particularly owing to their resource limitation (Freel, 2000; Hadjimanolis, 1999). The smaller the size of the SME, the stronger the relationship and ties with the owner-manager's style of thinking and doing. Therefore, in SMEs, much of the innovative capability of the organization lies within the remit of the owner-manager (Lynskey 2004; Webster, 2004). Research reveals the inverse relationship between the size of organizations and the motivation for firms to network for knowledge enriching purposes (Rothwell, 1991). Despite the fact that SMEs possess attributes that constrain their ability to innovate, (particularly resource availability mentioned earlier), they are also characterized by

behavioural advantages, such as closeness to customers, learning and flexibility, which enable them to be agile and successful at innovating, as they find it easier to listen to their customers' opinions and act accordingly, given that the locus of decision making is a relatively short one (Dutta and Evrard, 1999; Salavou, Baltas and Liukas, 2004). Valentina and Passiante, (2009) and Cepeda-Carrion, Leal-Millán, Martelo-Landroguez, Lean-Rodriquez (2016) argue that ACAP is a necessary causal factor for value creation, as it affects knowledge application both directly and indirectly. Furthermore, the researchers show that knowledge storage in itself has a limited effect on value creation. However, the combined effect of knowledge application and knowledge storage has a complementary impact on value creation.

2.4 The Dimensions of Absorptive Capacity

The various definitions and influential ACAP frameworks refer to different fundamental aspects of the construct. Cohen and Levinthal (1989) identify the ACAP dimensions as knowledge identification, assimilation, and exploitation and in later work (1990) also include the notion of knowledge exploitation *for commercial ends*. Todorova and Durisin (2007) consider an additional dimension of the model apart from knowledge identification, knowledge assimilation, and knowledge exploitation: knowledge transformation, which they say, acts as an alternative to knowledge assimilation. However Zahra and George (2002) developed the work of previous authors, namely Cohen and Levinthal (1989, 90, 94) and Lane and Lubatkin (1998), to focus on the dynamic nature of ACAP, reconfiguring the construct into two broad dimensions: Potential ACAP and Realised ACAP. Through the literature, various authors (Alavi and Leidner, 2001; Cegarra-Navarro and Martinez-Conesa, 2007; Chirico, 2008; Fletcher and Prashantham, 2011; Jansen, Van den Bosch and Volberda, 2006; Lopez and Estevens, 2013; Swift and Hwang, 2013; Todora and Durisin, 2007; Wasiluk, 2013; Wee and Chua, 2013; Zahra and George, 2002;) have recognised the importance of social mechanisms to enable the transfer of knowledge within organizational units. Although knowledge transfer has not quite been identified as a specific element of the ACAP model, authors

have invariably referred to its influence as an enabler of the learning firm. Others (Durst and Gueldenberg, 2010; Durst and Wilhelm, 2012; Joe, Yoong, Patel, 2013) have also identified the importance of the provision of knowledge storage and retention for the absorptive capacity of firms. Knowledge storage and retention is a process that aims to build a wide organizational knowledge base; this process mitigates against loss of knowledge, especially that which is brought about by staff turnover (Durst, Edvardsson, 2012). This phase is likely to include the codification and documentation of the acquired knowledge, thus, also converting the easily lost tacit knowledge, into a more retrievable explicit form.

The dimensions that have been identified above have, in general, converged into four categories: Knowledge Acquisition, Knowledge Assimilation; Knowledge Transformation and Knowledge Exploitation (Camisón and Fores, 2010; Lane, Koka and Pathak, 2006; Todora and Durisin, 2007; Zahra and George, 2002).

Knowledge Acquisition indicates the firm's ability to identify or recognise and acquire new knowledge from sources that are external to the firm. This dimension therefore, incorporates within it the elements of Knowledge Recognition and Knowledge Identification and Creation. Zahra and George argue that the intensity, speed, and direction with which a firm will invest in knowledge acquisition will determine the quality of the firm's acquired knowledge. They show how excellence at this dimension of ACAP is dependent on the firm's prior knowledge base and investments in knowledge and learning. They further argue that organizational learning, by nature, cannot be easily hastened or shortened (Clark and Fujimoto, 1991), thereby, posing a limitation on the firm's speed at building acquisition capabilities.

Knowledge Assimilation is the dimension that indicates a level of understanding and absorption of the previously acquired external knowledge. This level of organizational understanding and mastery of knowledge will be the result of precise routines and procedures, which enable the organization to examine, evaluate, and comprehend the new knowledge (Kim, 1997; Szulanski, 1996). Understanding promotes knowledge assimilation, comprehension, and

absorption (Zahra and George, 2002). However, researchers, (Teece, 1981) argue that there may be instances, when the knowledge may be context dependent or valid only in conjunction with specific firm assets, making the acquisition of knowledge by external third parties completely useless to them (Szulanski, 1996) unless they can plant the new knowledge within its relevant context.

The ability of the firm to combine existing knowledge with the newly acquired knowledge is termed as Knowledge Transformation by Zahra and George, (2002). In this manner the firm is interpreting and internalising the new knowledge and converting it into a form and manner that is usable to the firm. Knowledge Transformation requires '*bisociation*' (Zahra and George, 2002, page190), i.e., the convergence of two or more disparate ideas into one new concept or schema. This process of bisociation is the element that creates new opportunities, innovative strategies, and possibilities to the organization while it enhances its competitive advantage (Van den Bosch, Volberda and De Boer, 1999).

Knowledge Exploitation is the ACAP dimension that ties all the other three dimensions together. It is the firm's ability to combine the previously acquired, assimilated and transformed knowledge to leverage existing and new competences as the vehicle for the sustainable competitive advantage of firms. In this dimension the firm uses its knowledge to profitable commercial ends (Lane and Lubatkin, 1998). Knowledge exploitation is a measure of how much the firm excels at generating a return from its investment of incorporating knowledge into its routines, processes, and operations (Tiemessen, Lane, Crossan and Inkpen, 1997; Van den Bosch, Volberda and de Boer, 1999).

2.5 The Measurement of Absorptive Capacity

In their initial seminal work, Cohen and Levinthal (1989, 90) have indicated the use of Research and Development (R&D) spending as a proxy for absorptive capacity, measuring ACAP as R&D spending on sales. Studies adopting this

research line follow what is referred to as, a unidimensional (Zornoza, Julián, Navarro, 2015), quantitative (Kostopoulos, Papalexandris, Papachroni, Ioannou, 2011) approach to the measurement of ACAP. Scholars have argued that the measurement of R&D activity can be undertaken from various facets and further scholars have argued for the reliability of the measures they have used, based on whether these were input-focused, or output-focused. Mowery and Oxley (1995) and Poldahl (2012) consider R&D investment; Petroni and Panciroli, (2002) favour R&D intensity, whilst Montinaria and Rochlitz (2014), Vega-Jurado, Gutiérrez-Gracia, Fernández-de-Lucio (2008) focus on investment in technology. Lane and Lubatkin (1998) argue, however, that R&D spending is not an appropriate measure of the firm's ACAP. Whilst still adopting an input-oriented measure, a different research stream focuses on the investment in intellectual capital, rather than infrastructure, advancing an argument grounded in the resource-based view of the firm, for this approach. Mangematin and Nesta, (1999) use the measurement of dedicated staff, whereas Escriano, Fosfuri, and Tribo, (2009), Kostopoulos, Papalexandris, Papachroni, Ioannou (2011) and Castellaci and Najera, (2013) favour measures of select staff characteristics (training and/or professional qualifications). Other scholars prefer to consider research outputs as they argue that it is only with the exploitation of the knowledge that this becomes meaningful. Other scholars measure the number of registered trademarks or patents (George, Zahra, Wheatley and Khan, 2001; Mangematin and Nesta, 1999; Van Den Bosch, Volberda and de Boer, 1999), or number of scientific publications (Cockburn and Henderson, 1998; Mangematin and Nesta, 1999). Alternative quantitative measures of ACAP have also been used, such as the participation in networks and alliances (Mangematin and Nesta, 1999); and the number of R&D alliance members (Vega-Jurado, Gutiérrez-Gracia, Fernández-de-Lucio, 2008). Minbaeva, Pedersen, Bjorknan, Fey, Park (2003) have used proxies of human resources practices and organizational forms to measure the extent of ACAP within organizations, whilst Xiong and Bharadwaj (2011) have used market conditions as a dummy variable to appraise ACAP. The present research bank illustrates that consensus has not yet been reached with regards to the best approach to use for the measurement of ACAP. It is clear that the use of differing proxies for ACAP results in inconsistency and limitations of the comparability of different studies.

The arguments around the choice of the ACAP proxy in the unidimensional approach to the measurement of the construct are, by no means, the end of the controversy on the subject. Zornoza, Julián, and Navarro (2015) argue that one-dimensional quantitative measures of ACAP are insufficient to assess and value the richness and depth of the ACAP construct. They agree with studies that are based on multi-dimensional (R&D and non R&D proxies) quantitative variables. Few studies (such as those by Flatten, Engelen, Zahra and Brettel, 2011; Jiménez-Barrionuevo, García-Morales and Molina, 2011; Liao, Fei, Chen, 2007), have, however, adopted a multidimensional approach to ACAP (Volderba, Foss and Lyles, 2010). This gives a more comprehensive interpretation of the construct, as it can explain a much larger proportion of the measure. Despite the fact that a multidimensional measurement of ACAP produces a broader explanation of absorptive capacity, the variety and inconsistency of the variables used in studies, also questions the comparability of the results of the works (Petti and Zhang, 2016).

Valentin, Lisboa and Franco (2015) report that an alternative, qualitative approach to measuring ACAP, which is based on self-reports, has been used by scholars (Flatten, Greve, Brettel, 2011; Gold, Malhotra and Segars, 2001; Jansen, Van Den Bosch and Volberda, 2005; Liao, Welsh and Stoica, 2003). Bradford and Saad (2014) argue that using cognitive psychology as the background for the measurement of ACAP allows the researchers to develop the measurement instrument from theory, and allows for the inclusion of both the measure and the phenomenon in the same framework. The authors devise and conduct interviews while they explore the activities of organisations in order to assess the organization's ability to Recognise, Acquire, Assimilate, Transform, and Exploit new external knowledge. In their study, Bradford and Saad (2014) not only recognise the relevance of the cognitive processing aspects of innovation but, in addition, highlight the sociocultural aspects within which the innovation is being conducted (Howells, 1995). Using this qualitative approach, the researchers have engaged with a competency-based view of ACAP using a learning objectives framework, which measures the extent of the firm's ability at each of the different domains of the ACAP construct.

2.6 The Antecedents of Absorptive Capacity

With increasing global competition, a firm's capacity to absorb knowledge sourced either externally or internally, has, today, become axiomatic and lies at the foundation of the firm's ability to create sustainable competitive advantage. Whilst the organizational capability to innovate is clearly related to the extent to which firms engage with research and development, Lane and Lubatkin (1998) argue that R&D expenditure accounts only for as little as 4% of a firm's learning. They contend that a firm's absorptive capacity is greatly determined by other factors, which they call antecedents, such as organizational structures, similarity between the knowledge bases of the firms involved in the knowledge exchange the knowledge etc. Researchers (Lane Koka and Pathak, 2006) have proceeded to identify two broad categories of antecedents of ACAP: the internal antecedents and the external ones. These factors are critical in determining the organization's ability to acquire, assimilate, transform, and apply knowledge competitively.

It is argued that internal factors may be classified as intra-organizational antecedents and managerial antecedents (Volberda, Foss and Lyles, 2010). The intra-organizational antecedents are the incentive structures, the informal networks, internal communication, and the organizational internal structure itself (Anderson and Foss, 2005; Argote, 1999). Managerial antecedents represent themselves in combinative capabilities, management cognition and individual knowledge development and sharing (Dijksterhuis, Van den Bosch and Volberda, 1999; Kogut and Zander, 1992, Lenox and King, 2004; Zahra and George, 2002). The firm's level of knowledge and experience is identified as a valid antecedent, however, Volberda, Foss and Lyles, (2010) argue that such firm knowledge is *not* directly related to ACAP but, instead, this stock of knowledge works by influencing how the individual workers perform and how they interact with their co-workers, facilitating, or otherwise hindering, the transfer and sharing of knowledge. Organizational knowledge diversity, the existence of an innovation and learning culture, the strategic orientation, social integration mechanisms, quality management practices and information management systems are other internal antecedents that have been identified

in the literature (Cohen and Levinthal, 1990; Lane, Koka and Pathak, 2006; Lane and Lubatkin, 1998; Zahra and George, 2002). However, scholars argue that while these internal antecedents are essential, they are not sufficient in determining the ACAP of organizations (Zornoza, Julián and Navarro, 2015). With regards to information management systems, the literature recognizes the relevance of this (both from an internal and from an external perspective) antecedent in determining the speed and ease of access to new knowledge. However, despite its integrative influence on the ACAP construct, scholars feel that not enough attention has been dedicated to this unique feature in order to develop it further and have a greater impact on ACAP (Zornoza, Julián and Navarro, 2015)

Firms do not operate in isolation and are constantly interacting with other players in their environment, be these competitors, customers, the firm's supply chain, or the macro environment in general. It is for this very reason that an increasing expanse of literature has also identified a number of external antecedents that are crucial in determining the organization's ACAP (Zornoza, Julián and Navarro, 2015).

Literature identifies crucial external antecedents, such as, environmental turbulence or variability, competitiveness, dynamism, (Jansen, Van den Bosch and Volberda, 2005; Liao, Welsch and Stoica, 2003; Van den Bosch, Volberda and de Boer, 1999); technological opportunities and spillovers (Cohen and Levinthal, 1990; Nieto and Quevedo, 2005). Others point towards the characteristics of the external knowledge itself, its depth, breadth, the retrieval of the knowledge and its short term or long term nature (Cohen and Levinthal, 1998; Lane, Koka and Pathak, 2006; Simonin, 1999, Szulanski, 1996); cultural diversity (Lane and Lubatkin, 1998; Lane, Salk and Lyles, 2001; Simonin, 1999); geographical distance (Koschatzky, 2002; Szulanski, 1996) or the position of the organization in the knowledge market (Erramilli, Agaral and Dev, 2002; Oliver, 2001; Powell, Koput and Smith-Doerr 1996). Further research identifies mergers and acquisitions, alliances management systems and joint ventures, as well as the relatedness of organizations as important external antecedents of ACAP (Ahuja and Katila, 2001; Cloudt, Hagedoorn and Van Kranenburg, 2005; Fosfuri and Tribó, 2008; George, Zahra, Wheatley and

Khan, 2001; Lane, Salk and Lyles, 2001). Camisón and Forés (2011) and Malipiero, Munari and Sobrero (2005) also draw attention to how well anchored a firm is in industrial clusters or districts to assess the firm's ACAP.

2.7 SMEs: a definition

The focus of this investigation is the exploration of ACAP processes in small and medium sized enterprises (SMEs) operating in the knowledge intensive business sector (financial services industry), and in the non-knowledge intensive business sector (tourism industry). For this reason, this study is anchored in SME organizations. The researcher therefore, feels that it is opportune to explore the interpretation of the term SMEs and to analyse the meaning of the term, as dictated by other published work in the field, thereby finally establishing the definition of the term as used throughout this study, and justification thereof.

2.7.1 Towards an understanding of existing definitions of SMEs

Economies are fuelled by small and medium sized (SMEs) (Curran and Blackburn, 2001; EU Commission, 2016; Spence, 2002;) enterprises, which cater for much of the employment (Desouza and Awazu, 2006), income, and output generation, as well as making a meaningful contribution to National Income (Ardi, Pinar, Natalikya and Valentina, 2011; Ayyagari, 2007; EU Commission, 2015). The definition and interpretation of the term SME, however, gives scope to considerable controversy, particularly owing to the fact that the distinction between these and larger firms, or indeed, the singularity between micro, small and medium sized firms themselves, is measured differently across many parts of the world, notable the European Union, United States and China (Gibson and Vaart, 2009). A comparison of the definition for SMEs used by international organizations such as the World Bank, the Multilateral Investment Fund (MIF) of the Inter-American Development Bank (IADB), the United Nations Development Programme (UNDP) and the African

Development Bank immediately reveals significant disparities in the specification of the profile of an SME, with firm size ranging from 50 to 300 employees and turnover spanning anything from US\$3 million to US\$15 million.

Table 2.2 Varying SME definitions

source: Gibson and van der Vaart, 2008

Institution	Ceilings		
	Headcount	Revenue or Turnover (US\$)	Assets (US\$)
World Bank	300	15,000,000	15,000,000
MIF - IADB	100	3,000,000	(none)
African Development Bank	50	(none)	(none)
Asian Development Bank	No official definition. Uses only definitions of individual national governments.		
UNDP	200	(none)	(none)

The divergences in the identification of SMEs do not only stem from the fact that different countries around the world use different quantifications, but also arise as a result of the variations in the quantitative and qualitative variables used in the measurement of firm size. Commonly used variables to distinguish between the different sized firms range from the number of firm employees (full-time equivalent), asset value of the firm, size of annual firm turnover, amount of capital invested by the firm or its balance sheet values. Some countries also have different guidelines for the classification, which are industry specific, or further, variables to measure variances in ownership and control (Kushnir, 2010).

The EU definition states that “*the category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 people and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million*” (Art 2, Annex Recommendation 2003/361/EC: L124/39). The recommendation proceeds by setting the ceiling for the small firm at fewer than 50 employees and either an annual turnover of a maximum of EUR 10 million and/or capital invested which does not exceed the same figure. Lastly, the micro firm is defined as not exceeding 10 employees and having a maximum annual turnover and/or capital invested of EUR 2 million.

The following table can illustrate the EU definition:

Table 2.3 EU definition of SMEs

source: Article 2, Annex to Recommendation 2003/361/EC

Enterprise category	Ceiling		
	Headcount: Annual Work Unit	Annual turnover	Annual balance sheet total
Medium	50-249	≤€50m	≤€43m
Small	10-49	≤€10m	≤€10m
Micro	<10	≤€2m	≤€2m

The simplicity of the quantitative nature of this definition contrasts rather strongly with its more elaborate mode of interpretation. The EU recommendation in question qualifies that should the enterprise have any relationships (e.g. partnership or linkage to any degree) with other firms,

together, these enterprises must not exceed the set ceilings. In addition, the proviso assesses the availability of resources that firms have, by differentiating between degrees of ownership, partnerships and linkages between firms when calculating the relative quantitative aspects of the definition given in the table above. The qualification of the firm as either autonomous, partner or linked, and the degree to which it is associated with other enterprises, determines the proportion of the relevant values of the associated enterprises as accurate for reporting. The level of complexity of the comprehensive definition renders this interpretation of the term SMEs very difficult to utilize accurately on account of the unavailability of the required information, especially when one is undertaking research and is not dealing with a single, individual firm, but with a cross section of firms from a number of industries (as in the case of this study, where 35 organizations from two distinct service industries, tourism and financial services sector, are being considered).

Gibson and Vaart (2009) propose an interesting definition of SMEs in terms of annual turnover, which is measured to be of a proportion of between 10 and 1000 times the per capita gross income (at purchasing power parity) of the country in which it operates. This definition has been completely discarded owing to the difficulties encountered in accessing the required firm data.

There have been several studies that have proposed more qualitative measures for the classification of SMEs (Bolton Committee, 1971; Wynarczyk, Watson, Storey, Short and Keasey, 1993) such as the degree of control of the owner-managers, uncertainty, innovation, evolution of the firm, relativity of the market share commanded by the firm, and the extent of independence of the owner in the decision-making process. These definitions were quickly discarded as it was recognized that the qualitative nature of the measures were very difficult to compute and did not offer reliance, consistency, or objectivity.

The World Bank discriminates amongst SMEs in a more basic manner, and proposes a definition that simply takes into account the size of the workforce of the firm, and conforms to the ceilings set in the EU definition quoted previously, thus achieving a degree of harmonization between interpretations. This is a practical approach to defining SMEs, also because headcount of employees is

a statistic, which is readily known and reported by firms for payroll and regulatory purposes. The issue with this methodology is that presently, all the forms of different types of employment contracts in use (part-time, casual workers, temporary workers) are rendering even this measure increasingly complicated. Scholars (Curran and Blackburn 2001) argue in favour of head count as opposed to definitions based on financial measures, as a way to overcome the reluctance of managers to release such figures, which, in any case, are extremely industry specific, and, which, owing to the use of varying accounting practices used to collect the data, may not be directly comparable. Despite this, quantitative measures based on staff count are extensively used with researchers and policy makers on the grounds that they are transparent and simple, and that the data is anyway, very often readily collected for other various motifs.

In contrast to the above, others argue that SMEs should not be assessed solely on the basis of size (irrespective of whether this is the transparent employment levels or the more obscure financial measures) as this is not a robust enough measure (Burrows and Curran, 1989, page 530). Curran and Stanworth (1986, pages 140-141) argue that such an approach may lead to the phenomenon of 'size reductionism' with the size factor being recognized as the motivator and driver of all the actions of the firm. Furthermore, although the Bolton Committee (1971) concur that quantitative data is the best measure to determine firm classification, they also provide a number of qualitative parameters, which can help in the classification exercise. Such variables include relative market share, degree of control by the owners, and independence from larger organizations. In this context, the Bolton Committee shares the same recommendations as those put forward by the OECD.

In view of the above analysis Curran and Blackburn, (2001) conclude that there is not one acceptable definition of SMEs, and propose guidelines for researchers to use, when specifying and isolating SMEs. They recommend, in particular, the adoption of the EU employment size categories (Kushnir, Mirmulstein, Ramalho, 2010) and advocate the use of relevant numerical indicators characteristic to the industry under review by the researchers.

The above considerations have been taken into account when crafting a definition of SMEs for the purpose of this study. The interpretation of SMEs will be based on two variables, namely: the physical size of the organization measured in employee numbers, and any other industry-specific variable, and a measure of relative control of the owner.

2.8 ACAP in Small and Medium Sized Firms

Much research around the area of knowledge management focuses around large firms (Durst and Edvardsson, 2012) with small firms being treated as mere scaled-down versions of the larger organizations. In essence, there is insufficient research that focuses directly on the development of knowledge management frameworks, tools, and models, specifically for SMEs (Ergazakis, Ergazakis, Flamos and Charalabidis, 2009). This approach is inadequate at two levels: an internal and an external one. At the internal level, the distinctive characteristics and features of SMEs are very different to those features manifested by large firms, and tend to be largely ignored. Not only are SMEs characteristically distinctive from large firms, but also, this heterogeneous category of firms, loosely referred to as SMEs, is indeed extremely dissimilar even within the group itself. The current research available to date does not address such attributes. The external dimension of the research approach referred to above refers to the fact that such a perspective, therefore, completely ignores the importance of SMEs as the drivers of many economies around the world. Indeed, McAdam and Reid (2001) posit that knowledge management was originally developed for large firms and then, later, applied to SMEs. For this reason, Durst and Edvardsson (2012) recommend that research on knowledge management in SMEs should take a more realistic perspective, taking into account the resource limitations and the particular environment within which SMEs operate.

Numerous lines of research have affirmed that one of the fundamental differences between large firms and SMEs is the ability of the latter firms to overcome their size-induced resource limitations by taking advantage of relationships expanded outside the firm itself (Grandinetti, 2016). Researchers

assert that it is only possible for SMEs to exploit external sources of knowledge by interacting with other parties (Chen, Duan, Edwards and Lehaney, 2006; Dsouza and Awazu, 2006; Durst and Edvardsson, 2012; Egbu, Subashini and Renukappa, 2005; Thorpe, Holt, Machpherson and Pittaway 2005) and engaging in networking relationships and clusters (Porter, 1989). SMEs are not a homogeneous group of firms. Significant variations in the behaviour of SMEs are not exclusively dependent on the characteristics of firm ownership, control, and leadership, or, on the actual size of the SME itself: the number of employees, and the firm's financial resources, but also on the firm life-cycle stage (setting up phase, incubation phase, start-up phase). Various authors (Furlan, Grandinetti and Paggiaro, 2014; McKelvie and Wilkund, 2010) maintain that inter-organizational relationships should be seen as a facilitating factor and leveraged to support and sustain the growth of SMEs.

Various reviews on the literature around knowledge management practices in SMEs have been conducted (Cerchione, Esposito and Spadaro, 2016; Durst and Edvardsson, 2012; Thorpe, Holt, Machpherson and Pittaway, 2005). A number of interesting strands emerge from the reviews. Some of the articles emphasise the importance of relationships with parties external to the firm by emphasising the correlation between the use of knowledge and its acquisition (Yli-Renko, Autio, and Sapienza, 2001; Liao, Welsch and Stoica, 2003). Most published work sheds light on knowledge transfer within SMEs but neglects knowledge management processes such as those involving knowledge identification, knowledge storage and retention and knowledge utilisation. In general, most of the published work has not focused on partner interactions and forms of organizational interdependence in KM management processes in SMEs and, as such, there is a need to study KM in networks and clusters populated by SMEs (Cerchione, Esposito and Spadaro, 2016).

Grandinetti (2016) proposes a model for the conceptualisation of ACAP in SMEs. The author redefines ACAP as “ *a combination of external knowledge monitoring, evaluation and acquisition*” (page 162). This definition reflects the definition of the construct as given by Cohen and Levinthal (1989), but does not limit the absorptive capacity of a firm to be solely driven by its prior knowledge base. Instead, Grandinetti identifies that it is *two* processes that drive ACAP in SMEs: a codification-driven process, and an interaction-driven process, thereby

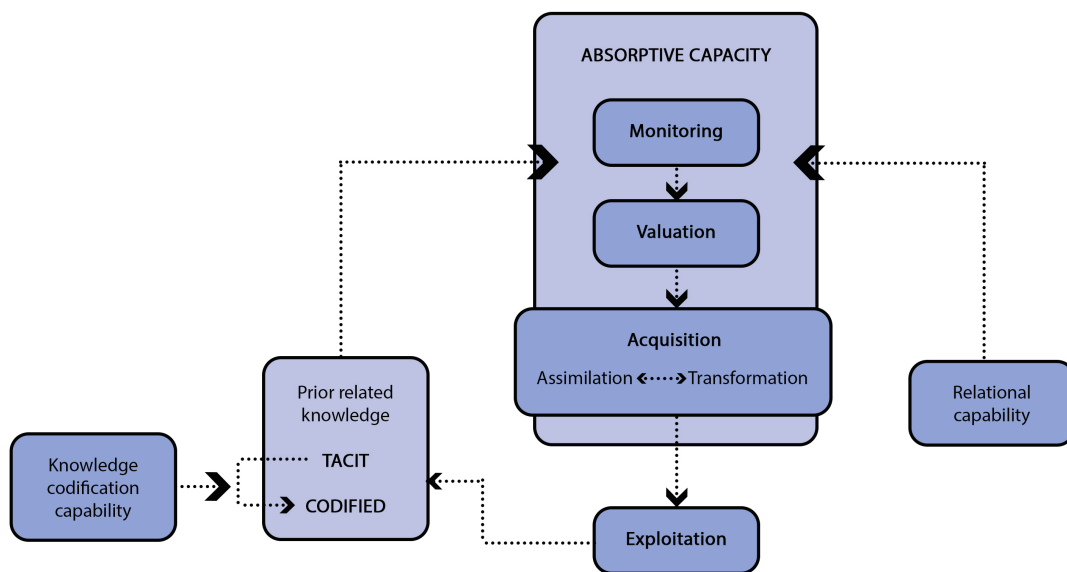
accentuating the central role of networks and relations with external parties for SMEs. The codification-driven process is similar to that with which large firms engage when they conduct R&D projects. When firms undertake research, they inevitably start by reviewing resources that are already in existence, i.e. codified information. As this work is reviewed and analysed, it is internalized by the staff and, therefore, becomes tacit knowledge (Nonaka and Takeuchi, 1995), which is, in turn, analysed, discussed, and stored as organizational memory, i.e. recodified. The interaction-driven process is dominated by interpersonal relationships, which revolve around the transfer of tacit knowledge between parties. Grandinetti argues that the *quality* of the interpersonal relationships is pivotal to the effective transfer of knowledge between contributor and the recipient. The quality of the firm's relational capabilities is determined by elements, such as, respect, trust, and trustworthiness. These relationship qualities have been identified in previous literature (Nahapiet and Ghoshal, 1998) as being key ingredients of social capital, when discussing relationships entered into by business people.

Grandinetti argues that SMEs commonly rely on an interaction-driven knowledge absorption process, with the codification-driven process mainly adopted by larger firms. An interaction-driven knowledge absorption process means that within SMEs, knowledge absorption is greatly reliant upon the extent and the quality of the internal communication and the social integration mechanisms; it is this process that is particular to SMEs and which facilitates ACAP within small firms, because in SMEs ACAP is dependent on knowledge sharing. Whilst an interaction-driven process relying on the SMEs relational capabilities can be very productive and efficient, it nonetheless, poses considerable limitations to the small firm. Primarily, firms may experience '*lock-in*' deficiencies, if they limit themselves to acquiring new knowledge from the habitual networks and relationships, and desist from exploring new relationships (Murray and Häubl, 2007). Secondly, if the absorbed knowledge is not transformed into explicit knowledge, staff turnover will, inevitably, imply knowledge loss (Dsouza and Awazu, 2006; Jo, Yoong and Patel, 2013; Lawson and Lorenz, 1999; Letonja and Duh, 2016). Such a risk can be avoided by instilling processes, whereby tacit knowledge is routinely codified and documented and transformed into explicit knowledge. This, of course, poses

serious problems to SMEs. These problems are, by their very nature, resource constrained, and, therefore, commonly find themselves in situations, where they cannot dedicate enough time to the processes and routines required for conversion of the tacit into explicit knowledge for storage, considering that they are grossly taken up by the routines of the business operation itself. The fact that the absorption of knowledge within SMEs is interaction-driven, therefore, presents itself to be rather problematic for SMEs.

Figure 2.6 A Model for ACAP in SMEs

source: Grandinetti, 2016.



2.9 ACAP in the Service Industry

This study focuses on ACAP practices in service sector SMEs. In particular, the study presents itself as a comparative analysis of the ACAP practices between firms in the financial services industry and in the tourism industry, representing, in the first instance the knowledge intensive business sector firms (financial services), and in the latter case, the non-knowledge intensive business sector firms (tourism firms). The following section will serve to evaluate the current literature that is available around ACAP practices in these two service sectors, and will, together with the general literature on ACAP, serve as the groundwork for the ensuing part of the field research.

Historically, innovation was a concept associated with the manufacturing sector, with a focus on investment in research and development projects, and a quantitative measure of patents (Chandler, 1962; de Vries, 2006; Drejer, 2004; Penrose, 1959; Schumpeter, 1987; Toivonen and Tuominen, 2009; Vergori, 2014). The deindustrialization phenomenon unfolding in many OECD countries since the 1970s has brought many economies to depend largely on the service sector (Andreas Koch & Harald Strotmann, 2008; Barras, 1986; Nickell, Redding and Swaffield, 2008; OECD, 2005; Rowthorn and Ramaswamy, 1997, 1998; Rowthorn and Wells, 1987). Towards the end of the 20th century, researchers started to garner interest in the innovative potential of service sector firms (Vergori, 2014). Researchers (Nonaka and Takeuchi, 1995) argue that there is extensive research on Innovation, KM, and ACAP frameworks for large manufacturing firms, but the work, which has been carried out specifically for small, service sector firms, (Carlborg, Kindström and Kowalkowski, 2014; Nonaka and Takeuchi, 1995; Sunbdo, 2007) is scant. There has been much debate on whether the research and theoretical models on industrial innovation can be applied to service innovation (Howells, 2001). There seems to be consensus that, whilst most innovation frameworks and theories can be utilised to explain the innovation process in the services sector, this sector possesses distinct characteristics around the manner in which the innovations themselves are developed and managed. The extensive level of involvement and reliance

on the employees, requires that particular attention needs to be given to service innovation (Sunbdo, 1996, 1998, 2002, 2007).

In his seminal paper, Barras, (1986, page 5), proposes a 'Reverse Product Cycle' to explain the development of service innovation. He basis his work on the research of Abernathy and Utterback (1975, 1990) and Kuznets (1957, 1966) and puts forth a dynamic model based on ICT as the 'enabling technology' (Barras, 1990, page 215). This 'enabling technology' is developed independently, but is adopted by service firms in order to enable their innovative capabilities (Gallouj and Savona, 2009). Barras contends that the nature of service innovation is dependent on the stage of firm ICT adoption and the accompanying learning curve.

Sunbdo (2007) argues that the employees and the managers are pivotal for service innovation. Both agents play a crucial role in the learning process in the firm; they are the keepers of all the tacit knowledge gained from their expertise and practice. Sunbdo (2007) sees the role of the firm as transforming the individual knowledge into organization knowledge. He argues that for this transformation to be effective, the firm must be endowed with efficient knowledge sharing mechanisms, which encourage and motivate the agents to transfer knowledge amongst themselves. He further argues that another requirement for service innovation is that of knowledge storage mechanisms within service firms, but claims that such mechanisms are not yet well developed in service firms.

2.9.1 ACAP in the Knowledge Intensive Business Sector – the Financial Services Sector

The financial services sector has been labelled as KIBS i.e. Knowledge Intensive Business Services, because of its specific reliance on a solid knowledge base to provide its business. KIBS are fundamental to the whole services sector because they serve to transfer knowledge to the rest of the

services, and, indeed, to the manufacturing industry, thus further acting as enablers to innovation in these industries. The financial services sector has ranked high amongst prominent industries that strategise knowledge management activities for innovation (Delphi Group, 1998; Squier and Snyman, 2004). Surveys have indicated that this is the most innovative service industry, mainly comprising of well-organised, large firms (Sunbdo, 2007).

Research conducted by Kock and Strotmann (2008) examines the extent to which managerial characteristics of KIBS firm founders, in addition to the extent of interaction (networking and cooperation) amongst firms, impact upon innovation in this specific service sector. Research (Kock and Strotmann, 2008; Leal-Rodríguez, Roldán, Leal, and Ortega-Gutierrez, 2013) reveals that external linkages, through inter-firm cooperation and networking, are fundamental requirements for service innovation particularly of the radical genre. Linkages with universities and research institutes, which give firms access to knowledge, have a positive correlation on service firm radical innovation, although cooperation with partners is the form of linkage that generates most innovative service output. Sheer access to information does not produce innovation in the KIBS firms. The research also reveals that managerial characteristics impact greatly on the innovation capability of these firms. The innovation capability of KIBS is grossly reliant on the founders'/leaders'/managers' professional background, knowledge and expertise, irrespective of whether this is obtained via formal education or practice.

Work carried out by Cepeda-Carrion, Leal-Millán, Martelo-Landroguez, and Leal-Rodriguez, (2016), is in support of Cohen and Levinthal (1990), and discloses that even in KIBS firms, innovation is the likely outcome of knowledge acquisition, assimilation and exploitation of new knowledge. The researchers, however, claim that in such firms, managers require more structured models of Knowledge Management practices, namely, ACAP, knowledge stock and knowledge application, in order to facilitate service innovation. The authors show how in the financial services sector, ACAP is an antecedent to value creation, and that the knowledge base and the application of the knowledge perform a facilitating role in value creation. The authors argue, however, that it

does not suffice for the firms to store the knowledge; if the aim is to create value (i.e. appropriation), then, it is imperative for the knowledge to be applied. The results of the research substantiate the claim that even for financial service firms, ACAP increases value. Scholars (Alavi and Leidner, 2001; Cohen and Levinthal, 1990, Jiménez- Jiménez and Sanz-Valle, 2011) support the work of Cepeda-Carrion, Leal-Millán, Martelo-Landroguez, and Leal-Rodriguez, (2016) when these claim that it is important for firms to apply and transform acquired knowledge for the firm to reap any benefit; the mere act of storing absorbed knowledge does not contribute towards value creation.

2.9.2 ACAP in the Tourism Sector

Innovation is the critical factor that differentiates tourism organizations and gives them competitive advantage in their market (Gálvez, 2011; Gálvez and Péres, 2012; Hall and Williams, 2008; Maravić, Križaj and Lesjak, 2015). Innovation in the tourism sector, like innovation in the financial services sector, is service-based innovation and is, therefore, incompatible with general innovation theories (Camisón and Monfort-Mir, 2012; Hall, 2008; Križaj, Brodnik and Bukovec, 2014; Tintoré, Aguiló, Bravo and Mulet, 2003).

Tourism innovation is complicated in its nature, because it is dependent on social behaviour and personal interactions between the service provider and the customer. Furthermore, various authors have contributed to outline the distinct characteristics of innovation in the tourism sector and have, moreover, accented the requirement of quality planning, novelty, originality and systematic business thinking (Cruz, Martínez, Hincapié, Torres, 2016; Križaj, 2009). These innovation traits are difficult to maintain in tourism organizations, because tourism service innovations are highly visible and difficult to shield from imitators (Hjalager, 2002). Scholars (Bieger and Weinert, 2006) claim that tourism innovations can contain technical, functional, or commercial aspects. Others (Hjalager, 2010) identify different facets of innovation in tourism, such as product or service innovation, process, managerial, management and institution innovations.

Tourism organizations face a tough challenge when it comes to innovation, particularly, because of the every changing profile of the tourist, who, thanks to improved access to information, is increasingly more knowledgeable about tourism offerings; is more demanding and independent; and can easily access all the required information to organize his own holidays independently. All this makes it more challenging for the tourism organizations to provide a unique and novel tourism experience to their customers. In addition, today's tourist is more environmentally conscious, and expects that the tourism sector be managed in an economic, environmental, and socially sustainable manner (Carvalho and Costa, 2011).

Tourism innovation revolves around strategic management aimed at *“increasing competitiveness, efficiency and resource efficacy, value creation and development of unique collaborator capabilities and chairing of leadership and innovation culture, not only organizational but also market level”* (Cruz, Martínez, Hincapié, Torres, 2016, page 1092). Although innovation should play a major role in any business sector, including the tourism sector, historically, this research area was not very popular with scholars, although, more recently the extent of research on tourism innovations have reached levels comparable to innovation research in other sectors (Hjalager, 2010). Although the previous discussion has proven the direct and positive relationship between a firm's ACAP and its ability to innovate, ACAP has been recognised to be *“a particularly neglected area of research within tourism studies”* (Shaw, 2015, page 46), which has been *“largely ignored or has been tangential to research conducted by scholars with an interest in tourism”* (Thomas and Wood, 2015, page 3).

It has been argued that tourism is a knowledge-based service owing to the increased access to information, and the IT-induced increased capabilities of knowledge processing, transfer and exchange (Yiu and Law, 2014). However, innovation is not merely dependent on the volume of knowledge that is generated, but rather, on the *use and application* of the generated knowledge (Ponce and Alabart, 2015). Knowledge management is, therefore, crucial for the innovation capacity and organizational competitive advantage (Nieves, Quintana and Osorio, 2014; Shaw and Williams, 2009; Simaro, Tonelli and Carús, 2012). Authors (Nieves, Quintana and Osorio, 2014; Rivero and

Rastrollo, 2013) argue that investment in human capital and the development of systems, which facilitate and encourage knowledge transfer within the firm, are critical in developing innovation in the service sector. This is, particularly so, given that the capabilities and brainpower of human capital are intangible and inimitable. Relational capabilities with external parties are also a decisive influence in creating innovation capacity in the tourism sector. Scholars have revealed that external relations and knowledge networks are invaluable sources of knowledge for tourism organizations (Shaw, 2015), but unless the newly acquired knowledge is shared within the firm, its efficacy is lost (Valenina and Passiante, 2009).

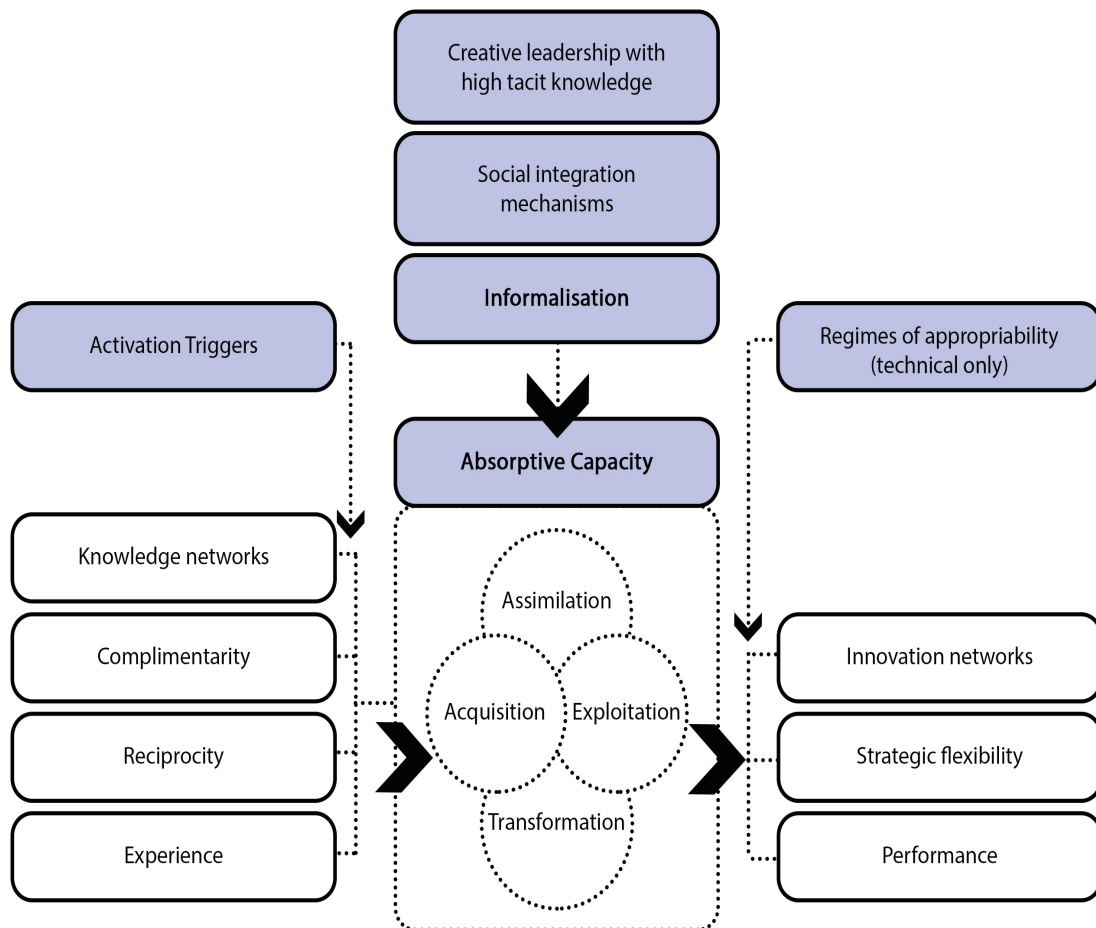
A unique characteristic of tourism organizations is that the use and application of knowledge in the operational areas of the industry (such as restaurant kitchens, hotel maintenance divisions, hotel room servicing departments) are rather limited and training of staff is required to equip staff with the skills required to implement innovation for increased efficiency and cost reduction of the processes they perform (Cerezo and Guevara, 2015; Ponce and Alabart, 2015). Tourism organizations, and restaurant companies, in particular, experience considerable resistance to change and lack of motivation from workers, particularly, because knowledge is not managed for competitive advantage (Perez, Leal, Barceló and León, 2013). Further, this sector is plagued by insufficient external, collaborative links, and knowledge transfer from universities and researchers units, thereby limiting organizational innovation.

Thomas and Wood (2015) propose a framework for absorptive capacity (Figure 2.7), wherein the antecedents of ACAP in tourism are not only limited to the firm's prior knowledge, but emphasise is placed on experience, reciprocity, relational capabilities and attributes that enable the firm to retain the knowledge. The model discards the notion of potential and realized ACAP as originally proposed by Zahra and George in 2002 and, instead, presents four dimensions of ACAP as being knowledge acquisition, assimilation, transformation, and exploitation. The model also proceeds to identify the crucial role of creative leadership; especially revealing that reliance on tactical knowledge is extensive, and lies in the hands of a core group of people in the organization. Social

integration mechanisms and the complementary role of formalization are recognised as being essential to the effective exploitation of knowledge in the tourism organization. It is argued that, distinct from manufacturing industries, it is the relative closeness of organization leaders to their central teams that facilitates the transformation of knowledge acquisition into innovations for competitive advantage.

Figure 2.7 A Model for ACAP in Tourism Organizations

source: Thomas and Wood, 2015.



2.9.3 ACAP in service sector SMEs

The preceding literature review furnishes the researcher with a strong foundation for the construction of an ACAP model specifically constructed around the distinct features of *small service sector* firms. On the one hand, scholars (Lane and Lubatkin, 1998; Lane, Koka and Pathak, 2012; Shaw, 2015; Thomas and Wood, 2015; Zahra and George, 2002) have shown how ACAP is a process that, independently of the size of firm, is pertinent and flourishes in a learning organisation. Therefore, ACAP must be driven by routines and processes that direct and enhance a learning culture within the organisation. The acquisition of new knowledge is not sufficient, and if this is to result in improved competitiveness of the organisation, shared within the organisation and assimilated; it must be permeated throughout the entire organisation. Others (Lynskey, 2004; Thomas and Wood, 2015; Webster 2004) have argued that in small firms the locus of decision-making lies tightly with the owner-manager, whose characteristics, will, therefore impact forcibly on the absorptive capacity of SMEs. Others (Grandinetti, 2016) posits that in SMEs the relational capability of the firm, not only internally, but also externally, with third parties, will overthrow any limitations that the firm may experience due to resource constraints arising from the small size of the organisation.

As a result of the above salient points arising out of the literature, the researcher constructed and tested a conceptual framework to understand ACAP in for service sector SMEs by considering factors such as firm size, and leadership characteristics, firm processes and routines, both internally and those determining relational capabilities and the extent of knowledge sharing enabled by internal communication within the organisation.

2.10 Summary

Since the seminal paper of Cohen and Levinthal in 1989, there has been increased interest in study of ACAP, with over 109,000 scholarly articles (Google Scholar) being published. ACAP has been researched across a number of different disciplines, from strategic management (Lane, Salk and Lyles, 2010), to economics (Cockburn and Henderson, 1998), international business (Minbaeva, Pedersen, Björkman, Fey and Park, 2003), and marketing (Narasimhan, Rajiv and Dutta, 2006). A literature map identifies the six major areas of ACAP that have attracted the attention of scholars include the definition of the construct, the conceptualization of ACAP, the development of the theoretical framework, the measurement of ACAP and the internal and external antecedents that facilitate the absorption of knowledge and industry specific research. The assessment of the literature reveals that most of the studies that have been undertaken, focus on large manufacturing firms, and little attention has been given to the study of the absorption of knowledge in small service sector firms.

The context of this study is rooted within SMEs. Branzei and Vertinsky (2006) posit that ACAP is vital for small firms to react swiftly to market changes and work towards innovation performance. Research (Alves, Salvini, Bansi, Neto, Galin, 2016) has shown that firm size is a determining factor in the manner in which organizations respond to ACAP. Indeed Nowak (2017) asserts that firm size impacts negatively on the relationship between PACAP and RACAP. Other scholars (Bass, 1985; Wang, Yang and Horng, 2010) place all the responsibility for the firm's ability to absorb, assimilate, and exploit knowledge with top management. This responsibility can only be more acute within the closely controlled reality of SMEs where, in any case, it is the owner-manager who drives the firm's ACAP. The first research objective (RO) set in Chapter 1 (page 29) of this investigation aims to study the extent to which firm size and leadership impact on the SME service sector firm's ACAP, an element that has not been directly dealt with in the presently available research.

Another area of study that has not been explored within the territory of SME research is the firm's internal practices, policies and strategies, which are used to maneuver the firm's ACAP to reap maximum benefit from it. Research objective 3 (Chapter 1, page 29) addresses this research gap. In addition to this, a review of the literature reveals substantial interest in the firm's (external) relational capabilities (with networks knowledge clusters, cooperation agreements, alliances etc.) and its relationship to ACAP. Rothwell, (1991) argues that an inverse relationship exists between a firm's size and its motivation to network for knowledge enriching purposes, but little work has, so far, concentrated on the relational capabilities of *service sector* SMEs. Research objective 2 (Chapter 1, page 29) of this study aims to address this gap in the literature.

Further to this, the analysis of the literature has revealed only two other studies that have engaged with inter-sectorial comparisons: one study which investigates ACAP and knowledge exploitation between two manufacturing industries, electronics and chemicals (Castellani, Zanfei, 2001); and a second study, between low-tech and high tech firms (Grimpe and Sofka, 2007). This work does not only aim to investigate ACAP in small sized, service sector firms by addressing the research objectives 1, 2, and 3, but further undertakes an inter-sectorial comparison between two distinct service industries, the knowledge intensive services industry represented by financial services sector firms, and the non-knowledge intensive business sector, represented by the tourism sector, focusing mainly on hotels (research objective no.4, Chapter 1, 30).

Chapter 3

Research Methodology

3.1 Introduction

The purpose of this chapter is to discuss the methodological framework underpinning this study and to assess the strategies and methods used to address the research aim and related objectives. This inquiry will examine the impact that different models of knowledge management have on the absorptive capacity (ACAP) and on the sustainable competitiveness of firms within the service sector, drawing differences between knowledge intensive business services and non-knowledge intensive business services. The objectives of this study shape a road map for the whole research process. These are stated below:

1. To assess the effect that firm *size* and *leadership* have on ACAP, and to understand how firms overcome any limitations posed by these features.
2. To examine the *external* strategies, policies, and procedures, which SMEs adopt in order to acquire and manage knowledge.
3. To examine the *internal* strategies, policies, and procedures which SMEs adopt to expand and capitalise on their knowledge resources.
4. To study the congruencies and divergences that exist in the management of knowledge and ACAP in firms, across the knowledge intensive business services (in particular, the financial industry) and the non-knowledge intensive business services sector (in particular, the tourism industry).

The above objectives are paramount in the design of the inquiry, and determine the methodological position, research design, operational strategy, methods, and procedures adopted in this study. This chapter presents and justifies the specific research methods that form the bedrock of this study.

Figure 3.1 Flowchart detailing the structure of the chapter

Source: *Personal collection*

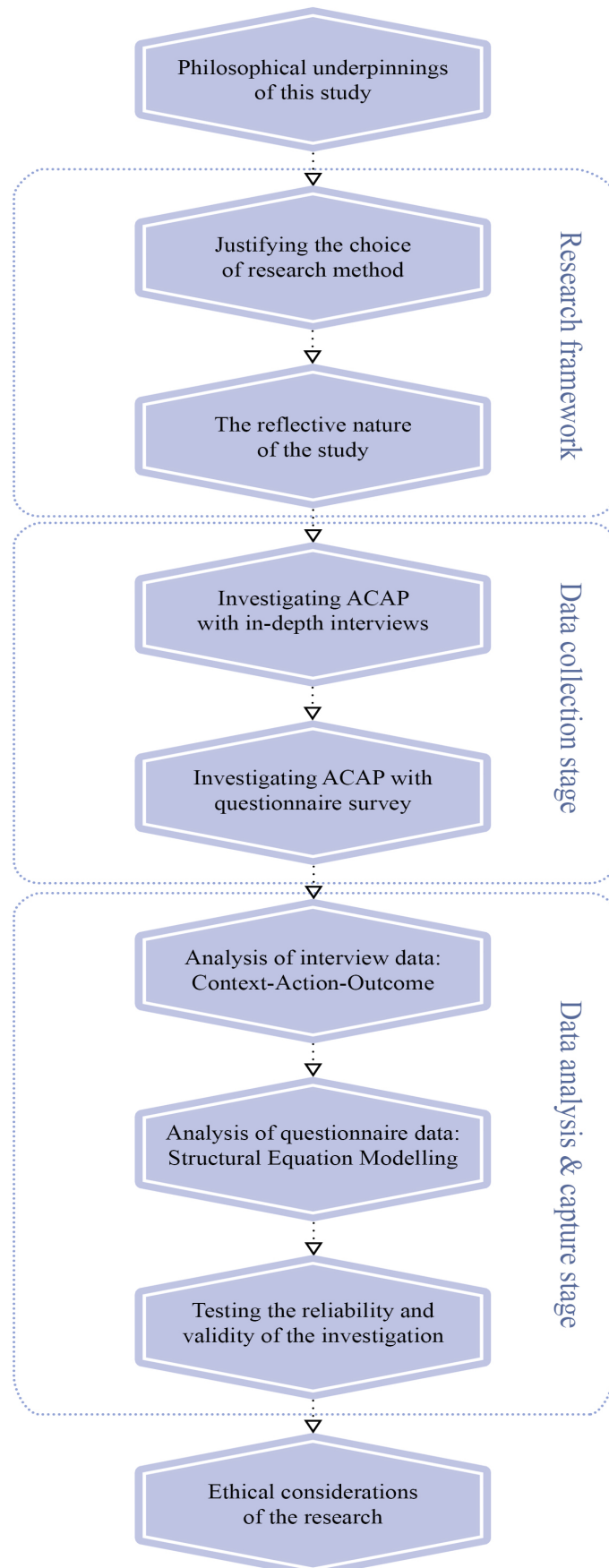


Figure 3.1 above presents a visual presentation of the manner in which the discussion will proceed within this chapter. The chapter starts by discussing the ontological, axiological, epistemological and methodological position held within this study. The chapter will proceed by presenting a defence for the choice of the mixed methodology being used for the analysis, together with a justification for the adoption of a reflective (retrospective) approach of the study. This section comprises a discussion based on the details of the complex mixed methodology, sequential approach, chosen as the basis for this study. The subsequent sections will analyse the data collection methodology giving a critical overview of the collection of the data of both the in-depth interviews and the questionnaire surveys. Section 3.10 evaluates the methodology adopted during the qualitative and the quantitative data analysis stages of the study, by reviewing the context-action-outcome approach and the structural equation modelling respectively, as well as entertaining a discussion around the requirement of testing for reliability and validity of the results to ensure the robustness and generalisability of the findings. The penultimate section discusses the importance of reliability and validity of the overall study; the chapter concludes with an overview of the ethical considerations that have been upheld throughout this study.

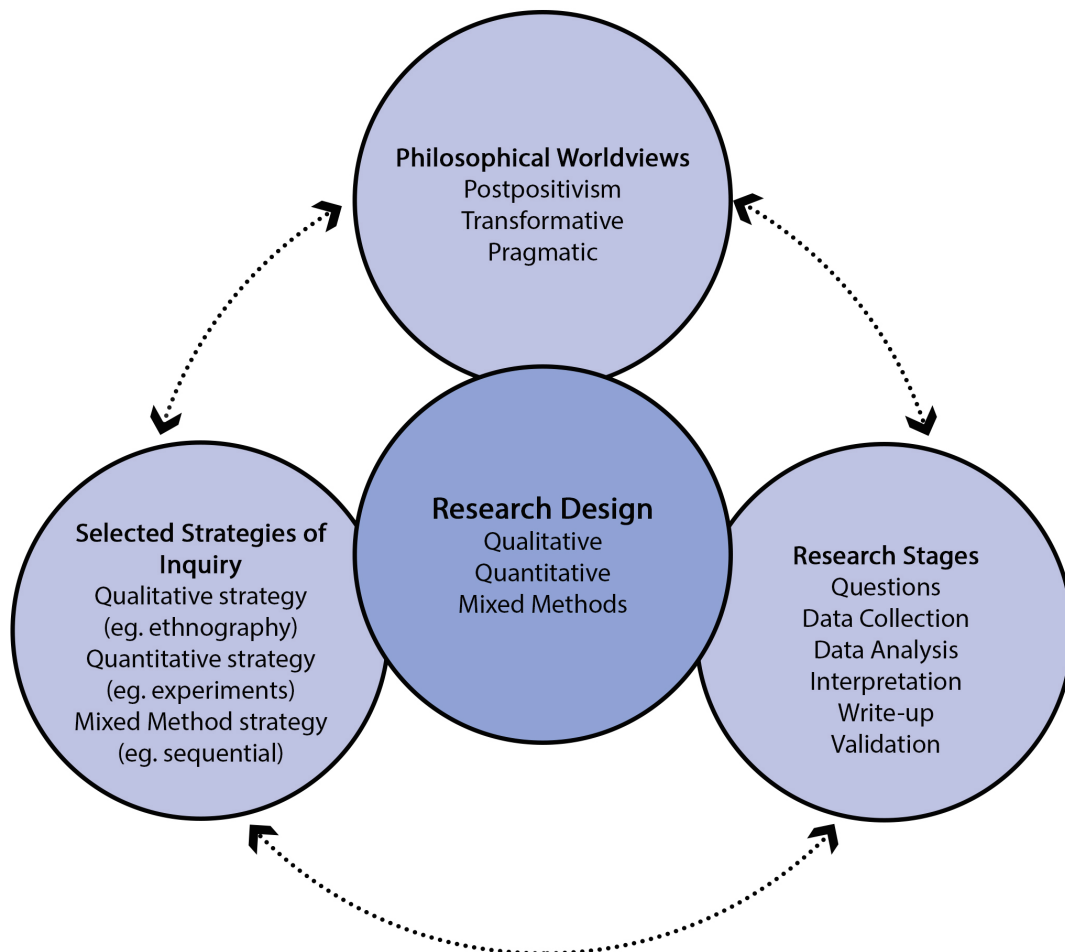
3.2 The Research Design Framework

The design of this research study is based on the research framework as affirmed by Creswell (2003, page 5) and associates three different facets of research: (a) the theoretical perspective and philosophical considerations (ontology, epistemology, axiology) underpinning the study; (b) the strategies of inquiry; and (c) the distinct phases of the research process. These three dimensions of the research are all considered with the research objectives in the background. This implies that the research is designed purposely to reach the objectives it set out to attain. Here Creswell (2003) argues that primarily the researcher needs to decide on the epistemology informing the research, such as, positivism, post positivism, constructivism, advocacy, or pragmatism. With

this position to the philosophical view of knowledge in mind, the researcher can proceed to determine which approach to research best suits his/her philosophical world view, and his/her research objectives: qualitative, quantitative or mixed methods. At this point the researcher’s planning can be translated into practice, with the design of the research process itself: the research instrument, the data collection and capture; the data analysis and evaluation; the write-up and validation of the results.

Figure 3.2 The interconnection of philosophical worldviews, strategies of inquiry and research stages

Source: adapted from Creswell, 2003



3.3 Philosophical Underpinnings of this Study

Several studies have identified different research philosophies that have shaped social science research and their implications on the design and interpretation of such investigations (Creswell, 2003; Creswell and Plano-Clark, 2007; Crotty, 1998; Denzin and Lincoln, 1998; Guba and Lincoln, 2005; Howe, 1988; Neuman, 2000; Puhch, 1998; Tashakkory and Teddie, 1999, 2009).

Throughout this study the researcher has maintained a pragmatic worldview of knowledge. Pragmatists claim that knowledge arises out of situations, actions and consequences, rather than being an antecedent condition. The pragmatist researcher is not conditioned by any one system of philosophy or reality, and this works well particularly for methods research. Researchers are given the freedom to choose which methods or research procedures best suit their purposes. Pragmatists like mixed methods researcher, do not see absolute unity, and consider many different possibilities for collecting and analysing data.

Creswell (2003) argues that the philosophical stance taken by researchers has implications in regard to the position the researchers take throughout their study, in terms of the ontological, epistemological, axiological and methodological perspectives, as well as the nature of the rhetoric adopted to report the findings.

This research will adopt a pragmatist worldview of knowledge and will embrace a mixed method of enquiry to achieve its objectives. Pragmatism is favoured as a philosophical position as it allows the researcher on embracing the methodology that works best for the problem at hand. Alternative worldviews of knowledge prioritize the method over the problem. The researcher wants to adopt a knowledge philosophy, that allows her the freedom to choose the research method, technique, and procedures, best suited to the situation at hand. Pragmatism allows this degree of freedom, considering that it is not tightly connected to any one single method or technique, but allows the use of what works within a given context. Pragmatism has been identified as being the most commonly adopted philosophical rationales for mixed methods studies (Biddle and Schafft, 2014; Bryman, 2007; Creswell and Plano-Clark, 2011;

Feilzer, 2010; Johnson and Onwuegbuzie, 2004; Johnson, Onwuegbuzie, Turner, 2007; Morgan, 2007; Scott and Briggs, 2009; Small, 2011; Tashakkori and Teddlie, 2003, 2010). Further justification for the choice of methodology will be developed in the following sections.

3.4 Justifying Choice of Research Methodology

3.4.1 Rationale for the adoption of Complex Sequential Mixed Methodology

Together with the precedent two traditional research methods of quantitative and qualitative research, Johnson and Onwuegbuzie (2004) present mixed methods research (MM) as the third framework. Quantitative researchers are intent that '*hard, generalizable ... data*' (Sieber, 1973, page1335) offers a preferred level of analysis, and affirm that research should be free from '*time-and context generalisations*' (Nagel, 1986). They adopt a positivist approach to their work, and believe that the observer is distinct from the subjects that he is observing. Advocates of qualitative research methods, on the other hand, refute positivism. They argue that both 'time and context-free generalisations' are undesirable and impossible, and profess the superiority of '*deep, rich and observational data*' (Sieber, 1973, page 1335). They affirm that research is 'value-bound', and that it is impossible to keep the knower and the known separate and distinct from one another (Guba, 1990). Qualitative research offers rich data and allows for comparison across cases, whereas quantitative methods do not permit this while they are, inherently, characterized by abstraction (Yin, 2004). Johnson and Onwuegbuzie (2004) argue that mixed methods (MM) research does not aim to replace either of the purist traditional research methods, but rather aims to draw on the strengths and weaknesses of both methods. MM therefore uses both purist traditional r esearch frameworks

iteratively or simultaneously to generate a research output that is more robust than that produced by either method individually.

MM has been defined as *'the class of research, where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study'* (Johnson and Onwuegbuzie, 2004). This method of inquiry stirs away from the qualitative vs. quantitative dichotomy and works towards using a method, which is complementary, inclusive, and pluralistic. The inquiry used is inductive (revealing patterns), deductive (involving the testing of hypothesis and theories) and abductive (relying on the best set of explanations to understand one's results). Firestone (1987) asserts that a mixed method procedure moves away from the emphasis on subjectivity inevitably attained through an individual level of interviewing, while he stirs towards the adoption of established procedures and practices to arrive at generalizable results and findings.

Primarily, mixed methods research is adopted to address the limitations posed by the use of single methods research, and to maximise on the strengths of each individual framework. Quantitative research, when used independently of any other method, suffers from a number of shortcomings. The researcher's categorization of data or theories used may differ from those accepted and understood by the researched. Also, the output of the research may be considered to be too abstract, while it may be difficult to apply to local contexts and situations. Further, the quantitative researcher may focus so closely on hypothesis testing, that he may completely neglect the actual generation of the theory or hypothesis. Qualitative studies will yield results that are not easily generalizable to larger groups of people or different contexts, and it will be difficult for the qualitative researcher to make predictions or to test theories or hypothesis. A major benefit of using a MM research design is that at any time during the project the researcher can refer to the qualitative data and compare the findings to the larger context for a better understanding and interpretation of the whole picture. Furthermore, the researcher can also run multiple sessions of the quantitative analysis until the confirmatory evidence is revealed (Creswell, 2007).

Several authors (Brewer and Hunter, 1989, 2006; Scrimshaw, 1990) champion that the complementarity of research methods is a strong argument in favour of MM. In addition, MM research is used to provide a much wider research question, as the researcher is not confined to one research method. The flaw with the MM framework is that it is a very demanding research method for the researcher to use: it is both time consuming and expensive, while it requires that the researcher is conversant with a broader range of analytical skills.

The choice of method is largely determined by the fit between the research objectives and the research methodology. The existing ACAP models are inadequate for small firms in the tourism (non knowledge intensive business sector) (Nonsanka & Takeuchi, 1995; Thomas & Wood, 2014) or the financial services sector (knowledge intensive business sector). This indicates that *exploratory* research (i.e. research of a qualitative nature) must be undertaken to address these issues. Furthermore, internal ACAP processes need to be identified, and their effectiveness assessed and evaluated (*explanatory* research) to allow for recommendations and predictions to be made. A MM research design offers a research framework, which exploits the strengths of both purist traditional research methods and better addresses the research objectives outlined in Chapter 1 (pages 29 and 30). Table 3.2 provides an illustration of the requirement of the complementarity of both qualitative and quantitative research methods in order to achieve the objectives of this study.

Table 3.2 Fit between research objectives and research methodology

Source: Personal collection

Research Objective 1	
To assess the effect that firm size and leadership have on ACAP and to understand how firms overcome any limitations posed by these features.	
Data Requirement	Research Method
Firm Size	Questionnaire survey with firm employees and owner/managers; mostly closed ended questions
Firm Age	
Market share commanded by the firm	
Number of family members of total staff complement	
Males vs. female staff members	
Measurement of staff turnover	
Foreign vs. local staff members	
<hr/>	
Leadership style	Semi-structured, face-to-face, in-depth interview with owner/managers; open ended questions
Identification of leadership succession plans	
Core Competences of the firm	
Owner/manager characteristics	
Identification of the challenges faced by firms	
Identification of actions taken by firms to overcome challenges	

Research Objective 2

To explore the internal strategies, policies and procedures which SMEs adopt to expand and capitalise on their knowledge resources

Data Requirement

Research Method

Identification of owner/manager's definition of innovation

Identification of owner/manager's perception of the need for innovation

Owner/manager's view on the importance of recognising tacit knowledge

Owner/manager's view on the importance of knowledge sharing within and outside the firm

Identification of knowledge management style (haphazard or systematic)

Evaluation of the systematic approaches adopted by firms to manage knowledge

Justification for approaching knowledge management non systematically

Measurement of staff training

Measurement of team building efforts

Identification of measures taken to retain transfer and exploit tacit knowledge of workers

Semi-structured, face-to-face, in-depth interview with owner/managers; open ended questions

Research Objective 3

To explore the external strategies, policies and procedures which SMEs adopt in order to acquire and manage knowledge

Data Requirement

Research Method

Awareness of opportunities for firms to form strategic alliances

Eagerness to engage in strategic alliances

Location of strategic alliance

opportunities (local vs. overseas)

Number of times (success/failures) firm has sought to form a strategic alliance

Identification of reason for joining a network

Benefits gained from cooperation arrangements

Challenges posed by such cooperation arrangements

Identification of attitude towards strategic alliances (lessons learnt from success and failures)

Semi-structured, face-to-face, in-depth interview with owner/managers; open ended questions

Research Objective 4

To study the congruencies and divergences that exist in the management of knowledge and ACAP in firms, across the Knowledge Intensive Business Services (in particular, the financial industry) and the Non-Knowledge Intensive Business Services Sector (in particular, the tourism industry)

Data Requirement

Research Method

Identification of the differences in the workforce pool in the tourism and financial services industry; average age; number of family members of total employees; nationality; nature of employment contract; academic background; average entry level position; staff retention/turnover rates; prospects for career advancement.

Questionnaire survey with firm employees and owner/managers – mostly closed ended questions

Identification of investments and intensity in research and development efforts

Assessment of attitude towards change

Semi-structured, face-to-face, in-depth interview with owner/managers – open

Scope of technological opportunities

ended questions

3.4.2 Complex Mixed Methods: QUAL→Quan→Qual,

Having established that the study will adopt a pragmatic philosophical worldview of knowledge, and having determined which data are required to address the research objectives, the specific research design is considered to collect the data, in order to develop a perfect fit with the research objectives.

Bearing in mind that the nature of the research objectives demands that the research design allows for an *exploratory* study, three main types of research design were considered: sequential mixed methods (Green, Caracelli and Graham, 1989), concurrent mixed methods (Tashakkori and Teddlie, 1989) and transformative procedures (Mertens, 2003). It is felt that neither the concurrent research design, where the different research methods are planted within one another, nor the transformative research design, where the researcher endorses a theoretical perspective which guides the topics of interest, the methods of data collection and the outcomes of the study, are appropriate for this research project. A sequential mixed methods procedure is preferred. Within a sequential mixed methods research procedure, the findings from one stage of the research process are used to inform and expand the next method (Green, Caracelli, and Graham, 1989). A sequential MM research design is deemed to have the best fit with the research objectives of this investigation, considering that the first phase of the inquiry may be used to identify and explore the relevant themes of the investigation, whilst the following stages enable the generalization of the results to the larger population. A sequential design has the strength of exploring the mechanisms behind revealed associations or to test hypotheses (Small, 2011; Morse 1991, 2003; Tarrow 2004; Smith 2008).

The sequential MM design used in this inquiry is complex and multiphase. Here the results from the initial qualitative research are used to develop the survey instrument in the quantitative part of the study, which, in turn are confirmed with further qualitative research done during the third phase, with more in-depth interviews. (Greene, Caracelli and Graham, 1989).

Concurrent MM are discarded on the basis that combining quantitative and qualitative research and running the research exercises in parallel, to triangulate the findings, does not suit the research problem. In the case of this study, the researcher must initiate her study by exploring the relevant themes of the subject. A transformative MM procedure is also deemed to be unsuitable for this purpose as within this procedure the researcher embraces a particular theoretical lens in order to analyse a distinct research problem. To reiterate, the position taken by the researcher in this inquiry is to adopt an exploratory sequential design with the initial qualitative phase of the research, informing the second quantitative stage, whose aim is to generalise the findings of the initial research step.

A canon of mixed methods research is that the researcher meticulously constructs a procedure, which is purposely designed to fit the research objectives (Johnson and Onwuegbuzie, 2004). Within the research design chosen to address this inquiry, the chosen procedure is multiphase, QUAL→Quan→Qual, with a dominance of the qualitative phase of the inquiry over the quantitative phase, given the exploratory nature of the investigation.

3.5 The reflective nature of the study

The nature of the inquiry, both during the qualitative and the quantitative aspects of the research, is reflective and backward-looking, as this is the mode best suited to investigate the knowledge procedures and processes, which have led to effective change, over the years, in an organization. The reflective character of this investigation adopts a retrospective approach and asks the respondents, both in the qualitative and in the quantitative parts of the research, to think back in time to their experiences within the organization they work for. No definite time frame has been pre-established to define the reflective character of this study. Instead, respondents were asked to recall their experiences over their years of employment with the current organization. In this way, it is thought to mitigate any confusion on the respondents' part in determining what to recount within or outside of a pre-defined backdated period.

3.6 Crafting of a definition of SMEs for the purpose of this study

Thirty-six organizations from two distinct service industries have formed the basis of this study: eighteen emanate from the financial services sector and comprise the regulator, banks, insurance companies and wealth management firms, whilst another eighteen organizations (sixteen hotels and two regional regulators) have been taken to represent the tourism sector (Appendix to 3.1, page 409). The features of this sample has been considered and evaluated to determine the precise nature of the participants in the sample and to ensure that the firms in question fall within the category of SMEs, the context within which this research is grounded.

At the fundamental part of the analysis, the firms have been classified according to headcount, this being the most commonly used objective, besides being a simple, quantitative yardstick (EU Commission 2005; Kushnir, Mirmulstein, Ramalho, 2010; World Bank, 2016). Following on the recommendations of various proponents of the definition of SMEs (Burrows and Curran, 1989; Curran and Stanworth, 1986; Kushnir, Mirmulstein, Ramalho, 2010) the author has also considered a number of other industry-specific variables to refine the definition and reduce the ambiguity surrounding the firm classification.

Both the firms in the tourism industry and in the financial services sector have been qualified according to size of workforce (based on full-time equivalent number of employees). Supplementary to this measure, the author has computed a value to estimate the level of relative control exercised in the firm by the owners themselves (table 3.3). Given the challenges of compiling the absolute data that would have been required to measure the firm owners' level of control, the author also considered other variables, such as: access to finance, succession plans within the firm, the owners' level of involvement at the operational and at directors' level, and the extent of association or linkages the

firm had with other firms. In the tourism sector, hotels were the only firms included in the sample; an added dimension of number of rooms was considered, as the size of the property did contribute to volume of business of the firm while it impacted upon the size of the enterprise. In the financial services sector, the additional variables that were contemplated comprised the geographical origin of the client base, as well as the nature of the client, distinguishing between corporate and non corporate (i.e. private) business, arguing that there is a great disparity between the volume of business generated by these two distinct groups of clients.

The quantification of the size of the workforce and the number of rooms in the hotels were taken at absolute value, as quoted by the interviewer. A binary coding system was designed for the remaining variables with the value of 0, indicating that the owners exercised considerable control over the firm, and specifying the value of 1 when the owners commanded a lower degree of control over the enterprise. The financing methods of the firm were distinguished by allocating the value of 0 if the firm was financed internally, or by the owner's private funds or bank borrowing, and by the value of 1, when the firm obtained funds by public offering, bonds, or other external means. When a clear historical or future family succession path in the ownership of the business was revealed, the value of 0 was allocated, whilst if this did not exist, indicating a more open and public nature of the firm, the value of 1 was designated. Firms where the owners distanced themselves from the operational activities of the firm were represented by the numeral 1; where the owner-managers involved themselves in the operations of the firm; this was denoted by the code 0. 1 indicated that the firm was associated, or in some way linked with other enterprises, whilst 0 showed that the firm was completely autonomous and independent of any ties with any other enterprises. Lastly, the value of nil was allocated when the client base was completely local and non-corporate, whilst the value of 1 indicated a mixture of local and foreign customers, as well as corporate clients, indicating a larger size of firm in the financial services sector. The measures for funding (v1), succession (v2), the extent of the owners' involvement (v3, v4,v6), association with other firms (v5), customer origin (v7) and nature of business (v8) were then aggregated to provide quantification for the level of control exercised by the owners. The case recording lower

aggregate values for the above variables indicated the owners held a tighter level of control over the firm; the higher aggregate value revealed the owners commanded less control over their firms. The range for the relative measure of control for firms in the financial services sector spanned between 0 and 8, whilst in the tourism sector the total value of the relative control exercised by the owners of the firm had a range of between 0 and 6 (variables v7 and v8 were not considered for this sub sample as they are not relevant to the industry).

Table 3.3 Determining the Relative Value of Control in Firm

Source: Personal collection

Control Variables								Level of relative control
v1	v2	v3	v4	v5	v6	v7	v8	
Financing	Succession	Owners' involvement	Owner-Director	Association with other firms	Owner's operational involvement	Origin of Customer	Nature of business by customer	0
0	0	0	0	0	0	0	0	0
Private	Family	Yes	Yes	No	Yes	Local Only	Private Business	8
1	1	1	1	1	1	1	1	8
Public	Outsiders	No	No	Yes	No	Local & International	Private and corporate business	No Owner's Control

3.7 Phase 1: Investigating ACAP with in-depth interviews

The initial phase of the inquiry was of an exploratory nature and focused on identifying the central and crucial themes of the process of enhancing the absorptive capacity in small and medium sized firms. The procedures adopted

to conduct and analyse the qualitative research (purposeful sampling, constant comparison and theoretical saturation) provided a systematic structure approach and a sound framework to the analysis that reinforces the credibility of the research. Owing to the fact that the database of literature discussing knowledge management and absorptive capacity in small and medium sized firms (particularly tourism sector and financial services sector firms) is scant, it was felt that, initially, an inductive approach to the inquiry is appropriate. Theoretical sensitivity (Glaser, 1978) was further deepened by extensive reading of the literature, discussions with stakeholders and policy makers in the field, as well as by personal experience. The parameters set a procedural approach to the qualitative research and guided the researcher in the design of the interview schedule, selection of the sample, in the analysis of the transcribed interviews and in the evolution of a conditional matrix.

3.7.1 The Researcher as an Instrument

In qualitative interviews the researcher plays a very important role in determining the direction and quality of the interview. Every researcher comes to the investigation with a baggage of academic, professional, and personal experiences, which, together with his personal characteristics and abilities, will, undoubtedly, influence the research process to some degree. This is in accordance with the writings of Corbin and Strauss (2008, page 33) '*professional experience can enhance sensitivity*' and '*background, knowledge and experience not only enable us to be more sensitive to concepts in data, they also enable us to see connections between concepts.*' Corbin and Strauss (2008, page 33.) proceed to state that the accumulated experiences and acquired knowledge of the researcher should not be '*forced onto the data*', but rather should be used to provide the mental capability to respond and decode the messages contained in the data. Being aware of these interview guidelines, the author always entered the interview room with an open mind, ready to facilitate the interviewee to elaborate on the themes being identified.

3.7.2 Interview Schedule Design

The qualitative interviews are exploratory in nature. Therefore a semi-structured interview format, containing open-ended questions was deemed to best fit the purpose of the inquiry. Prior to the field research, the investigator analysed the existing literature in absorptive capacity, and formulated a number of topics or themes, also with reference to previously published work in the field, which she wished to request the interviewees to discuss. Table 3.4 illustrates the different themes, which are contained in the interview schedule, together with relevant probing items and the references from where these were adapted. The qualitative interview schedule is found at Appendix B1 (page 412).

Table 3.4 References used for the source of the themes and probes for the interview schedule

Source: Personal collection

Main theme and supporting pointers		reference
What is the story of the business		
	Elicit information about general background/story of the business:	Thorburn (2005)
	The origins of the idea	
	Date of establishment	Thorburn (2005)
	Ownership	Thorburn (2005)
	Core competence	Uit Beijerse (2000)
	Size of business	Thorburn (2005)
	Management structure	
	How the business evolved over its existence.	
	The profile of the customer	
What is your story		
	Demographic information	Thomas & Wood (2014)
	Position in the business	Thomas & Wood (2014)
	Academic background	
	Employment history outside and within the firm	Thomas & Wood (2014)
	Passions and Ambitions	
Innovation		
Can you tell me about the changes which you have witnessed in this organisation whilst you have been working here?	Interviewee perspective on innovation and reasons/motives for this	
	Extent of organisational engagement with innovation (examples)	Thorburn (2005)
	Oranigational practices to support innovation	
Absorptive Capacity: Idea Generation		
Can you tell me about the processes, which the organisation goes through in order to identify, or think of, new ideas to implement?	Organisational practices to seek new ideas or business improvement ideas	
	Balance between internal and external sources for idea generation	Thorburn (2005); Uit Beijerse (2000)
	Processes for idea generation	
	Extent of investment idea generating process; problem-solving vs. on going activity	
Absorptive Capacity: Networks		
Can you tell me what happens when you understand that the organisation itself cannot generate new ideas from within its teams?	Affiliations/ Alliances/ Co-operations and how these are managed	Thorburn (2005); Uit Beijerse (2000); Jansen, Van den Bosch, Volderba, (2005);
	Extent of networking and how this is managed	
	Processes for networking	
Absorptive Capacity: Knowledge Transfer and Sharing		
	Internal practices aimed to store, retrieve and share tacit knowledge	
	Reliance on IT systems	
	Formal and informal settings. Internal practices aimed at promoting communication amongst management	
	ormal and informal settings /internal practices aimed at promoting omunication and enhancing the transfer of knowledge amongst epartmental staff	Thorburn (2005); McAdam and Reid (2001; Jansen, Van den Bosch, Volderba, (2005);
	rocesses to encourage knowledge sharing	
	taff training: on-the-job vs. off the job; frequency; processes to participate in staff training programmes.	Thomas & Wood (2014)
	Internal practices to facilitate the implementation of newly acquired knowledge following staff training.	
	Reward/ recognition schemes	
Can you please tell me what you do here when you see that staff needs to update or improve their skills and capabilities?		

The author organised the themes in a logical manner but was aware that the order of the themes may be dictated by the flow of the specific interview itself. The investigator was conscious of the fact that her role during the interview was to elicit the interviewee's opinions and ideas, and not to lead the interviewee towards preconceived ideas or meanings. The interviewer recognised her role to allow her subjects to talk freely and spontaneously about the subject, and to simply follow up by probes in order to obtain clarification and/or evidence of a more detailed account of events.

The interview schedule (Appendix B1, page 412) used for the purpose of collecting data to inform the second, quantitative part of the investigation, contained three main themes and seven sub themes as follows:

Theme1: Introduction -	Background to the interviewer Background to the organization
Theme 2: Innovation	Relevance Processes
Theme 3: Absorptive Capacity -	Idea Generation Networks Knowledge Transfer and Sharing Exploitation

3.7.3 Design of the Survey Instrument

The design of the survey instrument was undertaken in the shadow of the main research objectives, and was based upon the themes and concerns that emanated from the previous exploratory qualitative research phase.

Foddy (1994) argues that the validity and reliability of the findings of survey research greatly depend upon the design of the survey instrument itself, the relevance of the questions asked, the degree to which the questions measure the variables intended, the clarity of the wording of the questions and the length of the survey.

Lavrakas (2008) advises that questions should be individually numbered, clearly spaced, and laid out to be visually distinct from one another. He also advises that especially self-administered questionnaires must take up no longer than twenty minutes to complete, considering that the refusal or abandon rate by respondent increases with longer surveys, as does measurement error, survey fatigue and attrition.

The survey instrument (Appendix B2, page 416) was designed in five sections, as follows:

Part A: The Respondent

Part B: Innovation and the Firm

Part C: The Openness of the Firm

Part D: The Assimilation of Learning

Part E: The Exploitation of Knowledge

The survey started with a statement to explain the objective and purpose of the research. It thanked the respondent for accepting to participate in the investigation and declared complete confidentiality and anonymity of the respondents. Each section of the questionnaire provided clear instructions to answer the questions. The overall questionnaire contained 25 questions, some of which contained sub questions. The maximum time a respondent should have dedicated to responding this survey was around twenty minutes.

Part A of the questionnaire aimed at obtaining detail about the profile of the respondent and of the organization he worked for. This section contained 15 questions (with no sub questions). The questions required the respondent to choose from a drop-down list. This section of the questionnaire aimed at establishing the context within which the research was being conducted.

The subsequent parts of the survey instrument (parts B, C, D and E) comprised of 5 questions with fifty-three multiple-choice statements, which respondents had to rank on a five-point Likert scale; 49 multiple choice question and 4 open-ended questions. In articulating the questions or statements, care was taken to ensure that the respondent would have decoded the statements or questions in the way that was intended by the investigator. This was checked by asking four

different people, in different contexts and situations (two mentors, an English language specialist, and a practitioner in survey instrument design) to analyse the wording of the questionnaire, and to comment about the meaning and interpretation of the statements or questions.

In developing the set of questions for the survey instrument, the researcher was guided by surveys used in previously published work on ACAP. Bourque and Clark, 1994 advise that when designing the individual questionnaires, investigators can either *adopt* or *adapt* questions from other surveys or develop their own questions. In fact, several of the Likert questions used in the research instrument have been adapted from previously published work, which explored ACAP (see table 3.5). The advantage of using items from previously published work is that these items would have already been checked for their reliability and validity by the original author, thus offering the researcher more reassurance in terms of the viability of the questions in reducing the measurement error, when initially drawing up his original survey instrument. Table 3.5 lists each of the questions in the survey instrument together with the source from which the question has been adapted.

Table 3.5 Source of items in survey instrument

Source: Personal collection

Section and Item in the Survey Instrument		adapted from:
Innovation and the firm	16a The firm is continuously scanning the environment to monitor new market trends	Camison and Fores, 2010; Thornburn, 2005; Thomas, Wood, 2014;
	16b The firm regularly seeks to introduce new ways and procedures for doing business	Camison and Fores, 2010; Thornburn, 2005; Thomas, Wood, 2014;
	16c A dedicated team of people is employed primarily to research and develop new business ideas	Camison and Fores, 2010; Thornburn, 2005
	16d Management mostly takes a 'wait and see' approach in the context of new trends and methods	Camison and Fores, 2010; Thornburn, 2005
	16e I have personally been involved in projects which brought about changes to the organization	Original
	16d In general, employees in this firm are not hostile to change and innovation	Original
	16f During my employment with this firm, I have not witnessed the introduction of new or innovative ways of doing business	Original
	16g Innovation and change are initiated solely at management level	Original
16h Innovation and change are implemented solely at worker-level	Original	

The Firm's practices with respect to change and innovation	21a	Employees' participation in departmental meetings is required on a regular basis	Thomas, Wood, 2014;
	21b	Departmental meetings are mostly the place where management's decisions and instructions are communicated to staff	Original
	21c	Meetings are usually only held to identify and discuss problems	Original
	21d	During meetings, all participants are encouraged to put forward new ideas for discussion and development	Thomas, Wood, 2014; Valentim, Lisboa, Franco, 2015
	21e	New employees are trained in the firm's processes and practices prior to commencing work	Valentim, Lisboa, Franco, 2015
	21f	Employees are required to attend in-house training courses on a regular basis	Thornburn, 2005; Camison and Fores, 2010
	21g	Employees are required to attend externally organized training courses on a regular basis	Camison and Fores, 2010
	21h	The firm encourages employees to share new market, technical or other knowledge with their colleagues	Thornburn, 2005; Jansen, Van den Bosch, Volberda, 2005;
	21i	The firm has rules and places where to record firm processes.	Thornburn, 2005; Jansen, Van den Bosch, Volberda, 2005;
	21j	The record/manual of firm practices and process is updated regularly	Thornburn, 2005; Jansen, Van den Bosch, Volberda, 2005;
	21k	The firm has developed processes to capture ideas from employees	Thornburn, 2005; Jansen, Van den Bosch, Volberda, 2005;
	21l	Firm policies for idea generation and knowledge sharing are clear to all employees	Thornburn, 2005; Jansen, Van den Bosch, Volberda, 2005;
	21m	Employees are well aware of how to put forward an idea to management	Thornburn, 2005; Jansen, Van den Bosch, Volberda, 2005;
	21n	Employees' ideas are never taken on board and developed into new/better business, process or products.	Camison and Fores, 2010; Jansen, Van den Bosch, Volberda, 2005;

The openness of the firm	22a	There is a strong working relationship amongst firms operating in the industry.	Camison and Fores, 2010; Jansen, Van den Bosch, Volberda, 2005
	22b	Firms within the industry meet up regularly in formal settings (Association meetings, trade meetings, Chamber of Commerce meetings etc.) to share new trends and ideas.	Camison and Fores, 2010; Jansen, Van den Bosch, Volberda, 2005; Thomas, Wood, 2014;
	22c	The firm regularly engages with other players from local industry to learn about new trends, products and ideas.	Camison and Fores, 2010; Jansen, Van den Bosch, Volberda, 2005; Thomas, Wood, 2014;
	22d	The firm networks extensively with overseas organizations (partner firms, suppliers, agencies etc.) in order to learn about trends and new products.	Camison and Fores, 2010; Jansen, Van den Bosch, Volberda, 2005
	22e	I have never participated in any meeting with the aim of sharing ideas with players from inside the organization	Camison and Fores, 2010; Thornburn, 2005
	22f	I have never participated in any meeting with the aim of sharing ideas with players from outside the organization	Camison and Fores, 2010; Jansen, Van den Bosch, Volberda, 2005; Thomas, Wood, 2014;
	22g	Management regularly attends informal meetings (lunch, talks, social gatherings etc.) to discuss new trends and ideas	Camison and Fores, 2010; Jansen, Van den Bosch, Volberda, 2005; Thomas, Wood, 2014;
	22h	The search for relevant information regarding new ideas is imbedded in the culture of the firm	Camison and Fores, 2010; Jansen, Van den Bosch, Volberda, 200
	23a	Employees are encouraged to undertake training so as to broaden their knowledge of the industry	Camison and Fores, 2010
	23b	The internal processes necessary to obtain Authorization for employee training are known by workers	Camison and Fores, 2010
	23c	Management expects employees to broaden their firms and industry knowledge	Camison and Fores, 2010
	How learnig is used	23d	The organization adopts policies, which require employees to document newly acquired knowledge from training.
23e		Firm policies do not allow employees to undertake training during normal working hours	Jansen, Van den Bosch, Volberda, 2005;
23f		Many employees are not aware of the firm policies which require them to document the knowledge acquired from training	Jansen, Van den Bosch, Volberda, 2005;
23g		Most employees meticulously document newly acquired knowledge	Jansen, Van den Bosch, Volberda, 2005;
23h		Employees have a clear understanding of who is responsible for the storage of information within the organization	Jansen, Van den Bosch, Volberda, 2005;
23i		Employees have a clear understanding of who is responsible for the dissemination/sharing of information within the organization	Jansen, Van den Bosch, Volberda, 2005;
23j		The firm uses employees' knowledge and skills effectively	Camison and Fores, 2010
23k		I willingly share my knowledge with my colleagues for the benefit of the firm	
23l		Employees are kept informed of important developments within the firm	Thomas, Wood, 2014;
23m		The firm encourages informal conversations amongst employees to share information and knowledge	Thomas, Wood, 2014;
23n		Interdepartmental meetings are organised regularly to discuss developments	Thomas, Wood, 2014;
23o		Employees are given the opportunity to be heard during meetings	

	How effective is the firm in doing each of the following?		
The Exploitation of Knowledge	24a	Exploiting my knowledge	Camison and Fores, 2010; Valentim, Lisboa, Franco, 2015
	24b	Responding to specific customer requirements	Camison and Fores, 2010; Jansen, Van den Bosch, Volberda, 200
	24c	Encouraging employees to share information with each other	
	24d	Using IT to improve information flow	Thomas, Wood, 2014;
	24e	Using different methods to foster better communication among employees	
	24f	Exploiting new processes/practices to improve business products and services	Camison and Fores, 2010; Valentim, Lisboa, Franco, 2015
	24g	Communicating with employees	Thomas, Wood, 2014;

3.7.3.1 Testing for reliability and validity of the research instrument

Anderson and Gerbing (1998) recommend that the items in a quantitative research study be tested for reliability and for convergent, discriminant and nomological validity. Reliability tests the degree of consistency between multiple measurements of a variable. It is essential that the internal reliability of the constructs be measured to ensure that the individual items or indicators of a scale all measure the same construct and are highly correlated (Churchill, 1979; Nunnally, 1978). The assessment of the internal reliability of the items in the survey instrument required the analysis of the estimates for the measure of composite reliability (Werts, Linn, Jöreskog, 1974). Scale validity measures the extent to which the set of items on the scale accurately represent the concept to be measured, in this case ACAP. Convergent validity assesses the extent to which measures of the same concept are correlated, whereas discriminant validity measures the degree to which two conceptually similar concepts are different and distinct. Factor loadings and measures of the average variance explained (AVE) assess convergent validity (Fornell and Larcker, 1981). Discriminant validity was tested by comparing the square root of the average variance explained for the individual constructs, which were extracted from the measurement model, with the correlations among the latent variables (Barclay, Thompson, Higgins, 1995; Fornell and Larcker, 1981). Nomological validity of

the scale assesses the degree to which the scale makes accurate predictions as suggested by theory. The nomological validity of the structural model was assessed by calculating and interpreting the Q^2 value in a blindfolding procedure (Geisser, 1974; Stone, 1974).

3.7.4 Sampling

The primary data were obtained by interviewing owner-managers of small and medium-sized firms operating in the tourism and in the financial services sector in Malta during the period October 2015 - December 2015. In all cases, the respondent was either the most senior executive of the firm, or a member of the senior management team. This strategy was adopted in accordance with Hambrick's (1981) assertion that such a subject is expected to be the most instructed about the policies and strategies of the organization. In medium sized firms (i.e. firms which employ between 50 and 249 employees, and where the owner has a lower degree of control in the organization, as per definition stated in Section 3.6), officials from lower ranks of the organization were also interviewed in order to mitigate the characteristic of larger firms, where the agent-principal phenomenon may be at play.

The investigation was undertaken in two industries, which are representative of the two broad categories of the service sector: the knowledge intensive based firms, here represented by firms from the financial sector; and the non knowledge intensive based firms, portrayed here by the tourism sector. For the purpose of the investigation the financial services sector and the tourism sector are taken to comprise the following categories of firms:

Financial Services Sector: Banks (credit institutions)

Non-banks (pension funds, wealth management companies, insurance companies, trustees and fiduciaries)

Tourism Sector : Hotels

The sample of the tourism sector was limited only to hotels, and this for a specific reason: the researcher wishes to align herself with some of the previously published work on ACAP in the tourism sector (specifically Thomas and Wood, 2014), in order to enhance the comparability of results across research studies.

Initially, the sampling strategy chosen was convenience sampling. Three interviews were run as pilot interviews, based on interviewees, who had been approached, because they were acquaintances, and had volunteered to participate in the investigation. Following the piloting of the interviews using convenience sampling, the author adopted purposeful sampling, where the interviewees were chosen according to the needs of the study. Here the interviewer aimed to interview a minimum of five subjects from each micro and small firm and three subjects from each medium sized firm operating in the financial services sector and in the tourism industry. The process ensued until theoretical saturation was achieved with no new ideas, themes, or concepts being revealed.

3.7.5 Interview Piloting and Data Collection

The piloting of the interviews was carried out in October 2015, when three subjects were chosen based on convenience sampling. The three firms were chosen as the owner/managers were personal friends of the researcher and they were quickly available to participate in the investigation. The sample had the following structure:

- Firm 1: Financial Services Sector firm - Bank; small sized
- Firm 2: Tourism Sector Firm - Hotel; medium sized
- Firm 3: Financial Services Sector Firm - Non Bank; medium sized

During these pilot interviews the investigator preambled by thanking the interviewees for accepting to participate in the research, and then introduced the scope of her investigation. She proceeded by reading a confidentiality statement, and then presented each interviewer with a signed confidentiality declaration on the part of the researcher. Throughout these pilot interviews the need was not really felt to work towards the requirement for setting the interviewer at ease, given the previously established level of familiarity between the interviewer and the interviewee. The interviewer limited herself to asking broad, open-ended questions, revolving around the themes identified in the interview schedule, this was resorted to with the aim of eliciting the ideas and opinion of the interviewee with regards to the absorptive capacity processes in place in the firm to enable or to enhance the innovative performance of the organization. The interviewer conducted the pilot interviews by practising the effectiveness of questions such as:

“Tell me the story of this business”

“What is your story?”

“Can you give me examples of this?”

“Can you elaborate on this?”

“What do you mean?”

and by simply being silent at some times, to wait for the interviewee to proceed with the elaboration.

The interviewer found that these pilot interviews were good practice, particularly for her, as she was able to get into the routine of having probes ready at hand to elicit more detail from the subjects. The interviews, all averaging about an hour in duration, adopted a reflective and backward-looking nature, where the interviewee was asked to describe processes and events relevant to the context, which happened in the firm over time, and of which he/she had personal recollection. The outcome of the pilot exercise was three in-depth interviews, which were highly informative and of excellent quality. A further outcome was the opportunity for the researcher to evaluate and fine-tune the interview schedule to include a number of additional themes.

Theme1: Introduction -	Background to the interviewer Background to the organization
Theme 2: Evaluation of Innovation	At Industry Level At Firm Level
Theme 3: Process to enhance Innovation	Idea Generation Idea Acquisition Networks
Theme 4: Processes to enhance the learning capability of the organization	Training and Mentoring Experimentation Recording knowledge Evaluating Knowledge Using Knowledge
Theme 5: Future plans	Developments (process/product/practices in the pipeline)

Following the piloting of the interviews, the researcher undertook the main data collection phase.

In section 3.7 page 105), the researcher has explained how she has been guided by strict procedural guidelines to set a sound framework for her study. Throughout the data collection phase, she worked towards obtaining theoretical saturation before declaring that she had collected enough data from the in-depth enough interviews.

3.8 Phase 2: Investigating ACAP with questionnaire survey

Survey research is an extensively used research method (Moser and Kalton, 2001). Its use extends to a multitude of disciplines (Fowler, 2002; Moser and Kalton, 2001; Neuman, 2000). Survey research serves as a medium through which results can be generalised to a larger population about the behaviour of the population with regards to a particular context thereby enabling inferences

to be made (Babbie, 1990). This type of research method will provide a numeric measurement of opinions, trends and attitudes of the general interested population, with regards to the absorptive capacity in SMEs operating in the knowledge intensive based service sector and in the non-knowledge intensive based service sector (the financial services sector and the tourism sector respectively).

3.8.1 Sampling

The validity of survey research is greatly dependent upon the coverage of the enquiry. For this reason, determination of the sampling frame is essential prior to the establishing of the sampling method or target sample size.

This investigation aimed to collect the views and opinions of all those who work in the two economic sectors, namely; tourism and the financial services. Data collated by the National Office of Statistics (NSO) reveals both the number of firms and the number of employees registered in the relevant sectors and categorised by firm size (micro, small, and medium).

NACE H55.1 Hotels

NACE J64: Financial and Insurance activities

NACE J65: Insurance, re-insurance and pension funding, except compulsory Social Security

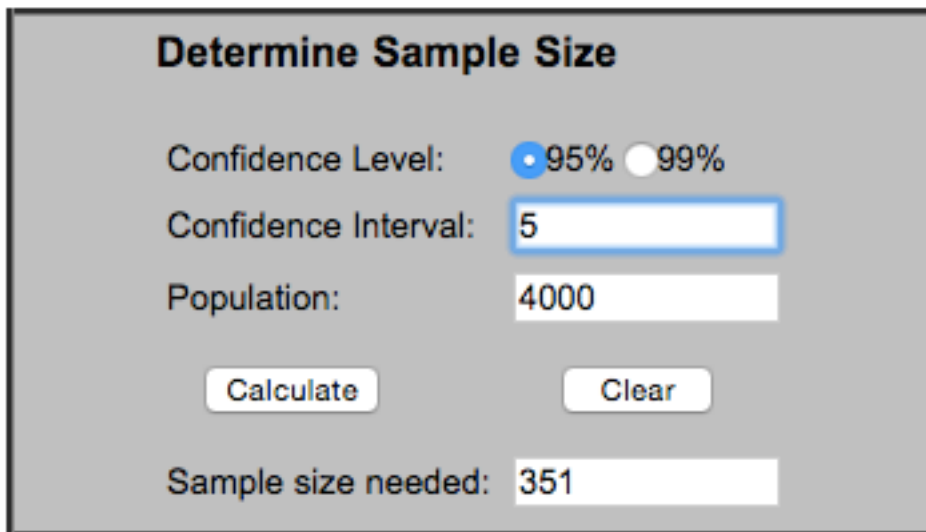
NACE J66: Activities auxiliary to financial services and insurance activities.

The author cautions that the firm size indicated by the National Statistics Office in Malta (NSO) conforms to the EU definition of the terminology, and, therefore, proves to be rather different from that provided for the scope of the investigation. Another word of caution is that the NSO currently provides statistics with a time lag of around eighteen months. This implies that the figure in hand to represent the total number of employees relevant for this study (around 4000) is only an approximation of the current accurate figure.

Based on sample size calculations carried out (<http://www.surveysystem.com/sscalc.htm>) with a confidence level 95% and a confidence interval of 5%, it resulted that the ideal sample size could not be less than 351 respondents, with a good representation from both sectors of the economy.

Figure 3.4 Sample Size Calculation

Source: <http://www.surveysystem.com/sscalc.htm>



The image shows a web-based calculator titled "Determine Sample Size". It features several input fields and buttons. The "Confidence Level" is set to 95% (selected with a radio button) and 99% (unselected). The "Confidence Interval" is set to 5. The "Population" is set to 4000. There are two buttons: "Calculate" and "Clear". Below the buttons, the "Sample size needed" is displayed as 351.

Field	Value
Confidence Level	95% (selected)
Confidence Interval	5
Population	4000
Sample size needed	351

3.8.2 Piloting

The piloting of the survey was conducted using an online survey platform (<https://www.surveymonkey.com>). The survey instrument was launched in December 2015, in four different organizations (two hotels, a bank and a non-bank) using a web link generated by the platform itself. This weblink was sent to the contact person within the organization, who was asked to cascade the link containing the invitation to participate in the survey, further down within the organization. The survey was kept open for four weeks. Eight responses were received within the first week, another two within the second week, nothing in

the third week and another one in the fourth week and then the responses stopped coming in. Despite the numerous online reminders and solicitations, this response rate was deemed to be very slow and it was immediately apparent that an alternative method to collect the survey responses needed to be adopted in order to satisfy the sample size requirements established in figure 3.4 above. A preliminary analysis of the data showed that the data that had been collected, was relevant and instructive.

3.8.3 Data Collection

Originally, the researcher had aimed to launch the online, self-administered questionnaire survey to all the registered employed persons in the sectors of the population by the methods listed below:

1. Approaching the Malta Tourism Authority (MTA) and the Malta Hotels and Restaurants Association (MHRA) and asking them to cascade the survey with all the registered hotel employees recorded on their databases.
2. Approaching the Institute of Financial Services (Malta) IFS and the Malta Union of Bankers (MUBE) and asking them to cascade the survey with all registered bank employees on their database.
3. Personally sending the survey to the contact people at each of the micro, small and medium sized firms operating in the tourism and services sector and ask them to cascade this amongst their employees.

The pilot study immediately revealed that trying to collect survey responses via the online platform was not going to generate the number of required responses. For this reason, the researcher adopted the more traditional way of distributing hard copies of the survey instrument and completely abandoned the online survey platform.

The researcher compiled a list of firms from the financial services sector and from the tourism industry, starting with the (eight) firms, where she had contacts

and armed with a set of twenty-five hard copies of the questionnaire started distributing these hardcopies to her contacts within the firms, asking them to distribute the questionnaires to a cross section of the employees, and to follow-up personally the collection of completed questionnaires. The researcher kept in telephone contact with the organization to monitor the progress of the completion of the questionnaires and personally collected the completed forms, when instructed to do so by the organizations. This process generated around 130 responses (65% response rate).

3.8.4 Overcoming challenges encountered in data collection

When the researcher attempted to enter other organizations where she had no contacts, this proved to be very difficult. The researcher received three downright refusals from Human Resource Directors of different organizations to allow their employees to participate in the exercise. Given the relative small size of the Maltese islands, and, therefore, of the number of organizations on the island, firms were reluctant to allow their employees to participate, as they claimed that this would invite other researchers to target their firms, implying a certain amount of loss of productivity during the time the employees completed the surveys. Two firms went as far as quantifying the cost to the firm of allowing the twenty employees to participate in the survey.

After much thought and discussion, the researcher overcame this challenge by personally calling the General Manager (GM) of the selected organizations, and asking them to concede her a thirty-minute meeting to discuss their perspectives on knowledge management in their industry. Most GMs agreed to the meeting, at the end of which, the researcher personally passed on hard copies of the survey instrument to the GM, requesting him/her to kindly allow some of his/her employees to participate in the research exercise. This approach was successful and a further 256 responses were collected between March and October 2016. This brought the total final sample to 397 responses; 130 responses out of initial 200 questionnaires which had been launched in the first instance, plus a further 256 (out of 400 launched) generated from the

second 'run'. The total response rate stands at 66.2% (397 out of 600 surveys launched).

The researcher feels that the reluctance of the firms to allow their employees to participate in the research exercise, stemmed not only from the fact that they considered this to be a costly, unproductive exercise for their bottom line, but also because they were mistrustful of the true intentions of the researcher. The short, face-to-face meeting with the GM of the organizations gave the researcher the possibility to explain clearly the motives of her research and to ensure the firms that the research was neither competition, nor politically motivated.

3.9 Phase 3: Triangulating results

Data triangulation aims to augment the credibility of the results of the study by endorsing the findings, even when using alternative sources of data and data collection methods (Merriam, 1998).

A mixed methods research design was originally regarded as an ideal method of data triangulation, (Tashakkori and Teddlie, 1998). Various authors (Shihm 1998; Thurmond, 2001) have identified the dual role of mixed methods research as being both confirmation of results and comprehension of results. The design of the first two phases of the research project was aimed at allowing a more detailed understanding of the phenomena (Morse, 2003), in this case the ACAP of SMEs in the knowledge intensive business services, and the non-knowledge intensive business services. The first two phases, therefore, do not provide for the confirmation of the results of the research, but simply elaborate and expand the understanding of the reality. The author has purposely designed a multistage mixed method design, with the third phase being used for the triangulation or confirmation of the results.

3.9.1 Case Study

A sample of six firms has been chosen from within the list of firms that participated in the quantitative part of the enquiry, three each from within the tourism and the financial services sectors. The sample of firms was selected to represent a micro, small, and medium sized firm from each sector, thus enabling a broader comparison of the data.

The case studies were conducted by organising on-site visits to the six organizations and engaging in informal conversation with employees, whilst these were enjoying their lunch break. The organizations also allowed the researcher to sit in and observe the employees interacting during meetings and proceeded to allow a line manager to prepare and deliver a 20-minute lecture detailing how he/she perceives the innovation performance of the organization, as well as the process the firm embraced to achieve the successful development of the most recent innovation. Each line manager offered to explain the operation of the organization and how the organization managed its resources.

In this way, the researcher was mainly testing the ability and ease with which the participants share their knowledge, an element that relates strongly to ACAP in service sector SMEs.

3.10 Methods of Data Analysis

Different data analysis techniques were adopted based on the nature of the data that emanated from the various stages of the inquiry. The researcher's overarching objective was to complete a study, whose credibility (reliability and validity) was established. For this reason, she strived to be meticulous, detailed, and rigorous in the analysis of the data she has collected.

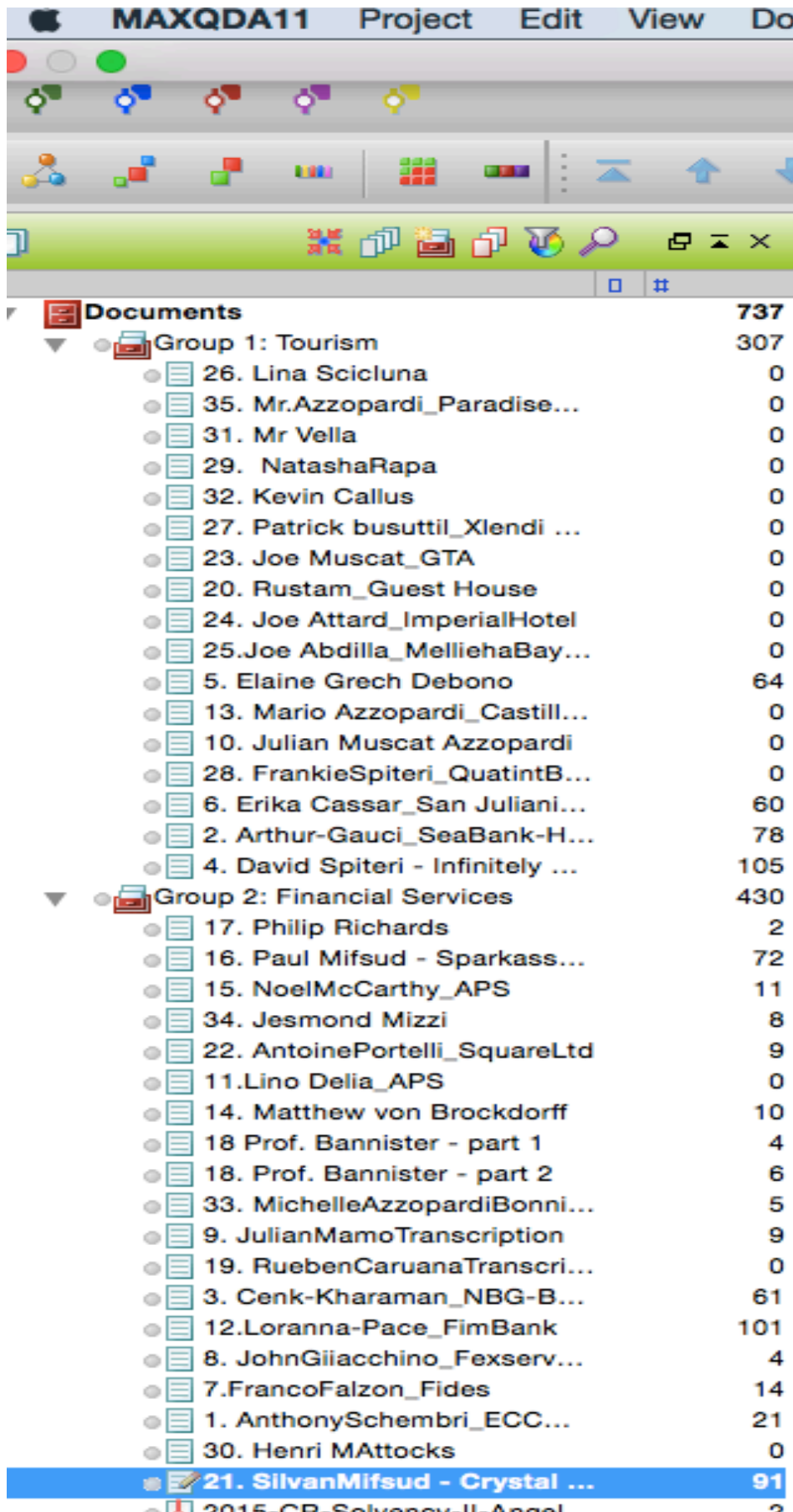
3.10.1 Phase 1 - Interview Data: Context-Action-Outcome

Each interview recording was meticulously transcribed using the support of two professional legal transcribers and a University student. Each transcription was then checked by the researcher herself, to ensure that the original interview discussion was religiously reported. All interviews were uploaded to a qualitative research analysis platform, MAXQDA v11, where a specific project was created. All the transcriptions were then stored into two document sub-systems, one containing the transcriptions of the interviews held in the tourism sector, and another sub-system containing the transcriptions of the interviews held in the financial services sector (Figure 3.5)

Descriptive coding was used to index the documents, with the researcher using one or two words to summarise the essence of each identified passage and used those same words to code the passage. This Open Coding was done as an initial level of coding. This was then followed by further coding procedures (axial and selective coding) according to the data analysis rules laid down by Strauss and Corbin (2008) .

Figure 3.5 Window revealing the transcribed documents as uploaded to MAXQDA

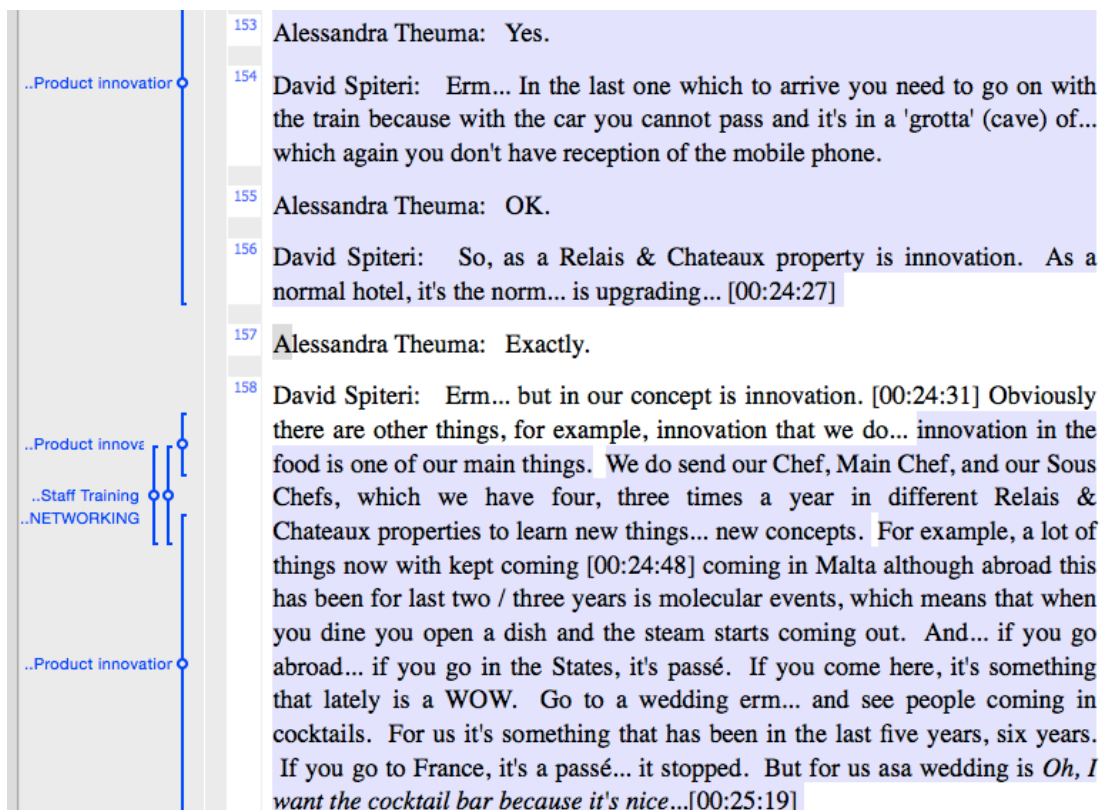
Source: Personal collection



An open coding process was performed during the first part of the analysis, where the analyst carefully read through the transcripts and identified words, phrases or extracts and classified them by attaching codes to them, as shown in figure 3.6.

Figure 3.6 Document browser showing the in-vivo coding

Source: Personal collection



A frequency table (Table 3.6) was generated. This table shows the number of times each code was used across all the analysed interviews, as well portraying the frequency of the code as a percentage of the total codes; and the number of documents in which the code appears. This gives the analyst an insight into which codes have relatively more importance than others and, therefore, need to be explored more extensively in the later part of the research.

Table 3.6 Code Frequency table (extract)

Source: Personal collection

Parent code	Code	All coded segments	All coded segments %	Documents
ACAP	Knowledge Transfer and Sharing	56	7.59	17
INNOVATION	Drivers	35	4.74	11
EXAMPLES OF INNOVATION	Product innovation	32	4.34	7
PROFILE OF ORGANIZATION	Background	29	3.93	9
IDEAS	Generation	26	3.52	12
ACAP	Knowledge Retention	26	3.52	11
HUMAN RESOURCES	Staff Training	23	3.12	8
ACTIONS	Networking	20	2.71	10
EXAMPLES OF INNOVATION	Process Innovation	20	2.71	8
PROFILE OF ORGANIZATION	Core Competence	19	2.57	7
PROFILE OF INTERVIEWEE	Professional background	17	2.3	8
HUMAN RESOURCES	Recognition of Staff Efforts	15	2.03	9
INNOVATION	Perception	15	2.03	9
EXAMPLES OF INNOVATION	Service Innovation	14	1.9	4
PROFILE OF ORGANIZATION	Corporate Culture	14	1.9	4
EXAMPLES OF INNOVATION	Business Model Innovation	13	1.76	4
PROFILE OF ORGANIZATION	Origins of Firm	13	1.76	6
CONSEQUENCES	Growth of business	13	1.76	6
PROFILE OF ORGANIZATION	Organizational Chart/management structure	13	1.76	7
PROFILE OF INTERVIEWEE	Academic background	13	1.76	9
PROFILE OF CLIENT	Background	12	1.63	3
ACTIONS	NETWORKING	11	1.49	3
INNOVATION	In-house vs Out-sourced	11	1.49	4
PROFILE OF CLIENT	Nationality	11	1.49	6
IDEAS	Acceptance	10	1.36	7
INNOVATION	challenges	10	1.36	5
HUMAN RESOURCES	Nurturing Innovation	10	1.36	4
INNOVATION	Open/Sources/Alliances	9	1.22	3
PROFILE OF INTERVIEWEE	Interviewee's position	9	1.22	6
CONSEQUENCES	Projections for the future	8	1.08	5
PROFILE OF EMPLOYEES	No of Employees	8	1.08	7
CONSEQUENCES	Consequences of Innovation	8	1.08	5
HUMAN RESOURCES	Staff Recruitment Policy	8	1.08	3
PROFILE OF CLIENT	Risk appetite	8	1.08	4

CONSEQUENCES	Innovation: Acceptance	7	0.95	3
INNOVATION	Inhibitors	7	0.95	2
INNOVATION	Type of innovation	7	0.95	4
PROFILE OF EMPLOYEES	Staff Turnover	7	0.95	6
ACAP	Knowledge Acquisition	6	0.81	6
PROFILE OF ORGANIZATION	Leadership	6	0.81	3
PROFILE OF INDUSTRY	Industry Climate/ Dynamics	6	0.81	4
PROFILE OF EMPLOYEES	Nationality	6	0.81	4
PROFILE OF INTERVIEWEE	Seniority in the firm	6	0.81	6
PROFILE OF INDUSTRY	Ecosystem	5	0.68	2
PROFILE OF ORGANIZATION	Age of business	5	0.68	4
PROFILE OF INDUSTRY	Regulation	5	0.68	2
ACAP	Knowledge Exploitation	5	0.68	2
PROFILE OF EMPLOYEES	Academic Background	5	0.68	4
Enablers	Organizational Attitude	4	0.54	1
ACAP	Knowledge Identification	4	0.54	2
PROFILE OF EMPLOYEES	Past experience with innovation	4	0.54	3
CONSEQUENCES	Perception of innovation	4	0.54	3
PROFILE OF INTERVIEWEE	Age	4	0.54	4
PROFILE OF CLIENT	Search of innovation	4	0.54	4
PROFILE OF INTERVIEWEE	Gender	4	0.54	4
HUMAN RESOURCES	Mentoring	3	0.41	2
PROFILE OF INTERVIEWEE	Innovative energy	3	0.41	2
INNOVATION	Trust	3	0.41	2
PROFILE OF INTERVIEWEE	Perception to innovation/change	3	0.41	2
PROFILE OF ORGANIZATION	Innovation Strategy	3	0.41	1
INNOVATION	Internal Processes	3	0.41	2
PROFILE OF EMPLOYEES	Age	3	0.41	3
PROFILE OF INTERVIEWEE	Nationality	3	0.41	3
PROFILE OF CLIENT	Organizational vs Individual	3	0.41	3
INNOVATION	Enablers	3	0.41	3
	Limited Knowledge	2	0.27	2
PROFILE OF CLIENT	Age	2	0.27	1
ACAP	Knowledge Assimilation	2	0.27	2
INNOVATION	Importance of Good Leadership	2	0.27	1
PROFILE OF CLIENT	Knowledge of the industry	2	0.27	2
INNOVATION	Reasons for innovation	2	0.27	2
PROFILE OF EMPLOYEES	Gender	2	0.27	2
CONSEQUENCES	Benefits of Multinational Staff	2	0.27	1
INNOVATION	Choice of implementation time	2	0.27	1
CONSEQUENCES	Resultant organization	2	0.27	2

INNOVATION	Industry context	2	0.27	1
PROFILE OF INTERVIEWEE	Interviewee's mission	2	0.27	2
PROFILE OF EMPLOYEES	Reaction to innovation	1	0.14	1
PROFILE OF CLIENT	Feedback	1	0.14	1
Enablers	Ecosystem	1	0.14	1
ACTIONS	IDEAS	1	0.14	1
HUMAN RESOURCES	Inclusion	1	0.14	1
	ACTIONS	1	0.14	1
INNOVATION	Serendipity	1	0.14	1
PROFILE OF INDUSTRY	Taxation	1	0.14	1
INNOVATION	Alignment of Innovation	1	0.14	1
HUMAN RESOURCES	Opportunity to meet	1	0.14	1
	CONSEQUENCES	1	0.14	1
PROFILE OF INDUSTRY	Economic conditions	1	0.14	1
INNOVATION	Definition	1	0.14	1
HUMAN RESOURCES	Creative Space	1	0.14	1
CONTEXT	PROFILE OF INDUSTRY	0	0	0
	CONTEXT	0	0	0
CONTEXT	PROFILE OF ORGANIZATION	0	0	0
CONTEXT	PROFILE OF INTERVIEWEE	0	0	0
ACTIONS	HUMAN RESOURCES	0	0	0
CONTEXT	PROFILE OF EMPLOYEES	0	0	0
ACTIONS	ACAP	0	0	0
CONTEXT	INNOVATION	0	0	0
ACTIONS	INNOVATION	0	0	0
ACTIONS	EXAMPLES OF INNOVATION	0	0	0
CONTEXT	PROFILE OF CLIENT	0	0	0
TOTAL		738	100	


A coding system (table 3.7) was generated which listed all the variables that had been lifted from the analysis. After the initial *in- vivo* open coding, axial coding (Strauss and Corbin, 1990), relating codes and categories together based on commonality and meaning, followed during which the researcher considered the relationship and connections between the codes and dimensions which resulted from the open coding exercise. A subsequent level of Selective Coding was engaged with, to connect the categories together. These codes were later organised into a model showing the relationship between contextual factors, actions, and consequences.

Table 3.7 Coding System created with MAXQDA analysis

Source: Personal collection

CODE SYSTEM
Limited Knowledge
CONTEXT
PROFILE OF INDUSTRY
Industry Climate
Taxation
Economic conditions
Regulation
PROFILE OF ORGANIZATION
Innovation Strategy
Origins of Firm
Background
Age of business
Core Competence
Organizational Chart/management structure
Corporate Culture
PROFILE OF INTERVIEWEE
Innovative energy
Perception to innovation/change
Interviewee's position
Age
Nationality
Gender
Seniority in the firm
Interviewee's mission
Academic background
Professional background
PROFILE OF EMPLOYEES
Reaction to innovation
Past experience with innovation
No of Employees
Age
Gender
Nationality
Academic Background
Staff Turnover
INNOVATION
Trust
Serendipity
Importance of Good Leadership
Definition

- Perception
- Industry context
- Type of innovation
- PROFILE OF CLIENT
- Age
- Background
- Knowledge of the industry
- Search of innovation
- Organizational vs. Individual
- Nationality
- Risk appetite
- ACTIONS
- IDEAS
- Generation
- Acceptance
- HUMAN RESOURCES
- Mentoring
- Staff Training
- Staff Recruitment Policy
- Recognition of Staff Efforts
- Nurturing Innovation
- Creative Space
- ACAP
- Knowledge Acquisition
- Knowledge Identification
- Knowledge Assimilation
- Knowledge Transfer and Sharing
- Knowledge Retention
- Knowledge Exploitation
- INNOVATION
- Internal Processes
- Alignment of Innovation
- Reasons for innovation
- Choice of implementation time
- Inhibitors
- In-house vs. Out-sourced
- Enablers
- Organizational Attitude
- Ecosystem
- Drivers
- EXAMPLES OF INNOVATION
- Service Innovation
- Business Model Innovation
- Process Innovation
- Product innovation
- NETWORKING
- CONSEQUENCES

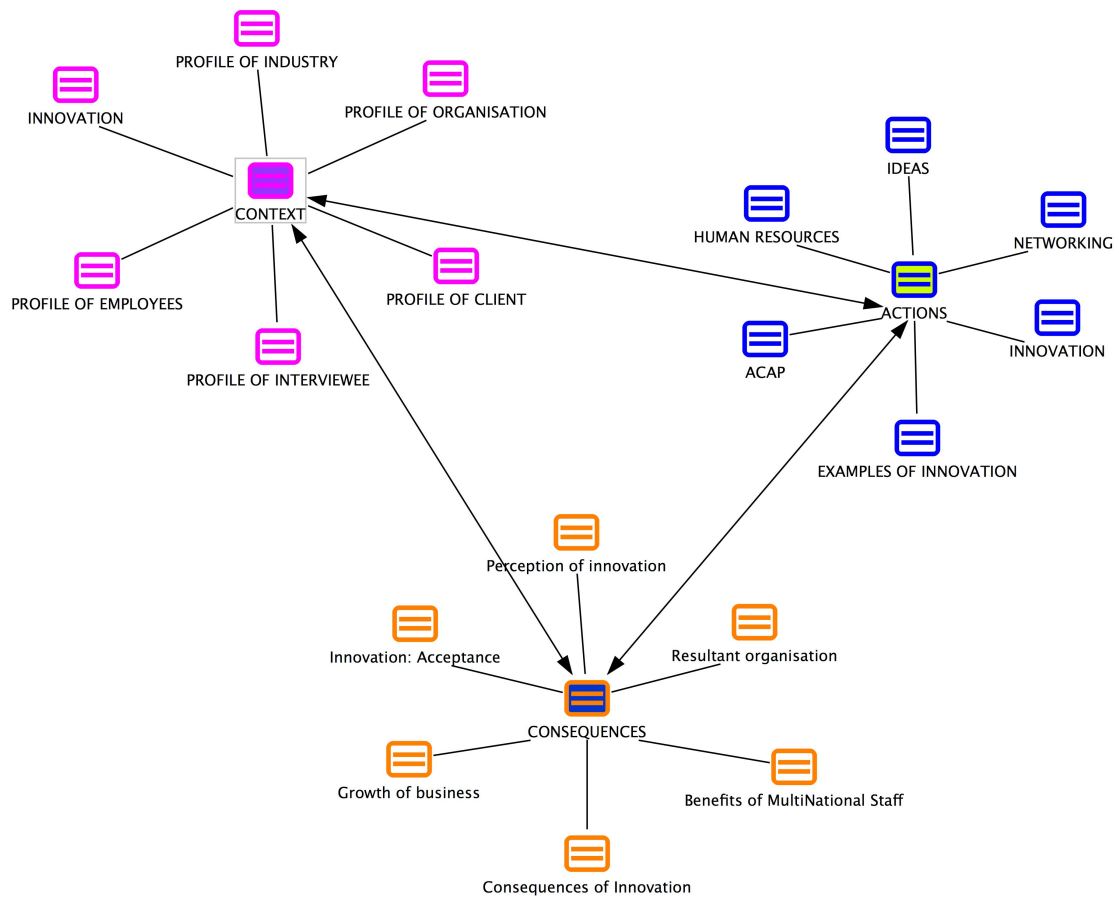


- Projections for the future
- Innovation: Acceptance
- Perception of innovation
- Consequences of Innovation
- Benefits of Multinational Staff
- Resultant organization
- Growth of business

Figure 3.7 organises the parent codes from table 3.7 and presents them in a manner to show the connection and links between the different codes. This map shows how six codes have been grouped together to form the context of the analysis and contain data about the profiles of the industry, organization, employees, interviewees, and customers, as well as a general perception of innovation of the interviewees. The interviewees revealed the actions that the firm takes within the context that has just been described. These actions can take the form of networking, Human Resources Management practices, ideas generation, ACAP practices and policies and the generation of innovation. The actions which are taken within the set context, will, in turn result in a set of precise outcomes, which have been identified as the resulting performance of the organization, the resulting benefits of a multicultural workforce, the extent and speed of growth experienced by the organization, and examples of innovations, which the firm has seen over the years. The model reveals that whilst the context shapes the actions, which in turn shape the outcomes, each of these stages will also impact each other in a backward fashion order; so the actions also shape the context (which then reshape the actions etc.) and the outcomes, too reshape the context (which reshape the outcomes etc.). Each of the three main elements are constantly shaping and reshaping one another. This qualitative analysis informed the design of the survey instrument, which was used during the second research phase.

Figure 3.7 Map of variables from phase 1 of the inquiry

Source: Personal collection



3.10.2 Phase 2 - Questionnaire Data - Structural Equation Modelling

Structural Equation Modelling (SEM) was used to examine the resulting relationship between the different variables within the study. SEM has been chosen over other traditional statistical methods like, correlation, regression and analysis of variance, since SEM is a highly flexible, comprehensive and powerful, statistical approach (Suhr, 2006), can analyse relationships between observed and latent variables (Hoyle, 1995), and is a method for producing, determining and testing a theoretical network of relationships between variables (Rigdon, 1998).

The results of the administered surveys were directly input to an excel file, which was then imported into IBM SPSS 24, a dedicated statistical programme that performs the required statistical manipulations for exploratory analysis.

The first stage of the analysis consisted of the cleaning of the data. The data were screened for missing data (replaced by mean values) and for normality using the measures of skewness and kurtosis. Given the non normal distribution of the data, the next step was to check for outliers using boxplot analysis and to standardize the data. At this point, the researcher ran an exploratory factor analysis (EFA) to determine the relevant underlying factors. This revealed a five-factor model, with a total variance explained of 67%, a Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) of 0.9 and a significant Bartlett's Test of Sphericity $p < 0.05$

3.10.2.1 Testing for reliability and validity of the data collected from phase 2

The contrasting nature of quantitative research requires a different approach to ensure the credibility of the results. Internal reliability was tested using composite reliability with a cut-off point of 0.7 (Fornell and Larcker, 1981). Since it is inappropriate to administer the same questionnaire twice to the same group of people, as would be required of the test-retest method, the split test evaluation was conducted to check for the reliability of the data. Cronbach's alpha (α) was calculated with a value of $\alpha = 0.7$ being interpreted as strong reliability of results (Churchill, 1979; Hair, Anderson, Tatham and Black, 1998; Spector, 1992).

A vital aspect the robustness of the finding is the degree of validity of the results. Validity of research results ensures that the findings of the study can be shared with confidence (Mentzer and Flint, 1997). Validity is multidimensional. Assessments can be made of construct validity, content validity, and substantive validity. Construct validity measures the extent to which a variable accurately reflects what it is actually intended to measure (Churchill, 1979, 1992). Structural equation modelling (SEM) provides for five aspects of construct validity: unidimensional, reliable, convergent, discriminant and predictive. Content validity assesses the extent to which the construct (or latent variable) is described by the elements that explore the domain for the latent variable. Substantive validity, on the other hand, assesses the theoretical connection between the construct and the items used to measure it (Dunn, Seaker, Waller, 1994).

Testing for content and substantive validity relies greatly on subjectivity and the value judgments of the researcher. The researcher has sought to ensure content and substantive validity by increasing her insight in the theoretical and conceptual expertise surrounding Absorptive Capacity (ACAP). In this way, the researcher has equipped herself with extensive theoretical knowledge to be able to judge and assess the relationship and theoretical relevance of the items to the latent variables.

Following the confirmation of the reliability and the validity of the measurement model, the structural model was evaluated (using the software SmartPLS v3.2.6) using R-square estimates, standardised coefficients (β) and significance level (t statistic). The R-square values measure the structural model's predictive power, while the path loadings (interpreted as standardized regression coefficients) indicate the strength between the independent and the dependent variables. A bootstrapping procedure calculated path loadings and t-statistics for the hypothesized relationships, whilst a blindfold procedure tested the predictive power of the model.

In order to fulfill the four objectives laid out in the introductory chapter of this study (Chapter 1 page 29-30), invariance analysis was conducted to assess the extent of convergence and/or divergence of the two service sectors in terms of their knowledge management. Measurement invariance analysis was conducted using the Multigroup Analysis procedure in Smart PLS v3.2.6. Measurement invariance procedures compare similar constructs, when these are used across different sub-samples.

The choice of the software Smart PLS was not the initial choice of the researcher, who had originally favoured the IBM SPSS Amos package for the elaboration of the confirmatory factor analysis. Smart PLS structural equation modelling uses an ordinary least squares regression-based model, rather than maximum likelihood estimation, used by IBM SPSS Amos in generating the covariance based structural equation model. The researcher decided to change the software package in favour of Smart PLS as, upon trial, this package seemed to be very intuitive to use, whilst also having had received excellent reviews by colleagues. On a technical note, Smart PLS works efficiently with small sample sizes (the sample size of this study of 397 cases is not too large), can handle complex models, and makes no assumptions about the underlying data (Cassel, Hackly and Westlund, 1999), as well as handling both reflective and formative measures, and single-item constructs well (Hair, Hult, Ringle, and Sarstedt, 2014).

3.10.3 Phase 3 - Analysis of Case Studies

The case study data was analysed using the Context-Action-Outcome method that has been previously adopted in the analysis of the interviews in the first phase of the research. The results emanating from this analysis were compared to the results obtained from phase 2 (the qualitative research) in order to confirm the reliability of the findings.

3.11 Overall reliability and validity of the qualitative and the quantitative data

The researcher has dedicated much time and deliberation to craft a research design that not only produces findings which are directly related to the research objectives, but also ensures the credibility of her research results. In this context, the author is abiding by Rogers' (1961) interpretation of scientific methodology, where he asserts that this is a procedure for increasing the credibility and reducing the subjectivity of the research findings. Two elements must be considered, when discussing the credibility of research findings: reliability and validity.

Several authors (Easterby-Smith, Thorpe and Lowe, 2002; Mauders, Lewis and Thornhill, 2007) express that the issue of reliability of research findings measures the consistency of results across testing situations (Easterby-Smith, Thorpe and Lowe, 2002; Mauders, Lewis and Thornhill, 2007). Robson (2002) identifies four factors that may impede the reliability of the results, these being subject/participant error; subject/ participant bias; observer error and observer bias. Robson argues that in order to reduce the danger of respondent error, the researcher must attempt to interview the respondents at a time when they are most likely to give data, which is typical of their normal environment, rather than allow the respondent to be conditioned by external factors in their environment e.g. end-of-day/ week work pressure etc. Of course, whilst this is, to a certain extent, within the control of the researcher in the case of the scheduling of the

face-to-face interviews, it is less so for the quantitative inquiry, when interviewers respond at the time they choose to do so. Participant bias refers to situations, when the interviewee replies are less objective, and bound by what the respondent believes either the interviewer or the employer would like him to say. It is appreciated that it is possible to elicit answers by wording questions in a number of different ways. This may create observer error, which can be mitigated by the preparation of interview schedules and questionnaire surveys that are carefully studied and pre-tested to counter observer error. Observer bias exists in the interpretation of the respondent replies, and it is unnatural for a researcher to assume that his own experiences and baggage of knowledge do not, in any way, frame his translation of the respondent's answers. The author aims to overcome this threat to reliability by undertaking a rigorously structured data analysis process and by the triangulation of the results from different sources.

Tests for validity measure whether the relationship between variables is causal or incidental in nature. Robson (2002) identifies several threats to the validity of data and presents these as history, testing, instrumentation, mortality, maturation, ambiguity, and causal direction. These factors all point to the fact that the respondent's answers were in some way conditioned by the immediate circumstances, which he/she was experiencing, and were not typical responses that the interviewer would have given had he been exposed to a more routine environment.

The reliability and validity criteria are considered differently in qualitative and quantitative researcher methods. Four guiding principles were adhered to throughout the qualitative part of the study to ensure the credibility of the data. The criteria that lie at the foundation of the qualitative data collection and analysis parts of this study are:

1. The collection of high calibre data: participants of the face-to-face interviews were chosen on the basis that they could contribute rich and varied data. A rigorous sampling strategy was used in order to ensure that this was achieved

2. The rigorous management of the collected data: the data collected from the face-to-face interviews was meticulously saved in digital format and religiously transcribed in every detail. The digital format both of the original interviews and their transcribed forms were saved in a secure database and backups maintained. The transcribed files were imported into a single project file in MAXQDA v11, which allowed for the analysis and coding of each separate interview and the cross analysis with the coding in each of the other transcribed interviews.
3. Meticulous analysis and interpretation of the data: the analysis of the initial interviews was conducted using the *in vivo* coding technique, as this phase provided for the initial architecture of the themes to emanate. *Axial and selective coding* were, then, used to confirm, or, otherwise eliminate, the variables and the relationships, which were lifted from the transcriptions in the initial analysis stage. The MAXQDA platform offers a *Text Retrieved Segments* option, which allows for all the text having a unique code across the different interviews, to be called up in a single file. This provides for ease of cross-reference, comparison, and detailed analysis.

3.12 Ethics of the Research Design

Throughout this inquiry, the researcher's work and behaviour was driven by strong regard for ethical considerations. Research ethics can generally be regarded as the principles and norms by which the researcher conducts his research, gains access to data, collects, processes and stores the data (Mauders, Lewis and Thornhill, 2007). The Social Research Association (2003) further expand the interpretation of research ethics and posits that a researcher must be guided by his ethical behaviour with respect to society, funders and employers and to colleagues, apart from the general ethical behaviour in his interactions with the research participants (subjects). Throughout her work, the author has maintained a deontological standpoint in this regard and has been guided by the philosophy that the objectives served by the research cannot ever justify unethically conducted research.

3.12.1 Ethical Considerations

In view of the four levels at which it is recommended that ethical considerations be maintained, the Social Research Association (2003) outlines the principles by which the researcher needs to be guided at each of the four levels at which ethical principles must be observed and respected. Table 3.8 gives an overview of the different facets of ethical considerations researchers are expected to respect and a detailed account of how the researcher has been guided by such recommendations throughout her investigations.

Table 3.8 Fitting recommended ethical recommendations with the researcher's actions.

Source: Personal collection

Ethical obligations to:	Recommendations by Social Research Association (2003)	Obligations respected by:
Society	Widening the scope of social research	Upon completion of the research the author intends to organise meetings with stakeholders and policy makers both in the Financial Services Sector and in the Tourism sector in order to discuss the findings and contribute towards the formulation of organisational policy.
	Considering conflicting interests	This recommendation is not particularly valid for the inquiry in hand as the inquiry aims to investigate the internal organisational processes for knowledge management in a bid to enhance innovativeness of the sectors. Society at large will only stand to benefit if sectors of the economy enhance their innovativeness and become more competitive, even on the international sphere.
	Pursuing objectivity	The researcher has maintained an open-minded approach regarding the degree of objectivity and the limitation so her research.
Funders and Employers	Clarifying obligations and roles	The researcher is self-funded and therefore has no additional commitments to respect in relation to her employer apart from those relating to her professional conduct at and beyond the place of work.
	Assessing alternatives impartially Guarding privileged information	
Colleagues	Maintaining confidence in research	The researcher aims to address this obligation by clearly discussing the limitations of the inquiry when engaging in the presentation of findings and emanating recommendations.
	Exposing and reviewing their methods and findings	All research methods adopted throughout this inquiry have been carefully thought-out and deliberated with colleagues, mentors, and supervisors and feedback has been taken into account. The overarching aim has been to design a research paradigm which, whilst respecting ethical considerations, addresses the research objectives appropriately and objectively. The researcher has maintained constant communication regarding research methodology and ethical consideration, particularly with her fellow research colleagues at her place of employment, which is a teaching institution focusing on ICT, Entrepreneurship, Management and Finance.
	Communicating ethical principles	
	Ensuring safety and minimising risk of harm to field researchers	This recommendation is not particularly relevant to the current research project and therefore no importance was given to it.

Subjects	Avoiding undue intrusion	The researcher is aware that she has no particular entitlement to study all phenomena and for this reason has always approached respondents respectfully and has not been insistent when the respondents felt that they did not wish to divulge particular information, or when they preferred not to participate in the research. All respondents to the qualitative and quantitative elements of the research were <i>invited</i> to participate in the research by an introductory letter/ telephone call or email and their involvement in the study was purely on a voluntary basis.
	Obtaining informed consent	The researcher binds herself to refrain from releasing any personal or individual data from her research and in any way to identify respondents when reporting and communicating her findings. Apart from guaranteeing absolute confidentiality and anonymity to participants, the researcher binds herself to curtail the level of disturbance to participants, particularly in the phase during which she is engaging them to participate in the research.
	Modifications to informed consent	The researcher has strived to include all eligible subjects in the invitation to participate in the inquiry without discriminating on any ground.
	Protecting the interests of subjects	When approaching subjects, the researcher binds herself to respect the anonymity and confidentiality of the subjects. She will do this by referring to respondents (where necessary, throughout the analysis) by pseudo names. This means that Mr XYZ will be referred to as Respondent 1 and Firm ABC will be referred to as Firm A.
	Enabling participation	
	Maintaining confidentiality of records	
	Preventing disclosure of identities	

3.12.2 Data Storage

The European Union Data Protection Directive (Directive 95/46/EU), which was reformed in 2012, now regulates the way in which individuals' data is processed, stored, and reused. In light of this, the researcher is abiding by a deontological ethical philosophy and guarantees to collect and process information according to the informed consent granted by the respondent. The respondent further guarantees not to collect personal data in excess of what is required to reach the research objective; to keep the data, especially, the personal data, securely; and not to retain it for a duration of time in excess of that which is necessary for the purposes of the research. The researcher vouches that all data will be kept in soft copy and transferred to external storage

in the researcher's personal library. Whilst the soft copy of the data is kept indefinitely (permitted as per Section 33 of the Data Protection Act), any hard copies of the data will be shredded and burnt after a period of seven years, which period is deemed to cover for any requirement to refer back to the data in the research.

Chapter 4

Setting the Context:

The Maltese Economy

4.1 Introduction

The Maltese economy is a small (320 square kilometers and a population of 431,874 (The World Bank, 2016), insular island state in Southern Europe, with a long history of colonisation, dating as far back as the Phoenicians (750 B.C.- 480 B.C.) and progressing through to the British (1799-1964). Malta is not endowed with any natural resources and suffers from a limited supply of fresh water; it therefore depends predominantly on its manpower to sustain the economy. Malta gained independence in 1964 and became a Republic in 1974. It has been a member of the European Union since 2004, and of the Euro Zone, since 2008. It has been a member of the United Nations since 1964 and is a Commonwealth member state. Malta's geographic position has been very significant to the island's economic history (Brincat, 2009) and has helped to overcome the island's limitations in terms of landmass and lack of natural resources. Much of the island's economic development took place during the second half of the twentieth century and is the result of a "*process of export-led industrialisation driven by foreign direct investment and foreign technology*" (Brincat, 2009).

After its independence in 1964, Malta steered its economy away from one that had been geared mostly to the servicing of other nations in defence matters, to an economy built on the pillars of production sectors such as manufacturing, tourism, and in more recent years, financial services, online gaming, aviation, pharmaceuticals and maritime services. Its first five-year Development Plan (1959-1964) sought to establish three major industrial sectors: manufacturing, tourism, and agriculture (Brincat, 2009).

Today's Maltese Government pursues a policy of gradual privatisation and economic liberalisation, steering the economy to replace state intervention with the market mechanism. The country's economy has evolved over the years in response to development and to events on the global economic sphere. In its document, 'Vision 2015 and Beyond: A Path to a Knowledge Based Economy', published in 2007, the Government of Malta identified a number of industries that it wanted to support and develop to ensure diversification of the local

economy. The government's intention is for these specific industries to form the pillars of the Maltese economy, to secure sustainable economic growth. The critical industries that have been identified include advanced manufacturing, creative industries, financial services, international educational services, life sciences, tourism, and transportation and advanced logistics.

The purpose of this chapter is to give a comprehensive understanding of fabric of the Maltese economy as it stands today. It aims to enable the reader to understand and appreciate the context within which this research project has been rooted. This chapter, therefore, directs the reader to recognise the precise context within which this empirical work has been conducted. This chapter will start by detailing the metamorphic process of the Maltese economy into the export-oriented service based economy it is today. It will proceed to discuss the more technical aspects of the Maltese economy, such as the Gross Domestic Product, International Trade, and Production. At this stage, the reader will be introduced to the tourism and the financial services sector in turn, these being the two services sectors that have been researched for the purpose of this empirical work. The tourism sector represents the non-knowledge intensive business sector, whilst financial intermediation represents the knowledge intensive business sector. The last part of the chapter will ensue, where the reliance of the Maltese economy on family-run micro firms will be made evident.

4.2 The Maltese economy: A historical background

During the early nineteenth century, Malta became the focal point of a major trading system with many cargo ships benefitting from Malta's strategic geographical position, in the middle of the Mediterranean Seas, guarding the passage of ships from Britain to India. The British had based their fleet in Malta. At this time, and in later years, with the opening of the Suez Canal, marine trade grew and Malta's economy prospered as cargo ships stopped in Malta for supplies, en route to their destinations. By the late nineteenth century many Maltese workers found employment in the docks and some banks had started operating on the island. By the beginning of the twentieth century the marine industry had developed large ships, which did not need to refuel as often as their predecessors. It was then that Malta's geographical position lost its importance to air technology and to the more powerful marine vessels; Malta's economic downturn had commenced. By the end of World War II in 1945, the British had withdrawn from the naval dockyard and transformed the docks for commercial ship repair purposes. Brincat, (2009) argues that the industrialisation process in Malta had started well before the end of World War II; however, Malta's industrialisation resulted in the production of services, mostly marine repair, rather than goods. Even at this time, the fabric of the Maltese economy was of the small-sized business, the sole trader, or the family-owned and managed business. During the British colonial era in Malta, several reports had been published (e.g. Macleod, 1943) which depicted Malta as completely income-dependent on the British military spending, and argued for the development of the Maltese economy away from British military spending, so that the island could secure its own existence, and avoid deteriorating standards of living during peace time. Casolani (1924) was one of the first writers to argue in favour of reducing Malta's dependence on British military spending by developing a large scale tourism sector, whereas Schuster (1950) proposed the development of industry, agriculture and tourism. The Development Plan of 1959-1964, the first of its kind for Malta, assigned funds for the development of three sectors as per the recommendations in the cited reports: industry, tourism and agriculture, and marks the beginning of a modern economy for Malta.

Today, Malta's economy has diversified into a variety of sectors and is greatly dependent on foreign trade, manufacturing (especially electronics and pharmaceuticals) 15.80% of GDP, (The World Bank, 2015) and the service industry (82.8% of GDP, The World Bank, 2015).

The main pillars of the service sector are tourism which accounted for around 20% of GDP in 2015 (Cordina, 2015), financial intermediation and insurance, accounting for around 15% of GDP in 2015, (Bannister, 2016), and the online-gaming industry at around 10-12% of GDP in 2015, (Bannister, 2016).

Thanks to the country's insularity and tightly regulated banking system, Malta did not suffer inexorable hardship as a result of the 2007- 2009 Global Financial Crisis, as did some other southern European countries. Malta's economy has registered impressive growth rates in 2015 and 2016 of 6.15% (World Bank, 2015), and 6.7% (NSO, 2017) respectively when the world average stood at 2.72% and the European Union average at 2.2% in 2015

4.3 The evolution of the Maltese economy

It was only around the mid-twentieth century, when the British decided to start withdrawing their naval and military bases from the Mediterranean, that the development of the Maltese economy ensued in earnest. During the earlier years, the British dampened Maltese efforts to set up private enterprise, as they believed this would have competed directly with their own requirements for Maltese skilled labour force.

4.3.1 An analysis of the GDP of the Maltese economy

Data collected reveals that the economy gathered momentum and expanded rapidly immediately after the island gained Independence in 1964. Figures 4.1 and 4.2 below illustrate the main measures of the Maltese economy over the years and give testimony to the economic development that the country has undergone since it gained independence in 1964. Figure 4.1 shows the upward trend in the Gross Domestic Product of the country over the forty-eight year period with GDP rising from US\$1.1bn in 1970 (the first record reproduced by The World Bank) to US\$ 10.5bn in 2015. The increase in the GDP is mainly attributed to the development of Maltese industry. Initially, these were mainly tourism, construction, and manufacturing; in later years, the emphasis was given to the services industry, particularly the financial services sector and online gaming.

Figure 4.1 Malta: GDP in US \$ (at constant 2010 prices), 1967-2015

Source: the World Bank, 2017

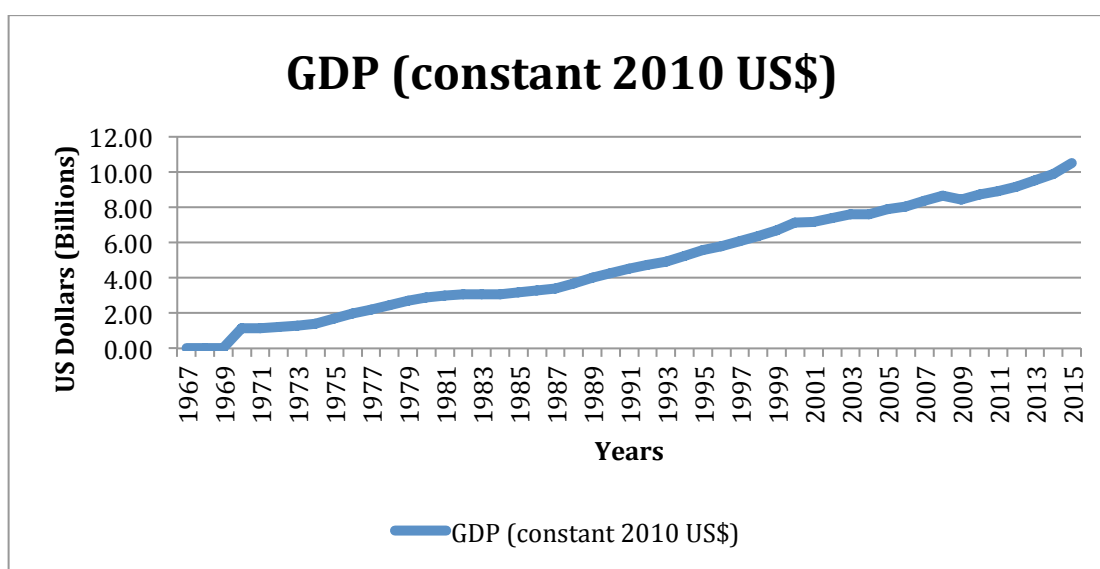
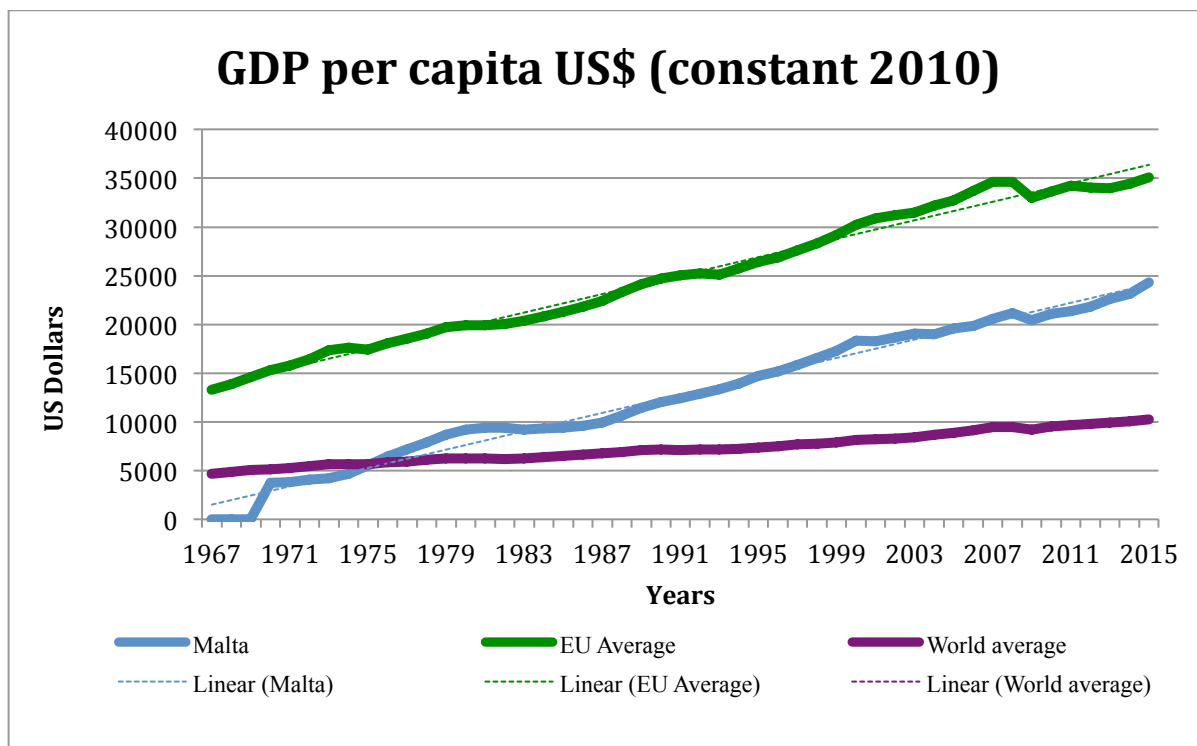


Figure 4.2 highlights the steady rise of the gross domestic product (GDP) per capita experienced in Malta over the same period. The GDP per capita measured US\$3743 in 1970 (EU: US\$ 15321; World US\$3690) to US\$24321 in 2015 when the EU average stood at US\$35100 (World average: US \$10242). This means that whilst the Maltese multiplied their GDP per capita nearly seven times over, the EU average only doubled over the same period. It can be argued, of course, that the magnitude of the EU GDP is only an effect of averages, and that when countries poorer than Malta acceded to the EU (particularly Romania and Bulgaria in 2007 and Croatia in 2013), the average GDP per capita in the EU was adversely affected. However, a similar pattern is also reported in the overall world GDP per capita, where the measure less than tripled during the same time when the Maltese GDP per capita increased by nearly seven fold. Figure 4.2 also reveals that the upward trend (rate of growth) experienced in Malta resembles that accomplished in the EU, but is much steeper and, therefore, better than that experienced by the rest of the world. Nevertheless, Malta's GDP per capita remains substantially lower than that of the European Union.

Figure 4.2 Malta , EU and World average GDP per capita, US \$

(at constant 2010 prices), 1967-2015

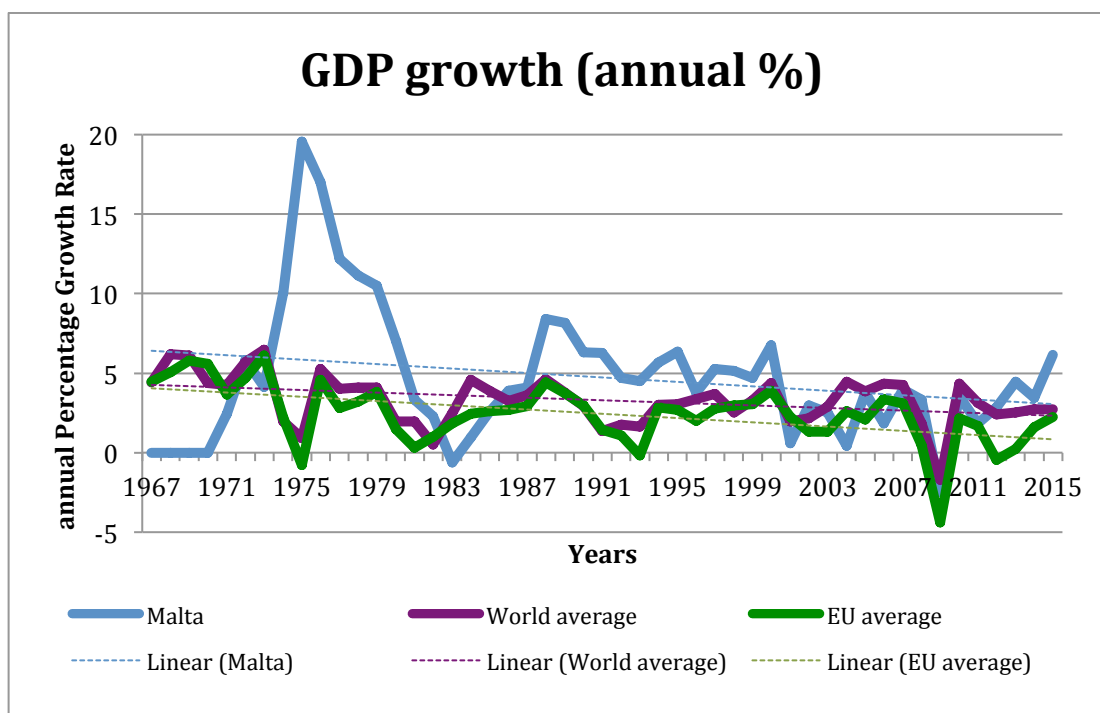
Source: the World Bank, 2017



A comparison between the annual GDP growth experienced in Malta, the EU and the World over the period 1967-2015 is reproduced in Figure 4.3. A visual check of the growth trajectories reveals that, in general, Malta's rate of economic growth, with double digit figures in the 1970's, exceeds that of both the world and the EU. Furthermore, the dip experienced during the period 2007-2009 as a result of the Global Financial Crisis was less severe in Malta (with a lowest growth rate of -2.5% in 2009), than it was in the EU (lowest growth rate of -4.4%, also in 2009). During the same period, the lowest annual growth rate experienced by the world was of negative 1.7%, closer to Malta's lowest recorded growth rate. In more recent years, following the aftermath of the Global Financial Crisis (i.e. post 2010), the recovery in the annual economic growth rate of Malta exceeded that of both the European Union and of the world.

Figure 4.3 Malta: GDP growth 1967-2015

Source: the World Bank, 2017



4.3.2 Analysing the exports of the Maltese economy

Malta is not endowed with reserves of natural resources, and the island experiences a visible trade gap, year on year. However, its mild Mediterranean climate, favourable geographical position and hard working labour force, contribute to the strength of the export sector. Figures 4.4 and 4.5 illustrate the growth path of Maltese exports, and reveal that both export in absolute figures, as well as exports expressed as a percentage of GDP, shows an upward trend in export statistics over the years under review. Malta's current main exporting partners (as in 2015) are presented in figure 4.6, with Germany and France playing major roles. Over the years, the situation portrayed in this diagram has not changed excessively, except that in earlier years, Italy played a more prominent role (up to 37.5% of GDP in 1994). Malta's main exports have been machinery and transport equipment, mineral fuels, lubricants and related

materials, chemicals and pharmaceutical products and miscellaneous manufacture goods. Figure 4.7 illustrates the position of Malta's balance on visible and invisible trade as a percentage of GDP. The figure reveals how, historically, Malta has had a deficit on its total trade balance, mainly owing to its reliance on importation. A positive trade balance in recent years has been the result of the steering of the economy to focus more on the services sector, mainly the financial services sector and online gaming.

Figure 4.4 Malta: Export of Goods and Services GDP in US \$
(at constant 2010 prices), 1967-2015
Source: the World Bank, 2017

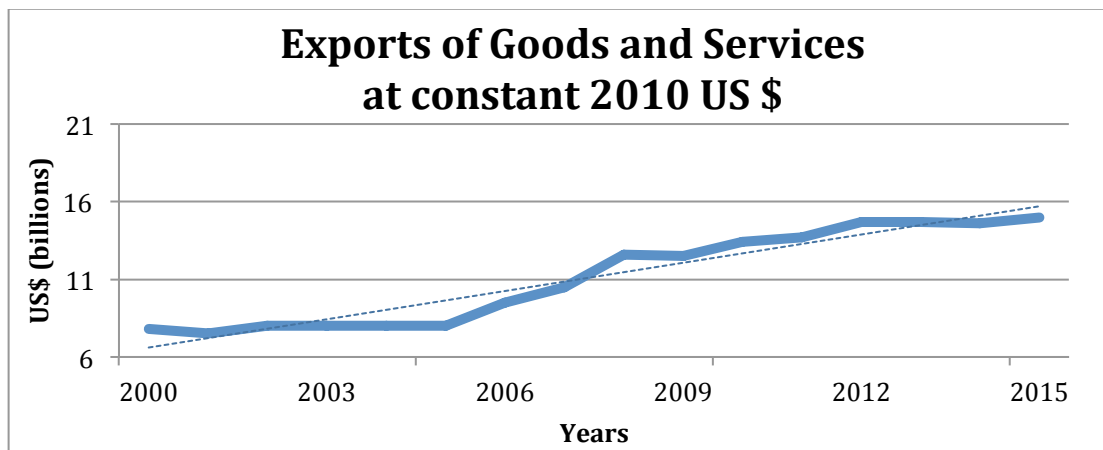


Figure 4.5 Malta: Export of Goods and Services
as a % of GDP 1967-2015
source: the World Bank, 2017

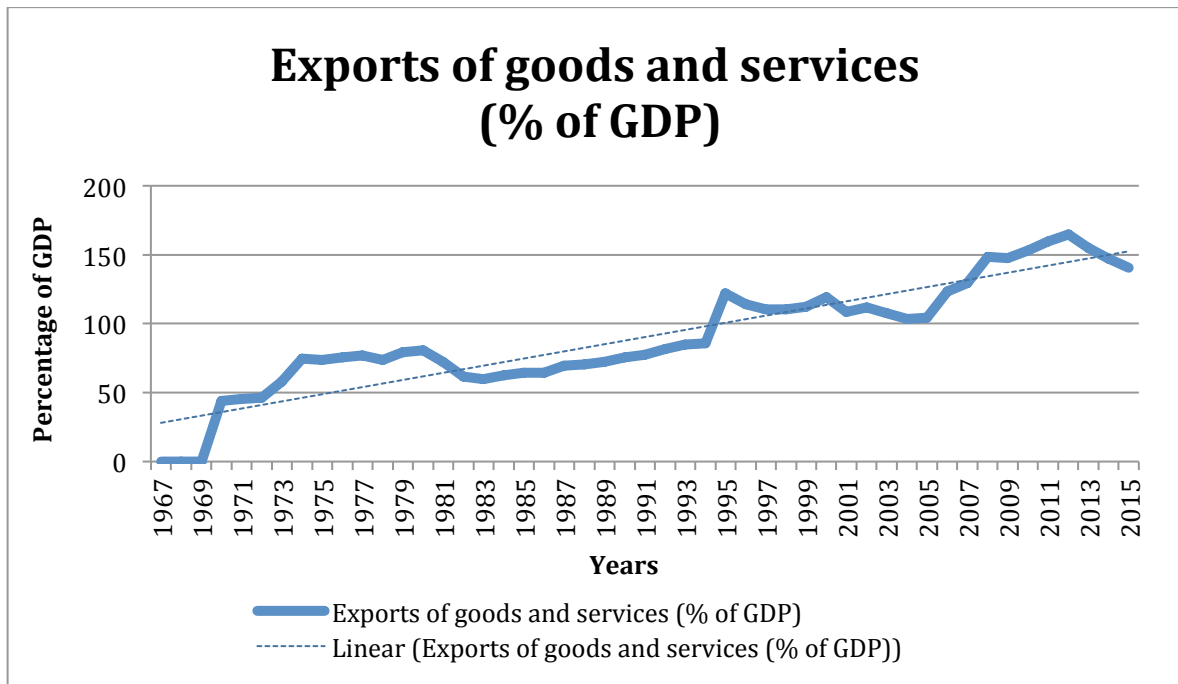


Figure 4.6 Malta: Main Trading Partners, 2015
source: WITS, World Bank, 2017

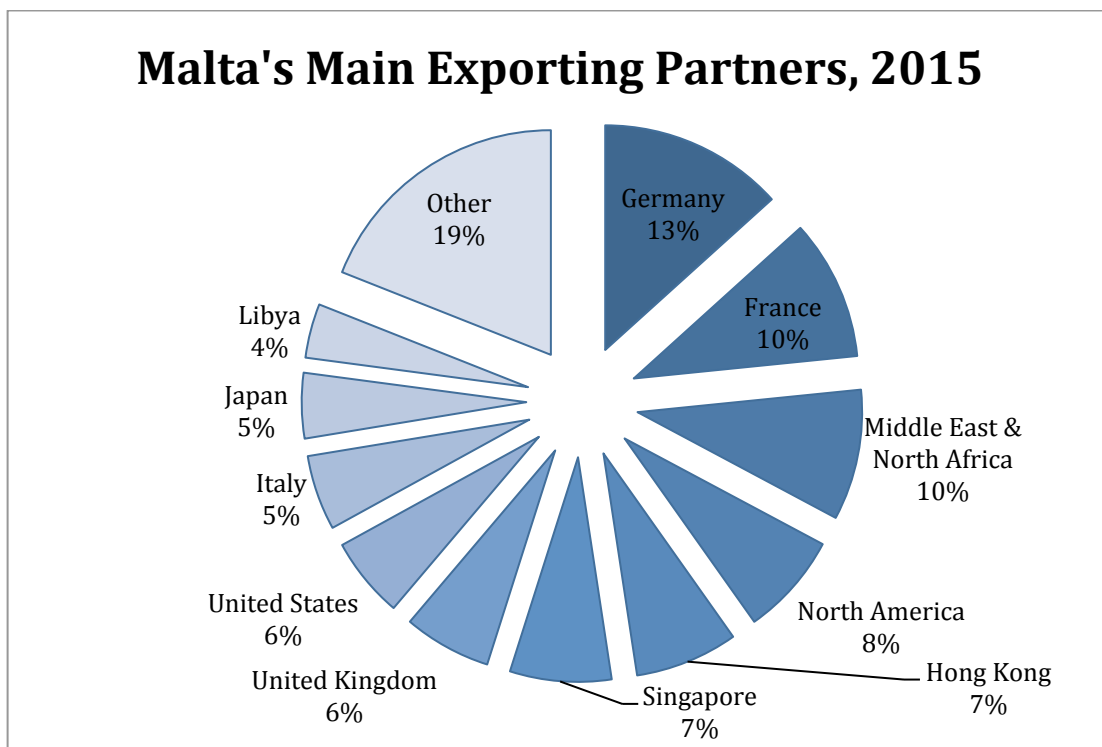
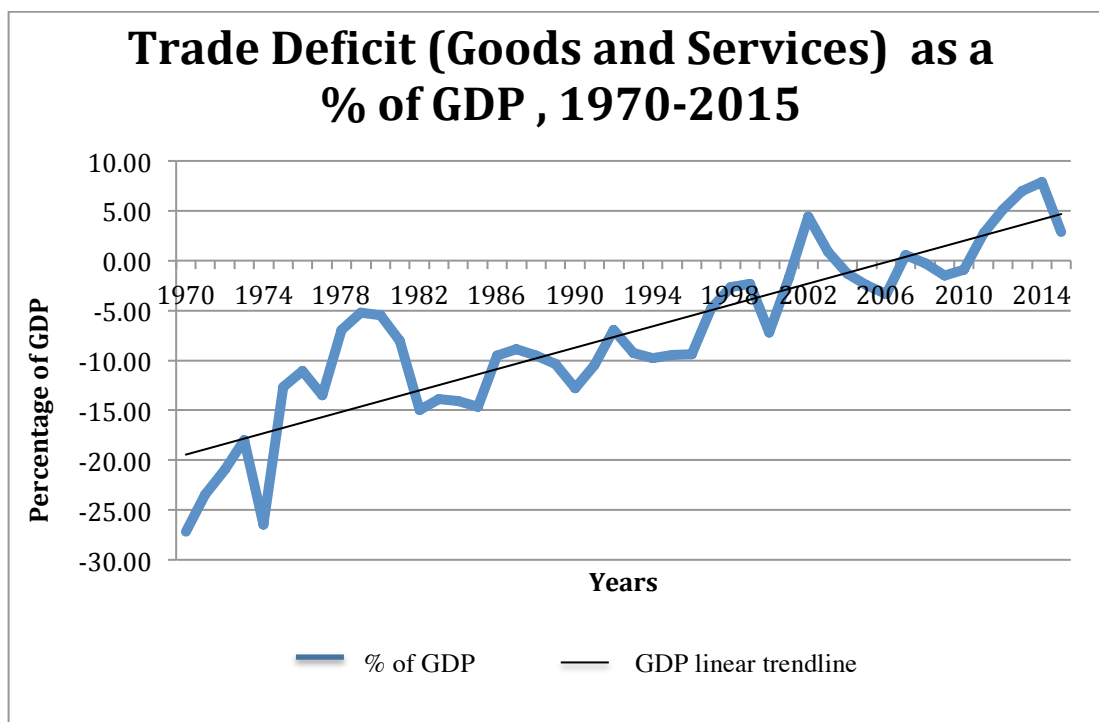


Figure 4.7 Malta: Trade Deficit as a % of GDP 1970-2015

source: the World Bank, 2017

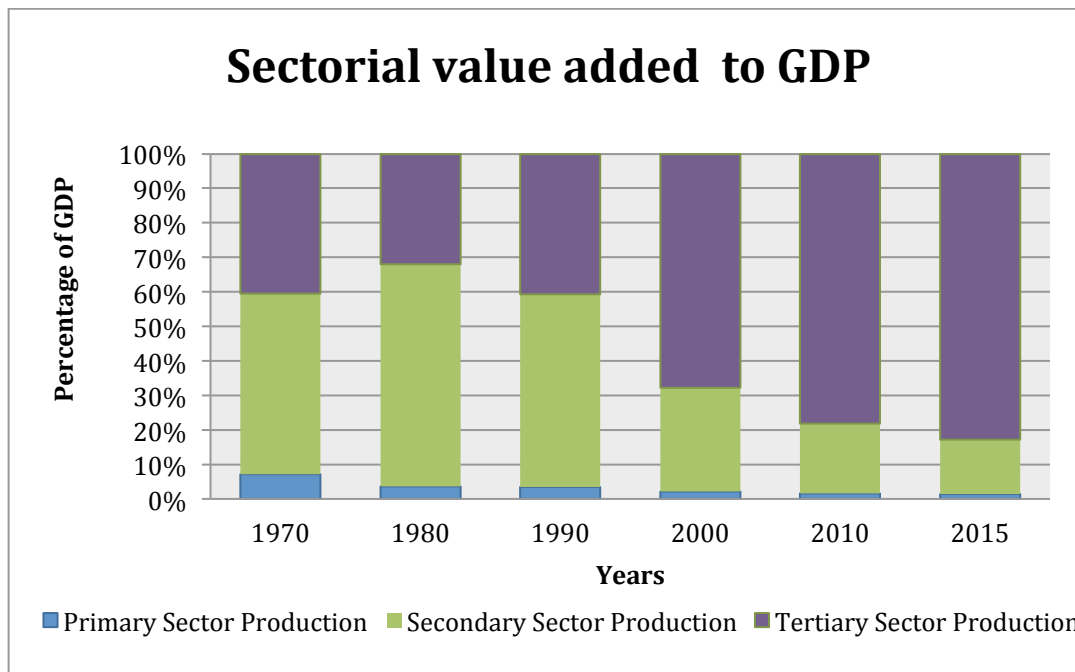


4.3.3 The Production pillars of contemporary Malta

The country's economy has evolved over the years in response to development and to events on the global economic sphere. The government's vision is to diversify the economy. It is currently doing this by supporting the development of the key industries (advanced manufacturing, creative industries, financial services, international educational services, life sciences, tourism, and transportation and advanced logistics). The government's intention is for these specific industries to form the pillars of the prevailing Maltese economy to ensure sustainable economic growth. Figure 4.8 below depicts the development of the Maltese economy from one that was strongly dependent on the manufacturing sector in the 1970's, to one, in 2015, wherein the services sector contributes in excess of 80% of the value added to the GDP.

Figure 4.8 Malta, Sectorial Value Added to GDP 1970-2015

Source: The World Bank, 2017



The Maltese economy is currently dependent on five main pillars, namely, agriculture and fishing, construction and quarrying, manufacturing, market services and the public sector (Briguglio 2011).

It is noticeable (Figure 4.8) that the Maltese economy relies substantially on the market services sector and further, that the importance of this sector has been on a steady increase during the period under review. In fact, based on latest data collected from the National Statistics Office for 2017, the Market Service sector contributes in excess of sixty per cent of the total gross value added of the economy.

At present, the market services sector comprises a number of identifiable sub segments, which are of varying relevance and importance to the development and growth of the economy. Given its mild climate and geographic disposition, tourism is one of the oldest, and strongest pillars of the services sector and indeed of the Maltese economy as a whole.

In spite of reliance on the tourism sector for economic production, the structure of the overall marketing services sector is rather diverse (Table 4.1) and includes a number of different services such as IGaming, financial intermediation, energy, creative industries, water and waste management, distributive services, business services. The growth and transformation of the Maltese economy are all dependent on the island's sole resource, manpower. Given the evident lack of natural resources, in order to ensure success in its initiatives, the Maltese government must focus on developing its primary resource, i.e. the human resource and in expanding its labour force, both in terms of numbers, and in terms of skills, and capabilities. Despite always having a low rate of unemployment, Malta has maintained its transformative momentum by training and retraining its labour force, by encouraging a higher female participation rate in terms of employment in the private sector; the market services sector is the largest sector and the one that offers largest employment opportunities in the Maltese economy. Clearly, this is a sign of a developed economy, and this does not come as a surprise, when one takes into account the steady increase in, for example, GDP per capita, improved infrastructure, health facilities and level of education.

Table 4.1 Composition of the Market Services Sector in the Maltese Economy, 2017

Source: Labour Force Survey, NSO 180/2017

Market Services	Full-time Employment	
	No.	% of labour force
Wholesale and retail trade, including repairs of motor vehicles and motorcycles	26,175	13.92
Transportation and storage	9,918	5.28
Accommodation and food service activities	11,959	6.36
Information and communication, including ICT	7,280	3.87
Financial and insurance activities	9,316	4.96
Real estate activities	2,937	1.56
Professional and business services, scientific, technical, administration and support service activities	26,820	14.27
Public administration, defence	13,713	7.3
Education	16,645	8.85
Health and social work activities	14,954	7.96
Creative Industries	1,808	0.96
Igaming	6,133	3.26
Water and Waste Management	1,576	0.84
Other services, including energy,	3,578	1.9
Total	157,544	83.81

The growth and prosperity of the Maltese economy is challenged by critical factors such as the insularity of the islands and the relatively small size of domestic market. These conditions impinge greatly on the pace of development of the economy. The present-day Malta is heavily dependent on market services, particularly, but not limited to, tourism and the financial services sector, which together account for around 30% of the GDP. It is essential for Malta to maintain its competitive advantage in the market if it is to proceed with its growth and development, but to do this, it must ensure that its industries maintain an exceptional level of innovation.

4.4 The Tourism Sector in Malta: Past and Present

As a consequence of the scarce natural endowments bestowed upon the island of Malta, the country has always been grossly reliant on imports to service domestic needs. During colonial rule, these imports were paid for in foreign exchange by the ruling powers, who expected the local people to work for them, in return for the payment of the imported goods. This resulted in a situation where Malta was not only dependent on imports, but it was also reliant on the spending by its colonists. Various reports were presented (Casolani, 1924, 1931; Macleod, 1943), which highlighted the need for the development of the Maltese economy, and argued in favour of the island's economic independence from colonial military spending. Casolani (1921) was probably the first to recommend the development of large-scale tourism. Malta's dry and warm climate, seas, rich cultural and architectural heritage, hospitable nature of the local people were always the major drivers of the setting up of the tourism sector as a main pillar of the Maltese economy. The fact that the English language was commonly spoken across the island was also a strong selling factor. As a result of the development of tourism in Malta, this industry today accounts for a large proportion of the island's employment (11959 full-timers, 9612 part-timers (NSO, 2017), apart from the employment in other sectors owing to the inter-industry linkages with to the tourism sector).

Tourism has always been high on the agenda of the Maltese government and has been predominant in the four Development plans (1959-64; 1964-69; 1969-74; 1973-80) which have been laid out for Malta, aiming to work towards increasing tourist arrivals, increasing direct employment in hotels, and increasing foreign exchange earnings. The year 1974 marked a decisive landmark for the Maltese tourism sector with the founding of the national airline company, Airmalta, which saw Malta become more autonomous in the management of tourist arrivals.

Tourism is seen to have contributed greatly to the growth of the Maltese economy, not simply because of the income earned by the hotels, but increasingly, owing to the spin-off effects of the increased tourist arrivals in the form of additional business for restaurants and eateries, car rental firms, water sports facilities, the handicraft and souvenir industry; the ripple effect is endless. Brigulgio (2003) calculates that the multiplier effect of every one million euro increase in exogenous spending by tourists generates an additional increase of around €800,000 - €900,000.

Figure 4.9 Tourist Arrivals in Malta compared with the Maltese population, 1960-2017

source: NSO, 2018

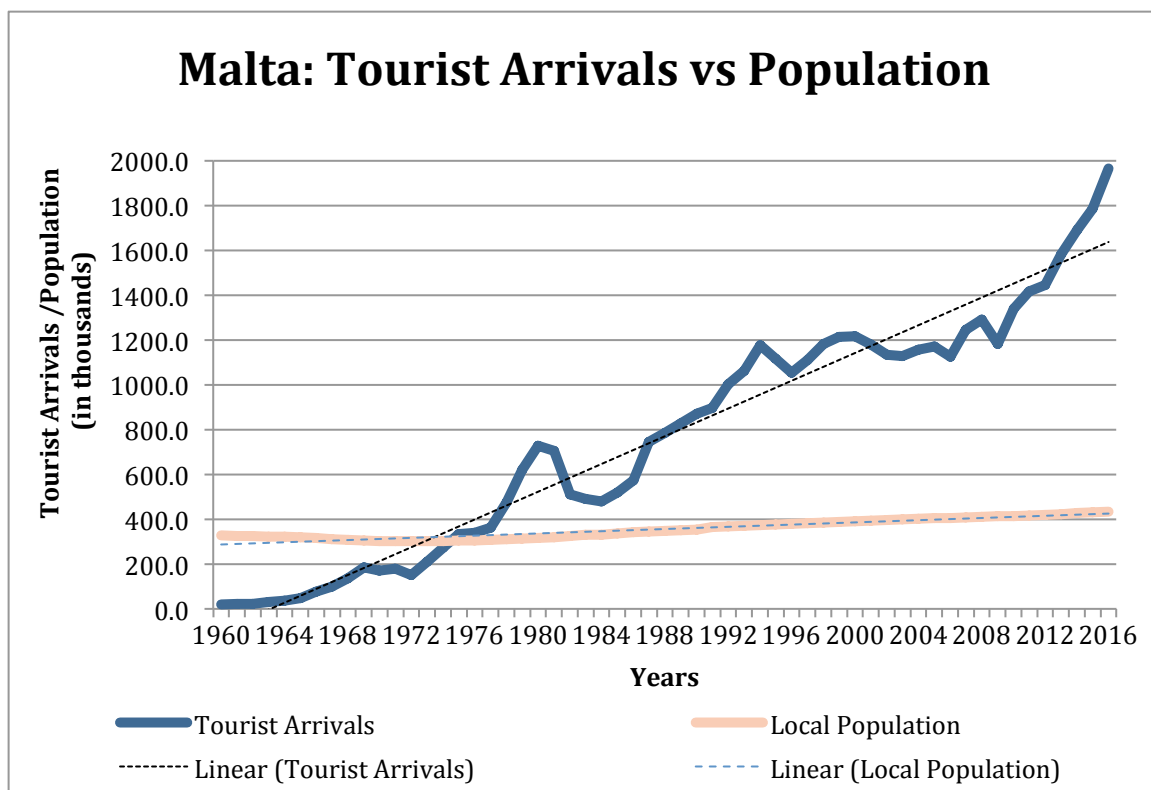


Figure 4.9 above shows the exponential growth of tourist arrivals over the fifty-six year period, 1960-2017. Tourism in the southern Mediterranean region is expected to record around 103 arrivals for every 100 inhabitants by 2030 (Ministry of Tourism, Malta, 2015), whereas Malta currently records 478 arrivals for every 100 inhabitant (2017). Although the increase in tourist arrivals is remarkable throughout most of the period under review, the rate of growth in arrivals has increased aggressively during the last nine years (2008-2017), in

particular, as a result of the arrival of low-cost airline in Malta, as well as the fact that Malta is reputed to be a safe destination when compared to similar destinations in the Mediterranean.

Oglethorpe (1984) had noted that Malta’s “severe dependence upon one market increases the Maltese tourist industry vulnerability to debilitating negative fluctuations in market conditions,” (page 148). In response to this analysis, efforts have been made to steer the industry away from relying solely on one main market, the British market, to one that enjoys a wider source market.

Figure 4.10 Provenance of incoming tourists , Malta, 1960-2016

source: NSO, 2017

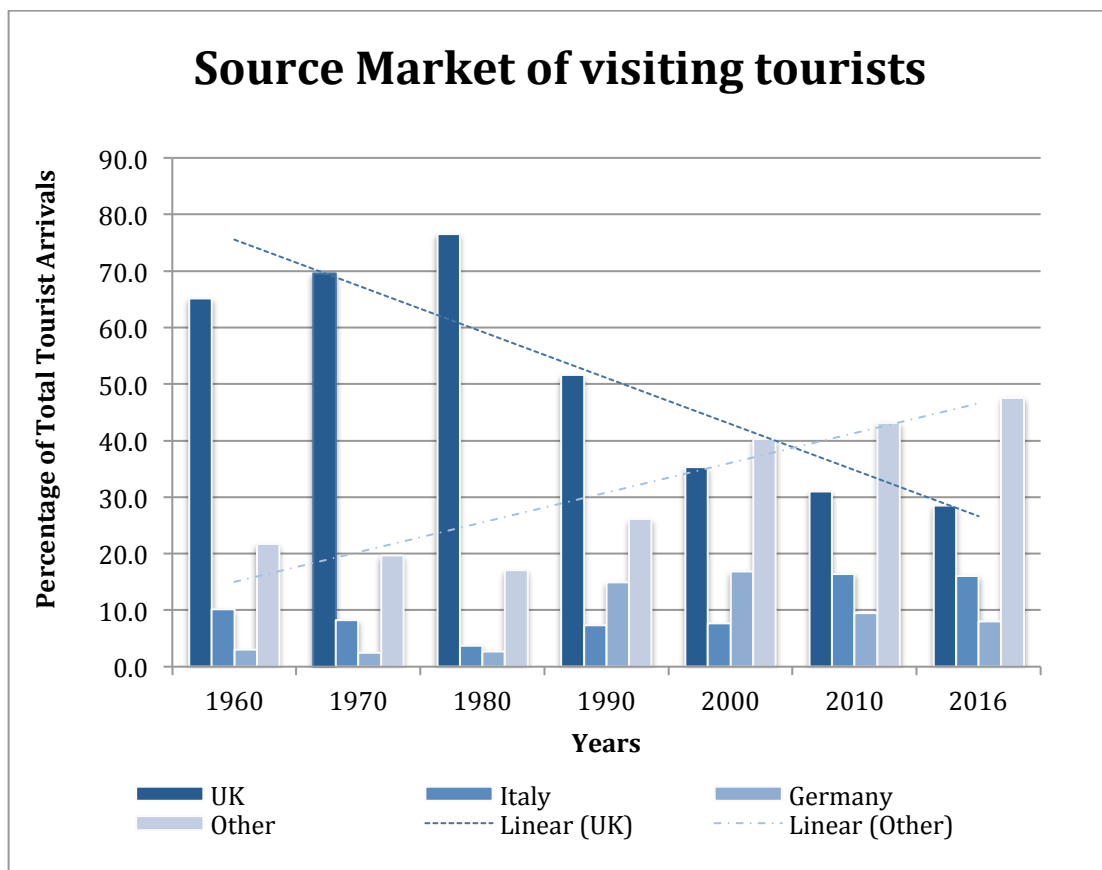


Figure 4.10 reveals Malta’s success at diversifying its incoming tourist nationalities. Although the United Kingdom still remains a main source market for Maltese tourism, the over-reliance on this source market has diminished

significantly (76.5% of total arrivals in 1980, to 28.5% in 2016). Other markets, such as Italy, Germany, France, Spain, Sweden, the Netherlands, and Russia have surged in importance.

The efforts that have been implemented nationally have proved to be successful. Apart from an increase in tourist arrivals, Malta has recorded an increase in expenditure per tourist (to Euro 918 in 2015); and a rather stable length of stay of approximately 8 nights per person (2016), whereas the current trend in the industry is seeing shorter and more economical trips overseas (Malta, Ministry of Tourism, 2015).

Figure 4.11 Average Nights Spent by Inbound Tourists

source: NSO, 2017

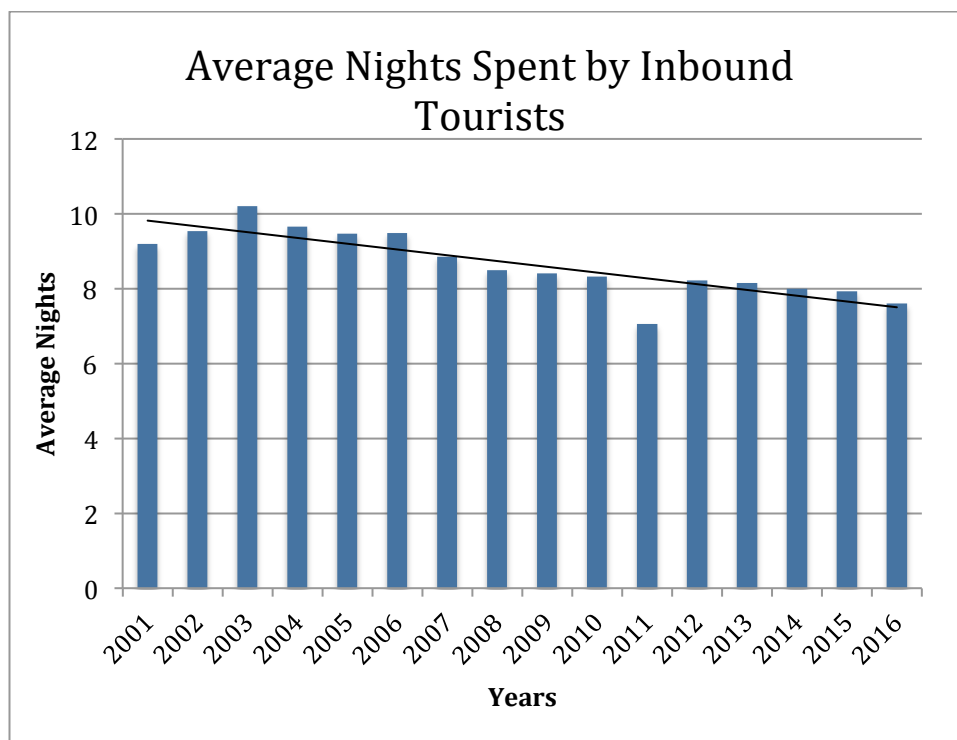
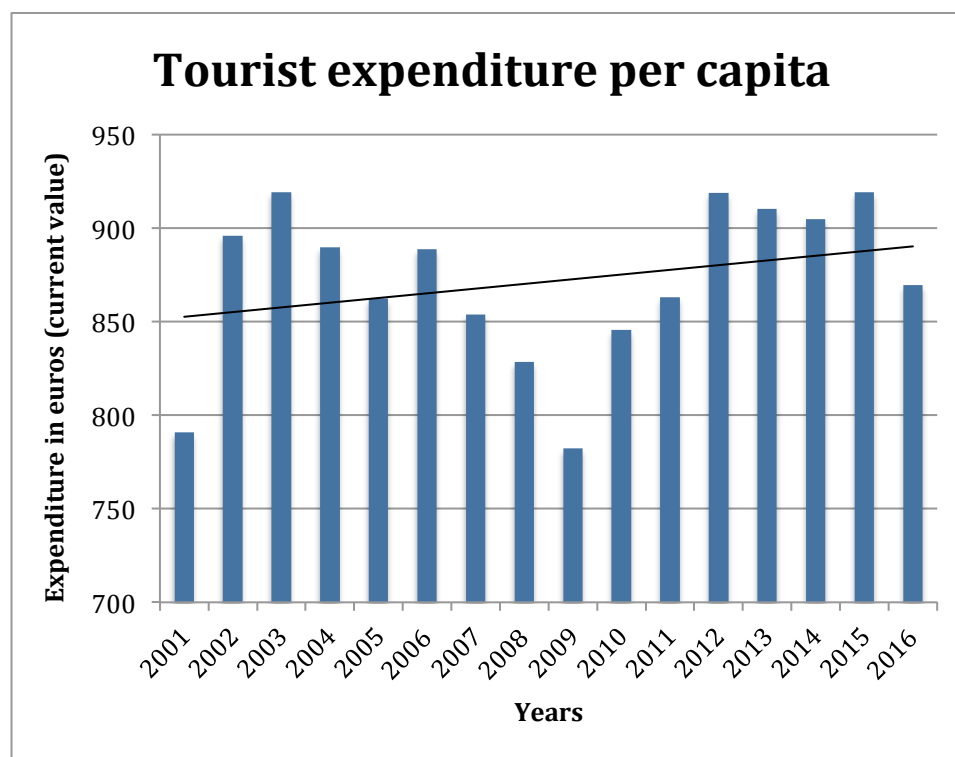


Figure 4.12 Tourist expenditure per capita

source: NSO, 2017

It is not easy to assess the effective impact of the tourism sector on the Maltese economy. An important characteristic of the Maltese economy is the fact that, as a result of the resource limitations, there is evidence of high import content in Malta. This implies that much of tourism expenditure, the ultimate benefit from this sector, leaks out of the economy in the form of imports. In 1976, import content comprised more than 50% of tourism expenditure, implying that although tourism expenditure formed 44% of the GDP, the net contribution to the economy was only of about 10% (Grech, 1978). In more recent years, the import content of tourism expenditure has dropped to around 40%, meaning that the net contribution of tourism to the Maltese economy is of around 12% (Brigulgio, 2011).

Malta's tourism policy is not solely based on increasing tourist arrivals, which are now at such a high level, that the sheer large number (usually during concentrated periods during the year) causes a strain on the island's infrastructure, and is fast becoming an unsustainable situation. An interview

with the Minister for Tourism (Dr. Zammit Lewis, 2015) reveals that apart from focusing on improving tourist numbers, the Government's current strategy is to focus on transforming Malta into a diversified, up-market tourist destination with an improved expenditure per tourist and length of stay. In support of this, The National Tourism Policy 2015-2020 (Malta, Ministry of Tourism, 2015) provides for the development of controlled growth of the Maltese tourism sector, by targeting the opportune markets that have the potential of earning the Island a higher rate of return on investment in the long term. The most critical aspects of the success of this strategy for sustainable tourism in Malta are the management of tourist arrivals; enhancing the quality of the Maltese tourism product, and reducing seasonality. Today, the leaders in the tourism sector in Malta are being advised not to consider their island as a tourism 'product' but rather as a tourist 'experience'. These are being urged to rebrand the tourist destination, basing it on authenticity and quality, as is happening in other mature tourist markets (Mediterranean Tourism Forum, 2015). Unfortunately, during an interview, the Chief Executive Officer of the Malta Hotels and Restaurant Association, noted that *"we (Malta) are recording tourism successes year on year, but we must realise that this situation will not go on forever, and it is fast becoming unsustainable. There will, one day, be a reverse, a slump in the sector.... it is normal, it is a cycle.... and we must prepare for this...we must have a vision and a strategy.... by looking at innovative ways to increase quality tourism rather than mass market tourism.... we Maltese are a very competitive people, very aggressive and very hardworking.... but not innovative enough"* (Julian Muscat Azzopardi, CEO MHRA 2015). Muscat Azzopardi argues innovation does not only require competence, imagination and foresight, but it also requires bold and courageous players to be the first to take the steps in the industry. He believes that such profiles are not at all common in Malta, and foresees that the industry will experience a downward trend at some point in the future.

The national strategy which is currently being implemented seeks to expand the tourism sector into different niches such as, cultural, and religious tourism, scuba diving tourism, marriage tourism, MICE (Meetings, Incentives, Conferences and Exhibitions, which has a large market share of high

spenders), tourism, film tourism, agro tourism on the sister island, Gozo, and in particular, medical tourism.

Mediterranean tourism is, by its very nature, substantively seasonal, very competitive and remains price sensitive (Papatheodorou, 2002). Globalisation and rapid advances in technology, particularly, the ICT and the aviation industry, have not only enhanced tourist mobility, but they have also provided the potential tourist with easy access to platforms, which can provide them with comparative facilities of destinations, prior to their final choice. In order to retain a clutch on this economic growth engine that is tourism, the various Mediterranean destinations strive to differentiate their offering by providing unique tourism experiences to their visitors. Malta has over sixty years of experience at managing the tourism industry, with various levels of success at maintaining its competitiveness (Bramwell, 2003).

Porter (1990) emphasizes, “national prosperity is created not inherited” (page 73). Innovation is recognised to be at the basis of the competitive economy (Porter and Ketels, 2003). Much is, therefore, reliant on the management of innovation processes within organizations (Balachandra and Friar, 1997; Cooper 1979; De Bretani, 1991; Di Benedetto, 1996; Ernst, 2002; Globe, Levy and Schwartz, 1973; Griffin, 1997; Rothwell, 1992) as organizations will achieve competitive advantage as they embrace new technologies, markets, and processes. In Chapter 1 the researcher has discussed how the owner-managers of SMEs are required to create and nurture an organization environment that fosters learning and knowledge transfer and sharing, if they wish to steer their firms to achieve sustainable competitive advantage. ACAP, in the form of the firm’s ability to assess, assimilate, and apply new knowledge for commercial ends is, therefore, strongly correlated with successful innovative firms (Indarti, 2010).

4.5 The development of a KIBS: the Financial Services Sector

Malta has always been predominantly steered towards the service economy, particularly, owing to the presence of the British naval base until 1979. Growth in the services sector intensified in the period preceding Malta's accession to the European Union (EU). The availability of a skilled workforce, a targeted strategy aimed at attracting foreign direct investment, and liberalisation measures, saw the expansion of traditional services sectors such as tourism, health, education banking and retailing, as well as other higher value added activities to include, but not exclusively, financial intermediation (Grech, Micallef, Zerafa, 2016) and maritime activity. Financial intermediation, commonly known as the financial services sector, is an important sub division of the services sector for the Maltese economy. This sector includes banking, pension funds, insurance, trust, investment services and other related services.

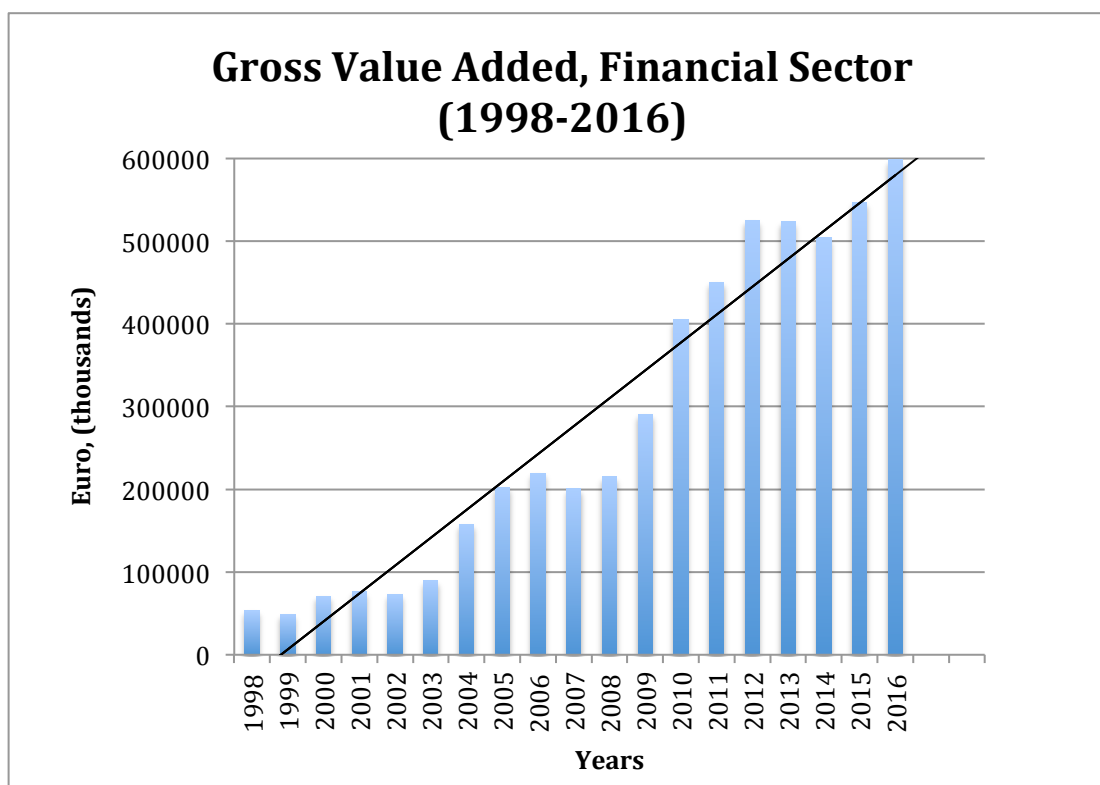
The swift development of the Maltese economy since Independence in 1964 has led to a series of major adjustments to the financial services sector. The establishment of the Central Bank of Malta (now a member of the European System of Central Banks), in 1968, the Malta Stock Exchange in 1992, and the Malta Financial Services Authority in 2002 constituted major financial changes, which served to formalise the sector.

During the latter part of the 1980s and the early 1990s, Malta positioned itself as an offshore financial centre. However, Malta soon abandoned this track to focus, instead, on onshore financial services especially as the prospects of becoming an EU member state (Malta joined the European Union in 2004) became more palpable. A further major change in the Maltese financial system occurred in the early 1990s, when the financial system ceased to be directly regulated by the Minister of Finance. Government controls (especially in terms of interest rate and capital controls) were removed, with government direct shareholding being reduced significantly. The liberalisation of the financial sector was part of an overhaul of the financial legal framework that aimed to help portray Malta as a stable jurisdiction with a well-regulated financial system.

These ingredients were believed to sow the seeds of an industry that had growth potential. Figure 4.13 shows the Gross Value Added (GVA) contributed by Financial Intermediation for the years 1998-2016. The data, which relates only to the *direct* contribution to GVA, reveals the exponential growth of the sector over the years under review. The direct contribution of the sector has increased from around 3% of GVA in 1998 to over 13% in 2016 and has, since then, continued to grow. Studies (Grech, 2015) measure the growth of the sector over a twenty-year period, distinguishing between the period prior to EU accession and the post accession decade. Whilst the total economy grew by 69% over the period 1995-2004, financial intermediation expanded by a staggering 214%. Growth in the post accession period was still remarkable, if a little slower: the total economy improved by 62%, whilst financial intermediation (excluding insurance) advanced by 128% over a ten year period from 2004 to 2014. It is reasonable to consider that the effective contribution of financial intermediation to the Maltese economy is, in fact, in excess of what is reported in figure 4.13. The spillover-effect of the sector resulting in enhanced output for professional services, such as, those of lawyers and accountants and other support services, cannot be measured precisely. The spillover-effect of financial intermediation is calculated to be roughly equivalent to the direct effect on the economy (Imeson, 2010). In addition to the spillover-effect, output from the financial services sector also enjoys a multiplier effect of 1.51. This means that for every one million euro increase in financial intermediation services, there will be an increase of direct output of 1.51 million euro and with a total sectorial multiplier of 2.52, there will be an increase in total production across the industry (direct, indirect and induced) of 2.52 million euro. Such an exogenous injection will further create an additional 32 employment posts (Cassar, 2015).

Figure 4.13 Gross Value Added of the Financial Sector (current prices), 1998-2016

source: NSO, 2017



According to the Malta Financial Services Authority, the sector regulator, Malta has positioned itself successfully as a regional centre for financial intermediation not only because of the quality of the trained people, or the comparatively lower salary and low office costs by European standards, but also it is Malta's connectivity with the rest of Europe, its tax efficient regime, and its 'firm yet flexible' regulatory approach, which have been the mark of gold.

"Our hallmark is that we apply what you might call an 'Anglo-Saxon style of business with Mediterranean characteristics' in our approach to financial regulation. We noticed that in other jurisdictions there was little regular contact between the regulators and the licensed companies. So, as a matter of policy, we decided the regulators must meet all companies, at the pre-application, application, and post-application stage. This level of service has become our

hallmark. We are also open and transparent as a regulator. Internal and external audits are carried out to ensure we are adhering to core principles. As we demand more transparency from companies, the regulator should become more transparent.” (Bannister, J. interviewed by Imenson, M., 2010).

Malta has invested heavily in establishing the financial services sector by dedicating a considerable amount of resources to the formalisation of the financial services regulatory framework, and in ensuring that the island's workers are adequately trained and employable. Malta is now reaping the benefits of the growth of this industry in terms of GVA and employment. Foreign Direct Investment in 2015 stood at around €142 billion, with 98% of that amount being derived solely from financial intermediation (Grech, 2015). However, the Maltese government has been cautioned not to be over reliant on this sector, lest it would suffer the same consequences of having been over reliant on the British source market for its tourism, when recession hit the UK. The warning has been voiced by the chairman of FinanceMalta, a public-private partnership, specifically set up to promote Malta as an international businesses and finance centre locally and overseas:

“There are significant equity capital injections into foreign companies, and 83% of that increase was in the area of financial intermediation. That tells us you that the financial industry is really taking off, but it also rings alarm bells, because 83% is a high number and from a diversification point of view we do not want our economic growth to be overly dependent on financial services” (Farrugia K, Chairman FinanceMalta interviewed by, Imeson, M., 2011).

Analysts envisage that there is still growth potential for financial intermediation in Malta, but that this is entirely dependent on the extent to which the local operators are innovative in offering value-added services to their customers. To date, the jurisdiction is considered innovative and proactive with innovations such as the Protected Cell Company Legislation, a first of its kind within the European Union (Grech, 2015)

Whilst continuing to spearhead and facilitate growth in the Financial Services sector, the Maltese government has taken heed of the warnings and sentiment

stated above and, consequently, has also looked at driving the establishment of other niche service industries in Malta, such as medical tourism, maritime, aviation, electronics and pharmaceuticals.

4.6 Identifying the relevance of SMEs to the Maltese economy

Malta's economy is composed mainly of small and medium sized firms, with only 0.2% of firms qualifying as large firms; in Malta, 81.6% of the labour force is employed in SMEs. Table 4.2 shows the distribution of micro, small, medium-sized, and large firms, in Malta and the EU, together with the number of people employed in each of these categories of firms. SMEs contribute 80.4% of the value added of the country. The data in table 4.2 shows that Malta is more dependent on SMEs than the average EU country, given that SME employment in Malta exceeds that of the EU by 12.7% and the SME share of value added is 25.2% greater than that of the European Union. The data also reveals that micro firms are the most prevalent and the most decisive for the Maltese economy, as they contribute a third of the value added of the country and employ over 30% labour force. The EU Commission (2017) predicts further strengthening of all SME size classes in Malta, with the highest growth forecasted for micro firms.

Table 4.2 Distribution of Micro, Small and Medium-Sized Firms in Malta and the European Union, estimates for 2016

Source: 2017 Fact Sheet, SBA, European Commission

Class size	Number of enterprises			Number of persons employed			Value Added		
	Malta		EU	Malta		EU	Malta		EU
	Number	Share %	Share %	Number	Share %	Share %	Billions €	Share %	Share %
Micro	26808	93.4	93.0	42497	31.5	29.8	1.7	35.9	20.9
Small	1497	5.2	5.8	31384	23.3	20.0	1.2	25.5	17.8
Medium-sized	331	1.2	0.9	33152	24.6	16.7	1.0	20.7	18.2
SMEs	28636	99.8	99.8	107033	79.3	66.6	3.9	82.0	56.8
Large	60	0.2	0.2	27866	20.7	33.4	0.8	18.0	43.2
Total	28696	100	100	134899	100	100	4.7	100	100

The small firm is highly dependent on decisions taken by its owner-manager and by his/her motivations and actions (Lynskey, 2004; Webster, 2004). This is particularly true, the smaller the size of the firm. Indeed, because research reveals that most small firms are on the lower end of size of this otherwise broad firm category, the leader's profile has a strong bearing on the extent to which the firm manages its knowledge.

4.7 Summary

This chapter has presented the background against which this research study is being pursued and sets the scene within which the empirical work was conducted. It has presented a chronological account of the economic developments taking shape on the Maltese islands. This account concludes that, in so far as production sectors are discussed, Malta has always been a service-oriented economy from the time it served as a British naval base. Indeed, however, today, it is, like many other developed economies, strongly reliant on the tertiary sector. In fact, 82% of the GVA of the Maltese islands is presently contributed by the services sector. Given that this study is based on a comparative analysis of the approach adopted by tourism and the financial services sector in terms of the management of their knowledge for the scope of creating competitive advantage, the evolution of the two sectors is discussed as well as their contribution to the Maltese economy. The overview has confirmed that the Maltese economy is significantly reliant on both sectors, in terms of output, generation of gross value added and employment. The tourism sector has been identified as a long-standing booming sector, which needs a stronger vision and enhanced innovation, to drive the island towards a more sustainable and lucrative future. There is evidence, on the other hand, of a strong, innovative and fast expanding financial services sector, with more growth potential to exploit.

Chapter 5

A Configuration of the Services Sector:

Preliminary Results

5.1 Introduction

In the earlier chapters of this study, the researcher has established the theoretical, methodological, and environmental context of her work. In the remaining chapters of this study the researcher will elaborate on the results, which were achieved from the different phases of the analysis. The current chapter reports the results obtained when the data are considered as one, single, over-arching sample, that of the services sector. This means that the results presented in this section will detail the behaviour of the services sector in general, without attempting to distinguish between patterns of behaviour of the firms in the tourism sector, or in the financial services sector, separately or comparatively; this will be undertaken in subsequent chapters. Chapters 6 and 7 will disclose the results obtained separately from each sub-sector in turn, while chapter 8 provides a comparative analysis of the behaviour of firms in the tourism sector and the financial services sector with regards to their ACAP practices.

This chapter starts by presenting the hypotheses that were tested in order to address each of the four objectives, which have been set out at the beginning of this study (Chapter 1, pages 29 -30). These hypotheses form the bedrock of the conceptual model, which is grounded in the literature, and which has been designed specifically to aid the researcher formulate precise responses to the four research objectives referred to earlier (Chapter 1, pages 29-30). The chapter reports the results of the testing, which has been undertaken to categorise the sample of firms into micro, small and medium sized organizations, based on the criteria of head-count and relative measures of control, as discussed in chapter 3 (section 3.6). Sections 5.4 and 5.5 follow with the results from the analysis of the data captured during the qualitative and quantitative phases of the study, in turn. The following section (Section 5.6) details the results obtained from the structural equation modelling. The chapter concludes with a discussion of the results and their implications for the services sector in general.

5.2 Developing the conceptual model

In order to further advance theoretical progress in the area of absorptive capacity of small and medium-sized firms, this study is based on and expands existing theory. This study stems from the argument presented by earlier scholars (Lyndsey, 2004; Webster, 2004) that the owner-manager's control and leadership is exceptionally tight and strong in SMEs, and, further that the leadership characteristics and controlling nature of the owner-manager have an impact on the benefits that SMEs manage to accrue from their knowledge (Bass, 1985; Wang, Yang, Horng, 2010). The author proceeds to present and test fourteen hypotheses (H) that emerge from the four research objectives, which stem from the leadership and controlling nature of owner-managers in SMEs. Table 5.1 illustrates how each of the four research objectives has been explored with the support of a number of hypotheses (H1-14)

Table 5.1 Relationship between the research objectives and the hypotheses being tested

Source: Personal collection

	Research Objective	Hypotheses	
1	To assess the effect that firm <i>size</i> and <i>leadership</i> have on ACAP and to understand how firms overcome any limitations posed by these features	H1	Leadership -> Exploitation
		H2	Control -> Exploitation
		H14	Leadership -> Control
2	To examine the <i>internal</i> strategies, policies, and procedures which SMEs adopt to expand and capitalise on their knowledge resources.	H6	Leadership -> In-House communication
		H7	Control -> In-House communication
		H8	In-House communication -> Exploitation
		H9	Leadership -> Firm Practices
		H10	Control -> Firm Practices
3	To examine the <i>external</i> strategies, policies, and procedures which SMEs adopt in order to acquire and manage knowledge.	H3	Leadership -> Openness
		H4	Control -> Openness
		H5	Openness -> Exploitation
3	The extent of the relationship between research objectives 2 and 3 i.e. between the internal and the external strategies of the firm	H12	Firm Practices -> Openness
		H13	Openness -> In-house communication
4	To study the congruencies and divergences that exist in the management of knowledge and ACAP in firms, across the KIBS and NKIBS firms	all above hypotheses H1-H14	

The first research objective dwells on the work of Freel (2000) and Hadjimanolis (1999) who assert that the size of a firm has a great influence on the firm's ability of manage knowledge for successful innovation. Also, since owner-managers have a strong control over the firm (Lynskey, 2004; Webster, 2004), the firm's ACAP capability lies with its top management (Bass, 1985; Wang, Yang and Horng, 2010). These arguments are further explored in the context of

service sector SMEs through the following research objective and supporting hypotheses:

RO1: Assesses the effect that firm *size* and *leadership* have on ACAP and aims to understand how firms overcome any limitations posed by these features.

H1: Leadership characteristics in SMEs are inter-related to the ability of these firms to exploit the benefits of ACAP.

H2: The controlling nature of the owner-managers in SMEs has a positive impact on the firm's ability to exploit the benefits of ACAP.

The influence of the owner-manager in SMEs is over-arching and far-reaching, and it thus follows that the characteristics of the leader of the organization will influence most, if not all, aspects of the firm. This is even more so, the smaller the size of the SME. Leadership qualities, and the resulting degree of control exerted on the organization, by its owner-manager will determine the extent to which staff are involved and consulted in the operations and decision making of the organization. This factor determines knowledge transfer and sharing, and the ensuing knowledge exploitation. Here the researcher proposes the following hypothesis:

H14: proposes a relationship between the leadership of the organization and the degree of control exercised by the owner-leader of the firm. This hypothesis further tests research objective 1.

A rich body of literature (Todorova and Durisin, 2007; Zahra and George, 2002) indicates that effective interactions amongst workers in a firm nurture an organizational culture, wherein discussion is encouraged, leading to a climate that is conducive to knowledge sharing and knowledge transfer within the organization. The extent to which such interaction is entertained is determined by the firm leadership qualities and also by the degree of control, which the owner-manager wishes to maintain within the SME. For this reason, the

researcher advances the following hypotheses that will be tested to expand on **research objective 2 as follows:**

RO2: To explore the *internal* strategies, policies, and procedures, which SMEs adopt to expand and capitalise on their knowledge resources

H6: Leadership characteristics enable intra-firm communication.

H7 The degree of control exercised by the owner-manager will be inter-related to intra-firm communication.

H8: Intra-Firm communication enhances the firm's ability to exploit ACAP.

Furthermore, the profile and qualities of the owner-manager further shape the firm's practices and policies. The level of control exercised by the owner-manager also have a decisive effect on which firm practices are implemented. For this reason the researcher proposes that:

H9: Leadership qualities impact on the firm practices and policies.

H10: The extent of control exercised by the owner-manager will impact on firm practices and policies implemented in the firm.

H11: The firm practices and policies will enable the firm to exploit its ACAP advantages, and further test research objective 2.

Various scholars (Grandinetti, 2016, Nahapiet and Ghoshal, 1998) have identified that ACAP depends greatly on the firm's relational capabilities. These are even more valued in SMEs that have great limitations on their asset and knowledge resources. Here, this study tests the hypothesis that there exists a relationship between firm leadership and control respectively with Firm Openness (i.e. firm relational capabilities), as well as a further link between the extent to which the SMEs network with other firms, and their ability to exploit the

benefits of ACAP. The researcher proposes the following hypotheses, which aim to elaborate on **research objective 3 in the following manner:**

RO3: To explore the *external* strategies, policies, and procedures, which SMEs adopt in order to acquire and manage knowledge

H3: Leadership characteristics affect the firm's ability and extent to which it networks with other firms in the industry.

H4: The controlling aspect of the owner-manager in the SME affects the firm's ability and extent to which it networks with other firms in the industry.

H5: Firm openness affects the extent to which firms exploit the benefits of ACAP to their advantage.

H12 and H13 test the inter relationship between the elements in objectives 2 and 3.

H12: proposes a relationship between firm practices and the relational capabilities of the firm, and

H13: proposes a relationship between the openness of the firm and the degree of intra-firm communication,

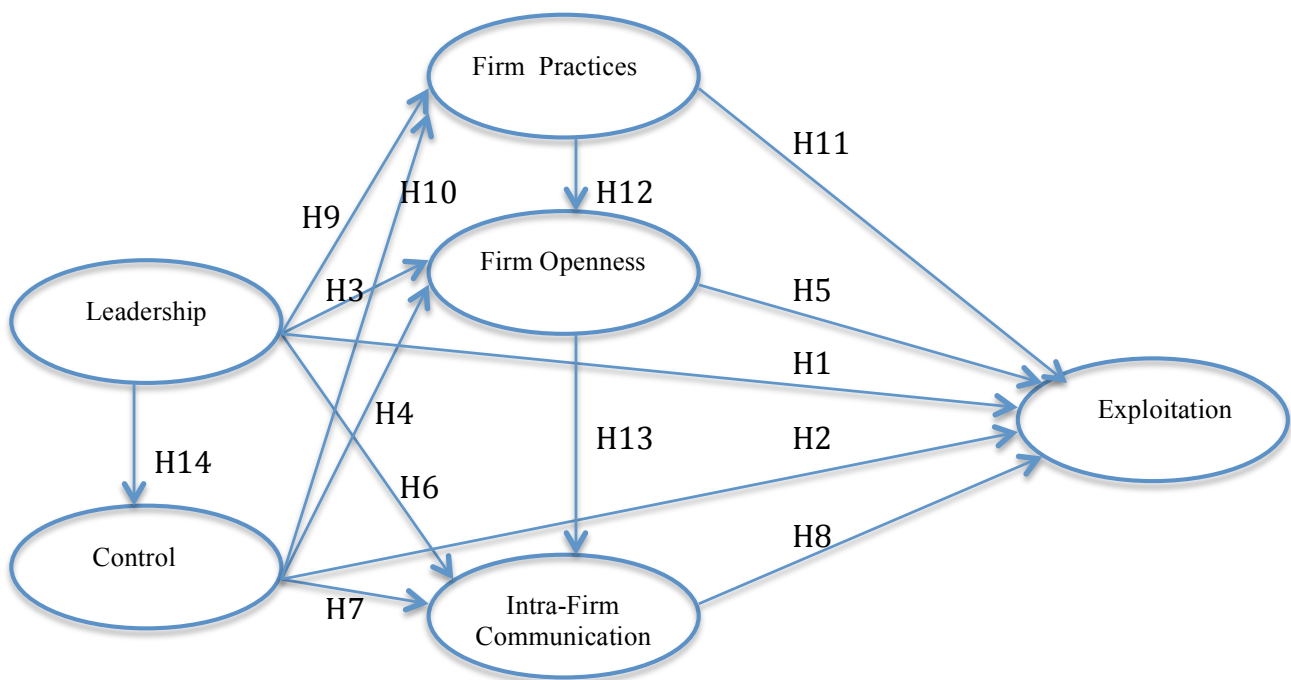
All of the above fourteen hypotheses *also* contribute towards exploring the last objective, research objective 4. The researcher addresses R04 by comparing and contrasting all the results obtained from the hypotheses explored so far, on the basis of the service industry from which the data was captured. This implies that a distinction will be made between the results obtained from the tourism firms, and those obtained from the finance firms. A comparison of these results will address RO4.

RO4: To study the congruencies and divergences that exist in the management of knowledge and ACAP in firms, across the Knowledge Intensive Business Services (in particular, the financial industry) and the Non-Knowledge Intensive Business Services Sector (in particular, the tourism industry).

Figure 5.1, portrays the conceptual model, as a path diagram, detailing the respective constructs of Leadership, Control, Firm Practices, Firm Openness, Intra-Firm Communication and Knowledge Exploitation, and shows how the hypotheses are used to test the relationship amongst these constructs.

Figure 5.1 The Conceptual Model

Source: Personal collection



5.3 Sample specification

5.3.1 The tourism sector

The thirty-five firms, which have participated in this study, have been analysed in accordance with the framework set out in Section 3.6 (page 103) to determine the size of the participating firms in the sample, and to ensure that all

the firms fell within the category of SMEs. The variables upon which the classification is based are headcount and the relative measure of control exercised by the owner-manager. At this stage the size of the firms participating in the study has also been assessed within both sub-samples (tourism and financial services sector) separately. This was done to ensure that a spectrum of differently sized firms (SMEs) was present not only across the services sector, but also within each of the sub samples, thereby providing a comparable basis for the analysis that follows in Chapters 6, 7 and 8.

Table 5.2 illustrates the computation of the estimation of the relative measure of control in each of the seventeen firms from the tourism sector. This table gives details of the relative measures of control, in addition to displaying variables such as, number of employees and number of accommodation rooms in the hotels. The data were obtained during one-to-one personal interviews with the owner or general manager in each of the firms.

A closer look at the relative values of control estimated for the firms in the non-KIBS reveals that here, the owners exercise considerable control over the firm - a feature that has been identified with SMEs as a result of the presence of owner-managers in the sector (Wynarczyk, Watson, Storey, Short and Keasey, 1993). The measures of relative control are not identical but vary mainly between the levels of 1 and 3 (out of a possible maximum score of 6 points, with lower levels indicating tighter control). This indicates that overall, the level of control exercised by owner managers in SMEs in the tourism sector is relatively tight, as all the firms scored a measure on the lower end of the scale (the closer the measure is to the value of zero, the stronger is the control of the owner-manager, refer to Table 3.3, page 105). The sample of non-KIBS is evenly distributed, with 6 very small properties having a maximum of 50 rooms, 4 hotels having between 64 and 100 rooms, and another 7 hotels boasting in excess of 250 rooms (with a maximum of 313 rooms). The size of the workforce further emphasized the small size of the enterprises, as most firms either fell within the ceilings of micro or small firms, with only one of the firms indicating an employment level consistent with medium sized enterprises.

Table 5.2 Classification of Hotels into SMEs

Source: Personal Collection

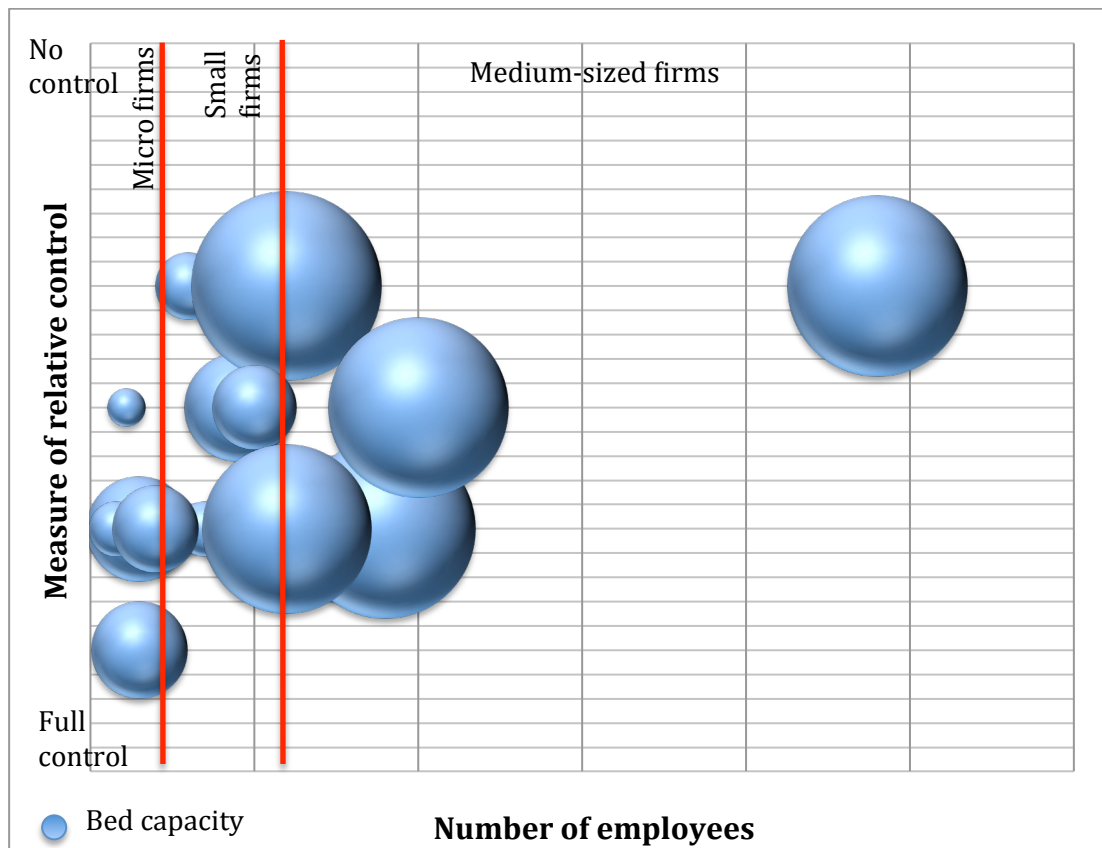
Tourism Sector Firms	Headcount	Number of Rooms	Private Financing	Family Succession	Owners' involvement	Owner-Director	Association with mother company	Owners operational involvement	Level of Relative Control
	Physical Size		Measures of Relative Control						
Firm 2	240	282	0	1	0	1	1	1	4
Firm 4	30	15	0	1	0	1	0	0	2
Firm 5	45	100	0	1	0	1	0	1	3
Firm 6	35	25	0	0	0	1	0	1	2
Firm 13	30	38	0	1	1	1	0	1	4
Firm 20	5	16	0	0	0	1	0	1	2
Firm 24	15	95	0	0	0	1	0	1	2
Firm 25	60	313	0	1	1	1	1	0	4
Firm 26	8	25	0	0	0	1	0	1	2
Firm 27	15	80	0	0	0	1	0	0	1
Firm 28	11	12	0	1	0	1	0	1	3
Firm 29	20	64	0	0	0	1	0	1	2
Firm 31	90	280	0	0	0	1	0	1	2
Firm 32	50	60	1	0	0	1	1	0	3
Firm 35	60	250	0	0	1	1	0	0	2
Firm 36	100	100	1	0	0	1	1	0	3
Firm 37	100	280	0	1	1	1	0	0	3

Figure 5.2 transposes firm-size calculations portrayed in table 5.2 into the space of number of employees against the measure of relative control, and further indicates a third measure reflecting the size of the hotels, by portraying the bed capacity with differently sized spheres. The firms were then categorised into micro, small and medium-sized, based on head-count. Figure 5.2 reveals that most of the hotels in the sample were either micro or small firms, with only one firm being classified as a medium-sized firm. Further, the analysis clearly shows, that whilst broadly speaking, the owner-managers exercised considerable control over the operations of the firms in the sample, the owner-managers in the micro firms exercise tighter control than the owner-managers in

the small or medium sized firms. The figure also indicates a reasonable spread of firm sizes within the sample being analysed.

Figure 5.2 Classification of tourism sector firms into SMEs

Source: Personal Collection



5.3.2 The financial services sector

The sample of participating financial services sector firms was also analysed into micro, small and medium sized firm categories, based on head count and relative measures of control, as set out in section 3.6 (page 103).

Table 5.3 Classification of Financial Sector firms into SMEs

Source: Personal collection

Financial Services Firms	Headcount	Origin of Customer	Nature of business by customer	Relative Financial Value	Private Financing	Family Succession	Owners' involvement	Owner-Director	Association with mother company	Owners operational involvement	Level of Relative Control
		Measures of Relative Financial Value			Measures of Relative Control						
Firm 1	14	1	1	2	0	1	1	0	1	1	4
Firm 3	35	1	1	2	0	1	1	0	1	1	4
Firm 7	11	1	1	2	0	1	0	0	0	0	1
Firm 8	60	0	0	0	0	1	1	0	1	1	4
Firm 9	100	1	0	1	0	0	0	0	0	0	0
Firm 11	250	0	0	0	0	1	1	0	0	1	3
Firm 12	170	1	1	2	1	1	1	0	0	1	4
Firm 14	190	1	0	1	0	0	0	0	0	0	0
Firm 16	40	1	1	2	0	1	0	0	1	0	2
Firm 17	3	0	0	0	0	1	1	0	0	0	2
Firm 19	190	1	1	2	0	1	0	0	0	1	2
Firm 21	40	0	0	0	0	0	0	0	0	0	0
Firm 22	3	0	1	1	0	1	0	0	0	0	1
Firm 33	13	0	0	0	0	0	0	0	0	0	0
Firm 34	35	0	0	0	0	1	0	0	1	0	2

In the case of the relative measure of control, the firms in the KIBS suspended over the lower ranges (reaching a maximum relative measure of 4 points out of 8 possible levels), but in general reached higher levels of relative measures than the firms in the tourism sector, indicating an overall lower level of control by the owner-managers in the financial services firms. Two points are immediately evident here: firstly that the spread of control is broader in the non-KIBS firms, with firms portraying more varied levels of relative control (2 firms level 0 i.e. absolute control; 2 firm level 1; 3 firms level 2; 2 firms, level 3; 3 firms level 4; 3 firms level 6); secondly the relative measure of control is more evenly spread amongst the KIBS firms, that it is amongst the non-KIBS firms (in which case most firms hovered around level 2). It is also clear that, the level of relative control of the owner-managers in the KIBS firms is marginally lower than that of the non-KIBS firms, given that, for example, the relative measure of 6 points has been reached three times in this sector, but never in the tourism sector. The measure representing the relative financial value of the firm, a sub component of the relative measure of control, is, rather, evenly spread amongst the KIBS firms, with six firms measuring level 0, three level of 1, and six firms recording level 2, i.e. the highest level of relative financial value in the sample. This implies that the sample of firms, which comprise the financial services sector generally evidences high control by the owners (but relatively lower than in the tourism sector), and there is an indication that the sample is generally represented by each of the three sizes: micro, small and medium sized enterprises.

Figure 5.3 Classification of financial sector firms into SMEs

Source: Personal collection

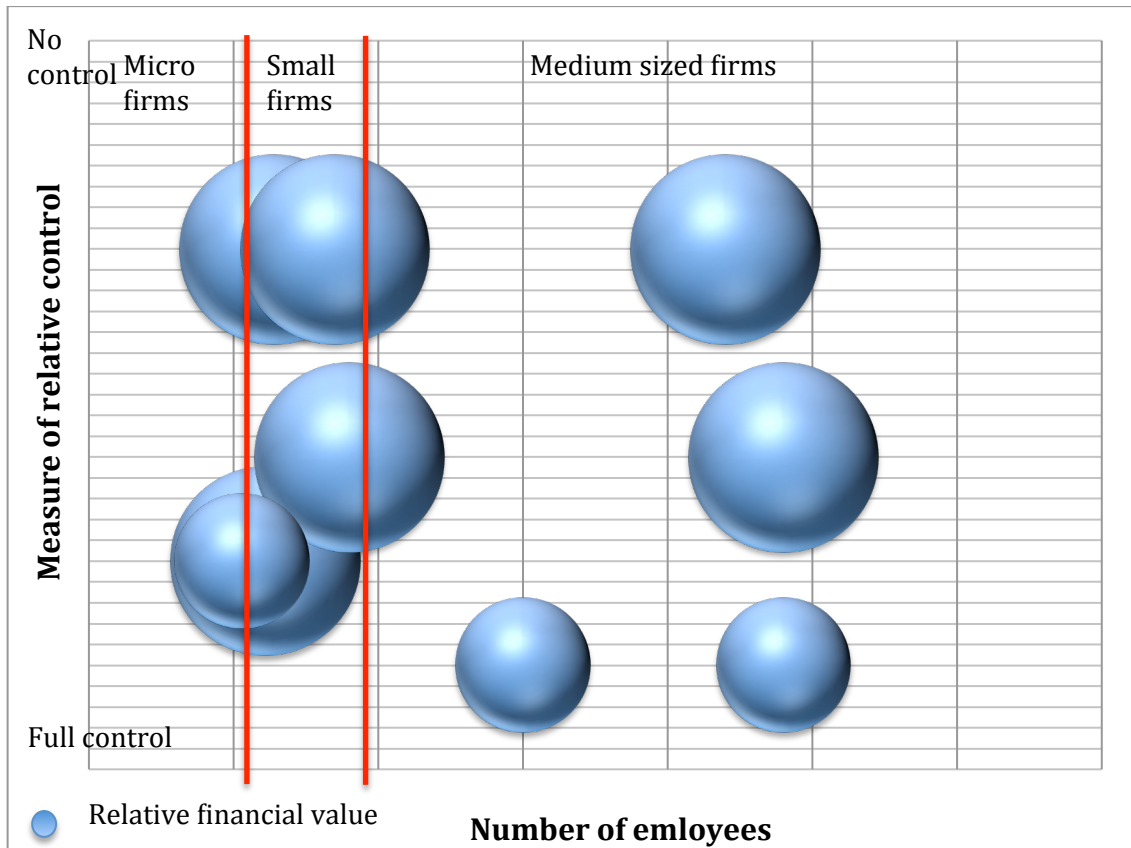


Figure 5.3 transposes the results of the calculations from table 5.3 and plots this in the space of number of employees (i.e. headcount) against the relative measure of control. The size of the firm is further illustrated by depicting the relative financial measure of the organizations by differently sized spheres: the larger the sphere indicating a larger organization. The figure shows that the sample contains firms across the three firm sizes: micro, small, and medium. It also indicates that the relative financial size of firms in the financial services sector is rather homogenous, and, definitely, in general, larger, than the firms in the tourism sector. Further, owner-manager of firms in the financial sector command a similar spread of relative control as the owner-managers of firms in the tourism sector.

5.4 An analysis of the results from the qualitative inquiry

The codes created during the analysis phase of the qualitative data (table 3.7, page 133 and figure 3.7, page 136) were expanded with the elaboration of the commonality of responses found within the transcribed interviews and organised into a self-perpetrating Context-Actions-Outcome model (Figure 5.7). The characteristics of the industry shape the context within which the industry operates. This context determines how the owner-managers and employees act within the industry, which results in determined results and outcomes. The latter reshape the context of the industry, which impact on the manner in which the firms behave and on the results of the actions of the firms. This cycle persists for as long as firms in the industry are operating.

Six main variables set the context and conditions within which ACAP is developed and nurtured within SMEs. These variables comprise the industry, organizational, interviewee, and customer profile, as well as the nature of the innovation within the specific industry.

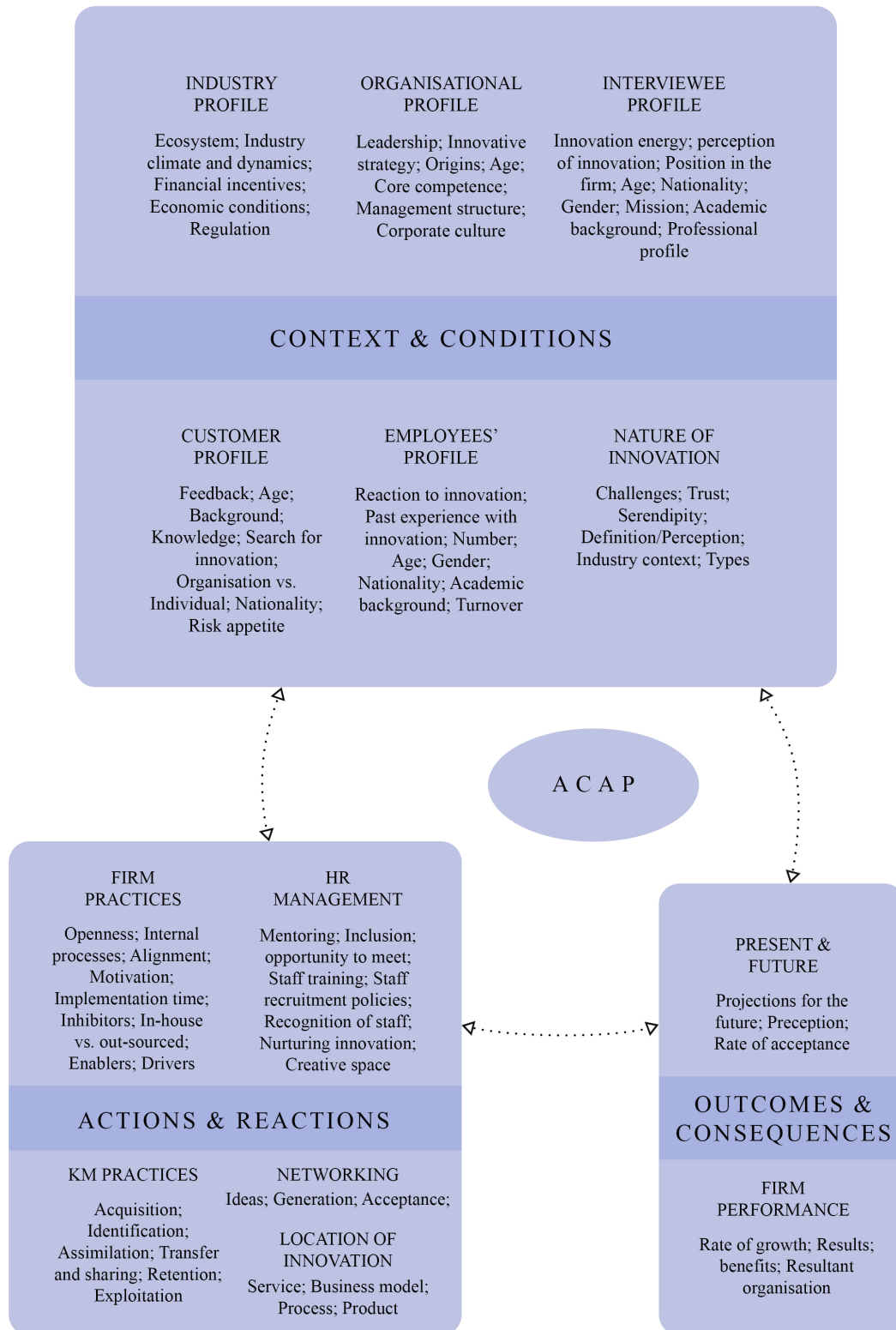
The researcher explored the ACAP actions and reactions, which the owner-managers implement within their firms. These actions were grouped into five categories, namely firm practices, human resources management, practices, knowledge management practices, the extent of networking, and the location of the innovation within the firm.

The researcher also analysed the outcomes and consequences of the actions of the firms as manifested in the research and classified these into firm performance, as well as the present state and future plans for innovation within the organization.

The analysis proceeds to identify the sub codes within each of the variables that have been identified above, based on commonalities in the responses of the interviewees. These explanatory factors are listed below each variable within Figure 5.4.

Figure 5.4 A classification of the results from the Qualitative Inquiry Phase

Source: Personal collection



For instance, within the context and consequences category respondents reported that the industry profile and make-up framed the ACAP practices within their firm. By this the respondents meant that the level of financial incentives offered by the government, perhaps, in terms of training grants, or subsidies on capital investments and improvement, impacting on their knowledge management decisions. The economic conditions prevailing at a particular time also played a major influence, with many owner-managers explaining how during the 2008-2010 Global Financial Crisis, their main focus was to keep the operation viable and afloat and they could not afford to distract their resources or their energy towards any other strategy. The level of regulation within the industry also played a major role, particularly in the financial services sector. The dynamics within the industry and the extent to which the agents collaborated trustingly were also considered as important conditions, which served to facilitate ACAP.

The respondents also explained how the organizational profile depicted by its core competences, management structure, corporate culture and innovation strategy, age, origins and leadership style laid the foundations of the context within which ACAP would operate. The leadership style of the organization depends, to a large extent, on the profile of the owner-manager, his demographic and professional profile, his innovative energy, as well as his personal mission. The interviewees proceeded to elaborate how the leadership style impacted upon the perception and behaviour of the employees towards ACAP, although they agreed that the employees' demographic and professional profile, as well as their previous and past organizational experiences would also affect their reaction towards ACAP. The customers within an industry have also been identified as contributing to the setting of the context and conditions within which ACAP may operate. Customer feedback (particularly in the tourism sector) and risk appetite (especially in the financial services sector), as well as their demographic profile, fuel ACAP. The final variable that has been attributed with the ability to shape the context, within which ACAP could flourish, is the nature of innovation within a specific industry. The respondents explained how innovation is industry-specific; certain industries face different challenges, ranging from market-based to regulatory-based, when attempting to engage with innovation. Serendipity also has a role in the generation and

success of innovations whilst knowledge management, and, therefore, ACAP is greatly dependent on the level of trust amongst employees within an organization.

The context and consequences drive the actions and reactions that are taken by the owner-managers. Firm practices shape the ACAP ability of the organization. These practices take the form of the degree of openness of the firm and its ability and willingness to learn from external sources; the internal processes and procedures of the organization; the alignment of practices across the firm in order to facilitate the acquisition and sharing of knowledge; the time it takes to implement new policies. The specific approach to human resource management adopted by the firm also impacts on the firm's ACAP ability. Staff selection, recruitment and retention; staff training; staff mentoring; inclusive policies; staff recognition etc., all lead to an environment wherein innovation is nurtured and ACAP encouraged. The firm's ability and appetite to network have also been identified as imperative in enabling the firm's ACAP. Respondents described how, in some instances, firms network willingly and meaningfully at various levels, while in certain cases, there is an obvious reluctance to collaborate with third parties, especially when these originate from within the same industry at a local level. The fear is that the firm may lose its competitive advantage over a local collaborator, and find itself in a disadvantageous position. It has been reported that the ability of the firm to identify, acquire, assimilate, transfer, share, retain and exploit knowledge, and the extent to which the firm does so, will also enable a firm's ACAP.

The respondents believe that the actions and reactions, with which a firm engages, shape the outcomes and consequences that the firm must face. The most common outcome that has been singled out by the respondents was the element of firm performance, in terms of enhanced profitability and firm growth and prosperity. The owner-managers also identified that the actions of the organization paved the way for the planning of future innovations, which may require new knowledge. The respondents also claimed that the actions of the organizations served to shape the perception of the employees, and the market towards innovation and the rate of acceptance of new projects.

5.5 Data capture and analysis of the results of the quantitative data

The sampling included employees working in the KIBS and non-KIBS in the service sector in Malta during the six month period June to December, 2016 period. 600 questionnaires (in thirty-five firms) were distributed with 395 respondents completing the survey. After excluding 16 cases due to excessive missing data, 379 responses remained for data analysis. The data received from the survey was entered into the appropriate collector on the Survey Monkey platform and then exported to IBM SPSS 24 for the data-cleaning phase. It was at this stage that the data were screened for missing values, normality, using measures of skewness and kurtosis, and with the replacement of Boxplot outliers by means scores. Following Beerli and Gil (2007) methodological advice, and upon the completion of the data screening stage, various exploratory factor analyses, with a Varimax rotation, were performed prior to testing the hypotheses. The procedure identified six items leadership, control, firm practices, firm openness, intra-firm communication, exploitation, with a total variance explained of 62.18%. In order to identify the data points that would be used to explain the constructs in the conceptual model detailed in Figure 5.1 (page 184) an Exploratory Factor Analysis (EFA) was conducted. The EFA retained a total of 26 data points (table 5.4) out of the original 53 data points contained in the survey instrument (Appendix B2, page 416).

Table 5.4 Classification of the data points in the survey instrument

Source: Personal collection

Data point	Description	Construct
Var16a	The firm is continuously scanning the environment to monitor new market trends	Leadership
Var16b	The firm regularly seeks to introduce new ways and procedures for doing business	
Var16c	A dedicated team of people is employed primarily to research and develop new business ideas	
Var21f	Employees are required to attend in-house training courses on a regular basis	Firm Practices
Var21h	The firm encourages employees to share new market, technical or other knowledge with their colleagues	
Var21i	The firm has rules and places to record its procedures.	
Var21j	The record/manual of firm practices and process is updated regularly	
Var21k	The firm has developed processes to capture ideas from employees	
Var21l	Firm policies for idea generation and knowledge sharing are clear to all employees	
Var21m	Employees are well aware of how to put forward an idea to management	Intra-Firm Communication
Var23j	The firm uses employees' knowledge and skills effectively	
Var23m	The firm encourages informal conversations amongst employees to share information and knowledge	
Var23n	Interdepartmental meetings are organised regularly to discuss developments	Firm Openness
Var22a	There is a strong working relationship amongst firms operating in the industry	
Var22c	The firm regularly engages with other players from local industry to learn about new trends, products, and ideas.	
Var22g	Management regularly attends informal meetings (lunch, talks, social gatherings etc.) to discuss new trends and ideas	
Var22h	The search for relevant information regarding new ideas is embedded in the culture of the firm	Control
Var23g	Most employees carefully document newly acquired knowledge	
Var23h	Employees have a clear understanding of who is responsible for the storage of information within the organization	
Var23i	Employees have a clear understanding of who is responsible for the dissemination/sharing of information within the organization	

Var24a	Using the full potential of my knowledge	
Var24c	Encouraging employees to share information with each other	
Var24d	Using IT to improve information flow	
Var24e	Using different methods to foster better communication among employees	Exploitation
Var24f	Exploiting new processes and practices to improve business products and services	
Var24g	Communicating with employees	

5.5.1 A demographic analysis of the sample participating in the questionnaire survey

Tables 5.5 and 5.6 portray a consideration of the demographic constitution of the participants in the questionnaire survey, i.e. phase two of the analysis. Table 5.4 shows that out of the respondents, which includes employers and employees, 58.5% of the participants originated from financial sector firms (KIBS) whilst 41.5% of respondents worked in the tourism firms, i.e. hotels (non-KIBS). The table also reveals the headcount that has been reported by the survey respondents of the firms where they worked. The results reveal a spread of differently sized firms ranging from micro (fewer than 10 employees) to under 250 employees (maximum headcount for medium sized firms).

Table 5.5 Profile of firms in the quantitative sample

Source: Personal collection

	Sample %
Type of Service Firm	
Knowledge Intensive Service Firm	58.5
Non Knowledge Intensive Service Firm	41.5
Number of employees	
fewer than 10	6
10 to 49	24
50 to 149	44
150 to 250	26

Table 5.6 Profile of respondents, (employers and employees) who participated in the quantitative phase of the research

Source: Personal collection

		Sample %
Gender	Males	52
	Females	48
Nationality	Locals	81
	Foreigners	19
Age	18-29	40
	30-39	32
	40-49	16
	50-59	12
	60+	10
Highest Education Achieved		
	No formal Education	9
	Compulsory Education	12
	Post Secondary Level	13
	Diploma level	29
	Bachelor's Degree	22
	Post Graduate Level	5
Position Held		
	Clerical	24
	Middle Management	36
	Top Management	7
	Other, manual	33
Duration of employment with firm		
	less than 1 year	19
	4-9 years	48
	10-15 years	22
	16-20 years	5
	more than 20 years	6

Table 5.6 reports the demographic makeup of the profile of the respondents of the questionnaire survey when gender, nationality, age, academic background, position held within the firm, and the duration of employment with the firm have been contemplated. The results of the frequency testing show that there is a fair spread across each variable within the whole sample.

Initially, the responses were tested for variances arising as a result of differences in gender, nationality, and industry sector (KIBS vs. non-KIBS) using independent sample T-test. A one-way ANOVA test was conducted for variances arising owing to divergences in academic background and position held within the firm. The choice of parametric tests (independent sample T- test and one-way ANOVA) for invariance analysis rests on two considerations: the appropriateness of parametric tests for data resulting from Likert scales; and the distribution of the data itself. Scholars (Norman, 2010; Murray, 2013) contend that contents that parametric tests can be conducted on Likert scale data without compromising the results. Given that parametric tests produce results that are more statistical powerful than their non-parametric parallels, they are potentially more likely to detect significant effects where such exist, and are therefore, preferred. Following data screening and the statistical treatment of outliers, the data produced a normal univariate distribution, respecting the parameters (± 2) for both skewness and kurtosis (George & Mallery, 2010). Further, the sample size being considered is substantial in size (379 cases, 153 tourism cases and 226 responses from the financial services firms) and respects the minimum required to successfully run the parametric tests for invariance analysis.

The results of these tests are detailed in section 5.5.3 (and ensuing sub-sections). Structural Equation Modelling was subsequently undertaken using SMART PLS in order to identify the structural model and to assess the constructs and data points which contributed mostly to the ACAP of SMEs in the service sector (section 5.7 and sub-sections).

5.5.2. Testing the correlation of the constructs

Pearson correlation tests were used to measure the extent of the relationship between the variables in the model. Preliminary tests conducted at a confidence interval of 95% confirmed the relationships to be linear, with all six variables being normally distributed.

Table 5.7 shows that the construct six constructs Leadership, Control, Firm Practices, Firm Openness, Communication, and Exploitation were all normally distributed, the measures of skewness and kurtosis lying between the ranges of -0.075 and -0.531 for skewness and -0.568 and 0.459 for kurtosis.

Table 5.7 Results of normality testing of the model constructs

Source: Personal collection

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Firm Practices	-0.531	0.125	0.459	0.250
Firm Communication	-0.501	0.125	-0.037	0.250
Firm Openness	-0.075	0.125	0.147	0.250
Control	-0.329	0.125	0.359	0.250
Exploitation	-0.470	0.125	0.227	0.250
Leadership	-0.334	0.125	-0.568	0.250

Five Pearson correlation tests were run to assess the strength of the linear relationship between each of the two constructs Firm Practices, Control, Leadership, Communication and Firm Practices, in turn, and the construct Exploitation to represent the effective use of knowledge within the firm (symbolized as Firm Practices → Exploitation; Control → Exploitation; Leadership → Exploitation; Communication → Exploitation; Firm Openness → Exploitation). The results of these correlations are illustrated in table 5.8. There was a moderate, positive correlation between Exploitation and Firm Openness, $r(379) = 0.412$, $p < 0.01$; Exploitation and Communication, $r(379) = 0.352$, $p < 0.01$; Exploitation and Firm Practices, $r(379) = 0.395$, $p < 0.01$; and Exploitation and Leadership, $r(379) = 0.424$, $p < 0.01$; and a small and positive relationship between Exploitation and Control, $r(379) = 0.219$, $p < 0.01$. There was a statistically significant relationship between all the pairs of constructs, in each case. Therefore, the null hypothesis, that there was no association between the tested variables, was rejected, and the alternate

hypothesis, that there existed a relationship between the tested variables, was accepted.

The coefficient of determination, r^2 , explains the proportion of the variance in the dependent variable that is explained by the independent variable. R^2 calculations indicate that the constructs Intra-Firm Communication and Firm-Openness, statistically explain 12.4% and 17% respectively of the variability in Knowledge Exploitation, whilst Leadership, Control and Firm Practices explain 17.98%, 4.8% and 15.6% respectively of the variability in Knowledge Exploitation in the services sector. The model therefore predicts 67.78% of the outcome of the model and leaves 32.22% of the variation caused to knowledge exploitation, unexplained.

Table 5.8 Assessing the correlation between the model constructs

Source: Personal collection

	Firm Openness	Firm Practices	Control	Leadership	Firm Communication
Exploitation	0.412*	0.395*	0.219*	0.424*	0.352*
Strength of correlation	Moderate and positive	Moderate and positive	Small and positive	Moderate and positive	Moderate and positive

Correlation is significant at the 0.01 level (2-tailed), $p < 0.01$

5.5.3 An investigation into the profile of the respondents – Results from the entire services sector cases

The data were initially examined to understand whether there were any variations in the responses given to the survey questions that could have been driven by gender, nationality, respondent's age, respondent's level of education, and respondent's position occupied in the organization.

5.5.3.1 Analysis of variance - by services sector

Table 5.9 shows the salient results of independent samples t-test carried out by services sector (knowledge intensive service sector and non-knowledge intensive service sector). This revealed that at a confidence level of 95%, significant differences in the respondents' attitudes to data points Var22c and Var24c existed. The effect size of this statistical difference was calculated (table 5.10) at 0.258 and 0.225 for Var22c and Var24c respectively using Cohen's d (1988). The calculated effect sizes are <0.5 and are considered to be small, indicating that although there is a difference in the responses of employees to data points Var22c and Var24c, these differences are not particularly important.

Data point Var22c measures Firm Openness and asks the respondents their views on how they feel about the extent of engagement, to learn about new trends, products, and ideas, of their firm with other players from the local industry. Data point Var24c measures the extent to which employees believe that the firm encourages them to share information with one another. Of the respondents, 210 worked in a knowledge intensive service firm, whilst 153 worked in a non-knowledge intensive service firm. Data Point Var22c (Firm Openness: KIBS $M=-0.11$; $SD = 1.034$, NKIBS $M=0.15$, $SD=0.966$; $t(361) = 2.454$, $p=0.15$). Data point Var24c (Exploitation: KIBS $M= 0.9$, $SD= 0.918$; NKIBS $M = -0.14$, $SD = 1.115$, $t(361) = -2.081$, $p = 0.038$) (table 5.9).

Table 5.9 Analysis of variance by services sector: Independent Samples Test (data points Var22c and Var24c)

Source: Personal collection

		t-test for Equality of Means					95% Confidence Interval of the Difference	
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
VAR22c	Equal variances	2.48	339.707	0.014	0.262	0.106	0.054	0.47
VAR24c	not assumed	2.081	288.188	0.038	-0.229	0.11	-0.446	-0.012

A calculation of the effect size of the differences in the means for the responses to Var22c and Var24c, using Cohen's revealed that the significant difference in means could only be marginally attributed to the fact that the differences were sector-driven.

5.5.3.2 Analysis of variance - by gender of employees

An independent samples t-test was conducted to compare males' and females' attitudes to firm leadership, firm practices, intra firm communication, firm openness, firm control and firm exploitation of knowledge. The sample contained 167 males and 207 females. Results show that there were no significant differences in males' and females' responses to all the data points except one data point from the category Firm Practices, i.e. data point Var21i (Firm Practices: The firm has rules and places where to record its procedures) (Males: $M=0.14$; $SD= 0.818$; Females: $M= -0.12$; $SD= 1.115$; $t(372) = 2.532$, $p=0.012$) (table 5.10). A significant difference was revealed between the responses of the males and the females in data point VAR 21i (Firm Practices), but a computation of Cohen's d effect size indicates that this significant difference was only a very small one.

Table 5.10 Analysis of variance by gender: Independent Samples Test (data point Var21i)

Source: Personal collection

		t-test for Equality of Means					95% Confidence Interval of the Difference	
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
VAR21i	EqVar NOTAss	2.617	368.878	0.009	0.262	0.1	0.065	0.459

An analysis of the face-to-face interviews also proves that the interviewees, i.e. the owner-managers and/or CEOs of the organizations, do not identify any difference between the male and female employees with respect to matters relating to attitudes towards change and innovation, generation of new ideas, attitude towards knowledge acquisition, sharing and transfer and the utilisation of their knowledge for the sustained competitive advantage of the organization. One respondent qualified:

“ Most ideas for change come from the staff...I spend a lot of time amongst them (the staff), listening to them...” Firm 4: Non-KIBS.

However, several interviewees articulated the general feeling of employers with regards to the attitude towards change of their employees, namely:

“ Change always brings resistance from staff” Firm3: KIBS.

“ They (the staff) resist change, particularly because of past experiences (i.e. steep learning curves of new methods and technologies with no end benefit and lack of mentoring)” Firm12: KIBS.

The above analysis, therefore, exposes the fact that whilst the employees themselves are the inspiration for new ideas for change they, generally, tend to

resist anything that will take them out of their comfort zone and implies the investment of additional time and effort to learn new approaches and methods. Employees, in particular are hesitant to embrace innovation as they feel that on many occasions, the 'change' is introduced without in-depth cost-benefit analysis to the organization, and without well thought-out plans implementation strategies. Employees are particularly resistant to change when this does not imply a personal gain them at some point.

5.5.3.3 Analysis of variance - by nationality of the employees

The above statistical procedure was repeated to check whether any significant differences in the participants' responses could be attributed to the variable of nationality. The sample was composed of 331 Maltese nationals and 48 foreign nationals. The foreigners hailed from very dispersed destinations, mostly in Europe (including Eastern Europe), with 5 each coming from Italy and Hungary, 4 from Serbia and 7 from the United Kingdom. The sample also included 3 respondents from Russia and one Turk, Brazilian and Filipino national. The large majority of these foreign nationals had been living and working in Malta for less than three years (59.8%); only 20% had been in Malta long-term i.e. more than 5 years. The independent t-test concluded that there were no significant differences attributable to nationality in the respondents' attitudes to firm leadership, control, firm practices, firm openness, intra-firm communication, exploitation. The analyses of the results of the Independent Samples Test, show no nationality-driven significant differences in any of the data points ($p \geq 0.05$).

A closer look at the results obtained from the in-depth interviews reveals that employers, in general, are in disagreement with regards to the benefits of having a multi-national staff complement. Whilst some embrace the diversity and claim that it works well for their firm, others feel that the foreign worker does not necessarily have the benefit of the organization at heart, but, instead, prioritises in favour of his short term economic gain.

“ The local workers are loyal; the foreigners are not “ Firm 6; Non KIBS

“ It (i.e. having a diverse work force) has a wonderful effect. It works very well”
Firm 16; KIBS

“ We have noticed that, especially people coming from Eastern Europe have left their country of origin in seek of employment. They do bring new ideas with them, but they do not stay long enough to implement them. They do not last, they use us as a stepping stone to something better” Firm 5: Non KIBS

5.5.3.4 Analysis of variance - by academic background

A one-way between groups analysis of variance was conducted to explore the impact of academic background of the respondents and the role they occupied in the firm, on the perception of the respondents with respect to the constructs identified in the factor analysis, namely, Leadership, Firm Practices, Intra Firm Communication, Firm Openness, Firm Control, and Firm Exploitation of knowledge.

Subjects were divided into five groups according to the highest level of education they had completed (Group 1: compulsory education, level 3, 79 respondents; Group 2: post secondary education, level 4, 41 respondents; Group 3: Diploma Level 5, 122 responses; Group 4: undergraduate qualification, Level 6, 90 responses; Group 5: post graduate qualification, Level 7, and higher, 47 responses). An analysis of the descriptive statistics and of the ANOVA resolution, as well as a scrutiny of the multiple comparisons of the responses at a 95% confidence interval, reveals that there were statistically significant differences, at the $p < 0.05$ level, in the responses to data points Var21h and Var21l (table 5.11). Both these data points explain Firm Practices. Data point Var21h assess the extent to which the firm encourages employees to share new market, technical or other knowledge with their colleagues; whereas data point Var21l examines the extent to which firm policies for idea generation and knowledge sharing are understand generation by all employees within the firm.

The results of the one-way ANOVA analysis indicate that for data point 21h are as follows: Data point 21h [F (4,374)= 2.581, p =0.037). The F-statistic represents the mean of variances with 4 and 374 degrees of freedom respectively 'between groups' and 'within groups'. The difference in means has a significant value, p = 0.037, which is less than 0.05, meaning that the difference between the means of the groups in the analysis *is significant*. Post-hoc comparisons using the Tukey HSD test (indicated that the mean score for Group 2 (M = -0.29, SD =1.029) was significantly different from that of Group 4 (M = 0.25, SD =0.970), where M is the mean value and SD represent the standard deviation. This implies that there are significant differences within the responses to data point Var21h, which occur between the responses of those attaining level 4 (completed post secondary education) and level 6 (undergraduate level of education) A calculation of the effect size of this significant difference, using the measure of omega squared (ω^2) (Field, 2013) showed that there is an effect size of 0.16, which can be interpreted as a very large effect size (Fritz, Morris and Richler, 2012). The effect size measures the extent of the effect on employees' educational levels, on the differences in their answers. Results obtained confirm that the difference in the education level between the employees with levels 3 and 6 did impact on the variation in the responses to data point Var21h.

Table 5.11 Multiple Comparisons revealing significant differences between two groups in Var21h

Source: Personal collection

Dependent Variable	(I) education	(J) education	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
VAR21h	Level 3	Level 6	-0.354	0.153	0.143	-0.77	0.07

The results of the one-way ANOVA test for data point 21I indicate that the differences in the means between the groups was statistically significant (Data point 21I [$F(4,374)= 2.527, p =0.04$]). Post-hoc comparisons using the Tukey HSD test indicated that, however, that none of the mean scores were significantly different from one another.

The analyst therefore concluded that the level of education of the respondents only had a statistically significant impact on difference in responses to one data point, Var21h (the extent to which the firm encourages its employees to share knowledge).

An examination of the data compiled during the qualitative phase of the inquiry reveals that, in general, the academic profile of the employee of the KIBS firm is that of a graduate at minimum level 5 (Diploma Level), whilst in the non-KIBS firm, the majority of the employees (excluding management) may not be in possession of more than the compulsory level of education. This stark divergence in the academic background of the employees of the sub-sectors of the service industry has been identified by interviewees as being the source of a different attitude to the generation of ideas and the acquisition and dissemination of knowledge between firms in the sub-sectors of the industry.

5.5.3.5 Analysis of variance - by age of the employees

The age of the subjects who participated in the survey varied greatly (younger than 20 years to over 60 years), with, however, the larger proportion of the sample (72%) having ages ranging from 18-29 (40%) and from 30-39 (32%). Analysis of variance using one-way ANOVA testing was conducted to explore whether any significant variations in the responses of the subjects could be attributed to age differences. The sub-sample was divided into five categories as follows: Group 1, those subjects who were younger than 20 years of age, i.e. 18-19 year old, new to the labour market; Group 2, represented those aged 20-29 years; Group 3, subjects aged 30-39 years of age; Group 4, subjects between the ages of 40-49 years of age and Group 5, representing those aged

over 50 years. A visual check of the results of the one-way ANOVA test reveals that $p < 0.05$ for one data point, VAR23g. This means that the variance of the means between the groups is statistically significant, at a 95% confidence level, and with 4 and 146 degrees of freedom (between groups and within groups, respectively) [F (4,146)=2.726, $p=0.032$]. Therefore, the null hypothesis was rejected, and the alternate hypothesis, that there exists a difference in the means of this data point, was accepted. A scrutiny of the results for the multiple comparisons post hoc testing revealed that the existed significant differences in the responses of age groups 1 and 2, 3 and 5 for the interested data point (i.e. data point Var23g). Var23g measures the extent to which employees carefully document newly acquired knowledge. A computation of the effect size, using omega squared, (ω^2) (Field, 2013) for this significant difference, revealed only a small to moderate effect size (Fritz, Morris and Richler, 2012) of 0.04. It is therefore concluded that those employees, aged 18-29, responded differently to those employees aged 30-49 and those over 60, with respect to the extent to which employees carefully documented their newly acquired knowledge. The younger age group in the firm had a statistically significantly different perspective of this practice to most of the other employees, in fact, to all the employees, except those aged 50-59.

5.5.3.6 Analysis of variance – by size of firms (measured by number of employees)

Tests were conducted to assess whether there existed any variation in the responses of the participants, which could be attributed to the size of the organization. For this purpose the responses of the entire sample of the services were classified into four categories: Group 1, those responses of participants, who worked in firms employing fewer than ten employees; Group 2, responses emanating from participants, who worked in firms employing between 10 and 49 staff members; Group 3, responses of participants working in larger firms employing between 50 and 99 workers, and Group 4, comprised those responses which emanated from firms employing between 100 and 250 staff members. One-way ANOVA tests, at a confidence level of 95%, were

conducted, to check for statistically significant variations in the means scores. Upon examination of the results of the tests, it was revealed that at a confidence level of 95%, the $p > 0.05$ criterion was violated for the following data points (Table 5.12):

Var21k [F (3, 375)=5.270 , $p = 0.001$];

Var21m [F (3, 375)=4.226), $p = 0.006$];

Var22a [F (3, 375)=3.667, $p = 0.013$];

Var22g [F (3, 375)=4.789, $p = 0.003$];

Var22h [F (3, 375)=4.102, $p = 0.007$];

Var24a [F (3, 375)=3.079, $p = 0.028$]; and

Var24c [F (3, 375)=4.150, $p = 0.007$]

Table 5.12 One-way ANOVA testing results by size of firms; statistically significant differences

Source: Personal collection

		Sum of Squares	df	Mean Square	F	Sig.
VAR21k	Between Groups	15.293	3	5.098	5.27	0.001
	Within Groups	362.708	375	0.967		
VAR21m	Between Groups	12.361	3	4.12	4.226	0.006
	Within Groups	365.639	375	0.975		
VAR22a	Between Groups	10.774	3	3.591	3.667	0.013
	Within Groups	367.225	375	0.979		
VAR22c	Between Groups	4.862	3	1.621	1.629	0.182
	Within Groups	373.137	375	0.995		
VAR22g	Between Groups	13.948	3	4.649	4.789	0.003
	Within Groups	364.051	375	0.971		
VAR22h	Between Groups	12.011	3	4.004	4.102	0.007
	Within Groups	365.989	375	0.976		
VAR24a	Between Groups	9.088	3	3.029	3.079	0.028
	Within Groups	368.911	375	0.984		
VAR24c	Between Groups	12.146	3	4.049	4.15	0.007
	Within Groups	365.854	375	0.976		

The null hypothesis (H_0 : there exists no statistically significant difference between the means score) was, therefore, rejected and the alternate hypothesis (H_1 : that there exists a statistically significant difference between the means score) was accepted for each of the data points 21k, 21m, 22a, 22g, 22h 24a and 24c.

Data point Var21k explored the firms' practices and measured the extent to which firms developed processes to capture ideas from employees. Data points Var22a, 22g and 22h explored the degree of openness and the relational capabilities of the firm. Var22a looked at the extent to which there was a strong working relationship amongst firms in the industry; Var22g explored how regularly management attended informal meetings with third parties to discuss new trends and ideas, whilst Var22h tested the extent to which the search for relevant information for new ideas was part of the organizational culture. Var24a and Var24c explored the exploitation of firm knowledge by testing the extent to which the employee believed that the firm used efficient in using

his/her full potential, and how efficient the firm was at encouraging its employees to share information with one another.

Table 5.13 portrays the results of the Multiple comparison, post hoc testing for the data points with statistically significant differences in their means. This testing was undertaken to identify the precise age groups between which the differences in the means were present.

Table 5.13 Multiple Comparisons post hoc Tukey HSD testing: Selected results

Source: Personal collection

Dependent Variable	(I) employees	VAR (J) employees	VAR	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
VAR21k	2	4		-.477*	0.15	0.009	-0.86	-0.09
	3	4		-.480*	0.134	0.002	-0.83	-0.13
VAR21m	1	3		.580*	0.219	0.041	0.02	1.14
VAR22a	3	4		-.392*	0.135	0.02	-0.74	-0.04
VAR22g	3	4		-.546*	0.15	0.002	-0.93	-0.16
VAR22h	3	4		-.457*	0.134	0.004	-0.8	-0.11
VAR24a	3	4		-.385*	0.135	0.023	-0.73	-0.04
VAR24c	1	3		.576*	0.219	0.043	0.01	1.14
	3	4		-.375*	0.134	0.028	-0.72	-0.03

* The mean difference is significant at the 0.05 level.

An investigation of the results of the multiple comparisons, post hoc testing (at a significance level of 0.05 indicated that the two groups that differed mostly in their responses were groups 3 and 4 (i.e. firms employing between 50 and 99 workers and those employing 100 and 250 workers), with differences in their responses for data points Var21k, Var22a, Var22g, Var22h, Var24a, Var24c. There also existed differences in the responses of groups 1 and 3 (firms employing fewer than 10 workers and firms employing 50 to 100 workers) for Var21m and Var24c, whilst groups 2 and 4 (firms employing between 10 and 49

employees, and firms employing between 100 and 250 employees) only differed in their response to one data point, Var21k.

Testing for the analysis of variances by number of employees has brought to light significant differences in as many 9 data points. This shows that the number of employees does cause different behavioural patterns within an organisation. It is pertinent to note, however, that the effect size of each of these differences was calculated to be small indicating that in reality this variable (i.e. number of employees in a firm) had only a *small* impact on the differences in the responses), which were most commonly present between firms employing 50-99 employees and those larger firms employing 100 – 250 employees.

5.5.3.7 Analysis of variance - by position held in firm

A one-way ANOVA between group analysis of variance was also conducted to explore the impact of the respondents' role occupied in the firm on their perception of the constructs, which resulted from the factor analysis (Leadership, Firm Practices, Intra-Firm communication, Firm Openness, Control and Exploitation). Respondents were divided into four groups (Group 1: Senior Management; Group 2: Middle Management; Group 3: Clerical grade and Group 4: manual workers). Table 5.14 reveals how major statistical differences, at the $p < 0.05$, in the means score of the four groups were revealed in a number of data points, namely data points 16a, 16b, 21f and 22c.

Table 5.14 Results of the one-Way ANOVA testing which reproduced significant differences between means

Source: Personal collection

		Sum of Squares	df	Mean Square	F	Sig.
VAR16a	Between Groups	11.391	3	3.797	3.884	0.009
	Within Groups	366.609	375	0.978		
VAR16b	Between Groups	9.948	3	3.316	3.379	0.018
	Within Groups	368.052	375	0.981		
VAR21f	Between Groups	11.314	3	3.771	3.857	0.01
	Within Groups	366.686	375	0.978		
VAR22c	Between Groups	16.787	3	5.596	5.809	0.001
	Within Groups	361.212	375	0.963		

Data point 16a and 16b explores Leadership: the former assesses the extent to which the employees felt that the firm engaged continuously in scanning the environment to monitor new market trends; the latter explores the degree to which the employee believed that the firm regularly sought new ways and procedures to do business. Data point 21f examines Firm Practices and employees' perception of how much they were required by the firm to attend in-house training courses regularly. Data point 22c contributes towards measuring Firm Openness and, in particular, delves into the intensity with which the firm regularly engages with other players from local industry to learn about new trends, products and ideas.

Table 5.15 shows the results of the Multiple Comparison post-hoc analysis using the Tukey HSD test for those groups between which the differences in the means were identified:

For data point 16a [$F(3,375)=3.884, p=0.009$]:

the means score of Group 1 (Mean = 0.80, SD = 0.409) was significantly different from Group 2 (Mean = -0.07, SD = 0.879), Group 3 (Mean = -0.80, SD = 1.161) and Group 4 (Mean = 0.6, SD = 1.010).

For data point 16b [$F(3,375) = 3.379, p = 0.018$]:

the means score of Group 1 (Mean = 0.64, SD = 0.559) was significantly different from Group 2 (Mean = -0.14, SD = 1.036).

For data point 21f [$F(3,375) = 3.771, p = 0.010$]:

the means score of Group 1 (Mean = 0.74, SD = 0.567) was significantly different from Group 2 (Mean = -0.01, SD = 1.032) and Group 3 (Mean = -0.16, SD = 1.015).

For data point 22c [$F(3,375) = 5.596, p = 0.001$]:

the means score of Group 1 (Mean = 1, SD = 0.978) was significantly different from Group 2 (Mean = -0.02, SD = 1.010), Group 3 (Mean = -0.13, SD = 0.97) and Group 4 (Mean = 0, SD = 0.953).

The above results show that the most common difference in the means exists between Groups 1 and Groups 2, 3 and 4, i.e. between senior management and other administrative staff with the difference between top management and the clerical grade ranking second and the differences between senior management and the manual workers having the lowest frequency.

Table 5.15 Multiple Comparisons revealing significant differences between two groups in Var16a, Var16b, Var21f, Var21c

Source: Personal collection

Dependent Variable	(I) VAR position	(J) VAR position	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
VAR16a	1	2	.871*	0.268	0.007	0.18	1.56
	1	3	.878*	0.274	0.008	0.17	1.58
	1	4	.740*	0.272	0.034	0.04	1.44
VAR16b	1	2	.784*	0.268	0.019	0.09	1.48
VAR21f	1	2	.746*	0.268	0.028	0.06	1.44
	1	3	.903*	0.274	0.006	0.20	1.61
VAR22c	1	2	1.023*	0.266	0.001	0.34	1.71
	1	3	1.130*	0.272	0.000	0.43	1.83
	1	4	1.001*	0.27	0.001	0.30	1.7

The calculation of the effect size of these differences, however, revealed that the effect was indeed *extremely small*, and negligible and therefore not considered meaningful for the analysis.

5.5.3.8 Analysis of variance - by length of employment with the firm

A one-way ANOVA was conducted to determine whether any of the responses of the participants varied according to the length of service they had given to the organization they worked for. The participants' responses were classified into 6 categories: Group 1, comprised those who had not yet spent a year working for the organization; Group 2, those who had spent between 1 and 3 years; Group 3, those between 4 and 6 years; Group 4, those between 7 and 9 years; Group 5, those between 10 and 15 years and Group 6 those who had

been working for the firm for more that fifteen years. The test was conducted at a 95% confidence interval. Table 5.16 reveals that the $p > 0.05$ criterion was violated for data points:

Var21h [$F(4, 373) = 2.583, p = 0.037$];

Var21j [$F(4, 373) = 3.313, p = 0.011$];

Var22c [$F(4, 373) = 2.902, p = 0.022$].

Table 5.16: Results of the one-Way ANOVA testing which reproduced significant differences between the means

Source: Personal collection

		Sum of Squares	df	Mean Square	F	Sig.
VAR21h	Between Groups	10.15	4	2.538	2.583	0.037
	Within Groups	366.435	373	0.982		
VAR21j	Between Groups	12.917	4	3.229	3.313	0.011
	Within Groups	363.59	373	0.975		
VAR22c	Between Groups	11.357	4	2.839	2.902	0.022
	Within Groups	364.94	373	0.978		

Data points Var21h and Var21j measure Firm practices and evaluate extent to which the firm encourages employees to share knowledge amongst themselves, and the extent to which knowledge is recorded and manuals are updated regularly. Data point Var22c measures the relational capabilities of the organization, i.e. Firm openness and assesses the extent to which the firm engages regularly with others in the industry with the intention of acquiring new knowledge.

Multiple post-hoc comparison testing, using the Tukey HSD tests, revealed variations between groups 2 and 6 for data points Var21h and Var21c and

groups 2 and 5 for data point Var21j (Table 5.17). It was therefore concluded that statistically significant differences existed between these groups for the mentioned data points. It becomes evident that the difference in the responses exists between group 2, i.e. those who had been working in the firm between 1 and 3 years, and those who had been working there much longer, for more than ten years. These results are expected, as those who work in a firm for more than one year but less than 3 have had enough time to learn how the organization works, and are still new enough to feel motivated to fuel change, whilst those who have been working in the organization for more than ten years are, probably, set in their ways and cemented in their comfort zone and are more likely to resist change.

Table 5.17 Multiple Comparisons revealing significant differences between groups the means Var21h, Var21j and Var22c

Source: Personal collection

Dependent Variable	(I) VAR DURATION	(J) VAR DURATION	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
VAR21h	2	6	-.361*	0.129	0.042	-0.71	-0.01
VAR21j	2	5	-.639*	0.183	0.005	-1.14	-0.14
VAR22c	5	6	.526*	0.181	0.032	0.03	1.02

The significant differences in the responses were found between the respondents of participants in groups 2 and 5 and 6; and between the respondents in groups 5 and 6 (table 5.17). The significant variances between groups 2 and 5 and 6 is not surprising as these groups represent those employees who are relatively new to the firm (group 2) and those who have been working in the firm for more than 10 years and therefore have settled in a somewhat comfort zone and would probably be resistant to any practices that can bring on change and disruption. Surprisingly, however, significant

differences were also revealed between two groups of employees who have been working for considerable years in the firm, and who therefore, should have a more homogeneous behaviour. In fact, differences have transpired between those who have been working in the firm for anything between 10 and 15 years, and those who have been working in the firm for more than 15 years.

The effect size of the statistical difference in the means scores of the three data points Var21h, Var21j and Var22c was calculated using the measure omega squared ω^2 (Field, 2013) and, in each case, reported a small size effect ranging from 0.016 to 0.03. The small magnitude of the size effects reveals that the differences in the means owing to the varying length of service of the employees only has a small impact on the overall answers of the sample.

The above analysis by variance has shown that the largest number of significant differences arose when the data is analysed by the fixed variable of number of employees, while the analysis by fixed factor nationality did not reveal any statistically significant differences. Furthermore, only one data point was affected the employees' responses, when these were analysed by academic background, age, and gender. When the analysis of the responses was analysed by service sector, length of service and employees' role in the firm reported on average a similar trend of between 2 and 4 differences in the data points.

5.6 Results from the Structural Equation modelling

Partial Least Square (PLS) path modelling (Lohmöller, 1989) tested the hypothesized research model. PLS is a non-traditional alternative to covariance-based structural equation modelling (CBSEM). In PLS, structural models are estimated using an iterative procedure, which maximizes the strength of the relationship between independent and dependent variables. PLS is suitable for predictive applications and theory building (Chin, 1998). Unlike CBSEM, PLS imposes less restrictive assumptions about normality and

the procedure works well with small samples (Chin, 1998; Chin and Newsted, 1999; Wood, 1982).

PLS path models are defined in terms of two sets of linear relations – inner and the outer models. The inner model specifies the relationship between unobserved or latent variables, similar to CBSEM structural models. The outer model (or measurement model in CBSEM), shows the relationship between the latent variable and observed or manifest variables (Lohmöller, 1989). Model fit indices associated with CBSEM, such as Goodness-of-fit and Chi-Square (χ^2) are not applicable in a PLS-SEM context (Hair, Hult, and Ringle, 2014). The key criteria for assessing the structural model in PLS-SEM are the significance paths, the coefficient of determination (R^2), the f^2 effect, the predictive relevance (Q^2), and the q^2 effect size. The hypothesized model was estimated using SmartPLS 3.2.6 (Ringle, Wende and Becker, 2015). In addition, statistical significance of the coefficients for the inner and the outer (structural) model were tested via a bootstrap re-sampling procedure.

5.6.1 The Measurement Model

Following Anderson and Gerbing's (1998) recommended procedure, the study's main constructs (table 5.20) were first examined for reliability, convergent and discriminant validity before testing the structural model. Reliability assessment uses composite reliability estimates (Werts, Linn, Jöreskog, 1974). From Table 5.18 composite reliabilities are above the 0.70 cut off value (range from 0.808 and 0.906), suggesting the scales are reliable (Fornell and Larcker, 1981; Nunnally and Bernstein, 1995).

Table 5.18 Assessment of the measurement model: reliability, convergent and discriminant validity

Source: Personal collection

	Factor Loadings	t-Statistic	Cronbach's Alpha	rho_A	Composite Reliability
Leadership			0.7	0.7	0.878
Var16a: The firm is continuously scanning the environment to monitor new market trends	0.766	20.873*			
Var16b: The firm regularly seeks to introduce new ways and procedures for doing business	0.838	34.309*			
Var16c: A dedicated team of people is employed primarily to research and develop new business ideas	0.749	20.151*			
Firm Practices			0.873	0.863	0.888
Var21f: Employees are required to attend in-house training courses on a regular basis	0.668	16.984*			
Var21h: The firm encourages employees to share new market, technical or other knowledge with their colleagues	0.649	15.760*			
Var21i: The firm has rules and places to record its procedures.	0.714	19.022*			
Var21j: The record/manual of firm practices and process is updated regularly	0.695	18.208*			
Var21k: The firm has developed processes to capture ideas from employees	0.803	38.512*			
Var21l: Firm policies for idea generation and knowledge sharing are clear to all employees	0.775	34.040*			
Var21m: The firm has developed processes to capture ideas from employees	0.784	34.671*			

Intra-Firm Communication			0.7	0.7	0.831
Var23j: The firm uses employees' knowledge and skills effectively	0.786	34.416*			
Var23m: The firm encourages informal conversations amongst employees to share information and knowledge	0.827	39.067*			
Var23n: Interdepartmental meetings are organised regularly to discuss developments	0.75	23.297*			
Firm Openness			0.7	0.727	0.808
Var22a: There is a strong working relationship amongst firms operating in the industry	0.681	17.247*			
Var22c: The firm regularly engages with other players from local industry to learn about new trends, products and ideas.	0.645	12.5607*			
Var22g: Management regularly attends informal meetings (lunch, talks, social gatherings etc.) to discuss new trends and ideas	0.717	16.0609*			
Var22h: The search for relevant information regarding new ideas is embedded in the culture of the firm	0.815	35.996*			
Control			0.79	0.79	0.878
Var23g: Most employees carefully document newly acquired knowledge	0.759	25.344*			
Var23h: Employees have a clear understanding of who is responsible for the storage of information within the organization	0.876	50.947*			
Var23i: Employees have a clear understanding of who is responsible for the dissemination/sharing of information within the organization	0.882	49.480*			
Exploitation			0.875	0.878	0.906
Var24a: Using the full potential of my knowledge	0.711	20.977*			
Var24c: Encouraging employees to share information with each other	0.789	28.526*			

Var24d: Using IT to improve information flow	0.771	29.456*
Var24e: Using different methods to foster better communication among employees	0.846	51.858*
Var24f: Exploiting new processes and practices to improve business products and services	0.778	27.110*
Var24g: Communicating with employees	0.81	37.779*

* Significant at the 0.05 level

**Average Variance Extracted

The factor loading's significance and average variances explained (AVE) assess convergent validity. Table 5.18, shows factor loadings are higher than 0.645 and significant ($p < 0.01$), with t values ranging from 12.6 to 51.9. Average variances extracted are above 0.50, ranging from 0.515 to 0.707, establishing the measure's convergent validity (Fornell and Larcker, 1981).

Discriminant validity was examined by comparing the square root of AVE for individual constructs with the correlations among the latent variables. For adequate discriminant validity, the diagonal elements in table 5.19 should be greater than the off-diagonal elements (Barclay, Thompson and Higgins, 1995; Fornell and Larcker, 1981). Comparing all correlation coefficients with square roots of AVEs in Table 5.19, the results suggest strong evidence of discriminant validity and therefore confirm that there exists no overlap between the six constructs that form part of the measurement model.

Table 5.19 Inter-construct Correlations; discriminant validity

Source: Personal collection

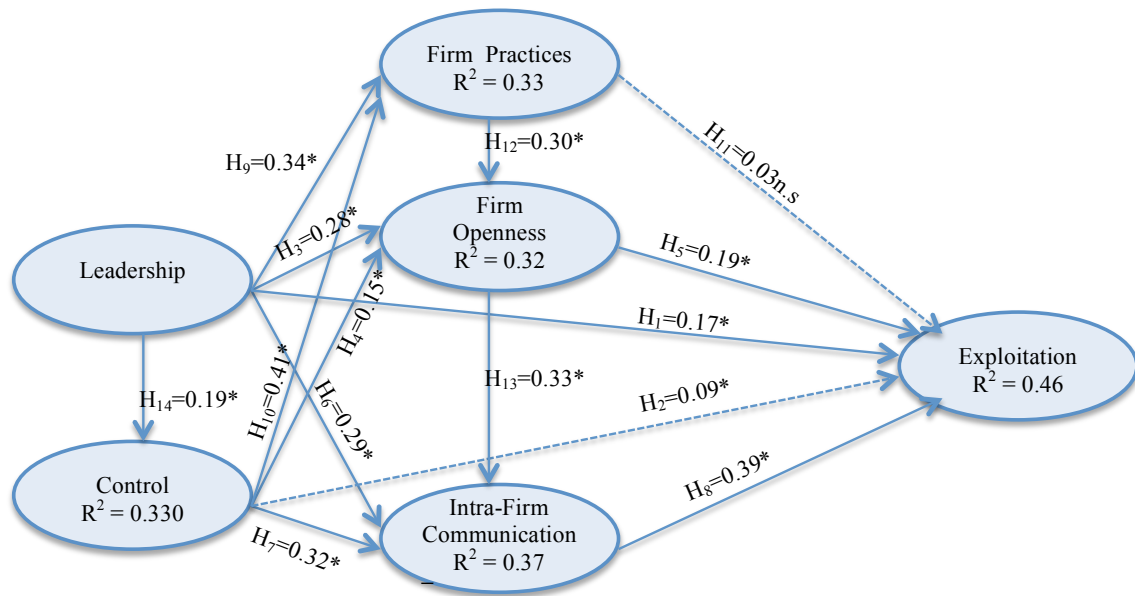
	Control	Exploitation	Firm Practices	Intr-firm Communication	Leadership	Openness
Control	0.841					
Exploitation	0.378	0.785				
Firm Practices	0.472	0.465	0.729			
IntraFirm communication	0.444	0.609	0.591	0.788		
Leadership	0.19	0.428	0.418	0.383	0.785	
Openness	0.351	0.51	0.494	0.51	0.437	0.717

5.6.2 The Structural Model

The structural model was evaluated using R-square estimates, standardized coefficients (β) and significance level (t statistic). The R-square values measure the structural model's predictive power, while the path loadings (interpreted as standardized regression coefficients) indicate the strength between the independent and the dependent variables.

Figure 5.5 Results for the Hypothesized Model

Source: Personal collection



notes: * = $p < 0.05$; n.s. not significant

From Figure 5.5, R-square coefficients are greater than the recommended 0.10 (Falk and Miller, 1992) value suggesting the structural model exhibits explanatory power. Specifically, the model explains 46% of the knowledge exploiting capabilities of SMEs in the services sector, with intra-firm communication alone contributing to 37%, firm openness to learning from sources outside its boundaries, 32% and internal firm practices 33%.

A bootstrapping procedure (i.e. a resampling procedure used to assess statistical significance) calculated path loadings and t-statistics for the hypothesized relationships (table 5.20). For H11 ($\beta = 0.03$; $p = 0.69$), PLS parameter estimates (β) are not statistically significant ($p > 0.05$). This leads to the rejection of H11. However, the path loadings for the relationships between:

control and exploitation H2 ($\beta = 0.09$),

leadership and exploitation ($\beta = 0.17$),
leadership and firm openness ($\beta = 0.28$),
control and firm openness ($\beta = 0.28$),
control and firm openness ($\beta = 0.15$),
firm openness and exploitation ($\beta = 0.19$),
leadership and intra-firm communication ($\beta = 0.29$),
control and intra-firm communication ($\beta = 0.32$),
intra-firm communication and exploitation ($\beta = 0.39$),
leadership and firm practices ($\beta = 0.34$),
control and firm practices ($\beta = 0.41$), are significant ($p < 0.05$), providing support for all the hypothesis H1, to (and including), H10.

Findings also confirm the relationships tested between:

firm practices and firm openness ($\beta = 0.30$, $p < 0.01$),
leadership and control ($\beta = 0.19$, $p < 0.01$),
and firm openness and intra firm communication ($\beta = 0.33$, $p < 0.01$), thus confirming H12, H13, and H14 respectively.

Table 5.20 Results for the hypothesized model using PLS

Source: Personal collection

Hypotheses	Path Loadings	T Statistics	P Values	Do findings support the hypotheses?
H1 Leadership -> Exploitation	0.165	2.988*	0.003	Yes
H2 Control -> Exploitation	0.093	2.069*	0.039	Yes
H3 Leadership -> Openness	0.280	4.622*	0.000	Yes
H4 Control -> Openness	0.154	3.271*	0.001	Yes
H5 Openness -> Exploitation	0.192	3.264*	0.001	Yes
H6 Leadership -> Intra Firm communication	0.185	3.913*	0.000	Yes
H7 Control -> Intra firm communication	0.294	6.243*	0.000	Yes
H8 Intra-Firm communication -> Exploitation	0.391	6.095*	0.000	Yes
H9 Leadership -> Firm Practices	0.341	6.673*	0.000	Yes
H10 Control -> Firm Practices	0.407	9.990*	0.000	Yes
H11 Firm Practices -> Exploitation	0.026	0.403	0.687	No
H12 Firm Practices -> Openness	0.304	5.754*	0.000	Yes
H13 Openness -> In-House communication	0.326	6.659*	0.000	Yes
H14 Leadership -> Control	0.190	4.142*	0.000	Yes

* significant at the 0.05 level

The results of the qualitative investigation corroborate the hypotheses that assume that Leadership acts as a decisive factor in enabling an innovative culture within the firm, which drives healthy knowledge management practices (H1, H2, H3, H6, H9, H14).

“He (i.e. the owner-manager) always had the vision. He never stops. It’s in his DNA.” Firm 2; NKIBS.

“Change usually starts from here (indicating the CEO’s desk).” Firm 21; KIBS.

“In a way, the firm is very much a reflection of management.” Firm 16; KIBS.

The way in which the firm's leader perceived innovation had repercussions on the importance this was given within the firm and impacted on the extent to which knowledge was geared in the firm to generate innovation.

“ Innovation is trying to pick out what is your competitive advantage in the market place and actually putting it into action: Firm 16; KIBS

“ I rate innovation highly; sometimes, I wish we could do more, but it's a constant battle against time.” Firm 5; NKIBS.

“ Innovation is a driver to enhance efficiency” Firm 12; KIBS

“ Innovation is a huge player in our business. If you want to remain in the industry, you need to move forward and create.” Firm 2; NKIBS

Interview respondents agreed that intra-firm communication was beneficial to the advancement of the sharing of knowledge and innovation within their firm and their industry. In general, subjects could identify different fora that offered the scope for this exchange of ideas and knowledge. However, several respondents pointed out that the competitive climate was such that the exchange of ideas was, indeed, only at superficial level, and firms rarely collaborated together in order to generate innovative ideas or to bring change to the industry (apart from political lobbying).

“ We (i.e. the different firms in the industry) do meet every month to discuss the latest developments in the local and foreign market” Firm 3; KIBS.

“ We have a very good relationship amongst us, even though we are competitors.” Firm 5 KIBS.

“ It (i.e. networking other firms in the industry to exchange ideas) doesn't happen. Everyone works independently” Firm 26; NKIBS.

“ I think that mainly the industry is made up of firms acting independently; it is a bit the mentality: Firm 6; NKIBS.

“Yes, the forum does exist for us to network; but it is mostly the quarterly industry financial results that other firms participate in.” Firm 2; NKIBS.

H5 (the direct relationship between Openness and Exploitation of Knowledge) was also confirmed following the qualitative interviews. Indeed, twenty-one out of thirty-five subjects confirmed that the firm networked with other firms or organizations, particularly, overseas, in order to acquire insight into new trends and practices. Some firms also specifically identified their customers as being a very useful source of innovative ideas.

5.7 Summary of Results

The specific nature of SMEs stems from the very size of these organizations. The leadership and control traits specific to this category of firms require special attention, when determining the motivations behind the behaviour and management practices of SMEs. Small firms are usually characterized by flat, organic structures with the owner-manager being central in every planning and decision-taking situation (Bridge, O'Neill and Cromie, 2003). Research shows that it is not uncommon to find situations where, all decisions in SMEs, whether of a strategic or of a routine nature, are limited to one person alone, the owner-manager (Culkin and Smith, 2000). Control too tends to be tightly guarded by most owner-managers in small organizations (Daft, 2007). It, therefore, becomes clear that the management of knowledge in SMEs is the sole responsibility of the owner-manager, and that his leadership, competences, and style impact on the firm's ability to accumulate and exploit the accumulated knowledge (Lynskey, 2004; Webster, 2004).

The following section summarises the results presented for the services sector. Table 5.21 synthesises the outcome of the testing carried out to divulge the reasons for any differences in the responses of the survey participants. Analysis of variance testing was conducted to inspect whether respondents may have had differing views, if any, as a result of the nature of the service firm they worked in, gender, nationality, academic level, age, size of firm, position held in the firm and the length of service in the current firm.

Table 5.21 Variance analysis: summary of results

Source: Personal collection

Analysis of variance by:		Data point	Construct	Effect Size
Service sector	Var22c	The firm regularly engages with other players from local industry to learn about new trends, products, and ideas.	Intra-Firm Communication	small
	Var24c	Encouraging employees to share information with each other	Exploitation	small
Gender	Var21i	The firm has rules and places to record its procedures	Firm Practices	small
Nationality	-	-	-	-
Academic level	Var21i	-	Firm Practices	largel
Age	Var23g	Most employees carefully document newly acquired knowledge	Control	small to moderate
Size of firm	Var21k	The firm has developed processes to capture ideas from employees	Firm Practices	small
	Var23m	The firm encourages informal conversations amongst employees to share information and knowledge	Intra-Firm Communication	small
	Var22a	There is a strong working relationship amongst firms operating in the industry	Intra-Firm Communication	small
	Var22g	Management regularly attends informal meetings (lunch, talks, social gatherings etc.) to discuss new trends and ideas	Intra-Firm Communication	small
	Var22h	The search for relevant information regarding new ideas is embedded in the culture of the firm	Intra-Firm Communication	small
	Var24a	Using the full potential of my knowledge	Exploitation	small
	Var24c	Encouraging employees to share information with each other	Exploitation	small
Position held in the firm	Var16a	The firm is continuously scanning the environment to monitor new market trends	Leadership	very small
	Var16b	The firm regularly seeks to introduce new ways and procedures for doing business	Leadership	very small
	Var21f	Employees are required to attend in-house training courses on a regular basis	Firm Practices	very small
	Var22c	The firm regularly engages with other players from local industry to learn about new trends, products, and ideas.	Intra-Firm Communication	very small
Length of service	Var21h	The firm encourages employees to share new market, technical or other knowledge with their colleagues	Firm Practices	small
	Var21j	The record/manual of firm practices and process is updated regularly	Firm Practices	small
	Var22c	The firm regularly engages with other players from local industry to learn about new trends, products, and ideas.	Intra-Firm Communication	small

Table 5.22 shows the relationship between the research objectives and the hypothesis, indicating whether the hypotheses have been supported, or otherwise, by the results and therefore, shed light on the first three research objectives of this study (the fourth research objective of this study is of an inter-sectorial nature and goes beyond the scope of this chapter). The summary illustrated in table 5.22 indicates that whilst research objectives 1 and 3 have been supported fully by the results, research objective 2 has been only partly supported, given that the relationship between Firm Practices and the exploitation of knowledge (H11) has been rejected.

Table 5.22 Summary of results: Research objectives and hypotheses

Source: Personal collection

	Research Objective	Hypotheses	Do the results support the hypotheses?
1	To assess the effect that firm <i>size</i> and <i>leadership</i> have on ACAP and to understand how firms overcome any limitations posed by these features	H1 Leadership -> Exploitation	Supported
		H2 Control -> Exploitation	Supported
		H14 Leadership -> Control	Supported
2	To explore the <i>internal</i> strategies, policies, and procedures which SMEs adopt to expand and capitalise on their knowledge resources.	H6 Leadership -> In-House communication	Supported
		H7 Control -> In-House communication	Supported
		H8 In-House communication -> Exploitation	Supported
		H9 Leadership -> Firm Practices	Supported
		H10 Control -> Firm Practices	Supported
		H11 Firm Practices -> Exploitation	Not Supported
3	To explore the <i>external</i> strategies, policies, and procedures which SMEs adopt in order to acquire and manage knowledge.	H3 Leadership -> Openness	Supported
		H4 Control -> Openness	Supported
		H5 Openness -> Exploitation	Supported
	The extent of the relationship between research objectives 2 and 3 i.e. between the internal and the external strategies of the firm	H12 Firm Practices -> Openness	Supported
		H13 Openness -> In-house communication	Supported

The current study establishes the validity of the theory that leadership has a determining role in the exploitative capability of knowledge in SMEs, and this confirms previous studies (Lynskey, 2004; Webster, 2004). This study, however, rejects the hypothesis that the level of control, exercised by the owner-manager in small firms is inter-related to the firm's ability to exploit benefit from the knowledge it accumulates. In fact, this part of the analysis of the services industry in Malta proves that leadership, exercised through firm

processes, such as, knowledge practices, intra firm communication and relational capabilities, accounts for 46.6% of the firm's ability to exploit benefit from its knowledge.

The results of this study apply to owner-managers of SMEs in the services sector. Given the acute resource limitations that SMEs have to deal with, owner managers are under constant pressure to enhance their competitiveness in the market by better exploiting their insufficient resources. Results confirm that the owner-manager has the responsibility of recognizing the importance and benefits to be gained from knowledge management.

The results of this study inform owner-managers that firm processes for networking and maintaining good inter firm relationships have emerged as being *highly* related to the exploitation capabilities of knowledge. Firm processes that enable and motivate inter-firm communication have been rated as having a strong relationship with knowledge exploitation, thus well positioning SMEs to extract benefit from their knowledge. In a nutshell, the results emphasize that most crucial aspect that determines the SMEs' ability to gain benefit from knowledge is communication, both internal communication (amongst employees and firm members itself), and external communication with other players in the industry. The results reveal that the search for new ideas and knowledge is embedded in the organizational culture of SMEs. The respondents of the survey assert for strong, proactive, working relationships amongst firms operating in the same industry. In addition, the research confirms that employees are encouraged to engage in discussion and to share their information, both within informal settings and also in more formally organized departmental meetings.

Chapter 6

The Tourism Sector: Results of the Investigation

6.1 Introduction

Services are intrinsically different, and when such services are emanating from diverse industries, not only is there a diverse end result, but so is the process of providing the service itself, different. Whereas some services are clearly reliant on the knowledge capabilities of the employees in the sector, other services are less so. Typically, the provision of services in, for example, the ICT sector, or the telecommunications sector, or indeed financial intermediation, relies much more on the technical knowledge of the employees, than do, say the provision of certain general tourism services. There therefore exists a clear divide between those service provisions that are knowledge intensive (KIBS) and those that are not typically knowledge intensive (NKIBS), although, of course, they would still require a degree of intellectual input and service experience from the workers. This fact clearly raises the question as to whether all service sector firms converge in the management of their knowledge for the purpose of competitive advantage.

This chapter proceeds with the discussion entertained in the preceding chapter, but will focus solely on the tourism industry. It aims to address the research objectives numbers 1, 2 and 3 (Chapter 1, p 30-31), i.e. research objective 1 which assesses the effect that firm *size* and *leadership* have on ACAP and to understand how firms overcome any limitations posed by these features; research objective 2, which explores the *internal* strategies, policies, and procedures which SMEs adopt to expand and capitalize on their knowledge resources and research objective 3 which explores the *external* strategies, policies and procedures which SMEs adopt in order to acquire and manage knowledge. In so doing, the analysis in this chapter will present a framework for absorptive capacity for the tourism sector, these being regarded as non-knowledge based industry. The analysis will be conducted by considering the base line model presented in Chapter 5 (Figure 5.5, page 227) and evaluate the extent to which this model remains valid for the tourism sector, representative of the NKIBS.

This chapter will start by analysing the results of the qualitative analysis linking these to the appropriate parts of the literature and then proceed to report and evaluate the results of the qualitative phase. The early part of this section (Section 6.3) will report the preliminary results of the analysis of variance, when the data is manipulated, keeping the variables of gender, nationality, academic background, age, position in the firm and length of service, fixed. This section will indicate whether the respondents evidence different patterns of knowledge management behaviour as a result of any of the identified variables mentioned earlier. The second part of this section will discuss the multivariate analysis, specifically, the structural equation modelling with the aim of determining the extent of the relationship between the constructs of Leadership, Control, Firm Practices, Intra-Firm Communication, Firm Openness and Exploitation, in the conceptual model (Figure 5.1, 184), valid in the tourism sector. The chapter will conclude by evaluating whether research objectives 1, 2, and 3 have been addressed for the tourism sector.

6.2 Absorptive Capacity in the tourism industry – a thematic qualitative analysis

Innovation has taken taking centre stage in the services industry (Miles, 2001), and the tourism industry has experienced a considerable degree of innovativeness (Hjalager, 2009). Innovation is deemed to be the response to the fierce competition that accompanies this industry (Pivcevic and Petric, 2011). In tourism, and, particularly, in the hospitality industry, this innovation mostly takes the form of new service products (de Brentani and Cooper, 1992). However, scholars have revealed that despite the intense competition, they found only a moderate level of innovation in the tourism sector (Camison and Monfort-Mir, 2012; Ottenbacher, Shaw and Lockwood, 2005). This can, possibly, be attributed to the specific challenges faced by the tourism sector in the area of innovation. In the tourism sector innovations cannot be guarded by the firms, and are in full sight of competition, making the innovations immediately imitable, with the loss of whatever competitive advantage it brings to the firm (Hjalager, 2001). Moreover, today's consumer of the tourism product

is a well informed, demanding, and an independent purchaser (Čivre and Gomezeli Omerzel, 2015), very conscious of the need to manage tourism in a sustainable fashion (Carvalho and Costa, 2011) thanks to the advances in technology and the spread of social media. We can consider the innovations in the tourism industry to have taken place over three broad phases: phase 1: the arrival of the package holiday, that made travel and tourism accessible to the mass markets, and shifted the power of the market to the tour operators; phase 2: the proliferation of the low cost airline, which has been facilitated by the widespread use of credit cards, internet and connectivity and the deregulation of the airline industry; and phase 3, which is characterised by e-commerce and social media, thus shifting the power in the industry to the consumer, who can now easily evaluate their options and plan their travel from the comfort of their homes. In fact, the tourism industry has now become a pioneer in the application of ICT for e-commerce (Werthner and Ricci, 2004).

Maltese tourism operators recognise the crucial role, played by innovation in their industry. The following discussion will analyse the data captured from the qualitative phase of the research, and will also analyse it against the framework of four main themes, namely: the perception of innovation across the tourism firms; the effect of leadership and firm size on ACAP; the extent of staff engagement with innovation across the tourism firms, and lastly, the knowledge sharing practices across the tourism industry.

6.2.1 A thematic analysis: perceptions of innovation in the tourism industry

The data captured from the face-to-face interview was analysed in order to identify patterns that could give insight into the manner by which innovation was perceived by the interviewees in the tourism sector. The scope of the researcher here was to understand what the interviewees meant when they used the term '*innovation*', and how important they believed this to be for their firm, and for the industry in general. The researcher also aimed to reveal whether the owner-managers who were interviewed had a clear vision and strategy of how they could achieve innovation in their firm, or, whether they only spoke of being innovative at a superficial and trivial level.

The respondents acknowledged that they appreciate the importance and relevance of innovation to their firm, and that in the absence of innovation, their firms have little chance of success, given the intense competition in the industry, and the specific profile of the consumer. This is in support of theory, in particular, the work of Pivcevic and Petric, (2011) and Čivre and Gomezeli Omerzel, (2015), discussed above. (The key to the interviewees quoted below and in subsequent sections can be in Appendix 3.1, page 409).

The Malta Hotels and Restaurants Association (MHRA), the agency representing all hotel operators in Malta revealed that from their point of view, innovation was the only strategy which paid dividends, and that unless the players engaged with innovation, the local industry had little hope of becoming a regional icon in the Mediterranean "*Innovation pays at the end of the day.*" (Interviewee no 10, NKIBS).

The analysis found that the owner-managers spoke of innovation with varying levels of passion. Whilst some of them gave examples of how and why innovation was important to the firm, and also proceeded to reveal the locus of innovation within the firm, others simply limited themselves to agreeing to the importance of change to the industry. This, possibly, uncovers differing levels

of engagement and receptivity to the concept of change amongst the firms. On the one hand, the researcher was told things such as:

“In our industry, if you don't change you don't maintain your competitive edge, so yes change is vital and even changing certain minor things, let alone big change. The competition is quite fierce so you always have to keep abreast of the changes that are happening elsewhere - nowadays even abroad, not just local competitors, but also, what happens in other countries. Because nowadays everyone travels, everyone sees and experiences different things” (Interviewee no 35, NKIBS)

The owner himself is always on the lookout for new trends, and we are always the first to implement these in our area. We are always working at giving the customer better value here.” (Interviewee no 29, NKIBS)

*Innovation will **always** be very important for us”* (Interviewee no 4, NKIBS), where the respondents are clearly being forceful in what they say, indicating that they truly value innovation and attempt to work towards attaining an innovative performance. One interviewee went far beyond what all the others divulged, indicating how passionate he was about bringing on change: *“I look at change from different aspects: change in product is paramount, change in people, obviously you have to keep working towards maximizing competitive advantage.”* (Interviewee no 31, NKIBS). This respondent had enough insight and mastery of the concept of innovation that he could speak of different facets of innovation (product and people). Several features distinguish this interviewee from the others being discussed here: firstly he had rigorous hospitality training to post-graduate level, he had previously worked in a large five-star operation both locally and overseas, and also, the operation he is currently heading is relatively larger than the ones to which he is being compared, and, possibly, has more resources at hand, and, moreover, is more profit-driven than the smaller operations.

The analysis, however, also captured the following data, which indicates that the respondents seem to have a more distant approach with innovation. Whilst Interviewees 5, 20, 31 (below) claim that innovation is relevant, and indeed,

important, they did not speak passionately about it; neither did they elaborate with examples of how they were striving to be innovative, or, why they were doing so. They simply limited themselves to brushing the concept off:

“We always change something...” (Interviewee no 20)

“I rate innovation very highly. Sometimes I wish we can do much more.”
(Interviewee no 5)

I mean, change is always important.” (Interviewee no 31)

6.2.2 A thematic analysis: the effect of size and leadership on innovation

Scholars have been emphatic in stating that the leadership of an organization is critical in driving innovation, as it is the top-level management of a firm who nurtures the proper environment to enable the absorption, assimilation, and application of knowledge, a predecessor, and required element for innovation (Bass, 1985; Wan, Yang and Horng 2010; Wang, Courtright and Colbert, 2011). Scholars go as far as placing leadership as an antecedent of absorptive capacity and innovation (Ferrerias Méndes, Sanz Valle and Alegre, 2018). According to theory (Wang, Courtright and Colbert, 2011) top management “may serve as role models for leaders at lower levels, encouraging (cascading down) transformational leadership through the organization’ (page213)

Unfortunately, the representative of the hotels association in Malta, who has constant dialogue with all the local hotel representatives and with counterparts overseas, is not convinced that the local hotel owners, or indeed, the local entrepreneurs, have the capabilities required to generate innovative performance. His position in this regard is that the Maltese entrepreneur lacks the capability to create innovation and states, *“unfortunately, however, I do not think that he (i.e. the Maltese entrepreneur) has the capability to be innovative...”* (tourism sector organization no. 10). This interviewee explained that the Maltese entrepreneur involved in the tourism sector does not, in

general, possess the necessary hospitality background and know-how, and lacks any strategic decision-making capability. Most entrepreneurs in this sector are not professional hoteliers, but people who wanted to maximise on their real estate by converting this asset into tourist accommodation, thereby taking the opportunity to ride on the bandwagon of the tourism industry in Malta. Essentially, these entrepreneurs are short sighted, profit maximisers, and lack the industry foresight and vision, which are required to build a sustainable and innovative tourism product. This reasoning is corroborated by the justification presented by another respondent from the tourism sector (interviewee no. 5), who argued that the innovation underperformance was due to time constraints. She revealed that because the operation was not constantly busy throughout the year, the firm desisted from employing the necessary staff complement to facilitate the required level of planning; the operation was planned on a day-to-day basis, in a management-by-exception fashion:

“The problem is that it’s always a constant battle against time. Sometimes, the operations are so periodical, we are short staffed in certain periods of the year, so you have no time to think, introduce new ideas, I mean. What is very sad is that you just have enough time to deal with what is happening today and not giving enough time to think and plan for the next months basically” (Interviewee no 5, NKIBS). Here, the respondent, a member of the senior management team, reaffirms the previous comment relating to the lack of strategic planning and innovation capability present in the tourism industry.

6.2.3 A thematic analysis: the extent of staff engagement with innovation across the tourism firms

A key ingredient to successful organization innovations is the proper training and preparation of the employees (de Brentani and Cooper, 1992; Ottenbacher, Shaw and Lockwood, 2005). Innovation requires certain changes to which employees must adapt: changes in their knowledge, or in their skills as well as changes in the manner in which they engage with the customers (Cascio,

1989). Whilst Ottenbacher, Shaw, and Lockwood (2005) posit that the extent of employee training facilitates the likelihood of a successful innovation, it is only if and when the employees take ownership of the change and engage intimately with the innovation, that success will follow. The authors hone in on the importance of a strong aspect of internal marketing. The above theory frames the discussion that staff engagement with organizational change is paramount if the innovation is to stand any chance of success.

Some hotel operators who have been interviewed do not feel that their employees embrace innovation. They do not pin this resentment towards change down to age or nationality, but rather to the individual's character and sense of security:

"I don't think it's (i.e. embracing change) related to the country of origin of the individual, it's more a matter of character. Every person perceives change differently. You've got those who are more easy going, more understanding, more ready to cooperate and are more easily motivated, and there are others who just take a stand, and refuse to consider the change." (Interviewee 5, NKIBS)

However, differing views to employee engagement have been traced within the data captured from the interviews:

"Maltese workers on the other hand find it more challenging to adapt to certain changes than the foreigners" (Interviewee 25, NKIBS)

In addition to the difficulties in recruiting staff, another reality being faced by the tourism industry is the retention of these workers, especially, the foreign nationals, who, in their majority emanate from Eastern Europe, and are only seeking employment in Malta temporarily. This implies a certain degree of knowledge loss and discontinuity, which is certainly a hindrance to innovation:

"I would say, there's a high percentage of labour turnover (i.e. especially amongst the foreign workers).... especially in the food and beverage service. Sometimes it's incredible, you do the interview; they sign the contracts; they're

looking forward to you giving them the uniform.... and they won't turn up for their first day of work, because they have gone on to earn an extra euro elsewhere.” (Interviewee 5, NKIBS).

“We have a high staff turnover rate, especially with the foreign workers in housekeeping and in the food and beverage department.” (Interviewee 13, NKIBS).

“Recently we've been experiencing a situation where workers only stay on for a few weeks, for two reasons: for some of them their work permit doesn't arrive on time, so they won't be able to continue working; for others, it may be that they find the work we offer is not right for them. They wouldn't know exactly what they're getting themselves into... especially, housekeeping, for example, which is quite a tough job - there are a considerable amount of rooms, which have to be cleaned, which makes this job one of the more challenging. Sometimes, the workers are just not ready for it” (Interviewee 35, NKIBS).

Staff training is a crucial element for the acquisition and transfer of knowledge. The high rate of employee turnover, coupled with the language barriers experienced by some foreign workers in the industry, renders staff training, particularly difficult, expensive, and at times, ineffective, when the workers leave the firm.

6.2.4 A thematic analysis: the knowledge sharing practices across the tourism industry

A stream of literature shows how knowledge sharing, knowledge transfer processes of the firm, as well as the relational capabilities of firms, play critical roles in facilitating the absorptive capacity of knowledge, which, in turn, drives innovation (Cohen and Levinthal, 1990). Others (Todorova and Durisin, 2007; Zahra and George, 2002) argue how the firm must be endowed with the appropriate ‘*social integration mechanisms*’ for knowledge sharing to happen.

Knowledge sharing requires a culture of trust and a sense of security in what one is performing. Literature shows that within the tourism sector firms there are usually inefficient knowledge management practices, as well as a reluctance to collaborate with external parties to facilitate innovation (Hjalager, 2010; Keller, 2006; Weiermair, 2006). In general, most of the interviewees gave evidence to oppose theory and revealed that some degree of knowledge sharing and collaboration were present within their organizations.

The analysis assessed the extent of knowledge sharing practices implemented within firms in the tourism industry by analysing the data captured from the in-depth face-to-face interviews. The interviewees had different views on the willingness of workers to share their knowledge and skills (especially their tacit knowledge) with one another, for the betterment of the operation. Whilst some respondents claimed that workers shared their knowledge willingly, others had different experiences to share:

“The receptionist was eager to teach the new employee the ropes.”
(Interviewee no 26, NKIBS).

“Very often we have situations where the workers, irrespective of whether they are foreigners or locals, share ideas, which help with the running of the operation.” (Interviewee no. 35, NKIBS).

However, on one instance an interviewee revealed a different experience:

“ I have staff, especially in the kitchen, who are very secretive about their knowledge and guard what they know...not only are they reluctant to train their juniors, but they outright refuse to do it. Unfortunately, this now has become an attitude which has spilled over from one person to the entire food and beverage department.” (Interviewee no 13, NKIBS)

Other managers revealed that it was standard firm procedure for a staff member who had received training, especially external training, to return to the operation, and train his colleagues:

“It’s a working practice: when they come back (i.e. from training), immediately the week afterwards, we do a one-day training for all the staff... And that’s a must because although, yes, staff always have the prerogative of leaving, and if they decide to do so, they can leave... but that way I won’t have to juggle people around...I also send different people on training courses, for that reason: because if person A leaves... there’s probably always going to be someone who is capable enough to fill his boots in the background.” (Interviewee 4, NKIBS).

It was interesting to note how the professional background of interviewee no. 4 differed considerably from that of most of the other interviewees. This top-tier manager had been exposed to extensive high-level, professional experience and training overseas. He is happy to share his knowledge with his workers, and does not feel intimidated at all, when his employees challenge him with new ideas. In return he expects his employees to exhibit the same level of knowledge sharing amongst them, and has ensured that several knowledge-sharing practices are implemented within the organization he manages. This finding also corroborates theory that places the leader and his characteristics and qualities as the main catalyst for innovation (Wang, Courtright and Colbert, 2011).

Other aspects that emanated from the qualitative interviews revealed the extent of networking in which the hotels engaged. Whilst, in general, several of the hotels revealed that they travelled overseas in search for new ideas and business partners, few of them gave evidence of effective networking at idea generation stage. The only type of cooperation disclosed amongst several of the hotels, was at an operational level.

“Everyone works independently... but of course, we do help one another, if the need arises. We share laundry, or guests if we are over booked... but we have never sat down together to try create anything; I don’t think it will work”

(Interviewee no. 26, NKIBS). This is the perspective of the owner of a very small, family run operation, where the owner and his family do not have any training or prior background in hospitality; they limit themselves to the exploitation of the prime location of their real estate.

“When it comes to the boutique aspect, we follow innovation, because we visit fairs regularly, or by reading, or by participating in online gazettes, even our school gazette, you know, we see what the latest trends are... but, as such, we follow innovation in the rooms, as in design trends and, of what are the latest things and gimmicks to offer in the rooms... by attending this fair in Paris, which takes place every two years, where we go ... and even when we travel, we try to stay in hotels whereby we are able to get something and learn something.” (Interviewee 6, NKIBS). And also:

“I mean, the way it is done (i.e. networking with local parties) is through the quarterly MHRA (ie Malta, Hotels and Restaurants Association) meetings, where the industry goes together and questions are put and answers given... at such occasions we try to sit down next to similar hotels and we exchange views ... and we talk and we say, you know, we should meet, but we don't get down to doing it, not because we don't want to share information because ... it's just that not enough time is allocated to exchanging information between us.” (Interviewee 6, NKIBS). Here the owner-manager of this operation, as well as other senior management team members in this organization, have been exposed both to academic and professional training overseas. Whilst they value knowledge sharing and collaboration, they prefer to engage with counterparts overseas, rather than locally, fearing that their local competitors may catch on more rapidly on the factors that make this operation distinct from others on the island.

“The five star hotel operators in Malta meet regularly; there are 6-8 regular attendees: the HR departments meet bi-monthly and the GMs meet on a monthly basis. These meetings are organised outside of the MHRA. It is the operators themselves who take the initiative... we discuss matters, share information and concerns” (Interviewee 31, NKIBS). This interviewee is elaborating on the fact that cooperation and collaboration amongst players in

the industry is, particularly addressed only amongst a certain group of operators, especially those who run the top tier hotels. These operators are actively engaged in exchanging ideas amongst them. This practice has not been identified amongst differently rated hotels in the industry, and it seems that amongst the interviewees in this sample, collaboration and external relations are entered into based on the high standing of the hotel, presumably because these operations are encouraged by a certain sense of security of the product, which they have to offer.

6.3 Absorptive Capacity in tourism sector firms - A Quantitative Analysis

6.3.1 A closer look at the composition of the respondents to the questionnaire survey from the tourism firms

Table 6.1: A demographic profile of the respondents participating in the questionnaire survey who work in the tourism firms

Source: Personal collection

		Sample %
Gender	Males	38.56
	Females	40.52
	no response	20.92
Nationality	Locals	100.00
	Foreigners	0.00
	no response	0.00
Age	18-29	3.27
	30-39	9.15
	40-49	32.03
	50-59	13.07
	60+	22.22
	no response	20.26
Highest Education Achieved	No formal Education	0.00
	Compulsory Education	22.88
	Post Secondary Level	11.11
	Diploma level	34.64
	Bachelor's Degree	7.19

	Post Graduate Level	4.58
	no response	19.61
Position Held	Clerical	5.88
	Middle Management	43.14
	Top Management	15.69
	Other, manual	16.34
	no response	0.00
Duration of employment with firm	less than 1 year	0.00
	1-3 years	18.30
	4-9 years	12.42
	10-15 years	10.46
	16-20 years	9.15
	more than 20 years	30.07
Number of employees	no response	19.61
	fewer than 10	2.61
	10 to 49	27.45
	50 to 149	40.52
	150-250	10.46
	no response	18.95

The data, which are being analysed here, has been collected from a self-administered questionnaire survey launched in the tourism sector firms. 153 valid responses have been collected from the tourism firms by the time that the data collection exercise had been closed. Given that the ultimate scope of this part of the inquiry is a multigroup analysis, comparing the knowledge management behaviour of the two sub-samples (tourism and financial services sector) within the original total frame of 379 valid responses, the researcher retained the same 26 data points which resulted from the exploratory factor analysis conducted on the total services sector sample as detailed in of survey instrument (Appendix B2, page 416).

6.3.2 Testing the distribution of the observations

Tests were conducted to identify the distribution of the observations. The Kolmogorov-Smirnov test and the Shapiro-Wilk tests were conducted on each of the 26 observations (table 5.4, page 196) resulting from the earlier exploratory factor analysis conducted in chapter 5. Both tests reported significant values with $p < 0.05$, disproving the normally distribution of the data.

Hair, Hult, Ringle and Sarstedt, (2014) recommend that in such cases, an examination of the skewness and kurtosis of the observations be undertaken. The results showed that data points reported skewness and kurtosis of $\pm |2|$, (ranging from -1.097 to 0.131 -1.272 to 1.424 for skewness), which represent an acceptable range to confirm the normal distribution of the data (George and Mallery, 2010; Gravetter & Wallnau, 2014; Trochim & Donnelly, 2006; Field, 2000 & 2009).

The analysis that will pursue in the remaining part of this section will focus on an analysis of variances identified in the responses of the subjects working in the tourism firms. The analysis of variance is based on differences resulting in responses based on gender, nationality, respondents' academic background, age, firm size, position in firm held by the employee and employees' length of service in the firm.

6.3.3 Analysis of variances: by gender

An independent-samples t-test was conducted to compare the responses of males and females with regards to the relevant observations to explain the framework of ACAP in the non-KIBS firms. Out of the 153 valid responses, 32 respondents did not indicate their gender. Out of those who indicated in this sub-sample 38.56% (i.e. 59 respondents) of the sample was male (Group 1) and 40.52% (i.e. 62 respondents were female (Group 2), a relatively gender-balanced sample

The differences in the responses of males and females were statistically significant for observations 21i and 21j (table 6.2) in the construct Firm Practices, leading to the rejection of the null hypothesis, that there did not exist any difference in the responses. The alternate hypothesis, that there existed a statistical significant difference in the responses, was accepted. Observation 21i measured the extent to which employees agreed that the firm had rules and places where to record its procedures, with males ($M=0.2826$; $SD= 0.83115$)

and females ($M = -0.2641$; $SD = 1.20567$) [$t(121) = 2.916$, $p = 0.004$] at a confidence interval of 95%.

Table 6.2 Analysis of variance by gender: Independent Samples Test, (data points 21i and 21j)

Source: Personal collection

		t-test for Equality of Means						
		t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
VAR21i	Equal variances	2.916	108.64	0.004	0.5466	0.1874	0.1750	0.918
VAR21j	not assumed	2.717	116.22	0.008	0.4797	0.1765	0.1300	0.829

Observation 21j evaluates the intensity with which the respondents agree that the record/manual of firm practices and processes is updated regularly, where males ($M = 0.2327$; $SD = 0.86857$) and females ($M = -0.2470$; $SD = 1.06788$) with [$t(121) = 2.717$ and $p = 0.008$] at a confidence interval of 95%.

The effect size of the identified statistical differences was estimated using Cohen's d (Cohen, 1988) and is given as 0.565 for Var21i and 0.495 for Var21j. These results indicated that there was a moderate effect size for both data points in question.

We can, therefore, conclude that there is a moderate difference in the extent to which male and female employees agree that the firm has rules and places where to record its procedures. Furthermore, there is also a moderate difference in the extent to which male and female employees agree that the firm has rules and places where to record its procedures.

6.3.4 Analysis of variance: by nationality

The sub-sample that is being considered was completely comprised of local nationals with no foreigners submitting a valid response for consideration. This is a very interesting finding as, in reality, many of the interviewed owner-managers in the sector remarked that since there was a severe shortage of locally skilled labour, the industry had to employ many foreigners, both EU nationals, who have freedom of movement and right of work, as well as non-EU nationals, for whom longer administrative procedures were required to secure the relevant working documents. This finding corroborates comments during the qualitative interviews, which indicated that even though the industry was employing foreign nationals, it was very difficult to communicate with foreign workers, as they could not speak the local language or, more importantly, they could not communicate in English. In such an event, they would not have been asked to submit their responses to the survey instrument owing to language and communication barriers. Evidence captured from the qualitative interviews (and, therefore, emanating from a different data set) revealed the extent of the limited supply of trained local staff in the industry:

“Yes the biggest problem was is finding the work force” (Interviewee no. 30, NKIBS)

“For every 10 employees there are about 4 Maltese... I think. When compared with other hotels, that's quite high. But, the more time passes, the more foreigners are coming to work here... Unfortunately the amount of Maltese that apply for jobs is minimal. There are many factors I think: firstly the average Maltese person has become more educated, academically, in the sense that he feels that it is degrading for him to work as a waiter. There's this perception that a waiter's work is a low job. But, even when we look to fill managerial posts it's quite difficult to find Maltese...The biggest challenge that we find is the language barrier, especially in housekeeping. The workers won't have as good a command of the English language as would a Maltese worker - there's no

chance that they would speak Maltese, and, sometimes, they even find it difficult to speak in English.” (Interviewee 35, NKIBS)

“And there are a lot of foreign workers, but most workers do not want to do the manual jobs. Or worse, still, they want to work as waiters or barmen, in the underground economy, without paying any taxes - which is absolutely unacceptable to us.” (Interviewee 31, NKIBS)

Interestingly, some managers expressed their regret that the work attitude of the foreigners and the local employees was completely disparate. These managers all worked in operations that had the same size profile, and also had similar professional and academic backgrounds, implying that the statements that they were making were directly comparable:

“I noticed that a Maltese manager is totally different to a foreign person. I am the assistant manager of the hotel. If I wanted, you know, I can just say yes I am the assistant manager and I do my job; but being Maltese, you know, I take over the Health and Safety matters, I took over the Food and Beverage, I took over the HR and, whenever I see a gap, you know, I say, all right, I fill it up. Foreigners won't do that, you know... They do not look at the operation in the same way; they just look at their bit in the operation. We Maltese tend to look at the overall aspect.” (Interviewee 31, NKIBS)

6.3.5 Analysis of variance: by academic background

Out of the 153 valid responses received from the tourism sector, 30 were discarded, because they did not indicate the respondent's academic background. Again, using the same principle as that adopted in chapter 5, for the purpose of this analysis, the valid responses were classified into five distinct classes (Groups 1-5). Frequency testing was done to measure the size of each group and the results are illustrated in Table 6.3.

Table 6.3 Description of classification of valid cases

Source: Personal collection

Group	Highest Academic attainment	Description	no of cases
1	Level 3	completed compulsory education	35
2	Level 4	completed post secondary education	17
3	Level 5	attained a level 5 diploma	53
4	Level 6	awarded undergraduate degree	11
5	Level 7	awarded post graduate degree	7

A one-way ANOVA was conducted in order to examine any statistical differences in the responses. A close look at the results revealed that at a confidence level of 95%, $p > 0.05$ for all responses, except for data point 16c, where $p = 0.01$. This implied that the Null Hypothesis, that there were no statistical differences in the means, could be accepted for all responses, *except* for observation 16c, where, instead, the Alternate Hypothesis, that there was a statistical difference in the means, was accepted. Data point 16c assesses the Leadership construct and measures the extent to which the firm is continuously scanning the environment to monitor new market trends. Post-hoc comparisons using the Tukey HSD test (table 6.4) indicated that the mean score of Group 2 ($M = 0.0173$; $SD = 0.947$) was different from that of Group 4 ($M = 0.7854$, $SD =$

1.83827) and that of Group 3 (M= 0.1013; SD= 1.0592) was different from that of Group 4 (M= 0.7854, SD= 1.83827). This revealed that those respondents with an undergraduate level of education had different views from those who had a lower level of education, particularly those who had simply completed secondary education, and those who had just attained a level 5 diploma.

Table 6.4 Multiple comparisons, Tukey HSD, data points 16c, by academic background

Source: Personal collection

Dependent Variable	(I) VAR educ	(J) VAR educ	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Var16c	2	4	1.11805*	0.3698	0.025	0.0936	2.1425
	3	4	1.09271*	0.31664	0.007	0.2155	1.9699

Effect size has been calculated using omega squared (ω^2) (Field, 2013; Fritz, C. O., Morris, Page E., & Richler, J. J. 2012) to allow for the estimate of the effect size in the population. The calculation of omega squared revealed that there was a moderate size effect (0.0752). This meant that 7.52% of the differences in the response were attributable to differences in the educational background

6.3.6 Analysis of variance: by age

The responses of the participants in the quantitative phase of the inquiry (i.e. the survey questionnaire) were then analysed to investigate whether any of variations in the responses of the subjects could be attributed to the age differences of the respondents. The tourism sector employees, who responded to the survey questionnaire, represented the full spectrum of the working age population (18-61). For the purpose of this analysis, the sample was divided into five different age groups (Table 6.5), in the same manner as done in the analysis in chapter 5:

Table 6.5. Description of age classification of valid cases

Source: Personal collection

Group	Age Bracket	no of cases
1	younger than 20 years	5
2	20-29 years	14
3	30-39 years	49
4	40-49 years	20
5	older than 50 years	34
	no response	31

Out of the sample of 153 observations, 31 cases did not indicate their age and could not be considered in the analysis. The remaining 122 cases were analysed for frequency within the age groups with the results being reproduced in table 6.5 (above). A one-way ANOVA test was conducted, at a confidence level of 95% represents the group statistics of this test. A visual check of the test results revealed that there were no significant differences between the respondents' replies, which could be attributable to their diverse ages. The null hypothesis, that the mean score was not statistically significant was, therefore,

accepted and the alternative hypothesis, that the mean score was statistically significant, was rejected.

The results, indicated that the respondents of the tourism sector were not affected by age differences, in their behaviour regarding knowledge management within the organisation where they worked.

6.3.7 Analysis of Variance: by respondent's position in the firm

A one-way ANOVA between group analysis of variance was also conducted to explore the impact of the respondents' (i.e. tourism firm employees) position in the firm, on their perception of the management of knowledge and ACAP within non-KIBS firms (in this case, tourism industry). In this case, 29 respondents did not provide a reply to this data point, and their responses were discarded. The remaining 124 cases were divided into four groups relating to the position they held within the firm, and a frequency testing was conducted to measure the number of cases within each category (table 6.6).

Table 6.6 Description of classification of valid cases, by position held in the firm

Source: Personal collection

Group	Position held in firm	no of cases
1	senior management	9
2	middle management ream	66
3	clerical workers	24
4	manual workers	25
	no reply	29

This test reveals that, at the confidence level of 95%, $p > 0.05$ for all observations except 23h (table 6.7). Data point Var23h measures the Control construct and examines the extent to which employees have a clear understanding of who is responsible for the sharing of information within the organization. This implies that for all data points, excluding Var23h, the Null Hypothesis that there was no statistical significance in the mean scores, was accepted. For data point Var23h, where $p = 0.031$, the Null Hypothesis was rejected and the Alternate Hypothesis, where there was a significant difference in the mean scores, was accepted (Table 6.8)

Table 6.7 Analysis of variance by position held in the firm: ANOVA testing
(data point Var 23h)

Source: Personal collection

		Sum of Squares	df	Mean Square	F	Sig.
VAR23h	Between Groups	9.697	3	3.232	3.056	0.031
	Within Groups	126.94	120	1.058		

Post-hoc comparisons using Tukey HSD test however did not indicate any significant differences between any of the groups 1-4 and, therefore, it was concluded that no statistical difference was revealed.

It has, therefore, been concluded that in the sub-sample of 124 respondents from the non-KIBS, none of the results varied owing to a difference in the respondents' academic background.

6.3.8 Analysis of Variance: by respondent's length of service to the firm

A one-way ANOVA between group analysis of variance was also conducted to explore any impact that the respondents' length of service may have on their perception of the management of knowledge within the firm where they worked. Respondents were classified into six groups depending on the length of service they had with the firm (Table 6.8); frequency testing was undertaken to measure the number of respondents in each category. Of the 153 valid cases, 30 respondents did not indicate the length of service they had with the organization, and were, therefore, excluded from the analysis. The remaining 123 valid cases were distributed into 6 categories as shown in table 6.8.

Table 6.8 Classification of survey respondents based on length of service

Source: Personal collection

Group	Length of service in firm	no of cases
1	less than one year	0
2	1-3 years	28
3	4-6 years	19
4	7-9 years	16
5	10-15 years	14
6	more than 15 years	46
	no response	30

A one-way ANOVA test, at a confidence level of 95%, was conducted to assess whether there existed any difference in the means of the respondents, which could be attributed to the length of the employees' service to the organization. A scrutiny of the results of the one-way ANOVA testing revealed that at a significance level of $p < 0.05$, none of the responses revealed significant statistical differences.

It was, therefore, concluded there was no statistically significant difference in the manner in which the respondents answered the questionnaire survey that could be attributed to the interviewees' varying length of service with the firm.

6.3.9 Analysis of Variance: by number of employees in the firm

Tests were conducted to assess whether there existed any variation in the responses of the participants, which could be attributed to the size of the organization. For this purpose the responses of the employees working in the tourism sector were, Groups 1-4 (table 6.9).

Table 6.9 Classification of survey respondents based on number of employees in firm

Source: Personal collection

Group	number of employees in firm	no of cases
1	fewer than 10	4
2	10 to 49	42
3	50 to 149	62
4	150-250	16
	no response	29

One-way ANOVA testing, at a confidence level of 95%, was conducted to check for statistically significant means scores. Upon examination of the results of the tests, it was revealed that, at a confidence level of 95%, the $p > 0.05$ criterion was violated for the following data points:

Var21k [F (3, 120)= 5.477 , p = 0.001];

and Var21m [F(3, 120)=43.145), p =0.028] (table 6.10).

The null hypothesis (H_0 : there exists no statistically significant difference between the means score) was, therefore, rejected and the alternate hypothesis (H_1 : that there exists a statistically significant difference between the means score) was accepted for both Var21k and Var22m.

Table 6.10 Significant differences in means of datapoints Var21k and Var21m: Analysis by number of employees in firm

Source: Personal collection

		Sum of Squares	df	Mean Square	F	Sig.
VAR21k	Between Groups	15.05	3	5.02	5.48	0.00
	Within Groups	109.92	120	0.92		
VAR21m	Between Groups	9.89	3	3.30	3.15	0.03
	Within Groups	125.79	120	1.05		

Both Var21k and Var21m explored the firms' practices and measured the extent to which firms developed processes to capture ideas from employees, and the extent to which employees were aware of the process which they had to follow when putting forward ideas to management.

An investigation of the results of the multiple comparisons, post hoc testing at a significance level of 0.05 indicated that there existed differences between groups of the datapoint Var21k, whilst none were revealed for datapoint Var21m. The analysis of the multiple comparisons, using Tukey post hoc testing for datapoint Var21k revealed that there existed differences between the responses of the employees in firm size 1 (fewer than 10 employees) and those of employees in firms sizes 2, and 3, as well as between firm sizes 2 (10-49 employees) and 4 (150-250 employees) (extract in Table 6.11). The calculation of omega squared (Field, 2013), confirmed moderate size effect in the means of

these responses indicating that the size of the firm does have a moderate causal effect on the diverse responses. Results show that the employees who worked in micro firms (fewer than 10 workers) had a different perception to most of the other employees in the differently sized firms. This finding is expected, considering that when firms are particularly small, the communication and ensuing knowledge sharing amongst workers, is likely to take place more often. There also existed differences in the responses of groups 2 and 4 (firms employing between 10 and 49 workers and firms employing 150-250 workers). Here again, this is not surprising, as the difference in the size of the firms in the two groups is considerable, and is likely to drive knowledge in a different manner.

Table 6.11 Identifying the groups of between which the significant variances exist in means of datapoints Var21k when analysing by number of employees in firm

Source: Personal collection

Dependent Variable	(I) VAR Employees	(J) VAR Employees	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
VAR21k	1	2	1.697	0.501	0.005	0.392	3.002
		3	1.469	0.494	0.018	0.183	2.755
	2	4	-.753	0.282	0.041	-1.486	-0.021

The analysis that has just been discussed details a preliminary understanding of the behaviour of the agents in the tourism sector. The analysis has looked at exploring whether any variation in the answers of the employees of the tourism firms could be attributed to differences in gender, nationality, academic background, age, position occupied in the firm, employee's length of service in the firm and the number of employees in the firms (which served as a proxy for size of firm). Very few statistically significant variances in the participants' means were identified. Gender has been attributed as causing statistically significant differences in the responses of two datapoints (Var21i and Var21j); variations in the academic background of the respondents was seen to be the reason behind the statistical difference in the variation in datapoint Var16c, whilst variances in the datapoints Var21k and Var21m have been pinned on variations in the number of employees in the firms where the participants worked. All statistically significant variances were estimated to have a moderate size effect (Fritz, C. O., Morris, Page E., & Richler, J. J. 2012). Age differences of the respondents, as well as differences in the length of the employees' respondents to the firm and the position held in the firm by the employee did not have any significant effect on variations. The variable nationality could not be tested, as the data captured did not provide any information to this effect.

The successive section (section 6.4) will follow with a further in-depth, analysis of the data captured from the quantitative phase of this investigation. The researcher will ensue with correlation testing of the constructs in the hypothesized model and will follow with Partial Least Square (PLS), (Lohmöller, 1989) modelling to estimate the cause-effect relationship in the model.

6.4 Testing the correlation in the constructs in the model for the tourism sector

6.4.1 The hypotheses, revisited

Pearson correlation testing was launched to evaluate the relationship between the six constructs in the conceptual model (reproduce here below and found originally in (Chapter 5, figure 5.1, page 184) , Figure 6.1, the base model, is used to explain the relationships in the overall service sector, and further, to test the validity of these same fourteen hypothesis (listed in Chapter 5, pages 180-183) in the tourism sector (NKIBS). The correlation is being tested between the construct Exploitation and each of the other five variables Leadership, Control Firm Practices, Firm Openness, and Intra-Firm Communication.

For ease of reference, the hypothesis being tested for the tourism sector will be stated below.

Hypothesis 1 and 2 examine the linkage between leadership style and the extent of the organizational benefits achieved from the management of knowledge in the organization.

Hypothesis 1: Leadership characteristics in SMEs are inter-related to the ability of these firms to exploit the benefits of ACAP.

Hypothesis 2: The controlling nature of the owner-managers in SMEs has a positive impact on the firm's ability to exploit the benefits of ACAP.

The reality of SMEs presents severe resource limitations on their asset base, including their knowledge resources. These limitations can be mitigated by exploiting networking and the exchange of knowledge with external third parties (Grandinetti, 2016; Nahapiet and Ghoshal, 1998). The following two hypotheses will assess the extent to which this applies to the NKIB service sector.

Hypothesis 3: Desirable leadership characteristics positively affect the firm's ability and extent to which it networks with other firms in the industry.

Hypothesis 4: Excessive control by the owner-manager in the SME, adversely affects the firm's ability to network with other firms in the industry.

The following hypothesis assesses the claim made by researchers that external relations are crucial for the accumulation of new knowledge, especially in the tourism sector (Shaw, 2014):

Hypothesis 5: Firm openness has a positive influence on the extent to which firms exploit the benefits of ACAP for competitive advantage.

In chapter 2, the author discussed how the literature revealed organizational social mechanisms as an enabler of ACAP (Jansen, Van den Bosch and Volberda, 2006; Todora and Durisin, 2007; Zahra and George, 2002). In addition to this, scholars (Grandinetti, 2016; Liao, Welsch and Stoica, 2003; Nahapiet and Ghoshal, 1998; Yli-Rendko, Autio and Sapienza, 2001) present relational capabilities as a major enabler in the firm's ability to accumulate knowledge, specifically in the ACAP framework for SMEs. The following three hypotheses test the extent to which social mechanisms and relational capabilities are employed within organizations and the degree to which they are considered to be valuable.

Hypothesis 6: Desirable leadership characteristics will have a positive effect on intra-firm communication.

Hypothesis 7: The appropriate degree of control exercised by the owner-manager will have a positive influence on intra-firm communication.

Hypothesis 8: Intra-Firm communication has a positive influence on the firm's ability to exploit ACAP.

A considerable body of research indicated that the 'internal antecedents' i.e. the strategies and processes of the organizations and the mental models which the employees build for themselves does have an impact on the firm's ACAP (Lane and Lubatkin, 1998; Lane, Salk and Lyles, 2001; Van den Bosch, Volberda and De Boer, 1999). For this purpose, the ensuing five hypotheses will test this relationship

Hypothesis 9: Desirable leadership qualities will have a positive impact on the firm practices and policies.

Hypothesis 10: An excessive degree of control exercised by the owner-manager will impact negatively on firm practices and policies implemented in the firm.

Hypothesis 11: The firm practices and policies will positively affect the firm's ability to exploit its ACAP advantages.

Hypothesis 12: There exists a positive relationship between firm practices and the relational capabilities of the firm.

Hypothesis 13: There exists a positive relationship between the openness of the firm and the degree of intra-firm communication.

Small firms are significantly dependent on their owner-manager's ability to steer the organization in the direction of sustainable competitive advantage. This was also evident in the qualitative interviews held:

"It's a one-man-run empire... Most of the decisions he takes himself, and that I see as a big setback, because I think it is very partial" (Interviewee 29, NKIBS)

"The owner and daughter, director of hospitality, run the hotels and the restaurants within the group and obviously business development. All business development and new ideas stem from these two persons." (Interviewee 31, NKIBS)

"There is a family owned concern...there is a lot of involvement from the owners..." (Interviewee 30, NKIBS)

"One of directors believes that because her father invested here, so she plays the part of the hotelier... the involvement from her side caused us, and is causing, a lot of problems; she intervenes in the daily running of the operation; she is led by the nose, because she is inexperienced and not knowledgeable of the industry." (Interviewee 24, NKIBS)

The last hypothesis (hypothesis 14) assesses the relationship between the leadership characteristics and practices of the owner-manager and the degree of control he exercises on his employees. The owner-manager's degree of control exerted on the organization will determine the extent to which staff are involved and consulted in the operations and decision making of the organization. This factor determines knowledge transfer and sharing, and the ensuing knowledge exploitation.

Hypothesis 14: proposes a negative relationship between the style of leadership of the organization and the degree of control exercised by the owner-leader of the firm.

Figure 6.1 The Conceptual Model

Source: Personal collection

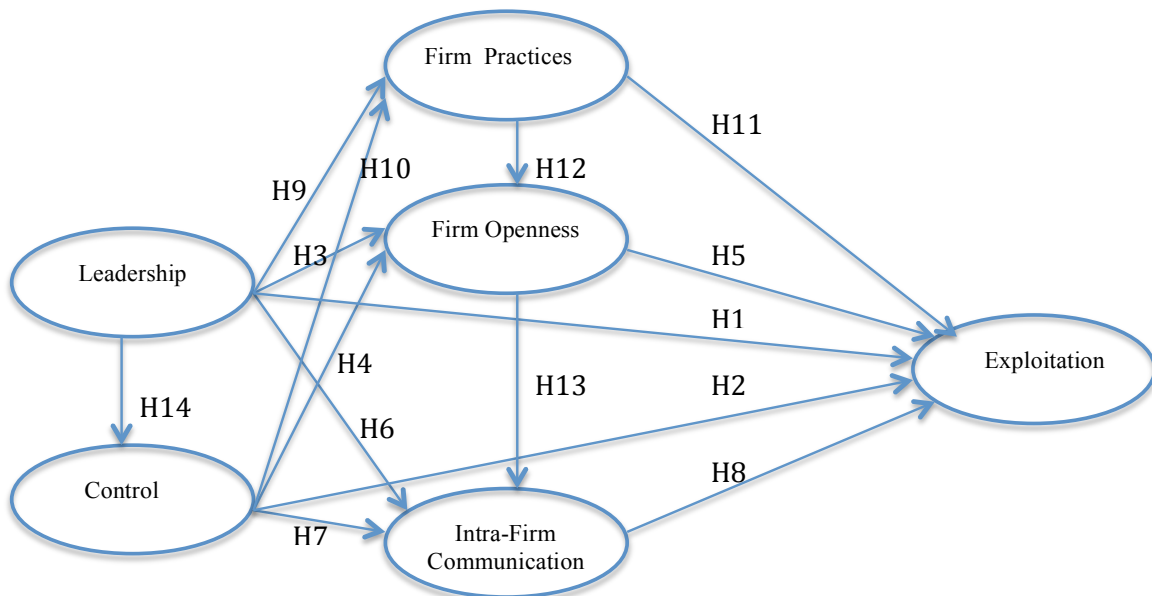


Figure 6.1 revisits the conceptual model introduced in chapter 5, (Figure 5.1, page 184), and represents all fourteen hypotheses as tested for the tourism sector. H1, H2 and H14 are all exploring research objective 1: to assess the effect that firm size and leadership have on ACAP and to understand how firms overcome any limitations posed by these features. Research objective no, 2 is

assessed by Hypotheses 6 through to 11, and consider the internal strategies, policies and procedures, which SMEs adopt to expand and capitalise on their knowledge resources. Research objective 3 is investigated by H3, H4 and H5, where these three hypotheses assess the external strategies, policies and procedures which SMEs adopt, in order to acquire and manage knowledge. H12 and H13 investigate whether there is a relationship between the internal and external strategies of the organization, i.e. whether there is a link between research objectives 2 and 3.

Preliminary analysis conducted at a confidence interval of 95%, confirmed the relationships between the six constructs in figure 6.1 to be linear, with all six variables being normally distributed. Normality was assessed by considering the skewness and kurtosis of each individual construct and confirmed that the values ranged between ± 2 (George and Mallery, 2010; Gravetter & Wallnau, 2014; Trochim & Donnelly, 2006; Field, 2000 & 2009).

Five Pearson correlation tests were run to check the extent of the linear correlation between Leadership and Exploitation of knowledge; Control and Knowledge Exploitation; Firm Practices and Knowledge Exploitation; Communication and Exploitation of Knowledge and, lastly, Firm Openness and Knowledge Exploitation.

The results of these correlations are illustrated in table 6.12. There was a large positive correlation between Exploitation and Firm Openness, $r(122) = 0.561$, $p < 0.01$ and also between Exploitation and Communication, $r(122) = 0.593$, $p < 0.01$. There was a statistically significant relationship between Firm Openness and Knowledge Exploitation, and also between Exploitation and Firm Communication. In both cases, the null hypothesis, that there is no association between the tested variables, was rejected, and the alternate hypothesis, that there existed a relationship between the tested variables, was accepted. Further, there was a moderate, positive correlation between Exploitation and Firm Practices, $r(122) = 0.400$, $p < 0.01$; Exploitation and Control, $r(122) = 0.409$, $p < 0.01$ and Exploitation and Leadership, $r(122) = 0.435$, $p < 0.01$. For each of these three correlations, the relationship between the two variables was statistically significant, rejecting the null hypothesis, that there was no

association between the tested variables, and accepting the alternate hypothesis, that there existed a relationship between the tested variables.

The above tests determined that Intra-Firm Communication and Firm-Openness, statistically explained a substantial 35.2% and 31.5% respectively of the variability in knowledge Exploitation, whilst Leadership, Control and Firm Practices statistically explained 18.9%, 16.7% and 16% respectively of the variability in knowledge Exploitation in the tourism sector (i.e. NKIBS).

Table 6.12 Pearson correlation coefficients of the constructs in the model

Source: Personal collection

	Firm Openness	Firm Practices	Control	Leadership	Firm Communication
Exploitation	0.561	0.4	0.409*	0.435*	0.593*
Strength of correlation	Large	Moderate	Moderate	Moderate	Large

*Correlation is significant at the 0.01 level (2-tailed), $p < 0.01$.

6.5 Structural Equation Modelling

Partial Least Square (PLS) (Lohmöller, 1989) modelling was used to test the hypothesized research model. In PLS, structural models are estimated using an iterative procedure, which maximizes the strength of the relationships between dependent and independent variables. In PLS, path models are defined by two linear relationships: that described by the inner model i.e. the structural model, and that described by the outer model, i.e. the measurement model. The measurement model specifies the relationship between the latent and the observed variables, whilst the structural model specifies the relationship between the latent variables. This section will proceed to detail the results of the calculations to estimate the PLS outer and inner models for the tourism sector.

6.5.1 The Measurement Model

The procedure recommended by Anderson and Gerbing (1998) was again followed and starts with the analysis of the reliability and validity (convergent and discriminant) of the constructs with reference solely to the sub-sample representing the NKIBs (i.e. tourist industry). Figure 6.2 and Table 6.13 present the results of the assessment of the measurement model for the Tourism sector. Composite reliabilities are above the 0.7 cut-off point, (range from 0.8-0.913), suggesting that the scales are reliable (Fornell and Larcker, 1981; Nunnally and Bernstein, 1995). The significance of factor loading and average variances explained (AVE) assess convergent validity. Each of the latent variables in the measurement model is being measured by a set of related observed variables. The factor loadings of each observed variable to the latent variable have been measured. Factor loadings are greater than or equal to 0.576, and significant ($p < 0.01$), with t values ranging from 6.451 to 33.626.

The extracted AVE are above 0.5, ranging from 0.504 to 0.718, establishing the measure’s convergent validity (Fornell and Larcker, 1981).

Discriminant validity was examined by comparing the square root of AVE for individual constructs among the latent variables. For adequate discriminant validity, the diagonal elements in Table 6.14 are greater than the off-diagonal elements (Barclay, Thompson and Higgins, 1995; Fornell and Larcker, 1981). Comparing all correlation coefficients with square roots of AVEs in Table 6.14, the results suggest strong evidence of discriminant validity.

Figure 6.2 The Measurement Model for the Tourism Sector (sub-sample)

Source: Personal collection

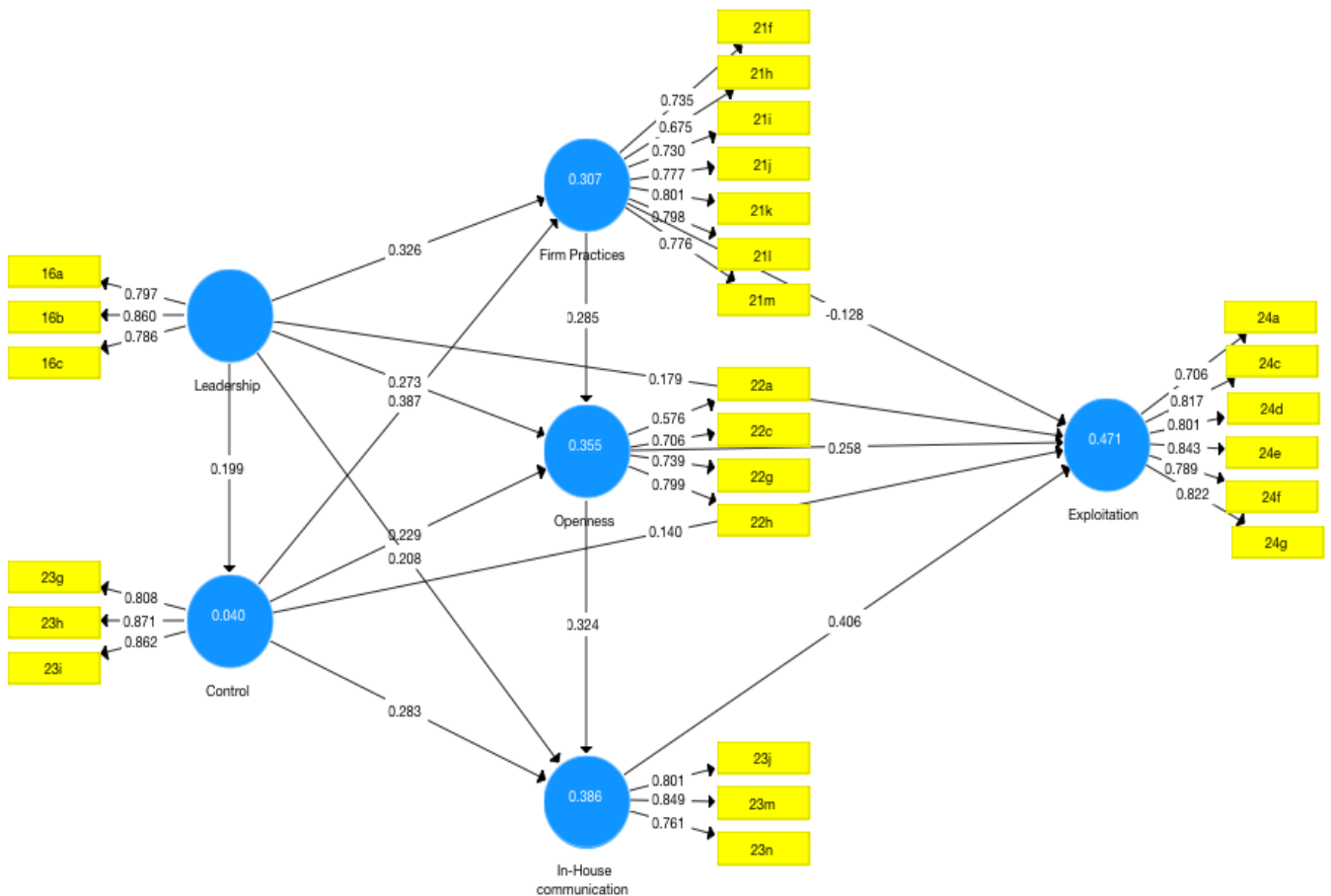


Table 6.13 Assessment of the measurement model for the Tourism Sector

Source: Personal collection

	Factor Loadings	t statistic	Cronbach's Alpha	rho_A	Composite Reliability	AVE**
Leadership			0.747	0.751	0.856	0.664
16a	0.797	13.352*				
16b	0.86	24.455*				
16c	0.786	18.020*				
Firm Practices			0.876	0.886	0.904	0.573
21f	0.735	14.404*				
21h	0.675	11.526*				
21i	0.73	13.875*				
21j	0.777	20.448*				
21k	0.801	21.914*				
21l	0.798	26.004*				
21m	0.776	20.302*				
In-House communication			0.728	0.736	0.846	0.647
23j	0.801	22.417*				
23m	0.849	33.626*				
23n	0.761	12.354*				
Openness			0.675	0.71	0.8	0.504
22a	0.576	6.451*				
22c	0.706	11.279*				
22g	0.739	10.147*				
22h	0.799	20.286*				
Control			0.803	0.804	0.884	0.718
23g	0.808	24.150*				
23h	0.871	27.519*				
23i	0.862	31.112*				
Exploitation			0.885	0.887	0.913	0.636
24a	0.706	13.445*				
24c	0.817	21.256*				
24d	0.801	20.257*				
24e	0.843	29.174*				
24f	0.789	18.424*				
24g	0.822	28.269*				

significant at the 0.05 confidence level

**AVE Average Variance Explained

Table 6.14 Inter-construct Correlations: Discriminant Validity for the Tourism Sector

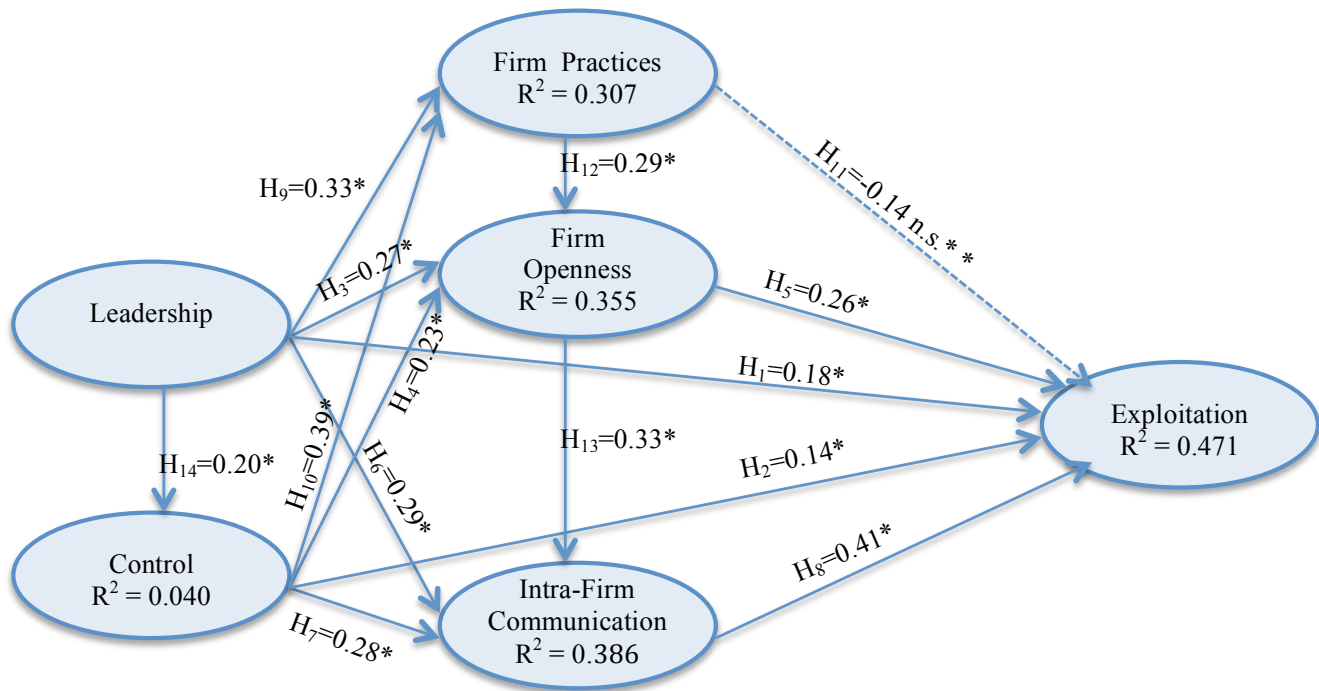
Source: Personal collection

	Control	Exploitation	Firm Practices	Intra-firm Communication	Leadership	Openness
Control	0.847					
Exploitation	0.41	0.798				
Firm Practices	0.452	0.383	0.757			
Intra-Firm communication	0.458	0.602	0.607	0.804		
Leadership	0.199	0.432	0.403	0.405	0.815	
Openness	0.413	0.545	0.499	0.531	0.434	0.71

6.5.2 The Structural Model

Figure 6.3 Results for the Structural Model for the Tourism Sector (NKIBS)

Source: Personal collection



significant at the 0.05 level

**n.s. not significant at the 0.05 level

The structural model was evaluated by adopting a process parallel to the one used for the evaluation of the structural model for the full services sector sample in Chapter 5. R-squared estimates, standardised coefficients (β) and significance level (t-statistic) were the measures used to evaluate the model. Figure 6.3 shows that the values of R^2 range from 0.307 to 0.471 for four of the constructs: Firm Practices (0.307); firm Openness (0.355); Intra Firm communication (0.386); Exploitation (0.471), indicating that the predictors have moderate capabilities at explaining the endogenous construct. The construct

Control, with $R^2 = 0.04$, is not well explained by the chosen predictors (Var23g, Var23h, Var23i).

A bootstrapping procedure calculated path loadings and t-statistics for the hypothesized relationships (Table 6.15). All standardized coefficients (β) and t-statistics for hypothesis H1 to H10 and H12 to H14 are statistically significant at the 95% confidence level, leading to the acceptance of the said hypothesis. H11 ($\beta = -0.139$; $p=0.206$) is not statistically significant ($p>0.05$), leading to the rejection of the hypothesized relationship between Firm Practices and Exploitation.

Table 6.15 Results, using PLS, of the hypothesized model for the Tourism Sector

Source: Personal collection

Hypotheses	Path Loadings	T Statistics	P Values	Do findings support the hypotheses?
H1 Leadership -> Exploitation	0.165	3.112	0.002*	Yes
H2 Control -> Exploitation	0.093	2.140	0.032*	Yes
H3 Leadership -> Openness	0.280	4.743	0.000*	Yes
H4 Control -> Openness	0.154	3.337	0.001*	Yes
H5 Openness -> Exploitation	0.192	3.295	0.001*	Yes
H6 Leadership -> Intra Firm communication	0.185	3.761	0.000*	Yes
H7 Control -> Intra firm communication	0.294	6.698	0.000*	Yes
H8 Intra-Firm communication -> Exploitation	0.391	6.342	0.000*	Yes
H9 Leadership -> Firm Practices	0.341	6.616	0.000*	Yes
H10 Control -> Firm Practices	0.407	9.254	0.000*	Yes
H11 Firm Practices -> Exploitation	0.026	0.403	0.687n.s.	No
H12 Firm Practices -> Openness	0.304	5.845	0.000*	Yes
H13 Openness -> In-House communication	0.326	6.483	0.000*	Yes
H14 Leadership -> Control	0.190	3.901	0.000*	Yes

6.6 Summary

This section summarises the results presented for the sub sample of the tourism sector, as representative of the NKIBS. Analysis of variance testing was conducted to inspect whether any significant variations in the respondents of the participants could be attributed to specific factors such as varying gender, nationality, academic level, age, size of firm, position held in the firm and the length of service in the current firm. Table 6.16 synthesises the results of the analysis of variance testing and reveals that statistically significant differences in the respondents of the questionnaire survey were only identified in 4 out of the 26 valid datapoints. The variations in the answers of the respondents all had a moderately large size effect and were identified as follows: Var21i and Var21j caused by gender differences; Var16c caused by differences in the academic level of the respondents and Var21k caused by the difference in the size of the firm where the respondents worked.

Table 6.16 Variance analysis: summary of results

Source: Personal collection

Analysis of variance by:		Data point	Construct	Effect Size
Gender	Var21i	The firm has rules and places to record its procedures	Firm Practices	moderate
	Var21j	The record/manual of firm practices and process is updated regularly	Firm Practices	moderate
Nationality	-	-	-	-
Academic level	Var16c	A dedicated team of people is employed primarily to research and develop new business ideas	Leadership	moderate
Age	-	-	-	-
Size of firm	Var21k	The firm has developed processes to capture ideas from employees	Firm Practices	moderate
Position held in the firm	-	-	-	-
Length of service	-	-	-	-

Table 6.17 Summarising the results from the tourism sector

Source: Personal collection

	Research Objective		Hypotheses	Do the results support the hypotheses?
1	To assess the effect that firm <i>size</i> and <i>leadership</i> have on ACAP and to understand how firms	H1	Leadership -> Exploitation	Supported
		H2	Control -> Exploitation	Supported
		H14	Leadership -> Control	Supported
2	To explore the <i>internal</i> strategies, policies and procedures which SMEs adopt to expand and capitalise on their knowledge resources.	H6	Leadership -> In-House communication	Supported
		H7	Control -> In-House communication	Supported
		H8	In-House communication -> Exploitation	Supported
		H9	Leadership -> Firm Practices	Supported
		H10	Control -> Firm Practices	Supported
3	To explore the <i>external</i> strategies, policies and procedures which SMEs adopt in order to acquire	H11	Firm Practices -> Exploitation	Not Supported
		H3	Leadership -> Openness	Supported
		H4	Control -> Openness	Supported
	The extent of the relationship between research objectives 2 and 3 i.e. between the internal and the external strategies of the	H5	Openness -> Exploitation	Supported
		H12	Firm Practices -> Openness	Supported
		H13	Openness -> In-house communication	Supported

The above results (tables 6.17) summarise the results obtained from for the structural model when this was tested for the tourism sub-sample only.

Leadership characteristics in SMEs are positively inter-related to the ability of these firms to exploit the benefits of ACAP (H1), and appropriate degree of controlling efforts of the owner-managers in SMEs has a positive impact on the firm's ability to exploit the benefits of ACAP (H2). Therefore both H1 and H2 have been accepted for the tourism firms, i.e. the NKIBS, confirming the work of Lane, Koka and Pathak, (2006).

This research confirms that desirable leadership characteristics positively affect the firm's ability and extent to which it networks with other firms in the industry (H3) and that the controlling aspect of the owner-manager in the tourism SME adversely affects the firm's ability and extent with which it networks with other firms in the industry (H4).

Hypothesis 5: Firm openness has a positive influence on the extent to which firms exploit the benefits of ACAP for competitive advantage is supported for the tourism sector and reaffirms the work of earlier researchers such Anderson and Foss, 2005, Argote, (1999) and Argote, (1999).

Hypotheses H6, H7 and H8 test the relevance of intra-firm communication as an enabler of knowledge exploitation in the tourism sector firms. Desirable leadership characteristics have been found to correlate positively with intra-firm communication (H6) in this sub sample. Further, the research proves that the appropriate degree of control exercised by the owner-manager positively influences on intra-firm communication (H7) and that Intra-Firm communication has a positive influence on the firm's ability to exploit ACAP (H8). These three hypotheses further reinforce the work presented by Lee and Choi, (2003) and Du, Ai and Ren, (2007).

The results of the testing confirm H9, H10, H12, and H13 and therefore support the work of Darrock (2005) and Wuryaningrat, (2013). Hypothesis 9 test the extent to which desirable leadership qualities will have a positive impact on the firm practices and policies, while Hypothesis 10 assesses the negative impact of an excessive degree of control, on firm practices and policies implemented in the firm, exercised by the owner-manager. Hypothesis 12 test whether there exists a positive relationship between firm practices and the relational capabilities of the firm. Results for Hypothesis 13 show that there exists a positive relationship between the openness of the firm and the degree of intra-firm communication. The confirmation of these hypotheses supporting the relationship between firm practices, relational capabilities, and ACAP for tourism sector SMEs.

H14 proposes a relationship between the leadership of the organization and the degree of control exercised by the owner-leader of the firm. This hypothesis has also been upheld, confirming the direct positive relationship between firm leadership and control in the NKIBS firms.

One hypothesis only, H11, which tests whether firm practices and policies will positively affect the firm's ability to exploit its ACAP advantages, has not been supported by the empirical research, which has been conducted.

Chapter 7

Results: The Financial Sector

7.1 Introduction

Innovation is critical for firm performance (Chandrashekar, 1999; Marinova, 2004). Firms in the financial services sector are not alien to this ascertainment (McKinsey Global Survey, 2007). The benefits of a competitive, innovative, and developed financial services sector are twofold, resulting not only in sustained growth and profitability for the financial services firms themselves, but also creating a profit-stimulating environment for other firms within which to operate (Dabla-Norris, Kersting and Verdier, 2010). Several studies show that the success of the financial sector spills over to the rest of the economy (Rajan and Zingales, 1998; Fisma and Love, 2004; Hartman, Heider, Papaionnou and Lo Duca, 2007). To substantiate these findings, others, (Aghion and Howitt, 2009; Sharma, 2007) correlate firm productivity to innovation, and contend that firms can only keep abreast of, say, costly technological advances in countries, where the financial services sector is well developed, innovative and competitive. This is in line with Schumpeterian (1991) writings on growth and innovative activity, which accentuate that innovation is only possible in an environment that boasts of a developed financial services sector that facilitates the availability of credit.

The financial services sector has traditionally differentiated itself for its conservative nature, high entry barriers and strict control and regulations (Vermeulen, 2004). The recent global financial crisis has only ensured the intensity of such attributes. As a result of the strict regulatory nature of the industry, the drivers of innovation in the financial services sector generally take the form of endeavours to avoid tax burdens and sectorial regulations (Miller, 1986). Various drivers have contributed to innovation in the financial services sector: the accelerated advances in technology (Vives, 2001), changes in industry regulation and market requirements (Drew, 1994). Scholars argue that firms in the financial services sector have invested in innovation to increase service production efficiency (by offering services at lower costs) variety and quality (Bos, Kolari, van Lamoen, 2013). On the contrary, a study published in 2014 reveals that post the Global Financial Crisis, financial services firms have

not focused much on innovation and have, instead, safeguarded their bottom line by cost-cutting and efficiency-boosting exercises. Wolfe Davis, Hepburn, Mills and Moore (2011) are in support of this statement when they demonstrate how financial service sector firms in Toronto, Canada, do not identify themselves as being innovative, but rather, prefer to reiterate their qualities in terms of reliability, profitability and the customisation of the service offering.

“Financial institutions cannot return to pre-recession return-on-equity levels unless they pursue breakthrough innovation” (PWC, 2014, page 1). The emphasis of these findings is not only steering financial service firms to innovate, if they want to advance to sustainable growth and profitability levels, but indeed specifies that the innovation must be of a breakthrough, rather than of an incremental nature.

Dobni (2006) reiterates that within the financial services sector, competition is fierce, and firms can only secure competitive advantage by adopting an innovation orientation. “Knowledge propels innovation,” (Dobni, page 173) and it is the effective management of knowledge within an organization that facilitates the innovative orientation of firms. The importance of Knowledge Management is more relevant to the financial services sector, considering that this industry is knowledge intensive and relies extensively on the intellectual capabilities and knowledge base of its human capital, than many other industries. At the grass root of effective knowledge management a firm must have laid out the foundations for powerful intra- and inter- firm communication, the essential condition for a learning organization (Blazevic, Lievens, 2004). It is communication that enables the assimilation and sharing of knowledge within an organization and which promotes innovation.

This chapter runs parallel to the previous one in that it will assess the hypothesized framework for absorptive capacity, this time through the lens of financial services sector firms. The baseline model laid out in Chapter 5 (figure 5.1, page 184), detailing the framework for ACAP in the services sector, will be assessed for the extent of its validity for adoption to the financial services sector, a KIBS.

This chapter discusses the approach used in the preceding chapter, but will focus solely on the financial services industry. The analysis that will ensue will

be conducted by considering the base line model presented in Chapter 5 (Figure 5.5, page 227 for the services sector as a whole and will evaluate the extent to which this model remains valid for a segment of the sector, i.e. the financial sector, representative of the KIBS. The discussion in this chapter will present a framework for absorptive capacity for the financial services sector, these being regarded as a knowledge intensive business sector. This industry specific model develops as a result of the consideration of the research objectives (RO) 1,2, and 3 (Chapter 1, pages 29-30), namely:

RO1: To assess the effect that firm *size* and *leadership* have on ACAP, and to understand how firms overcome any limitations posed by these features

RO2: To explore the *external* strategies, policies, and procedures, which SMEs adopt to expand and capitalise on their knowledge resources.

RO3 :To explore the *internal* strategies, policies, and procedures which SMEs adopt in order to acquire and manage knowledge.

This chapter starts by examining data that has been captured in the qualitative part of the investigation and analyse this thematically in the background of the existing literature focusing on the perception of innovation within financial services sector firms; the extent of the impact on firm size and leadership on the absorptive capacity of knowledge; the extent of staff engagement with innovation and, lastly, the extent of knowledge sharing practices across the financial services sector firms.

The chapter then proceeds to report and evaluate the results of the second phase of the study, the quantitative phase, and will adopt a similar style and layout as that followed in the preceding chapter. Section 7.3 reports the preliminary results of the analysis of variance, when the data is manipulated keeping the variables of gender, nationality, academic background, age, position in the firm and length of service, fixed. This section indicates whether the respondents exhibit different patterns of knowledge management behaviour as a result of any of the identified variables mentioned earlier. Section 7.4 will ensue with the multivariate analysis, specifically the structural equation

modeling, with the aim of determining the extent of the relationship between the constructs of Leadership, Control, Firm Practices, Intra-Firm Communication, Firm Openness and Exploitation, in the conceptual model (Figure 5.1, page 184). The chapter concludes by evaluating whether research objectives 1, 2, and 3 (detailed above) are supported for the financial services sector.

7.2 Absorptive Capacity in Financial Services Sector firms – a thematic, qualitative analysis

Innovation has endorsed the financial services sector (Flood, 1992). Evidence of this can be traced back historically from as far as the introduction of coinage in 7 B.C. Greece, to the present day technology-driven financial sector, security markets, crypto currencies and algorithmic trading (Cognizant Reports, 2012). Financial Institutions appreciate the attention and priority that needs to be dedicated to enhancing the innovativeness of their firms (Dobni, 2006). In the subsequent parts of this section the researcher will engage in a thematic analysis of the data captured from the qualitative part of the study (phase 1), i.e. the in-depth face-to-face questionnaires held with the owner-managers of the organizations in the financial services sector.

7.2.1 A thematic analysis: perceptions of innovation in the financial services sector

The view that innovation should rank high on a firm's agenda is shared by all of the interviewed owner-managers in the financial sector. The interviewees are strong in their position and most reiterate that the competitive edge of a financial services sector firm can only emanate from its successful innovation projects. There were, however, different views, on the extent to which the organizations and the industry itself were driving innovation, and not all agreed that their firm, or, indeed, the current state of the industry, were promoting an innovative culture:

“ The industry has come a long way in the last twenty years, but I believe we are still very conservative... I believe we need a cultural change. We need a whole cultural change, both parties: the players and the clients...” (Interviewee 22, KIBS), (a key to the interviewee code is found in Appendix 3.1 page 409).

“Innovation is an extremely important element to look at, both at a company level but also at an individual level... trying to motivate people to be innovative is one of the attributes that we try to pass on even through training... from the business point of view we believe that if you don't innovate, if you don't have the means of being able to change as the market changes, and, possibly, be ahead of the market in some instances, that is, if you're not looking forward, then definitely you're moving backwards! When we carry out strategic reviews of the firm and plan ahead these are beliefs, which we keep in mind” (Interviewee 14, KIBS)

“I have taken the position, that the competitive nature of the Maltese Financial Sector must emanate from innovation.” (Interviewee 18, KIBS)

Consensus existed amongst the interviewed owner-managers that innovation was required for sustained firm growth and competitiveness. The interviewees felt that the regulatory nature of the financial sector acted both as a driver of innovation and also as an impediment.

“Banking is very highly regulated and it's becoming more and more regulated. Now, this is a funny thing, because we see that regulations create innovation... Most of the financial instruments that are created, they are created just to circumvent regulations ... the way that banks operate, especially, being small institutions ... is that we are very highly regulated, so we are prudent, we are conservative and that, in itself, kills a bit innovation.” (Interviewee 15, KIBS)

One interviewer proclaimed that his belief was that the local insurance market was more innovative than some other foreign jurisdictions:

“I would say that in Malta, the insurance market is quite advanced and sophisticated, and I see this, because we also operate in other foreign countries, such as Poland, Cyprus and France.” (Interviewee 9, KIBS)

In his paper of 1992, Flood stated that the main motivation for innovation in the financial sector was ‘material gain’ (pg. 4), and that this gain could either have a cost-reduction facet or a revenue-increasing one. Other researchers (Frame and White, 2004) also added that financial innovation could be intended to meet customer and market needs more effectively. A similar sentiment was shared amongst the interviewees of this study who, generally, concurred with the motivations for the changes, which they either brought about or experienced. Bos, Kolari and van Lamoen, (2013) argue that mostly financial innovations take the form of new products (e.g. credit cards), new production processes (e.g. electronic payments) or new forms of organizations (e.g. diversified banks).

One of the interviewed owner-mangers in a wealth management firm, expressed his concern regarding the adoption of technological innovations that were being used in the financial sector. He explained how his clients still sought his personal opinion and advice before making any financial investment, even if, perhaps, they then performed the transaction independently online. This meant, whilst still being available to give time to his clients, he still had to incur the cost of the IT setup in order to keep up with the larger firms. The interviewee’s preoccupation was, that given this scenario, local financial sector

firms would soon need to start charging clients for advisory services, something which, to date, was not done. Apart from this, he felt, that the local client was, generally, not financially educated well enough to be able to take certain investment decisions of his own accord, on an online platform, and, therefore, was critical and skeptical of the benefits of some of the technological innovations in the financial sector:

“the younger generation doesn’t want to come to our office, they want to communicate by text, by e-mail... but they still don’ t go to the platforms (i.e. online trading platforms) so I am not convinced... even the youngsters, who are all IT literate, and all this, appreciate the fact that they want to call me and say: ‘ but what do you think about this?’ ... They will do it (i.e. the transaction) through me, irrespective of the fact that they are paying twice as much, because I have given them the advice, so I think we are a long way from people going IT, unless the regulator pushes us to do it” (Interviewee 34, KIBS).

7.2.2 A thematic analysis: the effect of size and leadership on innovation in financial services sector firms

Several studies have explored the relationship of firm size on innovation in the financial services sector. In general, the literature supports the notion that firm size is positively correlated with financial innovation (Frame and White, 2004). Other scholars have argued that larger financial institutions experience greater cost savings (Elysiani and Mehdian, 1990) and, therefore, also had enhanced profit efficiency (Berger and Mester, 1997), implying that the larger firms were better positioned to invest in technical change (Humphrey, 1993). Literature also confirms that larger banks benefitted more from technical innovation than smaller banks (Altunbas, Goddard and Molyneux, 1999).

The analysis of the data captured from the in-depth interviews held with the owner-managers reveals that the experiences of these practitioners concur with

the writings in the literature. The following excerpts from the interview transcripts show how the owner-managers confess of their size-induced limitations to invest in innovations.

“The firm needs to be innovative, but it is not. We operate in a tried-and-tested industry; we are a very small firm and we build on our capabilities. I don't really look at us as coming up with something innovative... There are some technologies, especially, and some processes that would be good to look into and introduce. However to do that it necessarily implies that we must move out of the current pond or lake we are in and move into a bigger bowl (i.e. firm needs to grow).” (Interviewee 22, KIBS). This is the position of the owner-manager of a micro firm, which only employs 3 persons, including the owner-manager. The owner-manager is conscious of his limitations. However, he seems to be happy and content operating in his smaller ‘bowl’.

“... for example, over the years, the organization has created a lot of products, which are innovative...but on the other hand, being a small bank, you cannot afford to be innovative in areas of technology, for example... the thing is, when new technology comes out, like for example, internet banking, mobile banking, different types of software etc. they are very, very expensive, until they become popular and are copied and developed by smaller software houses and then they become scalable. So at a point in time you cannot afford to be innovative in technology. Apart from the fact that in the first years these products evolve so quickly. When you look at internet banking... when it was launched it was very basic... the first banks, which started offering internet banking, they had to change the product very often... so your return on investment in a population, which is very, very small, is very low. And some of the products which we offer, they aren't even viable, but we still offer them in order to satisfy our customer needs.” (Interviewee 15, KIBS). This is the position expressed by the chief executive officer of a bank, which has a relatively larger head-count than most of the other firms in the sample (close to 200 employees). This interviewee did not only focus on the aspect that the bank is small, but also on the fact that it is operating in a relatively small market, arguing that, as a result of the market size limitations, hefty investments in technology can never be considered.

Other interviewees indicated that the degree and extent of knowledge dissemination and sharing was dependent on the leadership style, the claim being, that the leader set the behavioural trajectory for his subordinates to emulate. The views of the interviewees are in support of theory (Ferrerás Méndes, Sanz Valle and Alegre, 2018) which goes as far as placing leadership as an antecedent of absorptive capacity and innovation, and to theory Wang, Courtright and Colbert (2011) who define leaders as “may serve as role models for leaders at lower levels, encouraging (cascading down) transformational leadership through the organization’ (page 213).

The interviewees argued that when the leader displayed a disposition to open communication, staff would follow the example, and discuss their knowledge and ideas with colleagues. If on the other hand, the leader did not appreciate this form of engagement, then, the employees would refrain from sharing their accumulated knowledge:

“I guess in a way, a firm is very much a reflection of its management.”
(Interviewee 16, KIBS)

“the staff... basically, they copy their manager and their leader, and if they see that he’s sharing the information, then they feel comfortable, and are encouraged to do the same. Sometimes, we have supervisors (i.e. lower ranking officials) presenting, say, a Board Position Paper to the Board...Why? Because he would have prepared the paper, done the research, and therefore, we feel that he should be the one deciding on it and delivering it himself.”
(Interviewee 15, KIBS)

“I think having strong leadership is vital, being able to transmit that vision of leadership down the line, down the line obviously through management and through staff is equally important.” (Interviewee 11, KIBS)

7.2.3 A thematic analysis: the extent of staff engagement with innovation across financial services sector firms

Dobni (2006) argues that the employees are “*catalysts to an innovation environment*,” (page 8) and argues that the firms must nurture and engage their employees in the process of innovation for this to be successful. Some financial sector firms nurture an innovative culture by empowering employees. The simple rule that they adopt in order to achieve this is to impose that employees do not only present problem situations for discussion, but that they are always encouraged to present possible courses of action to remedy the situations. This approach has been adopted especially by the following owner-manager of a medium sized private bank, whose behaviour is, therefore, in support of theory (Bowen and Lawler, 1992), which states that employee empowerment is a key ingredient to increasing innovative performance, especially when the industry revolves around a relationship between the customer and the provider, as does banking in this case.

“ I always tell my staff: ‘Don’t bring problems only, bring me at least two solutions that we can talk about’. So they are, let’s say, kind of encouraged, or pushed to provide, to think, about the solution. Now, if that solution ties us to any other departments, which it might, because it’s a small unit, they have to bring that staff to the conversation and create the best possible solution for that problem. This has happened quite often, when there is a problem, when there is a new business introduced to the bank, necessary departments... they talk together, they hold meetings together...” (Interviewee 3, KIBS)

In general, whilst employees do appreciate the positive impact of innovation, they generally, need to be *muscled* into change, as the initial reaction to innovation and change by employees, is one of resistance:

“ If people are not pushed, they will not do it (innovation), because they are comfortable with the “status quo”... employees here are sort of ‘laid back’ in terms of innovation” (Interviewee 12, KIBS)

“Change always brings resistance from the staff, and we have witnessed this every time, with our latest being our new software upgrade.” (Interviewee 3, KIBS)

The financial services sector operates very much like other sectors in terms of idea generation with sources emanating both internally (Board of Directors, shareholders and family members, focus groups) and externally (Associations, the Industry Regulator and overseas partners). One owner-manager interestingly said that he challenges his employees to bring forward new ideas by telling them: *“I am not as technical and analytical as you are - this is what we are talking about, this is my opinion, come on, put on the boxing gloves and, come on, let's start fighting. We usually go out of this room with 'black eyes', not just smiling, and that has worked!”* (Interviewee 16, KIBS). Interviewee 9 (KIBS), on the other hand, admitted that *“there is value in spending half an hour a week with a group of people thinking, as opposed to doing,”* implying that he too values the ideas of his employees.

Authors, such as Dobni (2006), have argued that it is the extent to which employees apply the knowledge that they accumulate, that determines the success of the firm, especially, in terms of innovation. An effective manner of using knowledge is by sharing it amongst those “who possess common goals” (Dobni, 2006, page 174). Employees, who possess both the desire and the ability to communicate with their colleagues, succeed at disseminating knowledge more effectively within the organization they work for.

Interestingly, one change manager in the banking environment pointed out that her role, as change manager was particularly arduous, owing to the fact that her experience was that employees worked in ‘silos’, implying that they failed to communicate effectively about their work with the rest of the employees. This made the workers very knowledgeable about their part of the process, but limited in their holistic perspective:

“Now, in the bank we try to push this knowledge (i.e. holistic knowledge) but one of the difficulties I find as change manager is that in reality, people lack knowledge. So people tell me the bit they know and if I ask them the extra

question they say: “ I don't know, you have to ask the next person”. (Interviewee 12, KIBS). These findings are in support of literature, which discusses how, at times, workers are reluctant to share their knowledge (Hibbard and Varrillo, 1998; Milton, Pallen and Polley, 2004).

Dobni, (2006) shows how communication intensifies knowledge dissemination more efficiently in small, rather than large firms, and hence, the former are better positioned to develop their innovation-based competitive advantage over large firms. Many of the owner-managers who were interviewed reiterated that knowledge sharing was a positive experience in their organization:

“It's (i.e. knowledge sharing) constant...there is very open dialogue. I have not seen anything to worry me. The transfer of information, or the transfer of knowledge, happens purely accidentally on a daily basis. They (i.e. the foreign employees) have a great work ethic, but so do the Maltese, to be honest with you, especially the women; they make fantastic workers ... it works well, and I mean, it works well.” (Interviewee 16, KIBS)

7.2.4 A thematic analysis: knowledge sharing practices across financial services sector firms

A common thread in the discussions with interviewees was that communication links within the financial services industry were very strong, and this facilitated innovation. Networking, both local and overseas, has also been identified as an important source of idea generation, responsible for “85-90% of business” (Interviewee 22, KIBS) and “ranks highly on the agenda” (Interviewee 18, KIBS). These findings are in support of literature (Kock and Strotmann, 2008; Leal-Rodríguez, Roldán, Leal, and Ortega-Gutierrez, 2013) that reveals that external linkages, through intra-firm cooperation and networking, are fundamental requirements for service innovation particularly of the radical genre. Dobni (2006) argues that the desire and ability of small financial sector firms to share knowledge with third parties is “more acute” (page174) on

account of their size, and proceeds to claim that in the context of the financial services industry “ *value-creating opportunities are best identified by observing and understanding the relevant business cluster – the industry, competitors, and customers, emerging technology, channels and knowledge flows*” (page174). Porter (1985) reaffirms that engaging with networks and business clusters facilitates the development of competitive advantage.

The evidence captured from secondary data and from the qualitative interviews confirms that within the financial services sector, networking and inter-firm communication, particularly with the Regulatory body itself, are present and healthy:

“The regulator values an open communication and dialogue with stakeholders and this has resulted in the development of new regulation to keep abreast with market changes. As an ongoing process the regulator has sought to balance innovation with sound institutional development through sustainable regulation.”
(Grech, 2015, KIBS)

“... all the time communication is very open.... you know this is one of the only jurisdictions that you can call the regulator, and sit round a table with him, explain to him what you want to do, and ask for his opinion directly...”
(Interviewee 18, KIBS).

One interviewee claimed that knowledge management and the enhancement of the firm’s absorptive capacity is: “*all about bringing the people together.*” (Interviewee 12, KIBS). The interviewee is referring to the need for people to work together in teams and to support and help one another in an open learning process. “*Everyone says that they like to work in teams...but characters vary. I think one of the biggest disadvantage in Maltese is people do not like to delegate...Yes we try to build that team spirit but some learn and some don’t... but yes, we try, especially from the top, so from me to my employees; it is in my interest to teach them as much as possible.*” (Interviewee 33, KIBS). The experience of the owner-manager of this medium sized, wealth management firm, where the sharing of updated knowledge about products and market trends is crucial, is rather negative with respect to his belief of the extent to

which his employees were team-working effectively.

Given that most knowledge is tacit, staff turnover is a factor that affects knowledge dissemination adversely, particularly, when the firm does not nurture a culture of knowledge transfer and sharing amongst its employees and, further, does not have a dynamic system of knowledge storage, which captures all changes made. The most common scenario in the reviewed firms is that management acknowledges the importance of knowledge sharing, effective communication, and efficient knowledge storage, but many owner-managers also recognise the fact that there is still much progress for them to achieve in this area:

“We had two people from risk (i.e. Risk Department) who left. They took the knowledge with them.” (Interviewee 1, KIBS)

It's (i.e. staff turnover) very low, actually. This year we were shocked, because one of our back office; one of our most valued back office persons, left the company. He has been here since almost the beginning, but he went for an opportunity he couldn't miss to be honest...but the majority are people, who have been here for years, and that is a very important thing, both when it comes to back office and both when it comes to client advisers, which is a very stressful job.” (Interviewee 21, KIBS)

We do (i.e. suffer from staff turnover) because the local market is very shallow, so there are certain, let's say, talent parameters. There is a huge competition in the market, which is good. But that results in staff moving to other firms.” (Interviewee 3, KIBS)

“I can't say that we've had a lot of turnover in staff” (Interviewee 33, KIBS)

Most firms evidence basic structures for knowledge sharing, leaving it mostly up to the individual employees themselves to engage in knowledge dissemination. Firm practices are even more primitive, when knowledge storage is discussed, with firms limiting themselves to recording meeting proceedings, and formalizing firm processes and procedures but, possibly, failing to update these or to refer

to them or make them accessible to staff members. Unless provisions are in place to counter balance the effect of the loss of tacit knowledge that the exiting staff members take away with them. The interviewed owner-managers exhibited differing experiences with staff turnover:

“I'd like to think that something happens with it (i.e. the documentation employees are bound to submit after having followed a training course.” (Interviewee 9, KIBS). This striking comment showed the rather distant position that the owner-manager took with respect to how knowledgeable he was about the procedures of knowledge storage in his medium-insurance insurance firm. Other interviewees confessed that their firm was still lacking in terms of ensuring it did not lose any of its employees' knowledge:

“You know, as you grow, these problems start and sometimes you get lost, ... so I think this is an area where we need to fine-tune a lot”. (Interviewee 8, KIBS)

“This (i.e. knowledge storage and dissemination) is something we are not really prepared for...” (Interviewee 8, KIBS)

“No hard and fast rule of storing information, however we do obviously have our database, with say, a marketing tab where certain information is written... so we have little bits of the information as we go along, stored over there”. (Interviewee 33, KIBS)

“The knowledge on the particular securities and on the investment we are offering and whatever, that is something which is shared by everyone... But the particularities of the relationship between themselves (i.e. the relationship manager) and their client, now that is a very difficult situation, to be honest it's an industry issue, which is hardly addressed properly to be honest, and hardly solved for the simple reason that this is an industry which is based on trust. This is an industry built on trust and at the end of the day you are as good as your last show...Yes, what has happened, knowledge management as a situation, is managed by compliance... if there is a presentation it has to be filed

and shared internally, and even when it was shared, and to whom it was shared, is filed. So that as much as possible, anyone getting any information is shared to whoever we deem is important.” (Interviewee 21, KIBS)

“First of all, obviously, one of the things which we're working on is ensuring that our procedures are well documented. Any task needs to be well documented, and it's not only that because there's a risk with that. Things change and your procedures do not change. So there needs to be a constant, constant review of these policies and procedures within the bank.” (Interviewee 12, KIBS)

Only one interviewee was forceful in stating his firm's expectations to the degree of knowledge documentation by the employees:

“If I had to say that knowledge sharing was one of the things, which worried us at Firm, Y, I would say, “No” ... Part of the training is such that it is expected that to be good at your job you also need to be able to share and to work in pair with someone else so if you don't do it that will show up in your performance report... then again, part of the induction process of training is you are told of what is expected of you, what is good practice, what is bad practice”. (Interviewee 14, KIBS)

Several owner-managers indicated the manner in which they mitigated against loss of knowledge, with the most common practice being that of workers job-shadowing one another, so that knowledge is shared at the onset.

“As I said, there would be some shadowing in all areas.” (Interviewee 15, KIBS)

Since we are a very small unit, a lean unit, the key employees are always key employees ...but if they choose to leave, their replacements, in certain cases will be in-house, which are the, let's say, their second-in-command.” (Interviewee 3, KIBS)

“The way we do that (i.e. knowledge sharing) is by roping in those people, who are destined for a certain function within the bank to be called in and to be present with you, when you are conducting meetings and using your

knowledge, so that they will be privy to that thought process, and that, in my opinion is invaluable” (Interviewee 16, KIBS)

Other interviewees discussed the efforts they made in order to teach their own staff, and to organize firm meetings at different levels, so that the employees would be presented with the appropriate environment for the exchange of knowledge. There was not one owner-manager who actually detailed the proceedings of a meeting, and all alluded to one-way communication style of meetings.

“I mean, for example, the loan process, which we had at Firm A, I adapted here. This is all coming from the knowledge I gained with Firm A. I passed it on to the people who are here ...and they are also learning themselves, so this will stay if I leave.” (Interviewee1, KIBS)

“We encourage our staff who go on training courses, to share the new knowledge with their co-workers, and with other interested parties...we hold regular meetings, weekly or fortnightly depending on the nature of the meeting, and form working groups and committees for people to work together” (Interviewee 3, KIBS).

It becomes clear that innovation is considered to be critical to businesses operating in the Financial Services sector. However it is, generally, deemed to be hindered by the regulatory framework that prevails, particularly, after the Global Financial Crisis of 2009. The relevance of knowledge to financial service firms, and the degree of competitive advantage, which a firm can sustain, if it manages its knowledge efficiently, are well recognised amongst owner-managers. The situation which exists in the industry is that whilst diverse sources are well nurtured for the idea generation stage, networking in itself is not suitably exhausted, especially through the local Associations, these being used, generally, solely for lobbying and trouble shooting purposes. Internal communication is highly valued, but here again, the extent to which this is properly channeled and exercised is dubious, given that most of the interviewees related one-way type of communication. Another area that appears to be lacking is that of knowledge storage, with firms mostly religiously

recording proceedings of meetings etc. but not ever referring to the use of the documents being generated.

7.3 Absorptive Capacity in the financial services sector - A Quantitative Analysis

Table 7. 1 Profile of the financial sector employees participating in the survey

Source: Personal collection

Respondents	Sample %	
Gender	Males	42.00
	Females	57.10
	no response	0.90
Nationality	Locals	91.20
	Foreigners	8.00
	no response	0.80
Age	< 20	0.00
	21-29	32.30
	30-39	48.20
	40-49	11.50
	> 50	7.50
	no answer	0.50
Highest Education Achieved	Compulsory Education	15.00
	Post Secondary Level	10.60
	Diploma level	27.00
	Bachelor's Degree	31.00
	Post Graduate Level	16.40
Position held in organization	Top Management/owner	2.70
	Middle Management	33.60
	Clerical	30.50
	Other, manual	33.20
Number of employees	1 to 9	4.40
	10 to 49	21.20
	50 to 99	50.00
	100 to 250	24.40
Duration of employment with organization	< 1 year	0.00
	1-3 years	34.10
	4-6 years	16.80
	7-9 years	9.30
	10-15 years	9.30
	> 15 years	30.50

The investigation of the ACAP practices across the financial services sector proceeded with the analysis of the data that was captured from the survey questionnaires, which employees working in the service sector firms, completed. The quantitative data were filtered to select only the responses emanating from employees associated with the financial services sectors. Out of a total sample of 379 valid responses, 226 responses (i.e. 59.6% of the total sample) originated from the financial services sector, and were taken for further analysis. Table 7.1 details the general profile of the respondents. The gender balance of the financial services sample was slightly skewed in favour of females, with 129 (57%) females and 95 (42%) males. The sample was largely (91.2%) composed of local workers, with only 8% of the responses (18 subjects) being foreign. The age bracket of the respondents varied from 21 years to over 50 years with 32.3% of the sample aged between 21 and 29 years, 48.2% between the ages of 30 and 39, 11.5% between the ages of 40 and 49 years and 7.5% aged over 50. Only one respondent failed to divulge his age. A large proportion of the sample (47.4%) possessed recognised academic qualifications in the field, at either undergraduate (31%) or post graduate (16.4%). 27% of the sample had reached diploma level with a Diploma in Finance or Banking, whilst the remaining 25.6%, a considerable share of the sample, had completed compulsory education and sixth form. Half of the participants of this survey worked in organizations, which employed 50-99 workers, whilst 24% work in larger organizations having 100-250 employees. 4.4% worked in micro firms with fewer than 10 employees, whilst 21.2% worked in firms of a small size (according to EU recommendation 2003/361), which employed between 10 and 49 staff members. Broadly speaking, one third of the respondents occupied middle management (33.6%) positions, whilst a little less than one third (30.5%) occupied clerical positions, and another third, were manual workers (33.2%); only 2.7% of the respondents occupied top managerial positions or were the owners themselves.

7.3.1 Analysis of variances: A deeper investigation into the data from the sample of financial services firms

This section of the study will explore the analysis of variances in the responses of the Financial Sector sub-sample. To facilitate the comparative analysis, which is the ultimate aim of this research, the same 26 data points (table 5.4, page 196) are used here, as were used in the analysis of the total services sector (Chapter 5), and also the tourism sector (Chapter 6). These data points were identified following exploratory factor analysis. The forthcoming sections will explore the analysis of variance based on gender, nationality, age, academic background, position held in firm and number of employees in the firm and respondents' duration of employment.

7.3.2 Testing the distribution of the observations

Preliminary testing was conducted to explore the distribution of the observations. The Kolmogorov-Smirnov test and the Shapiro-Wilk test were conducted on each of the relevant 26 data points. Both tests reported significant, with $p < 0.5$ for each data point, therefore rejecting the null hypothesis that the data are normally distributed. An identical procedure to that used in Chapter 6 was adopted, where the skewness and kurtosis of each data point were examined as per Hair, Hult, Ringle and Sarstedt (2014). These results show that both skewness and kurtosis are in the acceptable range of $\pm|2|$ (ranging from -1.137 to -1.024 for skewness; and from -0.629 to 2.2530 for kurtosis). Authors recommend that these values are acceptable to prove normal distribution (George and Mallery, 2010; Gravetter & Wallnau, 2014; Trochim & Donnelly, 2006; Field, 2000 & 2009).

7.3.3 Analysis of variances: by gender

An independent samples t-test was conducted to compare the male and female responses, relating to 26 data points in the ACAP model for the KIBS firms. The responses were categorized into two groups: Group 1 represented the

male respondents and comprised 42% of the sample, whereas Group 2 represented the female respondents and comprised 57.1% of the respondents. 2 participants did not reveal their gender.

The differences in the responses were statistically significant for data points 21k, 23j and 24f, where the null hypothesis (H_0 : no difference in the means scores) was rejected, and the alternate hypotheses (H_1 : there exists a difference in the means scores) was accepted.

Data point 21k measured the construct Firm Practices, and assessed the extent to which the firm developed processes to capture ideas from its employees, where males ($M=0.1315$; $SD=0.9427$) and females ($M=-0.1509$ and $SD=0.0391$) with $[t(222)= 2.09$ and $p=0.038]$ at a confidence interval of 95%.

Data point 23j measured the construct Control, and assessed the extent to which the firm used employees' knowledge and skills effectively, where males ($M=-0.1861$; $SD=1.0352$) with $[t=(180)= -2.041$ and $p=0.043]$ at a confidence interval of 95%. Data point 24f measured Firm Openness and tested the degree to which the firm exploited new processes and/or products to improve business products and services, where males ($M=-0.1882$, $SD= 0.9896$) and females ($M=0.0802$ and $SD= 0.8805$) with $[t(222)=-2.1390$ and $p=0.034]$ at a confidence interval of 95%. Table 7.2 reports the independent samples t-test for these three data points.

Table 7.2 Analysis of variance by gender: Independent Samples Test (data points 21k, 23j and 24f)

Source: Personal collection

		t-test for Equality of Means					95% Confidence Interval of the Difference	
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
VAR21k	EVNA*	2.121	213	0.035	0.282	0.133	0.020	0.545
VAR23j	EVNA*	-2.041	180	0.043	-0.267	0.131	-0.524	-0.009
VAR24f	EVNA*	-2.101	188	0.037	-0.268	0.128	-0.520	-0.016

*EVNA Equal variances not assumed

The effect size for the statistically different means in data points 21k, 23j and 24f was calculated. Calculations estimated Cohen's d at 0.291, 0.304, and 0.307 for datapoints Var 21k, 23j and 24f respectively. A reading for Cohen's d ranging between 0.2 and 0.4 is reported as a small difference (Cohen, 1988). This means that although the responses given for data points 21k, 23j and 24f varied according to the respondent's gender, the reported differences can only be explained as having a small magnitude.

7.3.4 Analysis of variance: by nationality

The responses collected from the employees associated with the Financial Services sector were analysed to assess whether any existing variations could be pinned to the fact that the workers had different nationalities, and therefore cultural background and practices. The inference being made here is that one's nationality determines one's culture and this is also expressed in the manner in which an employee perceives and experiences his employment situation and surroundings. Independent samples testing was conducted at a confidence level of 95%. A close look at the results in revealed that all the data points respect the criterion $p > 0.05$. For this purpose, the null hypothesis, indicating that there is no statistical difference in the means of the data points under review, is accepted, and the alternate hypothesis, (that there exists a statistical difference in the means of the data points) is rejected. This finding implies that any differences in the responses of the participants of the questionnaire survey are not nationality-induced.

7.3.5 Analysis of variance: by academic background

Table 7.3 Description of the classification of the academic background of the survey respondents

Source: Personal collection

Group	Highest Academic attainment	Description	no of cases
1	Level 3	completed compulsory education	34
2	Level 4	completed post secondary education	24
3	Level 5	attained a level 5 diploma	61
4	Level 6	awarded undergraduate degree	70
5	Level 7	awarded post graduate degree	37

This section reports the results of the analysis of variance that were carried out to evaluate whether there existed any statistically significant differences in the responses, which resulted from differences in the academic background of the respondents. Each of the 226 participants in the sub sample (financial services sector) gave details of their academic background, and for the purpose of the analysis, these were organised into five categories: Group 1: those who completed compulsory education; Group 2 included all those subjects who had completed their post secondary education; Group 3 comprised of those respondents who had attained a diploma level in a financial related field; Group 4, those who had been awarded an undergraduate degree, whilst Group 5 included all those who had studied up to post graduate level (Table 7.3)

A one-way ANOVA test was run to analyse any differences in the means of the responses to the different data points. An examination of the results in reveals that all the data points respect the criterion $p > 0.05$. For this purpose, the null hypothesis, indicating that there was no statistical difference in the means of the data points under review, was accepted, and the alternate hypothesis (that there existed a statistical difference in the means of the data points) was rejected. This can be explained as arising from the fact that a large proportion (58%) of the respondents of this sub sample had a recognised level of training (Level 5 or level 6) in the field.

7.3.6 Analysis of variance: by age

Table 7.4 Description of the age classification of the respondents of the questionnaire survey

Source: Personal collection

Group	Age Bracket	No. of cases
1	younger than 20 years	0
2	20-29 years	73
3	30-39 years	109
4	40-49 years	26
5	older than 50 years	17
	no response	1

The age of the subjects who participated in the survey varied greatly (from 20 years to over 50 years), with, however, the larger proportion of the sample (80%) having ages ranging from 21-29 (32.3%) and from 30-39 (48.2%) (table 7.4). Analysis of variance using one-way ANOVA testing was conducted to explore whether any significant variations in the responses of the subjects could be attributed to age differences. The sub-sample (financial sector employee responses) was divided into five categories as follows: Group 1, those subjects who were younger than 20 years of age, i.e. 18-19 year old, new to the labour market; Group 2, represented those aged 20-29 years; Group 3, subjects aged 30-39 years of age; Group 4, subjects between the ages of 40-49 years of age and Group 5, representing those aged over 50 years. A visual check of the results of the one-way ANOVA test revealed that $p < 0.05$ for three data points Var21l, Var22a and Var23n, and, therefore, the null hypothesis was rejected, and the alternate hypothesis, that there existed a difference in the means of these three data points, was accepted for these three data points only.

The data points in the Financial Services sub sample, with a statistically significant difference, were looked at closely.

Data point Var21l explored the extent to which firm policies for idea generation and knowledge sharing were clear to all and measured the construct Firm Practices

Data point Var22a examined the strength of the working relationship amongst firms operating in the industry and measured the construct relating to firm Openness

Data point Var23n assessed the regularity with which interdepartmental meetings were organised to discuss developments and measured the construct relating to Intra-Firm Communication.

Post-hoc comparisons using the Tukey (HSD) test, indicated a similar pattern for both data points Var21l and Var23n. In data point Var21l the mean score of Group 2 (M= 0.1499, SD =1.0031) was different from that of Group 5 (M=-0.625; SD= 0.9516), and a difference between the responses of Group 2 (M= 0.2503, SD =0.964) and Group 5 (M= -0.5076, SD =1.1331) was also reported in Var23n whilst no differences were revealed for data point Var22a (Table 7.5).

Table 7.5 Multiple comparisons, Tukey HSD, data points 21l, 22a, 23n, by age

Source: Personal collection

Dependent Variable	(I) VAR educ	(J) VAR educ	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
VAR21l	2	5	.775	0.266	0.02	0.086	1.464
VAR23n	2	5	.758	0.264	0.023	0.073	1.442

Effect size, using omega squared (ω^2) (Field, 2013; Fritz, C. O., Morris, Page, E., & Richler, J. J. 2012), has been calculated for the differences in 21l and 23n. Both effect sizes for 21l and 23n indicate that although there exists a difference in the means square for the data points in question, this difference is only of a

small magnitude. This means that there only exist small differences in the responses between the age groups 2 and 5 for the data points 21l and 23n. What is interesting to note is that for both data points, the difference in means resulted between the precise age groups, i.e. age group 2, 21-29 year olds and age group 5, the over 50 year olds; that is, the younger generation of the employees in the organization, and the eldest generation in in the firm, who may also be higher ranking positions in the firm and, therefore, see the organization through a different lens.

7.3.7 Analysis of Variance: by respondent's position in the firm

Table 7.6 Description of the classification of the respondents' position in the firm

Source: Personal collection

Group	Position held in firm	No. of cases
1	senior management	6
2	middle management ream	76
3	clerical workers	69
4	manual workers	75
	no reply	0

One-way ANOVA testing was conducted to analyse whether employees' belief in the firm's ability to manage its knowledge to facilitate its absorptive capacity, depended upon the respondents' role in the firm. To enable the testing, all the respondents were classified into four categories according to the position they held in the firm, as follows: Group 1 represented those occupying top management positions, or, indeed, were the owners themselves; Group 2 comprised the respondents who occupied middle management positions; Group 3 encompassed those who held a clerical role, whilst Group 4, those who performed manual duties (table 7.6).

An analysis of the results of the one-way ANOVA test, conducted at a 95% significance level, revealed that the criterion $p > 0.05$ was breached at data points Var16a and Var22c (Table 7.7). For this reason, the null hypothesis (H_0) that there exists no difference in the means of data points Var16a and Var22c was rejected, and the alternate hypothesis, that there exists a difference in the means, was accepted.

Data point 16a measures the construct Leadership, and assesses the extent to which the firm continually scans the environment for the purpose of monitoring new market trends.

Data point 22c explores the degree to which the firm regularly engages with other firms from the local industry in an effort to learn about new trends, products and ideas, and gauges the construct Firm Openness.

Table 7.7 One-way ANOVA testing, data points 16a and 22c, based on position held in the organization

Source: Personal collection

		Sum of Squares	df	Mean Square	F	Sig.
VAR16a	Between Groups	8.119	3	2.706	2.910	0.035
	Within Groups	206.485	222	0.930		
VAR22c	Between Groups	14.756	3	4.919	5.069	0.002
	Within Groups	215.425	222	0.970		

Post-hoc comparisons using the Tukey HSD test did not reveal any difference between any of the groups 1-4 in the means of data point 16a ($F(3, 222)=2.91$, $p = 0.035$), and it was, consequently, concluded that a statistically significant difference in the means values of data point Var16a did not exist. Conversely, statistically significant differences were revealed for data point Var22c between Group 1 and each of Groups 2, 3 and 4 ($F(3, 222)=5.069$, $p = 0.002$) (Table 7.8). In fact, the post-hoc Tukey HSD test revealed that the mean score of Group 1 ($M=1.4116$, $SD= 0.5256$) was significantly different from that of Group 2

($M=-0.1877$, $SD= 0.999$) , Group 3 ($M=-0.1778$, $SD=1.0051$) and Group 4 ($M=-0.0742$, $SD= 0.9752$)

Table 7.8 Multiple Comparison, Tukey HSD, data points 22c, based on position held in the organization

Source: Personal collection

Dependent Variable	(I) VAR position	(J) VAR position	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
VAR22c	1	2	1.599	0.418	0.001	0.518	2.681
		3	1.589	0.419	0.001	0.504	2.675
		4	1.485	0.418	0.003	0.404	2.568

The effect size of the statistical difference in the means scores of data point Var22c was calculated using the measure omega squared, ω^2 . With $\omega^2 = 0.0106$, the effect size was considered to be small. This meant that although there was a statistically significant difference in the mean scores of the groups in data point Var22c, the position held in the firm by the respondents only had a small impact on the overall answers of the sample.

This means that the responses of the participants from the financial services sector, are not at all particularly dependent on the rank the employee occupies in the organization.

7.3.8 Analysis of Variance by employees' length of service to the firm

Table 7.9 Description of the classification of the length of service of the participants in the questionnaire survey

Source: Personal collection

Group	Length of service in firm	No. of cases
1	less than one year	0
2	1-3 years	77
3	4-6 years	38
4	7-9 years	21
5	10-15 years	21
6	more than 15 years	69
	no response	0

A one-way ANOVA was conducted to determine whether any of the responses of the participants varied according to the length of service they had given to the organization they worked for. Each of the 226 survey respondents divulged this detail. The responses were later classified into 6 categories: Group 1, comprised those who had not yet spent a year working for the organization; Group 2, those who had spent between 1 and 3 years; Group 3, those between 4 and 6 years; Group 4, those between 7 and 9 years; Group 5, those between 10 and 15 years and Group 6 those who had been working for the firm for more than fifteen years (table 7.9). The one-way ANOVA test was conducted at a 95% confidence interval and it revealed that the $p > 0.05$ criterion was only violated for one data point, 21h [$F(4, 221) = 2.808, p = 0.027$] (Table 7.10). A post-hoc comparison using the Tukey HSD test, however, did not reveal any variations between the groups of this data point. Therefore, it was concluded

that there existed no statistically significant differences between the groups of this data set.

Table 7.10 Analysis of variance, length of service of employees for data point 21h

Source: Personal collection

		Sum of Squares	df	Mean Square	F	Sig.
VAR21h	Between Groups	10.365	4	2.591	2.808	0.027
	Within Groups	203.98	221	0.923		

This reveals that the subjects of Financial Services sector perceived their firm to behave in the same manner independently of the length of service of the respondent and of his/her consequent familiarity with firm practices.

7.3.9 Analysis of Variance by number of employees working in the organization

Table 7.11 Description of the grouping of the size of firms (using the number of employees as a proxy)

Source: Personal collection

Group	Number of employees in firm	No. of cases
1	fewer than 10	10
2	10 to 49	48
3	50 to 149	113
4	150-250	55
	no response	0

Tests were conducted to assess whether there existed any variation in the responses of the participants, which could be attributed to the size of the organization. For this purpose the responses of the 226 participants of the Financial Services Sector were classified into four categories: Group 1, those responses of participants who worked in firms employing fewer than ten employees; Group 2, responses emanating from participants who worked in firms employing between 10 and 49 staff members; Group 3, responses of participants working in larger firms employing between 50 and 99 workers, and Group 4, comprised those responses, which emanated from firms employing between 100 and 250 staff members (table 7.11). One-way ANOVA testing, at a confidence level of 95%, was conducted to check for statistically significant means scores. Upon examination of the results of the tests, it was revealed that at a confidence level of 95%, the $p > 0.05$ criterion was violated for the following 7 data points, as follows :

Var21h [F (3, 2.68), $p = 0.048$];

Var21k [F (3, 3.575), $p = 0.015$];

Var22g [F (3, 3.009), $p = 0.031$];

Var22h [F (3, 3.517), $p = 0.016$];

Var23h [F (3, 2.924, p = 0.035];
 Var23i [F (3, 3.594), p = 0.014]; and
 Var24f [F (3, 3.197), p = 0.024] (Table 7.12).

The null hypothesis (H_1 : there exists no statistically significant difference between the means score) was, therefore, rejected and the alternate hypothesis (H_0 : that there exists a statistically significant difference between the means score) was accepted for each of the data points Var 21h, Var 21k, Var 22g, Var Var 22h, Var 23h, Var 23i, and Var 24f.

Table 7.12 Analysis of variance, by number of employees for data points 21h, 21k, 22g, 22h, 23h, 21i, 24f

Source: Personal collection

		Sum of Squares	df	Mean Square	F	Sig.
VAR21h	Between Groups	7.491	3	2.497	2.68	0.048
	Within Groups	206.853	222	0.932		
VAR21k	Between Groups	10.531	3	3.51	3.575	0.015
	Within Groups	217.975	222	0.982		
VAR22g	Between Groups	8.587	3	2.862	3.009	0.031
	Within Groups	211.147	222	0.951		
VAR22h	Between Groups	10.209	3	3.403	3.517	0.016
	Within Groups	214.779	222	0.967		
VAR23h	Between Groups	8.312	3	2.771	2.914	0.035
	Within Groups	211.076	222	0.951		
VAR23i	Between Groups	10.312	3	3.437	3.594	0.014
	Within Groups	212.352	222	0.957		
VAR24f	Between Groups	8.243	3	2.748	3.197	0.024
	Within Groups	190.79	222	0.859		

Data point Var 21h measures the construct Firm Practices, and assessed the extent to which firm encouraged employees to share new market, technical or other knowledge with their colleagues.

Data point Var 21k also measured the construct Firm Practices, and examined the degree to which the firm developed processes to capture ideas from its employees.

Data point Var 22g assessed the extent to which management regularly attended informal meetings to discuss new trends and ideas.

Data point Var 22h examined the degree to which the search for relevant information regarding new ideas was embedded in the culture of the firm.

Data point Var 23i measured the extent to which the employees had a clear understanding of who is responsible for the sharing of information within the organization. Each of the three data points Var 22g, Var 22h and Var 23i measured the construct Firm Openness, whilst data point Var 24f measured the construct Exploitation, and assesses the extent to which the firm exploited new processes and/or practices to improve business products and services.

Post-hoc comparisons using Tukey HSD test indicated that there were no identifiable differences between the means scores of any of the groups in data points Var 21h and Var 23h, but revealed a difference between the mean score of :

Group 3 (M = -0.1908, SD = 1.0786) and Group 4 (M = 0.3245, SD = 0.824) for data point Var 21k;

Group 2 (M = -0.2331, SD = 0.9317) and Groups 3 (M = -0.147, SD = 1.0036) and 4 (M = 0.2697, SD = 0.8949) for data point Var 22g;

Groups 3 (M = -0.2286, SD = 1.0642) and 4 (M = 0.281, SD = 0.9284) for data point Var 22h and

Groups 1 (M = 0.8196, SD = 0.5658) and 3 (M = -0.1691, SD = 1.0446) for data point Var 23i (Table 7.13)

Table 7.13 Multiple comparisons using Tukey HSD test for data points 21k, 22g, 22h, 23i according to number of employees in the firm

Source: Personal collection

Dependent Variable	(I) VAR employees	(J) VAR employees	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
VAR21k	3	4	-.515	0.163	0.01	-0.937	-0.094
	4	3	.515	0.163	0.01	0.094	0.937
VAR22g	2	4	-.503	0.193	0.047	-1.001	-0.004
	3	4	-.417	0.160	0.049	-0.832	-0.002
VAR22h	3	4	-.510	0.162	0.01	-0.928	-0.091
VAR23i	1	3	.989	0.323	0.013	0.153	1.824

Effect size was calculate using omega squared (ω^2), with effect sized estimated at:

ω^2 (Var 21k) = 0.033, considered to be a small effect size;

ω^2 (Var 22h) 0.026, considered to be a small effect size;

ω^2 (Var 22g) = 0.323, considered to be a small effect;

ω^2 (Var 23i) = 0.0333, considered to be a small effect.

This implies that the participants in the survey did not respond differently as a result of the differing sizes of the firms in which they worked.

The above comprehensive analysis of variance concludes that within the financial services firms, none of the differences in the responses given by the employees to explain the knowledge management of the firm could be attributed to differing nationality, academic background or length of service of the workers. The tests revealed that differences in the way in which the employees perceived the effectiveness of firm practices and intra-firm

communication for the exploitation of knowledge could be attributed to differences in gender and age variations. Variations in the position held in the firm by employees and the size of the firm, caused some variation in the perception of the effectiveness of Firm Openness on knowledge exploitation, while the size of the firm caused variations in the manner in which employees believed the firm exploited knowledge. This analysis reveals considerable variation within the behaviour of the firms within financial services industry.

7.4 Testing correlation: the framework for the Financial Services sector

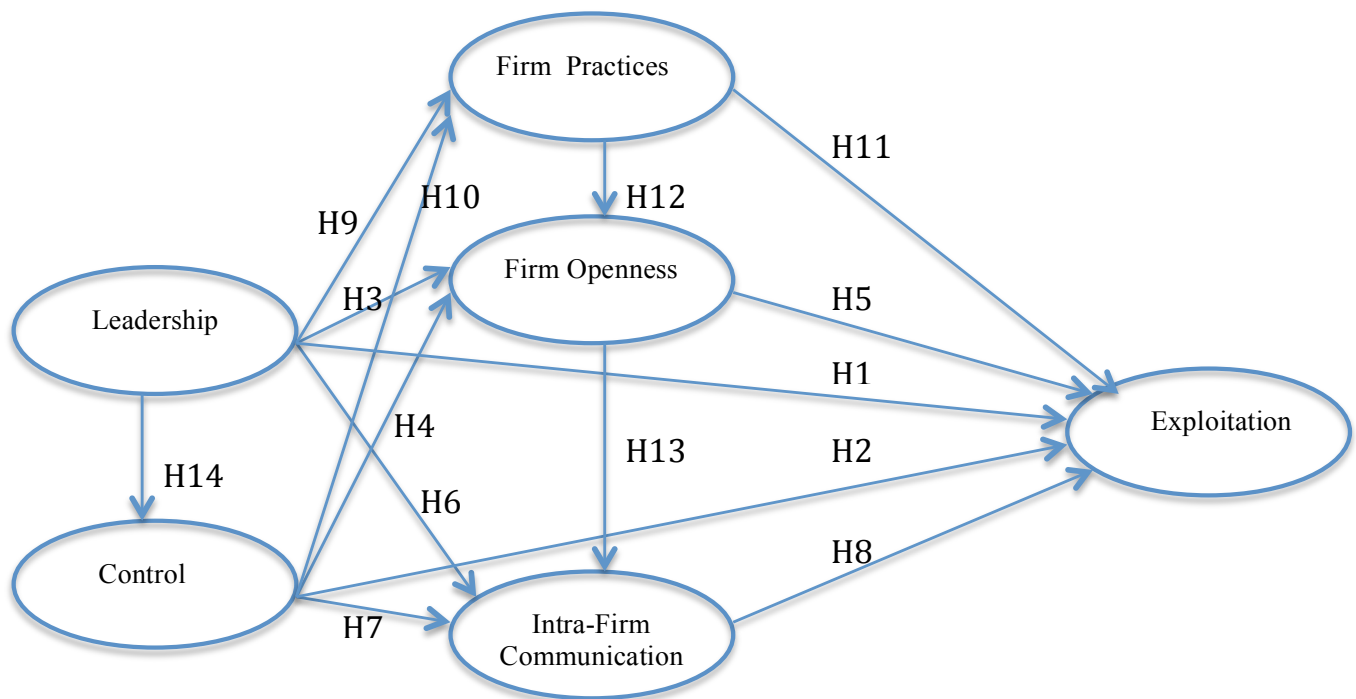
7.4.1 The hypotheses, revisited

The conceptual model, reproduced here below, in figure 7.1, and originally found in Chapter 5, figure 5.1, page 184) was used to test ACAP in the Financial Services Sector. The purpose of using the same conceptual model is to enable a comparative analysis of the case between the NKIBS (i.e. the tourism sector) and the KIBS (i.e. the financial services sector). Tests will be conducted using Structural Equation Modeling to assess the suitability of the baseline model to the Financial Services Sector.

The baseline model shows the relationship between six constructs, namely: Leadership, Control, Firm Practices, Firm Openness, Intra Firm Communication and Knowledge Exploitation, and in so doing tests the validity of the fourteen hypotheses laid out in Chapter 5, section 5.2 (table 5.1, page 179) which have been tested for the full services sector and also for the tourism sector, and the financial services sector.

Figure 7.1 The conceptual model

Source: Personal collection



Correlation analysis, using Pearson Correlation testing was conducted to assess the degree of interrelationship between Exploitation and each of the other five constructs in turn: Leadership, Control, Firm Practices, Firm Openness and Intra Firm Communication. The data were first examined for normality of distribution, a required condition for Pearson Correlation testing. Normality of distribution was assessed by evaluating the skewness and kurtosis of each of the constructs (and ensuring that the values respected the range ± 2 (George and Mallery, 2010; Gravetter & Wallnau, 2014; Trochim & Donnelly, 2006; Field, 2000 and 2009).

Preliminary testing showed the relationship between the constructs to be linear, and normally distributed, with no outliers. Each of the construct resulted to be normally distributed .

Five Pearson correlation tests were conducted as follows:

Firm Practices → Exploitation;

Control → Exploitation;

Leadership → Exploitation;

Firm Communication → Exploitation;

Firm Openness → Exploitation

The tests were conducted to assess the relationship between each of the constructs in turn, and Knowledge Exploitation, representing the effective use of knowledge within the firm. A summary of these results of the correlation testing, with $p < 0.05$, is reported in table 7.14 below.

Table 7.14 Pearson Correlation coefficients of the constructs in the model

Source: Personal collection

	Firm Openness	Firm Practices	Control	Leadership	Firm Communication
Exploitation	0.474	0.526	0.355	0.428	0.612
Strength of correlation	Moderate and positive	Large and positive	Moderate and positive	Moderate and positive	Large and positive

*Correlation is significant at the 0.01 level (2-tailed), $p < 0.01$

7.5 Structural Equation Modelling

The hypothesized model was estimated using SMART PLS 3.2.6 (Ringle, Wende, Becker, 2015) using a procedure identical to the one adopted in generating the hypothesized model in Chapters 5 (Section 5.6.2, page 226) and 6 (Section 6.5.2, page 276). The Partial Least Squares method (PLS) assesses the model fit by multiple fit indices, namely: R^2 values, average variance explained (AVE), path loadings, and Goodness of Fit index (GoF) (Lohmöller, 1989). GoF is measured by assessing the root mean square residual (SRMR) as in Henseler, Dijkstra, Sarstedt, Ringle, Diamantopoulos, Straub, Ketchen,

Hair, Hult, and Calantone, 2014). SRMR= 0.083 (and is less than the cut-off value of 1.0), indicating a good fitness of the model. AVE and the path loadings will be assessed in section 7.5.1, whilst R^2 , the amount of explained variance of endogenous latent variables in the structural model, will be assessed in the subsequent section.

7.5.1 The Measurement Model

The method adopted to investigate the reliability and validity (convergent and discriminant) of the constructs, when applied solely to the Financial Service sector, was the same as that used in the analysis of the total services sector model (Chapter 5) and also the tourism sector (Chapter 6), and followed the guidelines laid out by Anderson and Gerbing (1998). Figure 7.2 and Table 7.15 present the results of the assessment of the measurement model solely for the Financial Services sub-sector. Figure 7.2 illustrates the reflective measurement model with the six constructs and the corresponding latent variable (related to a unique question in the survey instrument) associated to each construct. Composite reliabilities are above the 0.7 cut off point, (range from 0.807 to 0.901), suggesting that the scales are reliable (Fornell and Larcker, 1982; Nunnally and Bernstein, 1995). Cronbach alpha, a rather conservative measure of internal reliability was also calculated, with values reported to be greater than 0.642, indicating a satisfactory level of internal consistency (Nunnally and Bernstein, 1994). Figure 7.2 reports the factor loads, together with a measure of the average variances explained (AVE) reported in table 7.16 assess convergent validity. Factor loadings are greater than or equal to 0.604, (ranging from 0.604 to 0.899), and significant ($p < 0.01$), with t values ranging from 8.102 to 44.455. The extracted AVEs are above 0.5 (ranging from 0.504 to 0.7), establishing the measure's convergent validity (Fornell and Larcker, 1981).

Figure 7.2 The Measurement Model for the Financial Services Sector

Source: Personal collection

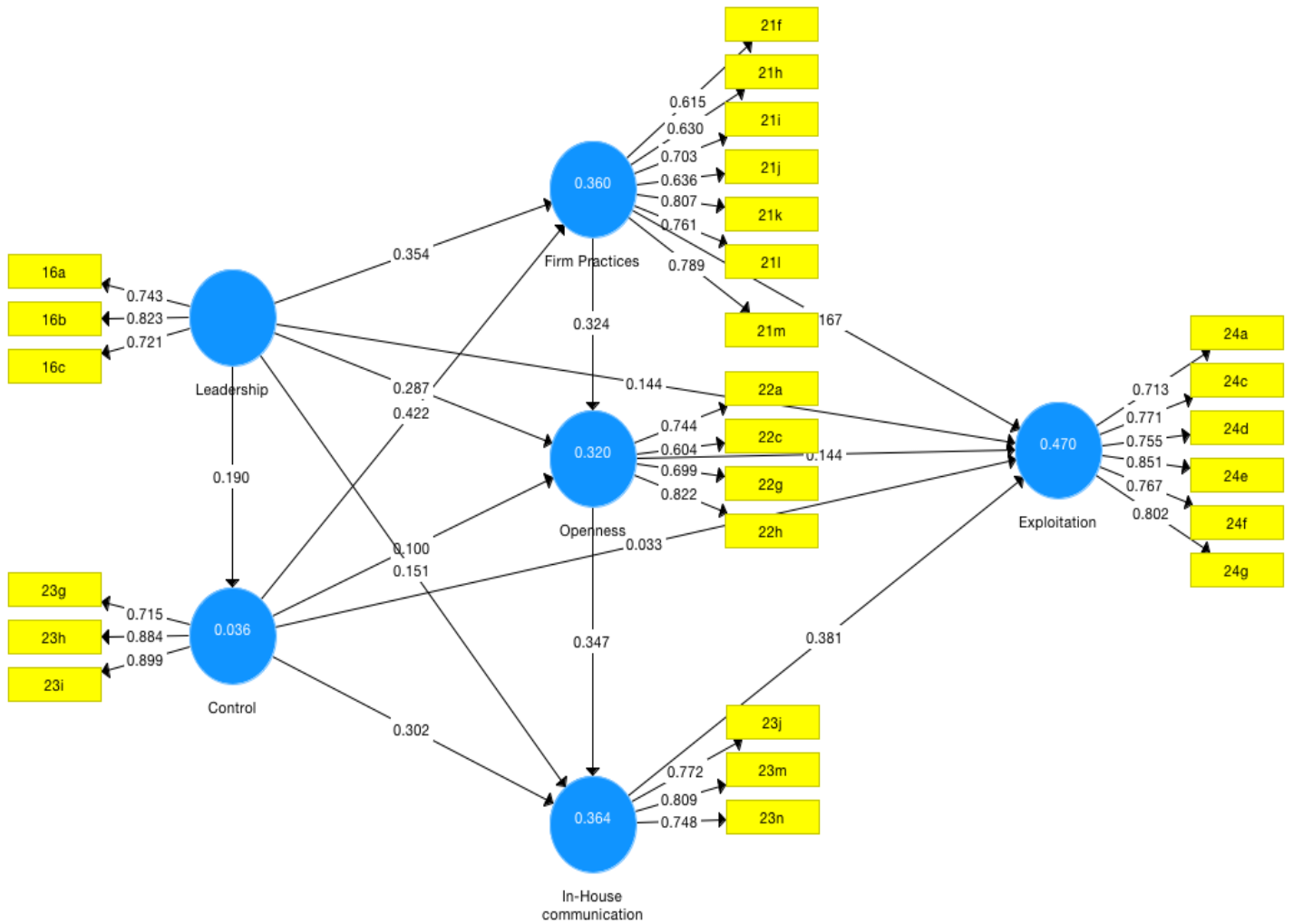


Table 7. 15 Assessment of the measurement model for the Financial Services Sector

Source: Personal collection

	Factor Loadings	t statistic	Cronbach's Alpha	rho_A	Composite Reliability	AVE**
Leadership			0.642	0.65	0.807	0.583
16a	0.743	15.881*				
16b	0.823	22.931*				
16c	0.721	12.713*				
Firm Practices			0.834	0.847	0.876	0.504
21f	0.615	10.059*				
21h	0.63	11.299*				
21i	0.703	14.674*				
21j	0.636	11.297*				
21k	0.807	28.344*				
21l	0.761	20.368*				
21m	0.789	26.678*				
In-House communication			0.672	0.673	0.82	0.603
23j	0.772	22.343*				
23m	0.809	24.540*				
23n	0.748	20.240*				
Openness				0.741	0.811	0.521
22a	0.744	18.423*				
22c	0.604	8.102*				
22g	0.699	12.723*				
22h	0.822	30.605*				
Control			0.779	0.789	0.874	0.7
23g	0.715	13.853*				
23h	0.884	41.264*				
23i	0.899	40.575*				
Exploitation			0.869	0.874	0.901	0.605
24a	0.713	15.748*				
24c	0.771	22.307*				
24d	0.755	20.945*				
24e	0.851	44.455*				
24f	0.767	16.912*				
24g	0.802	27.292*				

significant at the 0.05 confidence level

**AVE Average Variance explained

Once convergent validity was established, the next step was to assess the discriminant validity of the measurement model and to confirm the uniqueness of each construct in the framework (Hair, Black, Babin, Anderson, 2014).

Discriminant validity was investigated by comparing the square roots of the AVE for the individual constructs among the latent variables. The results of the square roots of the average variance explained are reported in table 7.16. Confirming that all the diagonal elements are greater than the off-diagonal elements suggests there is strong evidence of discriminant validity (Barclay, Thompson and Higgins, 1995; Fornell and Larcker, 1981).

The above analysis therefore confirms the reliability and validity of the measurement model and contributes towards confirming a good fit of the overall model.

Table 7. 16 Inter-construct Correlations: Discriminant Validity for the Financial Services Sector

Source: Personal collection

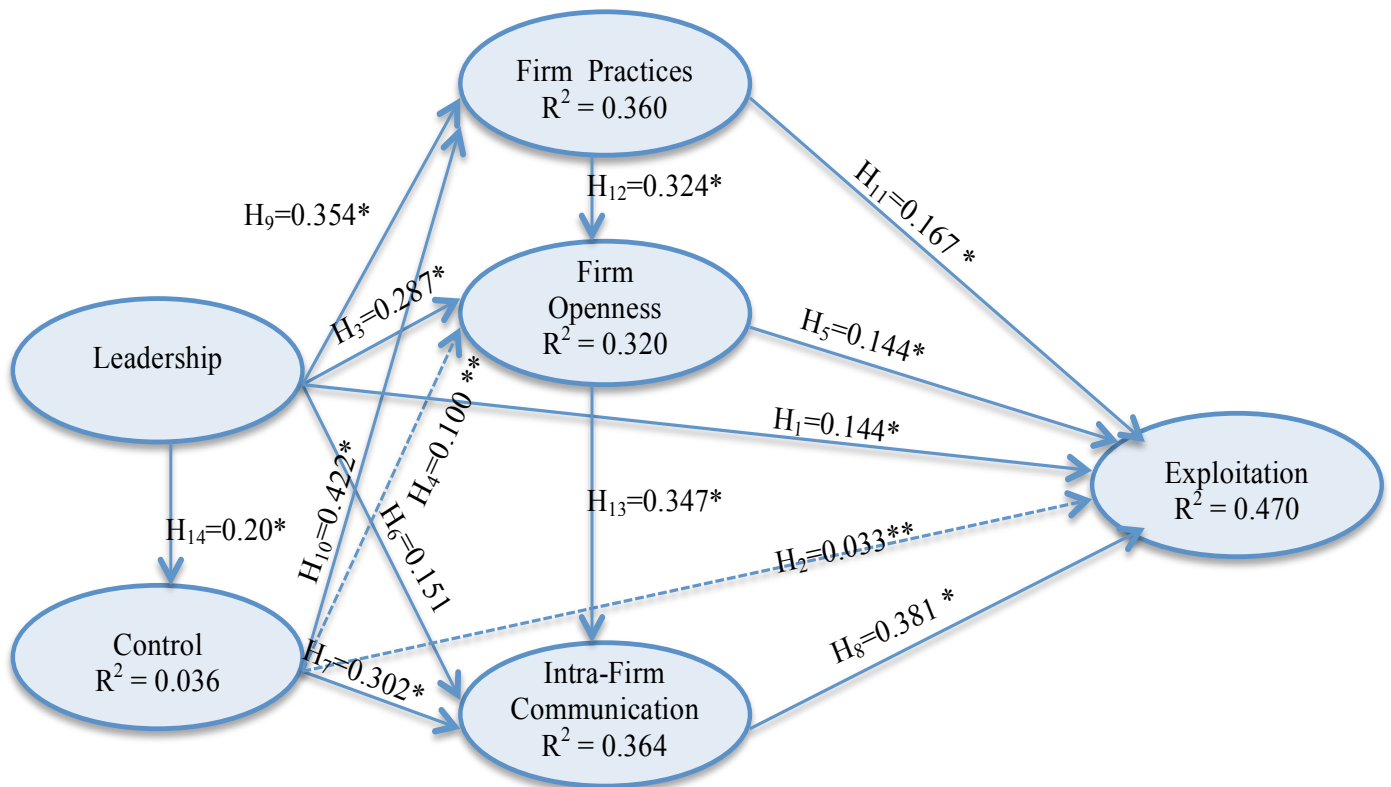
	Control	Exploitation	Firm Practices	In-House communication	Leadership	Openness
Control	0.837					
Exploitation	0.355	0.778				
Firm Practices	0.49	0.538	0.71			
In-House Communication	0.439	0.618	0.578	0.777		
Leadership	0.19	0.425	0.434	0.364	0.764	
Openness	0.313	0.496	0.497	0.509	0.446	0.722

Note: Square root of AVE is shown on the diagonal of the matrix in boldface; Inter-construct correlation is shown off the diagonal.

7.5.2 The Structural Model

Figure 7.3 Results for the Structural Model for the Financial Services Sector (KIBS)

Source: Personal collection



* Significant at the 0.05 level
 ** n.s.: not significant at the 0.05 level

The structural model was evaluated by conducting a bootstrapping procedure, similar to the process adopted when evaluating the structural model for the total services sector in Chapter 5 and for the tourism sub-sector in Chapter 6. R² estimates, standardised coefficients (β) and significance level (t-statistic) were the measures used in the evaluation. Figure 7.3 shows that the values of R² range from 0.32 to 0.47 for four of the constructs: Firm Practices (0.36); Firm openness (0.32); Intra-Firm Communication (0.364) and Exploitation (0.47), revealing that the predictors have moderate capabilities at explaining the endogenous construct. R² measures a mere 0.036 for the construct Control

indicating that the chosen predictors (Var23g, Var23h and Var23i) do not explain the construct Control well enough in the financial services sector. This is in contrast to the value of R^2 calculated in chapter 5 for the total services sector sample (0.33), which reveal an satisfactory explanatory power.

The standardised path loadings and the t-statistics calculated for the hypothesized relationships in the financial services sector are reported in Table 7.17.

Table 7.17 Results, using PLS, of the hypothesized model for the Financial Services Sector

Source: Personal collection

Hypothesis	Path	T	P	Do the results support the hypotheses?	
	Coefficient	Statistics	Values		
H 01	Leadership -> Exploitation	0.144	2.269	0.024	Yes
H 02	Control -> Exploitation	0.033	0.593^{n.s.}	0.553	No
H 03	Leadership -> Openness	0.287	4.420	0	Yes
H 04	Control -> Openness	0.100	1.521^{n.s.}	0.129	No
H 05	Openness -> Exploitation	0.144	2.086	0.038	Yes
H 06	Leadership -> In-House communication	0.151	2.170	0.03	Yes
H 07	Control -> In-House communication	0.302	4.961	0	Yes
H 08	In-House communication -> Exploitation	0.381	5.792	0	Yes
H 09	Leadership -> Firm Practices	0.354	6.127	0	Yes
H 10	Control -> Firm Practices	0.422	8.122	0	Yes
H 11	Firm Practices -> Exploitation	0.167	2.605	0.009	Yes
H 12	Firm Practices -> Openness	0.324	4.906	0	Yes
H 13	Openness -> In-House communication	0.347	4.822	0	Yes
H 14	Leadership -> Control	0.190	2.914	0.004	Yes

* significant at the 0.05 confidence level
n.s. not significant

Hypotheses 1 and 2 test the relationship between the leadership style and the organization benefits achieved from a particular style of leadership. The standardised estimate path coefficients for hypothesis 1 ($\beta = 0.144$, $p < 0.05$) confirm a positive relationship between the leadership characteristics in an SME and the ability of the firm to exploit benefits from ACAP. These results confirm theory (Durst and Edvardsson, 2012; Lynskey, 2004; Webster, 2004), which posits the direct relationship between leadership style and the firm's ability to accumulate and exploit ACAP. A non-significant path emerges from the results for hypothesis 2 ($\beta = 0.033$, $p > 0.05$), rejecting the hypothesis that the controlling nature of the owner-manager in an SME has a positive impact on the firm's ability to exploit the benefits of ACAP and confirming previous research (Daft, 2007).

Hypotheses 3 and 4 test the relationship between a financial service sector SME's networking and external knowledge exchange and the firms ability to exploit ACAP. Results for H3 ($\beta = 0.287$ $p < 0.05$) confirm a positive relationship and link networking and external knowledge exchange with beneficial and more efficient ACAP exploitation in financial services sector SMEs. However, results for and H4 ($\beta = 0.100$, where $p > 0.05$, rejects the hypothesis, which tests the positive relationship between the leader's control of the organization and its ability to relate with firms in the financial services industry industry in an effort to exploit its ACAP.

Hypothesis 5 ($\beta = 0.144$, $p < 0.05$) confirms the positive relationship between Firm Openness and Exploitation and upholds the influence of Firm Openness on the competitive advantage obtained from ACAP.

H6 ($\beta = 0.151$, $p < 0.05$), H7 ($\beta = 0.302$, $p < 0.05$), and H8 ($\beta = 0.381$, $p < 0.05$) test the extent to which social mechanisms and relational capabilities are employed within the financial services sector SMEs and the degree to which these are considered to be valueable.

The support of H3, H4 and H5 reaffirms the work of Nahapiet and Ghoshal, (1998) and Grandinetti, (2016), who posit the positive impact of firm openness,

in the form of networking and the external acquisition of knowledge, for the exploitation of ACAP in SMEs. The results obtained support a positive relationship for each of the hypotheses, and confirm that desirable leadership characteristics have a positive effect on intra-firm communication (H6); that the appropriate degree of control exercised by the owner-manager will have a positive influence on intra-firm communication (H7); and that H8, intra-firm communication, has a positive influence on the firm's ability to exploit ACAP. These results are in support of theory, which specifies the direct relationship between effective intra firm communication and enhanced ACAP within the organisation (George and Zahra, 2002; Todorova and Durisin, 2007). The results also support Blazevic and Lievens (2004), who state that it is communication that enables the assimilation and sharing of knowledge and consequent innovation within the organization, and reiterate that it is only those employees who possess the desire and the ability to communicate with their colleagues, that facilitate knowledge transfer and innovation.

The next five hypotheses test the extent to which 'internal antecedents' of the firm impact upon the financial services sector firm's ability to capitalise on ACAP. The reported results in table 7.17 establish the presence of a positive relationship and support each of the hypotheses: H9 ($\beta = 0.354$, $p < 0.05$), H10 ($\beta = 0.422$, $p < 0.05$), H11 ($\beta = 0.167$, $p < 0.05$), H12 ($\beta = 0.324$, $p < 0.05$) H13 ($\beta = 0.347$, $p < 0.05$). This implies that there exists a positive relationship between the leadership qualities and the firm practices and policies (H9); that an excessive degree of control exercised by the owner-manager will impact negatively on firm practices and policies (H10); that firm practices and policies will positively affect the firm's ability to exploit its ACAP advantages (H11); as well as on the relational capabilities of the organization (H12); and that there exists a positive link between firm openness and the degree of intra-firm communication (H13). Hypothesis 14 ($\beta = 0.19$, $p < 0.05$) is also supported and confirms a causal relationship between Leadership and Control, indicating that there exists a negative relationship between the style of leadership of the organization and the degree of control exercised by the owner-leader of firm. These results uphold theory (Lane and Lubatkin, 1998; Lane, Salk and Lyles, 2001; Van den Bosch, Volberda and De Beer, 1999), which links organizational strategies and organizational process to the effective exploitation of ACAP.

7.6 Summary

The following section summarises the results presented for the financial services sector firms representative of the KIBS. Analysis of variance testing was conducted to inspect whether any significant variations in the respondents of the participants could be attributed to specific factors such as varying gender, nationality, academic level, age, size of firm, position held in the firm and the length of service in the current firm. Table 7.18 synthesises the results of the analysis of variance testing and reveals that statistically significant differences in the respondents of the questionnaire survey were identified in 10 out of the 26 valid datapoints. The variations in the answers of the respondents all had a small size effect and were identified as follows: Var21k, Var23j and Var24f caused by gender differences; Var21l, Var 23n caused by differences in the ages of the respondents; Var21k, Var22g, Var22h, Var23i caused by the difference in the size of the firm where the respondents worked; and Var22c caused by variations in the role and grade occupied in the firm by the respondent. No variations in the responses were caused by differences in nationality, academic levels, and respondents' length of service with the firm.

Table 7.18 Analysis of variance: a summary of results for the financial services sector firms

Source: Personal collection

Analysis of variance by:		Data point	Construct	Effect Size
Gender	Var21k	The firm has developed processes to capture ideas from employees	Firm Practices	small
	Var23j	The firm uses employees' knowledge and skills effectively	Intra-firm communication	small
	Var24f	Exploiting new processes and practices to improve business products and services	Exploitation	small
Nationality	-	-	-	-
Academic level	-	-	-	-
Age	Var21l	Firm policies for idea generation and knowledge sharing are clear to all employees	Firm Practices	small
	Var23n	Interdepartmental meetings are organised regularly to discuss developments	Intra-firm communication	small
Size of firm	Var21k	The firm has developed processes to capture ideas from employees	Firm Practices	small
	Var22g	Management regularly attends informal meetings (lunch, talks, social gatherings etc.) to discuss new trends and ideas	Intra-firm communication	small
	Var22h	The search for relevant information regarding new ideas is embedded in the culture of the firm	Intra-firm communication	small
	Var23i	Employees have a clear understanding of who is responsible for the dissemination/sharing of information within the organization	Control	small
Position held in the firm	Var22c	The firm regularly engages with other players from local industry to learn about new trends, products, and ideas.	Intra-Firm Communication	small
Length of service	-	-	-	-

The analysis of the quantitative data indicates that twelve of the fourteen hypotheses have been upheld for the financial services sector (for summary of results see Table 7.18). The hypotheses that have been rejected are hypothesis 2 (Control è Exploitation) and hypothesis 4 (Control è Openness). Hypothesis 2 was used to partially assess the relationship between size and leadership and the ACAP of the organization (research objective 1), whilst H4 was crafted to explore research objective 3, and, partially, investigated the relationship between the external strategies and policies of the firms and their ability to exploit ACAP. This means that the degree of control, which the owner-manager exerts on the firms, is not conducive to the exploitation of ACAP in financial sector SMEs. These results are in contrast to those obtained when the hypotheses were tested for the total services sector and the tourism sector sub sample. In the case of the total services sector and the tourism sector, the results show that *all* the hypotheses were supported, except hypothesis 11 Leadership è Exploitation. A divergence, therefore, exists between the total services sector and the tourism sector (NKIBS) and the financial services sector, particularly, representing the KIBS, to the extent that, whilst the relationship between control and firm openness drives the exploitation of ACAP in the tourism sector firms, it does not do so in the financial sector organizations.

Table 7.19 Summarising the results from the financial services sector firms

Source: Personal collection

Research Objective	Hypotheses	Do the results support the hypotheses?
To assess the effect that firm <i>size</i> and <i>leadership</i> have on ACAP and to understand how firms overcome any limitations posed by these features	H1 Leadership -> Exploitation	Supported
	H2 Control -> Exploitation	NOT Supported
	H14 Leadership -> Control	Supported
To explore the <i>internal</i> strategies, policies, and procedures which SMEs adopt to expand and capitalise on their knowledge resources.	H6 Leadership -> In-House communication	Supported
	H7 Control -> In-House communication	Supported
	H8 In-House communication -> Exploitation	Supported
	H9 Leadership -> Firm Practices	Supported
	H10 Control -> Firm Practices	Supported
To explore the <i>external</i> strategies, policies, and procedures which SMEs adopt in order to acquire and manage knowledge.	H11 Firm Practices -> Exploitation	Supported
	H3 Leadership -> Openness	Supported
	H4 Control -> Openness	NOT Supported
The extent of the relationship between research objectives 2 and 3 i.e. between the internal and the external strategies of the firm	H5 Openness -> Exploitation	Supported
	H12 Firm Practices -> Openness	Supported
	H13 Openness -> In-house communication	Supported

Chapter 8

An Inter-sectorial Comparison

8.1 Introduction

The correct and effective management of a firm's knowledge base is a decisive ingredient, able to position one's firm advantageously ahead of its competitors (Spender, 1996; Teece, 2001). This study has focused on evaluating the knowledge management practices of service sector firms operating in disparate industries, which are distinguished by the extent to which they are dependent on knowledge (KIBS and NKIBS). The tourism sector usually buys in technical knowledge (eg. knowledge of IT people and data analysts for innovations in revenue management, on line booking systems) extensively to ensure that the sector can be proactive in identify changing consumers' needs and tastes regarding, for instance, travel services, accommodation arrangements, food and beverage etc. Whilst it is essential that the employees in the tourism sector are equipped with the relevant knowledge to be able to perform their jobs efficiently, the knowledge requirement of this sector is not of a specific technical (i.e. engineering, I.T., R&D etc.) or of a professional (legal, accounting, management consultancy etc.) genre. The very nature of the financial services sector, on the other hand, is such that it is entirely dependent on knowledge that is both technical and professional. The financial services sector would be at a complete standstill without the constant input from employees equipped with banking knowledge, investment expertise, legal and financial know-how, support from computer scientists, economists and other employees with similar specialised backgrounds. Whilst all businesses rely on knowledge-based activities, some sectors, such as the financial services firms, require higher level knowledge activities, as the very nature of the service they perform is directly reliant on the mastery of this knowledge. This contrasting feature highlights the discussion around the relevance each sub-sector extends to the management of its knowledge base: whilst the tourism sector (here represented exclusively by hotels, owing to the ease of accessing hotels) relies on knowledge and its effective management to be able to *enhance* the industry's competitiveness, the financial services sector cannot operate *at all*,

unless, it is furnished with a workforce equipped with the necessary professional and technical knowledge.

This major disparity between the very nature of the two industries justifies an investigation into the processes and practices adopted by firms in each industry in order to support the service they provide. In view of this, the current chapter provides a comparison between the results of the investigation carried out in previous chapters, around the knowledge practices of the tourism firms and those of the financial services firms. The purpose of this comparative analysis is to evaluate the extent to which the KIBS and the NKIBS firms view innovation, and how they respond by implementing internal processes, which positions the firm to exploit its knowledge to commercial aims.

This chapter will start by combining the results of both the qualitative and the quantitative phase of the inquiry in order to explore the extent of any divergence that exists between the two industries. The first part of this chapter will adopt a thematic approach, and will evaluate each sector's view of innovation, as well as the knowledge management processes adopted within each industry. The analysis will focus on the extent of the impact criteria such as: firm size, leadership and control, staff engagement, intra- and inter-firm communication and the firms' exploitation of knowledge itself, have on the knowledge management processes adopted within each industry. The second part of the chapter will look at the results from the Multigroup Structural Equation Modelling that has been used to measure the invariance across the two independent groups of firms. The chapter will conclude by determining whether the degree of heterogeneity *within* each sub sample (i.e. tourism and financial service firms) compares to that which has been ascertained *between* the two service sectors i.e. the NKIBS, the tourism sector and the KIBS, the financial services sector.

8.2 A comparison of the knowledge management practices of the NKIBS and the KIBS: a thematic approach

8.2.1 The perception of innovation across the tourism and the financial services sector

This section will proceed to present a thematic comparative analysis, of the results obtained from the semi-structured interviews held with the senior representatives and/or owner-managers in the firms in the services sector (eighteen interviewees representing the financial services sector and seventeen interviewees representing the tourism sector; Appendix 3.1, (page 409) gives details of the firm being represented by each interviewee).

Although, as discussed in the introduction of this chapter, there is considerable divergence in the distinct nature of each of the two industries, culminating in the portrayal of the tourism firms as the Non Knowledge-Intensive Business Sector and the financial services firms as the Knowledge-Intensive Business Sector, there is consensus amongst all of the interviewees, that innovation is crucial for the sustained competitive advantage of their firms and, in general, for the industry in which they form part. Interviewees have been very explicit in their positions and referred to innovation (or change) as being “*always/extremely important*” (tourism sector organizations 4 and 31; financial services firm 14); “*what pays at the end of the day*” (tourism sector organization 10); “*working at giving the customer better value*” (tourism sector organization 29); “*achieving competitive advantage*” (tourism sector firm 32; financial services 18) ; “*the firm needs to be innovative* (financial services firm 22). None of the interviewees denied the benefits generated by innovation at firm and industry level, or its unmeasured importance for sustained growth and competitiveness of the firm and /or sector. No significant difference is revealed in the importance of innovation perceived by firms *within* both industries.

With that position established, the focus turned towards understanding whether each interviewee felt that his firm was being tenacious enough in driving innovation within the organization and, potentially, also of transmitting the

benefits of innovation at industry level. Here again, a common thread was identified amongst the interviewed owner-managers, with participants declaring their firm was under-performing in the innovation arena. Interviewees have expressed their concerns in this regard stating: “*sometimes I wish we can do much more*” (tourism sector organization 5) and “*the firm needs to be innovative, but it is not*” (financial services sector firm 22), as well as “*we are prudent, we are conservative, and that, in itself, kills a bit innovation*” (financial services sector firm 15) and “*one of my battle cries within the organization is the need for constant innovation*” (financial services sector firm 9).

Several of the interviewed owner-managers offered varied justifications for this limited engagement with innovation within their firm. The most striking comment came from the representative of the hotels association, who, because of his role, spoke of the tourism firms in general, and expressed his view on the capabilities of the Maltese entrepreneur in terms of innovation: “*unfortunately, however, I do not think that he (i.e. the Maltese entrepreneur) has the capability to be innovative...*” (tourism interviewee 10). This interviewee explained that the Maltese entrepreneur involved in the tourism sector did not possess the necessary hospitality background and expertise, and moreover, lacked any strategic decision-making capability. Most entrepreneurs in this industry were not professional hoteliers, but people who owned real estate and who decided to turn the real estate into tourist accommodation, thus to ride on the band wagon of the flourishing Maltese tourism industry. Essentially, these entrepreneurs were myopic profit maximisers, and lacked the vision required to build a sustainable and innovative tourism product. This reasoning was corroborated by the justification presented by another respondent from the tourism sector (tourism sector organization 5), who argued that the innovation underperformance was due to time constraints. She revealed that because the operation was not constantly busy throughout the year, the firm desisted from employing the necessary staff complement to facilitate the required level of planning; the operation was planned from day-to-day, in a management-by-exception fashion, “*...you just have enough time to deal with what is happening today and not giving enough time to think and plan for the next months, basically*”. This comment reaffirmed the previous comment relating to

the lack of strategic planning and capability present in the tourism industry.

On the other hand, in the financial services firms, there was the tendency to use the highly regulated nature of the industry, especially since the aftermath of the Global Financial Crisis 2007-2008, as a screen and justification for the more conservative nature of the industry and its lack of innovation: “*the biggest challenge is regulation*” (financial services firm 34). Only one respondent identified the innovation-related potential of regulation “*regulations create innovation*” (financial services firm 15). He explained that the increasing regulations in themselves provided a platform and scope for firms to devise ways within which to circumvent the regulation, whilst remaining within the parameters set by the regulation. This comment was not entertained by any other respondent, who, in general, only referred to regulatory compliance as being a burden on the firm and its clients, both in terms of resources and costs. The general thread in the responses of the financial services sector was that the highly regulated nature of the industry stifled innovation. Within the financial service firms, evidence was also found of the preoccupation of the lack of financial resources available to keep up with the industry innovations, particularly those of a technological nature, “*being a small bank, you cannot afford to be innovative in areas of technology, for example ... they are very, very expensive*” (financial services firm 15). This particular concern, voiced by a high official in a medium-sized bank, was also echoed by other interviewees, irrespective of the size of the organization. It was concluded that the steep investment required to keep abreast of technological changes in the industry was being considered excessive and counter-productive in terms of profitability.

In conclusion, the results of the interviews revealed that whilst the respondents across both industries were in agreement regarding the need for their firm and the industry to take an innovative stand to facilitate growth and a sustained competitive advantage, the interviewees also concurred that there was a general underperformance in the firms and industries, in terms of innovation. The justifications put forward for this limitation varied across the industries, ranging from the acute lack of time and manpower in the tourism firms, to the

small size of the market and the rigorous regulatory nature, in the financial service firms.

8.2.2 Assessing the effect of leadership and firm size on ACAP

Previous research has established that small firms rely substantially on the decisions taken by the owner-manager (Lynskey, 2004; Webster, 2004). This assertion does not come as a surprise, particularly, because most small firms in Malta are headed by the owner-manager, who would have either been the person to conceive the business idea and set up the operation, or else, given that the large majority of small businesses in Malta are family-owned enterprises, would have inherited the business from previous generations (family businesses constitute 75-80% in the overall Maltese economy, (Mafe.org.mt, 2014). Invariably, in such a scenario, the ties and commitment that the owner has with the business are unfailingly very tight. The owner-manager who established the business is closely connected to it and he/she believes to be the only one who is really knowledgeable about the firm. Consequently, the owner-manager tends to impose his/her vision for his/her firm. Alternatively, the owner-manager, who has succeeded other family members to the business, will be keen to leave a mark and to successfully grow and expand what was otherwise simply inherited. This leader too will set about the mission to make a success of the business by unfolding his/her agenda.

Having established that the leaders in small firms were very tightly involved in all decisions taken in the firm, thereby determining the processes and practices of that firm, the research evaluated the extent to which this existed also in firms within the tourism and the financial services sector.

When evaluating leadership influences on firm practices, it was interesting to note a high degree of homogeneity within the firms across both samples. Interviewed participants in both industries described the close involvement of the firm leader (at times, the owner) in the decision-making process within the organization:

"I was very lucky to work directly with the owner... with the Chairman's daughter, who was the General Manager at that time... and now I meet XXXX (i.e. the Chairman's daughter, now Director of Hospitality) every Monday... I would have taken notes throughout the week what I need to discuss with her ... and there you get the go-ahead... I meet the owner on a monthly basis on the property, we do a site visit, and we walk around the property, highlight any issues...and discuss financials" (tourism sector firm 32). In addition to this, other interviewees revealed not just the involvement of the leader, but the extent of his involvement: *"it's a one-man-run empire... most of the decisions he (i.e. referring to the owner-manager) takes himself "* (tourism sector firm 29), and *"I (i.e. the owner-manager) am 100% involved (i.e. in the management of this hotel) , and have been for the past ten years"* (tourism sector firm 26).

The extract above reinforces the close involvement of the owners in the organization they own; it shows that the owner-manager of the organization is deeply involved in the organizational decision-making process and firm practices. Further, owner-managers in the financial services firms claimed, *"a firm is very much a reflection of its management."* (financial service firm 16); *"the staff... basically, they copy their manager and their leader"* (financial service firm 15) and that *"having strong leadership is vital"* (financial service firm 14). These interventions expose the awareness of the owner-manager of their responsibility of influencing the work attitude of their staff. None of the interviewees in the tourism firms were as vociferous as those in the financial services firms about the spillover of the leader's attitude on the employees. This enhanced awareness on the part of the owner-managers in the financial service firms may be the result of the sounder academic background and business management preparation of these owner-managers when compared to the ones in the tourism sector.

The above extracts, taken from the two industries, had one common thread running through them: the owner-manager was a key factor in determining the practices and policies in place in the firms, and was instrumental in any

decision-making process. In this sense, both the tourism sector firms and the financial services sector firms were very similar in their reliance on the firm leader. This reliance, of course, implied, that the direction of the firm was also determined by the characteristics, traits, and background of the leader himself. If the leader encouraged knowledge acquisition and innovation then, the employees followed the example set, but if the leader looked unfavourably upon any errors committed by employees, then it was unlikely that this trait would encourage the employees to try new things and engage with anything innovative. Instead, workers would limit themselves to repeating the same routines and processes, over and over again, because in that way, they were not running any risks of disgruntling the firm manager. Such leadership characteristics had a negative impact on ACAP within the organization.

Firm size was another criterion that used as a control variable to assess the extent of the congruencies between the tourism sector and the financial services sector in terms of ACAP. The analysis undertaken previously in chapter 5 (Section 5.3, figures 5.2 and 5.3, pages 187 and 190 respectively) categorized firm size in terms of two variables: the number of employees and the relative control of the owner within the firm (a calculated variable). All of the 35 firms that contributed towards the research fell within the micro, small, and medium firm sizes.

When reviewing the responses of the qualitative phase of the research, a disparity was immediately apparent between the two industries under review. Whilst interviewees from the financial services sector discussed the relevance of firm size on the extent of innovation and implementation of knowledge management practices, none of those in the tourism sector referred to the relationship between firm size and firm innovativeness. Most of the financial services sector firms identified the resource limitations imposed by their small size and generally spoke of how this proved to be a constraint, especially, when the firm needed to keep abreast of the advances in technology in the sector.

“... but on the other hand, being a small bank you cannot afford to be innovative in areas of technology for example.” (financial services firm 15, a medium sized organization)

“There are some technologies especially, and some processes that would be good to look into and introduce however, to do that it means we have to move out of the current pond or lake we are in and move into a bigger pond” (financial services sector firm 22, a micro sized organization).

None of the interviewees in the tourism sector made reference to any similar constraints imposed by their size. Instead, all of them spoke of how the firm managed to keep abreast of advances in technologies e.g. the use of online booking platforms. Of course, the investment in such online platforms does not match the required investment by a financial services sector firm to set up, for example, an online banking platform: the costs of the innovations in technology between the industries vary considerably.

The results of the quantitative analysis further expand on the extent of the divergence between the two industries, when discussing the impact of firm size on innovation. In this regard, the quantitative results for the tourism industry show that there was only one survey question (data point Var21k, which contributed towards measuring the construct: Firm Practices), which revealed a small and significant difference in the responses that could be attributed to firm size (measured by number of employees) (chapter 6, section 6.3.9, page 262). However, four data points (21k:Firm Practices, 22h and 22g: Firm Openness and 23i: Control) from the financial services sector revealed size-related differences (chapter 7, section 7.3.9, page 315). The effect size (calculated using omega squared (ω^2) for the size related differences in these four data points (21k, 22h, 22g and 23i) from the sample of the financial services sector, was calculated as small for all data points. This meant that there were more divergences within the ambit of the financial service firms than within in the tourism firms with respect to the extent of the impact of firm size on innovation.

The discussion reveals that the survey respondents within the firms in the two industries believed that the leader's style, traits, and competences impacted the organizational innovation performance; both reported that the leaders of the organization had a strong influence on the decisions and processes being implemented. There was, however, a reported difference in the manner in which firm size affected the innovative performance of firms across these industries. The tourism firms behaved in a more homogeneous manner, when compared to the financial intermediaries: whilst firms in the financial service firms reported that firm size impacted on the extent with which the firm engaged with innovation, firms in the tourism section made absolutely no reference to any such relationship.

8.2.3 The extent of staff engagement with innovation across the tourism and the financial services sector

This section will evaluate the extent of the divergence between the attitude and engagement of staff with innovation and with knowledge management practices, within firms in the financial and in the tourism industries. The analysis investigated whether any divergences that existed in the staff's attitude towards knowledge management practices could be attributed to factors such as demography, culture, academic background, role occupied in the firm, and loyalty to the firm, expressed in length of service.

The broad reaction of the interviewed subjects (i.e. of the owner-managers or members of the senior management team during the in-depth interviews) across both industries, was that management did make the effort to involve all the staff in the idea generation phase of innovation, but, generally, whilst the majority of staff were happy to be involved in the idea generation phase, many of them were resistant to change and its implementation.

"There's still ... an amount of apprehension that they're (i.e. referring to the employees) going for a change" (financial services firm 14). *"The staff... once*

we told them why we are doing this, how we are doing this, and what will be the benefits, and what will be the disadvantages compared to the old model, they accommodated quite well." (financial services firm 3). This extract is a clear indicator that the workplace does not really exhibit an innovation culture and that employees need to be convinced to accept the change, perhaps by highlighting its resulting benefits, for these to embrace the innovation. This could possibly be the case because in the particular case of financial firm 3, no reference was made to drawing in idea generation contributions from staff. This would make staff feel alien to changes pushed top-down in the firm. A similar scenario came to light in a tourism firm: *"you always need to push people... not too many have (i.e. not many employees have suggested ideas for change)... we do encourage it because we constantly... involve them a lot, but sometimes you know ... you need to dictate the rules... we need to be innovative... but, unfortunately, innovative ideas (i.e. suggested by staff members) were a bit lacking... I have to tell them to do it... I need to go there and I need to bombard them, because if you don't give them direction and feed them what they have to do, they're not going to take the initiative"* (tourism firm 6). This interviewee, a female in her mid-thirties, spoke of having to 'bombard' her employees, and of having to 'dictate' the rules - a rather dramatic approach, non conducive to the creation of a culture where knowledge can be propagate and innovation nurtured. In contrast, however, she also said: *"(we) involve them (i.e. the staff) a lot"*, but, in actual fact she did not seem to approve of the ideas presented to her. This gave the impression that this lady was being dogmatic about ideas, that ideas could be right or wrong. When the owner-manager cultivates such an attitude, staff probably desists from presenting ideas, as no one wishes to be noticed for having presented the 'wrong' idea. Other firms declared, *"when it comes to decision taking... it is my style to involve everyone, but obviously you involve (people) of a certain rank "* (financial services firm 32). Another interviewee made a similar remark *"we spend a lot of time on planning and during the planning process we try to include everybody, especially the management - all the management."* (financial services firm 32). Several interviewees in the tourism sector also shared the same sentiment (especially tourism firms 29, 2, 5). They indicated that although the owner-managers spoke of an all-inclusive approach to the generation of new ideas for the firm,

many times they really meant that they consulted with people occupying *managerial* positions. This meant that they did not really involve all the workers, ignoring the potential of contributions made by workers, who were in contact with the customers, and, probably, better positioned to contribute ideas, by filtering new requests directly from the market. The only interviewee, who confirmed that he spent time with the lower level employees was the General Manager of a very up-market, distinguished boutique hotel, "*I get most of the ideas from the staff. I spend a lot of time behind the bar, sometimes making coffee for the guests and feeling the pulse of the operation with my staff.*" (tourism firm 4). This General Manager is still in his mid-thirties and has been involved with the industry since he was fifteen years old. Today he boasts of an academic qualification in tourism; has been exposed to the hotel business overseas in some of the finest international properties. His approach was unique in style and manner, and very much contrasting with the approach of any of the other interviewed persons. His open approach has been attributed to his experience and overseas exposure.

This first part of the analysis confirmed that across both sectors, in general, employers spoke of an inclusive practice towards innovation management, although the reality was that involvement in generating change occurred on a very selective basis. As a result of this approach, lower level employees felt estranged from the innovation and a lot of time and effort needed to be dedicated to 'convince' the employees of the benefits of the change, in order to get them on board. The following extract affirms this:

"In fact much of the managing of the business is enabling, or encouraging or getting your staff to have the mind frame to be bold enough and challenged to want to have that change, to believe the change is necessary and be part of the change ..." (financial services firm 14). Indeed this interviewee actually used the phrase '*bold enough*' in order to describe employees, who were inclined to drive change, whereas in reality, if the culture of the firm were truly conducive to innovation, employees would not need to be 'bold' to drive change; change would be a natural process.

Interviewees admitted “*there was a huge resistance for that (i.e. change)*” (financial services firm no. 3) and “*you will always find resistance*” (tourism firm 32), “*the rest (i.e. of the staff) are still reluctant (to changes)*” (financial services firm 12) and workers will tell you “*don’t change anything for me*” (financial services firm 18) all confirmed that the norm was for employees to oppose and obstruct any change within the organizations across both industries. Notwithstanding this resistance to innovation, all interviewees could still describe different innovations that took place within their organization, when asked to identify any recent changes (i.e. happening during the last twelve months, such as new financial products, new menus, new facilities, new internal processes, new infrastructure etc.).

The researcher also investigated the procedure and tactics that management adopted in order to transform the initial resistant attitudes of the employees into cooperation and engagement with the proposed changes and innovation.

Many interviewees agreed that “*involving them (i.e. the workers) from the ... design to its (i.e. of the change) implementation*” (financial services firm 18), was the ingredient that successfully converted staff resistance into cooperation. Other employers spoke of camouflaging the project, when presenting it to the employees, “*...we made like a challenge for them*” (financial services sector firm 3). This last comment was, indeed, very interesting as it reflected that employees responded better to situations when they were put to the test, poked and provoked than rather when a conventional idea generation process was in place with employees formally asked for their contribution.

Having established that the behaviour of employees across both industries converged in terms of their engagement with innovation, the next section of this analysis will focus on determining the extent of any statistically significant differences in the responses gathered from the quantitative phase of the investigation launched to the employees working in the tourism and financial firms.

8.2.4 Knowledge sharing practices across the financial services industry and the tourism industry

This section contrasts the knowledge sharing and knowledge transfer practices across the financial and the tourism firms in order to evaluate the extent of the divergence or similarity between these two service industries.

Staff turnover is a factor to which loss of organizational knowledge can be attributed, particularly, tacit knowledge, unless measures are in place to mitigate against the hemorrhage of this organizational know-how. The two industries contrasted significantly in terms of their experience with staff turnover. The interviewed subjects from the tourism firms revealed that, in particular, the foreign employees, employees were not particularly loyal to the organization: *“I would say, there’s a high percentage of labour turnover... Sometimes it’s incredible... they sign their contract.... and they won’t turn up for their first day of work, because they have gone to earn an extra euro elsewhere... they (i.e. the foreigner workers) don’t stay for long. They use the hospitality industry as a stepping stone”* (tourism firm 5); *“we have a high staff turnover rate, especially with the foreign workers in housekeeping and in the food and beverage department”* (tourism firm 13) and *“our staff come and go”* (tourism firm 6). Interestingly, the owner-manager of tourism sector firm 6 admitted that it was inevitable that the staff took tacit knowledge with them as they exited the firm, and that she really could not do much to stop this leakage, and neither did she have the practices in place to mitigate against such a loss, *“No we don’t do anything, because how can you? You can’t really safeguard it (referring to the tacit knowledge),”* (tourism firm 6). This owner manager had extensive hospitality experience, both by studying and working overseas in Europe, Asia and the Middle East, and, yet, she insisted that the only way to safeguard the interests of her family-owned boutique hotel was to restrict knowledge, strategy and decision-making to herself and her husband (General Manager, Food and Beverage Department), *“the way we try to safeguard it (referring to the loss of knowledge as a result of resigning staff) is I try to be where I need to be... I try to be the face behind the outside catering and not let*

my staff...as long as myself and my husband are running it, then we are going to stay ... it's not like we're going to be resigning and going to a competitor" (tourism firm 6). This management style contrasted extensively with the style adopted by the management of tourism firm 4, who is young, and who has also already accumulated extensive local and overseas experience. He preferred to adopt a more open approach with his staff, financed their on-going training programmes, and has implemented a system, whereby knowledge was shared and communicated within the firm. This difference in knowledge management practices confirmed the fact that firms within the tourism industry behaved differently in their approach to knowledge transfer. It also reinforced the point made in Section 8.2.2 above (page 340), that the leadership characteristics of the owner-manager of the firm have a strong bearing on the practices implemented within the firm.

On the other hand, most of the financial services firms (e.g. financial services firms 21, 34), do not suffer from excessive staff turnover although the experience has not been uniform throughout the industry: *"We do (i.e. suffer from staff turnover) because the local market is very shallow"* (financial services firm 3). Firms in both have expressed concern at the increased difficulties they were facing to recruit staff; this being particularly chronic in the tourism sector, but only particularly worrying in certain specialised aspects of the financial services industry (e.g. insurance), rather than across the entire industry: *"the reality is that the available pool of manpower for staff recruitment has become a major issue for us (i.e. the insurance firms). It is very difficult to find good people"* (financial services firms 9 and 14). The tourism firms are trying to overcome this problem by recruiting foreign workers, and have found themselves facing issues created by language barriers and a very short-term perception of the employment, *"the biggest barrier is the language, because you need to communicate to them the change"* (tourism firm 5). Apart from these challenges, however, the interviewees in the tourism sector do not believe that the success of knowledge management practices are determined by nationality, or even gender, *"I don't think it's (relating to the extent of how much an employee is open to change) related to the country of origin of the individual, it's more a matter of character, every person perceives change"*

differently" (tourism firm 5), the personal traits of a person are seen to be more influential in this regard, *"it's more a matter of character, every person perceives change differently"* (tourism firm 5).

The researcher has not found evidence of an extensive influx of foreign workers in the financial services sector. However employers in this sector related positive experiences of the contribution made by the foreign employees in the workplace, *"They (referring to the foreign workers) have a great work ethic, but so do the Maltese, to be honest with you, especially the women."* (financial firm 16).

Staff turnover can be analysed from two angles: the exiting staff, who inevitably take away with them, possibly to a competing firm, their accumulated knowledge; and the incoming staff, who filter their knowledge into the firm they are joining. This is experienced across the two industries, not just at lower level employee ranks, but also at senior management:

" The General Manager of Hotel X (i.e. where interviewer worked previously) ... he was my personal mentor... he used to ask me to meetings and whatever I learnt was because... I felt part of the decision making" (tourism firm 4);

"the loan process, which we had at firm X (previous employment), I adapted here. How it (i.e. the loan application process) is structured, with the information on the client, the requests, the collateral, the swap analysis. These are all coming from the knowledge I gained with firm X)" (financial services firm 1).

The interviewed subjects of the tourism sector also had similar knowledge transfer experiences to relate, *"those people (i.e. foreigners, who come in search of work) yes they do bring a lot of insight... new ideas and you know, you could sense that they've got a lot in their background"* (tourism firm 5).

The reverse version of this case portrays a situation where knowledge is lost as a result of workers, who decide to move out of the current firm and seek

alternative employment. In this scenario, the interviewees did admit that their firm was likely to lose a certain amount, if not all, of the tacit knowledge accumulated by the exiting employees: “*we had two people from risk who left. They took the knowledge with them*” (financial services firm 1) and “*this (referring to the tacit knowledge) tends to be lost*” (financial services firm 11).

The researcher explored the avenues the different firms sought in order to minimize this loss of knowledge. Various practices were identified by different firms, although the general comment was that the firm did not have an explicitly identified strategy it followed religiously in order to ensure the minimization of knowledge loss: “*It's (i.e. knowledge sharing) constant... there is very open dialogue... the transfer of information, or the transfer of knowledge, happens purely accidentally on a daily basis. They (i.e. the foreign employees) have a great work ethic, but so do the Maltese, to be honest with you, especially the women; they make fantastic workers*” (financial services firm 16). The interviewee from tourism firm 25 had the same views to share about the foreigners, except that in this case, in the tourism firms, language barriers were a big problem, when employing foreign workers, and this, of course, hindered the effective transfer of knowledge.

Many of those interviewed stated that they arranged meetings throughout the organization, regularly or *ad hoc*, in order to facilitate the exchange of knowledge. “*It's all about bringing the people together,*” claimed the change manager of financial firm 12, emphasizing the benefits of communication amongst peers and colleagues at the work place. Other interviewees also shared her view by expressing that “*one of the best ways to learn is actually to have somebody teach you*” (financial firm 9), “*the ability to get on with everybody and pick things up (i.e. learn new things) I would say is pretty important*” (financial firm 9) and, “*part of the training is such that it is expected that to be good at your job you also need to be able to share and to work in pair with someone*” (financial firm 14).

Other interviewees had views that contrasted with the previous statements and explained how at times, employees could be reluctant to share their knowledge.

“Everyone says that they like to work in teams...but characters vary, I think one of the biggest disadvantage is that the Maltese do not like to delegate...Yes we try to build that team spirit but some learn and some don't.” (financial firm 34).

Reference to similar difficulties was also made by interviewees in the tourism sector (e.g. tourism firm 13), who went as far as explaining that his staff could be 'secretive' towards one another with the knowledge they acquired and accumulated.

Knowledge acquisition, accumulation, and retention were dealt with differently across the tourism and the financial firms. Whereas there was a strong emphasis to send staff on externally organised training courses regularly within the financial services industry, particularly, to address the need of updating them with the constantly changing regulatory frameworks, the training of the staff within the tourism sector adopted a more in-house, hands-on approach. In the tourism sector, the model which was adopted was that key individuals were sent on externally organised training programmes, and when these returned, equipped with the new knowledge, they were entrusted with the training of their subordinates and colleagues. Conversely, in the financial services sector, employees were regularly sent on training courses and the requirement was for them to give details to their superiors of the knowledge they acquired:

“We require that they (i.e. the employees returning from training) give feedback to their manager and the HR department about the training” (financial firm 9).

“When the training is over, the necessary, let's say, documentation, notes, or media which was given to the trainee, is copied, kept by the HR team, and if necessary we decide, 'OK, listen, a very good and detailed presentation', we ask the trainee to give a presentation to the interested parties.” (financial firm 3).

“We have no hard and fast rule of storing information, however we do, obviously, have our database” (financial firm 33).

Whilst this approach ensures that the training investment is not lost, and all documentation is recorded, it, however, does not ensure that the benefit from the training is propagated within the organization. In a sense, this approach to knowledge management is a rather myopic one. Other interviewees within the financial services sector did explain that staff was encouraged to share the organization-funded newly acquired knowledge,

“we encourage our staff, who go on training courses to share the new knowledge with their co-workers, and with other interested parties... we hold regular meetings, weekly or fortnightly” (financial firm 14).

“depending on the nature of the meeting and form working groups and committees for people to work together” (financial firm 3), however, no one discussed the extent or effectiveness of this interaction, and how much, if any, of the newly bought ideas were actually shared and implemented. The interviewees in the tourism sector were, however, more explicit about the manner in which the knowledge was shared amongst the workers:

“my managers (i.e. after returning from training courses) have to give a full training to all the staff... And you could see this continuation (i.e. of the hands-on coffee making training) from the Manager to the supervisor, from supervisor to the barman, from the barman to the commis ” (tourism firm 4);

“the receptionist was eager to teach the new employee the ropes.” (tourism firm 26).

These are very interesting situations as in this case, the interviewee in question was putting into action a process that he had experienced himself, whilst in training, implying that the brought-in knowledge can be very far-reaching within an organization. In this sense, the financial service firms seemed to be more focused with the storage of knowledge: *“one of the things which we're working on is ensuring that our procedures are well documented”* (financial firm 12); the interviewee of financial firm 33 also shared the same concern. In contrast the tourism firms appeared to be more effective in ensuring that knowledge was

shared, used and exploited within the firm. The current situation in the financial services industry confirmed the experiences of one of the interviewees, who expressed that employees lacked overall knowledge of the business and its procedures and seemed to limit themselves to being knowledgeable only about the part which concerned them, *“so people tell me the bit they know and if I ask them the extra question they say: “ I don’t know, you have to ask the next person”* (financial firm 12). Such an approach to knowledge management cannot be conducive to a learning organizational culture and to innovation.

Job shadowing was a common way of encouraging knowledge sharing and also of mitigating against the loss of knowledge with exiting staff. The interviewee from firm 14 (financial services sector firm) agreed with the executive of financial firm 15, when the latter explained,

“basically for every employee there is somebody, who is shadowing him and every manager has the responsibility to ensure that”.

However, some interviewees in the financial services sector were conscious that their knowledge sharing practices were not sufficiently enhanced and appreciated the fact that they would benefit from the knowledge sharing experience, if internal communication improved:

“that (referring to communication and sharing of knowledge) is the area, where we need to improve especially the exchange of information communication” (financial firm 8).

The exchange of communication happens in a more unstructured manner in the tourism firms, *“we maintain a very close relationship with our colleagues... There isn’t any mechanism in place, it’s the good communication that exists in between the individuals and their line managers basically”* (tourism firm 5);

“To be honest it’s not like we have meetings constantly all together,” added the owner manager of tourism firm 6, who proceeded to explain that most of the discussions and decisions were taken when top management sat around a

table to have lunch together, mostly daily, after which it was the responsibility of the section manager to “*pass on*” the information to lower ranking employees. It was interesting to note how there did not seem to be any real consultation with employees beyond the senior and middle management teams, beyond which, information, (i.e. the knowledge which was deemed necessary for them to know) was simply *communicated* to them, instead of being *discussed* with them. This further illustrated that what determined whether knowledge was shared in a top-down fashion, or whether it is also bottom-up, depended on the seniority of the employees. This practice was more pronounced amongst the tourism firms.

The above analysis shows that the extent of the knowledge sharing practices implemented within a firm depended greatly on the leadership characteristics of management, and there was no evidence to prove that they were either gender, or age or nationality determined. Knowledge sharing was found to be more practical and hands-on within the tourism firms, whilst the financial firms focused more on documenting knowledge and organising meetings to inform and advise lower-ranking staff members, rather than to involve them in discussion. Further, job shadowing was very common in the financial services industry, and was very effective in limiting the loss of firm information should staff resign their employment, whilst there was no evidence of this practice in the tourism sector.

8.2.5 A comparison of the relational practices across the financial services industry and the tourism industry

This section contrasts the relational capabilities across the financial and the tourism firms. The investigation analyses the extent to which firms engage in inter-firm communication both on the local and on the international sphere, and assesses the benefits firms reap and the challenges encountered, when attempting to engage with others at this level of knowledge exchange.

Inter-firm communication was described as an effective manner, especially used by resource constrained SMEs, to acquire new knowledge in order to

keep abreast of changes in the industry, or to supply them with products, when they did not have the capability to do this themselves in-house, “*we had to make sure that where we don’t have the knowledge or the competence for us to research... we had to bring in, obviously, outside help (referring mostly to local providers)*” (financial firm 8), and “*we visit fairs regularly or reading, or by participating in online gazettes, even our school gazette, you know we see what the latest trends are... we update ourselves by attending this fair in Paris, which takes place every two years*” (tourism firm 6), and firm 4 (tourism sector) also discussed how they engaged in extensive ‘shopping around’ of other hotels within and beyond members in their chain of hotels to acquire new ideas. “*You get all the information (i.e. necessary for the evaluation of financial products) that is coming from the credit rating agencies (i.e. overseas agencies), you get all the information just coming from the financial press*” observed firm 21 (financial firm) which proceeded to explain that this service was not available locally, so, essentially, all firms in the industry were constrained to source the relevant information overseas. One owner-manager of a micro financial firm explained that he preferred to network in an informal manner, initially equipping himself with explicit knowledge before engaging in discussion with specialists in different fields. He certainly agreed that the exchange of knowledge was important and practiced, “*It’s (i.e. knowledge transfer) mostly informal. I do not really like... sitting in a formal form to discuss some innovations etc. It’s my style... I prefer to read, get knowledge, be well prepared and understand the various facades, then... to discuss with professionals, who are well versed and well geared in that particular line*” (financial firm 22). The results of the analysis showed that firms within both industries engaged with other firms in order to acquire new knowledge. In this sense, the firms across both industries were very similar.

The financial firms and the tourism firms contrasted in that whilst most financial firms acknowledged that they acquired new knowledge both locally and from overseas sources, the tourism firms showed a preference to engaging with foreign counterparts. Further, the micro firm showed a preference to network and acquire new knowledge in a less structured and informal manner than the

small and medium sized firms, which related that they had meetings and discussions around boardroom tables.

Tourism firm 6 explained how they acquire knowledge from their own customers, and discussed how important this source was for them *“we listen to what they have to say, we try to get as much as we can, because a lot of our customers have travelled the world, and they are able to teach us as well you know, and they're able to help us be innovative”*. The owner-manager of this firm explained how the small size of her firm meant that this firm was more agile and nimble in adopting some of the changes suggested by her own customers: *“Being small, it's (i.e. implementing changes suggested by the customers themselves) easier to do. The hotels, which have so much hierarchy, are not so in contact with the guests, so they're not able to get all this feedback from them.”* None of the other tourism firms referred to their own customers as a springboard for change and innovation, suggesting that, presumably, the tourism firms do not all behave homogeneously in this respect. The analysis seemed to indicate that it was only the smaller tourism firms, which could really afford to find the time to engage in communication with their clients and to be receptive to suggestions made by them. Not one financial firm referred to its customers as a source of new knowledge, indicating that in this sector, the customer was not used as a primary vehicle for innovation. The tight regulatory framework that governs the financial services sector could, possibly, be the reason for the chosen course of action by the firms in this industry. In financial services it is the regulatory framework itself, which acts as a springboard for innovation (interviewee 3, financial services sector).

Networking, both on a local and on an international level, was recognised as being essential to the knowledge acquisition and learning process of all firms in the interviewed sample. Most firms made a direct reference to the importance of networking and discussed the extent to which they engaged in this practice:

“my husband speaks to others (i.e. referring to hotel operators in the area)...he's quite open with other hotels you know, and sort of speaks to other colleagues and they discuss” (tourism firm 6);

“we (referring to the management across five-star hotels) meet very regularly as hotels, GMs meet on a monthly basis, HR managers meet on a bi-monthly basis... you share information and you share your concerns”, (tourism firm 32);

Financial firm 18 revealed that, *“we start by networking...overseas, of course, don't forget we have a very insular existence, and need to learn from those who have more exposure”* (financial firm 18). Other firms (e.g. firm 2, 9, 21,14 (all financial firms and tourism firm 5) also discussed their positive experiences of alliances with foreign firms, which shared their expertise and market intelligence with them. In the financial services industry the regulator himself, who professed an “open-door policy” with industry, spearheaded this networking and communication. This analysis pointed to the fact that networking, both on a local and on an international level, was perceived as being essential to all firms across both industries, and that all firms did their utmost to engage in some degree of networking. Interviewees across both industries spoke of the existence of local organizations, which operated at industry level, and which aimed to facilitate networking amongst actors in the industry, as well as lobby with the authorities for changes and improvements as the firms saw fit:

“we put our ideas, we put our, let's say, expertise on the table, which we bring form overseas and we come up with a solution” (financial firm 3); and

“The insurance association has been in existence for many years and its prime goal is to be typically a lobbying unit with the authorities... it's also a means of gathering statistics and being able to bench mark at a market level, and also if there is any knowledge sharing, which makes sense for insurance companies to share knowledge on then they would do so” (financial firm 9).

The firms in the two distinct industries were also similar in the concern they shared, when they discuss the readiness of the local businessman to share information with other firms and competitors:

“I don't feel that we are (i.e. exploiting the potential of possible networks

amongst local firms) ... I feel that sometimes there isn't enough time to communicate between us" (tourism firm 6).

This concern was also shared by financial firms, *"Are people cagey with their data? And how!"* (financial firm 9).

Several interviewees across both industries (e.g. firms 9 and 21, both financial firms and, tourism firm 6) have identified the cultural factor as the reason for the reluctance to share knowledge, something, which, the firms affirmed, is not as strong overseas. Financial services firm 9 also indicated that the extent of the owner-managers' readiness to share knowledge varied across industries, claiming that the situation was more positive in the financial services sector within which he operated: *"I think if you compare the insurance sector to many other sectors we're very far ahead (i.e. referring to the extent of knowledge sharing entered into across firms), because we do share data..."*.

The analysis revealed that all the firms across the tourism and financial services sector regarded local and international networking as essential to knowledge acquisition. Firms across both industries bore evidence of the extent with which they engaged in networking, and the different organizational platforms present in the relevant industry to facilitate this networking. Firms across both industries expressed some concern at the reluctance of the businessmen to share knowledge, and identified this hesitance as being culturally embedded. It was only in a segment of the financial services sector that evidence was provided to reflect the enhanced readiness of owner-managers to share their knowledge. This analysis revealed the homogeneous behaviour of the firms both *in* and *across* the industries in terms of their relational capabilities, with a divergence being noted across the two industries, in the degree of reluctance of the owner-managers' sharing of knowledge.

8.2.6 Summary of results: a thematic approach

Table 8.1 presents a summary of the results obtained from the thematic analysis of the data collected for this study. The synopsis shows the salient points where the interviewees in the firms in the tourism and in the financial services firms shared agreement or disagreed on themes relating to the perception of innovation within the firm, the impact of leadership and firm size on the innovative performance of the firm, staff engagement with change, knowledge sharing practices, and relational capabilities and efforts of the firm.

Table 8.1 Thematic analysis: Summary of results

Source: Personal collection

		Respondents in the tourism and the financial services firms agreed on:	Differences in the responses across the industry exist where:
Perception of innovation	1	Correlation between innovation and sustained firm growth.	-
	2	General innovative underperformance across the industries.	-
Impact of leadership	1	Leader is tightly involved in any decision-making process.	-
	2	Leader determines processes and practices within the firm	-
Impact of firm size	1	-	Respondents from the financial service firms believe that the relatively small size of their firms impacts negatively on their innovative performance
	2	-	Interviewees in the tourism firms do not think that their relatively small size constrained their innovative performance.
	3	-	Responses from the financial services firms diverge in their agreement that the firm size negatively impacts firm performance.
	4	-	Respondents from the tourism firms are more homogenous their belief that the size of their firm did not constrain their innovative performance.
Staff engagement	1	Management efforts to involve all staff in the idea generation phase of innovation.	-
	2	Majority of staff across both industries are happy to be involved in the idea generation phase, but are resistant to the implementation of such change.	-

Impact of firm size	1	-	Respondents from the financial service firms believe that the relatively small size of their firms impacts negatively on their innovative performance
	2	-	Interviewees in the tourism firms do not think that their relatively small size constrained their innovative performance.
	3	-	Responses from the financial services firms diverged in their agreement that the size of the firm impacted negatively on firm performance.
	4	-	Respondents from the tourism firms were more homogenous their belief that the size of their firm did not constrain their innovative performance.
Staff engagement	1	Management efforts to involve all staff in the idea generation phase of innovation	-
	2	Majority of staff across both industries are happy to be involved in the idea generation phase, but are resistant to the implementation of the change.	-

Table 8.2 presents a condensed form of the results obtained in the quantitative analysis conducted in sections 6.3 and 7.3 (pages 250 and 301 respectively). The table gives an overview of all of the statistically significant differences, which have been identified in the employees' responses to each of the survey questions across both industries, classified by control variable. (the key to the data points referred to in table 8.2 can be found in table 5.4 on page 192).

The comparison reveals that the extent of any divergence in the employees' responses that can be attributed to gender differences is significant between both industries: two data points (Firm Practices: 21i, 21j) have reported statistically significant differences of a moderate size in the tourism sector, whilst there have been three data points (Firm Practices: 21k, Intra-Firm Communication: 23j, Exploitation: 24f), reporting statistically significant differences in the financial services sector. There is also a difference across the two industries in terms of the constructs that have reported this divergence.

Whereas the only affected constructs in the tourism sector are Firm Practices and Leadership, in the financial services sector the measurement of four different constructs have been affected by these differences: Firm Practices (which is common also to the tourism sector), Intra Firm Communication, Control and Exploitation.

These results reveal that whilst both industries show evidence of differences in the responses that can be attributable to gender, the extent of these differences diverge between the industries, with more (but smaller size) differences present in the financial services sector.

Table 8.2 Causal factors of identified differences in respondents' answers to interview questions

Source: Personal collection

Control Variable	Employee Responses					
	Tourism Sector			Financial Service Sector		
	Data point	Construct	Size effect	Data point	Construct	Size effect
Gender	Var21i	Firm Practices	Moderate*	Var21k	Firm Practices	Small*
	Var21j	Firm Practices	Moderate*	Var23j	Intra-Firm Communication	Small*
				Var24f	Exploitation	Small*
Age	-	-	-	Var21l	Firm Practices	Small**
	-	-	-	Var23n	Intra-Firm Communication	Small**
Nationality	-	-	-	-	-	-
Academic Background	Var16c	Leadership	Small**	-	-	-
Duration of employment	-	-	-	-	-	-
Position held within the firm	-	-	-	Var22c	Firm Openness	Small**
Number of employees in firm	Var21k	Firm Practices	Moderate*	Var21k	Firm Practices	Small*
	-	-	-	Var22g	Intra-Firm Communication	Small*
	-	-	-	Var22h	Intra-Firm Communication	Small*
	-	-	-	Var23i	Control	Small*

*Size effect measured according to Cohen's d

**Size effect measured according to omega squared (ω^2) (Field, 2013)

Employees' age was the second control variable used to assess the extent of any significant differences in the employees' responses across and within the industries. No age-related differences were identified in the response of the subjects coming from the tourism industry, indicating homogeneity within the industry in terms of the reaction to knowledge management and innovation practices, which is induced by one's age. The picture diverges from the situation in the financial services sector, where statistically significant differences in the attitude towards knowledge management and innovation practices were found in data points 21l (contributing towards the measure of the construct Firm Practices) and 23 n (contributing towards the measure of the construct Intra-Firm Communication). Both these statistically significant differences were only of a small size effect. These results indicate that not only are there divergences *between* the industries when age is used as the control variable, but there are also divergences *within* the financial services sector sub group.

No statistically significant differences were reported when the control variables of nationality and duration of employment were examined. This implies that not only do the employees *within* the two sectors respond to knowledge management practices similarly, but, so do the employees across the two industries respond in a similar manner. Neither nationality, nor duration of employment has been attributed with any different reaction from employees within or across the industries.

The comparison conducted when the academic background is used as the control variable, revealed a different scenario across the two industries. In the tourism industry, data point 16c (measuring the construct Leadership), disclosed a small-sized, statistically significant difference, which can be attributed to the academic background of the employees, while no such difference is detected in the financial services sector. This result was expected as the academic background of the employees in the financial services sector was more uniform (by the very nature of the work involved in the industry) than that of the workers in the tourism industry, and, therefore, the effect of a diverse

academic background was not evident in the financial services firms. This indicated that whilst the employees within the financial services firms behaved homogeneously in their response to knowledge management practices, those in the tourism sector responded differently on one data point, indicating that there existed differences within the tourism industry and across both industries, with no qualifications-related differences within the financial firms,

When firm size (calculated on number of employees) was used as a control variable, another divergent picture between the two industries emerged. Whereas the employees within the tourism industry only responded differently to data point Var 21k, which measured Firm Practices (variation measured a moderate size effect), the respondents in the financial services sector diverged in four data points, namely Var 21k (Firm Practices, Var 22g and Var 22h (Intra-Firm Communication) and Var 23i (Control). All size effects of the variations in the responses in the financial services sector had a small size

The overall analysis, therefore, reveals statistically significant differences at four data points (across two constructs only i.e. Firm Practices and Leadership) in the tourism industry and a total of nine statistically significant different data points in the financial firms (across three constructs Firm Practices, Exploitation, Intra-Firm Communication, Control and Firm Openness). This indicated that the behaviour of employees, in response to knowledge management practices, within each of the industries was different, with the behaviour of employees in the financial services sector more diverse than that of the tourism sector employees. There was more homogeneity within the tourism sector in terms of the impact of the staff profile on knowledge management practices.

8.3 Comparing the correlation of constructs across the financial services industry and the tourism industry

Table 8.3 Pearson correlation across the two samples

Source: Personal collection

Sector	Construct	Firm Openness	Firm Practices	Control	Leadership	Firm Communication
Financial Services	Exploitation	0.474	0.526	0.355	0.428	0.612
	Strength of correlation	Large and positive	Large and positive	Moderate and positive	Moderate and positive	Large and positive
Tourism	Exploitation	0.561	0.4	0.409	0.435	0.593
	Strength of correlation	Large and positive	Moderate and positive	Moderate and positive	Moderate and positive	Large and positive
Total Services	Exploitation	0.471	0.436	0.405	0.424	0.613
	Strength of correlation	moderate and positive	Moderate and positive	small and positive	Moderate and positive	moderate and positive

*Correlation is significant at the 0.01 level (2-tailed), $p < 0.01$

Table 8.3 above reproduces the results for the Pearson Correlation testing of the five constructs (Firm Openness, Firm Practices, Control, Leadership, Firm Communication) in the conceptual model introduced in Chapter 5 (Figure 5.1 page184) with the construct Exploitation, across the financial services and, the tourism firms, as well as the total services sector.

The analysis indicates that all the correlations were positive and linear, both those of the constructs in the tourism sector, as well as those of the constructs in the financial services sector. This indicated that the direction of the correlation was similar across all the tested relationships in both industries. The analysis revealed some divergence in the magnitude of the correlation for one out of the five relationships tested:

whilst the correlation Firm Practices → Exploitation was considered to be large in the financial services sector, $r(226) = 0.526$, $p < 0.01$, there was only

evidence of a moderate positive correlation in the sample of the tourism firms, $r(153) = 0.4$,

$p < 0.01$. This tells the researcher that the correlation between Firm practices and Knowledge Exploitation is stronger in the sample of financial firms. This is possibly due to the knowledge intensive, tightly regulated nature of the industry, which relies more strongly on a firm's processes for managing its processes, than in the non knowledge intensive tourism industry.

In both service industries, there is a statistically significant relationship between each of the constructs Firm Openness, Firm Practices, Control, Leadership, Firm Communication, and the construct Exploitation.

8.4 Multigroup Structure Equation Modelling

This section analyses the extent of any divergences in the parameters that have been extracted in the measurement model for both the tourism and the financial sample. For this purpose, a PLS-MGA multigroup analysis (Henseler, Ringle and Sinkovics, 2009) was conducted to compare the parameters achieved in the measurement models of the two service industries, i.e. the financial service firms (KIBS) and the tourism firms (NKIBS). A PLS-MGA multigroup analysis is a test which estimates whether any divergences in the magnitude of the parameters in the measurement models can be attributed to the nature of the service industry (i.e. the financial services (KIBS) and tourism (NKIBS) and, therefore, acts as a tool which facilitates the comparison of the ACAP behaviour of firms across both industries.

Figures 8.1 and 8.2 illustrate the results of the PLS-MGA multigroup analysis for the tourism and the financial firms respectively. The path loadings, which have been calculated, reveal the loading, which pertains to the relationship being measured in the respective industry only. The relative strength of the path loading is depicted by the thickness of the line of the path.

Figure 8.1 A Multigroup Analysis : the Tourism Sector

Source: Personal collection

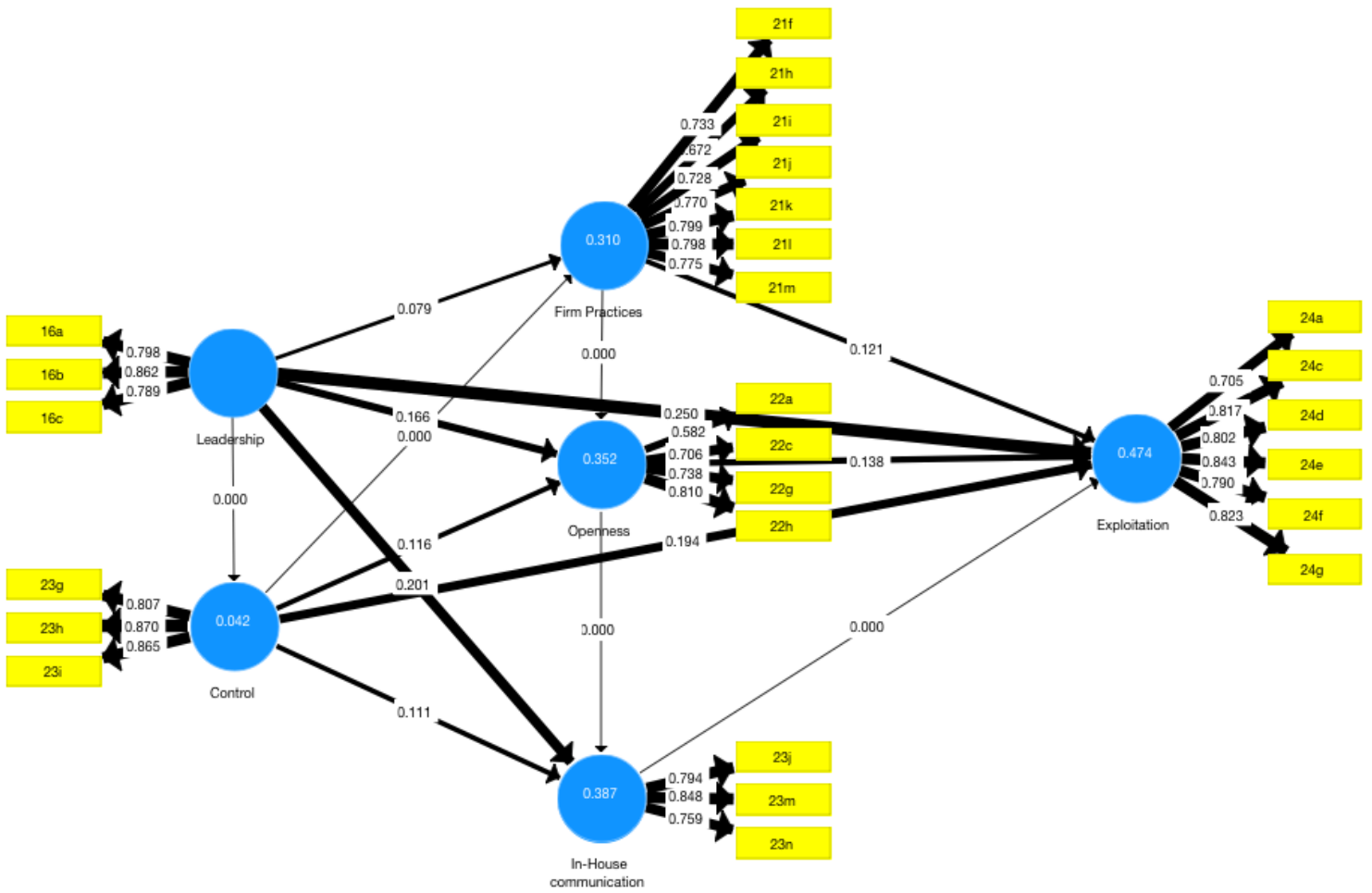
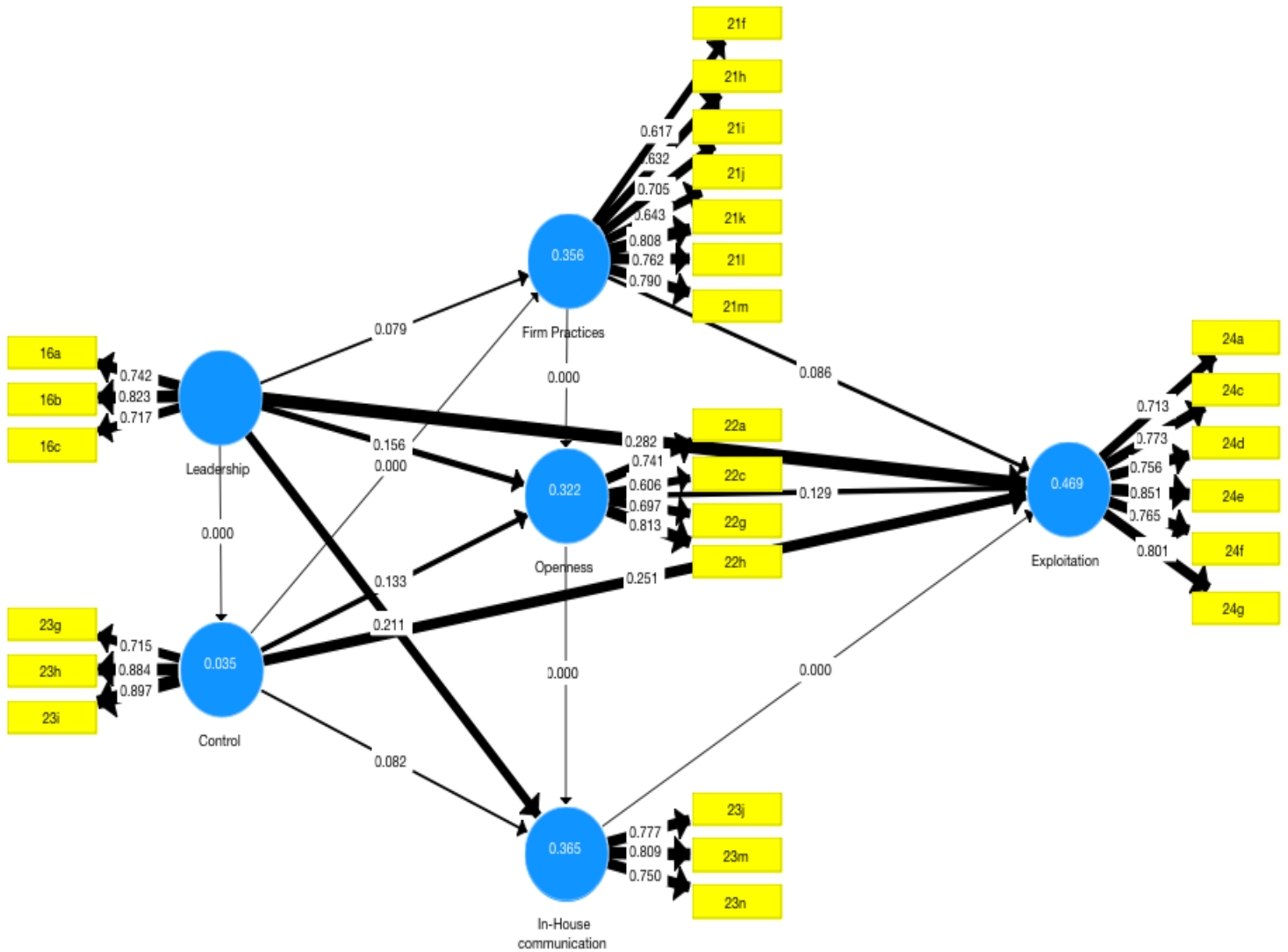


Figure 8.2 A Multigroup Analysis : the Financial Services Sector

Source: Personal collection



A visual comparison of the loadings of the indicators in the measurement models revealed that there were no large discrepancies between the two industries. The loadings on the Leadership construct ranged between 0.789 and 0.862 for the tourism firms and 0.717 and 0.823 for the financial services firms; those for Control between 0.807 and 0.870 in tourism and 0.715 and 0.897 for financial services; for Firm Practices, from 0.672- 0.799 for tourism and 0.617 - 0.790 for financial services; from 0.582 - 0.810 and 0.606 - 0.813 for Firm Openness; between 0.759-0.848 and 0.750-0.809 for Intra-Firm Communication and 0.705-0.843 and 0.713-0.851 for Exploitation in the Tourism and in the Financial services sector respectively. These loadings were of a very close magnitude and do not reveal any discrepancies, which could be attributed to the nature of the industry.

A bootstrapping procedure for each of the service sector samples was conducted, to estimate the path coefficients of each of the fourteen hypothesized relationships in the conceptual model, both in tourism and in the financial services industry separately. Table 8.4 illustrates the results of the bootstrapping procedures, calculating the path coefficient, the mean values, the t-values and the p value for each of the fourteen relationship. Table 8.5 proceeds from the results calculated in the bootstrapping procedure and presents the p-value (at a confidence level of 95%) of the absolute difference between the path coefficients of each of the fourteen hypothesis, across both industries, to deduce whether the difference between the industries is significant or not.

The calculations revealed the differences between the path coefficients in the two industries for the fourteen hypothesis ranged between 0.007 and 0.309. Thirteen out of fourteen hypotheses (H1-10; H12-14) have revealed differences that are not statistically significant at the 95% confidence level. Only one hypothesis, H11, resulted in a statistically significant difference, at a confidence level of 95%, between the results obtained in the tourism and in the financial services firms. This means that this hypothesis, H11, which tests the extent to which there exists a positive relationship between Firm Practices and Policies and the Exploitation of knowledge (Firm Practices → Exploitation) in the tourism

and in the financial services sector, recorded a statistically significant difference in the way in which these two firms behave.

In essence, therefore, the extent to which Firm Practices are effective in exploiting knowledge *differs significantly* in between the tourism and the financial service firms. No other significant differences exists between the two industries in terms of all of the other tested hypotheses (H1-H10 and H12-H14).

Table 8.4 Bootstrap results of the Multigroup analysis

Source: Personal collection

Hypotheses	Path Coefficients Original (Financial)	Path Coefficients Original (Tourism)	Path Coefficients Mean (Financial)	Path Coefficients Mean (Tourism)	t-Values (Financial)	t-Values (Tourism)	p-Values (Financial)	p-Values (Tourism)
1 Leadership -> Exploitation	0.145	0.18	0.143	0.178	2.302	2.148	0.021	0.032
2 Control -> Exploitation	0.037	0.139	0.033	0.138	0.641	2.11	0.522	0.035
3 Leadership -> Openness	0.293	0.263	0.294	0.264	4.636	2.437	0.000	0.015
4 Control -> Openness	0.107	0.215	0.108	0.212	1.623	3.107	0.105	0.002
5 Openness -> Exploitation	0.143	0.264	0.146	0.255	2.146	2.491	0.032	0.013
6 Leadership -> In-House communication	0.155	0.201	0.155	0.194	2.294	2.605	0.022	0.009
7 Control -> In-House communication	0.304	0.278	0.305	0.278	5.368	4.147	0.000	0.000
8 In-House communication -> Exploitation	0.377	0.411	0.379	0.417	5.665	3.717	0.000	0.000
9 Leadership -> Firm Practices	0.351	0.328	0.356	0.325	6.431	3.271	0.000	0.001
10 Control -> Firm Practices	0.422	0.388	0.422	0.395	8.004	5.442	0.000	0.000
11 Firm Practices -> Exploitation	0.169	-0.139	0.169	-0.133	2.526	1.342	0.012	0.180
12 Firm Practices -> Openness	0.317	0.3	0.321	0.311	4.671	3.488	0.000	0.000
13 Openness -> In-House communication	0.342	0.336	0.346	0.343	4.989	4.43	0.000	0.000
14 Leadership -> Control	0.187	0.205	0.192	0.213	2.853	2.736	0.004	0.006

* significant at the 0.05 confidence level

** not significant

Table 8.5 Partial Least Squares: Multigroup analysis

Source: Personal collection

	Path	p-Value
	Coefficients- difference (Finance - Tourism)	(Finance vs Tourism)
H01	Leadership -> Exploitation	0.035
H02	Control -> Exploitation	0.102
H03	Leadership -> Openness	0.030
H04	Control -> Openness	0.108
H05	Openness -> Exploitation	0.121
H06	Leadership -> In-House communication	0.046
H07	Control -> In-House communication	0.026
H08	In-House communication -> Exploitation	0.034
H09	Leadership -> Firm Practices	0.024
H10	Control -> Firm Practices	0.034
H11	Firm Practices -> Exploitation	0.309
H12	Firm Practices -> Openness	0.016
H13	Openness -> In-House communication	0.007
H14	Leadership -> Control	0.018

* Significant at the 0.05 confidence level

** Not significant

8.5 Summary

This chapter has focused on addressing research objective 4, that is: to study the congruencies and divergences that exist in the management of knowledge and ACAP in firms, across the Knowledge Intensive Business Services (in particular, the financial industry) and the Non-Knowledge Intensive Business Services Sector (in particular, the tourism industry), (Chapter 1, page 30).

The researcher ensued in a comparative analysis of the management practices for absorptive capacity by studying any potential differences when using control variables of innovation perception and performance: leadership; firm size; manpower; intra-firm communication; relational capabilities and firm practices. The investigation revealed that whilst the firms within the two sectors behaved in a comparable manner in most of the studied aspects of knowledge management, significant differences were revealed in the eight areas, namely: the reasons for the industry underperformance in terms of innovation; the extent of the impact of firm size on innovation; the extent of the staff profile and staff turnover on the exploitation of knowledge; the firm practices and procedures, which facilitate knowledge sharing across the industries; the main facilitator for networking across the industries; and the extent of the impact of firm practices on knowledge exploitation across both industries. In addition to the above inter-sectorial differences, the analysis also revealed diverging knowledge management practices within each of the two services sectors. In fact, firms within the financial services sector did not all experience the same intensity of staff turnover and, therefore, did not all suffer to the same extent, from the loss of knowledge brought about by exiting staff. Further, whilst in general, the firms within the financial services sector suffered from a reluctance to share knowledge amongst them, the firms forming part of the insurance cluster were more inclined to be open and receptive to this practice. Evidence is given by the interviewees to prove the enhanced benefit enjoyed by the sub-sector as a result of this practice.

Chapter 9

Conclusion

9.1 Introduction

This final chapter examines the extent to which the findings of this study address the four research objectives that have been put forward at the beginning of this thesis and which are set out Chapter 1 (pages 29 and 30). Durst and Edvardsson, (2012) , amongst others, have identified knowledge as a valid organizational asset, which contributes towards the growth, development, prosperity, and sustainability of the firm. This is particularly based on the strong links that exist between a firm's knowledge base and the firm's ability to engage with innovative practices, thereby ensuring that the firm maintains its foothold in the industry. This reality becomes even more pertinent when the firm operates in the knowledge economy, an increasingly important economic sector of developed economies. The management of a firm's knowledge, or its ACAP, becomes a crucial management process, closely related to a firm's innovation capabilities and financial success (Kostopoulos, Papalexandris, Papachroni, Ioannou, 2011). Notwithstanding the relevance of knowledge management to firms, especially knowledge based SMEs, much of the literature around this management concept focuses around large manufacturing firms (McAdam and Reid, 2001). This study aimed to address these gaps in the literature by exploring the specific knowledge management practices of service sector SMEs operating both in the knowledge based economy and in the non knowledge based economy, thus enabling a comparative analysis of the ACAP practices implemented by both types of firms. The aim of this research is to present a single comprehensive framework to explain the development of ACAP for service sector SMEs, which addresses the distinct knowledge features of both knowledge intensive and of non knowledge intensive service sector firms. To achieve the above aim, this study sets out to investigate the four research objectives laid out in chapter 1 (pages 29 and 30).

This chapter starts by presenting a synopsis and discussion of the research findings in relation to the aim and objectives of this study. At this stage, a substantive model for the management of ACAP in service sector SMEs is presented. This model highlights the specific drivers that contribute towards the exploitation of ACAP, and hence, towards enhanced knowledge management, formulated specifically on the characteristics and profile of the small service firm. The chapter proceeds with a section highlighting the study's overall contributions to knowledge, as well as identifying the limitations of this study. This chapter closes with suggestions of potential areas for future research.

9.2 The research aim and supporting objectives – an evaluation

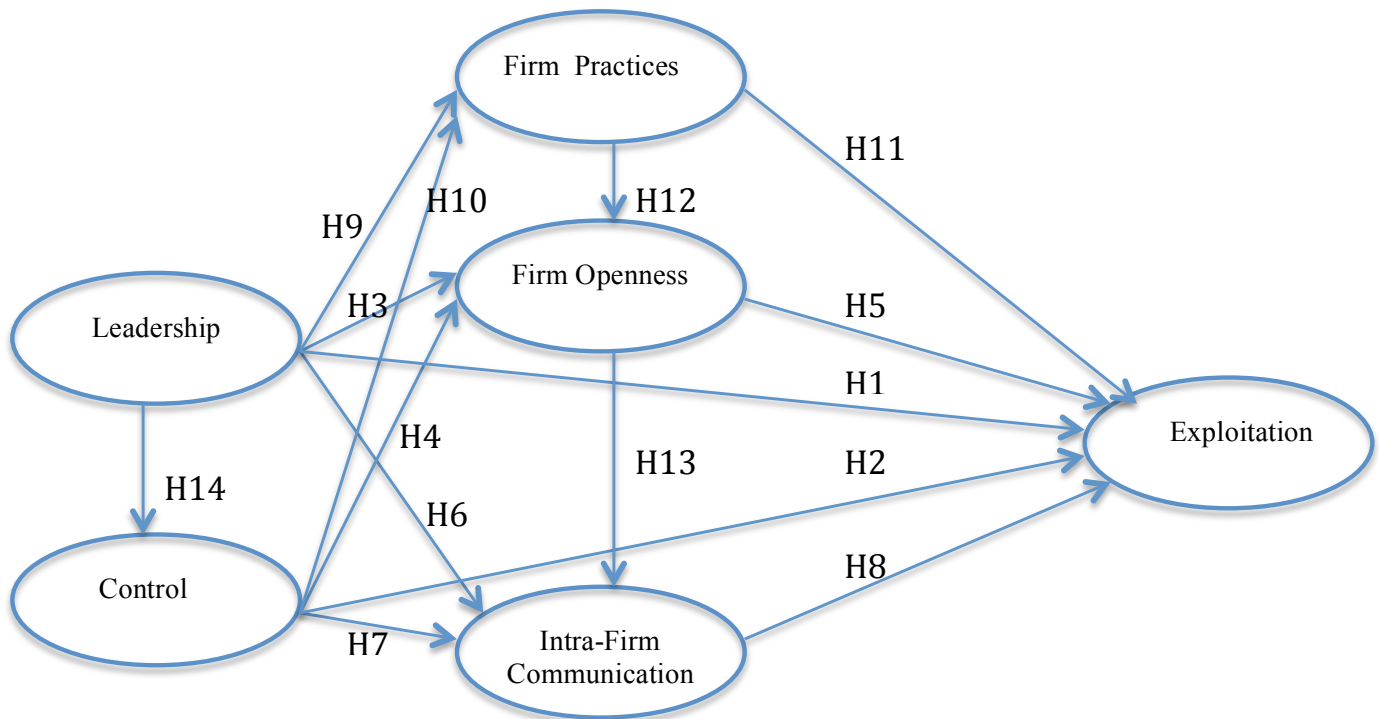
The over-arching aim of this study is to explore the extent to which distinct service sector firms, notably, the knowledge-intensive business sector firms and the non knowledge-intensive business sector firms, converge in their treatment of, and reliance upon, organizational knowledge, and its effect on the sustainable competitive advantage of firms. This research aim is supported by the four research objectives detailed in chapter 1 (pages 29 and 30).

Each of the first three objectives, RO1, RO2, and RO3 has been addressed in chapters 5, 6, and 7. Chapter 5 looked at the first three research objectives with specific reference to the SMEs in the services sector; Chapter 6 focused on examining the same objectives within the ambit of the tourism sector (a non knowledge intensive business sector); Chapter 7 applied the same three research objectives to the financial services sector, as a representative sector for the knowledge intensive business sector. The fourth objective was addressed in the penultimate chapter, chapter 8, which focused on a comparative analysis between the ACAP practices of the tourism sector and the financial services sector.

The conceptual model (Figure 9.1) presented in this study (originally found in Chapter 5, figure 5.1 page 184) derives from the literature and combines the essential elements highlighted in the research of Grandinetti (2016), Shaw (2014) and Thomas and Wood (2014), Yiu and Law (2014), namely: leadership, relational capabilities, knowledge codification and sharing practices and organizational communication processes, with the view of the exploitation of knowledge for enhanced organizational performance. This model combines the constructs found in literature, and proposes a relationship between them, crafted specifically with KIBS and NKIBS, small and medium sized enterprises, in mind.

Figure 9.1 The conceptual model

Source: Personal collection



The fourteen hypotheses made in this study are presented in four exploratory sets as detailed below:

The first set of hypotheses explore the relationship between leadership and the controlling characteristics of the owner-manager as the leader of the SME, on the exploitative capability of the firm:

Hypothesis 1: Leadership characteristics in SMEs are inter-related to the ability of these firms to exploit the benefits of ACAP.

Hypothesis 2: The controlling nature of the owner-managers in SMEs has a positive impact on the firm's ability to exploit the benefits of ACAP.

Hypothesis 14: proposes a relationship between the leadership of the organization and the degree of control exercised by the owner-leader of the firm

The second set of three hypotheses assess the impact of SME leadership on the firm's relational capabilities and, further, on the impact of the firm's relational capabilities on knowledge exploitation:

Hypothesis 3: Leadership characteristics affect the firm's ability and extent to which it networks with other firms in the industry.

Hypothesis 4: The controlling aspect of the owner-manager in the SME affects the firm's ability and extent to which it networks with other firms in the industry.

Hypothesis 5: Firm openness affects the extent to which firms exploit the benefits of ACAP to their advantage.

The third set, of a further six propositions, examine the extent to which firm leadership determines knowledge sharing through intra-firm communication, and further, the extent to which such practices impact the firm's ability to exploit its knowledge:

Hypothesis 6: Leadership characteristics enable intra-firm communication.

Hypothesis 7: The degree of control exercised by the owner-manager will be inter-related to intra-firm communication.

Hypothesis 8: Intra-Firm communication enhances the firm's ability to exploit ACAP.

Hypothesis 9: Leadership qualities will impact on the firm practices and policies.

Hypothesis 10: The extent of control exercised by the owner-manager will impact on firm practices and policies implemented in the firm.

Hypothesis 11: The firm practices and policies will enable the firm to exploit its ACAP advantages.

The fourth set of propositions examine the extent of the interlink between research objectives 2 and 3, i.e. the impact of the organizational practices on the firm's relational capabilities and intra-firm communication, as well as on the firm's ability to exploit knowledge:

Hypothesis 12: proposes a relationship between firm practices and the relational capabilities of the firm.

Hypothesis 13: proposes a relationship between the openness of the firm and the degree of intra-firm communication.

9.2.1 An evaluation of the overlapping nature of the research objectives

The fourth objective of this study encompasses the first three objectives, in that it assesses the extent of parallelism in the behaviour of two broad categories of service sector SMEs in their efforts to exploit the absorptive capacity of their knowledge. To this end, the study proceeds to analyse how, on the one hand, knowledge intensive firms, represented by the financial services sector, and on the other hand, non-knowledge intensive firms, represented by firms in the tourism industry (i.e. hotels), organised their operations and conducted their business in an effort to use their knowledge base in order to gain competitive advantage in the market place. In addition to examining any intersectorial differences, this study further analyses the extent of convergence of firms *within* each of the two service sector firms, tourism, and financial services.

Each of the fourteen hypotheses H1 to H14 in the conceptual model, (figure 9.1, page 380), contributed towards investigating this fourth research objective. In this case, a multi-group analysis technique was adopted to assess whether

there existed significant differences between the predetermined industry groups, that is, the tourism sector, to represent the non-knowledge intensive business sector and the financial service firms to represent the knowledge intensive business sector. This analysis allowed for the comparative analysis of the management of knowledge and ACAP across the two identified sectors.

The following three sections present the results and findings of the first three research objectives, and also address research objective four. The following discussion, therefore, details the results and findings of the impact of firm size and leadership (RO1); the organizational internal strategies and policies (RO2); and the external strategies, policies and procedures adopted by SMEs in order to acquire and manage knowledge (RO3), whilst simultaneously engaging in a inter-sectorial comparison between the practices of the firms in the tourism industry and those of the firms in the financial services industry, thereby addressing research objective 4.

9.2.2 Research Objectives 1 and 4: assessing the effect that firm size and leadership have on ACAP and to understand how firms overcome any limitations posed by these features: an intersectorial comparison across the KIBS and NKIBS

The first research objective sought to examine the effect of firm size and the impact of leadership on the manner in which service sector SMEs managed their knowledge and exploited their absorptive capacity.

Six of the data points in the survey instrument contributed to the measurement of the constructs of Leadership and Control on the ACAP of the firm, as shown in table 9.1:

Table 9.1 The Leadership and Control constructs and the relevant data points

Source: Personal collection

Construct: Leadership	
Var 16a	The firm is continuously scanning the environment to monitor new market trends.
Var 16b	The firm regularly seeks to introduce new ways and procedures for doing business.
Var 16c	A dedicated team of people is employed primarily to research and develop new business ideas.
Construct: Control	
Var 23g	Most employees carefully document newly acquired knowledge.
Var 23h	Employees have a clear understanding of who is responsible for the storage of information within the organization.
Var 23i	Employees have a clear understanding of who is responsible for the sharing of information within the organization.

This first research objective was explored by testing three hypotheses, namely H1, H2, and H14. The tests that have been conducted reveal that, in line with theory (Bass, 1985; Bridge, O'Neill and Cromie, 2013; Culkin and Smith, 2000; Daft, 2007; Wang, Yang and Horng, 2010), the results support each of the hypotheses. This implied that within small and medium-sized service sector firms, the leadership style of the owner-manager had a strong influence on the owner's control over the firm, and in turn, both these elements bore a strong impact on the firm's ability to capitalize on its ACAP and knowledge base. These results are in support of theory (Lynskey, 2004; Webster, 2004). The leadership style of the owner-manager of the organization determined the firm operations and the manner in which the firm conducted itself, namely, its relational capabilities and openness, the extent of intra-firm communication, and the choice of firm practices and procedures to implement. Furthermore, the

level of control exercised by the owner-manage, over the operations of the firm, also impacted strongly on the openness and relational capabilities of the organization, on the extent of intra-firm communication, and on the firm practices adopted in the organization. These findings are also in support of Bass (1985), Durst and Edvardsson (2012) and Wang, Yang and Horng (2010) and recognise the owner-manager as the person in the firm, who will determine the manner and extent to which the SME exploits its ACAP.

Table 9.2 An intersectorial comparison of the effect of firm size and leadership on the ACAP practices of KIBS and NKIBS firms

Source: Personal collection

RO	Hypotheses	NKIBS (Tourism firms)	KIBS (Financial services firms)	Notes	
To assess the effect that firm size and leadership have on ACAP and to understand how firms overcome any limitations posed by these features	Perception of innovation	KM is considered important	KM is considered important	no difference across industries	
	Innovation Performance	Industry/firm is considered to be underperforming	Industry/firm is considered to be underperforming	no difference across industries	
		Innovation underperformance pinned to resource limitations and limited innovation capability of entrepreneur	Innovation underperformance pinned to the tight regulatory nature of the industry	evidence of difference across industries	
	Leadership	Firms confirm the strong impact of the owner-manager on the extent of exploitation of knowledge	Firms confirm the strong impact of the owner-manager on the extent of exploitation of knowledge	no statistically significant difference	
	Firm Size	No evidence of relationship between firm size and extent of knowledge exploitation	Evidence of the negative impact of the small size of the firms on the exploitation of knowledge, mostly owing to the technological aspect of the required innovations	Evidence of difference across industries	
	H1	Leadership -> Exploitation	positive, statistically significant relationship	positive, statistically significant relationship	no statistically significant difference
	H2	Control -> Exploitation	positive, statistically significant relationship	relationship not statistically significant	difference is not statistically significant
H14	Leadership -> Control	positive, statistically significant relationship	positive, statistically significant relationship	no statistically significant difference	

The results of the intersectorial comparison of the effect of firm size and leadership on ACAP, are summarized in table 9.2. These show that firms in both industries consider the leadership of the owner-manager to be a determining factor in driving the management of knowledge in the organization, thereby reinforcing that the personal traits and characteristics and leadership style of the owner-manager impact greatly on the ability of the firm to exploit its ACAP and knowledge base for competitive advantage. These findings are in support of theory (Bass, 1985; Bridge, O'Neill and Cromie, 2013; Culkin and Smith, 2000; Daft, 2007; Durst and Edvardsson, 2012; Lynskey, 2004; Wang, Yang, Horng, 2010; Webster, 2004). No statistically significant difference was revealed in any of the tested hypotheses, indicating that the behaviour of the two industries converges when considering the impact of leadership and control on firm practices, firm openness, intra-firm communication and knowledge exploitation. These findings reveal that the **nature** (i.e. knowledge intensive or non-knowledge intensive) of the industry does not contribute towards shaping the management of knowledge within the small service sector organization.

Results obtained from firms in the financial services sector revealed a relationship between the size of the firm and the firm's ability to exploit its ACAP. These findings are in support of theory presented by Jarillo (1989), who asserts that small sized firms will be constrained by resource and capability limitations, and these will present severe complications in the exploitation of knowledge. Financial sector firms have affirmed that their small size acts as an inhibitor to them, especially, when it comes to allocating funds for investment in technological platforms. This result is in support of theory (Durst and Edvardsson, 2012), which asserts that innovation in small firms is constrained by resource limitations. In the financial sector, investment in technology is crucial, with much of the innovation that is being rolled out in this sector, being highly dependent on technology. The research data revealed that it was very difficult for the small firms (which only have a small target market to cater for) to keep abreast of technological innovations in their sector. No such relationship was revealed amongst the firms in the tourism sector, with even the smallest of tourism firms declaring that they were able to invest in the technological platforms specific to the nature of their business. Firms in the tourism sector did not feel that size impacted on the firms' ability to exploit their knowledge for

competitive advantage. This factor contributed to a divergence between the knowledge management practices of firms in the tourism and the financial services sector.

9.2.3 Research Objectives 3 and 4: exploring the internal strategies, policies and procedures adopted by SMEs to expand and capitalize on their knowledge resources: an intersectorial comparison across the KIBS and the NKIBS.

These research objectives explored the impact of the internal fabric of the SME, and assessed the extent to which the precise manner, in which each category of firm was organised, impacted on the ACAP of the organization. To this end, the constructs 'Firm Practices' and 'In-House Communication' in the conceptual model were used to enable the researcher to examine these research objectives. These constructs were used to describe the manner in which knowledge was managed: identified, acquired, stored, and propagated, within the firm. Furthermore, the dimensions of Firm Practices and In-House Communication were measured using the following data points in the survey model, as shown in table 9.3.

Table 9.3 The constructs of Firm Practices and In-House communication and the relevant data points

Source: Personal collection

Construct: Firm Practices	
Var 21f	Employees are required to attend in-house training courses on a regular basis.
Var 21h	The firm encourages employees to share new markets, technical or other knowledge with their colleagues.
Var 21i	The firm has rules and places, where to record its procedures.
Var 21j	The record/manual of firm practices and processes is updated regularly.
Var 21k	The firm has developed processes to capture ideas from employees.

Var 21l	Firm policies for idea generation and knowledge sharing are clear to all employees.
Var 21m	Employees are well aware of how to put forward an idea to management.
Construct: In-House Communication	
Var 23j	The firm uses employees' knowledge and skills effectively.
Var 23m	The firm encourages informal conversations amongst employees to share information and knowledge.
Var 23n	The interdepartmental meetings are organised regularly to discuss developments

Research objective 3 was tested by assessing six hypotheses: H6, H7, H8, H9, H10 and H11 in the conceptual model (figure 9.1, page 380). The results (table 9.4, page 390) of this investigation confirmed that there was a positive relationship between firm practices for intra-firm communication, and the firm's ability to exploit knowledge in service firms SMEs (H8). The results further confirm that within small service sector firms the implemented firm practices impacted on the extent of openness and networking engaged by the firm, thus influencing the small firm's ability to capitalise on its ACAP and in so doing, supports the research work of scholars such as Grandinetti, (2016) and Nahapiet and Ghoshal, (1998). The results of the investigation, however, rejected the direct relationship between firm practices and the firm's ability to exploit knowledge for small firms in the service sector (H11), and, therefore, were not in support of theory (Grandinetti, 2016). The findings show that in small service sector firms, internal firm practices do not directly affect the extent of ACAP exploitation. These findings are in support of theory (Dsouza and Awazu, 2006; Furlan, Grandinetti and Paggiaro, 2014; Kock and Strotmann, 2008; Leal-Rodríguez, Roldán, Leal and Ortega-Gutierrez, 2013; Porter 1989; Shaw, 2014), which suggests other important drivers (such as, networking, rather than firm practices) are more critical to the ability of service sector firms to exploit knowledge.

Results (table 9.4) revealed a degree of divergence between firm practices in the tourism sector and in the financial services sector with respect to knowledge management practices.

Table 9.4 An intersectorial comparison of the effect of internal organizational strategies and policies on the ACAP practices of KIBS and NKIBS firms

Source: Personal collection

RO	Variable/ Hypotheses	NKIBS (Tourism firms)	KIBS (Financial services firms)	Notes
To explore the <i>internal</i> strategies, policies and procedures which SMEs adopt to expand and capitalise on their knowledge resources.	Staff: involvement	Inclusive efforts (in terms of idea generation and discussion) stop at management level, leading to resistance from lower ranking employees	Inclusive efforts (in terms of idea generation and discussion) stop at management level, leading to resistance from lower ranking employees	No difference across industries
	Intra-firm communication: Knowledge sharing	positive, statistically significant relationship Evidence of on-the-job knowledge transfer by practical demonstrations	positive, statistically significant relationship There is evidence of efforts to document all knowledge and of job shadowing to facilitate transfer of knowledge	No difference across industries Evidence of differences across industries
	Staff: Profile	Gender has a moderate size effect on the manner in which staff embrace knowledge management practices, whilst academic background only has a small size effect. Staff age, nationality, duration of employment and position held in the firm have no effect.	Gender, age and position held in the firm have a small size effect on the manner in which staff embrace knowledge management practices, whilst nationality, academic background and duration of employment have no effect.	Evidence of difference across industries and within each of the financial services sector (for age and seniority) and the tourism sector (for academic background)
	Staff: Recruitment	Evidence of difficulty of finding suitable employees	Evidence of difficulty of finding suitable employees	No difference across industries

To explore the *internal* strategies, policies and procedures which SMEs adopt to expand and capitalise on their knowledge resources.

			Evidence of very high staff turnover	Evidence of low and moderate staff turnover and amongst the sector	Evidence of difference across the industries and within the financial services sector
Staff: turnover			Evidence that some firms prefer to retain knowledge with the owner-manager, whilst others actively share knowledge within the firm	Evidence of documentation and job shadowing practices	
H6	Leadership -> In-House communication	In-	positive, statistically significant relationship	positive, statistically significant relationship	no statistically significant difference
H7	Control -> In-House communication	In-	positive, statistically significant relationship	positive, statistically significant relationship	no statistically significant difference
H8	In-House communication -> Exploitation	->	positive, statistically significant relationship	positive, statistically significant relationship	No difference across industries
H9	Leadership -> Firm Practices	Firm	positive, statistically significant relationship	positive, statistically significant relationship	no statistically significant difference
H10	Control -> Firm Practices	Firm	positive, statistically significant relationship	positive, statistically significant relationship	no statistically significant difference
H11	Firm Practices -> Exploitation	->	negative, relationship not statistically significant	positive, statistically significant relationship	difference is statistically significant

Hypotheses 11, which tested the relationship between firm practices and the firm’s ability to exploit its knowledge, produced statistically significantly different results across the two industries, whilst H12, testing the relationship between firm practices and firm openness, did not bear evidence of any divergent behaviour. Owner-managers in both industries spoke at length of their Human Resource Management strategies: staff recruitment, training, rewarding, motivating, and staff retention. This indicated that leaders across both

industries recognised the importance that employees played in the absorptive capacity and the innovative performance of the firm. This finding reinforces the theory presented by Cascio, (1989), de Brentani and Cooper, (1992), and Sunbdo (2007), who emphasised that properly trained staff drove and facilitated successful innovations, and further supports Ottenbacher, Shaw and Lockwood, (2005) in their claim that staff need to take ownership of the innovation for this to be successful.

Staff recruitment proved to be problematic across both industries. Some minor differences were reported, in the effect of the staff profile, on the absorption of knowledge, across industries. In both industries, gender, academic background and the role occupied in the firm, impacted slightly differently on the firm's ability to exploit knowledge across the industry, whilst, age, nationality and seniority did not cause any significantly different results on the ACAP of the organization across the industries.

Staff training practices and, therefore, knowledge sharing processes, diverged between the industries. In the tourism industry, most training was on-the-job and hands-on, whilst in the financial services sector, there was a concerted effort to document and create repositories for all newly acquired knowledge. This latter practice was myopically limited to the storage of knowledge, without making that knowledge easily accessible to staff. There seemed to be a complete neglect of the fact that the mere act of knowledge storage did not, in itself, represent the exploitation of knowledge. Scholars (Alavi and Leidner, 2001; Cepeda-Carrion, Leal-Millán, MArtelo-Landroguez, Leal-Rodriguez, 2016; Cohen and Levinthal, 1990) do warn that firms must recognise that the mere act of storing knowledge does not contribute towards value creation or absorptive capacity. In the financial services sector a common practice adopted to transfer knowledge to new staff members was that of job shadowing during the induction period. This practice exposed the new employee to the reality of the operation, and facilitated the absorption of knowledge by the trainee.

When analysing staff turnover, the researcher noted evidence of differences across the tourism and financial services industries and within the financial services sector. High staff turnover was being experienced across all firms in

the tourism industries, whilst the extent of staff turnover was being experienced to different degrees by firms in the financial services sector. Staff turnover has negative implications for knowledge management, in that, if not mitigated against, results in loss of knowledge. In the tourism sector, most firms protected against loss of tacit knowledge by setting up reporting mechanisms, which were directed towards the owner-manager. Hence, in a way, all tacit knowledge was 'copied' to the owner-manager rather than directly shared with others in the firm, a practice also reported by Wong and Aspinwall, (2004). No such practice was found in the financial services sector. Intra-organizational communication was evident across all firms, with evidence of positive knowledge sharing experiences, indicating that owner-managers recognised the importance of communication for knowledge exploitation. Such findings reaffirm the work of Todorova and Durisin, (2007) and Zahra and George (2002) who argue in favour of a positive relationship between effective intra-firm communication and enhanced ACAP. The research results are also in support of Dobni (2006), who reiterates that communication intensified in smaller rather than in larger firms, driving smaller firms to be more successful at implementing change.

9.2.4 Research Objectives 2 and 4: exploring the external strategies, policies and procedures adopted by SMEs in order to acquire and manage knowledge: an intersectorial comparison across the KIBS and the NKIBS.

The impact of the external strategies and practices of the service sector SME on the ACAP of the organization were explored by measuring the construct 'Openness' in the conceptual model shown in Figure 9.1 (page 380). This dimension was created to examine the impact of the ability of the small firm to exploit its relational capabilities in order to enhance its knowledge base for competitive advantage. Four survey instrument data points were evaluated in order to measure this construct, as shown in table 9.5.

Table 9.5 The construct of Firm Openness and the relevant data points

Source: Personal collection

Construct: Firm Openness	
Var 22a	There is a strong working relationship amongst firms operating in the industry.
Var 22c	The firm regularly engages with other firms from local industry to learn about new trends, products, and ideas.
Var 22g	Management regularly attends informal meetings (lunch, talks, social gatherings etc.) to discuss new trends and ideas.
Var 22h	The search for relevant information regarding new ideas is embedded in the culture of the firm.

Each of the research objectives, RO1-RO4, outlined above has been assessed against the background of the service sector SME's ability to exploit its absorptive capacity and its knowledge base. For this purpose, each of the preceding three research objectives has been measured by the extent to which they enhanced the knowledge exploitative capabilities of such organizations. The construct 'Exploitation' in the conceptual model measured this dimension for each of the first three research objectives. This construct was measured by evaluating the following six data points in the survey instrument as shown in table 9.6.

Table 9.6 The construct Exploitation and the relevant data points

Source: Personal collection

Construct: Exploitation	
Var 24a	The firm is effective in using the full potential of my knowledge.
Var 24c	The firm encourages employees to share information with each other.
Var 24d	The firm is effective in using IT to improve information flow.
Var 24e	The firm is effective in using different methods to foster better communication amongst employees.
Var 24f	The firm is effective in exploiting new processes/practices to improve business products and services.
Var 24g	The firm is effective in communicating with employees

Hypotheses 3, 4, and 5 from the conceptual mode (figure 9.1, page 380) aimed to explore this third research objective. The results of the intersectorial investigation, a summary of which is presented in table 9.7, were in line with expectations, and upheld these hypotheses, confirming a positive relationship between firm openness and the firm's ability to exploit its knowledge, as well as firm openness and the extent of intra-firm communication. These relationships tested in H3, H4 and H5 were confirmed for all SMEs in the services sector. These findings, are in agreement with the work of other scholars (Cepeda-Carrion, Leal-Millán, Martelo-Landroguez, Leal-Rodriguez, 2016; Grandinetti, 2016; Porter, 1989; Shaw, 2014 and Thomas and Wood, 2014) who argue in favour of the requirement of service sector firms to network and develop their relational capabilities.

Table 9.7 An intersectorial comparison of the effect of external organizational strategies and policies on the ACAP practices of KIBS and NKIBS firms

Source: Personal collection

RO	Hypotheses/ Variables	NKIBS (Tourism firms)	KIBS (Financial services firms)	Notes
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">To explore the external strategies, policies and procedures which SMEs adopt in order to acquire and manage knowledge.</p>	<p style="text-align: center;">Relational capabilities</p>	<p>Evidence of firm reliance on an open relation with other firms in the industry</p>	<p>Evidence of firm reliance on an open relation with other firms in the industry</p>	<p>No difference across industries</p>
		<p>There is evidence of a preference for acquisition of knowledge from overseas sources and from one's own customers for small firms</p>	<p>There is evidence of acquisition of knowledge from local and overseas sources</p>	<p>evidence of differences across industries</p>
		<p>Evidence that firms recognise the importance of networking and engage with the practice.</p>	<p>Evidence that firms recognise the importance of networking and engage with the practice.</p>	<p>no difference across industries</p>
		<p>Evidence of local organisations at industry level which facilitate networking</p>	<p>Evidence of local organisations at industry level which facilitate networking</p>	<p>no difference across industries</p>
			<p>The industry regulator is seen as a major player in facilitating networking within the industry</p>	<p>evidence of difference across industries</p>

To explore the external strategies, policies and procedures which SMEs adopt in order to acquire and manage knowledge.	Relational capabilities	Evidence that firms believe that they are not exploiting fully the benefits of networking	Evidence that firms believe that they are not exploiting fully the benefits of networking	no difference across industries
		Evidence of the reluctance of owner-managers to share knowledge	Evidence of differences in the willingness of owner-managers to share knowledge	evidence of differences across industries and within the financial services sector firms
			Evidence of enhanced networking practices within a subgroup of the sector (the insurance firms), which reflects positively on the extent of knowledge sharing amongst these firms	evidence of differences across industries and within the financial services sector firms
		H3 Leadership - positive, statistically significant relationship > Openness	positive, statistically significant relationship	no statistically significant difference
H4 Control -> positive, statistically significant relationship Openness	positive, statistically significant relationship	no statistically significant difference		
H5 Openness - positive, statistically significant relationship > Exploitation	positive, statistically significant relationship	no statistically significant difference		

The last facet of this analysis evaluates any significant divergences across the industries in the manner in which they exploit their relational capabilities. Results obtained from both industries showed that firms in both sectors recognised the importance of networking, but despite their networking endeavours, they still had not exploited their networking benefits fully. A strong framework of local organizations, which facilitated networking by organising related functions, surrounded both industries. In the financial services sector the Regulator is seen as a champion of networking within the industry, whereas

the equivalent in the tourism industry is only seem as a vehicle to voice the industry’s concern to the government. The researcher found that owner-managers in both industries were reluctant to share knowledge with competitors in the industry. However, there was evidence of enhanced networking and knowledge transferring within a particular sub-group of the financial services sector (insurance). In this case, the researcher disclosed a divergence across the two industries and within the financial services sector with regards to the relevance of networking for the exploitation of ACAP of the firms.

Table 9.8 An intersectorial comparison of the linkages between research objectives 2 and 3: an intersectorial comparison of the ACAP practices of KIBS and NKIBS firms

Source: Personal collection

The extent of the relationship between research objectives 2 and 3 i.e. between the internal and the external strategies of the firm	H12	Firm Practices -> Openness	positive, statistically significant relationship	positive, statistically significant relationship	no difference across industries
	H13	Openness -> In-house communication	positive, statistically significant relationship	positive, statistically significant relationship	no statistically significant difference

The summary of results in table 9.8 shows the intersectorial comparison of the relationship between research objectives 2 and 3. This means that H12 and H13 test the inter-relationship between Firm Practices and the firm’s relational capabilities (Firm Openness), and Firm Openness and the extent of Intra-Firm Communication. This analysis was undertaken to assess industry practices against theory, which posits that employees are, usually, reluctant to share their knowledge with others (Hibbard and Varrillo, 1998; Milton, Pallen and Polley, 2004). Employees’ reluctance to share knowledge has detrimental effects on the ACAP and innovative performance of firms. The analysis reports a positive relationship between Firm Practices and Firm Openness, and further, between

Firm Openness and In-house Communication, confirming that there is no significant differences within and across the industries. This means that owner-managers are aware of the benefits of effective intra-firm communication, firm practices, and relational capabilities as ingredients for successful innovation performance.

9.3 A Synthesis of the Research Findings

The following list of points provides a synthesis of the main conclusions of the comparative analysis of knowledge management practices between firms across the tourism and the financial services industry:

1. Firms in **both** industries are in support of theory (Batt, 2001; Fiol, 1996; Grant, 1996; Teece, 2001) and agree that in an increasingly knowledge-based business environment, knowledge and its proper management are the only elements which can secure the long competitive advantage of firms.
2. There is a strong impact of the owner-manager's leadership and control, on the firm's ability to exploit its knowledge base in firms in **both** sectors. This finding supports theory (Bridge, O'Neill and Cromie, 2013; Culkin and Smith, 2000; Daft, 2007; Durst and Edvardsson, 2012; Lynskey, 2004; Webster, 2004; Zhai, Sun, Tsai, Wang, Zhao and Chen, 2018). This study reveals that leadership impacts the firms in the two industries (tourism and financial services) in the following manner:
 - a. There is convergence between firms in **both** industries in the impact of leadership on firm openness, intra-firm communication and firm practices.
 - b. Convergence exists between firms in **both** industries in the impact of the owner-manager's control on firm openness, intra-firm communication and firm practices.
3. Tourism and Financial service sector firms **diverge** in their view of the impact of the firm's size on the firm's ability to exploit knowledge for commercial ends. The former (i.e. tourism firms) believe that size does

not limit their ability to exploit knowledge and reject theory (Durst and Edvardsson, 2012; Jarillo 1989), whilst financial services sector firms believe that firm size restricts their ability to capitalize on firm knowledge. These findings are in support of theory (Durst and Edvardsson, 2012; Jarillo, 1989) that asserts that small sized firms will be constrained by resource and capability limitations.

4. Firms in both industries acknowledge the critical role played by employees in enabling the firm to exploit its knowledge for innovative purposes, and are in support of theory (Cascio, 1989; de Brentani and Cooper, 1992; Mennes, Van Gil, Odekerken-Schröder, Letterie, 2018; Ottenbacher, Saw and Lockwood, 2005; Sunbdo, 2007). Firms in **both** industries experience difficulties when attempting to recruit new staff.
 - a. Staff affects the firm's ability to exploit ACAP in **both** industries.
 - b. The position occupied by staff members and their academic backgrounds are causes for **divergence**. It impacts the exploitative success of ACAP in the financial services sector, but has no effect in the tourism sector.
 - c. Academic background only affects ACAP in the tourism firms, while position in the firm only impacts ACAP in the financial firms.
 - d. Nationality and seniority have no impact on the firm's ability to exploit ACAP, in **both** industries.
 - e. Tourism sector firms experience high staff turnover and consequent knowledge loss as argued by Dsouza and Awazu, (2006), Jo, Yoong and Patel (2013); Lawson and Lorenz (1999) and Duh, (2016) whilst the staff turnover rate experienced by firms in the financial service sector varies across the industry. Divergences exist here both **across** the industries and **within** the financial services sector itself.
5. Firms across both industries are in agreement with Dobni (2006) and Curado, Muñoz-Pascual and Galende (2018) and acknowledge the importance of effective intra-firm communication as a critical vehicle for absorptive capacity. Knowledge sharing across the industries is executed in a **divergent** manner.
6. Knowledge storage is implemented **differently** across both industries, with especially concerted efforts being made to document and store knowledge **only** in the financial service firms. It appears that the tourism

firms are much more aware of theory (Alavi and Leidner, 2001; Cohen and Levinthal, 1990; Jiménez-Jiménez and Sanz-Valle, 2011,) which asserts that firms should not limit themselves to recording knowledge, but should also proceed to transform and assimilate the newly acquired knowledge. In fact, the firms in the tourism industry focus on on-the-job training and knowledge sharing, whilst an element of excessive focus on the documentation of knowledge was exposed in the financial firms.

7. Firms across **both** industries appreciate the value of networking to expand their knowledge base and reaffirm theory (Dsouza and Awazu, 2006; Furlan, Grandinetti and Paggiaro, 2014; Kock and Strotmann, 2008; Porter, 1989; Shaw, 2014; Thomas and Wood, 2014). These firms, however, claim that although they engage in networking exercises, they do not exploit this avenue extensively. The following salient parallelisms between the industries are revealed:
 - a. Local organizations in **both** industries attempt to facilitate networking. In the tourism industry the leading organization is seen mostly as the vehicle to voice industry concerns to government, whilst in the financial services sector, the regulator champions networking with the firms within the industry. There is evidence of some degree of **divergence** of networking efforts **across** industries.
 - b. Owner-managers across **both** industries are reluctant to share their knowledge with competitors in the industry. This finding rejects theory (Dobni, 2006), which argues that networking is usually relied upon extensively by small firms (in contrast to large firms). An exception was identified in a sub-section of the financial services sector where networking and knowledge sharing are extensively relied upon, and support theory (Dobni, 2006). There is evidence of divergence **across** both industries and **within** one industry (financial services sector).
8. **Divergence** exists across the two industries with regards to the impact of firm practices and procedures, on the firm's ability to exploit its ACAP. Whilst firm practices are considered to determine the exploitative ability of firms in the financial services sector (and are therefore in support of Grandinetti, 2016) they are not considered to have any impact of the ability

of tourism sector firms to exploit their knowledge base, and, therefore, in this context, reject Grandinetti, (2016).

- a. Firms across both industries **converge** in the impact the firm practices have on the firm's openness and relational capabilities.

Firms across the NIBS and NKIBS, namely the financial service firms and the tourism firms respectively, converge on eleven aspects of knowledge management. However, they diverge on five aspects, in so far as the impact of organizational size, employee profile, turnover and employee training and networking abilities have on the firm's ability to exploit ACAP. In addition, three divergent knowledge management practices have not only been revealed across the industries, but also within one particular industry, i.e. the financial services, particularly, with respect to aspects of staff turnover, networking, and knowledge sharing practices.

This investigation, therefore, concludes that the firms within the financial services sector were less homogeneous than those within the tourism sector in terms of the manner in which they engaged with their firm's knowledge.

9.4 Key Contributions

This study is one of only a handful of studies that has been constructed purposely to explore the internal processes leading to the enhancement of ACAP, specifically, for SMEs, operating in the services sector. The contribution is, therefore twofold, in that, the study aims to address gaps that are evident in the literature, by tailoring an ACAP model pertinent to firms, which evidence the characteristics of SMEs in terms of size, agility, leadership characteristics and resource limitations, and also, because the model has been designed specifically for firms that operate in the services sector, where the ACAP literature published so far, is limited. This study is also somewhat unique in that it offers an inter-sectorial comparison between firms operating in two particular service industries, namely the tourism and the financial services

industry, where dedicated literature is even more scant. It also contributes directly by empirically testing existing ACAP models in use in the different service industries and attempted to construct a comprehensive ACAP framework for small and medium sized firms operating in the tourism and financial services sector to assist in the enhancement of innovation in this production sector. Consequently, it offers valuable insights and guidance on the optimisation of resources and capabilities of firms to match internal competences with competitiveness implications for SMEs operating in these industries.

The purpose of this study has been to contribute both theoretically and empirically to an enhanced understanding of this area. It seeks to present insights into the complex sets of dynamics that underpin experiences of and responses to practices, in order to enhance innovation in firms. The methodology and techniques employed in evaluating and assessing ACAP practices and frameworks within service sector SMEs offer KIBS firms and NKIBS organization stakeholders practical, comprehensible and, above all, valid instrumentation that can guide and facilitate the development of policies and effective implementation strategies.

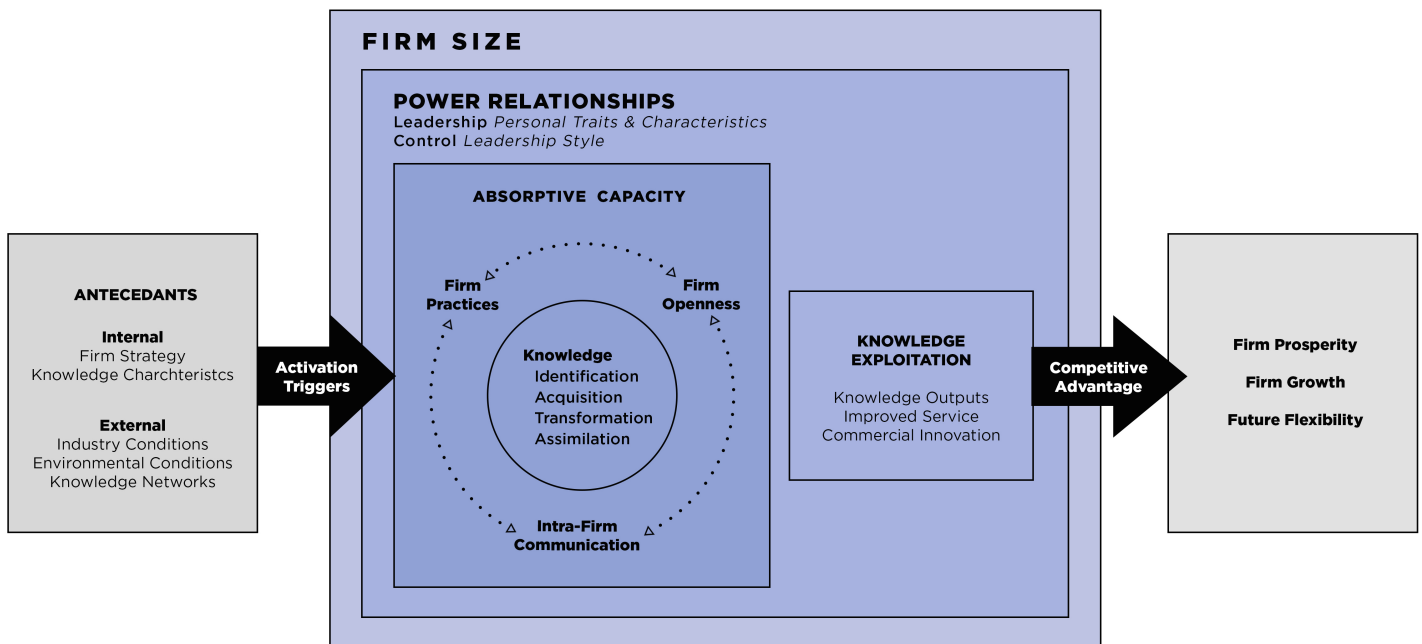
The research contributes to management theory by articulating the ACAP practices being implemented by Maltese SMEs and, moreover, to formulate an ACAP framework specifically designed for SMEs based on the nature of the economic sectors within which the firm operates.

The relationship that emerges from the analysis relating to the knowledge related behaviour of service sector SMEs is presented in figure 9.2. This model illustrates a relationship between five main dimensions: the antecedent ingredients, firm size, the organizational power relationships, the ACAP 'black box', and the organizational output, which exploits the organizational knowledge and results in competitive advantage for the SME.

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Figure 9.2 ACAP in small firms – a reconfiguration for the service sector organizations

Source: Personal collection



The antecedents position the firm advantageously to capture the market signals, and enable the firm to act proactively with respect to market trends and changing business requirements. The relevance of antecedents in ACAP models for the service sector has been recognised also by other scholars (Cohen and Levinthal, 1990; Lane, Koka and Pathak, 2006; Jansen, Van den Bosch and Volderba, 2005; Thomas and Wood, 2015; Zornoza, Julián and Navarro, 2015; Zahra and George, 2002 and numerous others). The researcher identifies antecedents as being internal and external. These antecedents are activated by triggers, which set the organizational machine in motion to develop and exploit its knowledge capabilities. The size of the organization determines the extent of the impact of each ingredient in the model. Power relationships are extremely relevant in SMEs; the owner-manager, whose personal traits and characteristics play a determining role in directing the ACAP activity of the small firm, spearheads the entire organizational operation. The locus of decision-making and planning rests with the owner-manager. Therefore his/her predisposition and appreciation of the importance that well managed knowledge plays in the organization are vital to its exploitation. Power relationships in the form of the degree and type of

leadership and control exercised by the owner-manager play on the three key ingredients, which drive the knowledge identification, acquisition, transformation and assimilation, in small service sector firms. These three key ingredients within the 'black box', which shape the ACAP of small service sector firms, take the form of internal firm practices, intra-firm communication and firm openness. The ACAP 'black box' effectively manages results in innovative knowledge outputs that position the firm competitively in the market with enhanced growth, profitability and prosperity as well as increased agility to respond in a more agile manner to the ever-changing, dynamic business environment.

9.5 Research Limitations

The study has achieved its set aim and objectives and has contributed to the literature around the ACAP of service sector SMEs. It provides a deep insight into the drivers that really matter in the exploitation of ACAP in smaller service sector firms. In addition, this study also delves into the resulting differences, which emanate in the behaviour of KIBS and NKIBS firms in this respect. The research findings can be of value to similar settings and provide a sound basis for further theoretical and practical application. Having said that, some caveats are identified and discussed.

The first issue regards the challenge of the generalizability of the research findings. The study was conducted using a sample of firms in a small island state, with a population of barely half a million inhabitants. This signifies a restricted geographical area, with a population set in its own culture and manner of conducting business, generally based on the Anglo-Saxon model and high on individualism. This in turn implies that the firms that have been approached to form part of the inquiry, conduct themselves in a specifically prescribed manner, which may not necessarily be significantly transposed to other service sector SMEs operating in different geographical locations. Further, given that the participating firms operate in a rather contained and limited market, they may have limited exposure to wider knowledge management issues and/or practices to which firms operating in larger realities would be exposed.

A second weakness of the study relates to the survey instrument that formed the basis of the quantitative aspect of this research exercise. The survey instrument used in this case was an original one, specifically created to address the research aim and objectives of this specific study. Notwithstanding the fact that such a research instrument would be more appropriate to direct the specific research study, given that there has not been a previously conducted parallel study, the use of an original research instrument poses questions of validation and reliability. These issues have been dealt with by testing and refining the research instrument to improve its reliability and validity. However, the fact remains that this is the first study that is using this research instrument and therefore, no previous published work exists, which can be used as unquestionable evidence of the superior quality of the research instrument.

A third and important research limitation is the difficulty that the researcher encountered to collect the research responses. Volume-wise, the research generated some forty hours of recorded face-to-face interviews with owner managers, and 379 valid survey responses. The collection of this data was an immense struggle for two specific reasons. Firstly, because the research was being conducted during a time within which nation-wide, financial service sector firms were being investigated for inappropriate business practices, and therefore, all firms were very suspicious of any one asking questions about the manner in which the business operations were being conducted, and consequently, were rather reluctant to participate in any form of voluntary research. Moreover, and, perhaps, more importantly, organizations that had been approached were actually costing their participation in the project in terms of forfeited labour hours, and presenting the costing to the researcher. This factor posed a restriction of the sample size of responses that could be collected from firm employees. Further, a large proportion of workers in the tourism industry, especially workers in specific role categories (mostly manual, housekeeping and waitering staff), originated from destinations outside the EU, and, consequently, had language issues, rendering it difficult to communicate in either of the two languages of the island (Maltese or English). As a result of their difficulty to communicate effectively, this category of workers could not be asked to participate in the research,

A final research issue relates to time and research costs. This study was undertaken in fulfillment of the requirements for the conferment of a doctoral

award, and, as such, was undertaken within a pre-defined timeframe. In addition, the expenses involved in the research project, such as, the travel expenses, transcription costs, software licenses, were all incurred by the researcher, posing a degree of restriction to the project itself.

9.6 Future Research

It is evident that there is scope for further research on ACAP in service sector SMEs. New research is inspired by the critical assessment of previous published work. This study will also serve the purpose of generating new research questions, and will become the take-off ground for further research. Research limitations outlined above can help inform new research questions, which can be directed towards enhancing the generalisability of the research results of the present study by conducting a parallel study with a larger sample size and across different service sector firms. Alternatively, researchers may choose to conduct a parallel study across different EU countries, which could, then, form the basis of a cross-country comparative analysis of different knowledge management practices amongst service sector SMEs. The category of SMEs encompasses a rather large typology of firms.

An alternative research avenue could potentially take the direction of conducting a comparable study to this current work, focusing only on one category of firm typology at a time, i.e., micro or small or medium sized firms, in turn. Such a study would enable a comparative analysis of the knowledge management practices across more homogeneous types of service sector firms, and would diminish the need to analyse the divergence of organizational practices originating from firm size.

A further research pathway could investigate the relationship between firm size and the ability of service firm's to exploit knowledge, with a special focus on the causes of the divergence in the impact of size on the KIBS and NKIBS firms ability to exploit knowledge.

APPENDIX A

Appendix 3.1 Details of the interviewees

no	Interview details Interviewee	Name of organisation	Position of Interviewee	Services Sector
1	Anthony Schembri	ECCM Bank	General Manager	Financial Services
2	Arthur Gauci	db SeaBank Resort	CEO	Tourism
3	Cenk Kharaman	NBG Bank	CEO	Financial Services
4	David Spiteri	Ininitely Xara	General Manager	Financial Services
5	Elaine Grech Debono	Solana Hotel	General Manager	Tourism
6	Erika Cassar	San Juliani Hotel	Owner-Manager	Tourism
7	Franco Falzon	Fides	Partner	Financial Services
8	John Giacchino	Fexserv	General Manager	Financial Services
9	Julian Mamo	Gasam Mamo Insurance	Owner-Manager	Financial Services
10	Julian Azzopardi	Malta Hotels and Restaurants Association	CEO	Tourism
11	Lino Delia	APS	CEO	Financial Services
12	Loranna Pace	FimBank	Change Manager	Financial Services
13	Mario Azzopardi	Castille Hotel	General Manager	Tourism
14	Matthew von Brockforff	Atlas Insurance	Owner-Manager	Financial Services
15	Noel Mc Carthy	APS Bank plc	Executive, Corporate Strategy	Financial Services
16	Paul Mifsud	Sparkasse Bank Malta plc	Owner-Manager	Financial Services
17	Philip Richards	Malta Micro Finance Ltd.	General Manager	Financial Services
18	Joe Bannister	Malta Financial Services Authority	CEO	Financial Services
19	Reuben Caruana	Credorex	Treasury Manager	Financial Services
20	Rustam Tadjiev	Sogdiana Guest House	Owner-Manager	Tourism
21	Silvan Mifsud	Crystal Finance Investments Ltd	Owner-Manager	Financial Services
22	Antoine Portelli	Square Ltd.	Owner-Manager	Financial Services
23	Joe Muscat	Gozo Tourism Authority	CEO	Tourism
24	Joe Attard	Imperial Hotel	General Manager	Tourism
25	Joe Abdilla	Mellieha Bay Hotel	General Manager	Tourism
26	Lina Scicluna	San Andrea Hotel	Owner-Manager	Tourism
27	Patrick Busuttil	Xlendi Hotel	General Manager	Tourism
28	Frankie Spiteri	Quaint Boutique Hotels	Owner-Manager	Tourism
29	Natasha Rapa	Grand Hotel	HR Director	Tourism
30	Joe Vella	Preluna Hotel	Assistant General Manager	Tourism

31	Kevin Callus	The Victoria Hotel	General Manager	Tourism
32	Michelle Azzopardi Bonnici	Bonnici Insurance	Owner-Manager	Financial Services
33	Jesmond Mizzi	Jesmond Mizzi Finance	Owner-Manager	Financial Services
34	Joe Azzopardi	Paradise Bay Hotel	Assistant General Manager	Tourism
35	Kevin Callus	The Palace	General Manager	Tourism
36	Joe Fsadni	Ramla Bay Hotel	General Manager	Tourism

Appendix B

Appendix B1 Introductory Letter preceding in-depth face-to-face interview and interview schedule

Interview Schedule

Philosophy of the Interview

The interviewer aims to conduct semi-structured interviews. Below is a list of themes, which will serve as a guide during the interviews. The themes are by no way binding and neither is the order in which they may be discussed, as the overarching aim of the interviewer is to build a rapport with the interviewee and to allow the subject to speak freely and spontaneously around the main subject.

The questioning technique that will be adopted starts with a main question, which may, if necessary, be succeeded by follow-up main questions and probes. Probes will focus on obtaining continuation of the conversation, clarification, evidence and sequence of events etc.

Purpose of the Interview

The purpose of this interview is to compile information for my doctoral research, which I am currently undergoing with the University of Exeter in the UK. This research aims to explore how firms in tourism and financial services sector behave when dealing with **the management of knowledge for innovation**. The aim is therefore to compare the "*ability to recognize the value of new information, assimilate it, and apply it to commercial ends*" (Cohen and Levinthal, 1989,90) by firms in the tourism sector and in the financial services sector with the end of advising managers of internal practices they can adopt to position themselves better innovatively.

Confidentiality Statement

I would like to assure you of the confidentiality of this interview and reiterate that all matters discussed in this setting and any information divulged will solely be used for research purposes. No respondent will be identified in the research.

The Interview Themes

The following is a list of themes, which are dealt with during the interviews. The interviewer endeavours to leave an element of freedom in the flow of the conversation and to build a rapport with the interviewee to facilitate the exploration of the theme.

1. About the business

Main Question: What is the story of this business?

- Elicit information about general background/story of the business:
- The origins of the idea
- Date of establishment
- Ownership
- Core competence
- Size of business
- Management structure
- How the business evolved over its existence.
- The profile of the customer

2. About the interviewee

Main question: What is your story?

- Demographic information
- Position in the business
- Academic background
- Employment history outside and within the firm
- Passions and Ambitions

3. Innovation

Main question: Can you tell me about the changes which you have witnessed in this organisation whilst you have been working here?

- Interviewee perspective on innovation and reasons/motives for this
- Extent of organisational engagement with innovation (examples)
- Organisational practices to support innovation

4. Absorptive Capacity

Main question: Can you tell me about the processes, which the organisation goes through in order to identify, or think of, new ideas to implement?

IDEA GENERATION

- Organisational practices to seek new ideas or business improvement ideas
- Balance between internal and external sources for idea generation
- Processes for idea generation
- Extent of investment idea generating process; problem-solving vs. on going activity

NETWORKS

Main question: Can you tell me what happens when you understand that the organisation itself cannot generate new ideas from within its teams?

- Affiliations/ Alliances/ Co-operations and how these are managed
- Extent of networking and how this is managed
- Processes for networking

KNOWLEDGE TRANSFER AND SHARING

Main question: Could you please tell me what you do here when you feel that staff needs to update or improve their skills and capabilities?

- Internal practices aimed to store, retrieve and share tacit knowledge
- Reliance on IT systems

- Formal and informal settings. Internal practices aimed at promoting communication amongst management
- Formal and informal settings /internal practices aimed at promoting communication and enhancing the transfer of knowledge amongst departmental staff
- Processes to encourage knowledge sharing
- Staff training: on-the-job vs. off the job; frequency; processes to participate in staff training programmes.
- Internal practices to facilitate the implementation of newly acquired knowledge following staff training.
- Reward/ recognition schemes

References

When compiling this interview guide reference was been made to themes which have been explored in research instruments found in the following published works: Becker and Peters, 2000; Camison & Fores, 2010; Delams, Hoffman, Kuss, 2011; Flatten, Engelen, Zahra, Brettel, 2011; Geroge, Zahra, Wheatley, Khan, 2001 Gulati, 1999; Jansen, Van de Bosch, Volderba, 2005; Jaworski and Kohli, 1993; Jaworsku , Kohli, 1993; Jimenez-Barrionuero, Garica, Morales, Molina, 2011; Knudsen, Dalum, Villumsen, 2001; Ko, Kirsch, King, 2005; Lane and Lubatkin 1998; Mangematin, Nesta, 1999; McAdam and Reid, 2001; Petroni, Panciroli, 2002; Rubin,J., and Rubin, S., 2012; Shu, Wong, Lee, 2005; Szulanski, 1996; Thomas, Wood, 2014; Thornburn, 2005; Veugelers, 1997; Vinding, 2001.

Appendix B2 Questionnaire Survey Exploring the Management of Knowledge for Innovation

Dear Respondent,

I would greatly appreciate if you agree to participate in my survey by completing the questionnaire below. This survey forms part of my doctoral research and aims to make a comparative analysis between innovation and knowledge management within firms in the financial services sector and in the tourism sector of the Maltese economy. This study aims to explore the commonalities and differences between the industries to reach a better understanding of the internal practices followed to embrace change in different firms.

All information will be treated in the strictest confidence. Responses will not be attributed to any individual or company. Results will be presented in the form of aggregate statistics.

The survey should take about 20 minutes to complete. I thank you for your participation; your contribution is highly valued!

Alessandra Theuma

☎ 99498055

sandra.theuma@gmail.com

Part A: This section aims to identify the characteristics of the respondent in order to gain a better understanding of the profile of the survey respondent.

1. What is your gender? Male Female

2. What is your age? (✓)

< 20		25-29		35-39		45-49		55-61	
20 - 24		30-34		40-44		50-54		>61	

3. What is your nationality? (✓)

Maltese Foreigner ,

Please specify _____

4. If you are in a foreigner, how many years have you been living in Malta? (✓)

< 1		4 - 6		10 - 12		16 - 18		22 - 24	
1 - 3		7 - 9		13 - 15		19 - 21		25+	

5. If you are a foreigner, how many years have you been working in Malta? (✓)

< 1		4 - 6		10 - 12		16 - 18		22 - 24	
1 - 3		7 - 9		13 - 15		19 - 21		25+	

6. Which is the highest level of education that you have completed? (✓)

a. Compulsory Education (form 5)	
b. First Year of Sixth Form	
c. Second Year of Sixth Form	
d. Vocational Programme	
d. Level 5 Diploma	
e. Bachelor's Degree	
f. Post Graduate Degree	
g. Other, please specify	

7. Which category best describes the organization you work for? Please choose one (✓).

a. Tourism Industry - hotel	
b. Tourism Industry - accommodation other than hotel	

c. Financial Sector - banks	
d. Financial Sector - non banks	
e. Other, please specify	

8. For how many years have you worked in this industry, to date? (✓)

< 1		4 - 6		10 - 12		16 - 18		22 - 24	
1 - 3		7 - 9		13 - 15		19 - 21		25+	

9. For how many years have you worked for this firm? (✓)

< 1		4 - 6		10 - 12		16 - 18		22 - 24	
1 - 3		7 - 9		13 - 15		19 - 21		25+	

10. What is your current position within the firm? (✓)

Owner	
Member of the Board of Directors	
CEO/General Manager	
Section or Department Head/ Manager/ supervisor	
Clerk	
Other, please specify	

11. How many years of experience do you have in your current role? (✓)

< 1		4 - 6		10 - 12		16 - 18		22 - 24	
1 - 3		7 - 9		13 - 15		19 - 21		25+	

12. How many people (full time equivalent) does your firm employ? (✓)

1-9		30-39		60-79		150-199	
10-19		40-49		80-99		200-250	
20-29		50-59		100-149		250+	

13. Mark (✓) where appropriate.

Which of the following statements applies to your firm?		Yes/No
a	In this firm there are many more males than females	
b	In this firm there are somewhat more males than females	
c	In this firm there are about the same number of males and	

	females	
d	In this firm there are many more females than males	

14. Mark (✓) where appropriate.

Which of the following statements apply to your firm?		Yes/No
a	In this firm there are only Maltese nationals working	
b	In this firm there are more Maltese nationals than foreigners working	
c	In this firm there are about the same number of Maltese nationals and foreigners working	
d	In this firm there are more foreigners than Maltese nationals working	

15. Mark (✓) where appropriate.

Which of the following statements apply to your firm?		Yes/No
a	In this firm, the owner's family members make up the larger part of the workforce.	
b	In this firm, the owner's family members make up the only a very minor part of the workforce.	
c	In this firm, the balance between the owner's family members and non- members is balanced in the work force.	
d	In this firm none of the owner's family members are employed	

Part B: Innovation and the Firm

16. Please tick (✓) ONLY one box per row.

		Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
a	The firm is continuously scanning the					

	environment to monitor new market trends					
b	The firm regularly seeks to introduce new ways and procedures for doing business					
c	A dedicated team of people is employed primarily to research and develop new business ideas					
d	Management mostly takes a 'wait and see' approach in the context of new trends and methods					
e	I have personally been involved in projects which brought about changes to the organisation					
f	In general, employees in this firm are not hostile to change and innovation					
g	During my employment with this firm, I have not witnessed the introduction of new					

or innovative ways of doing business					
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		Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
h	Innovation and change are initiated solely at management level					
i	Innovation and change are implemented solely at worker-level					

17. Thinking about the firm over the past 12 months, how many innovations (new products, processes, procedures etc.) can you recall having been introduced? (✓)

None		3-5		8-10	
1-2		6-8		10+	

18. If you have witnessed change projects within the firm, briefly describe the latest one you experienced.

19. Describe that, which is the factor that contributes mostly to the **successful**

implementation of new ideas in this organization?

20. Describe that, which, according to your experience, is the factor that mostly contributes to the **failure** of the development and implementation of new business/ideas/projects in this firm?

Part C: The firm's practices with respect to change and innovation.

21. Please tick (✓) ONLY one box per row.

How much do you agree with each of the following statements?		Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
a	Employees' participation in departmental meetings is required on a regular basis					
b	Departmental meetings are mostly the place where management's decisions and instructions are communicated to staff					
c	Meetings are usually only held to identify and discuss problems					
d	During meetings, all participants are encouraged to put forward new ideas for discussion and development					
e	New employees are trained in the firm's					

	processes and practices before commencing work					
f	Employees are required to attend in-house training courses on a regular basis					
g	Employees are required to attend externally organised training courses on a regular basis					
h	The firm encourages employees to share new market, technical or other knowledge with their colleagues					
i	The firm has rules and places where to record its procedures.					
j	The record/manual of firm practices and process is updated regularly					
k	The firm has developed processes to capture ideas from employees					
l	Firm policies, for idea generation and knowledge sharing, are clear to all employees					
m	Employees are well aware of how to put forward an idea to					

	management					
n	Employees' ideas are never taken on board and developed into new/better business, process or products.					

Part D: The Openness of the Firm

22. How much do you agree or disagree with each of the following statements.
Please tick (✓) ONLY one box per row.

		Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
a	There is a strong working relationship amongst firms operating in the industry					
b	Firms within the industry meet up regularly in formal settings (Association meetings, trade meetings, Chamber of Commerce meetings etc.) to share new trends and ideas					
c	The firm regularly engages with other firms from local industry					

	to learn about new trends, products and ideas.					
d	The firm networks extensively with overseas organisations (partner firms, suppliers, agencies etc.) in order to learn about trends and new products.					
e	I have never participated in any meeting with the aim of sharing ideas with other employees from inside the organisation					
f	I have never participated in any meeting with the aim of sharing ideas with other employees from outside the organisation					
g	Management regularly attends informal meetings (lunch, talks, social gatherings etc) to discuss new trends and ideas					
h	The search for relevant information regarding new ideas is embedded in the culture of the firm					

Part E: How Learning is used

23. Please tick (✓) ONLY one box per row.

How much do you agree with each of the following statements?		Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
a	Employees are encouraged to undertake training so as to broaden their knowledge of the industry					
b	The internal processes necessary to obtain authorisation for employee training are known by workers					
c	Management expects employees to broaden their firm and industry knowledge					
d	The organisation has policies which require employees to document new acquired from training					
e	Firm policies do not allow employees to undertake training during normal working hours					
f	Many employees are not aware of the firm policies					

	which require them to document the knowledge acquired from training					
g	Most employees carefully document newly acquired knowledge					
h	Employees have a clear understanding of who is responsible for the storage of information within the organisation					
i	Employees have a clear understanding of who is responsible for the sharing of information within the organisation					
j	The firm uses employees' knowledge and skills effectively					
k	I willingly share my knowledge with my colleagues for the benefit of the firm					
l	Employees are kept informed of important developments within the firm					
m	The firm encourages informal conversations amongst employees to share information and knowledge					
n	Interdepartmental meetings are organised regularly to					

	discuss developments					
o	Employees are given the opportunity to be heard during meetings					

Part F: The Exploitation of Knowledge

24. How effective do you consider the firm to be with respect to each of the following? Please tick(✓) ONLY one box per row.

How effective is the firm in doing each of the following?		Highly ineffective	Rather ineffective	Neither effective nor ineffective	Quite Effective	Very effective
a	Using the full potential of my knowledge					
b	Responding to specific customer requirements					
c	Encouraging employees to share information with each other					
d	Using IT to improve information flow					
e	Using different methods to foster better communication among employees					
f	Exploiting new processes/practices to improve business products and services					

g	Communicating with employees					
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25. Is there anything else you would like to add? We would welcome any comments you may have about your experiences of work, especially those

relating to innovation, openness, how learning is used and knowledge exploited in your firm.

Thank you for taking the time to complete this survey.

Your views will be invaluable in helping us to understand knowledge transfer and innovation within firms in Malta.

Appendix B3 Transcript of a sample qualitative interview

[00:00:12] AT: Mr.Mamo, can I please ask you to start by giving me the story of this business?

[00:00:19] JM: The story of this business is an interesting one, and goes back quite a long way. We trace our roots active in insurance as far back as 1947 when at the advent of mandatory third party liability insurance, that's the year it became mandatory, an insurance agency was set up representing London and Lancashire. In those days, there were very strong ties with the UK and representation of British companies, and Galdes and Mamo was established as an insurance agency representing the London and Lancashire Insurance Company. That went on through the years, the representation changed because of mergers and acquisitions in the UK and there was a big, very big turning point in 1999, where there was a merger that took place which created, essentially, what there is today. Up until then there was another half of the company, which was established in 1975, which was the Gasan Insurance Agency Ltd. which represented another UK based insurer, General Accident. In 1999 there was a decision by the two shareholding blocks to merge entities, the Gasans and the Mamos, and have joint representation, to form Gasan Mamo Insurance Agency, representing the CGU. Now, the CGU, at the same time we were talking about merging ourselves, at that time there were a lot of mergers and acquisitions going on in the UK as well, consolidation, and General Accident and Commercial Union merged at the same time. Literally at the same time, before we actually used our documentation we had to reprint the documentation again because the company had changed name. And we represented from 1999 through to 2003, we represented CGU as the General Accident and Commercial Union Company and we represented that company. At that point, there was a decision by the principal overseas to further consolidate and to restructure and basically their decision was to exit non core markets. And to determine core: was either markets that were not profitable, markets whose market share was too small to be of any influence, and markets that were too small to remain of particular interest. Not surprising, Malta fell into the third bucket of being a small market and therefore they decided to exit. That was obviously a huge turning point, another pivotal point in the history of the company where big decisions had to be taken and we decided to go a bold, to

take a bold step and change our mindset from that of an agent to that of a principal. We discussed obviously the exit strategy, everything was done in a very amicable and supportive way, there was no quarrel at all with the principal, in fact they assisted in the process and were actually share holders for a given period for about two years in the newly formed insurance company

[00:04:33] AT: And when did this happen?

[00:04:35] JM: This happened in 2003. So we were licensed in January of 2003 as an insurance carrier, so we were not representing other insurers, other insurance companies, but we were actually carrying risk ourselves, and underwriting the risk. For us, obviously it was a big step especially for a shareholder, because from generating your revenue through commission to actually carrying the risk and if you're going to end up in claims you are going to have to pay the claims you know...So obviously there was a big shift in mindset, However, the transition was very smooth, because even as agents we always had a very prudent and a very firm belief that we were actually representing the principal, we were not driven by commission and sell -sell -sell because you're going to increase commission. We were always careful in our underwriting, careful in our claims management, we always had that mind set, so from that point of view, there was zero change, it was just completely there. Obviously we needed to get on the learning curve, there were certain things we needed to improve, to learn from scratch. I mean investment management, because you have considerable part of an insurance company is also the management of funds. You're building up reserves, you need to manage those reserves and so on and so forth in a prudent way but actually to generate revenues and returns and **[00:06:13] re insurance** as well was a new area for us: how to carve up and salami-slice the risk to spread the risk as well. But we learnt fast, we had assistance, there's loads of sources of assistance out there and again, because of the good relations we had with CGU we now became Aviva, we had quite a bit of hand-holding in the early days, and we moved on from there. And basically we haven't looked back since 2003 when we started the journey and our life as an insurance company, we were not the first domestic insurance company in Malta, there was Middlesea which was formed in 1981.

[00:07:04] AT: Wasn't it a re-insurer, Middlesea?

[00:07:06] JM: Initially it was a re-insurer, it was a mandatory forced session which was basically imposed on all the market that everybody had to seed 30

percent of their business to Middlesea, and that's how it was created; so it's nice if you know that when you start a business you're going to get thirty percent of the market!

[00:07:28] AT: Of course!

[00:07:30] JM: But that's how they started life, and by then, by that time, in 1995 the session started to be removed, the mandatory session and then they were competing-

[00:07:45] AT: Now it's one of the competitors

[00:07:47] JM: On a level playing field much more, obviously once they've got all the traction that they need; but that's life! And there was also Citadel insurance, which had been formed earlier, but it was, and it still is, a smallish player in the market. So of the larger insurance companies we were like the first to take this bold step. In quite close succession then there were Atlas and there was also Elmo that followed suit and pretty much for the same reasons as well, there was a situation of consolidation, exiting the market and basically they set up as insurance companies. So we've been running as an insurance company since, as I said, 2003 through today, been very successful, but have also faced challenges, you know, I mean challenging years in terms of claims, challenging years in terms of competition and the environment but we believe that we do things in such a way that we are able to rise to those challenges.

[00:09:07] AT: So you are set in the insurance sector, but is there a particular core competence, one particular branch of insurance were you feel that it's your focus mostly?

[00:09:18] JM: We are, the technical term is General Insurance, and we are General Insurers, that is quite a big middle chunk, but basically it eliminates life, so we are not a Life Insurer and we are not a Specialist Insurer doing certain specialist risks that are not run of the mill type of risks. Aviation, [00:09:52], trains, this type of risks that we do not find, so we are very much in that middle tranche [00:10:01] of general insurer. If you analyse that a little bit deeper, OK where are our strengths and where are we focused within that general insurance sector. We are the largest motor insurer and we're very big on personal lines, so we have a lot of individual clients, we're quite ahead of the curve in terms of the distribution strategy that we had, we have ten branches, we've had them a long time, now other companies have moved into that space by all accounts, others have ten branches, and opening up regional offices and

things like that but we were ahead of the curve with that and it gave us a strong presence in the personal lines. Obviously we are not exclusive to the personal lines, we do commercial insurance we're very active in commercial insurance but if we are market leaders in motor and personal lines we're not market leaders in commercial, but we're very active in that space as well.

[00:11:14] AT: OK, and what about the management structure you said that there are two families sort of, the Gasans and the Mamos, there's a board of directors I would imagine, composed of?

[00:11:30] JM: We like to describe ourselves as a family owned business not a family run business and the idea there is I'd like to think that we're here not because we're family but because we're competent, and it would be in our best interest if we were not competent to step aside and let somebody else steer the ship. Now, in terms of the shareholding, it's split between the two families: the majority share is owned by Gasan, in fact, Gasan Mamo falls within the Gasan group of companies as well. On an executive level there are only Mamos involved. At a board level there are two board members from each block. The chairman is Joe Gasan, obviously from the Gasan side and his son Mark, from our side there's myself and there's Albert Mamo, who I just recently succeeded as managing Director. I took over as Managing Director in 2013 due to Albert's retirement but he remains deputy chairman and sits on the board of directors. Then we have three independent directors, and they bring wealth of experience and knowledge to the board and to the company because obviously it filters all the way down.

[00:13:17] AT: How many layers of management would you have?

[00:13:21] JM: When it comes to that we have obviously; there's the board, there's myself as managing director, we run with a management team, myself and five general managers, all responsible for their respective divisions and then the general managers themselves have a senior manager running departments, so a general manager may be responsible for more than one department, and in that case they would have a senior manager running the departments. So a department head is a senior manager and a senior manager might have deputy managers managing teams, or sections within the department. We have a grade scale of seven, so in our organisational structure we've got that and I mean we've got industrial staff at seven, entry level clerical staff at two, technical, three, four, and then there starts to be some supervisory

and management at five, like branch managers or deputy managers, six would be the senior managers and then seven the general managers and me.

[00:14:54] AT: And is your business focused only locally or are you also overseas?

[00:15:00] JM: Predominantly our business is local, but for several years we've been working to increase the importance of our overseas activity. We are, and have been for several years. Obviously joining the EU is a big opportunity for companies to expand into the European Region, the possibility for us to passport and retain the MFSA as our regulator, as our regulatory body is a huge benefit, but obviously there is a certain insularity. I suppose over the generations of getting out of Malta is always a challenging. That having been said we've already been active in Cyprus for five nearly six years, we have an agency appointment there and we regularly monitor that, we're passported into France and we have activity in France. It's limited, our objective is to go into big markets, because Cyprus we're pretty general because there are many synergies between Malta and Cyprus, the language, but France is completely different so in places like France it's extremely niche oriented but we're active, we've been there now for five years, it's been good, it's been lucrative but I can't say that we're out there trying to grow hugely in France, but we are active as a company saying we're not shy of going out to a new market. We're active in Greece, we've come to an arrangement with intermediaries in Greece and are placing and covering risks in Greece; causes a few sleepless nights but we're there, and we've also passported into Poland, so again a niche market in Poland

[00:17:16] AT: And all very different and diverse in their characteristics.

[00:17:18] JM: Very much so.

[00:17:21] AT: OK, very interesting! What about the profile of your customer, is there a particular customer who would fit the profiling or is it basically anyone?

[00:17:33] JM: Like I said our strongest suit is Personal Lines, but that's a very generic profile so there are a lot of our customers who are not necessarily high net worth individuals, but just people who have cars, people who have a house, people who travel, some people have a boat, some people have a big boat, some people have a small boat, you know they have a number of assets that they insure, so there isn't a particular profile that I can say, obviously then we have the high net worth individuals who we look after, and obviously we have

the corporate clients who we look after from A to Z and have businesses in Malta and abroad and we cover their interests overseas as well, so we have the capacity to do that, so it's difficult to profile. This is what the Gasan Mamo client looks like, fitting into a particular pigeon hole in that sense. In terms of geographical spread we're pretty much all over the place in Malta, as I said we've got ten branches, we've had the largest TII, which is a tide insurance intermediary network for many years so these are people who are very local, people who go and do their renewals

[00:19:08] AT: Your sub agents

[00:19:08] JM: Sub agents, it's the word for sub agent basically. So we've got good spread there, in the South and even in Gozo, at the two ends of the island we're strong, very strong.

[00:19:21] AT: How many people would you employ as Gasan Mamo?

[00:19:24] JM: As Gasan Mamo we're around 140. So it's one hundred and forty strong, so that it as a head count not full time equivalent

[00:19:34] AT: And full time equivalent falls?

[00:19:37] JM: It falls, it goes down to, I think it's around one hundred and ten. No, I mean most people are full time.

[00:19:46] AT: And, male, female, is there are a balance or is there a...

[00:19:52] JM: There is a balance, probably at some levels we're more female

[00:20:08] AT: Do you find a difference between a male employee and a female employee in terms of their output, in terms of their capacity to learn, in terms of their relating things to one another?

[00:20:20] JM: No, I don't think so. I think the spread is probably quite even, it starts becoming uneven higher up, and the reason there are the usual reasons: family, women leave the work place, we have one senior manager who's a lady and who's been with the company for many many years, we have deputies and loads of staff and supervisors who are women. In terms of the ability, obviously one can't be too generic

[00:21:10] AT: Because ?

[00:21:12] JM: It wouldn't be fair, but the reality is that more women apply for jobs and we often question where are the men? What are they doing? Where are they? So, that is probably one situation but I mean, the ability to get on with everybody and pick things up I would say is pretty even ...

[00:21:43] AT: What about foreigners, do you employ any foreigners or is this a Maltese staff predominantly?

[00:21:48] JM: It's Maltese more than predominantly, I think it's Maltese 100% almost, which is something that we review, in the sense that we've always maintained that our core business which is Maltese clients you need to be able to converse, the written language is English predominantly, we're emailing and sending letters predominantly in English.

[00:22:13] AT: Yes, but when a client comes across a counter

[00:22:16] JM: But we've always felt that it doesn't make sense that you have somebody who can't speak the local language. That is changing, and at management level we've discussed it a little bit, the reality in Malta is, that Malta has changed in the last five years, you go to shops , you go to restaurants, you're meeting people, everybody's meeting people who don't speak Maltese, maybe if these people come to our offices and they'll meet somebody who doesn't speak Maltese, they're not going to get too upset about it, I think now. And the reality is that the pool of recruiting staff has become a major issue for us. It is very difficult to find good people, and to have enough applications coming through.

[00:22:59] AT: What do you attribute that to?

[00:23:02] JM: In part it's the success of Malta. I mean that I think people are doing well, people are picking and choosing what jobs they take, insurance, and this is as a sector because I'm involved in the Malta Insurance Association, as a sector, hasn't been successful in attracting a lot of top end output from University, from tertiary education, from MCAST and things like that. We have and there are a lot of good people working in the industry, but you don't have people beating down the door maybe in the same way that people are beating down the door to get into banking or to get into accounting

[00:23:46] AT: It's not looked at as a stand-alone profession?

[00:23:50] JM: It's not looked at. I mean there is, there is a BCom major, part, but it's still probably not top choice, which is a pity. We feel it's a pity, because there is an interesting career path, the salaries are good, and as good or better than other equivalent sectors, good working conditions. Today, if you look around the top insurance companies on the island they're offering a good salary, a good working environment, you know, things are done more professionally than perhaps they used to be. Before I think there were some

less professionally, but now with corporate governance the way it is, with regulation the way it is and competition the way it is, you have to offer the incentives, the benefits. So, that is one of the issues. The other thing is one of the areas of growth in financial services has been insurance, but insurance of companies with their head office in Malta but writing risks outside Malta, and that obviously consumes resources, probably more attractive, in terms of salary, in terms of interest or whatever it is, obviously it has its short comings and the down side, longevity and things like that, but that has been a drain on resources; so there we are.

[00:25:36] AT: Can I take you now to move on a little bit to innovation? You've mentioned quite a few turning points, landmarks, in the story of Gasan Mamo, showing important changes, important innovative steps, the mergers, moving into the different countries, different cultures. Can you talk to me about any other innovations that have taken place, not necessarily from a business perspective, but even from a procedural perspective?

[00:26:14] JM: OK, one of my battle cries within the organisation is the need for constant innovation. By a large insurance, especially in the general insurance space has become commoditised, So what makes a difference is us, the people within this organisation, in this building, in our branches, and how we deliver it and what we can come up with, mostly in terms of the way we deliver it really, because innovation *per se* on the product will be replicated within a week, so if we add something to our policy and say we're going to cover with your mobile phone you have your remote key for your car covered, within a week, you be sure that everybody has that addition to their policy, because they're not patented it's different to manufacturing, so imitation in terms of product is, I'm not saying it's non-existent, you have to constantly review, revamp and try to improve your product, but you can't rely only on that, so one of the things that I'm pressing for is for everybody to be alert, to be in tune to be thinking change, to be innovative in that approach, and by chance, on my desk I have a document which is being studied because we started a process, and the idea is institutionalizing innovation, we want to make it normal, normalising innovation, the culture, a culture of, "let's not do this like this let's do it like that" you know? Obviously, it's not easy to do that, you're changing people, we all.... human nature is routine, we fall into routine, we get tied up and bogged down doing the mundane and you never look up and question why. Then the danger is that

when people do question why, if you don't have a system to process that questioning why, it gets lost and the negative impact is considerable, because then people say "I pointed it out and nobody took any notice, so I won't point it out again" and then you've lost a potential ally in this effort to infuse an innovative, inquisitive, challenging attitude. So what we're working on is the process of institutionalising innovation, whereby we make people want to question and we give people a space to question, so that there is a process that thinking is as important as doing.

[00:29:20] AT: So it isn't there now?

[00:29:23] JM: It isn't there now.

[00:29:23] AT: You don't feel that this is an innovative firm ?

[00:29:49] JM: I mean, to be fair, we were extremely innovative, where it's mostly bottom-up approach. In the 18+ car insurance package...it's not GMI's idea, telematics is something that's happening overseas, it's going to be growing.

[00:30:05] AT: But it's innovative for the Maltese.

[00:30:08] JM: It's innovative for us, the way we've implemented it is innovative, the way we've marketed it is very innovative it's called Boosh, and, yes definitely, what I want to do is improve, and we've got excellent people and we have an excellent track record and that didn't happen by accident, it happened because we have very good people. But what I want to do is try to infuse more of this, because that's the differentiator between one firm and another.

[00:30:44] AT: So you would say at the moment it's management down

[00:30:48] JM: I think even that might be a bit unfair, it goes both ways, but it's haphazard.

[00:30:57] AT: OK, and how do you plan to get the result that you would like to see, you would like to see your firm breeding change, everybody questioning how to improve, how do you think you're going to get to that point efficiently?

[00:31:15] JM: The value needs to be recognized, particularly by management, so one, you need to go down and get everybody on board that a good idea, even a bad idea, is not a nuisance, it has value. There is value in spending half an hour a week with a group of people thinking, as opposed to doing, we're not on a production line only, I mean we are in some parts, at certain times of the month we are, you have no time to draw breath, let alone sit down and have an airy fairy talk about what shall we do today or what shall we think about today.

But there are also times during the month or during the week where you can say listen, let's just look at our process on X or on Y, let's just look at what's happening in the UK or in the USA or in France or in Italy. Does this apply to Malta? And you might come up with nothing, but the fact that you thought through that process and you've given time to everybody to share that and actually contribute I think has huge value. So to me, I'm sold on it, I'm the driver of this, my GMs are on board. I need my senior managers on board, and I have no doubt that the staff will get on board. Then it's a case of systems and processes; because an easy solution is a suggestion box, that's the most rudimentary type of innovative driver you have. You have a suggestion box somewhere in the canteen and you slip a little paper, and nothing happens, and everybody gets demoralized. It's just not going to work. So the system, and I don't have the answer on the system yet, this is what we're going to work together on, because I can't say "OK, everybody this is how it's going to work"...You need to tell me, they need to tell me how it's going to work, what they think, but I'm saying I'm going to invest in it, I'm going to leave time for it, I'm going to value it, and that's where I am on innovation.

[00:33:36] AT: I'm going to take you back to a couple of points that you mentioned. You've spoken to me about merging with Gasan, you've spoken to me about changing the nature of your existence from an agency to a stand alone. All these changes must have meant that you needed to learn new ways of doing business, new procedures, new processes, new regulations. How did the company go around that? You mentioned to me, you actually experienced "a huge learning curve" especially when you had to become an insurance carrier yourself, but you learnt fast. How did you ensure that you learnt fast? What did you put in place? Because learning is not exactly very easy, learning fast is even harder. How did you ensure that?

[00:35:01] JM: I've been here, 27 years.

[00:35:02] AT: 27 years! OK

[00:35:05] JM: So I've been part of...

[00:35:06] AT: You've seen the firm going through a lot of these changes.

[00:35:11] JM: OK. I also made reference to hand holding. One of the best ways to learn is to actually have somebody teach you and have the hand holding process. There is a lot that can be done, I mean there are services that are provided, so when we learnt about reinsurance we actually did so because of

our relationship with the principal, Aviva, we worked with their reinsurance broker and we were part of their reinsurance program for the first two years. So until we could stand on our own two feet, we had that sort of safety net, that they helped us with our reinsurance program, is it the right program etc.? Then, we moved over to their reinsurance broker. We were introduced, we knew other brokers and we went to the London market to meet different brokers, and we made a choice. The introduction had come from Aviva, not this little tiny insurance company. Don't forget, at that point it was quite a daunting exercise to go to the London market and say listen, we're an insurance company, we've just started, would you like to carry part of the risk with us and re insure us? Because, insurance is a numbers game, and because of that historical data is important. So, if you're just starting up you have a bigger challenge. What we were lucky was that we'd been active in insurance for a good number of years, we had all the data available, and the story is a good one to tell, because we had all that data available, so being able to sell; but it was a big challenge even, you know being in the room with these A rated companies and you're sort of a little imp from Malta... you feel, you know, they're sizing you up and saying... Today, actually for quite a few years now, they're constantly knocking on our door wanting to be part of our program, so the table turned completely, which is a very nice thing to have happened, and a credit to all of GMI and all who put so much into it, so that learning process facilitated, hand held both. Because when you get an insurance broker, a re insurance broker, basically they're telling you, helping you with your presentation, analyzing your data and then giving you advice on what markets to approach and being there when you approach them. So, that we felt was a big step. But we also went a step further. We also had technical training for all the management team on re insurance, literally classroom training. We had two executives go to Munich for re insurance training, three executives, for re insurance training in Munich for a two week training, so we invested in that. So we had this technical, professional type of training. The other aspect that there was the steep learning curve was the investment management and that side of the business, which was less of a challenge. It was new to us, we weren't accustomed to managing tens and tens of millions of funds without putting them at risk, because at the end of the day these are funds which are technical funds, they're not profits of us, they're there, they're premiums which are unearned, they're claims which are unpaid as yet,

you're waiting for things to process and the funds are there, you have to save them. But, again because of the valid input from the board, experience of the board members as well in managing funds and insurance companies, because we have somebody from the UK,

[00:39:48] AT: These independent ones?

[00:39:49] JM: An ex managing director of Royal Insurance from the UK, and he was managing director of various companies in the Caribbean as well, an ex managing director of the Benilux region of Aviva in the Benilux region, and the ex managing partner of Casinov, which is a financial institution in London whose expertise then is investments, so we've got a very well rounded and experienced board. So then, basically what we did is, we recognized our limitations, and we bought in expertise and we carved it up and we identified three investment managers whose scope it is to manage funds. We determined an investment policy, which was a very prudent investment policy, and then we allocated, so that's how we bandaged that, I mean, actually bringing in the resources.

[00:40:56] AT: So you give a lot of importance to training of your staff, obviously. Retraining? Is it a constant update? Are there programs in place for this or is it one thing that happened when you changed from an agent to a principal?

[00:41:14] JM: Training is on going, the training program is something I'm pretty proud of at GMI throughout the organisation. We start with an induction program, which is quite a thorough program which is carried out by coaches from the staff, so we have people identified who have been with the company for a certain length of time and they deliver the induction program which goes sweep, sweeps across the board of where we come from, the history of the company, to share the culture and give people a heads up of what this organisation is, teaching of who's where and who's what and what's what in the company and then we have the soft skills training, which are core courses if you like, for everybody to go through, which is team and communication, so on and so forth, and then we have the technical, and we have a very attractive incentive for technical training, particularly insurance training but not exclusively, where there are bonuses and qualification allowances as a result as well as sponsorship programs for training, so that is something that we incentivise. We also have other soft skills and needs analysis which we do

every year. We plan our training program: HR in conjunction with the management of each department identifying people, this person, a bit of this and a bit of that people work through

[00:42:56] AT: Now when you send people for training, I mean you can't send everybody...how does this work?,

[00:43:27] JM: I suppose it depends on the type of course, some of it hopefully, depending on what level, a supervisory role for example it is going to happen because whether they're learning about the soft skills or the more technical side and they're telling people this is how we're going to do it because it makes more sense to do it in this particular way, they will be sharing. Do we have a structured presentation so someone back from training gives a five minute talk about what they learnt? No we don't, but do we require that they give feedback to their manager and the HR department about the training? Yes, so there is that feedback.

[00:44:06] AT: But what happens with that feedback?

[00:44:17] JM: I'd like to think that something happens with it, I mean because then we have a system of performance appraisals which will have identified what training would be needed, what somebody is going to be working on in that particular time in terms of improvement or technical knowledge, and then there's an assessment of how did you do on that, and then it's triggered to say, you are actually doing that much better so on and so forth. So we do give a lot of importance to feedback and actually getting the return on the investment, otherwise it's lost.

[00:44:59] AT: OK, what about networking, you have mentioned that you yourself are at corporate level now, you mentioned that yourself of course representing GMI are member of the Malta Insurance Association, do you feel that networking is of value, especially where idea generation is discussed?

[00:45:25] JM: Definitely, I think that networking and peer groups are extremely valuable.

[00:45:31] AT: But how present are they in the insurance industry, do they exist?

[00:45:36] JM: In the insurance industry predominantly you've got the Malta Insurance Association which is the hub of activity, but then that is broken down further so there isn't just one Malta Insurance Association which meets on quarterly basis and that's it. It's a live and vibrant entity in it's own right with a

Director General and a team of staff who are there every day doing things , circulating, so it's active. Then there are sector groups, each sector, motor sector, general business sector, life sector, financial committee, they all have their own, health insurance ... they all have their own sector meetings and they're going, so there is participation at every level by GMI at these meetings. In fact, Gasan Mamo, quite often takes quite a leading role in the MIA, we've always done, going way back many many years, we've all been very present at MIA and even in the sector groups, I mean, I think the longest serving motor sector chairman has been Francis Valletta, who's one of GMI's GMs, I'm deputy chairman, vice president of the Malta Insurance Association, you know we're very active. Other bodies are less active, but they exist in the Insurance sector risk management association and insurance institute where there are courses that are organised for people working in the sector, so there are activities.

[00:47:30] AT: But how well do you feel these networks achieve the aim of facilitating the exchange of ideas?

[00:47:45] JM: Very well!

[00:47:46] AT: Do you feel the industry in Malta is a collaborative or an individualistic one?

[00:47:59] :Very collaborative – very much so. I mean I think there is an element of that but I think if you compare the insurance sector to many other sectors we're very far ahead, because we do share data-

[00:48:13] AT: Why do you say this?

[00:48:15] JM: Because I know, I speak to people working in other sectors, there's no communication. Other than what you read in the paper or you hear somebody say, there's no communication between the sector. That's not the case, we meet regularly, we lobby hard regularly, if there are things of concern we talk about them regularly. Do we compete? like heck we do! Yes. Are people cagey with their data? And how! But do we share data? We try. On a no claims basis, we've been doing it for years, are we as good as other countries? Definitely not, I mean even a little country like Cyprus produces much more detailed data, they're less protective of their information, but I think we've come a long way. Generally speaking, Maltese businesses don't like to share anything.

[00:49:13] AT: I see...

[00:49:16] JM: SO, on a scale of 1 to 10, I would put probably the insurance sector at a 5 or a 6 whereas other sectors might be on a 2 or a 3.

[00:49:27] AT: Do you feel that this hinders change within the industry, or it has no impact?

[00:49:49] JM: I hesitate because if I say, you know, being protective of ones data would not hinder the sector it would be viewed as quite flippant a statement, but in reality I think there is enough data that is shared for us to be able to continue to move ahead. Where we fall short on certain elements of data, there's other sources for that data, Central Bank, MFSA, to get that type of information, it's not ideal, it's not as fragmented or as granular as maybe one would want it to be but...

[00:50:30] AT: Do you feel that, I mean you have experience at least first hand experience of another 4 countries from the insurance perspective because you operate there. Do you feel that change and innovation happen faster there than, in the Maltese Insurance sector?

[00:50:47] JM: I think that the Maltese Insurance sector is quite advanced. If I'm brutally honest, because we operate in a niche in France and our operation in Poland is very, very small and very niche also, pet insurance in Poland.

[00:51:05] AT: Pet?

[00:51:05] JM: Mhm, I would be unfair, I mean I'm not the right person and say it's not innovative or it is, but if you compare Malta to Cyprus where we've had a longer experience and more generic, more general, I would say Malta is more advanced in the area and sophistication of the policies, the rating. In sharing data no. Their association generates a very good 6 monthly report of how things are: who's growing, who's not, you can go through a list and say he's shrinking or he's growing or he's this, where did the business go? You know? You can't do that in Malta, but on the other hand I mean we're pretty... We're forced to be pretty open, we share information at the end of the year by the first quarter in terms of premiums and claims to see how the market has done. We question sometimes whether the data is correct or not because it's not audited so there's always that question, but then in June, everybody has to publish their accounts. I mean insurance companies is an open book, I have the accounts of my competitors, most of them-

[00:52:31] AT: The audited ones?

[00:52:32] JM: The audited ones

[00:52:34] JM: Even though they are the audited accounts, there are so many mandatory disclosures, that things are really broken down. I mean, all right you have things which are- but you don't have just 2 numbers, I mean you have a split, you have this and that and an investment incomes, you have enough depth to make the analysis complete.

[00:52:55] AT: You mentioned you're in pet insurance in Poland. How did you get the idea to go into that country with that product?

[00:53:10] JM: That product, and that country came to us, rather than the other way around. We were introduced to an individual who wanted to start up this particular line of business, the insurance world is quite a small world, even outside Malta, if you know people and you're looking around, personal connections and personal contacts matter a lot, even outside Malta and obviously reputation and so on also matters because it's not a huge...

[00:54:09] JM: Network, I mean once you're in on the London market and people know mhm Gasan Mamo, mhm Julian or Leslie, they know people, somehow, you can join some dots. This contact came through, actually he was known to one of our board members, and they came with a business plan, which we proved and challenged, and it was attractive to us. It was attractive because we look for- I mentioned it a couple of times- niche markets. Insurance unfortunately, is quite a difficult market to export, because the nature of our business is claims. So exiting a market can be messy. If you decide to export furniture and you go to a country and you try to sell chairs and you're not successful, you either leave the chairs there, or send them back and that's it, end of story. Because of insurance, you end up with a lot of liabilities, court cases, people waiting to be paid, claims waiting to be processed that you need to handle, so to turn around and say we're not interested anymore let's walk away, is a bit more difficult, and untidy, and costly. So one area that we thought of taking quite a bit of care on is, when we're going into a market, ideally it's a simple kind of product with low limits of liability, so if things don't go well, it's not going to hit us too hard. We obviously know that we're not, I don't know, Zurich or Alliance, we're Gasan Mamo, so the impact is like that, and long tail business, long tail the liability type of business where there's going to be those kind of claims which will probably go to court and which become very expensive and very long winded type of product. Pet insurance

AT: Okay perhaps IT is one of the spheres where innovation takes place at the fastest rate, , can you identify some of the innovations that you've implemented there?

JM: Sure, I think we have many of them but if I had to think of two at random one of them is when we had to change from an insurance company, from an insurance agency to an insurance company. We had to make a big decision: do we build or do we buy our own systems? And we went through the evaluation process, the buying part had a mind of its own, at its own risk and its own cost tied to it. To build you need to have the resources and the belief that your people were good enough to build what we needed. We chose the build route and that paid off for sure, we've come up with fantastic in-house development software, we used for example our financial package, we took a different route there, there we said it is quite standardised we need to make too many changes, we would plug in our financial package to our core insurance system but the core insurance system is something you can buy of the shelf but you need to definitely always make a lot of model care modifications and customization. So that was one big thing that we took that big decision and everybody has been a good decision and we managed to evolve it..

[00:58:36] AT: And how do staff respond to these changes

JM: It's a challenge. The staff that has been with us for a number of years are familiar with the change and throughout a number of years I would come out and face that change and want to do another one but they recognised it that the only way to keep up to date, to keep up to the efficiencies, to keep competitive with your customers is to keep looking at optimizing your operational processes and the obvious way to do it is by investing in IT and it also, it is not just a cost cutting thing to save on cost but it helps you to develop a better service more efficient but besides more efficient can be at the cost of the customer but keeping the customer in mind and implementing systems to drive both to the customer's satisfaction and also your cost optimization your costly base and obviously your cycles times. So how the staff react to it I think there's still naturally an amount of apprehension that they're going for a change, what is the impact going to be, what if it goes wrong ? So we are continuously looking at project management and optimizing the way we deal in our project

management both down with the planning management to planning phase and try to avoid typically going with a big bang, with a big bang change. Implementing a phase approach we have found being safer, more effective and easier for staff to familiarise with the change and take it on board rather than always a big of accumulation of knowledge training before and then having to switch on. We've had instances of big bang too.

[1:03:45] AT: That was my very last question. Thank you for your time and interesting contribution.

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