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**THE MEDIATING ROLE OF ENTREPRENEURIAL LEADERSHIP: AN
INVESTIGATION OF THE COMPETITIVENESS OF SMEs IN THE UK
SOUTH WEST FOOD AND DRINK MANUFACTURING**

By

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ABSTRACT

It has long been argued that Social Capital, a concept represented by the value embedded in the social relationships of individuals or collectives constitute strategic resources for individuals and organisations. Social networks are thus perceived by businesses, particularly small and medium enterprises, as a means to access those resources, for example gaining privileged access to strategic information that could secure financial resources. In reality, and because of the inherent characteristics of Social Capital, entrepreneurs or business owner/managers who effectively use resources available within social networks are driven by a clear and compelling vision and sustained by a set of leadership attributes which are in line with the process of recognising, evaluating and exploiting opportunities. This study reinforces the concept of Entrepreneurship as a multi-social construct.

Using survey data from 359 SMEs in UK South West food and drink manufacturing, this study uses a structural equation model to evaluate the relationships of interdependence between Social Capital, Leadership and Entrepreneurship Process. The mediating role of leadership in this interaction first, explains the relationship between Social Capital and Entrepreneurship Process and second, exposes the entrepreneurial behaviour common among SW food and drink manufacturers as the underlying explanatory factor of the competitiveness. Notwithstanding the prevalence of social networks, the level of brokerage appears to be very concentrated on closed networks with providers of professional services and local associations. This inadequate level of brokerage heightens the existence of structural holes which points to a situation of 'over-socialisation' suggesting that social norms prescribe economic action. The lack of appropriate market knowledge among

owners/managers of small medium enterprises in the UK South West food and drink manufacturing frustrates the formulation of a comprehensive vision, in spite of the fact that values of 'hard work', 'continued improvement' and 'ambition are largely shared among them.

The main findings contribute toward a better understanding of Social Capital as distinct from social networks and the leadership role in business competitiveness. It makes a significant contribution to the debate on the integration of individual and environmental perspectives as a direction of future research on the understanding of Entrepreneurship. The study implications address policy-makers and business managers in filling the skills and knowledge gaps which are restraining the competitiveness of SMEs in this important and strategic sector.

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LIST OF ABBREVIATIONS

AGFI	Adjusted Goodness-of-Fit Index
AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
BIS	Department for Business Innovation and Skills
BOM	Business Owner/Manager
BSSP	Business Support Simplification Programme
CFI	Comparative Fit Index
CR	Composite Reliability
DEFRA	Department for Agriculture, Food and Rural Affairs
Df	Degree of Freedom
DTI	Department of Trade and Industry
DWP	Department of Work and Pensions
EFFP	English Food and Farming Partnership
EP	Entrepreneurship process
EU	European Union
FDD	Food and Drink Devon
FDF	Food and Drink Federation
FFB	Food from Britain
FCC	Food Chain centre
GDP	Gross Domestic Product
GEM	Global Entrepreneurship Monitor
GFI	Goodness of Fit Index
GLOBE	Global Leadership and Organizational Behaviour Effectiveness
GVA	Gross Value Added
IFI	Incremental Fit Index
IGD	Institute for Grocery Distribution
IM	Institute of Manufacturing
LS	Leadership
LAs	Local Authorities

MoD	Ministry of Defence
MSV	Maximum-Shared Squared Variance
NFI	Normed Fit Index
NHS	National Health Service
NNFI	Non-Normed Fit Index
ONS	Office of National Statistics
PDO	Protected Designation of Origin
PGFI	Parsimonious Goodness-of-Fit Index
PGI	Protected Geographical Indication
PNFI	Parsimonious Normed Fit Index
PSFPI	Public Sector Food Procurement Initiative
RMIF	Red Meat Industry Forum
RMR	Root Mean-Square Residue
RMSEA	Root Mean-Square Error of Approximation
SC	Social Capital
SEM	Structural Equation Model
SIC	Squared Inter-Construct Correlation
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Science
SW	South West
SWLFP	South West Local Food Programme
SWRDA	South West Regional Development Agency
TLI	Tucker-Lewis Index
TSG	Traditional Specialty Guaranteed
UK	United Kingdom
UKTI	United Kingdom Trade and Investment
WHO	World Health Organisation

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DEDICATION

To my mother, Elisabeth Mapon, whose infectious passion for education has led me to this path;

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To my family; I truly hope that this work will inspire the young ones to greatest achievements;

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AUTHOR'S DECLARATION

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award.

The study was self-funded. Relevant scientific seminars and conferences were regularly attended at which work was presented.

The following activities were undertaken in connection with the program of study:

Attendance in a number of courses in data analysis, particularly courses on Quantitative Analysis: Regressions, Multivariate Analysis, Structural Equation Modelling for Cross-sectional and Panel data.

Participating in the Plymouth University Post Graduate Symposium 2010 and presented a paper entitled 'A theoretical model of interaction between social capital, leadership and entrepreneurship process'.

Attendance of ISBE (Institute for Small Business and Entrepreneurship) Annual Conferences in 2009, 2010, 2011 and presented a paper at 2011 event entitled 'The mediating role of leadership in entrepreneurship and social capital interaction'.

Publications arising from this thesis

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- The effect of the inter-relationship between social capital and leadership on SMEs' competitiveness. *Entrepreneurship Theory and Practice*. February 2014.

- The moderating effects of location and human capital on the structural dimension of social capital among SMEs in the SW food and drink manufacturing. *Journal for Small Business and Entrepreneurship Development*. April, 2014.
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CHAPTER ONE: INTRODUCTION - KEY CONCEPTS, AIM, OBJECTIVES, RESEARCH OUTLINE

1.0 Introduction

The past two decades have witnessed an unparalleled change in a global landscape increasingly characterised by a turbulent marketplace that has left no industry unchallenged. Technological advances have boosted global trade and expanded consumers' choices by bringing markets closer. Across industries, the relentless transformation of businesses has toughened competition and shifted market advantage in new directions, leaving some businesses fighting for survival. This phenomenon has been largely attributed to the rise of entrepreneurship, a process driven by innovation or the creation of new means-ends in response to the changing socio-environment (Schumpeter, 1934). Increasingly, entrepreneurship is recognised as the engine of economic growth and Small and medium enterprises (SMEs) play a key role in the creation of new ventures or the transformation of existing businesses (GEM, 2012).

Most authors share the view that entrepreneurship originates in the socio-environment of human interactions where new combinations emerge to supply and satisfy material needs (Gedajlovic et al, 2013; Honig and Davidson, 2000; Polyani, 2001; Kuratko and Hodgetts, 1989; Aldrich and Zimmer, 1986; Birley, 1985; Schumpeter, 1934). The extant literature contends that entrepreneurship is the process of recognising, evaluating and exploiting opportunity and the set of people called entrepreneurs who embark in that process (Casson and Della Giusta, 2007; Berglund, 2007; Alvarez and Barley, 2007; Acs and Audretsch, 1990; Shane and Venkataraman, 2000; Casson, 1982). The socially-constructed reality of

Entrepreneurship Process has prompted argument on its conceptual association with Social Capital. Building on the premises that Social Capital necessitates social networks which in turn improve individual action and community wellbeing (Putnam, 1993; Coleman, 1988a; Bourdieu, 2005; 1986), different opinions on the value of social networks in business competitiveness co-exist. One school of thought led by Burt (1992) argues that since competition is rooted in social structure, people who can bridge structural holes stand a better chance in competition because they can access information emanating from non-familiar social interactions. The theory of 'the strength of weak ties' (Granovetter, 1983) is built on the argument that relationships born out of non-familiar social ties generate non-redundant information emanating from different levels of society (Lau et al, 2010; Bhagavatula et al, 2010; Tiwana, 2008; McEvily and Zaheer, 1999; Granovetter, 1983; Grabher, 1993; Honig and Davidsson, 2000). Birley (1985) holds that informal ties through family and friends are more critical for mobilising resources. This contention is reinforced by Aldrich and Zimmer (1986) assertion that networks of continued social ties are critical for the entire process of entrepreneurship. Hill et al (1997) hold that relationships of informal ties increase the chances of new opportunities particularly with regard to market knowledge and customer preferences.

People naturally communicate and interact more within groups than with different groups, hence the generation of 'structural holes'. But the dynamics of social interactions generate expectations and obligations (Burt, 1992; Granovetter, 1985) but equally breed identity and identification of members in the form of "actor bonds" (Heckscher and Adler, 2006; Kilduff and Tsai, 2003; Hakansson and Snehota, 1995). Hence, the dichotomy of SC raises important questions with respect to business competitiveness. This begs the question: what type of social interactions is effective

in the process of recognising, evaluating and exploiting opportunities? More importantly, what explains the difference in competitiveness between businesses in a given socio-environment with a 'certain' SC?

1.1 Conceptual background

How do we evolve from social interactions to innovation? The question of how human interactions could create an opportunity which subsequently instigates a process of opportunity recognition, evaluation and exploitation for commercial value brings interest to this question. Human action is based on teleological behaviour whereby the pursuit of a goal implicitly or explicitly entails a rational behaviour (Homans, 1937; Mises, 1996). The widely shared contention that people act on the basis of their knowledge and preferences in pursuit of a goal (Hayek, 1937) places the individual entrepreneur at the core of EP. The need to understand the changing context as a source of opportunity creates information flows and the resulting knowledge (Kirzner, 2009; 1997) which inevitably is accessible to some and not to others (Cooper et al, 1995). Notwithstanding the debate about the source of opportunity (Dimov, 2010; Sarasvathy, 2001) distributed knowledge which confers a competitive advantage is determined by individual skills and experiences. It is these components of human capital that define the value contained in information and resources embedded within social interactions (Gedajlovic et al, 2013; Tansiri and Temtime, 2008; Johnson and Scholes, 2002; Lynn, 2000; Bontis, 1998; Bontis et al, 2000; Proctor, 1998).

Nahapiet and Goshal (1998) clarify this assertion in the definition of SC as ***'the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social***

unit' (Nahapiet and Goshal, 1998, p.243). Individual skills, experiences and capabilities positively affect innovation abilities (Wu et al, 2008; Hayton, 2005; Lee and Tsai, 2005), access to financial resources (Packalen, 2007; Fischer and Reuber, 2007; Berger and Frame, 2007; Burton, 2001; Boeker, 1988), and willingness to learn and to work with others (Beecham and Cordey-Hayes, 1998; Young and Olk, 1997). The ability to develop trust and work effectively with various network actors enhances opportunity outcome (Rodenbach and Brettel, 2012), suggesting that the opposite is a liability to the business (Saxenian, 1994).

Although human capital has been the main focus of business managers, relational skills are emerging as a core capability required for effective business management (Almog-Bareket, 2011; Katou, 2011). A substantial body of evidence shows that irrespective of industry and location, relational skills are proving critical for organisations in an increasingly competitive environment (Renko et al, 2012; Bhagavatula et al., 2010; Nahapiet, 2009; Street and Cameron, 2007; McCallum and O'Connell, 2008; Horner-Long and Schoenberg, 2002; Nicholson, 1998). Different approaches to defining an entrepreneur based on personality traits have yielded inconsistent results, shifting attention and interest more towards understanding their behaviour (Bridge et al, 2009; McCallum and O'Connell, 2008; Peters, 2005; Krueger, 1995; Aldrich and Zimmer, 1986). The constant challenge to innovate in a rapidly evolving socio-environment (Gupta et al, 2004; Vecchio, 2003; McGrath and McMillan, 2000) is essentially a leadership challenge which is not exclusive to entrepreneurs (Bass, 2010; 1985a; Burns, 1978). Therefore in order to address the research question "what factors explain the difference in business competitiveness within a given socio-environment" this study takes a realist ontological position to explore the socio-environment where social interactions generate information

asymmetries as source of opportunity, as well as resources required in order for the entrepreneur to recognise, evaluate and exploit those opportunities. Three core concepts help achieve the aim of this thesis: Entrepreneurship Process (EP), Social Capital (SC) and Leadership (LS) which are scrutinised below.

1.2 Core concepts

1.2.1 Entrepreneurship Process

The question of how social interactions could generate a process of recognition, evaluation and exploitation for commercial value emphasises human action underlying the entire process. Hayek (1937) and subsequently Kirzner (1982) contend that uneven distribution of knowledge affects the way people formulate their goals and preferences in a changing context of human interactions affected by politics, regulation and technology and so on. Irrespective of individual goals and preferences, these changes affect social strata in different ways because people hold different views about the value of things either because of personal judgement and intuition or the quality of information in their possession, and, more likely a combination of both (Kirzner, 1982; 1973; Casson, 1982; Hayek, 1937). Thus, it is often argued that an entrepreneur with more social interactions is best placed to identify opportunities (Eckhardt & Shane, 2003; Davidsson, 2003; Shane and Cable, 2002; Cooper et al, 1995). Research on opportunity evaluation suggests that social interactions within networks with shared values and norms are more likely to generate trust, to foster sharing resources or to facilitate access to strategic resources (Covey, 2006; Casson and Della Giusta, 2007; Heckscher and Adler, 2006; Kilduff and Tsai, 2003; Gambetta, 1988; Casson, 1982). On the contrary, the successful exploitation of opportunity relies more on social interactions with people

from non-familiar or formal social networks, and this emphasizes '*the strength of weak ties*' as a source of competitive advantage (Burt, 1997; 1992).

1.2.2 Social Capital

Building from the socially-situated origins of entrepreneurship, the argument for SC and its associated social networks is important in understanding EP and to explain business competitiveness (Gedajlovic, 2013; Casson and Della Giusta, 2007; Shane, 2003; Shane and Venkataraman, 2000). The overall pattern of interactions within a community defines network structure based on which SC can be explained and evaluated (Nahapiet and Ghoshal, 1998). People relate on a structural dimension when they need something intangible such as information or of a material nature, e.g. resources. In the same vein social interactions driven by familiarity occur often because people relate more frequently and informally for matters of trivial or great importance. Casson and Della Giusta (2007) go further in describing individual intent in social intercourse referring to 'instrumental' or 'intrinsic' value depending on whether one needs something of material importance (e.g. resources) or whether the interaction is driven by familiarity or the need to confide. The extant literature suggests that in reality social ties could be initiated for a specific purpose and end in serving a different goal, for example a spouse being also a business partner (Burt, 2009; 1997; 1992; Coleman, 1988; Granovetter, 1983). Equally, people perceive different benefits in maintaining social interactions such as exercising influence on the allocation of strategic resources (Lin et al, 2008). The fact that SC cannot be traded or personally owned brings up the question of how such resources can be secured in the EP.

1.2.3 Leadership

The process of leadership requires personal abilities to undertake and fulfil specific roles and activities in developing a vision and setting a clear goal; communicating, negotiating and convincing others to share and participate in that goal and committing and motivating a team in order to achieve that shared goal (Yukl, 1996). Leaders from all walks of life are subjected to a similar process and an effective leadership style for EP is to translate an opportunity into a compelling market vision (Trash and Elliot, 2003; Shamir et al, 1993; Bass, 1985a; Burns, 1978). It also requires convincing other social actors with resources necessary for its realisation (Heavey and Murphy, 2012; Katou, 2011; Graen and Uhl-Bein, 1995). The entrepreneurial behaviour transits between the market and the socio-environment using certain attributes in the process of recognising, evaluating and exploiting opportunity (Gupta et al, 2004; Vecchio, 2003; McGrath and McMillan, 2000; Schumpeter, 1934). What maintains the transition between two processes is the entrepreneur's self-belief in personal values which followers are keen to emulate and this constitutes a competitive asset hard to imitate (Katou, 2011; Ghemawat and del Sol, 1998). By conveying high expectations to employees and others, the entrepreneur stimulates their ability to meet those expectations and to produce extraordinary performance to achieve that common goal (Conger and Kanongo, 1998; House and Aditya, 1997; Shamir et al, 1993). The leadership behaviour provides some explanation for the differences in achievement in EP and in competitiveness.

1.3 The Research empirical context

The UK economy has responded well to the rise of entrepreneurship and recent data (BIS, 2012; FSB, 2012) revealed that at the start of the year 2012 SMEs accounted

for over 99% of all existing private businesses in the UK business portfolios and provided 59.1% of total workforce with a contribution of 48.8% to Gross Domestic Product (GDP). According to ONS (2010) six out of ten fastest growing businesses were SMEs. While SMEs in the UK have largely embraced entrepreneurship¹, the increasing pressure to respond to consumer demands in a globalised operating environment remains a challenge for their competitiveness.²

1.3.1 Why food and drink manufacturing?

Over the past two decades, innovation in the UK food and drink manufacturing sector has been transformed in response to demographic, life style changes, health concerns and environment constraints. Prior to this, the EU farm diversification programme (CEC, 1997) generated business creation by farm holders, resulting in small businesses with less than 10 employees still dominating the portfolio and largely located in the rural area (DEFRA, 2013; 2011; 2003a; 2003c; 2003d; SWLFP, 2003). The sector makes the largest contribution to the manufacturing industry with a turnover of £ 76.2 billion representing 16% of industry output (FDF, 2013). 70% of land in the UK is used for agriculture, and the food production to supply ratio of 63% for all types food and 78% for indigenous food indicates a structural dependency on imports (DEFRA, 2011) . On a global scale, continuous innovation has stiffened competition in the UK domestic market as the last trade figures reveal (ONS, 2011).

¹ The UK self-employment rose from 1.65 million to 3.15 million during the 30 years to 2001. In the USA, 80% of net job creation came from small businesses (Birch, 1982), and by 2006, the private sector represented 90% of total business portfolio with 60% employment within the EU.

² UK firms is illustrated by the Gross Value Added – GVA, an equation which equals the sum of all wages, plus depreciation, plus net profit before tax, divided by the number of employees (ONS, 2010). Thus, it demonstrates business or industry competitiveness by measuring the rate at which new goods and services are produced in relation to the number of people and the amount of materials necessary for the production. (Fare, 1988).

UK food and drink manufacturing has recorded a steady drop in profitability index every quarter during the period 1998-2003 (DEFRA; 2003a). This decline in competitiveness has taken place in spite of an enhanced support program³ implemented since 1998 (DEFRA, 2003a) to facilitate the provision of and access to business support across the sector. Recent studies (FDF, 2012; Cambridge, 2010) showed an improvement in productivity with almost five per cent (4.7%) increase in GVA/employee between 2003-2008 accompanied by an increase in full-time employment; but the sector still lags behind in comparison to the national average. No study so far has examined the competitiveness of the UK food and drink manufacturing from an entrepreneurship perspective. In filling this gap, the researcher has adopted a sociological perspective in order to integrate and evaluate the links within the industry also called the UK Food Chain (Boyce, 2007), and between the industry and the socio-environment (Schumpeter, 1934).

1.3.2 Why SMEs?

In developed and developing economies, SMES have been at the core of national development strategies, and most governments design dedicated support programmes and policy initiatives to the creation and development of a national SME sector. The World Bank (2011) estimates that for the five-year period to 2010, SMEs made the largest contribution to employment across countries, and among OECD countries, 60% of all private sector jobs are from SMEs. A report from the Directorate general for Enterprise and Industry (EU, 2012) states that SMEs are the backbone of the EU economy with 20.7 million firms accounting for more than 98% of all

³ The programme included grants for capital investment under the RDPE Redundant Building Fund, IT support, information, advice and subsidies towards export market development, resources for setting up and running network clubs such as SW Food and Drink (SWLFP, 2003) and provision of dedicated training to address skill gaps (Business Link, 2005).

enterprises (EU, 2012). According to the same source (EU, 2012) 66% of total employment and 58% of GVA comes from SMEs. For the year ending 2012, UK SMEs accounted for 49% of total turnover (equivalent to GBP 1,500 billion) of the private sector and represented 99.9% of the entire private sector portfolio with 14.1 million people employed (FSB, 2012).

Beyond these compelling figures, SMEs increase competition by making a large contribution to innovation and entrepreneurship, and boosting economic vitality at regional and community levels and building social cohesion (Charbonneau, 2013; Dalberg, 2011; UNCTAD, 2008). Other characteristics of SMEs include the fact that the majority are managed by the business owner, they are flexible and innovative (Mason et al, 2013; BIS, 2012; FSB, 2012; Smallbone, et al, 2010; Penrose, 1959). Research in the field of SMEs has gained more interest, but there is still a gap in understanding SMEs, particularly in the UK food and drink industry.

1.3.3 Why the South West Region?

The South West Region is home to about half of the UK's food and drink manufacturers of which about two thirds have emerged from the EU Food Diversification and approximately 80 per cent employing less than 10 people. (DEFRA, 2013; ONS, 2007; SWLFP, 2003; CEC, 1997). The region is also well reputed for its local brands promoted under the common denominator "Taste of the West" (2012), and a strong sense of belonging and sharing the local heritage. Being the UK's largest region in geographical area with seven counties, local associations tend to flourish at county and district level. Remarkably, the business portfolio is very diverse and comprises large businesses operating in domestic and

international markets and SMEs supplying customers in the high end of the domestic and international markets.

During the period 2007-2011, the South West Region maintained its contribution to national GVA above seven per cent (7%) while other regions' share has declined except for London, the South East and Scotland (ONS, 2013). Food and drink manufacturing remains the largest regional industrial sector employing 85,000 people of which 40% are self-employed (ONS, 2011; Little, 2004; SWRDA, 2004). The region has a good entrepreneurial spirit with a survival rate ranking 6th nationally and adding to its stock of active business (ONS, 2013). The same source (ONS, 2013) reporting on national trends of key industries showed that the Region's GVA/employee for manufacturing was below national average and its contribution to exports was the lowest in the UK. A study (FFB, 2005a) on new markets and star products also revealed that product diversity and innovation in the Region was much higher than anywhere else in the country but many businesses failed to take full advantage of the market potential. Why has a region with significant potential continuously performed below national average? More precisely, what factors explain the declining competitiveness of SW food and drink manufacturing? In attempting to explain this phenomenon, the study brings together the concepts of SC and social networks and the process of entrepreneurship as the driver for innovation and competitiveness.

1.4 Aims and objectives

Business competitiveness is subjected to the socio-environment within which the BOM interacts in order to undertake the process of recognising opportunities based on information asymmetries, evaluating and exploiting those opportunities by accessing resources within social networks. The researcher posits that the

relationship between EP and SC is not direct. Thus, in order to explain the declining competitiveness of SW food and drink manufacturing, this thesis aims to investigate the interaction between EP, SC and LS. In achieving this research aim, the specific objectives are defined as follows;

1. To broaden our understanding of the socio-environment of the South West food and drink manufacturing sector. This consists of the following steps: (i) identifying social networks at play within the UK Food Chain in general and the manufacturing sector in particular; (ii) identifying the socio-environment factors affecting entrepreneurship and innovation in food and drink manufacturing; and (iii) exploring the link between SC and EP in the South West food and drink manufacturing sector.
2. To develop an exploratory framework for business competitiveness from a sociological perspective by (i) exposing the limitations of a direct association between Social Capital and Entrepreneurship Process, (ii) building a theoretical model of interaction between Leadership, Social Capital and Entrepreneurship Process, and (iii) explaining the mediating role of Leadership in that interaction.
3. To evaluate and analyse the underlying factors explaining the competitiveness of the South West food and drink manufacturing sector. This encompasses the following activities. Firstly, the choice of a quantitative design and the use of SEM as a data analysis technique capable of generating direct and indirect effects in multivariate research methods. Secondly, the evaluation of direct and indirect effects in the interdependence relationship between Social Capital, Leadership and Entrepreneurship Process. Thirdly, the assessment of the effects of the interdependence

relationships on the competitiveness of the South West food and drink manufacturing sector.

The present study will make significant contribution to existing literature on the effect of Social Capital in explaining business competitiveness. The choice of an empirical study highlights the debate on UK food and drink manufacturing in general. The importance of the role of leadership is pivotal in conceptualising the effect of Social Capital on Entrepreneurship Process, and also in explaining the variation in business competitiveness. Entrepreneurship Process is better understood from a sociological perspective of behavioural process within a socio-environment. This thesis offers a critique of the extant literature on the association between the social environment and the process of recognising, evaluating and exploiting opportunity within the scope of existing models. Finally, it exposes the myth of social networks as an ipso facto vital resource for business competitiveness and raises more issues about the general understanding of Social Capital, particularly within the context of rural businesses.

1.5 The structure of the thesis

The methodology used in achieving the aim of this research is based on a quantitative design using an SEM for data analysis technique, because SEM is effective in analysing data on social and behavioural sciences (Easterby-Smith et al, 2008). A multivariate technique enables a simultaneous analysis of multiple measurements of objects under investigation by putting together random variables that are interrelated in ways that their different effects cannot be meaningfully interpreted separately, and also predict those multiple relationships (Hair, Black et al, 2010; Byrne 2009; Schumacker and Lomax 2004).

The quantitative approach to this research is based on the realist paradigm (Bhaskar, 1989) where the object of scientific enquiry exists and acts independently of scientists and their activity. However, observation of the reality can only be gathered indirectly through the many interpretations or faces of reality (Putnam, 1987). Thus, by using key factors which can be precisely measured the researcher uses data and patterns of regularity in data to generate a proposition and test hypotheses which can be generalised from the subject of investigation to the wider population (Easterby-Smith et al, 2008). Multivariate analysis enables the realist to give a full understanding of the phenomenon being investigated by establishing causality to acknowledge the complexity of data in representing reality in social science (Hair et al, 2010; Easterby-Smith et al, 2008). Among multivariate techniques, SEM takes a confirmatory approach and is therefore appropriate for this study (Byrne, 2009; Blunch, 2008; Schumacker and Lomas, 2004).

This study is composed of three phases as illustrated in Figure 1.1 with different parts represented by chapters representing the steps in each phase.

Phase I - Research problem definition, identification, analysis and research gaps.

This phase starts with a description of the research problem in a contextual review of network structure and its effect on competition and is completed with a review of the literature.

Phase II - Methodology for achieving the research aim, development of a conceptual framework, generation of hypotheses and research instrument.

Phase III - Evaluation of the empirical study including data collection and analysis, operationalizing results, discussions of main findings and conclusions of the study.

1.6 Outline of the thesis

In addressing the aim of this research, this thesis comprises eight chapters including the present chapter of Introduction.

Chapter Two covers the research contextual review with a critical synopsis of the UK Food Chain and the food and drink manufacturing sector. It begins with a description of the Food Chain structure, the macroeconomic importance of the research question and an analysis of the network of interactions of food and drink manufacturers within and outside the Food Chain. It then analyses the evolving socio-environment in demography and lifestyles characterising consumers. Finally, it justifies the choice of the South West Region food and drink manufacturing as a perfect representation of the national population before closing with a discussion on the presence of Social Capital and Entrepreneurship Process as key factors in this research and the gaps in current research.

Chapter Three covers a critical review of the literature on Entrepreneurship Process in relation to Social Capital. It begins with a review of general concepts associated with Entrepreneurship as the process of recognising, evaluating and exploiting opportunity. Thereafter, the researcher takes a sociological perspective to assess Social Capital effects on business competitiveness followed by a brief review of existing models before introducing leadership (LS) as a mediating factor in the interaction between SC and Entrepreneurship Process. The chapter concludes by making the main research proposition that will guide the next two phases.

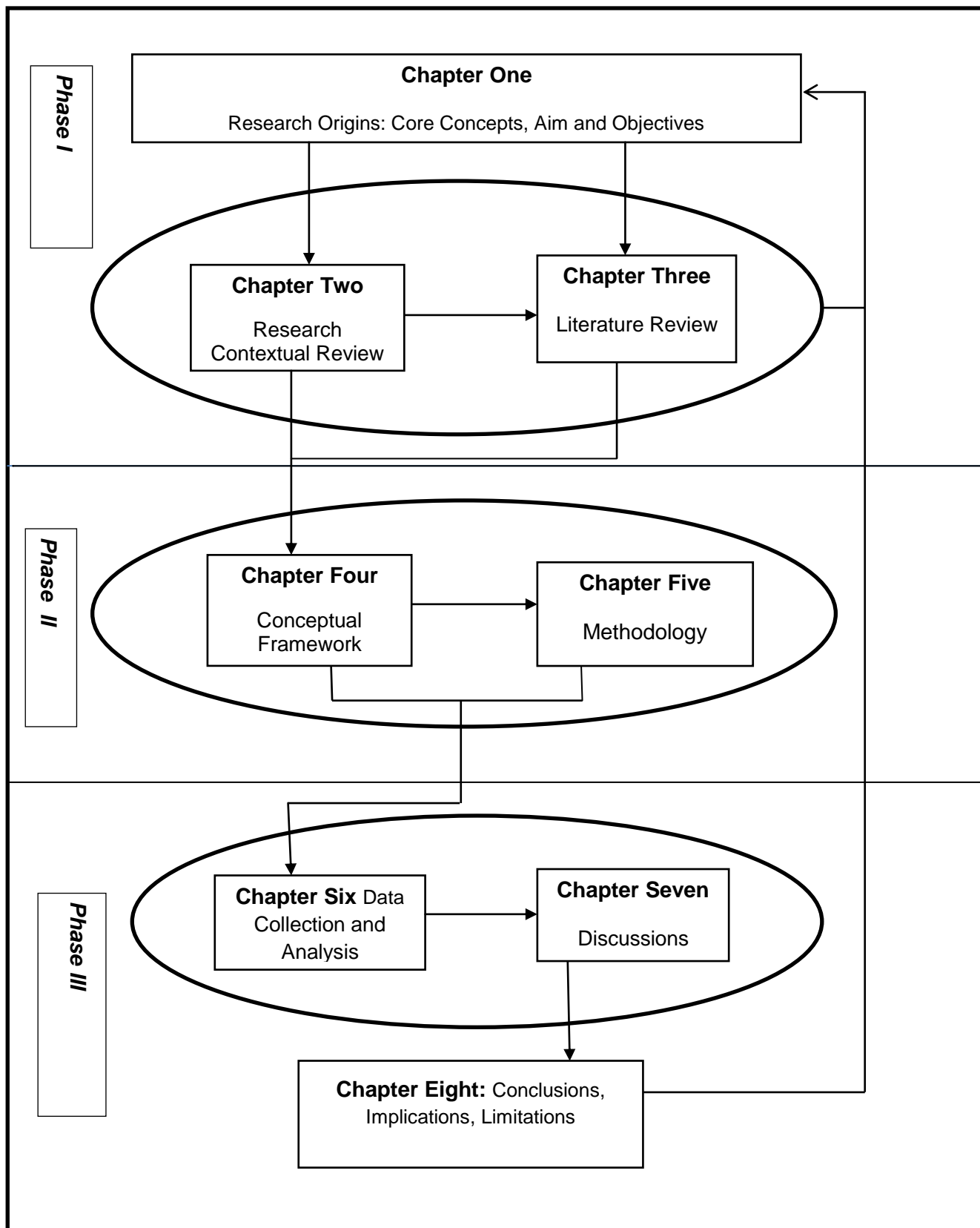


Figure 1.1: Structure of the thesis

Chapter Four develops a theoretical framework of the interdependence relationships between the study main variables including the research main hypotheses. A conceptual model for each variable is presented with the respective measurement indicators. The first three steps of the multivariate method for data analysis are also completed.

Chapter Five covers the research philosophy and methods justifying their suitability in achieving the study main aim. It elaborates the process for collecting and analysing the data and validating the results and outlines the research instrument and the sampling strategy. The pilot study is also presented.

Chapter Six analyses and evaluates the data. It begins with descriptive statistics followed by factor analysis for the input matrix of the measurement model. It then completes the procedures for fitting an SEM and operationalizing the results in the context of South West Food and drink manufacturing before concluding with an analytical summary of participants' comments.

Chapter Seven examines the main findings in respect of the extant literature. It begins with a discussion on the main findings for each variable and concludes with a full interpretation of the results.

Chapter Eight concludes the study with respect to its main aim and objectives and underlines the researcher's contribution to knowledge with implications for theory and practice. It highlights the study limitations and offers some direction for future research. The study concludes with recommendations for SW food and drink manufacturers and policy makers that can enhance the competitiveness of the UK food and drink manufacturing sector.

CHAPTER TWO - THE RESEARCH CONTEXT: A CRITICAL SYNTHESIS OF UK FOOD AND DRINK MANUFACTURING

2.0 Introduction

This chapter discusses the research context with the objective to uncover the salient characteristics of food and drink manufacturing which are associated with the main variables articulating this thesis. It begins with a synopsis of UK food and drink manufacturing within the UK Food Chain, first illustrating the industry macro-economic importance and second, highlighting networks structure associated with the industry from a perspective of Social Capital and social networks. It then examines the market channels open to food and drink manufacturing and their effects from a Social Capital perspective. Thereafter, consumer markets are examined as part of the evolving socio-economic landscape that generates entrepreneurial opportunities. Finally, an assessment of the South West Region food and drink manufacturing sector is completed to provide a critical synopsis of the empirical research context of this thesis, bringing forth the independent and dependent variables associated with the main research question.

2.1 The UK Food Chain: a synopsis

The UK Food Chain is a complex and inter-connected network structure, stretching from farm to fork and owing its justification to the significant share it claims in the national economy (ONS, 2013; 2011; FDF, 2013; 2012; Cambridge, 2010). From an operational perspective, several organisations with expertise have been involved with the Food Chain, from land-based activities to international markets (Bansback,

2010; 2006; IGD, 2009c; IATC, 2006; FFB, 2006; Ritson, 2006; EFPF, 2006). In a global environment characterised by free movement of people and goods as well as an unprecedented mobility of knowledge and resources, the industry's competitiveness faces additional concerns in relation to security, health and a challenging demography (IGD, 2009a; 2009d; 2007a; Sodano et al., 2008; WHO, 2003). As a result, the food and drink industry is subject to considerable regulation which infers political intervention with significant public funding (BIS, 2013; DEFRA, 2013; 2008a).

2.1.1 Macroeconomic importance

All key macroeconomic indicators point to the importance of the food and drink sector within the UK economy (DEFRA, 2011; FDF, 2013). Recent data from the ONS (2011) reveal that the entire food chain contributed more than £86 billion in GVA for the year 2010, with a total workforce of 3,520,000 employees working in approximately 419,000 enterprises. According to the same source (ONS, 2011), 63 million consumers spent £178 billion on food and drink including catering during the year 2010. For the year 2012, the trade balance recorded a deficit of £ 19 billion, against total exports of £ 18.7 billion. This marks a significant increase of 95% in exports over the past five years improving the overall food production to supply ratio by three per cent to sixty three per cent over the same period (FDF, 2013).

2.1.2 Food and drink within the manufacturing industry

This thesis focuses on the competitiveness of UK food and drink manufacturing, a sector that sits at the core of the entire food chain, making the largest contribution in GVA of £24.6 billion generated by 7356 enterprises and 384,000 employees, representing an increase of 9% and a decrease of 7% respectively (FDF, 2012; ONS,

2011). A recent report (FDF, 2013) reveals that food and drink is the largest contributor to the manufacturing industry with a turnover of £76.2 billion representing 16% of the industry total output, a performance which has been maintained over the past two decades (ONS, 2011). Although the manufacturing sector as a whole has contracted in nominal value over the past five years, food and drink still remains the largest contributor. Small businesses with less than 10 employees still dominate the business portfolio (DEFRA, 2011; 2003b) with 68% having emerged from the food diversification programme (CEC, 1997), and largely located in the rural area (SWLFP, 2003). There has been a decline in the number of small businesses between 2005 and 2011 but they still account for about 60% of the business portfolio (DEFRA, 2011). Skills distribution within the workforce is very diversified with approximately 40% qualified to A-Level and some 20% holding a graduate degree (FDF, 2012).

2.1.3 The competitiveness of the sector

Increased globalisation is forcing industries to constantly assess ways in which additional value can be created, and as a result businesses are moving into higher value added processes while outsourcing low value processes in order to compete against growing emerging markets. One of the measures of how an industry is competitive is determined by the Gross Value Added (GVA).⁴ In 2010, UK manufacturing, the third largest sector after business services and retail, contributed £140 billion in GVA representing just over 11% of the UK economy, a significant decline from £150 billion and £154 billion in 2009 and 2007 respectively (ONS, 2010). A report from the Department of Business, Innovation and Skills (BIS, 2010)

⁴ GVA is the measurement of economic value created and is a reflection of the differences in use of particular factors of production such as raw materials, physical capital, intangible investment, skilled and non-skilled labour, and knowledge and the value which they are able to generate (National Accounts, Blue Book, and ONS).

revealed that for the period 1994 - 2009 real value added in manufacturing has contracted significantly with the exception of four industries including food and drink. Up to the year 2005, the competitiveness of the food and drink industry (measured in terms of GVA/employee) stood at £23,000 against an industry average of £38.700 (ONS, 2005), and the situation has remained alarming over a sustained period of time (DEFRA, 2008a). Although most recent data (ONS, 2012; FDF, 2012; Cambridge, 2010) showed an increase of 4.7% in GVA/employee, a significant growth in exports (from £11 billion in 2010 to £18.2 billion in 2012) and a rise in full-time employment (from 80% to 94%) the sector still lags behind in comparison to national average productivity and imports continue to grow. On a positive side, globalisation is also generating opportunities with the 'servitization'⁵ of UK manufacturing and rapidly growing demand from emerging economies, and the food industry has been particularly favoured in this context. Changing demographic and lifestyle have increased awareness of health issues in relation to diet and nutrition, and the UK is increasingly well placed in developing new products suitable for health requirements with a remarkable record of 8,500 new products each year (FDF, 2013). In 2007, 36% of new health products launched in the European Union originated in the UK (IM, 2010).

2.1.4 A Multi-faceted industry

Food and drink fulfils a purposeful socio-economic function of bringing communities together and supporting livelihoods (Bowyer et al., 2009; IGD, 2009c; 2009e; Gorton and Tregear, 2008). The industry generates a multiplier effect across the economy with opportunities for many industries, although its resource requirements often

⁵ Manufacturing in developed countries is shifting towards business models combining the sale of a product with associated services, hence blurring the boundaries between manufacturing and services (EEF, 2009). Manufacturing advantage- How manufacturers are focussing strategically in an uncertain world.

become a concern for the environment (Morrison, 2006; Ilbery and Mayer, 2005b). It is more so the case for an industry that has reduced its carbon emission by 25% since 1990 and still does not add enough value (BIS, 2010; Boyce, 2007). Because of its close association to land, the industry faces threats from low-cost labour economies which are increasingly winning market share at home and abroad, as the World Trade negotiations press to stop subsidies in developed economies and further liberalise trade (Potter and Burney, 2002; Robinson, 2004; Papadopoulos and Liarikos, 2007). For the period 1986 - 2010 the European Union (EU) expenditures on respective farm support measures changed significantly with market support measures such as intervention and export refunds reducing their share of total Common Agriculture Policy (CAP) expenditure from over 80% to just over 10%, whereas direct payments and development spending significantly increased their share of the budget (Bansback, 2011).

The direct link between the industry and agriculture still fuels the debate about what development model is suitable for rural economies (Hubbard and Gorton, 2011; Shucksmith, 2010). Significant subsidies are still channelled through farming and fisheries by European Union.⁶ Initiatives by the UK government in support of the industry's competitiveness have resulted in additional partnerships with businesses, industry bodies and the communities within an industry already characterised by a very dense network (DEFRA, 2008a; Boyce, 2007). This increases the likelihood of redundancy in the type of information exchange within the industry (Burt, 1992; 2005).

⁶ Approximately 50% of the EU budget goes to the Common Agriculture Policy. As an indication, the SW region received Euros 124.7 million and 144.1 million for the 'Competitiveness' and 'Learning and Skills' programs respectively for the period 2007-2013. In comparison, the Rural Development Program for England (RDPE) has a funding budget higher than the combined sum for both competitiveness and learning and skills (SWRDA, 2008. South West Competitiveness and Employment Programme 2007-13. Bristol.

2.2 The UK food and drink manufacturing network

Against this backdrop, the Oxford Farming Conference urged all elements of the Food Chain to re-connect with their markets and to make the sector profitable in the marketplace (Boyce, 2007). The urgency to re-connect and create linkages within the industry is grounded on the concept of social networks (Burt, 2009; 1992; Casson and Della, 2007; Granovetter, 1985) whereby an optimal typology of networks or linkages is appropriate at each stage of the market organisation process. It is a widely shared assertion that businesses that build new links can compete more successfully (Porter, 1998) because they can access information and resources (Shane and Cable, 2002; Gainelli et al, 2007) .

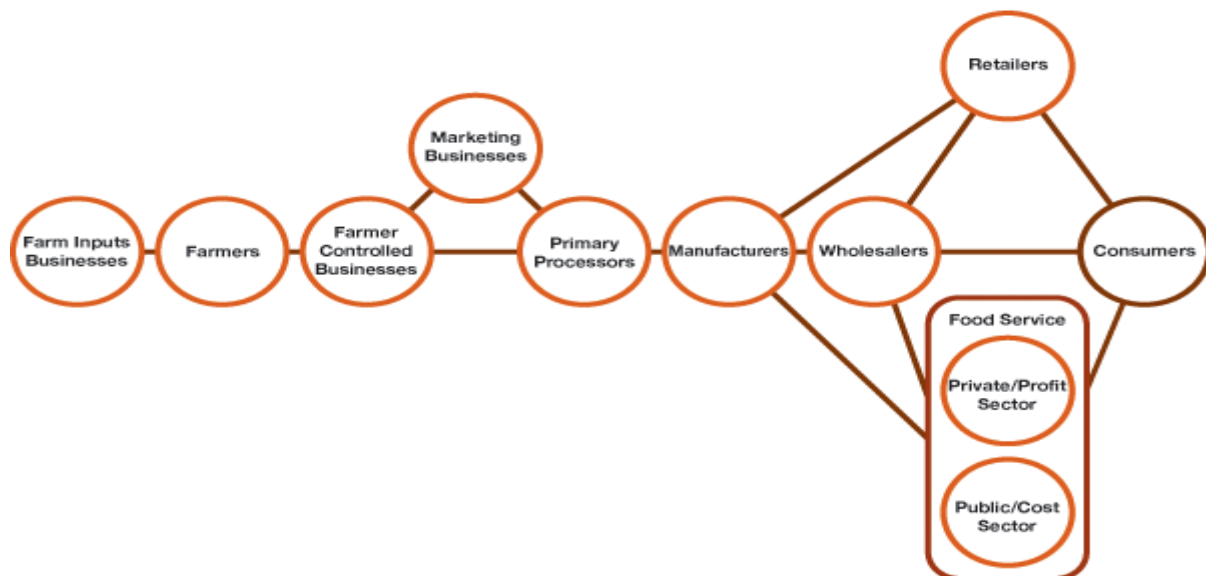


Figure 2.1: Network Connections within the UK Food Chain (Boyce, 2007)

As Figure 2.1 illustrates, food and drink manufacturing is a pivotal player within the food chain, making the essential connection between farmers and farmer-controlled businesses and the three main market channels (i.e. retailers, wholesalers and food

services from the private and public sector). This network structure does not, however, make a direct connection between manufacturers and end consumers but instead offers wholesale, retail and catering as the main routes to market, with the exception of exports. A review of the current network structure enveloping food and drink manufacturing examines the relationships between manufacturers and bodies of national competence, and also considers regional and local agencies providing funding and expertise through programmes designed to boost competitiveness, including public-funded organisations that are set up to correct market failures. It then examines the market channels and their effects on the existing network structure; finally it provides an analysis of consumer markets and opportunities.

2.2.1 The Institute of Grocery distribution - IGD

In the past, several bodies were associated with the UK food chain, for example: the Cereal Industry Forum (CIF), the Red Meat Industry Forum (RMIF) and Food from Britain (FFB) providing expertise on products and markets, particularly exports (Boyce, 2007). Since 2009, the Institute of Grocery Distribution (IGD) has seen its functions enlarged to include the provision of leadership to the food and consumer goods industry by helping to prepare for, and face the strategic challenges of the global market place (IGD, 2013a). Its status as a research and education charity puts it in a leading position for information and best practice on consumer goods industry worldwide. It operates with industry working groups such as the Food Chain in order to develop expertise on industry-wide challenges for the good of all its members who are drawn from the total food and grocery supply chain, including businesses. Appendix 2.1 provides more details about the history of IGD and its functions across industry groups.

2.2.2 Levy bodies with national competence

Within the current structure, levy bodies fulfil a distinctive function with the objective to improve competitiveness. Levy bodies are generally funded by their members who are farmers, growers and others in the supply chain. Members pay a levy to help fund the activities of the group for the benefit of all its members. An example of levy body is the HGCA, a division of the Agriculture and Horticulture Development Board (AHDB), a statutory levy board, funded by farmers, growers and others in the supply chain and managed independently of both commercial industry and Government. Its purpose is to make agriculture and horticulture industries more competitive and sustainable through factual, evidence-based advice, information and activity (HGCA, 2013). Since 2009, it has absorbed the functions of the defunct CIF overseeing the cereals and oilseeds sector. In 2010, its annual revenues from levies stood at GBP 9.8 million collected from cereals and oilseeds growers, processors and dealers in the UK (HGCA, 2010). Levies are invested in R&D and knowledge transfer programmes, supply chain and business improvement activities, benchmarking⁷, market intelligence, exports and consumer marketing on behalf of the UK cereals and oilseeds sector.

Probe, Masterclass, Value chain analysis

The Food Chain Centre⁸ (FCC) and bodies such as the Red meat Industry Forum (RMIF) pioneered the development of diagnostic and business improvement tools

⁷ Benchmarking - The objective of benchmarking takes a problem-solving approach looking beyond the normal performance and examining other revealing parameters affecting productivity (IGD, 2009). It encourages peer learning and a long term perspective.

⁸ FCC was formed in 2002 and its primary role was to be an effective source of information in support of an efficient UK food chain. Its membership was diverse including farmers, producers, retailing and

suitable for use by food companies (including SMEs). These included Probe⁹, Masterclasses, Value Chain Analysis and the general application of 'lean' techniques to food companies in different sectors. Further information on these business improvement activities is provided in Appendix 2.2. Although FCC and RMIF no longer exist, some of this work is being continued by respective levy bodies. Particularly for manufacturers, these services bring a strategic advantage in resource efficiency or technological change (Kumar and Basu, 2008; Nadvi and Halder, 2005; Salim and Kalirajan, 1999; Ray and Desli, 1997; Damanpour and Evan, 1984). However their cost makes them unattractive for small businesses (Boyce, 2007).

Product specific expertise is another key function that helps to boost competitiveness by offering a critical assessment of key drivers of productivity at national or international level. For example, the RMIF completed a strategic review of EU beef production assessing the industry competitiveness over the 2020 horizon (Bansback, 2006). The report is very relevant to the UK since the continuous decline in farm subsidies implies that beef production remains particularly vulnerable to imports, as consumers requirements for quality at affordable prices put more power into large retailers and supply chains.

2.2.3 Regional, national and local organisations

Although the industry finds its origins in farming, food and drink activities spread to several aspects of the socio-economic fabric by creating wealth across the entire

food service. The membership has been absorbed within the Institute of Grocery Distribution –IGD, another non-profit research organisation with membership across the food and non-food grocery industry supply-chain (IGD, 2013; BOYCE, 2007).

⁹ PROBE - Promoting business excellence is a benchmarking technique based on cross functional performance, with the aim to see how each team member perceives their own business. A questionnaire is used to collect response on key questions such as operations, risks, the competency of decision-makers etc. that can improve decision-making. Taste of the West undertook a Probe project with a cheese maker in Exeter, as a result the business focus was completely transformed (IGD, 2009c).

food chain, and beyond (DEFRA, 2011; 2008b; 2003c; Morrison, 2006). The production and consumption of food is a catalyst for a more integrated and vibrant community with potential benefits of improved productivity (Ray, 1998). Industries such as hospitality and tourism, entertainment, sports and media, education and healthcare work closely with the food and drink industry (FDF, 2012; DEFRA, 2009a; Lever et al, 2009; O'Sullivan and Jackson, 2002). The resulting relationships are based on several factors such as a shared location, e.g. Taste of the West (SWLFP, 2003), Yorkshire Regional Food Group (Gorton and Tregear, 2008) upon which various parties can define a common objective (FFB, 2006; SWRDA, 2004). The commonality factor is perceived as the tangible element that maintains some 'familiarity' upon which trust can be built. Such relationships are beneficial to the extent that a society that remains connected is more successful in addressing its socio-economic wellbeing through norms of trust and reciprocity that generate social capital (Putnam, 2001).

2.2.3.1 Regional development agencies - RDAs

Organisations with a scope covering a region or a county are often publicly funded to support the achievement of inclusive business systems through policies and specific programmes. The defunct Regional Development Agencies –RDAs¹⁰ is an exemplar of such organisations whose responsibility was to define and help implement regional strategy for business competitiveness with community-oriented programmes. Events such as food festivals and manufacturing advice forum foster social networks

¹⁰ The European Regional Development Fund- ERDF which has designed the Competitiveness Programme for SMEs across EU member states, as well as the Rural Development Programme for England- RDPE which is more geared towards farming and rural businesses are both managed by the RDAs (SWRDA, 2008. South West Competitiveness and Employment Programme 2007-13. Bristol).

and community interactions, knowledge dissemination and trust as well as brokerage (Burt, 2005; 1992).

Under the supervision of then then RDAs, support to small businesses was delivered by Business Link¹¹ up to November 2011. A core service remains available online, primarily for information provision to SMEs (Businesslink.Gov, 2012). An enhanced service focussing for high-growth businesses and strategic sectors is being introduced regionally via the Growth Fund (BIS, 2012). The Rural Development Programme is still on-going (RES, 2012) offering specific tools designed for all rural businesses. Its objectives include the provision of information and knowledge to all rural businesses, including signposting and networking opportunities. Partnership is essential in achieving those objectives¹².

The Business Support Simplification programme –BSSP (SWRDA, 2008) was introduced in 2008 to enable Business Link to act as a one-stop-shop for SMEs. The use of brokerage was extensive in order to facilitate access to other available resources,¹³ including professional services such as legal, financial and management from the private sector. The model also fostered relationships beyond existing networks (Granovetter, 1985; Burt, 1992). For instance, food manufacturers looking for export markets could access potential importers/distributors, training on

¹¹ BSSP brings under one umbrella *ibid.*. Learning and Skills Council –LSC, UK Trade and Investment –UKTI, the Rural Enterprise Gateway –RE, and other support services, e.g. Manufacturing Advisory Service, Carbon Trust and Envirowise. Similarly, several regional investment funds, such as the SWIG, SWAIN, and commercial banks have used Business Link as a reliable client acquisition source.

¹² In the South West Region, RES is operated by the University of Plymouth Enterprise Solutions, in partnership with Taste of the West, The Royal Agriculture Society, the NFU, and the Duchy College.

¹³ REG offers advice on sustainability and resource efficiency with small grants for capital investment. There is an additional service on IT for farming and rural businesses.

export documentation, translation services, subsidies for market visits and trade fairs (FFB 2005; Plymouth, 2004). Recent surveys (Businesslink.Gov, 2012; SWRDA, 2008) suggested that the proportion of SMEs using public-funded support service is on the rise.

2.2.3.2 Local agencies

As discussed in Section One above food and drink and rural economic development are very intertwined because of the association to farming. The recent creation of Local Action Groups (SWRDA, 2008) - LAGs, has significantly contributed to the emergence and success of local agencies such as Devon Renaissance whose primary function is to maintain a network support for rural businesses and to meet local needs through a community-led initiative. Evidence from previous studies suggests that endogenous and locally-focused initiatives tend to limit market opportunities and access to resources, and generate additional concerns that impact negatively on business competitiveness in a global economy (Carmen and Gorton, 2011; Gorton, 1999; Lowe et al, 1995). The LEADER programme is another example of a locally-driven initiative for rural development based on local actors and resources, but an assessment of the programme in various regions revealed that those with links to extra regional resources achieved better outcomes (Carmen and Gorton, 2011; Shucksmith, 2010; 2002). This would suggest that key actors driving local initiatives can design and implement a mechanism that combines local and external resources successfully towards the exploitation of external opportunities.

2.2.4 Addressing market failures: business support

Business support is generally justified as a mechanism to correct market failures (Lean, 1996) and this view is shared by most market-oriented economies. Small businesses are a primary source of job creation and a channel for more equitable

wealth distribution (GEM, 2010; Smallbone et al, 1995). Government intervention under the RFS (DEFRA, 2003b) found justification in this argument.

2.2.4.1 A critical assessment of business support by SMEs

Up to its abolition in November 2011, Business Link became a household name among SMEs for various reasons. A survey by FFB (2005a) on business support provision to food and drink manufacturers revealed that Business Link ranked top of service providers. However business owner/managers (BOMs) also expressed confusion and lack of awareness, with 23.5% assessing the service not fit for their needs irrespective of the fact that they had not used it (FFB 2005b). Critiques included the requirements for advice and support in areas such as marketing, food hygiene and training, IT and website development (FFB 2005b). This critique is not unique to the UK small business support.

A survey conducted on the use of public support services to SMEs in Canada (Audet and St-Jean, 2007) revealed that private sector professionals in accounting and banking services were among the most used while government agencies were far less popular. Participants perceived business advisors more as 'subsidy provider' than 'business development advisor', and only rated the service as 'fairly good'. Such perception may also explain partly why some food and drink manufacturers (23.5%) were not interested in using the service, irrespective of the fact that they had not experienced it (FFB 2005a).

Looking at the level of satisfaction among businesses, the same survey (Audet and St-Jean, 2007) gave a higher satisfaction rating of 54% compared with 41% among

those who have developed a perception without actually using the service. This signals the important issue of SMEs' perception of their position in the larger picture. In a study on the factors behind the success of small businesses (Coy et al., 2007) social dimensions such as the sense of belonging to a wider circle beyond relatives and close friends are often cited as essential success factors. These findings are shared by empirical research in Canada (Audet and St-Jean, 2007). When asked which source was most comfortably used for support, participants ranked public agencies, customer and family second and at par, preceded by private sector professional services such as accountants. Lawyers, suppliers and consultants came last while banks ranked average. This would suggest that SMEs recognise the necessity of relationships with a diverse range of networks (Casson and Della, 2007; Burt, 1992).

2.2.4.2 Business associations

SMEs value networking and the ability to access support in a simple manner (Coy et al, 2007; Audet and St-Jean, 2007; FFB 2005b). The request for closer contacts with business support providers points to the need for alternative networks outside the Food Chain (Ilbery and Maye, 2005a; Burt, 1992). Paradoxically, the findings from the same survey (Audet and St-Jean, 2007) also revealed a tendency to remain ingrained in their social fabric (Granovetter, 1985) perhaps as a defence mechanism against a network structure dominated by relationships of unequal partners (Casson and Della, 2007; Murdoch et al., 2000). The emergence of Caterfood¹⁴ in the South West region illustrates the reinforcement of local networks.

¹⁴ Caterfood is a family owned business located in Paignton and which supplies a wide range of cleaning products, premier frozen foods, chilled foods and ambient foods many of which are locally produced here in the West Country, to businesses throughout Cornwall, Devon, Somerset, Dorset, South Gloucestershire and South West Wiltshire. www.caterfood.co.uk.

2.2.5 Food and drink manufacturing: a network of asymmetrical relationships

The preceding section on UK food and drink manufacturing reveals a myriad of networks within and around the food chain with different purposes and processes as

Figure 2.2 illustrates.

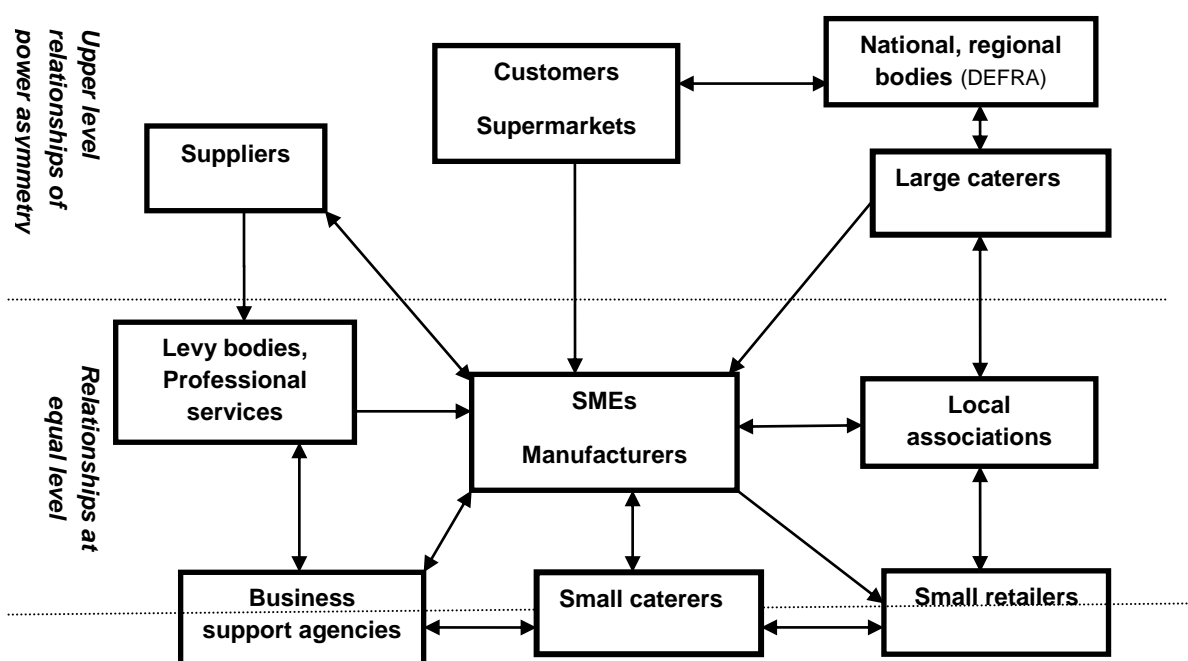


Figure 2.2: An illustration of SMEs in Food and drink manufacturing network based on contextual examination

Network actors in Figure 2.2 include small and large caterers to illustrate the growing trend in eating out by UK households, as well as the demand from institutional clients such as schools, hospitals and corporate events. While the share of non-household catering remained below the pre-financial crisis levels (DEFRA, 2011) households'

expenditure on eating out has increased mainly through 'convenience'¹⁵ grocery shopping, whose market share rose to more than a fifth (21.4%) and is predicted to reach 23% in 2016 (IGD, 2013). These routes to market are examined in more details in the next section.

Considering the bodies within the food chain, the issue of trust due to asymmetrical relationships based on power and the prohibitive cost of access to services are also highlighted. With regard to agencies of regional and local scope and resulting networks generated to address market failures, it is not clear whether the objective is simply a reactive marketing strategy or if resources could be enhanced to provide a competitive advantage and lead respective businesses to a more effective market organisation (Gorton and Tregear, 2009; Street and Cameron, 2007). A crucial factor for businesses to compete is openness to facilitate knowledge and information exchange, innovation, cooperation and product linkages¹⁶ in order to acquire and develop the competencies and resources that are absent locally (De Propis and Sugden, 2006; Shucksmith, 2002; Burt, 1992). Achieving this requires a thorough understanding of consumers' needs in a changing market environment combined with an 'optimal' combination of local actors with extra territorial resources to increase market access in order to better exploit opportunities.

¹⁵ To help with household budgeting, increasing numbers of shoppers are turning to the convenience sector and increasingly taking a 'little and often' approach to their grocery shopping. This, they feel, helps them to cut back on food waste as well as enabling them to reduce their car usage at a time when petrol prices are still high.

¹⁶ Some recent initiatives include linking up consumers and buyers through "Meet the Buyers" events where food and drink manufacturers display their produce and offer a free tasting session as part of market penetration activities. Attendance is often parochial with limited scope for a market breakthrough.

2.3 The routes to market for food and drink manufacturing

According to ONS (2011), the UK market for food and drink is worth £187.1 billion to some 63 million consumers, and it is set to grow. Household expenditure represented about 60% with catering accounting for the remaining value of £76.4 billion. UK households spent £163.2 billion on grocery in 2012 recording an increase of almost 4% on the previous year and total expenditures are projected to reach £200 billion by 2017 (IGD, 2012).

As shown in Figure 2.3 supermarkets, hypermarkets and superstores representing retail/multiple account for more than 60%, followed by convenience stores dominated by symbol groups. Discounters such as Aldi, Lidl, Poundstores have gained more market share particularly since the onset of economic austerity in 2008. Independent stores and online sales from Internet orders are also growing.

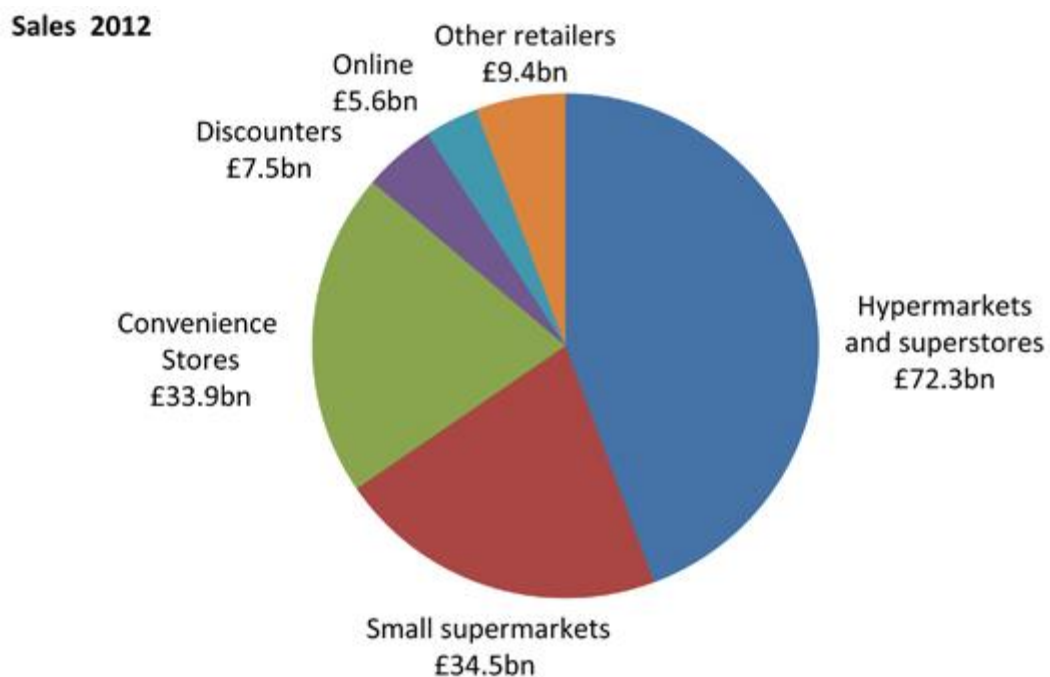


Figure 2.3: Market channels for food and drink in the UK (IGD, 2012)

2.3.1 The power of retail/multiple

Retail is by far the most important route to market and 80% of all retail sales are accounted for by the four big players (ONS, 2011; IGD, 2012a). As such, consumers' needs and preferences are primarily and exclusively managed by retailers, with manufacturers reacting at a low-level of the relationship. This illustrates a typology of networks in a hierarchical structure comprising low-level and high-level networks exercising where decision-making resides (Casson and Della, 2007). Because the majority of UK food manufacturers are essentially small businesses the paucity of market interaction and customer awareness hinders their ability to compete effectively in a hierarchical network of relationships. In social networks theory, this network typology leads to the multiplication of '**structural holes**' on the one side and a form of '**embeddedness**' that limits the scope of entrepreneurial activity on the other (Burt, 1997; 1992; Granovetter, 1985). The main actors within this market channel are the buying groups and symbol groups.

2.3.1.1 The undermining structure of the buying groups

A buying group is an organisation which combines the volumes of several members in order to obtain goods or services at a rate that is better than might be achieved through individual negotiation (IGD, 2007b). As illustrated in Figure 2.4 buying groups have long influenced the European grocery market by their sheer size (IGD, 2011; 2009b). With their size comes a negotiating power which, in this market configuration, brings a dominant position from both consumer and supplier or manufacturer viewpoint. A study on food access in a London Borough established that food access could mean more than just the availability or lack of shops, but rather is explained by a combination of both structural and individual influences

(Bowyer et al, 2009). The recent conflict between milk producers and leading supermarkets which led to producers threatening to pour milk down the drain is another illustration of power asymmetry (DEFRA, 2012).

It is generally argued that trust cannot develop in a situation where one party has too much power over another party. The dominance of a few players in the retail market, enhanced by a configuration of low-level and high-level networks exacerbates vulnerability in a context already dominated by mistrust (Chua et al., 2008). The largest European buying group alone has a turnover well over Euros 100 billion, very close to the total UK household expenditures on food and drink. Such power asymmetries distort market systems and prevents innovation (Burt, 1997; 1992; Granovetter, 1985).

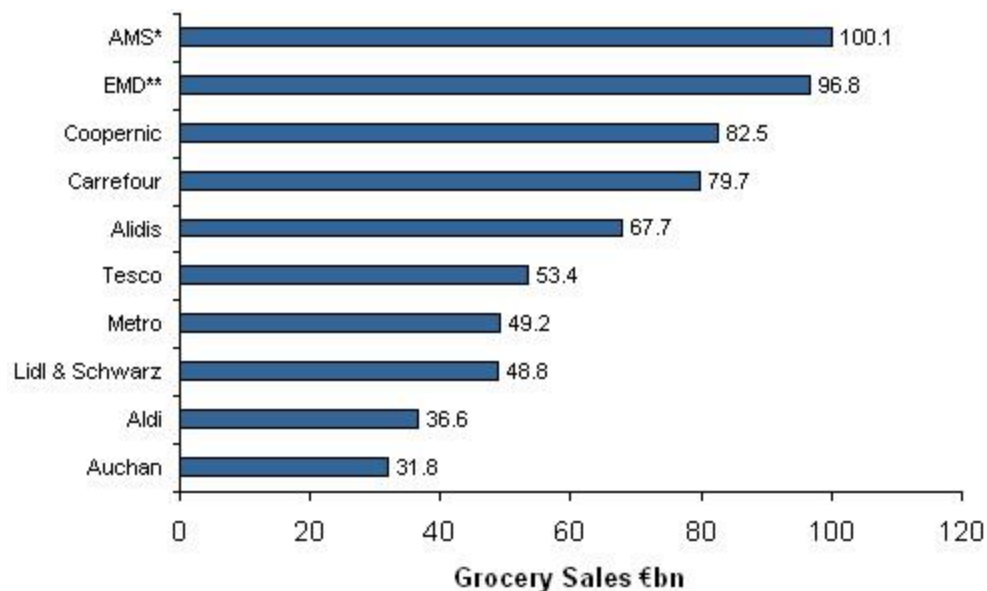


Figure 2.4: The main buying groups in Europe and their reflective negotiating power (IGD, 2011)

There is an additional potential effect of third-party certifiers who, although not part of the current structure may have a conflict of interest with regard to disclosing or approving safety standards (Sodano et al., 2008). The penetration of horsemeat into UK consumer markets through food retail and catering is a powerful example of an abusive position.

A study by Goodwin and Mullan (2009) on the impact of financial conflicts of interest (FCI) disclosure on dietary behavioural intention related to the Glycaemic Index (GI) of food is useful in this context. The research involved 72 participants split equally on disclosure and non-disclosure of FCI by the food producer. Results from the study findings revealed that trustworthiness and credibility accorded to the researcher was much less among participants in the conflict condition than among participants in the non-conflict situation. The findings suggest that power and trust do not easily embed in the same relationship.

2.3.1.2 Symbol group¹⁷ and convenience retailing

This segment encompasses co-operatives, franchises and 'Faschia' groups. As of April, 2012 there were 16,407 symbol group retailers in the UK, accounting for £13.6 billion sales a year with a 40% market share of all convenience stores and the segment is growing at 8% per year (IGD, 2012b). Symbol group offers buying as part of a range of services to members but it also imposes rigid relationships with individual members linked at a much deeper level. Competition among members is limited by territorial boundaries, but benefits include improved buying terms, marketing support and branding, the option to sell own label products, and new shop

¹⁷ There are 16 symbol groups in the UK and their activities cover 14,630 stores with PREMIER leading the sector on a portfolio of 2,700 stores, followed by Best-One Best-In with 2,511 stores (IGD, 2009d. CONSUMER UNI, IGD Research. London.

technology such as check-out scanning, shop fitting services and on-going support delivery (IGD, 2009e).

From social networks perspective, symbol groups are closely associated to clusters where strong connections can create a successful basis to exploit market opportunities on the back of advantageous positions, based on a typical web configuration with information, knowledge and power located at a central point. The problem with this sort of market arrangement is at two levels: first, the centralised management style hinders innovation and competition by creating the conditions for collusive and anticompetitive effects (Sodano et al., 2008); second, by limiting territorial scope for members, opportunities for small manufacturers are also limited due to the effect of several territorial barriers erected around members of the group (Burt, 1992).

Convenience retailing has recorded a huge increase in popularity because of the flexibility it brings to retail, hence attracting convenience multiples such as Sainsbury's, Tesco, M&S, Waitrose. Although their market share stands at 6.2% they are recording a year-on-year growth of 9.6% which is double the growth rate recorded for the entire market segment (IGD, 2012c). General opinion favours regular shopping in small quantities and with the continuous increase of single person households this market channel is set to grow.

2.3.2 Independent stores

Independent stores tend to be located in rural areas and small towns, where consumers are particularly attached to the notion of 'local food'. The impact of rural location on business competitiveness and entrepreneurship has been investigated in several studies (Morrison, 2006; Shields, 2005; Stathapoulou et al., 2004; Salazar,

2004; Robinson, 2001) yielding conflicting results. Although lifestyle remains a key factor contrary to profit maximisation and growth as found in mainstream economic theory (Stathapoulou et al., 2004), there is increasing evidence for the argument made by Salazar (2004) that shifts in consumer preferences are creating opportunities for rural businesses with Internet access, particularly in the organic niche market. Such thinking has also inspired DEFRA's programme on Sustainable Farming and Food Partnership, as consumers' preference for food origins and quality is growing. DEFRA (2008a) reports that there are now an estimated 550 farmers' markets in the UK compared to just 1 in 1997, and an estimated 4,000 farm shops with a turnover of direct sales estimated around £2 billion a year.

2.3.3 Online retail

Online retail is becoming a real option in the channel mix consumers consider when shopping and a research by IGD (2012d) projects that by 2016, this route to market will attract 20% of food and drink expenditures in the UK. As technology distributes the benefits of online shopping more producers would become empowered to present their brands directly to consumers. Small producers of food and drink can overcome the barriers of rurality and space and more importantly enhance the value of the origins of their products more effectively. Online retail can bring together convenience, market positioning and customer feedback onto one single platform. Research shows that 73% of shoppers believe the quality of private label products has improved over the last couple of years. With brands and products increasingly being shaped by consumer interactions and comments, web reviews enable small businesses in rural areas to communicate directly with shoppers both proactively and responsively.

While the economic situation is driving many of the shopper trends, online shopping continues to grow and is gradually changing the British retail landscape. A recent article by The Economist (2013) affirms that changes in the ways Britons consume have increased the number of van traffic on British motorways in a manner that is irreversible. Over the past two decades van traffic grew by 71% with four grocery deliverers (Tesco, Sainsbury's Asda and Ocado) accounting for more than 50% of that increase, which predicts a rise to 87% by 2018 as online retail continues to soar. ONS survey (2012) revealed that 80% of UK households can access internet and this proportion rose by 50% to 21 million in 2012. The same source also estimates at two thirds the number of internet users in the UK who shop online every day. Another survey (IGD, 2012d) showed that one in five online transactions is for food and drink, leading several sources to predict a twofold increase in online food and drink in the next five years. The challenge to understanding what online grocery shoppers want is that a very diverse group uses the retail channel in very different ways. Three key factors can help small producers gain a competitive edge: (i) reliability by committing to the long term; (ii) reassurance especially with fresh produce; and finally (iii) price reductions.

2.3.4 Catering

In general terms, catering is the consumption of food and drink outside the home, and is a market in rapid expansion. Eating out has changed dramatically over the past 60 years. Eating out in the UK has evolved remarkably over the past 60 years from the communal center reserved to those who were displaced during the war or workers who could not eat in the workplace to the concept of steakhouses in the 1970s and 80s (IGD, 2013). Between 1992 and 2004 hotels, catering and pubs

became the sixth fastest growing industry in the UK and the trend continues to rise in spite of the recent economic downturn (IGD, 2013). The main customer is by far the public sector which includes HM prisons, schools, the MoD, the NHS, followed by corporate canteens, hotels, pubs and cafes. Because of this market size, large caterers tend to be the preferred supplier, leaving small caterers to serve smaller size local demands.

2.3.4.1 Public sector

The public sector has the capacity to influence the production and processing of food and drink through its huge procurement, an estimated £2 billion per year (DEFRA, 2008b). It is also multiplying initiatives to engage with producers and manufacturers through the Public Sector Food Procurement Initiative –PSFPI (DEFRA, 2009b). Such initiatives can facilitate market entry to small producers through cooperation with buyers within the supply chain, thereby fostering alliances among small businesses, regardless of the fact that they may not be the ultimate contractor (Salazar, 2004). The government is committed to ensuring food procured by Government Departments, and eventually the whole public sector, meets British standards of production or their equivalent, wherever this can be achieved without increasing overall costs. The drive for sustainable procurement is fundamental to this initiative (DEFRA, 2011).

2.3.4.2 Schools

Schools and Local Authorities LAs- are important clients to the catering industry. A survey was conducted on 150 LAs to assess the conduct in procurement and identify skills gaps (Lever et al., 2009). Of the 73 LAs (49%) who responded 20 spent a total of £71 million during the year 2007-2008. Most LAs held one contract

for the school meal catering service and four held more than one contract. 26 different contractors were identified and five of these held contracts with more than one LA. With regard to in-house catering, 42 LAs spent approximately £98 million and 101 food suppliers were mentioned with one holding contracts with 22 LAs. Another category of food procurement to schools is where LAs buy from a wholesaler. 35 LAs admitted buying from a wholesaler with the proportion of UK produce varying from 9% to 90%. The most common methods used by LAs to publicise upcoming contracts to small and medium sized enterprises were their own website, newspapers, trade magazines and “Meet the Buyer” events.

2.3.4.3 Cafes, restaurants, pubs

Eating out is increasingly a convenient way for families and friends to get together, as household units become smaller and more disperse (ONS, 2012; IGD, 2009a; 2007a). Consumers’ concerns over health and food hygiene particularly affect their attitude towards portions, labelling, and food origin each of which constitutes a base for product differentiation in this competitive market (IGD, 2009c; 2009d; 2008). Names such as ‘Café Nero’¹⁸ pride themselves in offering organic soup, or home-made sandwiches with Wiltshire ham or Cornish cheese. The success of the Cornish Pasties¹⁹, which has become a high street brand, with dozens of selling points in London and the Midlands, is a remarkable success.

¹⁸ We believe in high quality, interesting, artisan food. We always look for the best ingredients, and we develop favourite, trusted recipes and make them our own. Our range is similar to that of a deli; serving handmade sandwiches (including our panini), traditional soups, salads, fresh pastries and delicious cakes. www.caffenero.com/food.

¹⁹ <http://www.westcornwallpastys.co.uk/store/>.

Increasingly in parts of the UK where local tourism is important, food served in cafes and restaurants is produced locally. DEFRA (2013) is encouraging consumers to request the origins of food served in public places.

2.4 Consumer markets: characteristics and opportunities

An evolving demographic landscape of 63 million consumers and their diversity in culture, location and lifestyle is constantly shaping the industry (ONS, 2012; 2005; IGD, 2009a; 2007a; Megicks et al., 2008). Consumers' behaviour expressed in preferences and lifestyle choices drives the market (Adebanjo, 2001) and information technology is adding to the market dynamics. Because food also fulfils a social function, these market drivers also impact on social networks (Sodano et al., 2008) and ultimately on food producers' personal aspirations (Tregear, 2001). This evolving landscape is a source of entrepreneurial opportunities and provides vital clues about the location of strategic information and resources (Shane and Khurana, 2003; Shane and Venkataraman, 2000; Schumpeter, 1934a)

2.4.1 Evolving demography

Demography yields crucial information on consumers and market trends by segmenting the population in age group. As Figure 2.5 illustrates, the UK population is growing at an annual rate of 0.7% and will reach 71 million people by 2031²⁰. In part, this growth is being driven by an ageing population. Demography matters to network structures since it sets apart distinct social groups with different needs and means for creating and maintaining relationships, which are determinant factors in the entrepreneurship process (Casson and Della, 2007) and affect the way business

²⁰ This growth is accounted by two main factors: natural change in births number outpacing death and net migration

owner/managers (BOMs) adapt to network structure in order to bridge structural holes or to expand an existing network (Burt, 1992).

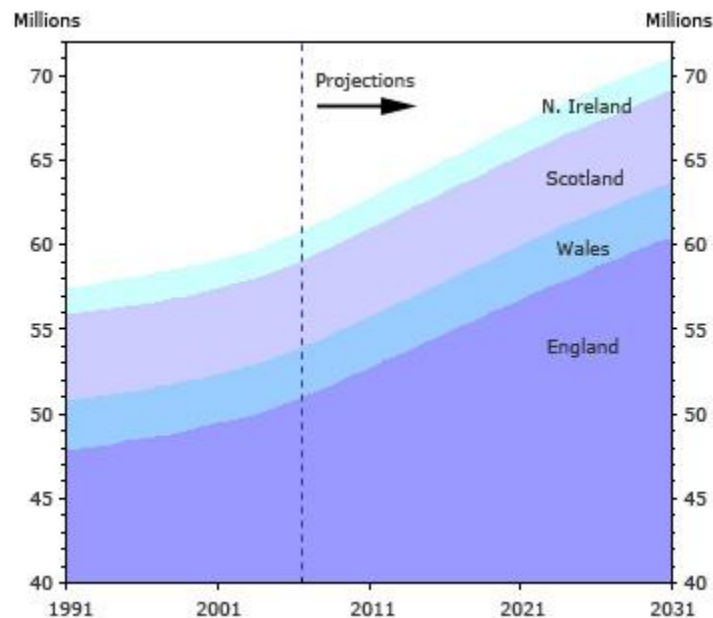


Figure 2.5: Actual and projected UK population (ONS, 2012)

2.4.1.1 A growing ageing population

The last UK census revealed that the population aged under 16 has decreased from 25% in 1971 to just 19% in 2010, while the proportion of the population aged 65 and over has increased by 4% to 17% over the same period. This trend is expected to continue as those aged 65 and over will overtake the younger population by 2035 with proportions of 23% and 17% respectively (ONS, 2012). As Figure 2.6 illustrates, by 2035 the number of people aged 65 and over is projected to double again and would account for about twenty five per cent (25%) of the total population.

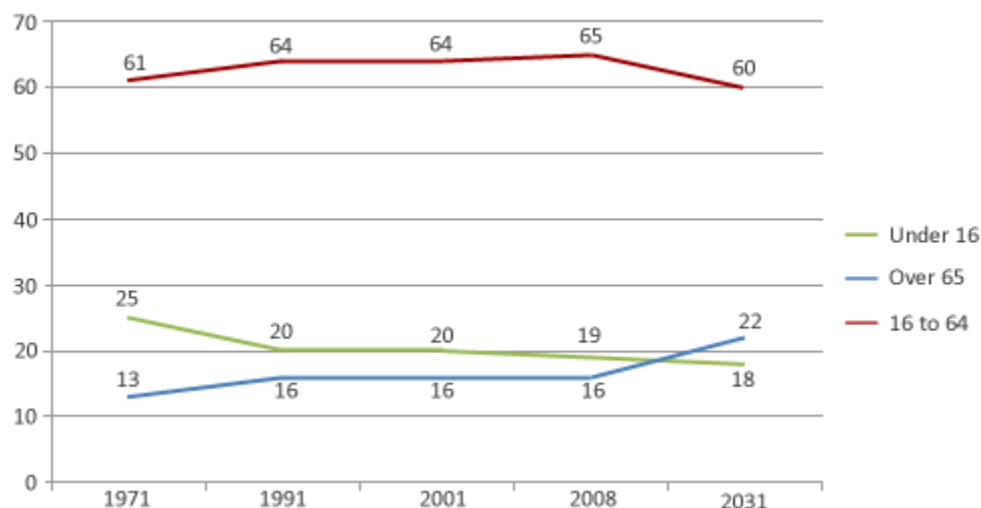


Figure 2.6: UK Population age structure (ONS 2008-based projections for 2013)

Household disposable incomes are significantly affected by these demographic shifts, according to the Department of Work and Pension²¹ (DWP, 2010). It is also expected that this proportion will exceed those aged 20 and under in most advanced economies²². Many among the population aged 65 and over lead highly active lifestyles, benefiting from increased life expectancy, higher levels of disposable income and improved healthcare. Retirement is no longer a brief period at the end of life, but one that can last for many years and this group of retired consumers is not homogeneous. A study by Angell et al (2012) on the behaviour of UK's shoppers aged 65 and over was conducted in six localities in the South West Region. Using qualitative data, the study found six distinct types of shoppers aged 65 and over, namely: product-oriented, prudent, selective-convenience, restricted-convenience, store-oriented and personalised shoppers. This emerging typology of shoppers aged

²¹ Figures from the Department of Works and Pensions (2010) offer a segmentation of this population with the older pensioners and single women pensioners having less money to spend than pensioner couples, whose joint earnings could reach seven fold.

²² This phenomenon is also observed in most of the Western world, where retirement is no longer the end of life, but marks the beginning of a more fulfilling lifestyle and enjoyment.

65 and over requires additional considerations to the more generic buying behaviour and decisions illustrated in Figure 2.7.

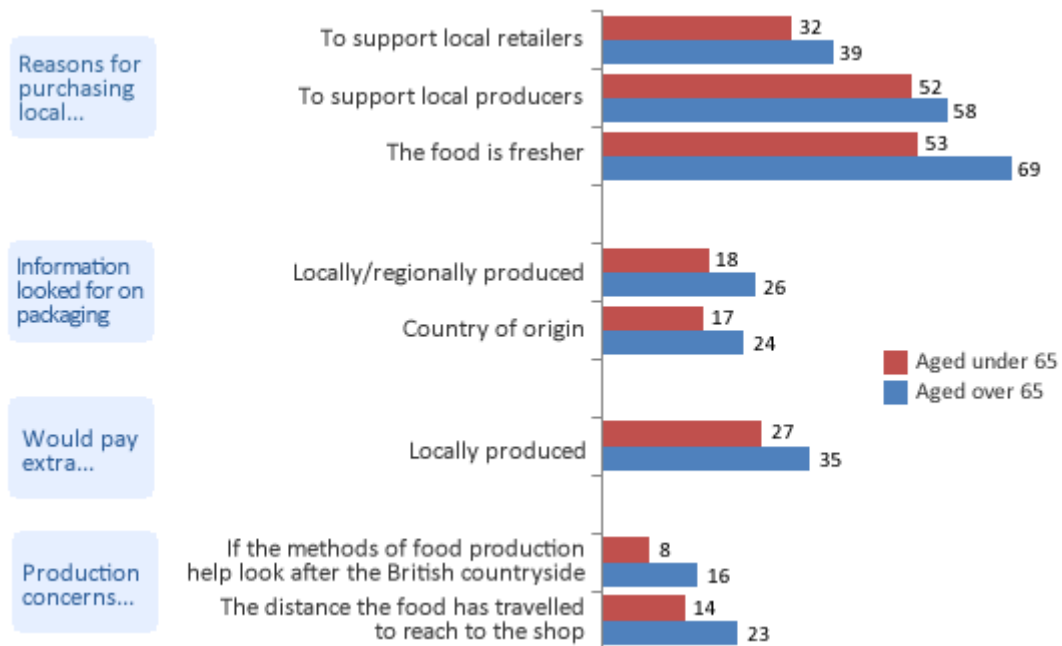


Figure 2.7: Over 65 shopper characteristics (IGD Shopper Trends, 2010)

2.4.1.2 Factors affecting buying decisions for population aged over 65

The buying decisions among shoppers aged 65 and over with regard to food are influenced by a variety of factors, including the level of support to the local economy. A consumer survey (IGD, 2010) showed that 86% of over 65s mentioned that food provenance and support to local economy were key factors, compared with 59% of those under 65s. Among participants to the survey, 35% of shoppers aged 65 and over said they were more likely to purchase and pay extra for local food compared with 27% for shoppers aged under 65. Concerns over production conditions were also perceived as influencing buying decisions among shoppers registering 39% and

22% of respondents to the survey among the groups aged over 65 and under 65 respectively.

Another survey (IGD, 2008) also revealed differences in opinions on health concern between shoppers aged 65 and over and those aged under 35. With regard to sugar and fat, consumers aged over 65 scored 48% and 34% respectively against 35% and 26% for those aged under 35. On brand loyalty 49% of those aged over 65 were more loyal to a brand with 43% not necessarily concerned by promotion, against 34% and 30% respectively for those aged under 35. Finally, 36% of those aged over 65 were more responsive to smaller portions as a way to reduce waste compared with 25% for those aged 35 and under, and they were also less unhappy with limited choice (9%) compared to 18% for the other category of shoppers.

2.4.1.3 Brand names and Protected Designation of Origins (PDOs)

Consumer loyalty to brand names and origins of products implies an element of trust between the supplier and the customer. As studies show (IGD, 2010; 2008) shoppers across all age groups express some preference for locally sourced food, although at a much higher level among shoppers aged 65 and over. The increasing complexity of supply chain networks among competitive market channels has also generated food scares among which the recent 'horsegate' situation.

Traditionally, the definition of local food²³ was a term used by farmers' markets to identify producers who are entitled to sell there (DEFRA, 2003c). The amended EU

²³ This wide definition covered food produced, processed, traded and sold within a defined geographical radius, often up to 30 miles.

regulation (EC) 628/2008²⁴ redefines the use of PDOs, PGIs and TSGs in relation to food origins. However, the majority of locally sourced food is not sold through PDPs, PGIs and TSGs because the legislation requirements for quality process are very stringent, which could make them unaffordable for most SME food producers. Nonetheless, the availability of locally produced food can accommodate consumers' expectations including the delivery of social, health and environmental benefits in addition to food itself (Gorton and Tregear, 2008; DEFRA, 2003c). Food production and commercialisation enhances social capital by facilitating interactions between various individuals, businesses, social groups and brokers, as well as supporting innovative initiatives (Hubbard and Gorton, 2011; Casson and Della, 2007). Such initiatives include the creation of a local brand²⁵ which still remains essentially parochial, and therefore resulting in issues associated with brand sharing as a strategy to protect the competitive advantage of a specific geographical location. Evidence from previous studies (Schoonhoven and Romanelli, 2001; Burton, 2001) suggests that the skills set required for defining and implementing a successful strategy for competitive advantage required behavioural characteristics that are not equally shared among business owners/managers (BOMs) and could explain some variance in business performance (Hubbard and Gorton, 2011; Gorton, 1999).

²⁴ Protected Designation of Origin (PDO) which is open to product which are produced, processed **and** prepared within a particular geographical area, **and** with features **and** characteristics which **must be** due to the geographical area.

Protected Geographical Indication (PGI) which is open to products which must be produced **or** processed **or** prepared within a geographical area **and** have a reputation, features **or** certain qualities attributable to that area

Traditional Speciality Guaranteed (TSG) which is open to products which are traditionally **or** have customary names **and** have a set of features which distinguish them from other similar products. These features must **not** be due to the geographical area the products is produced in **nor** entirely based on technical advances in the method of preparation.

²⁵ Local brands referred to as 'shared brands', e.g. Love the Flavour for food and drink manufacturers/members of the Food and Drink Devon association, Chilterns Choice for beef and lamb meat raised in the Chilterns Hills

2.4.1.4 Young population

The young population²⁶ is a distinctive market in that the majority of young people are in education, and make a significant proportion of the clientele of the catering industry. Health concerns, particularly obesity and diabetes, are major issues, and celebrities (e.g. Jamie Oliver, Sarah Ferguson) are joining the campaign to develop healthy eating in schools, particularly in low-income and high-risk communities. Businesses with an entrepreneurial spirit e.g. Pasta King²⁷ have successfully entered the market and established strong links within local communities to develop a sense of community wellbeing (Putnam, 2001; 1993). There is an increasing awareness towards helping consumers make informed choices and understand their energy requirements, attitudes to energy balance and food portions (IGD, 2008). The debate is having an effect on food manufacturing and the options in terms of routes to market (Chemers, 2002).

2.4.1.5 Immigrants

Immigrants make up about 14% of the UK population, and the proportion is set to grow (ONS, 2012). Recent data from ONS (2012) show that the number of households of more than 2 people with at least one immigrant rose to 12%, an increase of 8% over the past 10 years. Immigration brings diversity in food culture that enriches the entire food industry. The success of Indian and Chinese ready meals now available in all main supermarkets as well as convenience and speciality stores is an illustration of the '**embeddedness**' of food in the social fabric

²⁶ Based on recent population estimates and projections the proportion of the UK population aged 16 and under no longer leads on population growth rate, as it has been outpaced by those aged 65 and over (ONS, 2007. 2006-Based National Population Projections. London.

²⁷ All of our Pasta King & Spice Connections sauce range can now be found on My Fitness Pal, a free community based website that gives you a calorie counter, diet and exercise journal to help you track calories and lose weight. Also available on iPhone and Android based systems, making calorie counting easier than. www.pastaking.co.uk/healthyeatingplanner.

(Granovetter, 1985). The UK positive attitude towards mainstream food culture is a strong indication that opportunities in this market segment will continue to grow. Studies on immigrant small businesses (Sequeira and Rasheed, 2006) have revealed that non-emotional relationships referred to as 'weak ties' are likely to generate more business opportunities because they channel non-redundant information which tends to be of greater value than information received through 'strong ties'. Equally, the increasing use of Internet brings information at a much faster rate, hence creating demand and opportunities for innovation (Salazar, 2004).

2.4.1.6 Active population

What characterises the active population comprised within the range of 16-64 years is its impact on the economy as the main contributor to GDP, and its size (60% of UK population). There is a shared argument that people of working age have more incentive to invest in social networks and establish relationships in order to achieve their career aspirations and general wellbeing (Putnam, 2001). Ethical consumers' choice is gaining more ground, as consumers are overwhelmingly more likely to buy ethical products (Memery et al, 2012). Data in Figure 2.8 suggests (IGD, 2012d) shoppers consistently demonstrate a commitment not to compromise on their values, despite financial pressures on household budgets.

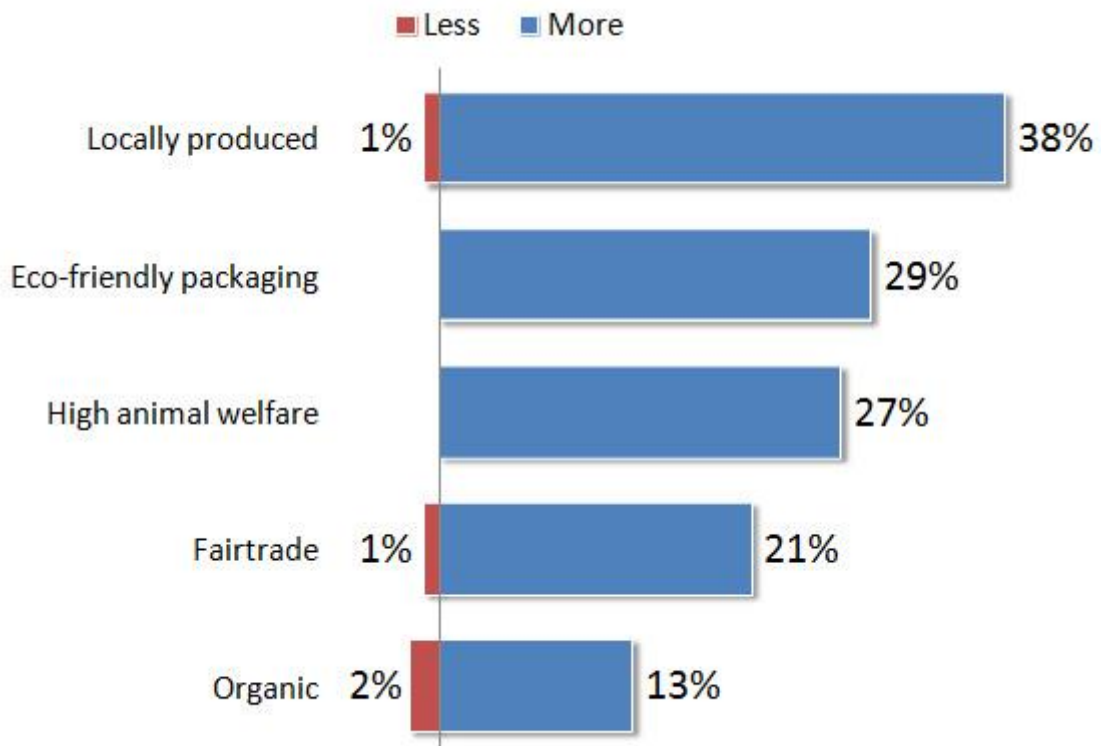


Figure 2.8: Factors driving ethical shopping (IGD all main shoppers survey *June, 2012*)

The trend towards ethical shopping is likely to remain strong and food and drink manufacturers can create new opportunities by responding to these aspirations. Locally sourced food remains high on the value scale and small producers especially meat producers can compete successfully.

2.4.2 Buyers characteristics

The UK household size²⁸ is getting smaller while the number of households is increasing faster than the population. 33% of UK households consist of a single person while households of more than two people make 30%. An increasing

²⁸ Sources from the ONS estimate that households with 1 or 2 people now represent approximately 60% of all households, compared to just 50% in 1971 while the proportion of households with 4 people or more decreased from 30% to just about 20% during the same period. The proportion of households with 3 people has remained constant around 10% (ONS, O. O. N. S. 2007. 2006-Based National Population Projections. London.

proportion of working men and women live alone and work odd hours. As a result, the demand for convenience shopping, long opening hours and speedy meal solutions will continue to grow (IGD, 2009a). Within the working population there are different groups based on income and lifestyles whose buying decisions can generate opportunities for product differentiation and enable businesses to compete more successfully (Megicks et al, 2008; Hitt and Ireland, 2002). People on low income prefer larger portions of food and carbohydrate components, irrespective of where they eat (IGD, 2008). Health concern is dominating lifestyle as people become more aware of foodborne diseases and other risks associated with poor eating habits²⁹ (WHO, 2003).

From a consumer's viewpoint, food safety, labelling and advertising are closely linked, with a knock-on effect on reputation, trust and consumer loyalty (Sodano et al., 2008). As Figure 2.9 shows consumers' main concerns are animal welfare, hygiene, additives and security.

²⁹ A recent survey by IGD revealed that 84% of shoppers claim to do at least something to promote a healthy lifestyle. Of the 16% who said they were not, 11% were not interested or did not know what to do and 5% said they already have a very healthy lifestyle (IGD, CONSUMER UNIT 2009b. Diet and Health. London.

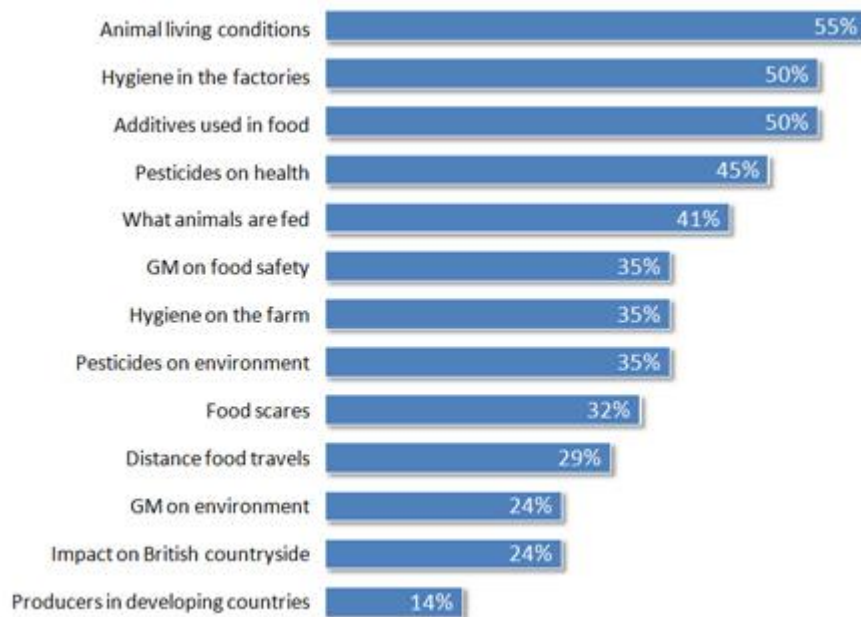


Figure 2.9: Shoppers' food production concerns (IGD Consumers survey, 2011)

2.4.3 Organic produce: a lifestyle choice

Organic produce is increasingly becoming a high premium lifestyle choice perceived as a middle-class folly, particularly since the London School of Hygiene and Tropical Medicine published their inconclusive findings on research of superior nutrients from organic produce (Elliot, 2009). Sales of organic produce rose from £900 million in 2003 to £ 2 billion in 2008, illustrating a substantial increase in market share (Leroux, 2009). A price comparison puts an average premium of 26.4% on organic produce (DEFRA, 2009a; Bagon, 2009).³⁰ However, the premium on animal protein products is unequally shared because additional costs for the production of organic beef and

³⁰ Farmers evoke reasons linked to animal welfare and climate change, asserting that non-use of chemicals prevents them from cashing EU CAP subsidies, making the business very labour intensive and therefore costs more to run. What they lose in labour productivity is compensated by a clever marketing and best-practices. A farmer who grows both organic and non-organic gave a very balanced view pointing to low yield and high cost per unit of production to justify the premium they charge for organic produce. His most convincing argument in market terms was that the value of the premium charged on organic was a subjective opinion DUNN, R. 2009. Examining the Benefits of Organic Food. The Times, 1 August 2009, p. 21 reinforcing the point that going organic is a lifestyle choice.

lamb put the premium much lower than that related to the production of organic pork and pig meat products, for example. Since 2009, demand for organic produce has declined, although the premium continues to keep the market value on the rise.

The subject of organic food made headline news during the Summer of 2009, and consumers joined the cohort, affirming their commitment to the brand as a lifestyle choice that gives them pleasure, not necessarily superior health or better behaved children (Thomson, 2009). Consumers are attracted to organic food for various motives but concerns related to environment and resource constraints are increasingly driving consumer choices (Megicks et al, 2008).

Organic products have created strong brand communities around names like the Duchy originals, Riverford which remain attractive to retailers, independent stores and increasingly to the catering industry. The economic downturn has had a negative impact on organic food as mainstream food advertising is concentrated around price and functionality. As data shows (IGD, 2012d) organic products can differentiate by linking various benefits from organic food in new ways, as it still remains an aspiration for some consumers not yet buying organic produce for financial reasons (Megicks et al, 2008).

2.5 The SW Region food and drink manufacturing

2.5.1 An overview

South West Region food and drink manufacturing offers an appropriate context for empirical research. A report on The State of the Key Sectors (Little, 2004) revealed that food and drink manufacturing was the largest industrial sector with a gross value added of £ 2.8 billion in 2003, providing jobs to 85,000 people or 4.4% of the

regional workforce. Four out of every 10 full-time employees in the industry were self-employed (SWRDA, 2004). At the turn of the century, the South West Local Food partnership reported that (SWLFP, 2003) that the region hosts approximately 3,000 food and drink producers, accounting for almost half of the UK portfolio of 6,692 businesses. The same report (SWLFP, 2003) indicated that 80% of businesses employ fewer than 10 people, and 68% emerged from farm diversification (CEC, 1997). The region hosts large businesses operating in domestic and international markets, with a proportion of SMEs covering a diverse product range also active in export (FFB, 2005b). Data on key sectors in regional economies (ONS, 2007b) show no change in this performance. By all accounts, food and drink is a strategic sector for both the UK and the South West region.

The region is also well reputed for its local brands promoted under the common denominator 'Taste of the West' (West, 2012) which claims the true source of food and drink inspiration. There is a strong sense of belonging and protecting the shared heritage of the South West locality associated with supreme quality produce and very attractive to consumers and businesses in the tourism and hospitality sector. Some small producers in the region have succeeded in supplying exclusive shops such as Fortnum and Mason, Harrods, Buckingham Palace and exclusive hotels in the Emirates, Japan and the US. Being the UK's largest region measured in area, covering 9,200 square miles (23,828 km²), the SW encompasses seven counties with a total population of 5 million (ONS, 2012b). It has been argued that the seven counties of the regions have less in common among themselves than they have with the rest of the UK, and therefore local associations tend to flourish as each county

or even district chooses to promote its own identity. On this basis, one could argue that the regional food strategy (DEFRA, 2003a) is working well in the South West.

2.5.2 The state of competitiveness

Previous data (DTI, 2005) revealed that in 2003 the food and drink industry GVA/employee was £22,080, well below the regional average of £28,700 for all industries. Regional economic indicators for the period 2007-2011 (ONS, 2013) showed that the South West has maintained its contribution to national GVA above 7% while all other regions have seen their share of GVA decline except for London, the South East and Scotland. However, the same source showed that the productivity index measured by GVA per hour worked has slightly declined and continues to remain well below the 100 index at 93, ranking 5th out of 12 regions. Also, Regional trends on key industries (ONS, 2013b) recorded the South West region GVA/employee for manufacturing at £46,436 against a national average of £ 51,472. The region has a good entrepreneurial spirit with a survival rate ranking 6th nationally and adding to its stock of active business (ONS, 2013b).

A survey of SW food and drink was undertaken (FFB 2005a) with the objective to identify new markets and star products with business development potential as part of the sector growth strategy. 300 businesses³¹ were contacted and 132 completed the survey. The findings revealed that the degree of product diversity in the region was far greater than anywhere else in the UK, indicating a highly innovative sector, mainly on the back of a strong regional identity. However, the same survey confirmed that many businesses could not take full advantage of their market

³¹ The selection of participants in the survey covered the seven counties of Avon, Cornwall, Devon, Dorset, Gloucestershire, Somerset and Wiltshire that make the SW Region.

potential. Why has a region with significant potential continuously performed below the national average?

2.5.2.1 Exports

The UK has relied on food imports to meet its domestic market needs since the end of the 19th century, with a self-sufficiency rate around 60% (DEFRA, 2011). For the period 2002-2012, UK exports of food and non-alcoholic drinks increased more than twofold and markets outside the EU recorded the highest increase (FDF, 2013). The trade deficit has also doubled reaching £18 billion for the year ending December, 2012. At a time when consumers have a proclivity for British sourced food (IGD, 2010; 20092e) this high level of deficit evokes some questions in respect of the industry competitiveness.

It is widely acknowledged that SMEs face specific barriers to export because of several factors, including their inability to recruit highly skilled staff, inappropriate infrastructure often related to their location and their ill-defined strategy. Research shows that both tariff and non-tariff trade barriers and other business impediments such as transport costs and foreign markets export regulations affect SMEs disproportionately in comparison to large businesses (Julien and Ramangalahy, 2003; Leisch and knight, 1999). However, SMEs involved in foreign markets perform better than similar SMEs with no export activities (USITC, 2010; Julien and Ramangalahy, 2003; Knight and Cavusgil, 2004). This observation is confirmed irrespective of the fact that some SMEs enter foreign markets indirectly through a wholesaler or a range of intermediaries, whereas large businesses tend to export direct to other large businesses. Thus, SMEs contribution to value added through exports is much greater and could explain why most governments design programmes and policies to boost SMEs' exports performance.

The SW as a region has a poor record on exporting. In 2003, the value generated from exports per employee contributed a modest £4,600 to the regional economy, well below the national average of £7,200 (DTI, 2005). Recent data (ONS, 2013b) show that for the period 2006-2011, the South West region again recorded the lowest increase in exports contribution to regional GVA, see Figure 2.10. A survey conducted by FFB (2005a) revealed that 39.4% of businesses interviewed considered themselves experienced exporters, and a further 32.6% were either new to exports or interested in developing export markets. 23% were neither exporting nor interested in doing so. What factors lie behind this poor performance?

In looking at the effect of international openness on local firms' productivity, Damijan et al (2009) studied the effect of both trade and foreign ownership on firms' productivity in south eastern Europe. Empirical evidence from six countries showed that foreign ownership helped restructure and enhance productivity only in four out of six countries, while exporting to advanced markets had a greater impact on productivity growth for four countries. Although the positive effect of exporting was driven by other factors, e.g. adequate capacity, the findings suggest that trade liberalisation is not uniformly beneficial.

A study by Gorton and White (2012) on export strategies and performance in the dairy sector among Commonwealth Independent States (CISs) yielded interesting results. Using 12 case study enterprises and negating the effect of macro-environmental forces outside the control of BOMs, results showed that management and organisational factors were key determinants of export performance. Based on the work of Katsikeas et al (2000) they defined organisational factors as aims and objectives of the firm together with its intangibles and tangibles, while managerial

factors were represented by the decision makers' demographics, attitudes, behaviour and experience.

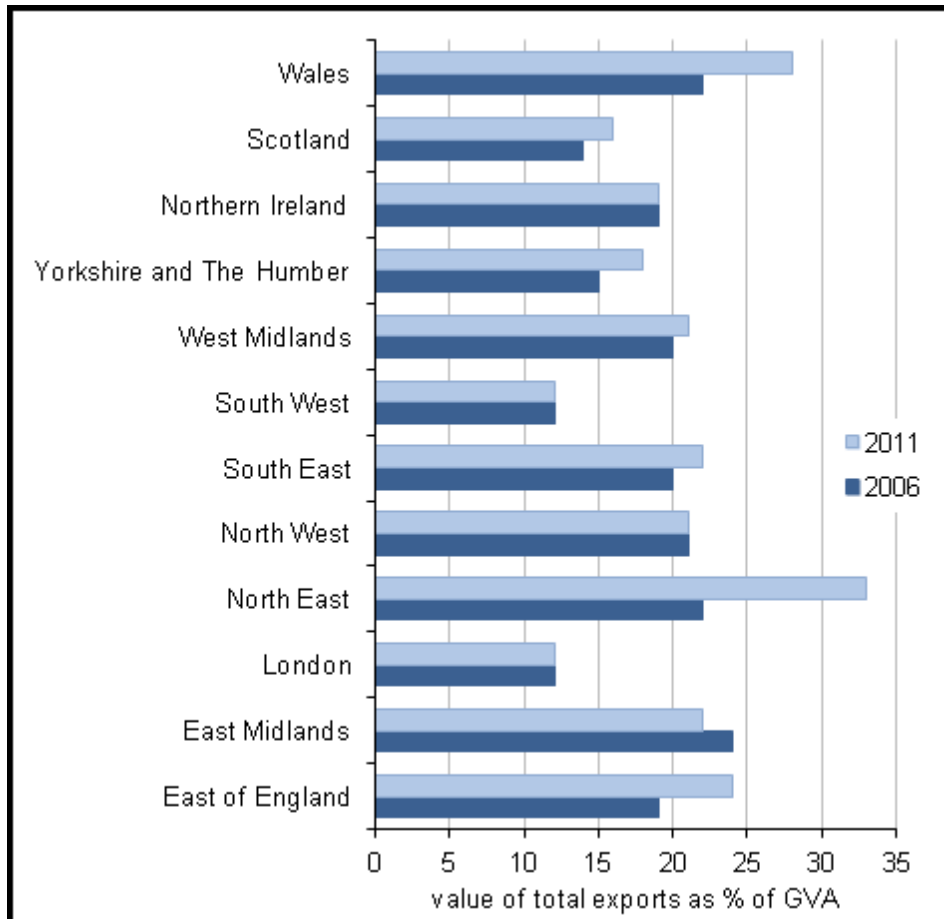


Figure 2.10: Value of total goods exports as a % of workplace- based GVA (HMRC, ONS Regional Economic Indicators, 2013)

The findings revealed that determinants of export success were not evenly distributed when compared with the universal determinants applicable in western markets like the US. For CISs, business orientation, which is the key element in organisational factors, was primarily determined by a network orientation giving prominence to political business relationships as opposed to market orientation

based on buyer-seller relationships; thus 'regional' models of internationalisation were more appropriate as they recognise distinct institutional structures alongside some elements of universality.

2.5.2.2 Innovation

It has been argued that innovation enhances competitiveness because it drives productivity in many ways. The UK Innovation Survey (BIS, 2013) reported on the types and levels of innovation activity over the three year period 2008-2010, defining a business as innovative if it has engaged in any of the following:

- Introduction of a new or significantly improved product (good or service) or process;
- Engagement in innovation projects not yet complete or abandoned;
- New and significantly improved forms of organisation, business structures or practices and marketing concepts or strategies.

Figure 2.11 shows the share of innovation active businesses across the regions of the UK for 2008 to 2010 and the South West performance is above average. A survey conducted by FFB (2005a) revealed that food and drink manufacturers in the SW were among the most innovative in the UK with a good level of firm collaboration but acknowledged their difficulties in taking their innovation to market. A reference to the literature on Innovation can help explain this paradoxical situation.

Since Schumpeter (1934b) introduced the debate on entrepreneurship and economic growth, innovation is widely accepted as the lifeblood of entrepreneurial activity. Its importance in terms of competitiveness is also well established (Porter, 1998). Schumpeter (1934b) defined innovation as the '**carrying out of new combinations**'

in any of the following forms: product, market, supply and organisation. Building on this, several authors (Sarasvathy, 2011; Shane, 2003; Shane and Venkataraman, 2000; Kuratko and Hodgetts, 1989; Aldrich and Zimmer, 1986; Casson, 1982; Kirzner, 1973) contend that innovation is about combining resources for a profitable commercialisation of opportunities, and this is what entrepreneurs do.

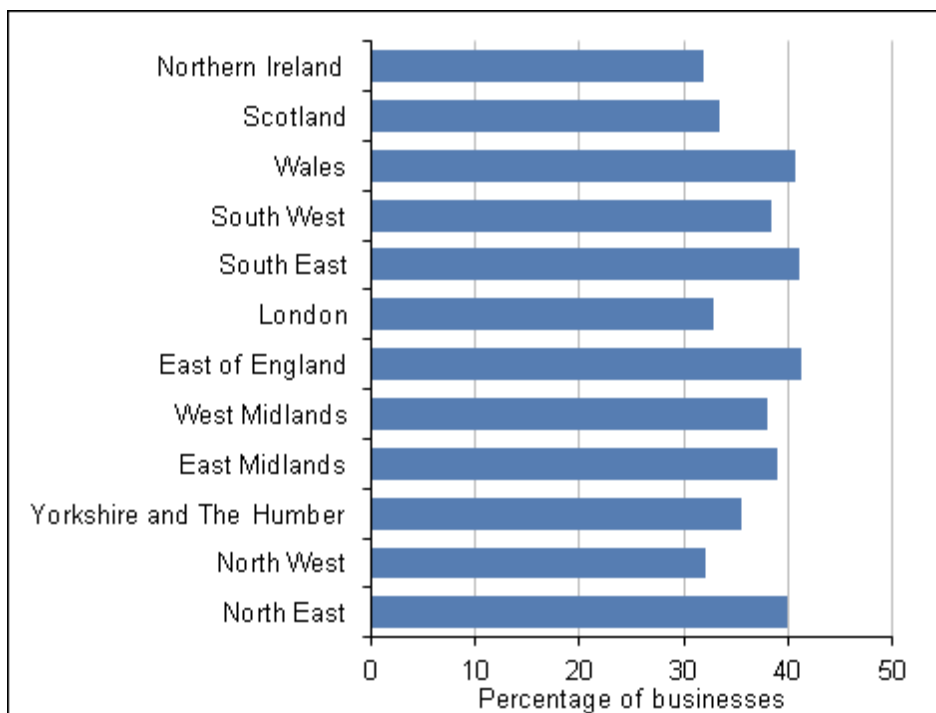


Figure 2.11: UK Innovation active enterprises by regions, 2008 – 2010 (Department for Business, Innovation and Skills, 2012)

Opportunity stems mainly from social, technological, economic, political and environmental changes where an entrepreneur identifies new means-ends by making links between such changes; as well as different conjectures made by people about the value of things within such contexts (Casson and Della, 2007; Shane and Venkataraman, 2000b; Kirzner, 1982; Hayek, 1937; Schumpeter, 1934b; Knight, 1921). Shane and Venkataraman (2000) define entrepreneurship as the

process of discovering, evaluating and exploiting opportunities and the set of individuals involved in that process. This assertion is also well illustrated in the following terms:

“The carrying out of new combinations we call “enterprise”; the individual whose function is to carry them out we call “entrepreneur” (Schumpeter, 1934a)

This would suggest that entrepreneurial activity is an integral part of the social environment as the source of innovation, and of which the entrepreneur BOM is a part. What then, explains the fact that innovative BOMs in the South West food and drink manufacturing, a region with strong local identity and vibrant networks built on common heritage, show a poor record on competitiveness?

2.6 Conclusions

This chapter has provided a critical synthesis of food and drink manufacturing, a pivotal player in an important industry. A review of the network of relationships reveals the co-existence of parallel structures: (i) asymmetrical relationships within the food chain that is dominated by retailers controlling the main routes to market on the one hand, and (ii) food and drink manufacturers largely in the rural area with close local associations on the other (Burt, 1992; Granovetter, 1985). A review of the socio-economic landscape also points to sources of opportunities emerging from demographic changes and consumers’ lifestyles (Schumpeter, 1934b). Data shows that food and drink manufacturers in the SW region are innovative but the region still lags behind national average in exporting and commercialising new products (ONS, 2013; BIS, 2012; FFB 2005b).

In spite of an increase in productivity at the national level, food and drink manufacturers in the SW region continue to show a level of GVA/employee below

the national average, even though the region has maintained its contribution to national GVA (ONS, 2013; FDF, 2012; Cambridge, 2010). It is still the case that a higher than national average proportion of the portfolio is represented by businesses employing less than 10 people and mainly located in the rural areas that are characterised by a low-skilled workforce and strong links to a very seasonal tourism industry (DEFRA, 2011; ONS, 2005). The next chapter explores the literature on innovation and the process of discovering, evaluating and exploiting opportunities (Shane and Venkataraman, 2000)

CHAPTER THREE: ENTREPRENEURSHIP – A REVIEW OF THE LITERATURE

3.0 Introduction

The preceding chapter completed a critical synthesis of the research context, unveiling its significance in macro-economic terms and bringing to light issues within food and drink manufacturing which are associated with Social Capital and social networks concept. It underscored the asymmetrical relationships among the Food Chain players, and the sector pivotal role in building a cross-sectorial connectivity within the rural economy as part of policy initiatives. The evolving socio-economic landscape shaping or responding to consumers' behaviour suggests that entrepreneurial opportunities and the subsequent process of evaluating and exploiting those opportunities, constitute a significant factor in this research context.

This chapter examines entrepreneurship as a process of opportunities discovery, evaluation and exploitation and how BOMs/entrepreneurs engage in the process. It begins with definitions and general concepts affiliated to entrepreneurship, followed by a critical review of the process with a particular emphasis on the influence of the socio-economic environment in generating opportunity and facilitating commercialisation. Section Two takes a sociological perspective on the interaction between Entrepreneurship Process and the socio-economic environment and introduces SC as the independent factor in this interaction. Thereafter, an assessment of some existing models of interaction between Social Capital (SC) and Entrepreneurship Process (EP) is completed in order to highlight gaps in current literature. In The role of leadership (LS) as a mediating factor in the interaction

between SC and Entrepreneurship Process (EP), is discussed in Section Three, postulating that the interaction between SC and EP is not a direct relationship. LS is examined from an entrepreneurial perspective with the main proposition that LS is the instigator of the process of discovering, evaluating and exploiting opportunities, while simultaneously transforming the value in SC into EP outcome. This mediation determines the result of a social process in LS as well as a market process in EA. This proposition defines the main hypothesis from which the researcher formulates the main research question underpinning this thesis.

3.1 Entrepreneurship: definitions and general concepts

3.1.1 Definitions

Entrepreneurship is defined as the process of discovering, evaluating and exploiting opportunities and the set of people involved in that process (Shane and Venkataraman, 2000). Scholars share the view that EA is what entrepreneurs do and their actions are rooted in the socio-institutional environment where the best combination of resources can be achieved (Sarasvathy and Venkataraman, 2011; Bridge et al., 2009; Shane, 2003; Kuratko and Hodgetts, 1989; Casson, 1982; Schumpeter, 1934b). Entrepreneurs act either as a response to an external and objective reality (Shane and Venkataraman, 2000; Kirzner, 1973; Hayek, 1937) or as a realisation of a creative social process (Sarasvathy, 2011; Gartner et al, 2003). Irrespective of whether EA results from opportunities that exist objectively or are socially created (Haynie et al, 2009; Corbet, 2007; Dimov, 2007; McMullen & Shepherd, 2006) it remains congenial to entrepreneurship in that it is seized upon and recognised as a force for renewal and personal achievement in many ways. Ultimately, it generates occasions for advancement of progress and innovation

(Cardon et al, 2012; Berglund, 2007; Schumpeter, 1934a) and as a process, it is socially constructed with different meanings attached to it (Anderson et al, 2012). It is this narrow, or enterprise, approach to entrepreneurship based on innovation that the researcher applies to this thesis.

3.1.2 Innovation: general concepts

The lifeblood of entrepreneurship is instilled by the socio-environmental dynamics of the marketplace and driven by innovation, a concept which has evolved beyond the meaning of an absolute novelty in the sense that it has never been done before (Levitt, 1962). New combinations in enterprise, or innovation, also mean a relative novelty being new to a business unit, or achieving significant improvement and benefits to all partners (Lau et al., 2010; Poole and Van de Ven, 2004; West and Farr, 1990; Tushman and Anderson, 1986). Schumpeter (1934b) establishes that the undertaking of an enterprise to exploit opportunities generates diverse forms of EA with the following possible outcomes :

- (i) A new good or a new quality of a good that is not yet familiar to consumers;
- (ii) A new method of production or commercialisation not yet tested by the firm but not necessarily a scientific discovery;
- (iii) A new market for the firm, but not necessarily new in existence;
- (iv) A new source of supply to the firm, irrespective of whether it existed before;
- (v) A new form of organisation in industry such as merger or strategic alliance.

3.1.2.1 New good/product or service

Previous studies (Chen et al, 2006; Avermaete et al, 2003; West and Farr, 1990; Damanpour and Gopalakrishnan, 2001) support the adaptation of existing products as being innovation. As discussed in Chapter Two on the research context, findings from surveys (IGD, 2012; 2010; 2009d; 2007a) revealed that consumers have concerns ranging from health in terms of fat and sugar content, to portion, variety, origins and branding. These concerns drive change that could affect the social, technological and legal environment. Adapting to address these concerns presents opportunities for EA (Shane and Venkataraman, 2000), with potential to achieve significant improvements and benefits to the consumer.

3.1.2.2 New process

Research evidence upholds that adopting a new form of production or commercialisation is a form of innovation (Ray and Desli, 1997; Tushman and Anderson, 1986; Damanpour and Evan, 1984). As discussed in the preceding chapter, demographic changes are affecting lifestyle choices with an increase in elderly population and single person households according to census data (ONS, 2012b; 2007). Working patterns are also shifting, creating new market segments for which the choice of place to eat implies new combinations in terms of production and commercialisation. Snacking, eating out and buying online are becoming more popular and the demand for convenience shopping, long opening hours and speedy meal solutions is on the rise (IGD, 2012c; 2009a).

3.1.2.3 New markets/exports

Existing literature supports that exports generate a form of product/service that is new in a particular market with a potential to achieve significant improved benefits to consumers and competitors (Lau et al., 2010; Damanpour and Gopalakrishnan, 2001;

West and Farr, 1990). A study by Damijan et al (2009) showed an association between international openness and firm productivity which in turn could heighten the pace of innovation; and this in spite of the fact that trade liberalisation benefits are not uniformly distributed.

3.1.2.4 New source of supply

Supply-chain is a source of competitive advantage particularly for small firms (Fare et al., 1994) and can also lead to clusters in specific areas or sectors developing value chain (Gordon and McCann, 2000; Porter, 1998; Schmitz, 1995). Clusters have a significant effect on small businesses' access to new sources of supply or resources such as skills and knowledge spill-over. Several authors (Nadvi and Hadler, 2005; Humphrey and Schmitz, 2002; Schmitz and Knorringa, 2000) have established that supply chain and value chain can facilitate access to a new source of material or knowledge. With 20% of activities within the Food Chain adding no value (Boyce, 2007), new ways of combining and processing material and information could generate innovation in product or service (Levitt, 1962).

3.1.2.5 New form of organisation

Firms collaborate because they wish to accomplish mutually compatible goals that would be difficult for each to achieve alone (Das and Teng, 2002; Spekman et al, 2000). Existing studies (Lau et al., 2010; Sodano et al, 2008; Brunetto and Farr-Wharton, 2003) found that market dominant positions hinders innovation because they do not facilitate the achievement of significant improvement and benefits to all partners. Findings from a survey (EFFP, 2005a) revealed that food and drink manufacturers were experiencing difficulties in forming successful groupings for the achievement of mutually compatible and beneficial goals. Several factors could help explain that. First, the retail sector which remains the largest route to market is

controlled by four big players with 80% of the market share (IGD, 2012a; 2012b; ONS, 2006). The buying groups and Symbol control the supply chain of a vast number of small retailers who are increasingly opening stores in small towns next to independent stores (IGD, 2012b; 2009b). However, recent initiatives e.g. Caterfood³² suggest that BOMs are responding to the challenges posed by dominant players in the food chain by initiating new customer/supplier relationships (Burt, 1992).

3.1.3 The Entrepreneurship Process

As discussed in section 3.1.1 above, innovation as a corporeal representation of EP is the result of a process embodying a new combination of resources that bestows a competitive advantage in the market place (Shane and Baron, 2008; Shane and Venkataraman, 2000; Casson, 1982). Entrepreneurs are what they do and their actions are entrenched in a relationship context where those actions can be evaluated and commercialised as a profitable endeavour (Aldrich and Zimmer, 1986; Birley, 1985; Schumpeter, 1934b). Thus, it is a process that is rooted in the reality of how people interact with and within their environment in order to supply and satisfy material means (Polyani, 2001).

3.1.3.1 Opportunity recognition

The notion of opportunity derives from the proposition that human action is based on an uneven distribution of knowledge which, in turn, informs subjective preferences and goals (Hayek, 1937). Furthermore, as the state of knowledge changes, individual preferences also adapt to capture the dissemination and fluidity of knowledge in the changing context (Kirzner, 1997; 2009). The nature and source of

³² Established in 1970, Caterfood is a family owned business located in Devon and supplies a wide range of premier frozen foods, chilled foods and ambient foods many of which are locally produced in the South West Region. With no minimum order, next day delivery and late telesales opening, the business offers many benefits to small producers.

opportunity is still subject to intense debate among scholars. Some authors (Eckhardt & Shane, 2003; Davidsson, 2003; Shane and Cable, 2002) claim that changes in social, economic, technological and government factors are sources of enterprise opportunities because the resulting knowledge from such changes is subjected to time and space with regard to technological possibilities, unfulfilled human needs and purchasing power. This uneven spatial and temporal distribution of knowledge generates information asymmetries which in turn grant access to information to some and not to others (Cooper et al, 1995).

A more recent school of thought argues that such claims bear no ontological value to the extent that an opportunity can only be tested after it has materialised (Dimov, 2010). They uphold that the term opportunity should simply be used to illustrate what entrepreneurs do (Klein, 2008) or as originally intended, the possibility of an EA to be taken by an alert entrepreneur (Kirzner, 2009). Irrespective of this ontological debate, the process of entrepreneurship begins with an opportunity which essentially arises out of a recognised change which also defines the outcomes (e.g. a new product or service) and potential new connections (Anderson et al, 2012). In other words, EP generates an adaptive system where access to information leads to a continuous circle of new opportunities. Renko et al (2012) argue that opportunity is both subjective and objective and the real debate should be on the market value of opportunity to facilitate the process of evaluation and exploitation.

Access to information occurs either fortuitously from networks that are unfamiliar or is shared within a network of people who know each other well. The former case involves relationships based on 'weak ties' (Granovetter, 1985) in that the parties do not invest time and effort in maintaining those ties. Typically, the Information originates from non-competitive sources, i.e. the sources providing the information

cannot use it themselves (Casson and Della, 2007; Casson, 1982). In the latter case, the relationships are based on 'strong ties' built in closed networks where trust matters and opportunist behaviours are controlled. Several authors (Aldrich et al, 1997; Coleman, 1988) argue that information from such sources is reliable because it originates from trusted sources and therefore can be authenticated with a specific voice, adding value to the referral process. The information is recognised to have an entrepreneurial opportunity value for an identified beneficiary with entrepreneurial capabilities. Hence, the recipient who finds no personal use for the information will feel duty bound to pass it on to another individual within the networks of strong ties (Uzzi, 1997).

What type of social ties is most suitable for opportunity recognition remains a subject of debate among scholars (McMullen et al, 2007; Sarasvathy and Dew, 2003). Two main arguments co-exist from the primary perspectives of SC. On the one side, a bonding perspective (Coleman, 1988; Birley, 1985) views relationships based on trust and norms emanating from strong, repeated social interactions as essential in the functions of opportunity recognition which ultimately leads to concrete performance outcomes. This argument is furthered by Aldrich and Zimmer's (1986) contention that networks of continued social ties are critical for the entire process of entrepreneurship. Hill et al (1997) extend the effect of bonding relationships to include market knowledge particularly understanding and managing customers' preferences.

On the other side, the main argument is built on the work of The work of Burt (1992) and the concept of bridging relationships which suggests that external connections of a focal actor lead to non-redundant resources, which in turn constitute the SC leading to positive outcomes. Burt (1992) identifies the roots of competition within the

existence of gaps in peoples' social structures. In other words, existing gaps between different social structures within which all members have known each other for a long time and interact frequently make those relationships redundant. The argument is that non-redundant or less-redundant networks are rich in structural holes that facilitate access to new information.

The existence of structural holes does not imply that people in different networks are unaware of each other, but simply that they are connected through 'weak ties'. Instead, by focussing on each one's activities to the extent of not paying attention to what occurs in other groups, they benefit from brokerage due to those 'weak ties' based on their ability to exchange non-redundant information (Bhagavatula et al., 2010; Tiwana, 2008; McEvily and Zaheer, 1999).

Granovetter (1983) initially has exposed the 'strength of weak ties' in the phenomenon of relationships born out of unfamiliar or more formal circles as a source of new information emanating from different levels of the society. Burt (2005) postulated that that brokerage is associated with innovation and growth and therefore an entrepreneur with several disconnected contacts generates multiple advantages to bridge structural holes and compete more successfully. This is because those multiple connections provide a vision advantage in spotting different ways to solve problems and new pathways to build support for new ideas (Shane and Venkataraman, 2000; Schumpeter, 1934a).

3.1.3.2 Opportunity evaluation

Opportunity evaluation is the process of making a judgement on the potential future market value of an opportunity, based on different conjectures people will make about its perceived value Aldrich and Zimmer, 1986; Casson, 1982; Kirzner, 1982;

Hayek, 1937). This judgement dictates the types of resources and their different combinations e.g. skills, finance, material etc. that is optimal in terms of generating profitable future market value.

Typically, the entrepreneur starts with financial and other kinds of support from family and close friends (Birley, 1985) and the success of the new venture is highly dependent on the availability of such resources. Given these constraints, the entrepreneur strives to obtain the minimum quantity of required resources at the lowest price possible in order to achieve a competitive advantage (Starr and MacMillan, 1990). Since the entrepreneur cannot pay the on-going market price for labour, material and other resources required to exploit the commercial opportunity, network ties become a valuable transaction channel for the acquisition of resources at the lowest price possible (Jensen and Greve, 2002; Jensen, 2001).

Social networks of strong ties are usually more inclined and motivated to provide needed resources at this stage. In addition to family and close friends, redundant networks are more appropriate because people interact in closed networks where relationships are dense and frequent (Burt, 2000; 1997; Honig and Davidsson, 2000). The benefits of predictability, based on trust and long term relationships also confer certain credentials which could prove vital in speeding transactions at this critical point in the process (Covey, 2006; Uzzi, 1997).

3.1.3.3 Opportunity exploitation

Often referred to as market organisation (Casson and Della, 2007) opportunity exploitation is the most significant step in the entrepreneurship process where the entrepreneur realises commitment to resources and materialises the initial representation of changing the network of trade (Kirzner, 1997). The form of

exploitation, e.g. wholesale, retail, strategic alliances, and so on also determines how different stakeholders particularly customers and competitors, respond to the new entrant. Arguably, attracting new customers and building loyalty would increase the cost of doing business, and the entrepreneur appropriates the reward by quickly altering the market structure, stiffening the competition against existing businesses (Casson, 1982). If successful, the new firm gains more market share and stimulates new entrants into the competition, and so the circle starts again with new market players. Schumpeter (1934b) described this phenomenon of constant and perpetual market organisation as 'creative destruction' or the essence of economic growth. There are two factors that are essential for opportunity exploitation and also critical in determining the outcome of market organisation, and these are skills and capital.

- **Skills**

Skills constitute an important factor in the context of food and drink manufacturing (Boyce, 2007; EFFF, 2006; FCC, 2005). Studies by Johnson and Scholes (2002) and Pansiri and Temtime (2008) hold that skills are determined by knowledge, experience and attitudes of employees as well as managers' own attitudes, knowledge and experiences. Hynes (2009) widens the argument in stating that the knowledge, skills and abilities of the owner/manager and the staff should be viewed as more critical than financial resources. Lynn (2000) asserts that skills and capabilities are determinants of human capital.

Building on Nahapiet and Goshal (1998), further study by Bontis (1998) clarifies the definition of intellectual capital as a combination of competencies made of human capital, customer capital and structural capital, where customer capital represents ex-firm intangibles such as the knowledge embedded in customers, suppliers,

government or related industry associations. Structural capital is made of all non-human storehouses of knowledge including processes (Bontis et al, 2000).

Hayton (2005) found that human capital has a positive influence on innovation and Proctor (1998) argued that understanding markets and customers is the cornerstone of innovation. Because skills are an element of human capital which in turn is influenced by knowledge, experience and attitudes, it could be argued that the combination of competencies within a firm has a direct effect on its innovative orientation and behaviour (Lee and Tsai, 2005). This would suggest that the pursuit and adoption of new methods of production or new process (Schumpeter, 1934b) is directly associated with the organisational intellectual capital of which customers and employees are an integral part.

- **Investment**

Investment is one of the main drivers of innovation. Stuart (2000) found a relationship between the rate of innovation, the level of prominence of partners and access to finance. Studies by Boeker (1988) and Packalen (2007) established that a firm's capacity to obtain resources was influenced by its legitimacy, and the founder's prior experience. The perception of status and reputation of a firm's founder affects not only the firm's ability to acquire resources (Fischer and Reuber, 2007; Burton, 2001) but, more important, its credit scoring and such information is more valuable in making funds available than data about the firm itself (Berger and Frame, 2007).

Schumpeter (1934b) enunciates that the provision of credit is the function of a category of individuals called 'capitalists' whose role is to provide productive means to those wishing to form new combinations. Accordingly, the entrepreneur's role is to

convince owners and managers of capital such as bankers whose decision to channel the means of production into new combinations is vital. This could indicate that the relationship between investment and innovation is not direct but is determined by the entrepreneur's ability to access financial resources due to personal credentials such as legitimacy or prior experience.

- **Collaborative alliances**

Firms may decide to collaborate as a way to exploit an opportunity. Particularly small businesses and medium-sized businesses form relationships with other organisations in order to achieve market organisation outcomes which are difficult to attain alone, especially with regard to their limited ability to raise finance. Formal relationships are often an alliance between two or more firms where the relationship is close and collaborative with the intent of accomplishing mutually compatible goals that would be difficult for each to accomplish alone (Spekman et al., 2000). Network relationships differ from alliance in that they form a collection of relationships that binds a group of independent organisations together (Das and Teng, 2002). As discussed in the previous chapter, food and drink manufacturing counts alliances of different types that are intended for building consumer loyalty or protecting a shared brand (Cornwall, 2012; Gorton and Tregear, 2009).

Street and Cameron (2007) undertook a theoretical review on external relationships and small businesses based on existing literature on small businesses and networks. They established that the effect of social networks on small business could not be studied outside a framework which consisted of inputs, process and outputs and the association between them. For instance, environment characteristics such as geographic location or industry sector would have an impact on relationship formation (Beecham and Cordey-Hayes, 1998). Equally, the process, e.g. engaging

in a relationship with a foreign partner, would impact on the chances of increasing sales and market share (Kai Ming Au and Enderwick, 1994).

The most interesting link was that from antecedents to outcome, such as the ownership of a key resource, and the effect on the business's enhanced competitive position. The antecedents to the external relationship process comprise individual characteristics of the owner/manager, organizational and environmental characteristics. On the individual characteristics, previous research established that a manager's willingness to learn and the general attitude towards partnering, influence the knowledge transfer in the relationship (Beecham and Cordey-Hayes, 1998) whereas self-interest, regardless of what is best for the business has a direct impact on the outcome of the alliance (Young and Olk, 1997).

In reviewing organizational characteristics, Stuart (2000) found a direct relationship between technological capabilities, rate of innovation, the level of prominence of partners and access to finance. A review of relationships characteristics revealed that the strength and depth of the relationships positively influence financial performance and goal congruence among partners as an important aspect for the success of the alliance (Hoffman and Schlosser, 2001). Furthermore, a high level of existing trust between potential partners leads to network formation (Volery and Mensik, 1998). On environmental characteristics, Weaver et al, (2000) found that an environment of financial uncertainty and changing risk levels was favourable to alliances formation with significant effect on existing market structure

The process of relationship management is about finding new partners either by developing new relationships or by gaining referrals, which is an expression of trust. Lewicki et al (1998) define trust as a state in which both parties are confident about

the other party's motives and conduct in situations involving risk. Covey (2006) posits that trust is negatively correlated to transaction cost. The ability to trust becomes economically valuable to a firm when it affects the owner/manager's ability to act on opportunities that may emerge from networking. Brunetto and Farr-Wharton (2007) argued that an SME's owner/manager's ability to identify other trustworthy actors among other SMEs or government employees with the least risk and maximum opportunities may be a talent that differentiates one SME/BOM from another. Saxenian (1994) strongly contended that BOMs who find trusting new people difficult as a result of their own inadequacy in making good decisions based on balancing trust and independence, may in turn be a liability to their firm. Making good decisions is partly about past experience (Rodenbach and Brettel, 2012) and partly about knowledge and judgement of the situation which, to a large extent, is determined by the dissemination and fluidity of information in a changing context (McMullen and Shepherd, 2006; Shane, 2003; Shane and Cable, 2002;). The context is made of relationships of diverse nature and purpose which endow an emotional dimension to the process (Cardon et al, 2012; Baron, 2008).

3.2 Social capital and social networks

3.2.1 Origins, definitions and general concepts

Although originated from sociology and political science (Bourdieu, 1980; Coleman, 1988; Putnam, 1993) the concept of SC has evolved to find usefulness in a wide range of areas including in the field of economics and entrepreneurship (Gedajlovic et al, 2013; Lin et al, 2008; Packalen, 2007; Casson and Della Giusta, 2006; Shane, 2003; Della Giusta, 1999; Dasgupta and Seregaldin, 1999; Burt, 1992; Kuratko and Hodgetts, 1989; Granovetter, 1985). The first systematic contemporary analysis of

SC was produced by Pierre Bourdieu, who defined the concept as **“the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition”** (Bourdieu 1986, p. 248; 1980).

Much later, in examining community wellbeing in America Robert Putnam (1993) provided a more generic definition of SC as **“social networks and the norms of reciprocity associated with them”**. Alder and Kwon (2002) define SC as **‘the goodwill’** available to individuals or groups, with its source in the structure and content of the actors’ social relations, while its efforts lie in the information, influence and solidarity it makes available to the actor. Ostrom and Ahn (2003) explain SC as **‘an attribute of individuals and their relationships’** that enhances their ability to solve collective problems”. Re-visiting the origins of the term provides some useful contextual and conceptual interests applicable to the context and aim of this thesis.

L. J. Hanifan (1920) observed the impoverishment and declining neighbourhood in the state of West Virginia, USA in 1916 and concluded that to renew the community would require an involvement in both democracy and development. This involvement would necessitate **‘social capital’** which was then illustrated in the following terms:

“not referring to real estate or personal property or cold cash, but rather to that in life which tends to make these tangible substances count for most in the daily lives of people: namely goodwill, fellowship, sympathy and social intercourse among the individuals and families who make it” (Hanifan, 1920) Silver, Burdett, 1920, p.8.

The contention was furthered by outlining the private and public benefits of '**social capital**' as follows:

“The community as a whole will benefit by the cooperation of all its parts, while the individual will find in these associations the advantages of the help, the sympathy, and the fellowship of his neighbours.... When the people of a given community have become acquainted with one another and have formed a habit of coming together occasionally for entertainment, social intercourse and personal enjoyment, then by skilful leadership this social capital may easily be directed towards the general improvement of the community well-being” (Hanifan, 1920) Silver, Burdett, 1920, p.9-10.

It stems from this historical perspective that SC theory is built on the proposition that social ties constitute a valuable resource for managing social affairs and enabling individuals and social groups to attain goals that could otherwise not have been possible (Burt, 1997, Putnam, 1993; Coleman, 1988).

Putting this general proposition in a business context, social networks matter, and these networks have value for the people who belong to them. Existing writing largely agrees on the economic value of SC capital in the process of a firm's growth (Lin et al., 2008; Coy et al., 2007; Knack and Keefer, 1997). Some authors (Cainelli et al, 2007; Ngamkroeckjoti et al, 2005; Schoonhoven and Romanelli, 2001; Davenport et al, 1999) hold that SC has an influence on a firm's ability to innovate, while others (Gambetta, 1988, Brunetto and Farr-Wharton, 2007, Damijan et al, 2009) claim that the degree of cooperation and collaborative alliances in a firm is a function

of its SC. Many authors uphold that the people you know and through whom you earn some credentials matter a great deal in such situations as mobilising resources and could explain vast differences in access to productive resources and level of investment (Politis, 2008; Packalen, 2007; Burton, 2001; Della Giusta, 1999; Volery and Mensik, 1998; Young and Olk, 1997; Boeker, 1988; Domhoff, 1967). It is a shared view that network of relationships can constitute a source of competitive advantage which comes in the form of financial information or resources.

From an entrepreneurial perspective, Casson and Della Giusta (2007) assert that SC is the “**capitalised value of improvements in economic performance that can be attributed to high-trust social networks**”. This assertion distinguishes between a social dimension made of networks of relationships and a capital dimension based on the value in economic performance derived from those relationships. Another perspective of SC is presented by Nahapiet and Goshal defining SC as “**the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit**” (Nahapiet and Goshal, 1998, p.243). The emphasis here is clearly on both the networks and its potential assets. Thus, the understanding of SC is through the analysis of social networks.

3.2.2 Social networks

The work of Burt (2000; 1997; 1992) represents a landmark in research in understanding how social networks constitute SC, because of the distinctive manner in which relationships are formed. Accordingly, networks ties are made of two types of relationships based on principles of familiarity and closeness.

3.2.2.1 Understanding 'structural holes'

Burt's work (2009; 2000; 1997; 1992) is developed on the fact that people in general cluster in groups based on affiliations, shared interests and communality of location, occupation and so on. Hence, communication within the cluster or group is more frequent than between groups, leading to group members holding similar views on a range of issues including past and present. Such practices are common in various settings and have been used to explain how firms build strength and competitive advantage (Saxenian, 1994; Coleman, 1988).

Research shows that the development of knowledge within groups and clusters is influenced by the ties on which relationships have developed, to the extent that group members create a tacit form of knowledge that cannot be understood by anyone outside the group (Tiwana, 2007; Nahapiet and Goshal, 1998; Grabher, 1993). This communication model creates gaps in the structure of relationships. Burt (1992) used the term 'structural holes' to describe this common practice which is explained as 'holes in the social structure of communication' and represented by missing relationships that inhibit the flow of information.

3.2.2.2 Closure and brokerage

Inherent to social networks is a type of SC that is generated by the fact that people communicate more within groups than between groups (Tiwana, 2007). Relationships built on ties with people who are familiar such as family members and close friends are classified as 'closure' while social ties developed with people who do not share that familiarity and closeness are referred to as 'brokerage'. Burt (1992) used the terms 'closure' and 'brokerage' to describe this phenomenon of group communications by arguing that brokerage offers a distinct advantage of exposure to

a diversity of opinions and practices and determines the level of opportunities that a network affords by building new ties across structural holes.

3.2.2.3 'Structural holes' and the 'strength of weak ties'

Burt (2000; 1997; 1992) elucidates that social networks that identify several structural holes for brokerage opportunity develop a vision advantage for more lucrative opportunities due to several alternatives in solving a problem. Arguably, the disconnection in network ties vis-a-vis different groups could be a source of competitive advantage. In explaining the impact of social structure on economic action, Granovetter (1983, Granovetter, 1985) argued that in general people who build and maintain relationships beyond the sphere of family members and close friends achieve better than those who do not. In other words, by closing structural holes, people develop a type of relationship that widens access to new sources of knowledge, hence 'the strength of weak ties' (Granovetter, 1983). This claim is supported by further studies (Lau et al., 2010; Honig and Davidsson, 2000; Grabher, 1993).

3.2.3 Measuring social capital

A universal definition of SC has yet to be agreed among scholars (Nahapiet, 2009; Ostrom, 2009) but the proposition that SC is represented by a set of resources rooted in relationships which affect the performance outcomes of actors belonging to those social ties (Bourdieu, 2005; 1986) is widely shared throughout existing literature. Scholars have expressed different views about how to capture such performance outcomes and more importantly what type of social ties best generate them (Honig and Davidsson, 2000; Aldrich et al., 1997; Grabher, 1993; Aldrich and Zimmer, 1986; Coleman, 1988). As such, SC is analysed mainly from a relational theory perspective.

3.2.3.1 The capital value in social networks: an application to entrepreneurship

The relational theory perspective which is fundamentally based on connections between actors in explaining and measuring SC, emphasises the connections and patterns of exchange among individuals and the dynamics of cooperation and competition (Grabher, 1993; Burt, 1992; Granovetter, 1985). Networks and communities are also an important element (Heckscher and Adler, 2006; Kilduff and Tsai, 2003). Hence, the analysis of SC can be extended to all levels encompassing individual, group, organisation, community, region, and so on. Therefore, this approach offers a useful way to characterise, comprehend and examine the sets of relationships at all these levels.

Casson and Della Giusta (2007) assert that SC is the “**capitalised value of improvements in economic performance that can be attributed to high-trust social networks**”. Two key components make this assertion. First, social networks highlight the social component typically made of interactions among people forming a habit of coming together. Second, the value of future improvements emphasizes the capital component in the term. Hence, the value in SC carries both an ‘**intrinsic**’ value based on the relationships and an ‘**instrumental**’ value defined by the expected outcome from social intercourses (Casson and Della, 2007). Because human action is motivated by preferences based on a limited amount of knowledge (Kirzner, 1982) the value in SC is also determined by information asymmetries and differences in inference about the perceived value of things (Kirzner, 1982; 1973; Casson, 1982; Hayek, 1937).

The work of Nahapiet and Goshal (1998) embraces an integrated approach in explaining the role of SC in firm competitive advantage and strategic management particularly in a global and volatile context. In so doing, they built on previous work

(Putnam, 1993; Putnam, 2001; Granovetter, 1983; 1985; 1992; Burt, 1992; 1997) to bring together various contexts where SC is manifest irrespective of the use of the term (Schuller et al., 2000; Farr, 2004). In defining SC as: ***‘the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit’*** (Nahapiet and Goshal, 1998, p.243) the authors include both the networks and the potential assets of the networks in that definition, underlining three distinctive attributes of the definition: the resource-based perspective, its ability to combine multiple dimensions of relationships and the focus on performance outcomes. These three qualities are examined in terms of interrelated, although analytically distinct, clusters: structural, relational and cognitive dimensions of SC.

3.2.3.2 Structural dimension of social capital

Nahapiet and Goshal (1998) make a distinction between the ‘structural’ and the ‘relational’ dimensions of SC based on discussions on structural and relational ‘embeddedness’ (Granovetter, 1985). This terminology is used to describe the configuration of connections between people or units. This configuration explains the characteristics of the system of social ties as a whole. Therefore, it refers to the pattern of overall connections between actors in translating how different people react to one another (Burt, 1992). Among the most important facets of this dimension are the presence or absence of a pattern of linkages in terms of such measures as density, connectivity, and hierarchy of relationships between actors (Wasserman and Faust, 1994) or network configuration and morphology (Doreian and Stokman, 1997). This phenomenon explains the existence of networks created for one purpose that may be used for another (Coleman, 1988). For example, parentage creates family networks and trade creates commercial networks but in reality relationships from

parental origins can transit into commercial ties in instances where a family member becomes a business partner and likewise a commercial relationship could evolve to become an actor in social networks.

3.2.3.3 Relational dimension of social capital

Relational '***embedded ness***' describes the kind of personal relationships people have developed with each other through a history of interaction (Granovetter, 1992). This concept is built on particular relations people have developed on the basis of respect and friendship and which ultimately influence their behaviour. It is through these on-going personal relationships that people fulfil such social motives as sociability, approval and prestige. Such assets are created and leveraged through distinctive behaviour based on trust and trustworthiness characterised by norms (Putnam, 1993; Fukuyama, 1995). The dynamics of these relationships generate expectations and obligations (Burt, 1992; Granovetter, 1985) but equally breed identity and identification of members in the form of "actor bonds" (Hakansson and Snehota, 1995). The manifestations of social interactions could lead to 'over-socialisation', a phenomenon characterising the conduct of economic activity within the norms of social interactions; or a situation 'under-socialisation' in circumstances where economic action is not influenced or guided by people's social interactions (Granovetter, 2011).

3.2.3.4 The concept of trust

Authors have attempted to explain the concept of trust from the perspective of business. Heavey and Murphy (2012) evaluate trust from an organisation's perspective in relation to cooperation and risk. McAllister (1995) makes a direct connection between trust and risk, defining trust as "***the extent to which a person is confident in and willing to act on the basis of, the words, actions, and***

decisions of another person". Currall and Judge (1995) enounce that trust is an individual's behavioural reliance on another person under a condition of risk. Several authors identify characteristics associated with trustworthiness. For example, Mayer et al (1995) associate trustworthiness with ability, benevolence and integrity; while Doney and Canon (1997) add benevolence and credibility to trustworthiness characteristics. Larzerele and Houston (1980) contend that honesty and benevolence characterise a trustworthy individual. Another position (Gubbins and McCurtain, 2008) suggests that the three characteristics defined by Mayer et al (1995) as ability, benevolence and integrity incorporate the different trust typologies and thus are appropriate to understanding trust in organisations.

Covey (2006) and also Casson and Della Giusta (2007) explain trust by the predictability factor which implies that one can rely on such a person to fulfil certain obligations. Thus, a propensity to honour obligation is the second component of trust. The distinction between trust and trustworthiness also implies that the latter is an objective characteristic of an individual in a given situation but cannot be observed directly (Gambetta, 1988) and therefore may not necessarily be correct (Hardin, 1993, Lewicki et al., 1998, Lewicki and Brinsfield, 2009). A compromise position could interpret trust as **"a confident and warranted belief that the other party will honour their obligations"** (Casson and Della, 2007).

3.2.3.5 Cognitive dimension of social capital

The third dimension of SC refers to those resources providing shared representations, interpretations, and systems of meaning among parties, which constitute an important asset (Nahapiet and Goshal, 1998). Such resources also represent facets of particular importance in the context of shared language, codes

and narratives which ultimately affect the individual thinking process (Augoustinos and Walker, 1995). The distinct characteristic of those resources as facilitators of information exchange inevitably implies that they affect the way people make sense of new information and knowledge (De Carolis and Saporito, 2006; Grant, 1996).

3.2.3.6 Common characteristics of social capital dimensions

Although SC takes many forms, each of these forms has two common characteristics; (1) they constitute some aspects of the social structure, and (2) they facilitate the actions of individuals within the structure (Coleman, 1998). Firstly, all dimensions of SC are built into social ties and are jointly owned (Burt, 1997). Its contingent value renders it difficult to trade, for instance, someone being trustworthy in lieu of somebody else. Secondly, SC value enables people sharing it to work better and faster because of the norms of reciprocity, making it possible to achieve objectives and goals otherwise impossible or unaffordable (Nahapiet and Goshal, 1998).

As argued by Burt (1992) the need to bridge structural holes occurs where relationships are either disconnected or non-equivalent in interest. In so doing, actors share non-redundant information which enlarges their scope and capabilities. In contrast, where norms of reciprocity underpin social ties and trust develops, other types of benefits emerge because there is no need to monitor and control individual actions since all parties are fully expected to fulfil their obligations (Covey, 2006; Putnam, 1993). This would suggest that social actors invest in establishing social ties in expectation of some return, by virtue of reciprocity or simply a sense of belonging.

3.2.4 Benefits of social capital

Going back to the Marxist origins of capital, Lin et al (2008) classify SC among other neo-capitalist theories on capital, i.e. the potential investment and capture of surplus value by the masses. In very simple terms, SC is assessed as an investment in social relations with expected returns. Accordingly, social networks can enhance the outcomes of actions for four reasons (Lin et al., 2008).

3.2.4.1 Privileged access to information

First, social networks can facilitate information flows and correct market imperfections by directing useful information and opportunities from social ties within strategic locations towards market making entrepreneurs. Likewise, those ties may alert individuals, communities or organisations about availability or interest of other individuals otherwise unrecognized and yield mutual reward at a much cheaper price (Lin et al., 2008; Shane and Cable, 2002; Honig and Davidsson, 2000; Casson and Della, 2007). As discussed earlier in Section 3.1, the uneven distribution of information and the value judgement different people make based on these asymmetries in information and the source of knowledge is at the very core of EA (Kirzner, 1982; Hayek, 1937). By transforming information and knowledge into opportunity, the BOM/entrepreneur starts a process with a real potential to build new social ties as the requirements for resource acquisition and market development become critical (Anderson et al, 2012; Siegel and Renko, 2012; Bhagavatula et al, 2010; Covey, 2006).

3.2.4.2 Influence

The second benefit of SC is the influence exerted by social ties, which can manifest on strategic decisions. Lin et al (2008) hold that certain actors, due to their strategic locations and positions of authority carry more valued resources and the power that

goes with them. A word from such individuals could determine the final outcome of a business venture, particularly at the critical stage of opportunity evaluating and resource acquisition (Casson and Della, 2007). Building on previous work (Granovetter, 1983) several studies showed that both strong ties (Honig, 1998; Packalen, 2007; Domhoff, 1967; Economist, 2012) and weak ties (Packalen, 2007; Frank et al., 2007) generate influence which has a direct effect on business success. By bridging structural holes, weak ties in effect expand the scope of influence for individuals and the business (Burt, 1992; Granovetter, 1985) .

3.2.4.3 Social credentials

Lin et al (2008) cited social credentials as the third form of benefits accumulated from SC. Acknowledged relationships to an individual may confer credentials to that individual such as access to certain strategic resources with the backing of people prepared to 'stand behind' the individual (Lin et al., 2008; McAllister, 1995; Gubbins and McCurtain, 2008). Thus, credentials are closely associated with the concept of trust and provide reassurance to an organisation or its representatives/agents that such individual will honour obligations, even beyond personal capital. Previous studies support this claim in investment decision making, (Craig et al., 2007; Domhoff, 1967; Constant and Zimmerman, 2006), innovation and business alliances (Brunetto and Farr-Wharton, 2003; Saxenian, 1994), even in attracting employees of certain calibre (Packalen, 2007). Domhoff (1967) reinforced this assertion by stating that certain associations could protect a firm from bankruptcy.

3.2.4.4 Identity and recognition

Finally, SC boosts identity and recognition. Lin et al (2008) posit that the assurance of self-worthiness as a member of a social group sharing similar interests and resources not only provides emotional support but also public acknowledgment of

claims to certain resources. Such benefits are intangible in nature but skilful leadership could turn them into tangible benefits such as branding and special customers group (Casson and Della, 2007; Reuber and Fischer, 2005). Arguably, it is the ultimate benefit that social networks can confer on a firm. It underpins sales and marketing activities for businesses of all sizes (Sirdeshmukh et al, 2002). The ubiquitous use of customer loyalty and reward membership which has evolved and adapted to technological requirements through Website, Twitter, LinkedIn and Facebook³³ bears evidence to the importance of identity and recognition in a changing environment. The names of successful entrepreneurs and their firm are used interchangeably to mean the same thing. Virgin and Richard Branson are a powerful illustration.

3.2.4.5 Concluding remarks on social capital and social networks

As discussed in the preceding section SC is intangible, jointly owned and not easily tradable (Burt, 1997; Granovetter, 1985; Nahapiet and Goshal, 1998; Coleman, 1988) because it is intertwined in social ties which could be of dual nature (Burt, 2009). By virtue of such intrinsic characteristics, SC generates various benefits and fulfils different functions suggesting that it does not accumulate in the same manner (Nahapiet, 2009; Brass, 2009). Research shows that a very specific type of social ties provides access to strategic corridors of information for opportunity discovery while another set of relationships builds credentials to facilitate resource acquisition (Jensen, 2001; Jensen and Greve, 2002; Covey, 2006; Coy et al., 2007; Burton, 2001). In the same vein, certain forms of network associations may have a negative effect (Coleman, 1988) particularly where norms of reciprocity could lead to

³³ Increasingly, businesses of all sizes, sectors and locations are either building or maintaining their identity for which they seek recognition through multimedia platform. Some examples in the food and drink manufacturing include The Black Farmer, Chunk of Devon, and Duchy Originals etc.

blindness (Fishman, 2009; Lewicki and Brinsfield, 2009). It could be the case that the socio-dynamics of entrepreneurship process and the in-built emotional element are significant determinants of the outcomes of its interaction with SC. Thus, the research main proposition can be formulated as follows:

EA is positively but indirectly related to SC.

3.2.5 Assessment of existing models of interaction between SC and EP

A review of existing models on entrepreneurship interaction with SC integrates socio-environmental factors as predictors of EP outcome making a link between EP and SC (Casson and Della, 2007; Shane and Venkataraman, 2000; Krueger, 1995, Bridge et al., 2009; (Packalen, 2007; Domhoff, 1967; Bhagavatula et al., 2010). Research shows that there is an association between socio-environmental factors which to some extent determine SC and the individual entrepreneur (Saxenian, 1994; Cohen and Prusak, 2001; Brunetto and Farr-Wharton, 2007; 2003). Furthermore, a substantial body of evidence reveals that socio-environmental factors as well as the determinants of individual entrepreneurs are affected by other factors such as skills, experience (Bontis, 1998; Bontis et al, 2000; Politis, 2008) location and industry sector. There is more interaction going on than a mere direct effect of SC on EP.

3.2.5.1 Casson and Della Giusta model

Casson and Della Giusta (2007) have developed a model of interaction between EP and SC based on an application of network analysis using the processes of social interactions pioneered by Coleman (1988). The model makes a distinction between social networks of 'instrumental' value which are transaction-motivated and those of 'intrinsic' value based on trust and analyses the interaction between a rational

entrepreneur and social networks. The network of relationships is limited to high-trust social networks for the promotion of productivity and trade. The model rests on the assertion that the entrepreneur is socially embedded at each stage of the process of discovery, evaluation and exploitation of opportunity (Shane, 2003). However, the model raises a difficult question about a rationally behaved entrepreneur pursuing benefits of purely instrumental value from network associations characterised by trust (Anderson et al, 2012; Cardon et al, 2012; Tiwana, 2008; Sarasvathy and Dew, 2003). The main limitation is the assumption that belonging to social networks automatically grants benefits to the entire process of entrepreneurship irrespective of whether EP enhances those social networks or how the capital value in those networks accumulates (Slotte-Kock and Coviello, 2009).

3.2.5.2 Krueger model

Krueger (1995) defines a model based on entrepreneurial potential and credibility drawing from the individual traits as well as the cognitive, sociological and behavioural approaches to entrepreneurship. In this model, the entrepreneur will act only if (i) the probable outcome is perceived as credible based on personal preference and social approval and (ii) the experience, attributes, knowledge and resources required to increase self-efficacy are all present. The argument is that two conditions bring credibility. This model presents some weaknesses in view of research evidence. First, prior to acting, the perception of credibility based on an outcome that is hypothetical may be far from reality (Dimov, 2010). The notion of social approval is vaguely circumscribed as it is unclear whether the dependent variable of social approval is determined by specific social ties formed with the entrepreneur, for example, whether bridging or bonding relationships are at play or both (Putnam, 1993; Burt, 1992; 1997) based on a perception which may be different

from reality. Second and with regard to the pre-existence of experience, knowledge, attributes and resources adequate to guarantee self-efficacy, this approach is contrary to a widely shared opinion on entrepreneurship as a social construct (Cardon et al, 2012; Sarasvathy and Dew, 2003).

3.2.5.3 Bridge et al model

Bridge et al (2009) model of EP integrates personal attributes and resources based on cognitive models of self-efficacy. The model implies that personal attributes of self-confidence, diligence, perseverance, innovative behaviour and interpersonal skills combined with knowledge, experience, finance, social networks and track record may produce a rational response when an entrepreneurial opportunity is present. By taking a much broader approach to entrepreneurship (Gibb, 2003), this model emphasises the behavioural nature of entrepreneurship but fails to incorporate the interaction between the individual entrepreneur and its socio-environment. For example, when does self-confidence intervene in the process and specifically what particular entrepreneurial attribute accounts for the rational response to an opportunity (Gupta et al, 2004; Sosik and Dinger, 2007). Finally, it is not specified which type of social networks are responsive to those entrepreneurial attributes (Bass and Avolio, 1997).

3.2.5.4 Shane and Venkataraman model

Shane and Venkataraman (2000) theoretical framework of entrepreneurship process essentially addresses the following questions: (i) why, when and how the opportunities for the creation of goods and services come into existence; (ii) why, when and how some people and not others discover and exploit those opportunities; (iii) why, when and how different modes of action are used to exploit entrepreneurial opportunities? The model integrates opportunity as an objective reality, implying that

the discovery and exploitation of opportunities depends on the entrepreneur's abilities to spot asymmetries and make possible links for the creation of new means-ends (Kirzner, 1973; 1997; 2009). This model has contributed significantly to the understanding of entrepreneurship as a process in spite of the on-going debate on the source and nature of opportunities (Berglund, 2007; Dimov, 2010; Sarasvathy, 2003).

However, its main limitation is the assumption that once an opportunity has been recognised the process always works irrespective of the continuous socio-environmental changes. As such, it lacks practicability in that the individual entrepreneur remains an abstract (Baron, 2008; Cardon et al, 2012). Research shows that businesses can follow this process and achieve different outcomes due to individual circumstances (Day et al, 2002; Gardner and Avolio, 1998; Berson et al, 2001) as well as external factors (Storey, 2011; Sosik et al, 2002; Crowl, 2001). The key questions which the model is designed to answer are pertinent, particularly, why some people discover, evaluate and exploit opportunities and not others. But the theoretical concept does not provide an explanation of the socio-environment and of different actors' responses within the entrepreneurship process. Thus, the model does not offer the conceptual framework which demonstrates the main aim of this thesis which is to investigate the predictors of the competitive performance in food and drink manufacturing in the UK SW region.

3.2.6 Gaps in existing literature

The preceding section on existing models showed that EP is a social construct where opportunities and resources are intertwined within social networks (Shane and Venkataraman, 2000, Krueger, 1995; Casson and Della, 2007; Bridge et al., 2009). Although this construct makes a link between EP and SC and also recognises the

presence of an individual entrepreneur, no study so far explains the behavioural process of the individual entrepreneur in this interaction. For example, what social ties are predictors of specific SC benefits and how does the individual entrepreneur access them? What process does the entrepreneur follow to identify those benefits in the first place and how do they integrate into an unfolding EP?

To the extent that people build and maintain relationships to attain goals otherwise difficult to achieve alone, it could be argued that BOM/entrepreneurs are also motivated by the pursuit of business objectives. Henceforth, the evolving environment, which to a large extent determines those objectives, would influence the formation of social networks (Aldrich & Zimmer, 1986; Shane, 2002). Paradoxically, the pursuit of business objectives occurs among individuals whose actions are guided by their own knowledge, preferences and goals (Hayek, 1937; 1945) and those drivers of human action do not necessarily converge. The resulting duality in social networks confers a subjective and emotional dimension to the socio-environment where entrepreneurship emerges and is nurtured (Baron, 2008; Sarasvathy and Dew, 2003). By inferring about future possibilities based on limited knowledge, the individual entrepreneur is also emotionally engaged in the process (Cardon et al, 2012; Foo, 2011; McMullen and Shepherd, 2006). From the discussion thus far, no model expounds how this emotional process integrates with EP as the individual pursuit of business objectives.

A substantial body of evidence shows that irrespective of industry and location, relational skills are proving critical for organisations in an increasingly competitive environment (Simon et al, 2012; (Bhagavatula et al., 2010, Horner-Long and Schoenberg, 2002; Nahapiet, 2009; Street and Cameron, 2007; Nicholson, 1998; McCallum and O'Connell, 2008; Hynes, 2009). Although human capital has been the

main focus of business managers, relational skills are emerging as a core capability required for effective business management (Almog-Bareket, 2011; Katou, 2011). Arguably, social skills facilitate social interactions within networks of relational and structural dimensions which could bring access to strategic resources through the power of brokerage. But not all active and skilled networkers reap benefits such as influence, social credentials and privileged access to information, identity and recognition which are critical assets for entrepreneurship process. The researcher posits that the BOM/entrepreneur mediates the interaction between SC and EP by maintaining social interactions on the one hand, while knowledge and foresight captures the capital value embedded within those relationships and transforms them into EP outcomes on the other. To achieve this, the proposed theoretical model takes a sociological perspective to integrate leadership within a socially-constructed environment where the process of discovering, evaluating and exploiting opportunity occurs (Shane and Venkataraman, 2000; (Gupta et al., 2004; Schumpeter, 1934b).

3.3. The Leadership process in Entrepreneurship Process

3.3.1 Introduction

The subject of leadership has regained interest over the past two decades, as rapid and dramatic changes in the global environment add to the uncertainty. Increasingly, public opinion has turned the light on leaders, pushing organisations and communities across cultures to demand accountability and a sense of direction in the environment in which they operate (Conger and Kanungo, 1998; Strange and Mumford, 2002). In the turbulent and competitive environment within which the entrepreneurship process occurs, the role of the BOM/entrepreneur encompasses not only the combination of new means-ends (Shane and Venkataraman, 2000) but

also the most fundamental challenge of envisioning future possibilities and facilitating their realisation within the organisation (Gupta et al., 2004; Vecchio, 2003; McGrath and McMillan, 2000). The formulation of a vision of future possibilities in an uncertain environment is not the exclusive challenge of entrepreneurs because it is fundamentally a leadership role (Burns, 1978; Bass, 1985a).

3.3.2 Main concepts of Leadership

Leadership is generally defined as the process of influencing others towards the achievement of organisational goals (House et al., 2002). The process requires personal abilities to undertake and fulfil specific roles and activities in developing a vision and setting a goal; communicating, negotiating and convincing others to share and participate in that goal and committing and motivating a team in order to achieve that shared goal (Yukl, 1996). Different theories, however, disagree on the best approach to defining those abilities and their contribution to the process.

3.3.2.1 Personality versus behavioural approach

Traditionally, there have been two main approaches to understanding leadership. The trait approach defines the leader by a set of personality and cognitive traits, arguably because there is sufficient evidence to support the concept that leaders all display similar traits such as drive, motivation, honesty and integrity, self-confidence, courage and cognitive ability (Lord et al., 1986; Stogdill, 1974). Building on this, Hogan et al (1994) hold that leadership effectiveness is about personality traits. The opposite approach is pioneered by Blake and Mouton (1964) who advocate leadership based on behaviour. Accordingly, leaders are distinguished by their participatory behaviour which is translated into delegation of authority, avoidance of close supervision, setting expectations of high standards of performance, supporting subordinates and taking their view in the decision-making process (Yulk, 1998).

3.3.2.2 Universal versus contingency theories

There are two main approaches to leadership which have developed on the fact that three key variables; the organisation, its employees and the environment in which it operates define the leadership. The universal theory claims that the characteristics required of a leader do not change because of stage of development of the organisation or its operational environment or even the people who work in that organisation (Nicholson, 1996; Digman, 1990). In other words the three variables do not have any bearing on the leadership effectiveness. This would suggest that effective leaders display a set of generic behaviours which remain appropriate for all organisations and business environments. This approach to theory is task-oriented.

In contrast, contingency theory states that the organisation and the environment in which the leader exercises the role matter and leadership is about bringing in the required personal attributes of the suitable individual to deal successfully with the task, the people and the environment in order to attain the goal (Tannenbaum and Schmidt, 1973). Accordingly, effective leadership requires a person to use a behaviour style aligned to the environment in which the leadership is exercised. Although more people-oriented, this theory holds that the right balance between people and task lies in the situational variables such as the nature of the task itself, the experience and the motivation of the subordinates and the leader's own personality and power. This argument is shared by more recent studies (Gupta et al., 2004; Fryer, 1990; Horner-Long and Schoenberg, 2002; House et al., 2002).

3.3.2.3 Transactional versus transformational leadership

The work of several authors, particularly Bass (1985b; 1997; Bass and Avolio, 1997) has brought together previous theories on personality traits and behaviour to examine leadership from a perspective of performance and change. The result

produced the Full Range Leadership (FRL) model (Bass and Avolio, 1997) which contrasts two forms of leadership: transformational, based on a shared vision versus transactional, based on an exchange of reward. From this perspective, the transformational leadership style is more effective particularly in introducing and managing organisational change. Yukl (1996) elaborated guidelines for transformational leadership as follows:

- Articulate a clear and appealing vision;
- Explain how the vision can be attained;
- Be confident and optimistic;
- Express confidence in followers;
- Use dramatic, symbolic actions to emphasize key values;
- Lead by example.

Transactional leadership style is based on instrumental themes where leaders are passive and less inspirational in their content (Bass and Avolio, 1997). The leadership process is driven by extrinsic goals, goal setting and defined timeframes for accomplishment (Berson et al, 2001)

3.3.3 Leadership styles

Traditionally, two views are opposed on leadership style: authoritarian and democratic which differ mainly on the personality and attributes of the leader and the power structure within the organisation. Authoritarian leaders rely on a system based on structures and rewards where the leader recognises followers' aspirations and grants them according to their performance (Bass, 1985b). Control, power, objectives setting, decision making remain solely with the leader (Fryer, 1990; Horner-Long and Schoenberg, 2002). There has been wide criticism of this

leadership style which is perceived as an obstacle to team-building, creativity, foresight and self-confidence.

Democratic leadership style is more people-oriented, consultative and supportive in trying to integrate the people, the task and the organisation in a way to achieve the desired positive transformation (Norburn et al., 1986; Goleman, 2000). Arguably, this style of leadership is favourable to the development of cohesive teams with a high standard of achievement and a positive attitude to change. It also demonstrates the leader's ability to delegate, trust others and facilitate an environment where people can challenge their own attitudes and beliefs and take positive actions towards their personal development (Cheng et al, 2010; Horner-Long and Schoenberg, 2002). It builds within organisation and people the capacity to adapt to changing situations, to be flexible in a rapidly changing and highly competitive environment (Tracey, 2012).

3.3.3.1 Effective leadership style

Leadership matters. Successful organisations account for the strong correlation between managerial effectiveness and positive organizational performance (Wei and Lau, 2010; Teece, 2007; Hayton, 2006; Colin and Smith, 2006). Existing writing points to the role of leadership as a strong predictor of innovation and increasingly globalisation and competition are urging BOMs to stimulate and inspire employees towards exceptional performance in order to transform their organisation (Mumford et al, 2002). Yukl (2010) reiterates the argument that leadership for recognising, evaluating and exploiting opportunities is necessary to explain how leadership process can predict the outcome of innovation and value creation.

Burns (1978) observed that the act of leadership creates a bond between leader and follower in a mutual and continuing pursuit of a higher purpose. This affirmation begs

the question 'what then makes an effective leader?' Recent studies on leadership have focussed on behaviours to explain how the visionary process works in the leaders' mind set and why people follow them. Existing literature maintains that the formulation and delivery of visionary statements through the power of passionate orations represents the leaders' idealised goal that is shared with followers (Awamleh and Gardner, 1999; Berson et al, 2001; Kirpatrick et al, 2002; House and Shamir, 1993). Some authors (Samir et al, 1994; Conger and Kanungo, 1998; Strange and Mumford, 2002; House et al., 2006) argue that the capacity to understand the people and events around them, construct and deliver compelling statements that inspire others to accept their vision and behave accordingly is the proof of effective leadership style. The idealised goal represents the vision that is shared with followers and charisma is what enables the leader to engage with people and win their commitment.

3.3.3.2 Elements of effective leadership

Charisma is a social influence process that involves the formulation and articulation of an evocative vision, provides inspiration to motivate collective action, demonstrates sensitivity to environmental trends and displays unconventional and personal risk-taking behaviour (Shamir et al, 1993). Bass and Avolio (1997) have developed the Multifactor Leadership Questionnaire based on the core behavioural dimensions of leadership and consistent with previous theories. It showed consistency between transformational leadership and charismatic leadership (Shamir et al, 1993; Conger and Kanungo, 1998) in that the charismatic leader becomes a role model for followers who commit to the leader and the vision, perceive a true meaning in their task and are willing to sacrifice for the achievement of that goal. Thus, the charismatic leader is associated with transformational leadership through a

process of influence built on inspiration and characterised by evocation, motivation and transcendence.

The need for social approval, self-monitoring and social power are other behavioural dimensions associated with successful formulation of a vision. McClelland (1985) defines the need for social approval as the desire to have a positive influence or impact and control over others and this is a critical factor in building followers' commitment. It could also reveal the level of self-confidence, a key attribute of successful leadership (House et al, 2006; Conger and Kanungo, 1998). There is a moral dimension in leaders with a strong sense of their own values seeking to serve as role models and influencing others to transcend their self-interest for the benefit of the organisation (Bass, 1985). Such reflection of socialised power implies that the leader is likely to formulate a vision with an inspirational theme (House and Howell, 1992). Self-monitoring signals an individual ability to regulate and monitor own identity, to read social cues, scan the environment and adapt to the particular circumstances. This ability is increasingly recognised as an essential antecedent to leadership emergence and effectiveness (Day et al, 2002).

3.3.3.3 Some empirical evidence

Sosik and Dinger (2007) looked at the components of charisma that could be linked to core behavioural dimensions using relevant measures from the Multifactor Leadership Questionnaire (MLQ-5X) (Bass and Avolio, 1997). The data was consistent with previous theories on motivation and charismatic leadership (Shamir et al., 1993) and the findings proved that inspirational motivation and idealized influence are two charismatic components of transformational leadership. Inspirational motivation involves communicating high performance expectations through the projection of a powerful, confident and dynamic presence which

energises followers to do the extra; while idealized influence is associated with the display of attributes that creates a role modelling to which followers aspire through exemplary personal achievements, character strengths and/or behaviour (Shamir et al., 1993; Bass and Avolio, 1997; Sosik and Dinger, 2007).

The same study by Sosik and Dinger (2007) looked at the transactional contingent reward based on goals setting and reward scheme with clarified followers' expectations, and the 'Laissez-Faire' leadership characterized by an avoidance to make decisions, get involved or solve problems (Bass and Avolio, 1997). On a sample of 183 focal leaders of which 64 were female, results showed consistency with previous studies by Conger and Kanungo (1998) and Berson et al (2001).

- Charismatic leadership was positively related to inspirational vision themes and negatively related to instrumental vision themes
- Contingent reward leadership was positively related to instrumental vision themes but unrelated to inspirational vision themes
- Laissez-faire leadership was unrelated to both inspirational and instrumental vision themes.

Vecchio (2003) alleges that the need for social acceptance is key to entrepreneurial success and requires building strong social skills and SC. Such skills confer competencies in correctly gauging the mood of others, proficiency in inducing positive reactions in others by enhancing appearance and image, effectiveness in persuasion and ability to adjust to a range of social situations with a diversity of individuals (Baron, 2000). A recent study (Simon et al, 2011) revealed that good leadership and vision which encourage innovation and creativity came second to quality of service among five critical strategic capabilities for organisational success.

Although the study was limited to 386 Australian executives selected mainly from the service industry, the result showed that strategic capabilities indicators included client trust, attention to clients' wants and needs, integrity and honesty scored the highest points. Corresponding success indicators put client satisfaction top, followed by retention while revenue and growth scored the lowest points.

Organisational vision has an impact on human resources management policies which are entrusted with enacting the strategy to achieve that vision and, as such, it gives a clue to the type of organisational leadership. The link between employees' satisfaction, motivation and organisational performance has been established by several authors (Purcell and Hutchison, 2007; Boselie et al, 2005; Guest, 1997; 1999a; 1999b). Katou (2011) conducted a study on the interaction between organisational performance, strategy, human resources management and psychological contract, defined as employers/employees relationships, using data on 912 participants from 177 businesses selected across industry sectors. Using an SEM, the findings revealed that a positive psychological contract between employees and employers had a direct effect on organisational performance and, more significantly, employees' commitment had a direct effect on both employers' commitment and organisational performance. Indicators of employers' promises included recognition for innovation, respectful treatment, training and development and so on; these indicators measure effective and successful leadership (Bass and Avolio, 1997) and have provided similar results in previous studies (Vecchio, 2003, Sosik and Dinger, 2007; Simon et al, 2011).

3.3.3.4 Servant leadership

The concept of servant leadership first enunciated by Greenleaf (1977) defines leadership as meeting the needs of others first and foremost. The focus of servant leadership is on others and understanding the role of the leader as a servant rather than focusing on self-interest. Advocates of this theory maintain that leadership is about helping others to thrive and flourish (McMinn, 2001) and the leader's role is to provide vision, gain credibility and trust from followers, and influence others (Farling et al., 1999). From this perspective, both transformational leadership and servant leadership share some similarities in relation to valuing people and empowering followers. However, there is a much greater emphasis upon service to followers in the servant leadership paradigm where influence is gained in a non-traditional manner that derives from the leader granting more freedom for followers to exercise their own abilities, for example being more creative (Russell and Stone, 2002).

With regard to a point of clear difference between both leadership concepts, the transformational leader has a greater concern for getting followers to engage in and support organizational objectives while the overriding focus of the servant leader is upon service to the followers (Stone et al (2003). Therefore, the extent to which the leader is able to shift the primary focus of leadership from the organization to the follower is the distinguishing factor in determining whether the leader may be a transformational or servant leader and this distinction influences other characteristics and outcomes. Servant leaders show unconditional concern for the well-being of those who form the organisation rather than an affinity for the abstract organization itself and this distinction defines the relational context within which the servant leader actually leads. The leader and followers engage in constructive action as the real point of business and pursuit of profit becomes peripheral because followers are

trusted to undertake actions that are in the best interest of the organization even though the leader does not primarily focus on organizational objectives (Harvey, 2001). In a competitive environment, a leadership focus on organisational objectives could detract employees from using their abilities to find innovative solutions. Empirical research on servant leadership remains limited, although Richard Branson has often been qualified as trusting and empowering Virgin employees compared to other organisations. Fitting this leadership approach to the SW food and drink manufacturers could enhance the values of fairness which seem to emerge from their behavioural characteristic 'reward'. The real issue is the availability of skilled workforce in rural locations, and also the attitude of some BOMs towards employees and partners who are not really considered as valuable assets to the business.

3.3.3.5 Distributed leadership

There is an emerging stream of literature on leadership practice developed on the argument that a leader can co-perform in a process aimed at distributing the influence. Spillane (2006) and Spillane et al. (2007) argue that distributed leadership can be collaborative by allowing at least two individuals to work simultaneously to conduct a routine task such as board meeting or strategic networking; or collective in facilitating the co-performance of separate and inter-dependent routine activities by two individuals whose interactions define a final result, e.g. board secretary and chairman. Equally, the leadership process can be co-ordinated in a pre-defined sequence whereby success is determined by the perfect execution of that sequence requiring co-performers to act in an orderly and pre-agreed sequence. This process could apply for example to identifying investment capabilities and negotiating. In the case of SW food and drink manufacturers seeking to gain competitiveness, leadership co-performance process can buttress core competencies.

The findings of a recent case study conducted by Wilson Ng and Thorpe (2012) offer some positive prospects with regard to LS in SMEs and particularly in family business. Contrary to the widely shared assertion that family business leadership is more focused on the founders and their offspring, Sinobank developed and assessed non-family member employees with high potential using co-performance process. The success of the business particularly at a time of diversification through new acquisition reinforces the limitations of the firm's reliance on its founder's social network of distant relatives and personal contacts (Carney, 2005; Karra et al., 2006; Ng and Roberts, 2007). A notion of leadership dependent on family members or relying on the founder's SC deprives the business of other critical resources such as close customer relationships (Carrigan and Buckley, 2008). Distributed leadership is more aligned to team-work leadership style in that it embraces the leader-member exchange theory (Graen and Uhl, 1995) and also accommodates the path-goal theory of leadership (House, 1971) where the situational aspect dictates the co-performance of influence.

3.3.3.6 Ambidextrous leadership

Ambidextrous leadership is a process that incorporates flexibility in innovation process whereby the entrepreneur/leader embarks in a more dynamic relationship with the networks relevant to the situation. In an attempt to match the leadership process and behaviours with the requirements of innovation process, the ambidextrous leader provides support for followers to engage in both exploration and exploitation through frequent and direct interactions and not at the organisational level. Rosing et al (2011) brings an entirely new perspective into leadership for innovation where the leader chooses to increase or reduce the variance of follower

behaviours to adjust to the needs of exploration or exploitation, calling on different attributes (Bledow et al, 2009).

Rosing et al, (2011) assess evidence from studies on leadership for innovation using the heterogeneity index to substantiate the case of leadership inferring complementary processes due to the requirements of innovation (Mumford et al, 2002; 2009). For instance, the association between transformational leadership and team innovation can be moderated by an environment of high standards of excellence (Einsenbeiss et al, 2008) or a strong climate of support for innovation (Jung et al, 2008). Thus, SW food and drink manufacturers could reach a clear and strong vision by exercising some form of social control within a supportive environment. The real issue is the lack of intellectual stimulation within a supportive environment where staff can be creative and explore.

Another perspective of this leadership style is based on a leader-follower relationship where mutual trust and respect are key determinants of the relationship (Graen and Uhl-Bien, 1995). Rosing et al (2011) analysed the correlation between leadership and innovation using results from five studies and the results confirmed a moderate and consistent relationship between leader-team relationships based on trust and respect and innovation. Looking for the effect of moderators in this relationship, data showed positive correlations with some variables, e.g. creativity and enabling effect for individuals with low innovative cognitive style (Tierney et al, 1999). Another study by Clegg et al (2002) only inferred a positive correlation with idea implementation at the exploitation phase and no correlation with idea generation at the exploration phase. Putting this in the context of SW food and drink manufacturers, this conceptual debate suggests that their main leadership characteristics of strong self-values and team orientation are hindered by the inadequate level of knowledge

which is too weak to trigger creativity including among employees with low innovative cognitive skills. This is further enhanced by Clegg et al (2002) assertion that team values only foster innovation at the implementation phase.

3.3.3.7 Other leadership styles

Other leadership styles of relevance to this thesis, e.g. participative leadership based on shared decision-making between leader and employee are effective for the exploitation phase (Krause and Kearney, 2007). The same argument applies to leadership and team innovation (Somech, 2006). The ability to nurture both exploration and exploitation and more importantly switch between the two abilities calls for '*opening leader behaviour*' based on creativity, independent thinking and encouragement to do things differently (Gupta et al, 2004).

3.3.4 Entrepreneurial leadership: a cross-cultural construct

The GLOBE³⁴ – Global Leadership and Organizational Behaviour Effectiveness – research program has endorsed the charismatic/transformational leadership style as most effective. Its empirically-based theory seeks to describe, understand and predict the impact of specific culture variables on leadership and organisational processes and their effectiveness (House et al, 2002). It builds on previous work on implicit LS theory (Lord and Maher, 1991); value/belief theory of culture (Hofstede, 2001); implicit motivation theory (McClelland, 1985) and structural contingency theory of organisational form and effectiveness to develop a conceptual framework.

The main arguments behind the GLOBE is that attributes and entities that distinguish

³⁴ The research program covers 61 different cultures and has developed a widely used scale for measuring leadership effectiveness across cultures, known as Culturally Endorsed Implicit Leadership – CLT on a multi scale dimension comprising leader's attributes. These attributes include charismatic, visionary, diplomatic, integrity, performance-oriented, team integrator, all attributes that are required in market organisation and social capital development.

cultures can predict the practices of organisations and leadership attributes and behaviours most frequently enacted, accepted and effective in those respective cultures (House et al, 2002).

A cross-cultural study across 61 different cultures using both quantitative and qualitative data on 17,000 participants from 825 organisations found nine cultural dimensions based on scales for measuring leadership effectiveness across cultures, known as Culturally Endorsed Implicit Leadership on a multi scale dimension comprising leaders' attributes. Appendix 3.1 provides a detailed description of the culture construct definitions and specific measurement indicators. The main findings showed that the benefits of charismatic/transformational leadership style include broadening and elevating the interests of followers, generating awareness and acceptance among the followers of the purposes and mission of the group and motivating followers to go beyond their self-interests for the good of the group and/or the organisation (House et al., 2006). In total, 112 attributes of outstanding leadership were identified of which 23 were particularly relevant to entrepreneurial behaviour in established businesses.

3.3.4.1 Innovation as a transformation process

The competitive nature of entrepreneurship implies that new means-ends are constantly emerging in the form of products, services, markets and processes. In this pursuit, the BOM/entrepreneur must lead the means of production into new channels through a transformation process from opportunity to market organisation within a complex and dynamic environment comprising a diversity of interests and players (Bridge et al., 2009, Schumpeter, 1934b). The critical factor is to remain focused on the essential within a process where the breadth of intellectual understanding and talents for logical analysis do not guarantee success (Shane and

Venkataraman, 2000; Venkataraman and Van de Ven, 1998; Storey, 2011). Thus, fulfilling this role effectively requires the entrepreneur to lead the process of discovering, evaluating and exploiting opportunities. On leadership, Schumpeter declares:

“The personality of the capitalist entrepreneur need not, and generally does not, answer to the idea most of us have of what a ‘leader’ looks like, so much so that there is some difficulty in realizing that he comes within the sociological category of leader at all” (Schumpeter, 1934a)p.129

By carrying out new combinations, the entrepreneur steps outside the boundaries of routine and this involves three elements. Firstly, the planning and action take place outside accustomed channels where experience is no longer sufficient and success is rather based on intuition to define the right conjecture and the capacity to see things in a way that afterwards proves to be true (Shane and Venkataraman, 2000; Storey, 2011). Entrepreneurship is also an emotional journey (Baron, 2008). Secondly, the right balance between the daily routine task of management and the commitment of limited resources in pursuit of new combinations is necessary in order to remain focused on the real possibility and achieve it. Finding the right balance is a critical resource in its own right. Thirdly, opportunity sources often manifest in unpredictable ways and addressing these circumstances requires a level of awareness that demonstrates and sustains a certain type of behaviour (Casson and Della, 2007, Vecchio, 2003; Dimov, 2012; Sarasvathy and Dew, 2003; Kirzner, 2009).

3.3.4.2 Leadership process applicable to entrepreneurship process

The need for entrepreneurial leadership is justified in its dedication to fulfil the kind of functions without which innovation cannot occur. It is not necessarily characterised by the glamour and influence associated with other kinds of leadership (Schumpeter, 1934a). A study by Gupta et al (2004) examines LS from a contingency approach based on three universal LS perspectives relevant in the context of rapid change and uncertainty, hence applicable to entrepreneurship (McGrath and McMillan, 2000). Starting with transformational LS, the leader's behaviour instils followers to transcend self-interest and appeal to higher needs for deeply held values and implicit motivations (Burns, 1978; Bass, 1985; Trash and Elliot, 2003). The relationship is built on the continuous pursuit of a higher purpose (Shamir et al, 1993). The second perspective is team-oriented LS which stems from a leader-member exchange theory based on differentiated role exchanges between the leader and subordinates within an organisation (Graen and Uhl-Bein, 1995). Data shows that this theory is a predictor of team performance and managerial progress (Heavey and Murphy, 2012; Katou, 2011; Graen et al, 1982). Value-based LS perspective (House and Aditya, 1997) asserts that leaders who can articulate a captivating vision and demonstrate confidence in their personal values set an example for others to emulate. By conveying high expectations to followers, they also stimulate their ability to meet such expectations (Conger and Kanongo, 1987; Shamir et al, 1993). Such commitment based on individuals' values and beliefs can prove a strategic asset hard to imitate (Ghemawat and del Sol, 1998; Katou, 2011).

3.3.4.3 The process of entrepreneurial leadership

Bringing these LS perspectives into the process of EA generates the entrepreneurial task of securing organisational commitment and conviction that a specified goal can be reached. A prerequisite to organisational commitment is an articulated vision where individual efforts lead to significant outcomes for a team capable of persevering in the face of adversity (Gupta et al, 2004). This task represents an interrelated challenge consisting of specific roles that the BOM/entrepreneur must perform (McGrath and McMillan, 2002).

- (i) The first challenge is the '**scenario enactment**' which entails turning an opportunity into a vision that can revolutionize the current transaction set, given resource constraints; three roles are associated to this challenge:
 - Framing the challenge by specifying highly challenging but realistic outcomes for the cast of actors to accomplish (McGrath and McMillan, 2002) by combining highly ambitious goals with insightful understanding of individual limits (Brazeal and Herbert, 1999) to discover a worthy vision ;
 - Absorbing uncertainty by taking the burden of responsibility, hence unleashing teams' self-confidence (Shane, 1994) ;
 - Clearing the path by anticipating resistance and negotiating internal and external opposition to the realisation of the established goal (Daily and Dalton, 1993)
- (ii) The second challenge of '**cast enactment**' is concerned with building a committed team to persevere in the face of change and uncertainty (Gupta et al, 2004). Adapting from McGrath and McMillan (2000), this requires:

- Building commitment by inspiring and modelling a team capable of extraordinary achievement (Bandura, 1970; Katou, 2011);
- Specifying limits by reshaping individuals' perceptions of capabilities and eliminating barriers to creativity (Goleman, 2000; Nobourg et al; Horner-Long, 2002).

Gupta et al (2004) completed an empirical study of this model on 376 respondents based on 23 LS attributes associated with entrepreneurial behaviours from the GLOBE scales. Using this construct of entrepreneurial LS an exploratory factor analysis validated 19 LS attributes which loaded into their predicted role factor according to the five roles (McGrath and McMillan, 2002). After satisfying convergent and discriminant validity tests, the results showed the universality of entrepreneurial LS construct at organisational, societal and individual level. However, the universality criteria proposed by Hartog et al³⁵ (1999) for assessing the universality of LS attributes revealed that at individual level, more than 5% of managers rated the effectiveness of entrepreneurial LS below 5%, implying that not all managers endorse entrepreneurial LS as effective. Previous studies (Child, 1981) revealed that the convergence of cross-cultural factors explaining organisational performance at macro level do not reflect the reality that individual behaviours still maintain their cultural specificity. Other factors (access to knowledge, technology, and finance) also have an impact on the perceived effectiveness of entrepreneurial LS (Teagarden and Von Glinow, 1997).

³⁵ According to Hartog et al (1999) a LS universal attribute measured on a seven-point scale must show (i) 95% of scores ≤ 5 and (ii) the grand mean score must be ≤ 6 .

3.3.4.4 Conclusion on Leadership

By building on the social influence of behavioural processes which develops positive transformation (Bass, 1985; 1997; Yukl, 1989; House et al, 2006; Sosik and Dinger, 2007), the behavioural indicators measuring effective LS style can be applicable to similar contexts (Hartog et al, 1999). Gupta et al (2004) construct of entrepreneurial LS provides a socially situated conceptual framework which elucidates a behaviour process driven by a proactive engagement with emerging opportunities in a fast-changing and competitive environment (Schumpeter, 1934).

3.3.5 Conclusion

In the preceding chapter, an exploratory analysis of the food and drink manufacturing revealed the existence of social interactions within the UK Food Chain from a sociological perspective of SC and social networks. The evolving socio-environment also attests that demographic changes and existing market structures point to entrepreneurial opportunities.

The preceding sections of this chapter have completed a review of the current literature on Entrepreneurship Process as part of the socio-environment within which discovering, evaluating and exploiting opportunity take place. A review of the interaction between SC and EP based on existing writing points to gaps in current literature and the research main proposition is generated. The next chapter present the study theoretical framework.

CHAPTER FOUR: THE RESEARCH CONCEPTUAL FRAMEWORK

4.0. Introduction

In Chapters Two and Three, an examination of the literature uncovered the main factors emerging from the research context associated with this research aim. Relationship between actors in the network structure enveloping food and drink manufacturing and the concept of social capital and social networks revealed an interest for this study. While those main factors suggest an association between Social Capital (SC) and entrepreneurship process (EP), the researcher argued that this association was not a direct relationship. From the main proposition that EP is positively *and* indirectly related to SC, the researcher posited that leadership (LS) is the mediating factor making a causal relationship between SC and LS on the one hand, and between LS and EP on the other. From this hypothetical position, two key arguments were developed: (i) the dependent variable, which is the outcome of the interaction between SC, LS and EP, is the result of LS process and EP, and; (ii) this dependent variable is measured as benefits of SC. The extant literature also revealed that the main factors underpinning this thesis are all latent variables because they are measured using multiple indicators.

The conceptual framework is concerned with the first three steps in SEM. Precisely, it develops a hypothetical model that is used to hypothesise the relationships between SC, LS and EP. The theoretical justification which lies beneath the model is built on Schumpeter (1934b) theory of entrepreneurship. In justifying this theoretical framework, existing models of SC and EP interaction have been

assessed in Chapter Three and none was deemed appropriate to provide a satisfactory outcome for this research activity. It is also clear from existing literature that no published research activity has endeavoured to explain the root causes of the declining profitability of food and drink manufacturing from an entrepreneurial perspective. The first section of this chapter covers the construct or theoretical justification of the main variables. Section Two presents the proposed theoretical framework comprising (i) the structural model defining the relationships between the constructs of EP, SC and LS, and (ii) the measurement model identifying the indicators measuring each construct. Section Three summarises the conceptual framework and generates the main hypotheses of the research which will be tested in Chapter Six to evaluate the causal relationships between EP, LS and SC.

4.1 The Theoretical justification of the study main variables

A critical synthesis of the research context in Chapter Two provided an evaluation of the food and drink manufacturing sector within a network structure of interactions characterised by asymmetrical relationships not necessarily favourable to food and drink manufacturers (Boyce, 2007; IGD, 2009c; Granovetter, 1985; Burt, 1984). So far, corrective policies aimed at boosting the industry profitability have produced mixed results (FDF2012; Gorton and Tregear, 2009; Cambridge, 2010; Sodano et al, 2008). From this starting point two main factors emerged as EP and SC based on which an examination of the literature exposed the gaps in existing knowledge and made a case for LS as a mediating factor in the interaction between SC and EP. Although these three factors were largely discussed in Chapter Three re-visiting their respective theoretical construct is necessary to validate the research conceptual

framework, to determine the measurement indicators of each construct and to hypothesise the relationships between these constructs. The three main constructs used to build the model are:

- a) EP outcomes representing the dependent variable and resulting from the process of discovering, evaluating and exploiting entrepreneurial opportunities that emerge from a socio-environment characterised by competition and innovation;
- b) SC representing the independent variable defined as relationships of structural and relational dimensions between BOM/entrepreneurs in food and drink manufacturing and various network actors classified as closure or brokerage;
- c) LS as the mediating factor in the interrelationships between the dependent and independent variables, which is represented by a behavioural process observed through leadership attributes.

The following sub-sections cover each variable construct in light of the theoretical justification of the chosen conceptual model for this research.

4.1.1 The construct of Entrepreneurship Process

Entrepreneurship is concerned with the source of opportunities, the process of discovery and the evaluation and exploitation of opportunities by a set of individuals called entrepreneurs (Shane and Venkataraman, 2000). This widely shared definition has emerged from previous work, particularly Schumpeter (1934a) whose original idea is expressed in the following terms:

“The carrying out of new combinations we call “enterprise”; the individual whose function is to carry them out we call “entrepreneur” (Schumpeter, 1934a)

While acknowledging the on-going debate about the source of opportunity as an external and objective reality (Kirzner, 1973; Shane and Venkataraman, 2000; Hayek, 1937) or as a realisation of a creative social process (Gartner et al., 2003; Sarasvathy, 2011; Dimov, 2007; Haynie et al, 2009; Corbett, 2007; McMullen & Shepherd, 2006), most scholars agree that entrepreneurship is a socially constructed process. Opportunity is congenial to entrepreneurship in that it is seized upon as a force for renewal and personal achievement which ultimately advances innovation (Schumpeter, 1934a; Berglund, 2007) in any situations where new goods, services, material, markets and organisations can be introduced.

4.1.1.1 The Social nature of opportunity and the roots of competition

Opportunity is an integral part of the socio-institutional environment where the best combination of resources can be achieved (Schumpeter, 1934b; Casson, 1982; Kuratko and Hodgetts, 1989; Shane, 2003; Bridge et al., 2009; Sarasvathy and Venkataraman, 2011). Opportunity is rooted in the reality of how people interact within their environment in order to supply and satisfy material means (Polyani, 2001), and therefore pre-exists the undertaking of entrepreneurship process. Differences in the state of knowledge within a given space and time among different social actors generate asymmetries in judgement which could translate into opportunity (Eckhardt & Shane 2003; Davidsson 2003; Shane and Venkataraman, 2000).

4.1.1.2 The sources of asymmetries in perceived value

People hold different beliefs about things because of two main factors: (i) personal judgement based on intuition and experience, and (ii) the quality of information in

their possession and their ability to make sense of it (Kirzner, 1973; Hayek, 1937; Kirzner, 1982; Casson, 1982). Because the integrity of these two factors, whether combined or considered separately, is not necessarily guaranteed, differences and variations contribute to generate opportunities. The world of business is particularly competitive and without borders. In spite of technological progress which has made globalisation a concrete reality across countries, there are still differences in social, legal and technological achievement within and outside national boundaries. These differences affect the distribution of information and resource within a context where the entrepreneur is primarily a social actor (Schumpeter, 1934b).

4.1.1.3 The social nature of competition and Entrepreneurship Process

In describing innovation as a process of 'creative destruction', Schumpeter (1939) emphasizes the nature of competition in a socio-institutional context where asymmetries in information and resources create a competitive advantage. Entrepreneurial success is thus dependent on the ability to capture current knowledge in order to make the right conjecture about resources (Cardon et al, 2012; Das and Teng, 1998)

Arguably, the lack of connectivity between networks of social ties helps perpetuate the gaps and variations in judgement that people make about things in general and further obstruct access. This explains the social nature of competition (Granovetter, 1983; 1985). In other words EP can be facilitated or hindered depending on the types of social interactions involved in the process and the existence of structural holes which drive competition and help to sustain it (Burt, 1997; 1992; Granovetter, 1985). Networks theory offers an explanatory framework to elucidate this affirmation.

4.1.2 The Construct of SC

The concept of SC has gained particular interest in the field of social sciences and many authors (Burt, 1997; 1992; Wasserman and Faust, 1994; Himanen and Castells, 2004; Shane, 2003) agree that it is a source of competitive advantage to a firm. Social networks provide an understanding of SC because they engender norms of reciprocity and other benefits on which social actors rely to achieve goals that would otherwise be impossible to attain (Putnam, 1993). People interact because they expect something in return and not necessarily from those actors directly involved in their daily interactions. It is on this understanding that people gain influence and businesses develop market share and strong brands.

4.1.2.1 Definition of Social Capital

There is still no clear definition of SC because it is a multi-faceted construct. Putnam (1993) offers a generic framework where the term SC can be applied in many fields of interest. Hence, the construct in this investigation is built on the premise of definitions that are most appropriate to business competitiveness.

Nahapiet and Goshal offer the following definition of SC:

‘The sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit’ (Nahapiet and Goshal, 1998, p.243).

This definition embraces an integrated approach in explaining the role of SC in a firm’s competitive advantage and strategic management particularly in a global and volatile context (Porter, 1998).

Building on previous work, Casson and Della Giusta (2007) hold that SC is the “*capitalised value of improvements in economic performance that can be attributed to high-trust social networks*”. In this definition, social networks highlight the social component whereas the value of future improvement emphasizes the capital component in the term. Hence, the value in SC carries both an ‘intrinsic’ value and an ‘instrumental’ value which is inherent to the reality that people have different perceptions about the value of things (Kirzner, 2009; 1979; Shane and Venkataraman, 2000).

4.1.2.2 Measurement of SC

The authors (Nahapiet and Goshal, 1998) draw from previous work (Putnam, 1993; 2001; Granovetter, 1983; 1995; 1992; Burt, 1992; 1997) to bring together various contexts where SC is manifest irrespective of the use of term (Farr, 2004; Schuller et al, 2000; Seregaldine and Dagupsta, 1999). This perspective underlines three distinctive attributes of the definition: the resource-based perspective, its ability to combine multiple dimensions of relationships and the focus on performance outcomes. These three qualities are examined in terms of interrelationships although analytically distinct clusters: structural, relational and cognitive dimensions of SC. Although the cognitive dimension of SC is an important factor in explaining variations in decision making among entrepreneurs (De Carolis and Sapatiro, 2006; Cohen and Levinthal, 1990) the researcher has not included this dimension in the construct of SC. This is because the subject of investigation is not to explain why business owner/managers/entrepreneurs in the food and drink manufacturing sector develop a specific understanding of social networks but rather to identify and measure the factors in their social interactions that are predictors of the outcomes of their entrepreneurial endeavours.

The two dimensions of SC used in this construct are structural and relational explained as follows:

- The structural dimension made of the overall pattern of social interactions or network ties which measure relationships of brokerage within social interactions or 'weak ties' initiated to create the 'instrumental' value of SC;
- The relational dimension which refers to 'strong ties' made of dense and informal social interactions where trust and trustworthiness help measure the 'intrinsic' value of SC.

The structural dimension refers to situations where social ties are maintained for the purpose of granting resources and improving capabilities and as such provides an indication of structural holes in social networks structure. This dimension is associated with the 'instrumental' value of the capital in social networks (Casson and Della, 2007). The relational dimension is more concerned with the kind of personal relationships people have developed with each other through a history of interaction based on respect and friendship and from which they expect to achieve social motives (Granovetter, 1992). Thus, it represents the 'intrinsic' value of the capital in social networks.

4.1.2.3 Social Capital benefits

Lin, et al (2008) classify SC as an investment in social relations with expected returns. They posit that embedded resources in social networks enhance EP by offering such benefits as:

- a) Privileged access to information flows moving from social ties in strategic locations towards market making entrepreneurs which can then be

exploited as carrying an instrumental value in spotting or evaluating opportunities (Casson and Della, 2007; Shane and Venkataraman, 2000).

- b) Influence of both 'instrumental' and 'intrinsic' values affecting certain strategic decisions with regard to critical access to resources which are a crucial factor in evaluating and exploiting opportunities (Casson and Della Giusta, 2007; Burt, 1992).
- c) Social credentials as people are prepared to 'stand behind' an individual and affirm trust or trustworthiness. As previous studies illustrate, this benefit has an instrumental and an intrinsic value in investment decision making (Craig et al., 2007; Domhoff, 1967; Constant and Zimmerman, 2006) which in turn affect innovation particularly in business alliances (Brunetto and Farr-Wharton, 2003; Saxenian, 1994).
- d) Identity and recognition through one's worthiness as an individual and a member of a social group sharing similar interests and resources, providing emotional support and also public acknowledgment of one's claim to certain resources such as human capital (Packalen, 2007). Extended benefits include the power of consumer groups and branding (Casson and Della, 2007). Examples are numerous across industries and names such as Duchy Originals and The Black Farmer are well established in the food and drink industry.

Empirical studies show that entrepreneurs use social network connections for competitive advantage, and these include access to information from strategic locations and influence including in investment decision making (Craig et al, 2007; Domhoff, 1967; Constant and Zimmerman, 2006; Fischer and Reuber, 2007). This

begs the question as to what actions can be taken to secure such critical assets. The next section takes a sociological perspective on LS theory to uncover parallels with EP in order to develop the construct of entrepreneurial LS applicable to this model.

4.1.3 The Construct of Entrepreneurial Leadership

The need for entrepreneurial leadership is justified in its dedication to fulfil the kind of functions without which innovation cannot occur (Gupta et al, 2004). It is not necessarily characterised by the glamour and influence associated with other kinds of leadership (Schumpeter, 1934a). In making this assertion, Schumpeter associates the entrepreneur with a specific category of leader. By carrying out new combinations, the entrepreneur steps outside the boundaries of routine and this involves three elements.

Firstly, the planning and action take place outside accustomed channels where experience is no longer sufficient and success is based rather on intuition to define the right conjecture and the capacity to see things in a way that afterwards proves to be true (Shane and Venkataraman, 2000; Storey, 2011). Secondly, the right balance between the daily routine tasks of management and the commitment of limited resources to conceive and design new combinations is necessary in order to remain focused on the real possibility that is not merely a day-dream. Thirdly, opportunity sources often manifest themselves in unpredictable ways and addressing these circumstances requires a level of awareness that demonstrates and sustains a certain type of behaviour (Casson and Della, 2007; Vecchio, 2003).

4.1.3.1 The Drive for innovation

Because of the competitive nature of EA, the entrepreneur must innovate or die. In this pursuit, the entrepreneur '**leads**' the means of production into new channels

through a process of mediation between a vision based on an opportunity of new means-ends and a complex and dynamic environment comprising a diversity of interests and players (Bridge et al., 2009; Schumpeter, 1934b). In this leadership position, the key is about grasping the essential facts and discarding the non-essential in a process where the breadth of intellectual understanding and a talent for logical analysis do not guarantee success (Shane and Venkataraman, 2000; Venkataraman and Van de Ven, 1998; Storey, 2011). For entrepreneurial leadership success, ***“keenness and vigour are not more essential than a certain narrowness which seizes the immediate chance and nothing else”*** (Schumpeter, 1934a, p.129).

4.1.3.2 Theoretical Justification

Amidst the turbulent and competitive global environment, the outstanding success and the resulting influence of some organisations (Google, Amazon, and Facebook etc.) have ignited a new wave of interest among scholars endeavouring to understand what makes successful entrepreneurial leaders and, more importantly, how the phenomenon can be duplicated. Several perspectives have been explored on the shared definition that leadership involves the process of influencing others towards the achievement of defined organisational goals (Horner-Long and Schoenberg, 2002; Bass, 1985; Day et al, 2006).

What makes a good leader has generated argument between authors examining personality traits and behaviours or different contexts where leadership is exhibited. As a result, relational capabilities, in addition to human capital, are emerging as a core element for effective leadership (McCallum and O'Connell, 2008; Horner-Long and Schoenberg, 2002; Vecchio, 2003; Pearce and Conger, 2003). Three perspectives of leadership support this assumption applied to entrepreneurship.

Transformational leadership

The work of Burns (1978) and Bass (1985) take the discussion beyond the limitations of transactional leadership theories (Luthans and Kreitner, 1975; House, 1971) and asserts that a leader seeks high performance by evoking higher needs of self-achievement, self-motivation and deeply held personal values from followers. Transformational leadership supports EP because it responds to the need to adapt to a changing environment as the main source of opportunities (Schumpeter, 1934b; Shane and Venkataraman, 2000)

Team-oriented leadership

Graen and Uhl-Bein (1995) looked at the interaction between leaders and group members and discussed the ability of leaders to generate high levels of group participation and involvement by group members. This approach builds on the leader-member exchange theory based on differentiated role exchanges between the leader and subordinates within an organisation. In addition, team-oriented leadership brings other benefits, such as shared ownership and reward, which fuel creativity and constitute an asset to contain adverse competition (Schumpeter, 1934a; Horner-Long and Schoenberg, 2002).

Value-based leadership

Value-based leadership elaborated by House and Aditya (1997) offers a perspective of leadership where the leader articulates an inspiring vision based on self-belief and subsequently backs the vision with a conduct that sets an example of involvement and commitment for followers to emulate. In so doing, the leader is a channel of communication of high expectations in a behavioural pattern that meets those expectations. The leader's behaviour motivates and inspires values and beliefs

across the team (Shamir et al., 1993; Goshal and Bartlett, 1996; Ghemawat and del Sol, 1998).

Having established theoretical associations between LS and EP, it is now important to bring these three constructs in a theoretical model of inter-relationships in order to develop the hypotheses for testing the direct and indirect effects in the interaction between SC, LS and EP which overarches this thesis.

4.2 The Proposed theoretical framework: a model of interaction between SC, LS and EP

4.2.1 The underpinning theory

In defining the entrepreneur, Schumpeter (1934a) set two conditions to sustain the EP.

First, the entrepreneur must be able to overcome the psychological and social resistances that stand in the way of carrying out new combinations, which is expressed in the following terms:

”The reaction of the economic environment against one who wishes to do something new.....in matters economic, this resistance manifests itself first of all in the groups threatened by the innovation then in the difficulty in finding the necessary cooperation, finally in the difficulty in winning over customers”
(Schumpeter, 1934a, p.126-127)

Second, the entrepreneur must become the conduit of the capital embedded in social networks and which in turn enables the process of spotting, evaluating and

exploiting opportunities. This condition is clearly stated in that the entrepreneur must ***“Lead the means of production into new channels” (Schumpeter, 1934a, p.129).***

Both conditions can be illustrated in a leadership process articulated around a vision of future possibilities based on which the business can transform its current set of transactions (McGrath and McMillan, 2000; Gupta et al, 2004; Venkataraman and Van de Ven, 1998). They illustrate the EP in a fiercely competitive environment where successful commercialisation of innovation is critical for the business to remain competitive. These two conditions are integrated to make the necessary link between SC and the EP.

4.2.2 Interaction between Leadership and social networks: overcoming psychological and social resistance

According to Schumpeter (1934b) the carrying out of new combinations which, as a function characterises an entrepreneur, is inherently non-routine in that the factors are combined for the first time and bestow its innovative nature. This requires personal attributes such as ‘initiative’, ‘foresight’, ‘authority’ that are not to be found or associated with routine activities, and is supported by studies on leadership theories (Burns, 1978; Graen and Uhl-Bein, 1995; Bass, 1985; House and Aditya, 1997). As discussed in the preceding sections on social networks, the journey from opportunity recognition to exploitation involves an entrepreneurial process situated within social interactions of a dual nature (Burt, 1992; Granovetter, 1983; Sarasvathy and Dew, 2003; Dimov, 2011). The entrepreneurial conduct becomes the key determinant of the value in social networks in a changing socio-environment. Sarasvathy (2010) eloquently explained this in effectuation theory based on three questions that each entrepreneur must answer in this order: Who am I? What do I know? Whom do I know? These three key questions are intrinsically linked to the

process of assessing one's own capabilities in the face of a challenge which one can clearly define and articulate and getting the support from those one knows in order to meet the challenge. Hence, overcoming social and psychological barriers translates into a behavioural process involving two main factors:

a) the entrepreneur's personal attributes, and;

b) The changing the socio- environment.

Leadership emerges from environments and situations where a new direction is required and innovation intrinsically belongs to such situations. Primarily, opportunity can only lead to innovation when the entrepreneur makes a positive evaluation to commercialise it within a specific timeframe given resource constraints. Arguably, behaviour of self-confidence and self-belief, driven by an inspiring and compelling vision must be displayed to convince followers such as employees, partners, investors and so on, that the goal is worth pursuing. This behaviour draws on transformational leadership as well as team-oriented leadership attributes in order to overcome psychological and social resistances (Schumpeter, 1934a; Shamir et al., 1993; Graen and Uhl-Bein, 1995).

Evidence shows that behavioural process characterised by self-confidence, self-belief and driven by extra insight generates influence and trust which in turn facilitates and enhances the development of social interactions based on 'intrinsic' value (Lin et al., 2008; McCallum and O'Connell, 2008). In the well acclaimed book 'The speed of Trust' Covey (2006) investigates leadership in most successful organisations and establishes that trust must be at the very core of any business strategy. This leadership calls for integrity, intent and capabilities to achieve results and bring credibility. Anne Mulcahy, Chairman and CEO of Xerox asserts that

‘Leadership may have to come in a different package. It’s got to be credible... Overall, it is about credibility, walking the walk’ (Covey, 2006. P. 43).

Previous research (Gupta et al., 2004; Horner-Long and Schoenberg, 2002; Hynes, 2009; Vecchio, 2003; Pearce and Conger, 2003) has established a strong correlation between such behaviour and the following attributes:

ambitious, high-performer, well-informed, visionary, forward-thinking, inspirational, confidence-builder, diplomatic, encouraging, effective negotiator, convincing, inspiring, enthusiastic, integrator, improvement-oriented, intellectually stimulating, creative, decisive, team builder, intuitive.

Recent studies (Tracey, 2012; Fink and Kessler, 2010; Bass and Alvolio, 1997; Bass, 1985; 1997; Yukl, 1996; House et al, 2006; Sosik and Dinger, 2007) affirm that leaders who display these attributes also build better relationships with their employees who subsequently achieve a superior performance for their organisation. They co-create as they bring people on board and subsequently gain some control over future events.

4.2.3 Channelling resources: Interaction between Leadership Process and Entrepreneurship Process

In defining the second condition for EA, Schumpeter (1934a) theorises that the entrepreneur must ***‘lead’*** the means of production into new channels. Shane and Cable (2000) also postulate that exercising control over resources confers an advantage because it enhances the judgement that an entrepreneur makes about the perceived value of things. The construct of entrepreneurial LS rests on this assumption and is described as a process of double-challenge of vision enactment and cast enactment (Gupta et al, 2004).

Arguably, leading the means of resources into new channels is essentially organising the market to exploit the opportunity and is intrinsically linked to the challenge of overcoming barriers by formulating a credible vision. Thus, the entrepreneur leader must demonstrate credibility in intent and capabilities as part of the reality of a turbulent socio-environment (McGrath and McMillan, 2000; Graen and Uhl-Bein, 1995 ; Shamir et al, 1993; Schumpeter, 1934a) and this implies:

- (i) inspiring and modelling a team capable of extraordinary achievement (Bandura, 1970; Katou, 2011);
- (ii) re-shaping perceptions of individual capabilities and eliminating barriers to creativity, taking control of the future (Augier and Teece, 2009; Horner-Long and Schoenberg, 2002; Goleman, 2000; Clark et al, 1985).

According to leadership theories, these actions call upon team-oriented and value-based leadership behavioural indicators which generate a strong sense of ownership, reward, enhanced creativity and illustrates a behaviour driven by strong personal values which followers are keen to emulate (Hul-Bein, 1995; House and Adiyata, 1997; Shamir et al, 1993; Goshal and Bartlett, 1996; Ghemawat and del Sol, 1998). As a result, the leader and followers are embedded in a relationship of dual nature which explains the entrepreneur's transitional behaviour, in that:

- (i) the '**instrumental**' value defined is materialised in the successful implementation of the goal, and;
- (ii) the '**intrinsic**' value is based on shared personal values.

Values such as the drive to superior performance, self-motivation and self-achievement are recognisable in behavioural attributes which inspire, motivate and

enthusiasm. By sustaining resources acquisition and market organisation during the EP, they bring SC benefits (Lin et al., 2008; Casson and Della, 2007) and this makes the link between SC and EP. Figure 4.1 illustrates the mediating role of leadership.

4.2.4. Model illustration: the mediating role of Leadership

Figure 4.1 below illustrates the theoretical justification of the interaction between the three constructs. The model depicts an arrow from SC to LS attributes to explain that influence, social credentials and access to resources accrue to the entrepreneur leader in response to actions guided by a behaviour which generates such benefits. The two arrows from LS illustrate the interrelationship built in developing a vision and convincing others to achieve that vision. It gets interesting once the entrepreneur establishes who he/she is through a vision and subsequently transforms personal knowledge into real assets to facilitate the commercialisation of the original vision (Sarasvathy, 2001; Dew and Sarasvathy, 2003).

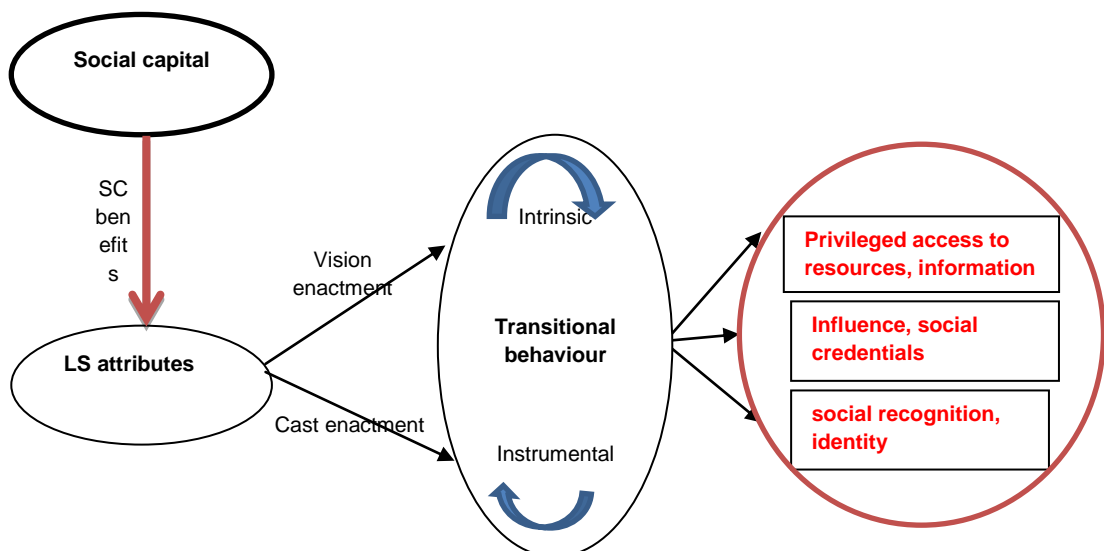


Figure 4.1: Conceptual model of interaction between SC, LS and EP

This dual-process illustrates a transitional behaviour where social interactions of relational and structural nature work simultaneously to the successful realisation of EP and the development of more social capital. People who work hard and achieve high performance generally succeed and inspire others to emulate their behaviour and logically create more SC benefits. The next section expounds this interaction in the proposed theoretical model.

4.3 The Proposed theoretical model and hypotheses

4.3.1 Model interpretation

The interpretation of the model hypothesises that EP is a direct result of two simultaneous processes. According to leadership theories, LS attributes affect social interactions and entrepreneurial conduct (Burns, 1978; Burns and Stalker, 1961; Bass, 1985; House and Aditya, 1997). Attributes such as well-informed, visionary, forward-thinking, ambitious, confidence-builder, convincing which are all associated with the formulation of a compelling vision are also called upon in inspiring and convincing others to share in that vision as an attainable goal. Because the entrepreneur must support his ambitions with hard work, a strong performance and improvement orientation, these values and beliefs attract others in emulating similar behaviours. Consequently, the ability to encourage and build confidence in others, to negotiate effectively and be fair in rewarding and to create an environment that is intellectually stimulating with a sense of shared ownership (Grean and Uhl-Bein, 1995; Horner-Long and Schoenberg, 2002) become essential in committing own and others' resources to the realisation of the shared vision. This completes the process of evaluating and exploiting opportunities (Schumpeter, 1934a; Shane and Venkataraman, 2000). The behavioural process instigated by leadership attributes is

based on social interactions of dual nature comprising both an 'instrumental' and an 'intrinsic' value (Burt, 2009; Casson and Della Giusta, 2007; Nahapiet and Ghoshal, 1998). It facilitates trust by simultaneously sharing a vision and achieving a personal ambition. Arguably, the realisation of an 'intrinsic' value in sharing a vision and an 'instrumental' value in enabling the achievement of a personal goal in two interconnected processes of social interactions fulfil the benefits of SC (Lin et al, 2008).

4.3.2 Model hypotheses

The reality of human action and interaction is determined by the effects of the socio-environment on individual aspirations within varying contextual realities (Mises, 1996). Thus, individual understanding and experiences of, and expectations from social networks and leadership would differ accordingly. Irrespective of whether opportunity is discovered or socially constructed, entrepreneur action is built on the realities of social interactions and leadership response to information asymmetries (Hayek, 1937).

Existing writing provides evidence that a strong association exists between personal attributes and individual gains extracted from social networks (Honig, 1998; Packalen, 2007; Domhoff, 1967; Economist, 2012; Frank et al., 2007; Craig et al, 2007; Domhoff, 1967; Constant and Zimmerman, 2006; Brunetto and Farr-Wharton, 2003; Burton, 2001; Saxenian, 1994). The path from Social Capital to Entrepreneurship Process (EP) is not a direct relationship because the norms of social interaction from network actors' perspective determine the real nature of and value contained in social networks (Burt, 2009; 1992; Granovetter, 1985). This can be theorised as follows:

H1: Entrepreneurship process is positively but indirectly related to Social Capital

Entrepreneurs access information from redundant and non-redundant sources (Granovetter, 1983; Burt, 1992) to which intuition and forward-thinking are combined to help make a conjecture which is articulated into a compelling vision. The clarity of the vision instils self-belief and decisiveness to overcome any opposition to the pursuit of that vision. Studies on leadership hold that behavioural process driven by these attributes inspires others to emulate similar behaviour (Bass, 1985; Shamir et al., 1993; Goshal and Bartlett, 1996; Ghemawat and del Sol, 1998). Research shows that there is a strong correlation between leaders displaying this behaviour and their success in building relationships (Chen et al, 2010; Fink and Kessler, 2010; Tracey, 2012; Bass and Alvolio, 1997; Bass, 1985; 1997; Yukl, 1996; House et al, 2006; Sosik and Dinger, 2007). The influence exerted by a leader's behaviour consequently convinces followers to commit to the realisation of the vision and to emulate the leader's self-values (Shamir et al, 1993; Goshal and Bartlett, 1996; Ghemawat and del Sol, 1998). Thus, the researcher posits the first hypothesis as follows:

H2a: Leadership is positively directly related to Social Capital

Initially, leadership is built on 'intrinsic value' as followers who are inspired ultimately share their leader's vision. Since social interactions are driven by the pursuit of personal goals (Hayek, 1937) the achievement of a shared vision inevitably generates the 'instrumental value' in channelling the resources to exploit opportunity

(Casson and Della, 2007; Shane and Cable, 2002; Shane and Venkataraman, 2000). This is essentially EP transferring the value from social networks into new channels of production (Schumpeter, 1934a; Shane and Venkataraman, 2000). It is also the result of 'knowing who you are and using whom you know to improve what you have' (Sarasvathy, 2010; Horner-Long and Schoenberg, 2002). The process illustrates the relationship between LS and EP and from which the following hypothesis is formulated:

H2b: Entrepreneurship Process outcome is positively directly related to Leadership

The achievement of the vision generates leadership credibility and yields social recognition (Lin et al, 2008). The leader's influence on followers in effect expands the scope of influence through the creation of 'weak ties' subsequently bridging structural holes to access information and resources in strategic locations (Burt, 1992; Granovetter, 1985). Existing 'weak ties' also evolve into 'bonding' relationships to generate social credentials (Burt, 2009; Lin et al., 2008; Gubbin and McCurtain, 2008). Equally, the leader gains social credentials by enthusing and encouraging others, motivating and rewarding individual efforts by sharing ownership of success (Katou, 2011; Graen and Uhl-Bein, 1995; Bandura, 1970).

The hypothesized relationships are illustrated in Figure 4.2 below and represent the main variables articulating the theoretical model. The model is consistent with Schumpeter's (1934b) theory of entrepreneurship as articulated in the interaction

between Social capital, Leadership and the process of discovering, evaluating and exploiting opportunity.

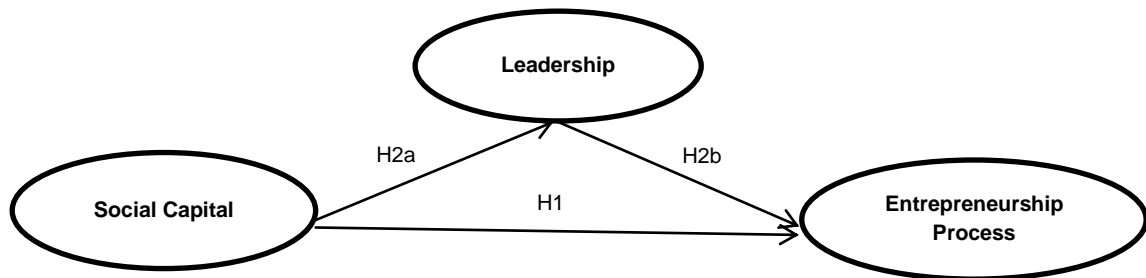


Figure 4.2: The research hypothesised model

This represents the structural model in SEM. As part of the theoretical model, each construct must enable the researcher to contextualise the concepts and identify its measurement indicators to facilitate the identification, evaluation and interpretation of the model (Hair et al., 2010; Byrne, 2009; Schumacker and Lomax, 2004).

4.3.3 Model variables: the measurement model

The model main variables are all latent because they cannot be observed directly. Each construct determines the indicators that enable the researcher to measure each latent variable and subsequently to evaluate the direct or indirect effects on their interaction in this model (Hair et al., 2010; Byrne, 2009; Schumacker and Lomax, 2004).

4.3.3.1 Social Capital: independent latent variable

Social Capital encompasses the two measurement dimensions based on social networks which are: (i) relational (ii) structural (Nahapiet and Ghoshal, 1998). There is also a distinction between 'strong ties' otherwise called 'closure' representing

people in the relational dimension who are familiar or with whom bonds have been formed; and ‘weak ties’ often referred to as ‘brokerage’ describing social ties developed to bridge structural holes and be more competitive (Granovetter, 1983; Burt, 1992). Social networks are built on social ties represented by the frequency and the depth of interactions among social actors such as family members, close friends, employees, business partners, customers, suppliers, professional services and so on. Table 4.1 below summarises the measurement indicators of SC adapted to the research context.

Dimensions	Structural: instrumental value	Relational: intrinsic value
Measurement Items		
Closure: family and close friends, business partners	X	X
Closure: employees, customers, suppliers	X	X
Brokerage: local associations	X	X
Brokerage: professional services	X	X
Brokerage: regional, national bodies	X	X
Brokerage: media, global	X	X
Total = 12 items	6	6

Table 4.1: Measurement items for social capital construct

References to the terms closure and brokerage adapted to the research context are provided below and illustrated in Figure 4.3

- Closure = strong ties = relationships with family and close friends including business partners; at the low end of closure we also have people with whom social interactions are informal or frequent such as employees, regular customers and suppliers;
- Brokerage = weak ties = relationships within local associations, professional services (e.g. accountant, lawyer, bank manager), regional and national bodies and contacts with customers / suppliers via the media, e.g. Internet.

4.3.3.2 Leadership: the mediating latent variable

The measurement indicators for leadership are associated with behaviour of overcoming socio-psychological barriers and leading the means of production into new channels (Schumpeter, 1934b; Burns, 1978; Bass, 1985; Grean and Uhl-Bein; Gupta et al, 2004).

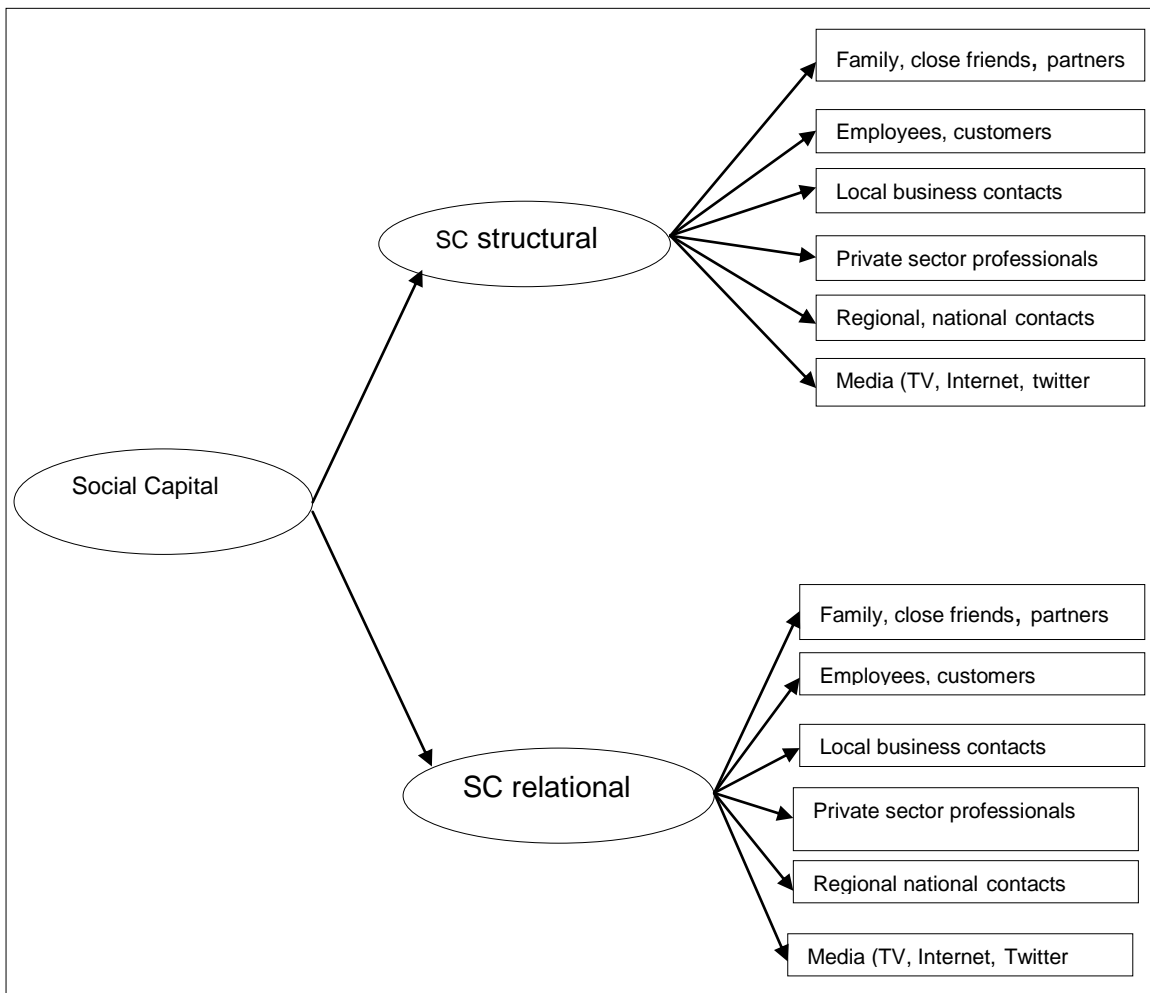


Figure 4.3 Measurement Model of Social Capital

4.3.3.3 Dependent latent variable: Entrepreneurship Process outcome

As discussed in the preceding sections, the interaction between EP, LS and SC generates an outcome which is the effect of two processes occurring in a socio-environment. Similar to other people, entrepreneurs' actions are driven by personal aspirations and goals. Therefore, they develop and maintain social ties with social actors, those who are more likely to facilitate the achievement of their personal goals. Research shows that social networks facilitate access to the value in Social Capital which comes in the form of privilege, influence, social credentials and recognition which have all proven very useful in accessing information and resources in strategic locations (Lin et al, 2008; Packalen, 2007; Craig et al, 2007; Domhoff, 1967; Constant and Zimmerman, 2006; Brunetto and Farr-Wharton, 2003).

Construct	Leadership dimensions
Entrepreneurial Leadership	Transformational <ul style="list-style-type: none"> • Vision based in self-confidence and self-belief • Inspirational/evoking higher needs of self-achievement • Confidence-builder, self-motivated and deeply held personal values Team-oriented <ul style="list-style-type: none"> • High level of group participation, commitment by group members, integrate others and trust • Effective negotiator, shared ownership, reward • Increased creativity and sense of initiative Value-based <ul style="list-style-type: none"> • Setting high goals; hard work/improved performance • Sets an example of involvement and commitment for followers to emulate, intellectual stimulation • Channel of high expectations, Encourage and enthuse team

Table 4.2: Measurement of entrepreneurial leadership dimensions

These benefits deriving from social networks represent the competitive assets that entrepreneurs are so keen to secure in order to organise the market successfully in an increasingly challenging environment (Shane and Venkataraman, 2000; Schumpeter, 1934b; Kirzner, 1973).

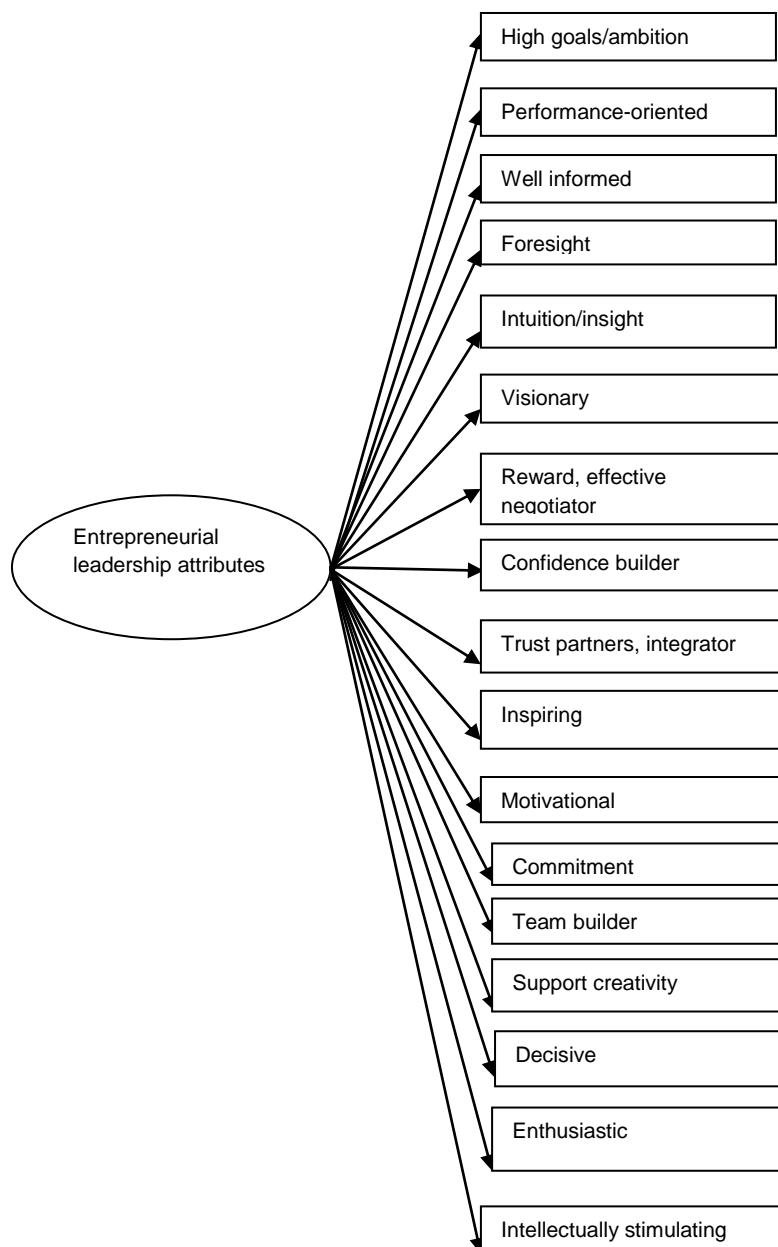


Figure 4.4: Measurement model of Entrepreneurial leadership

EP Outcomes is the dependent latent variable in this model of interaction with two other variables which are SC and LS. Because this conceptual model is based on a theoretical confirmatory approach (Schumpeter, 1934a) the researcher argues that (i) privileged access to resources, (ii) influence, (iii) social credentials, (iv) identity and recognition are the results of entrepreneurial leaders' behaviour in overcoming the psychological barriers to innovation and bringing the means of production into new channels.

From a sociological perspective, it is the result of the process of discovering, evaluating and exploiting opportunities. Accordingly, the construct of EP is summarised in Table 4.3 and the measurement indicators of EP outcome are illustrated in Figure 4.5.

Construct	Indicators
Entrepreneurship Process and SC benefits	<ul style="list-style-type: none"> • Privileged access to information and resources/opportunity recognition • Influence/ secure resources in strategic locations for opportunity evaluation • social credentials/ opportunity evaluation and exploitation • Social recognition and identity/ opportunity exploitation

Table 4.3: Entrepreneurship Process construct

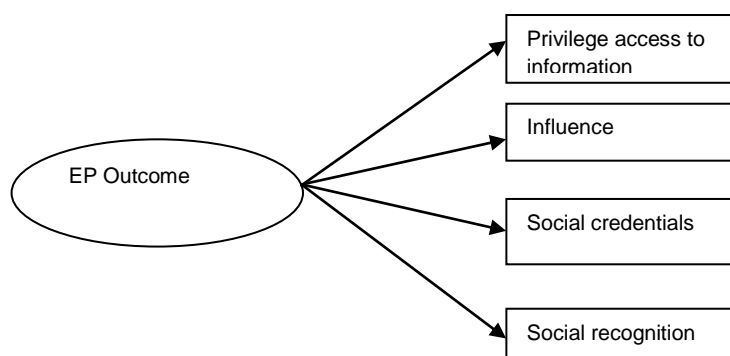


Figure 4.5 Measurement model of Entrepreneurship Process outcome

4.3.3.4 Measurement model summary

The discussion in this chapter has built a theoretical framework based on the construct of three latent variables in a model of interaction. Each latent variable construct has determined the items that can be used to evaluate the construct within the model. These measurement indicators have also been adapted to the research context for ease of reference and interpretation of results. The importance of these observed variables in the measurement model is that they are indicators or manifest variables of each construct.

The main aim of this research is to evaluate the significance of the relationship between EP, LS and SC based on Schumpeter's theory of entrepreneurship (Schumpeter, 1934b). The model of interaction describing the mediating role of LS in section 5.2.4 and postulated in Figure 5.2 in the theoretical model provides the framework to evaluate the direct and indirect relationships in this interaction. The theoretical model is now completed with both the structural model, as determined by hypotheses, and the measurement model providing observed or manifest variables as measurement indicators for each latent variable. The evaluation of this conceptual framework requires a statistical methodology capable of analysing several relationships of interdependence of direct and indirect effect which justifies the choice of SEM statistical analysis technique

4.4 Chapter summary

As indicated in the introduction, this chapter was designed to (i) develop a theoretical model, (ii) construct a path diagram and (iii) transform the path diagram into a set of equations. In Section One the theoretical justification of each construct was provided, leading to the development of a theoretical framework in Section Two. The

theoretical framework provided the foundation to develop a research construct whereby two socially-constructed processes, i.e. leadership and entrepreneurship occur simultaneously within social networks. Thereafter, a measurement model was elaborated to clarify the measurement indicators for the evaluation of direct and indirect effects in the interaction between the three main latent variables. Together, the measurement model and the structural model form the SEM. The methodology to evaluate relationships in the path diagram is covered in the next chapter.

CHAPTER FIVE: METHODOLOGY

5.0 Introduction

So far, this thesis has covered a critical synthesis of the research context in Chapter Two suggesting some association between key factors defining the food and drink manufacturing sector which underpin the concept of Social Capital and network structure articulating the main research question. Two main factors emerged: (i) the breadth and depth of relationships within the Food Chain actors and outside its network structure uncovered evidence of SC and social networks; and (ii) the socio-economic characteristics of consumers' lifestyles and demographics indicated a proliferation of entrepreneurial opportunities. Chapter Three covered a critical examination of the literature on Social Capital and social networks in relation to entrepreneurship as the process of discovering, evaluating and exploiting opportunities. Having established that existing theoretical models of association between SC and EP were not appropriate to answer the main research question, the researcher addressed this gap by developing a conceptual framework and generating the research hypotheses as presented in Chapter Four. The theoretical proposition is built upon relationships of interdependence between the main variables, which also indicate causal relationships based on direct and indirect effects.

This chapter covers the philosophical approach and elucidates the methodology used in the empirical evaluation of the relationships between the main variables supporting this thesis. Section One deals with the philosophy of research and the ontological orientation taken in this study. Section Two presents the research design that is most appropriate to satisfy the outcome from this study. Thereafter, Section Three discusses the methods of gathering evidence and interpreting

results and Section Four examines the strategy and the choice of methods the researcher has adopted in line with the ontological and epistemological position. Section Five presents the pilot study.

5.1 Research philosophy: ontology and epistemology

The philosophy of research is concerned with the paradigm defined as worldviews or beliefs systems guiding researchers (Guba and Lincoln 1994). It originates with ontology, i.e. the philosophical assumptions about the nature of reality; which in turn distinguishes the epistemology or the general set of assumptions about the best ways of inquiring into the nature of the world (Easterby Smith et al, 2008). Ontology and epistemology express the philosophical position underlying the design of research in terms of the combination of techniques used by the researcher to achieve a satisfactory outcome. The methodology is specified by the combination of methods or individual techniques used by the researcher to collect data, produce evidence and to analyse and interpret results in order to answer the main question being investigated in the research (Howell, 2013).

The importance of worldviews guiding research was first heralded by Kuhn (1970) who argued that paradigms are the models imitated within any given field of study and that competing beliefs systems or worldviews defining such paradigms could exist alongside each other. In the field of social and behavioural sciences, the debate about scientific research has long contrasted two traditions: positivism versus social constructionism, although the practice of research in the field has not drawn a demarcation line on the philosophical assumptions and the methodological implications associated with each ontological position (Easterby-Smith et al, 2008).

5.1.1 Positivism

The positivist claims that the social world exists externally and its properties should be measured objectively rather than being inferred through intuition, sensation or reflection (Comte 1853). According to Lincoln and Guba, (1985), this claim makes the following set of assumptions :

- (a) reality is external and objective;
- (b) the acquisition of knowledge of that reality is based on observations of that reality which is external;
- (c) enquiry is not influenced by the values of the researcher;
- (d) the subject of enquiry is based on a theory which can be observed beyond time and context;
- (e) the links between cause and effect can be observed.

This philosophical orientation (Kuhn 1970) based on 'the nature of reality' or the possibility of causal linkages, assumes that the world is concrete and external and therefore scientific progress can only occur by observing phenomena that have a direct correspondence to the phenomena being investigated (Bhaskar 1989). In other words, the discovery of reality is experimental. The epistemological assumptions behind positivism represent a collection of propositions from different philosophers who did not always agree among themselves (Comte, 1853; Wittgenstein, 1953). In the heated debate on the research paradigm, Lincoln and Guba (1985; 2000) avow that positivism and its quantitative methodology accompanying the paradigm has been discredited, giving more ascendance to constructivism and qualitative methodology. Howe (1988), and more recently Reichardt and Rallis (1994), emphasize the dissatisfaction with the ontology,

epistemology and axiology of positivism in the field of social and behavioural sciences.

5.1.2 Constructivism or social constructionism

A more recent tradition developed over the last decades is social constructionism also called interpretivism, which claims that reality is socially constructed and given meaning by people (Berger and Luckman 1966; Shotter 1993). In other words, people make sense of the world by sharing their experience through the medium of language, relying on interpretive methods (Habermas 1970). In so doing, the researcher is part of the process and theories which apply to the subject of their work must also be relevant to the person conducting the research (Denzin 1978). This reflexive approach to research methodology is recognised to be particularly relevant in subject areas related to power and culture (Easterby-Smith and Malina 1999; Cunliffe 2002). The five axioms of social constructivism (Lincoln and Guba 1985; 2000) establish that:

- a) the nature of reality is subject to multiple constructs;
- b) the researcher and the enquiry are inseparable;
- c) enquiry is value-bond;
- d) time and context-free generalizations are not possible;
- e) it is impossible to distinguish a cause from its effects.

The differences in philosophical orientation are based on 'paradigm purity' and express the incompatibility in ontology, epistemology and axiology between positivism and constructivism. Henceforth, quantitative and qualitative methods could not be used in the same enquiry due to the differences in the philosophies that underlie them. However, Datta (1994) attributes this dichotomization of

positivism versus constructivism to a 'misunderstanding of science' by highlighting strengths and weaknesses of both the positivist and the constructivist traditions, a view which is supported by studies (Pugh, 1976; 1988).

There are strong parallels and also differences between positivists emanating from the law of natural science, particularly regarding epistemological positions. Among positivists new philosophical orientations have emerged, namely realism and relativism.

5.1.3 Realism

Typically, realists start with the philosophical assumption that reality is concrete and external and science progresses with observations directly linked to the phenomenon being investigated (Easterby-Smith, 2008). However, recent progress in science helps to differentiate between the law of nature and the scientist's knowledge in relation to such law, and this is more reflected on the epistemology and processes of observation of concrete and external reality. Bhaskar (1989) is a strong advocate of realism and claims that the object of scientific enquiry exists and acts independently of scientists and their activity. Realists argue that once they are discovered, scientific laws are absolute and independent of further observations and the researcher can only gather indirect evidence of the many faces of reality (Putnam, 1987).

This assertion has methodological implications in identifying the pre-existing reality under investigation. The realist will use a design which allows key factors to be measured precisely in order to test predetermined hypotheses. The realist approach to research design will focus on data rather than opinions and patterns of regularities in data capable of generating a proposition which can be generalised from the

subject of investigation to the wider population (Pugh, 1983; Easterby-Smith et al, 2008). The complexity of data representing reality in social science is acknowledged and the availability of sophisticated tools capable of complex multivariate analysis enables the realist to give a full understanding of the phenomena being investigated by establishing causality (Pugh, 1988; Von Bertalanffi, 1962; Easterby-Smith et al, 2008).

5.1.4 Relativism

The relativist philosophical orientation borrows from positivism that 'reality' is independent of the observer but adds that 'truth' is determined through a consensus between objective and subjective viewpoints (Tashakkori and Teddie 1998). However, it differs from both constructivism and positivism in methods used to identify pre-existing reality. The relativist researcher will use triangulation of methods and the surveying of views and experiences of a large sample of individuals in order to reach a consensus of viewpoints (Easterby-Smith, Thorpe et al. 2008). A variant of relativism is **critical realism** (Bhaskar, 1989; Sayer, 2000) which derives from realism ontology and incorporates interpretivism by recognising the effect of social conditions irrespective of the researcher recognising and labelling them.

5.1.5 Pragmatism and social science

Another ontological position referred to as pragmatism was first echoed by Wittgenstein (1953) expressed in terms of critique of super-concepts of 'truth', 'reality' generating insoluble pseudo problems. Instead of searching for metaphysical truths, pragmatist philosophers consider 'truth' in terms of 'problem solving' with the researcher more concerned with understanding real actions and situations and

exploring applications and solutions to problems (Patton 1990). Howe (1988) and Datta (1994) define a concept of pragmatism with compatibility between quantitative and qualitative methods as useful approaches to encourage or even require the researcher to integrate different theoretical perspectives in order to interpret the data. Accordingly, there is a world independent of the mind as well as that lodged in the mind (Cherryholmes 1992) and the job of the scientist is to identify this pre-existing reality from multiple perspectives. Reichardt and Rallis (1994) conclude that the world is complex and stratified and often difficult to understand. Individuals have very limited ability to influence the social structures of their external world but personal experience influences individual understanding and opinion about the world around them. Therefore, the field of social and behavioural sciences is suitable to a distinct paradigm labelled as pragmatism which allows for the use of mixed methods. More recent advocates for a pragmatic philosophical orientation in social and behavioural sciences research include Stones (2005), Morgan (2007) and Creswell (2009).

5.1.6 Other philosophies

Apart from the main ontological orientations discussed so far, a number of philosophical frameworks also represent relatively coherent worldviews held by influential proponents. The **critical theory**, also known as the Frankfurt School (Habermas, 1970), argues that society leads to inequalities and the irrationality of the capitalist society creates false consciousness of human wants and needs. Social sciences are based on communicative experiences through dialogue as opposed to using the interest of the most powerful in society as the representation of reality (Habermas, 1970). **Feminism** is a philosophical position which argues that women's perspectives have been largely ignored in sciences (Blaikie, 1993) leading to a

gender bias in defining research and denying science its rationality and objectivity. Thus, a full understanding of human behaviour is internal through the experiences of women by themselves (Cotterill, 1992). Other research paradigms include **postmodernism** (Lyotard, 1984); **structuration theory** (Giddens, 1984) and **hermeneutics** (Gadamer, 1989). However these philosophical orientations are too narrow in their scope of investigation and are deemed inappropriate in achieving the aim of this research.

5.1.7 The research philosophical orientation: realism

This thesis aims to investigate the factors underlying the competitive performance of food and drink manufacturing in the UK South West region. An exploration of the extant literature has resulted in the main proposition that the relationship between SC and EP is explained by a third factor, hence generating relationships of interdependence between the three variables. Two main hypotheses were developed from the theoretical framework in order to test the fundamental theory linking the three main variables. By positing that LS is the mediating factor that explains the relationship between SC and EP, the researcher takes the view that there is a cause and effect relationship in this interaction between SC, LS and EP.

The phenomenon being observed and investigated (i.e. the competitiveness of SMEs in the SW food and drink manufacturing) is not an independent reality, but emanates from the development of human theory. Thus, the discourse underpinning the social product of knowledge generates a social reality that becomes ingrained in historical or individual multi-faceted understandings (Howell, 2013). Phenomena such as democracy, social class, values are fundamentally outcomes of a social world, and the same observation is applicable to competitiveness as a social production of knowledge by human beings (Kuhn, 1996). For example, human theory

on competitiveness is linked to having connections in strategic places in society. The socio-economic context which determines the competitiveness of SMEs in the SW food and drink manufacturing sector is a reality that is also defined by BOMs' individual understanding of their position within the structures of that reality of a social world (Stones, 2005). This multi-faceted reality of competitiveness is expressed in the variable indicators that measure the objective reality of the interdependence relationship between SC, LS and EP. The objective nature of the reality is built on the social production of knowledge. Thus, the researcher seeks to gather numeric measures of observations in relation to the main variables in order to achieve the outcome of this research.

The knowledge emanating from this investigation enables the researcher to infer about the measurements of the theoretical reality that explains the competitiveness of SMEs in SW food and drink manufacturing. The hypothesised causal relationships are examined using regular patterns of quantifiable data which can enable inference from the subject of investigation to the general population. Thus, in order to attain this research main aim the researcher takes a realist ontological orientation.

5.2 Research design

As mentioned in the introduction, research design is concerned with the organisation of research activities in ways that are most likely to achieve the research aim (Easterby-Smith et al, 2008). The general approach addresses the methods that the researcher uses for gathering and analysing data to understand the nature and significance of relationships between variables defining the subject under investigation.

Ontology and epistemology express the philosophical position underlying the design of research in terms of the combination of techniques used by the researcher to achieve a satisfactory outcome. The methodology is specified by the combination of methods or individual techniques used by the researcher to collect data, produce evidence, analyse and interpret results in order to answer the main question being investigated in the research. Three types of research design emanate from the epistemological assumptions applicable to social and behavioural sciences.

5.2.1 Quantitative design: deductive approach

A quantitative approach to research design consists of gathering factual data in quantifiable form and then generating quantifiable deductions in accordance with a theory (Easterby-Smith et al, 2008). This approach consists of a five-stage process: exploration, construct development, hypothesis generation, hypothesis testing for internal validity and hypothesis testing for external validity. Conclusions about the data mainly collected through surveys are therefore made based on this deductive approach and based on a wide range of statistical significance tests.

5.2.2 Qualitative design: inductive approach

The qualitative approach to research seeks insight and understanding of people's perceptions of the world through collection of unstructured data that can generate non-quantifiable results (Easterby-Smith et al, 2008). It is an inductive data analysis whereby the researcher builds patterns, categories and themes from the bottom up, thus organising data into more abstract units of information. Data can be gathered using multiple sources, such as observations and interviews with interaction between researcher and participants.

5.2.3 Mixed method approach

This approach is a combination or association of both qualitative and quantitative methods in a single study, using both approaches in tandem so as to generate study results that are greater than either method would yield individually (Cresswell and Plano Clarke 2007). In planning for a mixed method study, consideration needs to be given to some important aspects such as timing, weighting, mixing and theorizing or transforming perspectives.

Timing

First, timing is concerned with the collection of quantitative and qualitative data whether this will be conducted in phases, e.g. sequentially or concurrently. When qualitative data is collected first, the research aim is generally exploratory and the researcher will later expand the understanding through a second phase of quantitative data collection from a large sample size representative of a population. When data are collected concurrently, both quantitative and qualitative data are gathered at the same time and the implementation is simultaneous (1995; Creswell 2009).

Weighting

Second, weighting relates to the priority the researcher gives to a quantitative or a qualitative method in a particular study, either by equal treatment or by emphasising one method over another. This priority in turn depends on whether the researcher has a single dominant paradigm with a small component of the overall study drawn from an alternative design (Tashakkori and Teddie 1998; Creswell 2009). In practice, the research strategy will determine whether quantitative or qualitative information is emphasized first and also if the study is taking an

inductive approach or whether its primary objective is to test a theory. Another strategy consists of using one form of data in a supportive role to a larger study (Rogers, Day et al, 2003).

Mixing

The third aspect in the mixed method procedure is mixing which applies in a large sense to research questions, philosophy and interpretation and consists essentially of text, images, quantitative data and numbers. Two aspects need considering: (i) when does the researcher mix, and (ii) how does mixing occur. The process of mixing could take place at data collection, data analysis, interpretation or at all three phases (Cresswell and Plano Clarke 2007). Mixing quantitative and qualitative data can follow one of the three processes:

- a) connected is when the researcher connects quantitative and qualitative approaches between the data analysis of the first phase and the data collection of the second phase of the study;
- b) integrating occurs when the researcher concurrently collects both quantitative and qualitative data and then integrates or merges the two databases by converting the qualitative data into numbers and comparing them with the descriptive quantitative data;
- c) embedding mixing process consists of collecting a primary form of data, e.g. quantitative and using the secondary form of data, e.g. qualitative in a supporting role.

Theorizing or transforming perspectives

This procedure applies to whether a theoretical perspective guides the entire study design, either as a theory from the social sciences (adoption theory, attribution

theory), or as a an orientating lens that shapes the types of questions asked, participants to the study and tools for data collection. Theorizing could be implicit, i.e. not mentioned in the study or explicit, in which case it offers an overarching perspective used with all of the mixed methods strategies of enquiry.

5.2.4 The study research design: a quantitative deductive approach

This thesis aims to investigate the nature and significance of the interaction between SC, LS and EP for SMEs in the SW food and drink manufacturing sector through an empirical evaluation of their relationships of interdependence. It draws from the philosophical position that the multiple facets of the reality under investigation can be measured in data rather than opinions so as to enable the researcher to confirm or reject the hypothesised relationships between the three main variables in the study (Pugh, 1983; Easterby-Smith et al, 2008). Emerging patterns from quantitative data enable the researcher to precisely measure the significance of the interaction between the three main variables, and to generate quantifiable deductions according to the theory.

This deductive approach consists of a five-stage process: exploration, construct development, hypothesis generation, hypothesis testing for internal validity and hypothesis testing for external validity. The first three steps were completed in Chapters Three and Four where a review of the literature led to the development of constructs and the study main hypotheses linking those constructs. This research design expands on the methodology used for testing the study hypotheses for internal and external validity. Accordingly, the researcher seeks to gather numeric measures of observations and to use statistical techniques in order to achieve the outcome of this research.

A qualitative approach to research design was deemed inappropriate to achieve the study main aim. The philosophical assumptions of a reality that is based on individuals' subjective meanings and experiences of the world (Lincoln and Guba, 1985; Crotty, 1998) would not enable the researcher to explain the significance of the interdependence between SC, LS and EP in accordance with the underlying theory articulating this study. The researcher recognises the importance to ascertain that emerging patterns from factual data recorded in quantifiable form through the use of survey captures the multi facets of reality under investigation. In response to this, necessary steps were completed during the pilot study to ensure that research participants understand the constructs and their dimensions as a prerequisite for validating the research instrument (Crotty, 1998). The use of Likert scale provided participants with various options expressing an opinion that best reflects their understanding of the subject under investigation. More details on the pilot study are provided in Section Five of this chapter.

Furthermore, the survey provided an option for participants to express their views on the study exogenous variable as the main cause of fluctuations in the values of other variables in the model (Byrne, 2010). These additional comments on SC contributed to the interpretation of the study results and enriched the main findings, and are covered in details in Chapter Six on data analysis and further discussed in Chapter Seven. In order to fully meet the study aim a quantitative approach enhances the researcher's ability to measure precisely the causal effects in the interaction between the three main variables and to confirm pre-existing realities as hypothesised in the development of constructs. The complexity of data representing reality in social science is acknowledged and the availability of sophisticated tools capable of complex multivariate analysis enables the realist to give a full understanding of the

phenomena being investigated by establishing causality (Pugh, 1988; Von Bertalanffi, 1962; Easterby-Smith et al, 2008).

5.3 Research methods: multivariate

Multivariate techniques, particularly SEM, are becoming popular in studying social and behavioural sciences because they expand the researcher's explanatory ability and statistical efficiency (Hair et al, 2010). Multivariate techniques contribute to the knowledge dimension of information and improve decision-making in organisations. Multivariate techniques enable a simultaneous analysis of multiple measurements of objects under investigation by putting together random variables that are interrelated in ways that their different effects cannot be meaningfully interpreted separately. By bringing them together in a multivariate analysis, the researcher can measure, explain and predict the multiple combinations in the relationships among variables (Hair et al, 2010; Blunch, 2008). The multivariate character is not a function of the number of variables or observations, instead it is a function of linear combinations of variables with empirically determined weights by means of correlation or regression (Byrne 2009).

5.3.1 Choice of multivariate technique

The choice of the type of multivariate technique used in a study depends on three criteria:

- (i) a theory-based classification between dependent and independent variables,
- (ii) the number of variables treated as dependent in a single analysis,
- (iii) the measurement scale of both dependant and independent variables.

Once these three criteria are met, the researcher needs to consider the kind of relationship being evaluated, whether it is one of dependence or interdependence. The next step is to examine the number of variables being predicted in a choice between (i) one dependent variable in a single relationship in which the appropriate techniques are multiple regression, conjoint analysis, multiple discriminant analysis and linear probability ; or (ii) several dependent variables in a single relationship in which canonical correlation and multivariate analysis of variance are recommended; or (iii) a multiple relationship of dependent and independent variables in which structural equation modelling (SEM) is a candidate model (Byrne, 2010; Hair et al, 2010; Blunch, 2008).

In this study, the presence of more than two variables which are theoretically linked justifies the choice of a multivariate technique (Schumpeter, 1934). The use of Likert scale for the measurement of construct dimensions for all three variables equally satisfies the use of a multivariate technique. The following statistical techniques are applicable to multivariate analysis.

- **Multiple regression, conjoint analysis and multiple discriminant analysis**

The presence of one dependent variable in a single relationship is dealt with using multiple regressions, conjoint analysis or multiple discriminant analysis to analyse the relationship of dependence between a single dependent variable and several predictors. First, multiple regression is used essentially to predict the dependent variable with a set of independent /predictors variables with a twofold objective: (i) maximising the overall predictive power of the independent variable as represented in the variate, and (ii) compare two or more sets of independent variables to ascertain the predictive power of each variate (Hair et al, 2010). To apply this

multivariate technique to this study would mean changing the relationships between SC and LS in a way that the effect of the socio-economic environment on the entrepreneur/BOM ability to recognise, evaluate and exploit opportunity cannot be measured meaningfully (Anderson, 2003). A different study should be designed with a theoretical framework that looks at the impact of different predictors of EP outcomes which include SC and LS among predictors.

Second, a multivariate technique of conjoint analysis seeks to understand how consumers particularly develop preference for a given object by combining the separate amounts of value provided by each attribute of the object (Anglers et al, 2000). This technique could be useful if the research aimed to understand the competitive performance of SMEs in the SW food and drink manufacturing based on their preferred social networks (Giles and Weun, 1997). This would require a structure of possible combinations of sources of SC which is beyond the scope of this study.

Thirdly, similar limitations are also associated with multiple discriminant analysis technique which is typically used to deal with the relationship between a dependent variable measured in non-metric scale and multiple independent variables measured in metric scale (Harris, 2001).

- **Canonical correlation and MANOVA³⁶**

Canonical correlation and MANOVA multivariate techniques apply to analysis of a single relationship between one independent variable and several dependent variables. Canonical correlation is a multivariate technique used to study linear

³⁶ MANOVA is multiple analysis of variance

interrelationships between two sets of variables that are measured using metric or non-metric scale. It is similar to factor analysis in that each set of variables represents a canonical variate and the canonical correlation coefficient measures the strength of the relationship between the two canonical variates (Bagozzi et al, 1981). This technique was deemed inappropriate in a study of three variables, although the researcher recognises the usefulness of studying the strength of the relationship between any pair of variables from the study conceptual framework.

MANOVA or multiple analyses of variance is a multivariate technique that analyses a dependence relationship represented as the differences in a set of dependent measures across a series of groups formed by one or more categorical independent measures (Anderson, 2003). As such, it provides an insight into the nature and predictive power of the independent measures and the interrelationships and differences seen in the set of dependent measures. The fact that it deals only with two variables excludes its use from this study. Its appropriateness remains applicable to analysing the dependence relationship between LS and the level of qualifications between SMEs in SW food and drink manufacturing, for example.

- **Justification for SEM**

The choice of SEM is guided by two key considerations: (i) the number of study variables and the hypothesised relationships among them and (ii) the mediating effect of one variable in explaining the relationship between the two other variables. The underlying theory (Schumpeter, 1934) linking the main constructs represents causal processes which generate observations on multiple variables simultaneously (Bentler, 1988). This interdependence between three interrelated

variables with multiple dimensions limits the suitability of other multivariate techniques in achieving a desirable outcome for this study (Schumacker and Lomax 2004; Byrne 2010; Hair, Black et al. 2010; Anderson, 2003 Bagozzi et al, 1981). Authors (Byrne, 2010; Bentler, 1988; Beauducel and Wittmann, 2005; Bollen, 1989) on multivariate techniques distinguish some key characteristics of SEM from other multivariate techniques.

- (i) The interrelated dependence relationships incorporated within SEM can be estimated separately using a simultaneous series of multiple regressions and a dependent variable could become an independent variable in a separate relationship. For example, the relationship between SC and LS can be analysed separately from that between LS and EP or SC and EP.
- (ii) By specifying the pattern of inter-variable relations a priori, SEM lends itself to the analysis of complex data for inferential purposes.
- (iii) SEM incorporates latent variables, i.e. unobserved variables that can be approximated by observed or measured variables (Hair et al, 2010; Byrne, 2009; Schumacker and Lomax, 2004).
- (iv) To the extent that measuring a concept always includes a certain degree of error and given that dependence between two variables is based on correlation between them, that dependence relationship is strengthened if the correlation attributed to the measurement errors is accounted for. The correlation between error terms of observed variables is provided in the statistical output if using AMOS.
- (v) The fact that SEM relies on theoretical concepts as constructs of relationships carries some reliability issues, since the design of variables

to measure those constructs is subject to error. In addressing this issue, SEM incorporates the assessment of the contribution of each observed indicator and the degree to which the indicators measure the latent constructs with the estimation of the relationships between the dependent and independent variables (Schumacker and Lomax 2004; Byrne 2009; Hair, Black et al. 2010).

- (vi) SEM methodology enables the researcher to evaluate direct and indirect effects in a simultaneous relationship of interdependence, something which other multivariate techniques cannot do.

Thus, SEM as a statistical technique is the multivariate technique that will provide a satisfactory answer to the research question, because it can evaluate precisely the effect of the leadership factor and the effect of Social Capital factor on the outcome of Entrepreneurship process, as well as the contribution of each measurement indicator of those factors.

5.3.2 Structural Equation Model (SEM)

SEM is a statistical methodology that takes a confirmatory approach (i.e. hypothesis-testing) to the analysis of a structural theory bearing on some phenomenon (Byrne, 2010; p 3). Essentially, the theory represents causal processes generating observations on multiple variables (Bentler, 1988). The term structural equation modelling conveys two important aspects of the procedure: first, causal processes under investigation are represented by a series of structural (i.e. regression) equations, and second the structural relations can be modelled pictorially to enable a clearer conceptualisation of the theory under study (Byrne, 2010). Another main characteristic of SEM is the fact that the hypothesised model

can be tested statistically in a simultaneous analysis of the entire system of variables to establish if the model is consistent with the data (Bentler and Chou, 1987). From this perspective, it is most suitable in achieving the research aims and objectives. Figure 5.1 below summarises the research process using SEM.

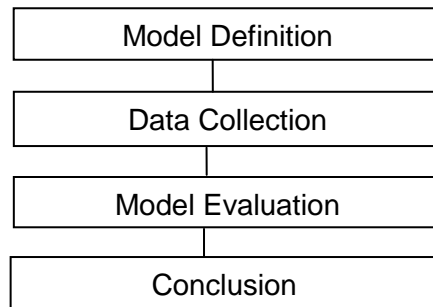


Figure 5.1: General Research Approach

5.3.3 Components of a Structural Equation Model

SEM comprises two elements: the measurement model and the structural model. The measurement model defines the relationships between observed and unobserved variables whereas the structural model defines the relationship between unobserved or latent variables in the model (Schumacker and Lomax 2004; Byrne 2009; Hair, Black et al. 2010). Latent variables are theoretical constructs that cannot be observed and measured directly and as such they are operationally defined through observed or indicator variables. In so doing, the measurement of latent variables becomes possible mainly using a confirmatory factor analysis and the structural element is represented using a regression model as Figure 5.2 illustrates.

According to the model, A and B are theory-based constructs conceptually defined as unobserved variables that cannot be measured directly. The relationships between A and B represent the structural model. A and B are both latent variables

with a set of indicator variables that are used to measure the construct. Hence, A is measured by a1, a2 and a3 and B is measured by b1 and b2. The two components of A and B form the measurement model which is a sub-model of the entire SEM model. As mentioned in the definition and characteristics of SEM, the design of variables measuring a construct may be subject to error which the model addresses by incorporating estimates of error variances.

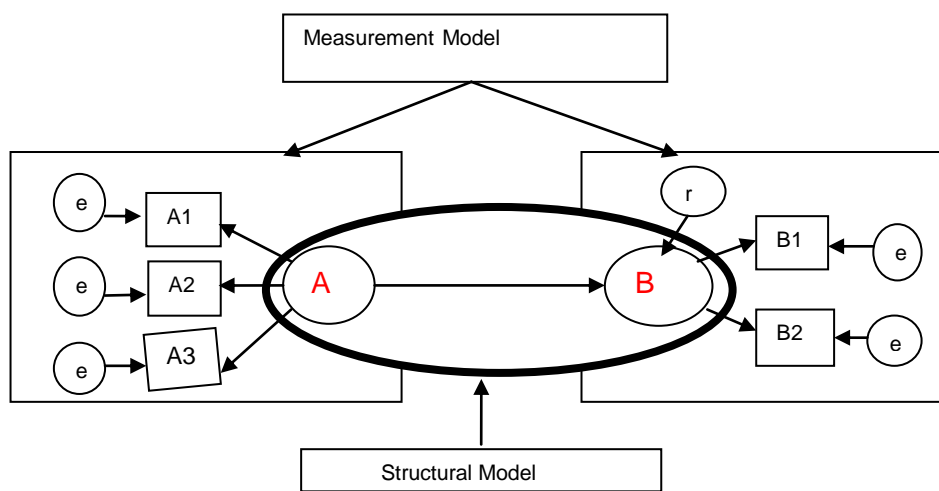


Figure 5.2: Composition of an SEM (Byrne, 2009)

These estimated error variances are e_1 , e_2 , e_3 , e_4 and e_5 and they are respectively associated with the indicator variables A1, A2, A3, B1 and B2. It is noteworthy that construct B also has an error term, r , which adjusts to the fact that although A predicts B in the structural model, there is an error term due to other indicators not accounted for in that relationship.

5.3.4 The structural equation modelling process

Building an SEM encompasses seven steps as recommended by most authors and illustrated in Figure 4.3 below (Hair, Black et al. 2010; Byrne, 2009; Blunch, 2008).

These are:

- Developing a theoretically based model;
- Constructing a path diagram of causal relationships;
- Converting the path diagram into a set of structural equations and measurement equations;
- Choosing the input matrix and estimating the proposed model;
- Assessing the identification of the model equations;
- Evaluating the results of goodness-of-fit;
- Interpreting and making indicated modifications to the model if it is theoretically justified.

Similar procedures are also recommended by Schumacker and Lomax (2004), and Byrne (2009). Although the terminology differs in describing the steps (model specification, model identification, model estimation, model testing and model modification), the processes are identical.

Step 1- Developing a theoretically-based model

The first step in SEM is to specify the theory that justifies the relationships in the model. Essentially, this step identifies the variables and specifies how they relate to each other (Schumacker and Lomax 2004). In other words, the researcher makes the statistical statement concerning the relationship between variables, thereby translating a theory into a structural model which specifies the relationship between those variables (Levine, Petrides et al. 2005). The theoretically-based approach is essential to the extent that SEM takes a confirmatory approach. Indeed, the attribution of causal relationships between variables is strongly dependant on the argument enunciated in the underlying theory, thus providing a strong basis for the assumptions of causal relationships (Hair, Black et al. 2010). In using Schumpeter's

theory on entrepreneurship (Schumpeter 1934) to meet this research aim, the researcher is also taking a theoretical approach, by making a statistical statement about the relationships between the latent variables EA, SC and LS, that forms the structural model of this research.

As discussed in the literature review, previous studies have examined the association between EA and SC on the one hand and LS and SC on the other. Building on these studies and bringing the three constructs into an SEM model, this research essentially hypothesises the causal relationships between these three latent variables. Further discussion will be covered in the next chapter on the conceptual framework.

Step 2 – Constructing a path diagram of causal relationships

Byrne (2009) defines this step as a pictorial representation of causal relationships between variables which in effect is a series of mathematical equations of a set of relationships between variables. An illustration is provided in Figure 5.4 below; A, B, C and D are all latent variables measured by indicators or observed variables a1, a2, a3; b1, b2, b3; c1, c2, c3; d1, d2, d3 respectively. The construct can be endogenous, i.e. equivalent to a dependent variable, or exogenous, i.e. equivalent to an independent variable.

However, in SEM an endogenous construct can predict other endogenous constructs, changing the relationship from dependence to independence. This particular characteristic of SEM makes it suitable to analyse interrelated relationships between latent variables. In the path diagram, the straight arrow shows a direct causal relationship from one variable to another whereas the curved line between variables illustrates correlation. Circle shapes are constructs or latent variables and

rectangular shapes are indicators or observed/measured variables. Although error terms have been omitted in Figure 5.5 illustrating the path diagram, a degree of error is implied in the design of all indicators or observed variables, and likewise for the endogenous constructs or dependant variables.

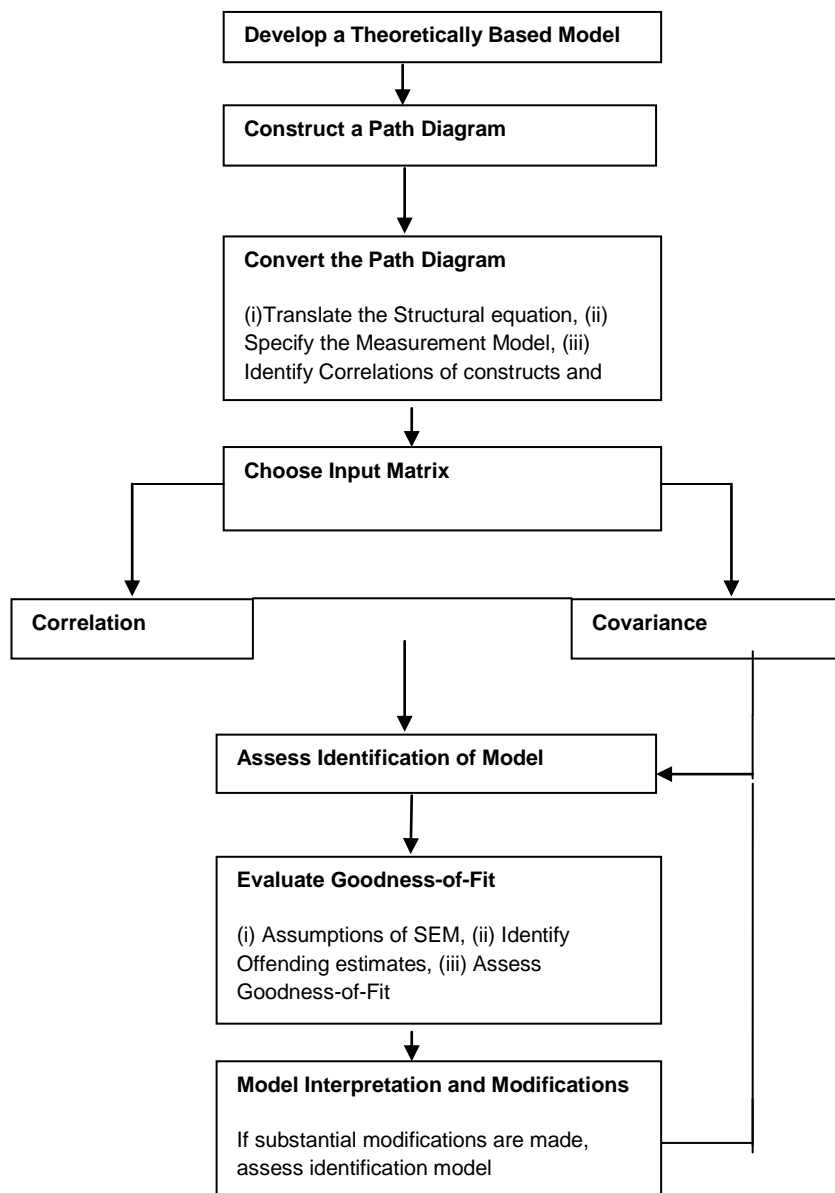


Figure 5.3: The SEM Process (Hair et al, 2010)

As discussed in the literature review, LS construct is a predictor of EA, but equally influenced by SC. Thus, it is both endogenous and exogenous in this interrelated relationship between the three latent variables.

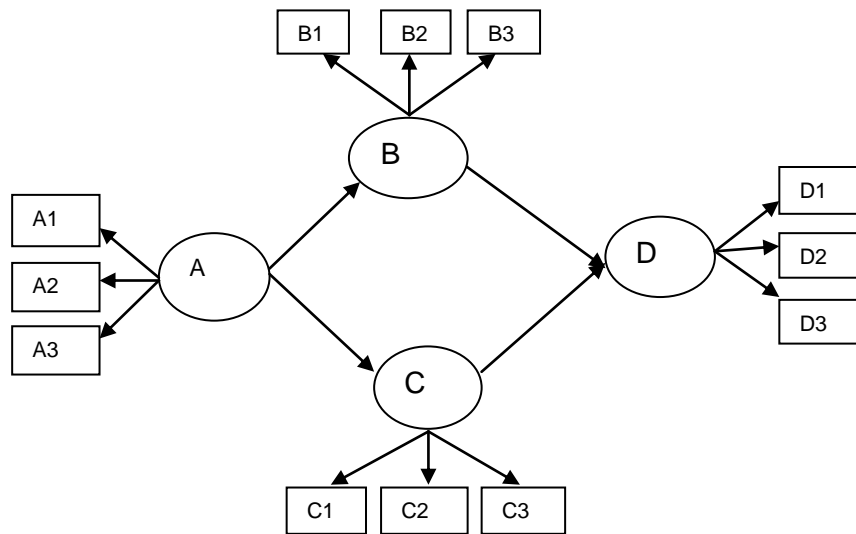


Figure 5.4: An Illustration of the path diagram (Byrne, 2009; Schumacker & Lomax, 2004; Hair et al, 2010)

Step 3 - Converting the path diagram into a set of structural equations

SEM has rules in translating the path diagram into structural equations. Each endogenous construct becomes a dependent variable in a separate equation and a structural coefficient (**btn**) and an error term (**ei**) is affected to each equation. Translating these rules to the path diagram shown in Figure 4.4 above would generate a set of structural equations as defined in Table 5.1 below

	Endogenous Variables	Exogenous Variables	Endogenous variables	Error
	B, C, D	A	B C	Ei
1	B=	b1A		+e1
2	C=	b2A		+e2
3	D=		b3B+b4C	+e3

Table 5.1: An Illustration of structural equations - Translating a path diagram into structural equations (adapted from Hair et al., 2010)

The path diagram in Figure 5.4 Shows three endogenous variables B, C and D and one exogenous variable A. The equations generated are based on the model theoretical assumptions formulated as follows:

- (i) Endogenous variable B is affected by exogenous variable A which is multiplied by its structural coefficient b_1 plus error term e_1 ;
- (ii) Endogenous variable C is affected by exogenous variable A multiplied by its structural coefficient b_2 plus error term e_2 ;
- (iii) Finally endogenous variable D is affected successively by endogenous variables B multiplied by its structural coefficient b_3 and endogenous variable C multiplied by its structural coefficient b_4 plus its error term e_3 .

It should be noted that in this third equation, B and C which were endogenous variables in the previous equations, become exogenous variables in relation to endogenous variable D.

After generating a set of structural equations, the next step is to specify the measurement model by defining the observed or manifest variables that are used to measure the latent constructs. Essentially, the researcher needs to indicate which variables load on to a particular construct by taking a confirmatory approach. Accordingly, the researcher exercises control over the choice of variables that load to each construct (Byrne 2009). Although the literature is not clear on the issue of the adequate number of variables per construct, a minimum of three variables is accepted as a rule, while a maximum number is determined by theoretical justification. Hair et al, (2010) and Blunch (2008) recommend five to seven variables

per constructs, arguing that too many variables could result in a non-parsimonious measurement model.

After defining the measurement model, the researcher needs to ascertain the reliability of the indicators, using one of two approaches. The first approach consists of an empirical estimation whereby loading matrix are specified together with an error term for each indicator variable. In so doing, the loading coefficients provide estimates of the reliability of the indicators and the overall construct when the structural and measurement models are estimated. In the second approach, the reliabilities are fixed. Hair et al (2010) and Brown (2006) mention that this approach is only appropriate in the following circumstances :

- single item measures
- previously established known reliabilities
- two-stage analysis estimating first the measurement model and then the structural model.

Step 4 - Choosing the input matrix and estimating the proposed model

Two types of matrix can be used for data input in SEM: variance/covariance or correlation matrices (Byrne 2009; Hair, Black et al. 2010). According to authors (Hair et al, 2010; Brown, 2006) the covariance matrix provides the advantage of comparing between populations or samples, although this comes with a caveat on interpreting results because coefficients must be interpreted in terms of the units for the constructs. The correlation matrix allows for possible comparison of the coefficients within the model, which in effect makes this matrix more appropriate. It is noteworthy

that computer programs that perform SEM analysis will offer both matrices, which enables the researcher to choose the more suitable input matrix to the study.

Estimating the proposed model deals with the researcher's choice of technique and computer program (Schumacker and Lomax 2004; Byrne 2009; Hair, Black et al. 2010). This covers estimation of the model parameters using one of the following alternatives, although the most efficient and widely used is the maximum likelihood estimation, as it validates results with small samples:

- Weighted least squares (WLS)
- Generalised least squares (GLS)
- Asymptomatic distribution free (ADF)
- Maximum likelihood estimation (MLE)

In addition to the estimation technique, the researcher must decide between the two methods of estimation. The single step analysis includes both the measurement and the structural models in a simultaneous analysis, while the two-step analysis consists of a prior measurement model, followed by a simultaneous estimation of both the structural and measurement models (Hair et al. 2010). Hair et al (2010) contend that if the researcher is using a strong theoretically-based model as expected in SEM, the single step method offers high reliability measures. Byrne (2009) advocates the two-step approach because it provides the researcher with the opportunity to check the validity of the measurement model even when the model is supposed to be built on sound theory.

There are a number of computer programs used in SEM analysis. The first was LISREL or linear structural relations model initially known as JKW model from its authors' initials and was developed in 1973 (Schumacker and Lomax 2004). EQS

was later developed by Peter Bentler. Developed by James Arbuckle, AMOS stands for Analysis of Moment Structures, in other words, analysis of mean and covariance structures (Byrne 2009). It offers two alternative approaches to model specification. The first one uses graphics interface working directly from the path diagram, and the second uses a text interface called AMOS basics working directly from equation statements. The need to understand relationships among various constructs in social science research is increasing, with SEM becoming more popular and various techniques being constantly refined. MPlus is the most recent computer program offering an SEM analysis that includes ordinal and binomial data. AMOS graphics approach remains by far the most popular and is the primary source for technical development in SEM. Whichever computer program is used, there is no difference in terms of results.

Step 5 – Assessing the identification of the structural model

Byrne(2009) describes the step of model identification as the degree to which a unique set of parameters is consistent with the data obtained. SEM offers three solutions with respect to model identification, as explained by Schumaker and Lomax (2004)

- (i) over-identified;
- (ii) just-identified and;
- (iii) under-identified, bearing in mind that SEM primary goal is to build a model that is over-identified (Hair, Black et al. 2010; Schumacker and Lomax, 2004).

Other necessary rules include the rank condition and the order condition. With regard to the order condition, the degree of freedom must be greater than or equal to zero, hence the three solutions for identification would be:

- $df=0$; model is justified
- $df >0$; model over-justified
- $df <0$; model under-justified

With regard to rank condition, each parameter must be uniquely identified. However, due to the complexity in identifying each parameter uniquely, Hair et al (2010) recommend the use of a proxy based on two rules. The first proxy is the three-measure rule which states that any construct with three or more indicators will always be identified. The second rule refers to the recursive model rule based on which recursive model with identified constructs (i.e. three or more indicators) will always be identified. The model identification must fulfil these two conditions of order and rank.

Step 6 – Evaluating the model fit

Following the estimation process, the next step is to evaluate if the model fits the data obtained. Again, authors (Hair et al, 2010; Blunch, 2008; Schumacker and Lomax, 2004) offer a process for assessing the Goodness-of-Fit Model comprising the following:

- a) Check that all SEM assumptions are met and these three assumptions are (i) independent observations, (ii) measurement model and (iii) linearity of all relationships.
- b) Check for any offending estimates, i.e. coefficients in the model that exceed acceptable limits, such as negative or non-significant error variances for

constructs, standardised coefficients exceeding or very close to 1.0, or very large standard errors associated with any estimated coefficient.

- c) Check the model fits at all three levels: overall model fit, measurement model and structural model.

Overall model-fit is assessed using the Goodness of Fit indices, which measure the correspondence of the actual input matrix with the model prediction using one of the three categories of measure:

- An absolute fit measure assesses both the structural and measurement models for an overall fit, collectively with no adjustment for the degree of over fitting that may occur. Such measures include the likelihood of chi square statistic (χ^2), goodness-of-fit index (GFI), root-mean-square residual index (RMR) and the root-mean-square error of approximation (RMSEA).
- An incremental fit measure compares the proposed model with the null model to determine the degree of improvement over the null model, using indices such as the Tucker-Lewis Index (TLI) also called non-normed fit index (NNFI), normed fit index (NFI), comparative fit index (CFI), and the adjusted goodness of fit index (AGFI).
- A parsimonious fit measure adjusts the measures of fit to provide a comparison between models with different numbers of estimated coefficients in order to determine the amount of fit achieved by each estimated coefficient. Normed chi-square (NC), parsimonious goodness-of-fit index (PGFI) and parsimonious normed fit index (PNFI) are indices used in this category.

Fit Index	Description	Acceptable Fit
Absolute Fit Chi-Square Statistic (X²) Goodness of fit index (GFI) Root-mean-square residue (RMR) Root mean square error of approximation (RMSEA)	Tests the statistically significant differences between the observed and estimated matrices. Non significant X ² is desired as a significant x ² indicates probability that differences are due to sampling variations GFI represents the overall degree of model fit. It does not account for degrees of freedom This is the square root of the mean of the squared residual for which no absolute threshold has been established Similar to RMR but measures discrepancies in terms of the population, not only the sample	p>0.05 >0.90 Close to 0 <0.05 to 0.08
Incremental Fit Comparative Fit Index (CFI) Incremental Fit Index (IFI) Normed Fit Index (NFI) Non-Normed Fit Index or Tucker-Lewis Index (NNFI/TLI) Adjusted Goodness-of-fit (AGFI)	Compares the estimated model against the null or independence model. More appropriate for a model development strategy or when smaller sample is used, values range between 0-1 IFI compares estimated model with null or independence model NFI provides a relative comparison of the proposed model to the null model, values ranging between 0 and 1 Combines a measure of parsimony into a comparative index between the proposed model and the null model, values between 0 and 1 AGFI adjusts the GFI by the ratio of the degree of freedom for the proposed model to the degrees of freedom from the null model, values ranging from 0 to 1	>0.90 >0.90 >0.90 >0.90 >0.90
Parsimonious Fit Normed Chi-square (CP=X²/df) Parsimonious normed fit index (PNFI) Parsimonious Goodness-of-fit index (PGFI)	Calculated by dividing the chi-square statistic by degrees of freedom This is a modification of the NFI which takes into account the number of degrees of freedom which is used to achieve the level of fit. Useful in comparing competing models This modifies the GFI and adjusts for the number of estimated parameters, values between 0 and 1 with higher values indicating greater parsimony	<2 to 5 Differences of 0.06-0.09 are proposed as substantive > 0.90

Table 5.2: Acceptable Fit Indices (Hair et al, 2010)

Table 5.2 summarises the indices and their acceptable fit levels as discussed by Hair et al, (2010), and they also recommend that more than one measure from each class

be used to assess the model fit. Further recommendation by other writers such as Schumacker and Lomax (2004) and Hoyle (1995) suggests that the researcher should apply multiple measures from each type of measure to gain a better consensus across the types of measures regarding the acceptability of the proposed model.

Step 7 – Model interpretation and evaluation

Based on fitting indices, a model can be either confirmed or rejected. A confirmed model does not necessarily mean that the model is true but simply that the model is not rejected because it is possible that other models can fit the data. Thus, authors (McCallum and Austin, 2000; Hair et al, 2010; Schumacker and Lomas, 2004; Beauducel and Wittmann, 2005) argue for a plausible model. The use of AMOS output modification indices provides suggestions as to achieving an acceptable model fit (Byrne, 2010; Bentler and Chou, 1987).

5.3.5 SEM Strategy for Modelling

Three modelling strategies dominate SEM, as acknowledged by authors (Hair et al, 2010; Byrne, 2009; Blunch, 2008; Schumacker and Lomax, 2004).

- **Strict confirmatory approach**

The 'strict confirmatory approach' is when the researcher specifies a single model and uses SEM to assess its statistical significance by either rejecting the model or failing to perform any further modifications to improve its fit. Byrne (2009) suggests this strategy is very restrictive and leaves the researcher with no option but to conclude on a rejected hypothesised model.

- **Model development approach**

The 'model development approach' strategy consists of modifications to both structural and measurement models (Hair, Black et al. 2010). However, Byrne (2009) warns against the determination to improve the model until such stage where it fits the data, as it diverts the model away from its confirmatory characteristics towards a more exploratory nature. In dealing with this risk of reduced validity in the model, three suggestions are recommended by both Byrne (2009) and Hair et al (2010) and these are :

- results are partially data driven,
- modifications must be substantively meaningful,
- a modified model must be evaluated by fitting it to an independent sample.

- **Competing Models approach**

The 'competing models approach' requires that alternative models are specified based on the understanding that numerous models could potentially provide equal or better fit to data sample, and based on alternative theoretical frameworks (Hair, Black et al. 2010). Hence, a representative model is selected based on the results of the analysis. Advocates for this method include Byrne (2009) and McCallum and Austin (2000) who see it as an alternative to the other two strategies.

This study adopts the '**model development approach**' and applies appropriate care in the modifications process. This is consistent with the research strategy in addressing the situation where the model, though built on a strong theoretical basis, may still not fit the data perfectly.

5.3.6 Reporting results

McCallum and Austin (2000) state the crucial importance in reporting results in SEM analysis and provide a step by step process:

- (i) A clear and complete specification of models and variables
- (ii) Clear listing of indicators of each latent variable
- (iii) Clear statement of type of data analysed with presentation of the sample correlation and covariance matrix
- (iv) Specification of software used and method of estimation
- (v) Presentation of complete results including multiple measures of Fit.

The inclusion of the path diagram illustrating just the latent variables is optional, although Levin et al (2005) recommend it together with an explanation of the modelling strategy used, a discussion on the matrix.

5.4 Research strategy

Research strategy is concerned with the type of study that the researcher decides to adopt within the choice of methods in order to provide a specific direction for the procedures in the research design (Creswell 2009). As such, the strategy of enquiry or approach to enquiry is largely influenced by the philosophical and epistemological positions adopted by the researcher in the study. Several authors (Gill and Johnson 1991; Blaxter, Hughes et al. 2001; Fellows and Liu 2003; Easterby-Smith, Thorpe et al. 2008) discuss a range of strategies available to research including experiment, case study, survey, action and ethnography. According to Creswell (2009), the choice of strategy is determined by whether the study is using quantitative, qualitative or mixed methods of investigation.

5.4.1 Quantitative design strategies

Experimental research

This strategy seeks to determine the influence of a specific treatment by randomly assigning the treatment to a set of subjects/participants to the study. This strategy could also be quasi-experimental or single-subject, where the subjects/participants are not chosen at random. Essentially, the researcher manipulates the independent variable in a controlled environment in order to test or understand a causal relationship (Blaxter, Hughes et al. 2001). This strategy is more applicable to natural sciences.

Survey

Survey provides a numeric or quantitative description of opinions, attitudes and trends of a population through a sample representative of that population. Essentially, it involves cross-sectional or longitudinal studies using questionnaires or structured interviews to collect data. The objective is to use the representative sample to make inference on the whole population under consideration (Blaxter, Hughes et al. 2001). The main advantage of survey is that it provides a means for generalisation of study results, although such results do not go deep enough in addressing the 'why' question in the research.

5.4.2 Qualitative design strategies

Grounded theory

This is a strategy of enquiry whereby the researcher generates an abstract theory of a process, action or interaction grounded in the views of participants. Essentially, the process follows a multi-stage data collection and refinement of information

categories and inter-relationships (Strauss and Corbin 1998; Charmaz 2006). Grounded theory strategy is unique in that (i) it makes constant comparison of data with emerging categories and (ii) it conducts analysis in order to maximize the similarities and differences of information. This strategy is not suitable for this research which relies heavily on a strong theoretically-based design.

Case studies

Case study is a strategy of enquiry based on in-depth exploration of a programme, event, activity or process of one or more individuals. The researcher collects very detailed information using a variety of data collection procedures over a sustained period of time (Stake 2006). The main issue with this strategy is the limitation of empirical study to only a few cases, which makes it difficult for empirical or statistical generalisation of the research results.

Ethnography

This is a strategy of enquiry in which the researcher studies a cultural group in a natural setting over a prolonged period of time by collecting data through observation and interviews (Cresswell and Plano Clarke 2007). The research context is flexible and evolves in response to the experiences and realities in the field setting. Although this empirical research focuses on the South West region food and drink manufacturing sector, the population is not an intact group and the purpose of the study is not of a cultural nature, though it could be argued that the regional culture may influence the competitiveness of the population being studied.

Phenomenological research

It is described as a strategy of enquiry whereby the researcher seeks to understand the lived experiences of participants through extensive and prolonged

engagement with a small number of participants in order to develop patterns of meaningful relationships (Heron 1996). Although the researcher's experience is distant and distinct from the subject of study, this strategy is deemed inadequate for this research partly due to the large number of subjects involved (359) and partly because the theoretical basis on which the research is designed also predetermines relationships that are meaningful in the research context.

Narrative research

Narrative research is basically about peoples' live stories which are narrated by the researcher in a chronological manner. It is a very subjective strategy in that the researcher's views are combined with those of participants to produce the narrative (Daiute and Lightfoot 2004). Although peoples' live stories could provide an insight into their reality, it does not necessarily provide a meaningful explanation to that personal reality and how it may relate or impact with reality beyond the subject of study (Easterby-Smith and Malina 1999; Easterby-Smith, Thorpe et al. 2008). In a research that takes a deductive approach based on a theory, this strategy is inappropriate. It is also time and resources constraining.

5.4.3 Choice of research strategy- survey

In accordance with the research design, the researcher established that survey was the most appropriate strategy to conduct this research activity. Several factors guided this decision. Firstly, the ontological position adopted in this thesis excludes many of the methodologies available to answer this research question. The epistemological assumptions informed the researcher to adopt a deductive approach, hence the main research question was to explain the underlying factors behind the competitiveness of SW food and drink manufacturing. By testing

hypotheses the research activity will reach an outcome that satisfies statistical tests and enables the results to be generalised to a wider population. An experimental research is most suitable for the field of natural sciences and other strategies such as case method and grounded theory are not considered appropriate to achieve a satisfactory outcome for this investigation. Finally, resources constraints, e.g. time, are always a major factor in deciding the best research strategy and for this reason, survey offers several advantages to the quantitative design research.

The limitations of survey, particularly with regard to its inability to explain deep-rooted social phenomena under investigation have largely been corrected by data analysis techniques such as SEM. This technique enables a simultaneous analysis of multiple measurements of interrelated variables in ways that their different effects can be meaningfully interpreted together in a combination of interrelation based on pre-defined hypotheses. By bringing those variables together in a multivariate analysis, survey data can enable the researcher to measure, explain and predict the multiple combinations in the relationships among these variables.

5.4.4 Data Collection

As discussed in the research strategies section, there are several methods available to the researcher for data collection and the choice of method is largely dictated by the procedures set out in the research design. This study adopts a sequential quantitative/qualitative mixed method design, therefore data collection and data analysis will be completed in that order. It is a dominant quantitative embedded mixed method, giving more dominance to the quantitative data while the qualitative data will play a supportive role in the final stages of data analysis. Also, the choice of SEM for data analysis requires a large sample which further limits the choice of

data collection tools using survey. Denscombe (2003) and Easterby-Smith et al (2008) offer a review of data collection tools in conducting a survey research.

Questionnaire survey

This method of collecting information is based on the researcher asking respondents to complete a questionnaire with a pre-formulated set of questions in a pre-determined sequence. This process can be completed either face-to-face similar to an interview or using one of the communications channels such as post, internet or email. Questionnaire survey is very common in a situation where the researcher needs a large number of responses at one point in time. Although the response rate is often poor, postal questionnaire is more cost efficient than face-to-face interview, and the response is less biased even though in some instances it is difficult to ascertain that the respondent is the actual person to whom the questionnaire was addressed. Also, it offers access to a large number of participants and various locations where more reliable data is required (Bryman 2006).

Other benefits associated with postal questionnaires are that by providing response scale in a pre-determined sequence, the researcher can pre-code data and reduce interaction. In spite of its numerous benefits, questionnaire survey often yields a poor response rate including incomplete data, and the researcher can still influence the respondent through the wording or order of questions and pre-determined response scales. In spite of these weaknesses, questionnaire survey remains the most common tool for data collection in cross-sectional studies.

Interviews

Collecting survey data using interview is a conversational process between the researcher and the respondent and it is most appropriate where the need to obtain

personal data and ask probing questions is desirable (Gray 2004). This process can take two forms (i) face-to-face involving direct contact with the interviewer and most appropriate in situations where the respondent is not comfortable with the language being spoken and (ii) telephone. It is a very time-consuming process, often requiring transcript of responses and the personal interaction is likely to produce biased responses (Denscombe 2003). The whole process can be very onerous if the sample population is large and geographically widely spread.

Documentary research

The use of documentary sources such as company reports, financial reports, employment statistics, demographic survey and other forms of official statistics is often used particularly in longitudinal studies where secondary data are suitable to attain the research objectives. Although this research context has referred to several sources of documentary research in the literature review, the collection of primary data is crucial in meeting the objectives of this research. For instance, data on leadership self-assessment are not available and even if data on social networks did exist it would require substantial manipulation to adapt to the aim and design of this research which is essentially a cross-sectional study (Tashakkori and Teddie 1998).

Observation

The researcher can watch, record and analyse events of interest as a means to collect quantitative data. Observation is based on direct evidence of the eye to witness events through either systematic observations based on a schedule and a checklist or participant observation that can be disguised or open (Gray 2004). Although this method may provide a rich insight to the researcher, it is impractical for this research due to the large number of samples required.

5.4.5 Choice of data collection method: postal questionnaire

Primary consideration is given to the requirement of a large sample in using SEM for data analysis. Time constraints and cost efficiency are also considered with strong arguments in favour of a postal questionnaire. Another major consideration more pertaining to the research context is the fact that the SW region is large with a sparse population particularly in rural areas where the majority of food and drink manufacturers are located. Difficulty of internet and broadband connections would most probably worsen the poor response rate (Easterby-Smith, Thorpe et al. 2008). Therefore, the use of postal questionnaire survey is considered the most appropriate for this study.

5.4.6 Population sampling: credibility

Sampling is important regardless of whether the researcher is conducting a quantitative or a qualitative oriented research because of serious constraints associated with studying the totality of the target population. Even in the case of a small target population, only a proportion of that population is accessible to the researcher.

The real issue facing the researcher is to establish a credible sample in terms of its precision as a representative proportion of the population being studied (Nguyen 2005). Easterby-Smith et al (2008) recommend the following steps in establishing a credible sample:

- Achieve low bias in sample selection - the degree to which the sample is representative of the population enables the researcher to safely apply or transfer conclusions from the sample to the target population. This is achieved mainly through selecting the most appropriate sampling technique.

- Achieve high precision in sample selection – the sample size enables the researcher to reduce the margin of error in the claims made. In other words, the proportion of the sample to the target population does not matter as much as the sample size.

Tashakkori and Teddie (1998) recommend that when the sampling unit consists of intact groups of individuals in clusters not offering large enough numbers to have small sampling errors, then a non-random sample selection is more appropriate. In this case, the selection is based on information already collected on those units and a purposive sampling is more appropriate. Examples include studies on racial or ethnic groups where clusters can be formed based on the degree of racial or ethnic diversity already available to the researcher. When the researcher aims to make inference by generalisation of study results to a larger population, probability sampling is recommended (Tashakkori and Teddie 1998; Easterby-Smith et al. 2008). As this research is taking a theoretically-based confirmatory approach to explain the interaction between three latent variables, a probability sampling strategy is more appropriate.

5.4.7 Sampling in SEM

The issue of sampling in SEM has raised numerous debates with diverse views on the optimal sample size. The issue is particularly related to the number of cases that are acceptable for each variable under study. Considering the assumption that each variable has approximately three parameters in a typical SEM model, Bentler and Chou (1985) suggest that 15 cases per variable corresponding to five cases per parameter are acceptable. Hair et al (2010) acknowledge that there is no correct

sample size but some important issues are worth considering when deciding on sample size. These issues cover model specification, model size, departures from normality and estimation procedures. The recommendation also provides for an increase of sample size whenever the researcher has concerns for specification error.

Sample size

The question about the absolute minimum size is discussed extensively by Hair et al (2010) particularly in relation to the size and the complexity of the model. The rule of thumb is that the sample size must be at least greater than the number of covariance or correlations in the input matrix with a ratio of between five and 10 respondents per each estimated parameter. Also, as the data departs from normality in terms of linearity, the number of respondents should increase to an estimate of 15 respondents per parameter. Furthermore, although 50 respondents has been used previously to validate results using maximum likelihood estimating method, a critical sample size ranging between 100 and 200 should be secured, where 200 is the critical sample size.

Response rate

The key aspect of sampling in SEM is the complexity of the model. Some studies based on simple models have yielded acceptable results on sample size less than 100 (McCullum and Austin 2000). Also, in some studies related to consumer behaviour, sample sizes were often smaller than the minimum recommended size on about 35% of models investigated with an average of five cases per parameter. In view of this, the dominant rule is that sample size should be large enough while securing the best response rate possible. However, in view of the low response rate

associated with postal questionnaire, generally around 15-20% (Denscombe 2003), and anticipating that a response rate of 50% cannot be exceeded in the best case, it would be prudent to estimate that an average response rate of 20% could be achieved, which is acceptable for results validation.

5.4.8 Sampling techniques

The following procedures are recommended in probability sampling, explaining how the sample unit is selected (Tashakkori and Teddie 1998).

Simple random sampling – There is an equal and independent chance for every individual in the population to be selected for the study. The sample is obtained through a selection by chance using a table or computer-generated random numbers.

Systematic random sampling - A sample number is decided and achieved through a Selection of pre-qualified numbering of individuals in the target population. For example, every 10th number will form the sample population hence all numbers ending with 0 as a multiple of 10 are selected. This procedure assumes that the population is listed in an orderly fashion.

Stratified random sampling – This sampling procedure is recommended when the proportion of subgroups or strata is known in the population. The selection of sample units is made randomly but from each stratum.

Proportional sampling – The proportion of each subgroup within the sample reflects exactly the proportion of each subgroup within the target population.

Non-proportional sampling – In this sampling procedure, the sample does not reflect the proportion of each subgroup in the target population, but instead

apportions equal numbers of individuals to each of the subgroups. The results are therefore generalizable to the subpopulation rather than to the entire population being studied. This sampling strategy is most appropriate in studies where some minority groups would be proportionately unrepresented if the sampling were simply random.

Cluster random sampling - This procedure is based on the selection of already formed groups within the population as sample units. Thus, the group becomes the unit of selection and the researcher needs a large number of groups to form a sample.

Multistage cluster sampling – As the term implies, the selection is conducted by stages starting with cluster selection and followed by the selection of sample units within each cluster either through a simple random process or by looking at certain attributes similar to stratified sampling.

5.4.9 Sampling strategy – stratified random sampling

This sampling procedure was deemed most appropriate for this research for the following reasons:

- (i) To address the issue of unequal geographic spread: official database indicates 3,453 food and drink manufacturers in the seven counties of the South West region, of which about two thirds (2,527) are located in the two counties of Devon and Cornwall and the Isles of Scilly;
- (ii) To manage the 'skewness' of database towards small-size firms: approximately 50% of the target population employs less than five employees, also with a concentration of small-size manufacturers in Devon and Cornwall and the Isles of Scilly;

- (iii) To exclude subsidiaries of multinationals and large firms: few firms employing more than 250 employees are located in each county.

5.4.10 Generalization, validity, reliability

Generalization of study findings depends upon validity of the study sample and reliability in terms of error measurement, as these two conditions enable the researcher to make inference to the general population based on the study findings (Easterby-Smith et al, 2008).

Internal and external validity

Validity in a study is concerned with selecting a sample that is most representative of the population as a whole so that results obtained from the study sample are likely to be generalizable to the population. Validity provides integrity to the conclusions generated from the research findings (Bryman 2006; Creswell 2009). For a quantitative study, validity has two elements; external and internal validity.

External validity relates to the transferability of the study findings to the population and includes the generalization of situations and definition of constructs beyond what is used in the study. Fowler (2002) explains external validity as the measurement of a variable based on a sample of items, a number of observations or a specific way of measuring and documenting events. Thus, external validity is the approximate validity by which the researcher can infer that the relationship of association or difference can be generalized across the population in different settings, times and measures.

There is a general consensus that internal validity is the degree to which the study conclusions and inferences are used to establish causal relationships between variables and events. Accordingly, changes in an outcome or dependent variable can be attributed to a preceding or predicting variable as a cause of that change (Easterby-Smith, Thorpe et al. 2008). In other words, internal validity is concerned with the credibility of results that the obtained relationships between variables is real as opposed to spurious, i.e. caused by other variables. In a quantitative study internal validity is dependent on the degree of statistical control in the conceptual framework. As discussed earlier in the sample credibility and sampling procedures in paragraphs 4.3.3.2.4 and 4.3.3.2.6 above, sampling in SEM offers assurance that both external and internal validity are confirmed by a greater number of representative sample units.

Reliability

While validity intends to confirm that study findings can be inferred in other settings, reliability addresses the issue of measurement error and consistency in findings (Saunders et al, 2009; Easterby-Smith et al, 2008). In other words, if the measurement instrument is reliable, it should provide the same result consistently over time (Tashakkori and Teddie 1998). The reliability measures commonly used are **Cronbach Alpha** where probability value (p) higher than .6 ($p > .6$) is a common method. Cooper and Schindler (2008) mention three types of reliability which are: stability, equivalence and internal consistency. However, Hair et al (Hair, Black et al. 2010) warn that in SEM this reliability measure is weak because it assumes that uni-dimensionality exists and therefore does not include it. They recommend that the examination of the statistical significance of estimated coefficients is the best

approach to assessing the structural model. The chi-squared value of $p > 0.05$ confirms that the relationships between variables did not happen by chance.

5.4.11 Measurement: questionnaire design

Measurement addresses the issue of ensuring that the reliability test measures items that are indeed descriptive factors of the variables being studied. Thus, designing a questionnaire in a structure that ensures the right questions are asked and the corresponding right answers are recorded is critical to the measurement process. Easterby-Smith et al (2008) describe five key principles in designing structured questions for surveys and interviews which are;

- a) each questionnaire item should express only one idea to ensure that the respondent is thinking exactly about that precise item as he formulates the answer;
- b) keep the message clear by avoiding jargon and colloquialisms as such terms may not be familiar and understood by all respondents;
- c) use of simple expressions including dividing up complicated processes into a series of simple steps rather than expressing it in one long sentence;
- d) avoid the use of negative which may lead respondents into answering the question the wrong way round particularly where Likert scale is used to record response. Schmidt and Tults (1985) observed that about 10% of respondents in a large scale study may convey the opposite response if negative is used simultaneously with Likert scale ;
- e) avoid leading questions by focusing attention on some areas and not on others running the risk of the respondent giving an answer because that is what the researcher wants.

5.4.11.1 Measurement scales for recording responses

Measurement is concerned with the scale for recording responses and the scale for recording can be categorical or continuous depending on the number of distinctions between alternative points on the measurement scale.

Category scale

Category scales are grouped in two distinctions which are unordered and ordered and based on whether by shuffling the assignment of numbers to categories the meaning of the variable can differ. With unordered or nominal scales, there is no natural ordering. For instance, ethnicity, professional groups could be ranked in any order without affecting the meaning of the variable (Goldacre, Davidson et al. 2004).

With ordinal scales, there is a natural ordering based on pre-defined criteria such as level of education and pre-determined marking reflecting the level of achievement, e.g. socio-economic status, education. However, Easterby-Smith et al (2008) caution that in using category the researcher should remember that scales are simple measurement properties and are not intrinsically linked to the meaning of variables as this is determined by the purpose of the study. As an example, Asian student population in the UK may be recorded on a nominal scale but the allocation of these students between undergraduates, post-graduates and research students will be recorded on an ordinal scale.

Likert scale

Measuring opinions and attitudes is complex and the use of nominal or ordinal scales is limiting as there is no way of ordering agreement or disagreement using a natural ordering since everyone is entitled to an opinion. Likert scale accommodates the measurement of opinions and attitudes by offering a neutral point to allow the

possibility that an individual may not have an opinion on an issue as well as the fact that among those who agree on something there may be a variation in degree. This measurement scale is the most appropriate for recording responses in this study given the concept variables being studied. On each side of the neutral point, there are two alternative response options to record moderate or extreme views for or against. Easterby-Smith et al (2008) contend that both types of attitude and opinion response scales are ordinal scale since agreeing reflects a more positive attitude towards the issue raised than does disagreeing. For instance, in measuring social interactions of a structural dimension, the answer as to whether family and close friends constitute the first point of call would determine the extent and the direction of bridging relationships perceived by respondents in the EP.

Continuous scale

Continuous scales are ordered scale about what is being measured based on the value on the scale, i.e. whether it is an interval or a ratio. A ratio scale has a true zero point which enables a true ratio scale, such as twice as tall (height) , or twice as long (time), etc. When it is not possible to establish a true zero point, the continuous scale is recorded on interval scale and differences between alternative values can be described meaningfully. Easterby-Smith et al (2008) contend that in social sciences, most continuous measurement scales are truly interval scales rather than ratio scales and, for much data on attitudes and opinions, scales are arbitrary and therefore trying to capture the difference succinctly by introducing a fixed value would not matter.

5.4.12 Synthesis of research design

The purpose of a research synthesis, as shown in Table 4.5 below, is to bring the study in a joined-up framework where aims and objectives help to complete the

research process. For a quantitative design, the main stages in the research process are: exploration, construct development, hypothesis generation, hypothesis testing for internal validity and hypothesis testing for external validity.

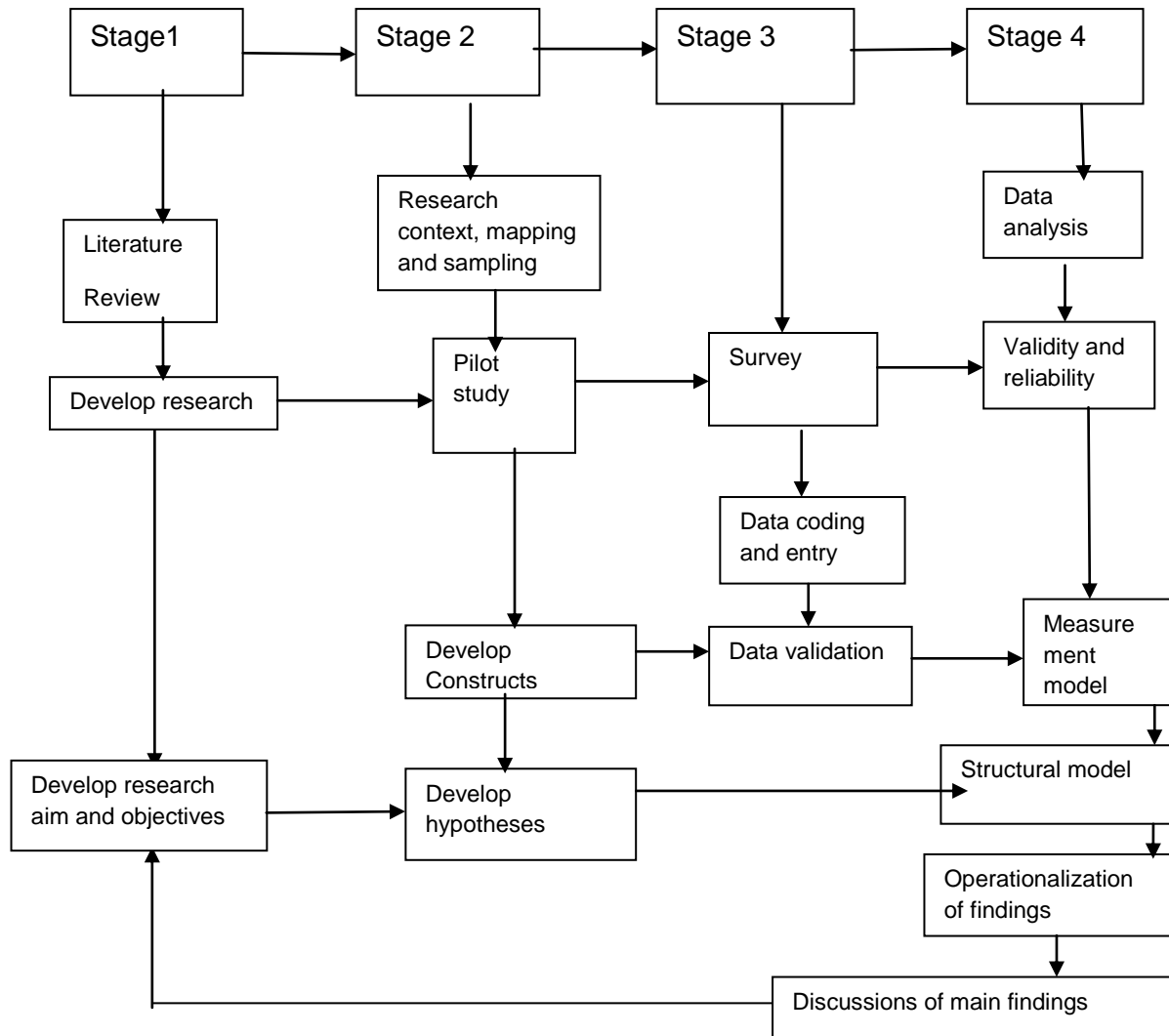


Table 5.5: Synthesis of the research design

5.5 Pilot study

Having satisfied the key principles of a good questionnaire design and the measurement scale appropriate for this research, a survey questionnaire was designed for the purposes of ensuring the content validity, the construct validity and initial reliability statistical testing.

5.5.1 Questionnaire layout

The objective of the questionnaire was to collect data on EP, LS and SC in order to conduct an empirical evaluation of the interaction between these three variables. Accordingly, the questionnaire was designed to provide such data based on the observed variables of each latent variable in the interrelationships. In keeping with the key principles of good questionnaire design (Easterby-Smith et al., 2008), each indicator was expressed as a single measurement item, and where applicable, the questionnaire statement related to each observed variable was adapted to fit the research context.

The questionnaire was designed with consideration to three issues: (i) maximising the response rate (ii) minimising non-valid responses and (iii) engaging respondents to complete the survey within a limited timeframe.

The questionnaire was divided into four parts with an introduction at the beginning of each part providing clear guidelines for the completion process.

Part I was designed to help respondents engage with the process by selecting a goal among the four dimensions of innovation (Schumpeter, 1934) which may instigate an EP in order to achieve it. The related data was not included in the study.

Part II was dedicated to SC and dealt with data expressing the respondent's opinion on the use of social networks. This covered social networks of both relational and structural dimension (Nahapiet and Goshal, 1998) and the use of closure and brokerage representing 'strong ties' and 'weak ties' respectively (Burt, 1997; 1992; Granovetter, 1983). The purpose was to assess the extent of structural holes in the overall pattern of relationships and to evaluate the source of SC of 'intrinsic' and 'instrumental' value in the social networks they use.

Part III was designed to assess the leadership behaviour of business owner/managers with the objective to determine if their entrepreneurial leadership attributes align with the Entrepreneurship Process (Gupta et al, 2004; Schumpeter, 1934b).

Part IV covered the SC benefits that are useful in the process of discovering, evaluating and exploiting opportunity and perceived as important by SW food and drink manufacturers.

Part V collected general business and demographic data on each respondent for purpose of sampling representation and validity. This data was not used to analyse relationships between the main variables. Instead it was used to assess the characteristics of the sample.

Likert scale Survey provides a numeric or quantitative description of opinions, attitudes and trends of a population through a sample representative of that population. The use of Likert Scale was deemed appropriate in this survey to facilitate the collection of opinions on a wide range of scale. With regard to measurement scale, the Likert scale from (1) to (5) was used with (1) reflecting the strongest disagreement or negative attitude, (3) being the neutral position and (5) expressing the strongest agreement or positive attitude. Some items in the

questionnaire required an answer expressing importance or frequency as opposed to attitude or opinion, and a similar measurement scale was adopted. For instance, measuring the structural dimension of SC from the perspective of the use of social networks to access resources, the answers ranged from (5) very important to (1) very unimportant with a neutral position (3) expressed as neither important nor unimportant. The same argument was applied to social networks from a relational perspective with answers ranging from (5) frequently to (1) never with no opinion (3) as the neutral position. In so doing, all questionnaire items were measured on a Likert scale of (1) to (5).

Initially, the first draft of the questionnaire was checked by seven (7) doctorate research students, five academic staff and four programme managers from business support agencies selected from Taste of the West, Business Link and Food and Drink Devon. This was necessary to ensure that they could understand the questions. Their comments covered the following aspects:

- questionnaire layout
- terminology
- questionnaire covering letter.

All relevant comments were included to produce a revised draft questionnaire.

5.5.2 The study main variables

Referring to the conceptual model, three main variables articulate this study. The dependent variable is EP outcomes represented by SC benefits that derive from social networks and are useful for the EP. The mediating variable was LS and represented by the leadership attributes required in formulating a vision and mobilising the resources to achieve that vision. It should be mentioned that LS is

also the dependent variable in the direct relationship with SC. The independent SC was represented by social networks which were measured on the two dimensions of SC: relational and structural. It is also assumed that social ties can be used for the purposes of extracting instrumental value and intrinsic value simultaneously. Tables 5.3-5.5 summarise the study variables

Question items	Researchers
Social networks used to access information and resources for market organisation: instrumental value of SC	Burt, 2009; 1997; 1992; Casson and Della Giusta, 2007; Nahapiet and Goshal, 1998
<u>Closure</u> <ul style="list-style-type: none"> • Family members, close friends, partners • Employees, customers • Local and trade associations 	Aldrich and Zimmer, 1986; Granovetter, , 1983; Birley, 1985; Hill et al, 1997; Bhagavatula et al, 2010;
<u>Brokerage</u> <ul style="list-style-type: none"> • Professional services • Regional, national bodies • Media 	Tiwana, 2007; McEvily and Zaheer, 1999; Granovetter, 1983; Cooper et al, 1995; Honig and Davidson, 2000;
Social networks used in times of need to socialise, confide: intrinsic value of SC	Burt, 2009; 1997; 1992; Casson and Della Giusta, 2007; Nahapiet and Goshal, 1998
<u>Closure</u> <ul style="list-style-type: none"> • Family members, close friends, partners • Employees, customers • Local and trade associations 	Hakansson and Snehota, 1995; Coleman, 1988; Jensen, 2001; Jensen and Greve, 2002.
<u>Brokerage</u> <ul style="list-style-type: none"> • Professional services • Regional, national bodies • Media 	Audet et al, ; Granovetter, 1985; Covey , 2006; Coy et al, 2007

Table 5.3 Questionnaire items for Social Capital

5.5.3 Content validity

The first step was to define the questionnaire content based on the measurement model of the three main variables as defined in the conceptual measurement model. Initially, the first draft of the questionnaire was checked by seven doctorate research students in business management, five academic staff and four programme

managers from business support agencies selected from Taste of the West, Business Link and Food and Drink Devon.

Question items	Researchers
<u>Transformational leadership attributes</u> Visionary Intuitive/extra insight Enthusiastic Inspiring Foresight Confidence-builder	House et al, 2002; Gupta et al, 2004; Vecchio, 2003; Shamir et al, 1993; Bass and Avolio, 1997;
<u>Team-oriented leadership attributes</u> Encouraging Team-builder Integrator/trust partners, employees Commitment Encourage creativity	Graen and Uih-Bein, 1995; Ghemawat and Del Sol, 1998;
<u>Value-based leadership attributes</u> Goal-oriented, ambitious Performance oriented, self-achievement Intellectually stimulating Decisive Reward, effective negotiator Well-informed	Katou, 2011; Bandura, 1997; Gupta et al, 2004;

Table 5.4 Questionnaire items for Leadership

Question items	Researchers
<u>EP outcomes: SC benefits</u> Privileged access to information and resources Influence Social credential Recognition and identity	Lin et al, 2008; Domhoff, 1967; Shane and Venkataraman. Shane and cable, 2002; Honig and Davidson, 2000; Packalen, 2007; McAllister; Gubbin and McCurtain, 2008

Table 5.5 Questionnaire items for EP outcome

This was necessary to ensure that they could understand the questions. Comments were used to refine the questionnaire on the following aspects:

- questionnaire layout
- terminology
- questionnaire covering letter.

All relevant comments were included to produce a revised questionnaire to be completed by a small number of respondents selected among the population.

5.5.4 Population identification and choice of sample

The database used for the population identification was the customer database of Business Link. This was deemed appropriate because Business Link was at the time the main UK government funded agency providing support to SMEs and as such the main point of call for all business support services including those offered by other Government departments such as DEFRA, UKTI, DCLG, BIS. The selection criteria was based on SIC codes, service description and postcode. This primary data was subsequently checked to confirm that selected contacts were in the food and drink manufacturing sector as a primary function.

Of the 50 businesses selected for the pilot study, 25 were based in Devon out of which six (6) were interviewed face-to-face to explain the study aim and to ascertain their understanding of the questions. For practical reasons, it was not possible to conduct visits in the other counties. The remaining 44 all received a telephone call explaining the purpose of the study and checking their understanding of the questionnaire content, followed by a postal survey questionnaire.

5.5.5 Construct validity

Construct validity is an essential step to ensure that the research instrument is measuring the constructs defined as part of the study variables (Vogt, 2007). The process is important to establish if the conceptual framework underpinning the structural model of causal relationships among the variables enables those variables as constructs to correlate (Bryman and Bell, 2007). As mentioned in the preceding sections there are two types of construct validity which are discriminant and convergent and they will be analysed in detail as part of the factor analysis to

determine the input matrix for the measurement model. This will be completed in the next chapter. However, part of the pilot study is to confirm that the items loading on each construct show an acceptable level of correlation. Corrected-item correlations are used to measure the construct and its indicators. Netemeyer et al (2003) recommend that indicators loading between 0.35 and 0.80 in corrected-item correlations should be retained as valid items to measure the construct.

5.5.6 Testing for construct reliability

Reliability testing helps to ensure that the results obtained from the survey instrument can be reproduced (Litwin, 1995). The Cronbach's alpha value of the homogeneity of a scale formed of multiple items rank from (0) indicating that measures are totally inconsistent to (1) showing a perfect correlation. Researchers argue about the acceptable scale for maintaining an item within a construct (Leblanc, 1992; Hair et al, 2010; Field, 2009) but a Cronbach's alpha value above 0.70 is deemed the norm. For the three variable constructs, results of construct reliability are presented in Table 5.7 below.

Starting with the independent variable SC, Table 5.6 shows that of the 12 items measuring SC on relational (intrinsic value) and structural (instrumental value) dimension six items are deleted because the corrected –item total correlation is below the threshold of 0.35 and a Cronbach's alpha value increases from 0.681

Eight of the initial 17 items measuring LS construct show a Corrected-item correlation below the threshold of 0.35. The reliability test using Cronbach's alpha yields a coefficient of 0.775. The same test is finally performed for the EP outcomes representing the dependent variable. All four items measuring of EP outcomes

construct show corrected-item total correlation values above 0.35. The construct reliability test was recalculated yielding a Cronbach's alpha value of 0.817.

Social networks: relational and structural dimension including closure and brokerage	Corrected-item total correlation	Cronbach's alpha if item deleted
Social networks instrumental value: family, friends, partners	0.458	0.802
Social networks instrumental value: employees, customers	0.427	0.844
Social networks instrumental value: local associations	0.591	0.789
Social networks instrumental value: professional services	0.643	0.783
Social networks instrumental value: regional, national bodies	0.531	0.795
<i>Social networks instrumental value: media</i>	<u>0.319</u>	<u>0.762</u>
<i>Social networks intrinsic value: family, friends, partners</i>	<u>0.361</u>	<u>0.810</u>
<i>Social networks intrinsic value: employees, customers</i>	<u>0.284</u>	<u>0.816</u>
Social networks intrinsic value: local associations	0.603	0.786
Social networks intrinsic value: professional services	0.542	0.793
<i>Social networks intrinsic value: regional/national bodies</i>	<u>0.279</u>	<u>0.797</u>
Social networks intrinsic value: media	0.500	0.737

Table 5.6 Reliability of Social Capital variable construct

Leadership attributes including transformational, team-oriented and value-based dimensions	Corrected-item total correlation	Cronbach's alpha
Ambition, goal	0.518	0.750
Performance-oriented, hard work	0.472	0.751
Inspiring	0.623	0.824
<i>Visionary</i>	<u>0.339</u>	<u>0.849</u>
Enthusiastic	0.555	0.741
<i>Extra insight, intuitive</i>	<u>0.307</u>	<u>0.749</u>
Well-informed, knowledgeable	0.434	0.758
<i>Intellectually stimulating</i>	<u>0.327</u>	<u>0.834</u>
<i>Decisive</i>	<u>0.327</u>	<u>0.837</u>
Confidence-builder	0.487	0.834
<i>Support creativity</i>	<u>0.279</u>	<u>0.767</u>
Motivational/encouraging	0.612	0.825
Foresight	0.427	0.758
Team-builder	0.696	0.820
<i>Integrator, trust employees and partners</i>	<u>0.319</u>	<u>0.762</u>
Reward/effective negotiator	0.604	0.826
Commitment	0.703	0.818

Table 5.7 Reliability of Leadership variable construct

EP outcomes represented by SC benefits	Corrected-item total correlation	Cronbach's alpha if item deleted
Social recognition	0.451	0.744
Social credentials	0.621	0.727
Privileged access to information and resources	0.461	0.742
Influence	0.432	0.747

Table 5.8: Reliability test for EP outcome variable construct

Results from the construct reliability for the three main variables indicate that there is enough correlation among the items measuring each construct. Apart from the SC construct which shows a Cronbach's alpha value below 0.70, all results point in the right direction. Therefore, it was deemed prudent to retain all 33 items in the data collection because the pilot study sample was not sufficient to decide on construct measurements. Appendix 5.1 presents the survey questionnaire used for the pilot study and later for the main data collection.

5.5.7. Identification of EP outcome and applicability to business

As discussed in Section 4.1.2.3 of Chapter Four on the study conceptual model, SC generates benefits that are very attractive to BOMs because of the competitive advantage that derives from social interactions. Lin et al (2008) identified four benefits that accrue from social relations, as enumerated in Table 5.8 above. Because SC is a multi-faceted concept, specific applications of SC benefits to businesses have been the subject of previous studies. Empirical evidence suggests that gaining privileged access to information or resources enables BOMs to spot and evaluate opportunity (Casson and Della, 2007; Greve and salaff, 2003; Ahuja, 2000; Aldrich and Zimmer, 1986). Equally, research shows that influence affects strategic

decision making in matters such as resources allocation (Packalen, 2007; Uzzi, 1999, Birley, 1985; Coleman, 1990). Study findings reveal that social credentials - which are manifest in the fact that people are prepared to stand behind a BOM- are determined by the intrinsic value vested in the relationship, but more importantly affects strategic decision-making such as partnership and financing which are critical in the process of evaluating and exploiting a market opportunity (Craig et al, 2007; Domhoff, 1967; Constant and Zimmerman, 2006; Brunetto and Farr-Wharton, 2003; Saxenian, 1994). Identity and recognition have also been established as strategic resources in building strong brands (Casson and Della Giusta, 2007). To the extent that human action is situated in a socio-environment where information asymmetries affect the value of things (Hayek, 1937, Kirzner, 1973) it could be strongly argued that, from a sociological perspective, BOMs maintain social interactions in expectation of derived benefits of SC which could improve their business competitiveness (Nahapiet and Goshal, 1998).

5.6 Conclusions

This chapter has presented the methodology appropriate to achieve the study aim and objectives. Taking a realist ontological position, the researcher has adopted a quantitative design to conduct the study using an SEM. It is also explained that a stratified random sampling will be used to identify the population and obtain an acceptable sample size. A pilot study has been completed to test the reliability of the research instrument. The three main variables and their measurement indicators as described in the conceptual framework have been tested for initial stage construct reliability. The result shows that all 33 items are retained for data collection and will be further tested for construct validity before determining the input matrix. This is completed in the next chapter.

CHAPTER SIX: PRESENTATION OF DATA AND MODEL FITTING

6.0 Introduction

Chapter Four covered the theoretical framework and the main constructs articulating this thesis. It also presented the structural model built on a path diagram using the study hypotheses which stipulate the causal relationships between the main variables and the measurement model showing the items measuring each construct.

Chapter Five presented the methodology and discussed the steps involved in SEM which included (i) the development of a theoretically-based model, (ii) construction of a path diagram, (iii) the conversion of the path diagram, (iv) choosing the input matrix, (v) assessment of the identification of the model, (vi) evaluation of the goodness-of-fit and (vii) interpretation of the model (Hair et al., 2010). The pilot study was also covered.

This chapter is concerned with the remaining four stages of SEM and covers the empirical evaluation of the model with respect to the theoretical model. The first section presents the sample characteristics and descriptive statistics. Section Two covers pre-analysis of the measurement model with a particular emphasis on the strategy and the validation process for the measurement items generating the input matrix. Section Three assesses the model looking at parameters and estimations and the validity and reliability of each construct or composite in the measurement model. Sections Four and Five present the fitting model and the validation of hypotheses with an analysis of the path diagram of interdependence relationships. Section Six offers an interpretation of the model results starting with an assessment

of the measurement model and the effect of each construct variable within the model, and an operationalization of the model hypotheses with conclusions on main results is provided in Section Seven. Finally Section Eight summarises additional data collected as part of the research instrument and representing participants' opinions.

6.1 Descriptive statistics

As discussed in Chapter Two, the UK South West food and drink manufacturing sector shares many characteristics of the industry at the national level (DEFRA, 2013; 2011; ONS, 2010; 2005). Most of the socio-demographic and business characteristics of the food and drink manufacturing sector such as product portfolio, rural location, farm ownership have been identified in the South West Region at proportions very similar to the national levels (ONS, 2010; 2006, SWLFP, 2003). It was also explained in the pilot study that the customer database of Business Link was deemed appropriate for the population identification as it was the main UK government funded agency providing support to SMEs. Other government departments such as DEFRA also channelled substantial support via the Business Links across the country. The selection criteria was based on SIC codes, service description and postcode and generated raw data which was subsequently cleansed in order to retain only those contact details whose primary activity was food and drink manufacturing.

The questionnaire was divided into five parts with an introduction at the beginning of each part providing clear guidelines for the completion process.

Part I was designed to help respondents engage with the process by (i) selecting a goal among the four dimensions of innovation (Schumpeter, 1934), and (ii) navigating through the EP to achieve that goal.

Part II was dedicated to SC and dealt with data expressing the respondent's opinion on the use of social networks. This covered social networks of both relational and structural dimension (Nahapiet and Goshal, 1998) and the use of closure and brokerage representing 'strong ties' and 'weak ties' respectively (Burt, 1997; 1992; Granovetter, 1983). The purpose was to assess the extent of structural holes in the overall pattern of relationships and to evaluate the source of SC of 'intrinsic' and 'instrumental' value in the social networks they use.

Part III was designed to assess the leadership behaviour of business owner/managers with the objective to determine if their entrepreneurial leadership attributes align with the Entrepreneurship Process (Gupta et al, 2004; Schumpeter, 1934b).

Part VI covered the SC benefits that are useful in the process of discovering, evaluating and exploiting opportunity and which are perceived as important by SW food and drink manufacturers.

Part V collected general business and demographic data on each respondent for the purpose of sampling representation and validity. This data was not used to analyse relationships between the main variables.

Likert scale Survey provides a numeric or quantitative description of opinions, attitudes and trends of a population through a sample representative of that population. The use of Likert Scale was deemed appropriate in this survey to facilitate the collection of opinions on a wide range of scale. With regard to measurement scale, the Likert scale from (1) to (5) was used with (1) reflecting the strongest disagreement or negative attitude, (3) being the neutral position and (5) expressing the strongest agreement or positive attitude. Some items in the questionnaire required an answer expressing importance or frequency as opposed to

attitude or opinion and a similar measurement scale was adopted. For instance, measuring the structural dimension of SC from the perspective of the use of social networks to access resources, the answers ranged from (5) very important to (1) very unimportant with a neutral position (3) expressed as neither important nor unimportant. The same argument was applied to social networks from a relational perspective with answers ranging from (5) frequently to (1) never with no opinion (3) as the neutral position. In so doing, all questionnaire items were measured on a Likert scale of (1) to (5).

6.1.1 General characteristics of the sample

Stratified random sampling procedure was deemed more appropriate for this research for the following reasons:

- (i) The initial target population obtained from the Business Link database contained 3,453 food and drink manufacturers in the seven counties of the South West region of which about two thirds (2,527) were located in the two counties of Devon and Cornwall and the Isles of Scilly;
- (ii) Approximately 50% of the target population employs less than five employees, again with a concentration of small-size manufacturers in Devon and Cornwall and the Isles of Scilly;
- (iii) All large manufacturers with more than 250 employees were excluded from the target population.

In order to obtain a credible sample that is non-biased towards one county or one particular group within the target population, the sampling procedure went through the following steps;

- a) The first step was to distribute the database among the seven counties each representing a stratum.

- b) The second step was to eliminate all businesses with more than 250 employees as well as branches or subsidiaries of large corporations (e.g. Unilever, Cadbury, Kraft, Wiseman, and Constellation Europe). The main justification derives from the findings of previous studies showing that leadership in intrapreneurship and entrepreneurship differ in terms of decision-making and Board composition and functions (Kuratko and Hornsby, 1998, Daily and Dalton, 1993). Thus, social networks interactions as well as SC benefits are also perceived differently in the work place.
- c) The third step was to randomly eliminate businesses with less than five employees proportionately to the total number in each county or stratum. This step was critical for two main reasons: (i) to avoid a skewed response towards opinions of businesses employing less than five employees, and (ii) to ensure that the empirical study remains in line with the theoretical model.
- d) The fourth step was to reconcile sample units across all counties/strata in order to obtain the representation of the target population within the sample. For instance, Avon and Wiltshire have a ratio of sample units to target population which is much higher than the same ratio in Devon.

6.1.2 Questionnaire administration

A total of 1,218 potential respondents were identified and each one received a questionnaire with a cover letter and a prepaid reply envelope by post. The survey was administered in two stages. Within the two weeks following postal distribution of the questionnaire approximately 200 responses were received indicating a very positive response rate. Thereafter, the response rate declined to about 20 over the following month of August which was holiday and harvest time. The second stage consisted of telephone calls to Taste of the West, reminding members to complete

the questionnaire. This was followed by a wave of responses within a period of two weeks. Over a period of four months of data collection, 370 responses were received including 11 non-valid forms yielding a response rate of 30% (Denscombe, 2003). The results obtained including the distribution of respondents by stratum are presented in Table 6.1 below.

County/Stratum	Population	Potential Respondents	Sample units
Avon	51	32	18
Cornwall & Isles of Scilly	967	389	90
Devon	1560	443	146
Dorset	168	60	16
Gloucestershire	148	75	15
Somerset	455	169	56
Wiltshire	118	50	19
Excluded	(686)	0	(11)
Total	3767	1218	359

Table 6.1: Sample Summary

6.1.3 Sample size

The issue of sample size was discussed in Chapter Four and there was no clear agreement on what is considered the correct sample size. However, in using SEM, the general recommendation is that the sample size must be at least greater than the number of covariance or correlations in the input matrix with a ratio of between five to 10 respondents for each estimated parameter. In this study, the model has three variables with forty nine indicators. Considering the range of five to ten cases for each estimated indicator, the critical sample size should be between 240-480 respondents. In view of the low response rate associated with postal questionnaire, generally around 15-20% (Denscombe, 2003), and anticipating that a response rate

of 50% cannot be exceeded in the best case, the researcher estimated that a sample size between 234-246 representing 20% response rate with a five per cent error margin either way was the very minimum size to achieve for results validation (McCullum and Austin, 2000).

With respect to non-respondents, the issue of sample size bias was considered. However, as the sample was very carefully selected within the target population, it was considered that the non-respondents had the same characteristics and as such no non-response bias was expected.

6.1.4 Respondents' characteristics: socio-demographic data

The data related to demographic characteristics was collected in Part V of the questionnaire. The questionnaire was addressed to business owner/managers as this category was deemed more suitable to provide adequate data for this research activity. Approximately 50% of all responses received included additional comments in the box provided which suggests that the questionnaire was completed by owner/managers themselves. The main criteria included: gender, age, years of experience, education achievement, number of hours spent on leisure activities per week. The results are summarised in Table 6.2.

6.1.5 Respondents' characteristics: business data

Information was also collected on the legal status and farm ownership characteristics in Part V of the questionnaire. The results were consistent with previous data which showed that about two thirds of food and drink manufacturers own a farm, a proportion which is very similar to that observed as a result of the farm diversification (DEFRA, 2003). These results are also supported by demographic characteristics on age and years of experience with 68% of sample units aged 45 and over and 50% reporting over 20 years of experience (DEFRA, 2008).

Respondents Characteristics	Sample units	Proportion in sample
Gender	Male=272	76
	Female=87	24
Age	25-35=22	6
	36-45=94	26
	46-55=141	39
	>55=102	28
Education Level	<GCSE=23	6
	GCSE=79	22
	Technical College=80	22
	University degree=78	22
	Professional qualification=57	16
	Post Graduate=42	11
Years of Experience	<5=48	14
	6-10=45	12
	11-15=42	12
	16-20=42	12
	21-25=56	15
	>25=126	35
Hours Spent on Leisure Activities	<5 =155	44
	6-10=127	35
	11-15=40	11
	16-20=13	3
	>20=24	6

Table 6.2: Descriptive statistics: socio-demographic data

The issue of small-size business dominating the sector also emerged with 47% of sample units employing less than five people. Combining results from Tables 6.2 and 6.3 provides evidence of the sample representativeness of the population and offers some assurance about internal and external validity and the generalisation of the research findings.

Firm Characteristics	Sample Units	Proportion in sample (%)
Legal Status	Sole Trader =36 Partnership = 127 Limited = 167 Others = 29	10 35 46 8
Number of Employees	Up to 5 = 168 6-10 = 50 11-15 = 35 16-20 = 10 >20 = 96	47 13 10 3 27
Average sales growth over the past 5 years (in %)	<0 = 27 Up to 10 = 142 11-20 = 79 21-30 = 37 >30 = 74	8 40 22 10 21
Farm ownership (in ha)	<20 = 189 21-50 = 31 51-100 = 20 >100 = 33 No ownership = 86	52 9 4 9 26
Distance to nearest customer(in miles)	Up to 5 =223 6-10 = 29 11-15 = 10 >15 = 41 Pick up = 56	62 8 3 11 16
Product Type	Drinks incl. alcoholic = 32 Dairy = 122 Seafood = 27 Bakery & confectionery = 62 Meat = 56 Ready meals & veg = 60	9 33 7 18 15 18

Table 6.3: Descriptive statistics - Business data

6.1.6 Frequencies distribution

Results on frequencies distribution present opinion expressed by all respondents and grouped by variable construct as presented in Tables 6.4-6.6.

Social Networks	(1)		(2)		(3)		(4)		(5)		Mean
Structural dimension/Instrumental value	Very important		Important		Neither Nor		Unimport		Very unimport		
	F	%	F	%	F	%	F	%	F	%	
Structural, family/friends	148	41.2	142	39.6	42	11.7	21	5.8	6	1.7	4.13
Structural, employees, customers	220	61.3	113	31.5	18	5.0	20	6	9	1.7	4.50
Structural local associations	99	27.6	158	55.0	75	20.9	21	5.8	6	1.7	3.90
Structural professional services	50	13.9	163	45.4	101	28.1	30	8.4	15	4.2	3.57
Structural regional/national bodies	29	08.1	139	38.7	134	37.3	36	10	21	5.8	3.33
Structural media	42	11.7	106	29.5	113	31.5	68	18.9	30	8.4	3.17
Relational dimension/Intrinsic value	Frequently		Occasionally		No opinion		Rarely		Never		
	F	%	F	%	F	%	F	%	F	%	
Relational , family/ friends	263	73	78	21.7	12	3.3	3	0.8	3	0.8	4.66
Relational employees/customers	210	58.5	113	31.5	15	4.2	18	5	3	0.8	4.42
Relational local associations	40	11.1	188	52.4	42	11.7	60	16.7	29	8.1	3.42
Relational professional services	67	18.7	172	47.9	54	15.5	45	12.5	21	5.8	3.61
Relational, regional national bodies	12	3.3	129	35.9	81	22.6	84	23.4	53	14.8	2.90
Relational media	18	5.0	67	18.7	68	18.9	69	19.2	137	38.2	2.33

Table 6.4: frequencies analysis for Social Capital

In terms of importance and combining important with very important, social ties that are used for instrumental value are: employees and customers (61.3%), family, close friends and partners (41.2%), local associations (27.6%) media (11.7%) and finally regional and national organisations (8.1%). On the relational dimension again relationships with family and close friends came first with (73%) with regional and national bodies coming last (3.3%) and other networks maintaining the same level of importance in terms of the frequency of interactions.

Leadership attributes	Strongly agree		Agree		Neither Nor		Disagree		Strongly disagree		Mean
	F	%	F	%	F	%	F	%	F	%	
Ambition	204	56.8	146	40.7	9	2.5					4.54
Performance oriented	127	35.4	169	47.1	54	15	6	1.7	3	.8	4.14
Well-informed	129	35.9	209	58.2	21	5.8					4.30
Foresight	127	35.4	178	49.6	48	13.4	6	1.7			4.19
Vision	85	23.7	196	54.6	72	20.1	6	1.7			4.00
Integrator/trust partners	133	37.0	181	50.4	42	11.7	3	0.8			4.24
Confidence builder	163	45.4	160	44.6	30	8.4	6	1.7			4.34
Reward/effective negotiator	143	39.8	171	47.6	42	11.7	3	0.8			4.26
Motivational	125	34.8	153	42.6	73	20.3	8	2.2			4.10
Inspirational	107	29.8	162	45.1	81	22.6	9	2.5			4.02
Enthusiastic	165	46.0	164	45.7	27	7.5	3	0.8			4.37
Team builder	106	29.5	188	52.4	59	16.4	6	1.7			4.10
Commitment	100	27.9	170	47.4	83	23.1	6	1.7			4.01
Support creativity	101	28.1	193	53.8	54	15	11	3.1			4.07
Decisive	104	29.0	133	37	84	23.4	38	10.6			3.84
Extra insight	105	29.2	155	43.2	81	22.6	18	5.0			3.97
Intellectually stimulating	122	34.0	169	47.1	65	18.1	3	0.8			4.13

Table 6.5: Frequencies analysis for Leadership

On leadership attributes, ambition ranked highest with 56.8% followed by enthusiastic (46%) confidence builder (45.4%) and reward/effective negotiator (39.8%). The items with the lowest means were Decisive (3.84) and intuitive (3.97).

EP outcomes/SC benefits	Strongly agree		Agree		Neither Nor		Disagree		Strongly disagree		Mean
	F	%	F	%	F	%	F	%	F	%	
Social credentials	53	14.8	188	52.4	86	24	29	8.1	3	.8	3.72
Social recognition and identity	26	7.2	152	42.3	125	34.8	44	12.3	12	3.3	3.38
Influence	36	10.0	171	47.6	108	30.1	41	11.4	3	0.8	3.55
Privileged access to information and resources	27	7.5	156	43.5	123	34.3	50	13.9	3	0.8	3.43

Table 6.6: frequencies analysis for Entrepreneurship process outcome

On EP outcomes, social recognition is perceived by respondents as the most important outcome of EP, with 67% combined opinion of strongly agrees or agrees. It is followed by influence with 57.6% and finally privileged access to information and resources with 51%. Social recognition was perceived as the least of benefits from social interactions that contribute to EP outcomes with 49.5% combined strongly agree and agree and the lowest mean of 3.38.

6.2 Pre-analysis for SEM measurement model

Authors (Schreiber et al, 2006; Byrne, 2009; Hair et al, 2010) recommend that when using SEM, results should separate the pre-analysis steps from the post-analysis procedures where the model fitting is completed. A similar approach is adopted in this thesis including the definition of the software program used and the model acceptable fitting indices.

6.2.1 Factor analysis

A preliminary factor analysis was necessary in order to identify groups of variables which form a cluster based on the questionnaire items. It was also useful in reducing the number of factors to a manageable size and assessing to which extent the data fits an expected structure (Field, 2009). The main objective was to explore the structure of a set of variables taking a confirmatory approach (Hair et al, 2010).

Prior to testing for construct validity, the reliability of the original measurement scale was run on SPSS using Cronbach's alpha to ascertain that the variables were valid for factor analysis. 12 variables measure SC construct; 17 variables measure the LS construct and four variables measure the EP outcomes construct making a total of 33 variables. Cronbach Alpha value below .70 indicates that there may be problems

with factor analysis in terms of construct validity. Table 6.7 shows a Cronbach's alpha value of 0.899 on standardised items confirming that factor analysis can proceed.

Cronbach' s alpha	Cronbach' s alpha on standardised items	No of items
.891	.899	33

Table 6.7 Reliability statistics of factors

Another important test was to ascertain the sampling adequacy based on the Kaiser-Meyer-Olkin (KMO) measure. As shown in Table 6.8 below KMO shows a value of 0.792 confirming that the variables are valid for factor analysis. The Bartlett's test of sphericity is used to establish the significance of the validity of the initial variables. The test result showed Chi-Square = 3004.191, df = 171 and $p < 0.01$ and therefore the Null Hypothesis was rejected. In other words, the variables determining the correlation matrix were all uncorrelated in spite of the fact that they form an identity matrix.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.792
Approx. Chi-Square		3004.191
Bartlett's Test of Sphericity	Df	171
	Sig.	.000

Table 6.8: KMO and Bartlett's tests

Factor extraction was the next step consisting of minimising the sum squared differences between observed and reproduced correlation matrices using SPSS. In

order to achieve this, it was necessary to evaluate the communality among the 33 variables, given that communality value of (1) is given for each variable and variables with low communality should be excluded from the correlation matrix. This is because by extracting those factors with low communality the sum of squared differences between observed and reproduced correlation matrices is minimised (Brown 2008).

The proposed model of 33 measurement items or factors was reduced to a rotated component matrix of six dimensions with 24 factors.

Items	Initial	Extraction
Structural family, close friends, partners	1.000	.661
Structural employees, customers	1.000	.390
Structural local associations	1.000	.610
Structural professional services	1.000	.648
Structural regional/national bodies	1.000	.606
Structural media	1.000	.725
Relational family, close friends, partners	1.000	.363
Relational employees, customers	1.000	.320
Relational local associations	1.000	.535
Relational professional services	1.000	.656
Relational regional/national bodies	1.000	.334
Relational media	1.000	.226
Leadership ambition/goal	1.000	.574
Leadership performance-oriented, hard work	1.000	.648
Leadership inspirational	1.000	.623
Leadership visionary	1.000	.328
Leadership enthusiastic	1.000	.442
Leadership intuitive/extra insight	1.000	.335
Leadership well-informed, knowledgeable	1.000	.370
Leadership intellectually stimulating	1.000	.472
Leadership decisive	1.000	.445
Leadership confidence-builder	1.000	.553
Leadership support creativity	1.000	.343
Leadership motivational, encouraging	1.000	.625
Leadership foresight, anticipate future	1.000	.501
Leadership team-builder	1.000	.725
Leadership integrator, trust employees and partners	1.000	.442
Leadership reward, effective negotiator	1.000	.505
Leadership commitment	1.000	.740
EP outcome social credentials	1.000	.635
EP outcome privileged access to information and resources	1.000	.657
EP outcome influence	1.000	.569
EP outcome social recognition, identity	1.000	.537

Table 6.9: Communalities values of factor analysis

The summary result using Varimax with Kaiser Normalisation extraction method is provided in Table 6.9 and Table 6.10 showing the communalities values of factor analysis and the Eigenvalues for the six factors respectively.

Data in Table 6.10 shows that 10 unrelated components explain 72.046% of the information contained in the original 33 variables, which is beyond the threshold of acceptable results (Field, 2009; Byrne, 2009).

Initial Eigenvalues				Extraction sums of squared loadings			Rotation sums of squared loadings		
Component	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	4.016	12.170	12.170	4.016	12.170	12.170	3.525	10.682	10.682
2	3.917	11.868	24.039	3.917	11.868	24.039	3.325	10.076	20.757
3	3.318	10.053	34.092	3.318	10.053	34.092	3.180	9.637	30.394
4	2.885	8.743	42.835	2.885	8.743	42.845	3.095	9.377	39.772
5	2.435	7.378	50.214	2.435	7.378	50.214	3.055	9.258	49.030
6	1.867	5.657	55.871	1.867	5.657	55.871	1.908	5.782	54.812
7	1.723	5.222	61.092	1.723	5.222	61.092	1.727	5.233	60.044
8	1.443	4.374	65.466	1.443	4.374	65.466	1.587	4.810	64.854
9	1.167	3.538	69.004	1.167	3.538	69.004	1.261	3.822	68.676
10	1.004	3.042	72.046	1.004	3.042	72.046	1.112	3.370	72.046
11	.958	2.904	74.950						
12	.874	2.650	77.600						
13	.843	2.554	80.154						
14	.726	2.200	82.354						
15	.704	2.133	84.486						
16	.595	1.804	86.290						
17	.521	1.579	87.869						
18	.468	1.419	89.289						
19	.426	1.292	90.581						
20	.395	1.196	91.776						
21	.358	1.084	92.861						
22	.344	1.043	93.904						
23	.296	.896	94.800						
24	.289	.875	95.675						
25	.263	.796	96.471						
26	.209	.632	97.103						
27	.203	.617	97.719						
28	.192	.583	98.302						
29	.151	.457	98.759						
30	.137	.415	99.174						
31	.131	.396	99.570						
32	.117	.355	99.926						
33	.025	.074	100.00						

Table 6.10: Extraction method: principal component analysis

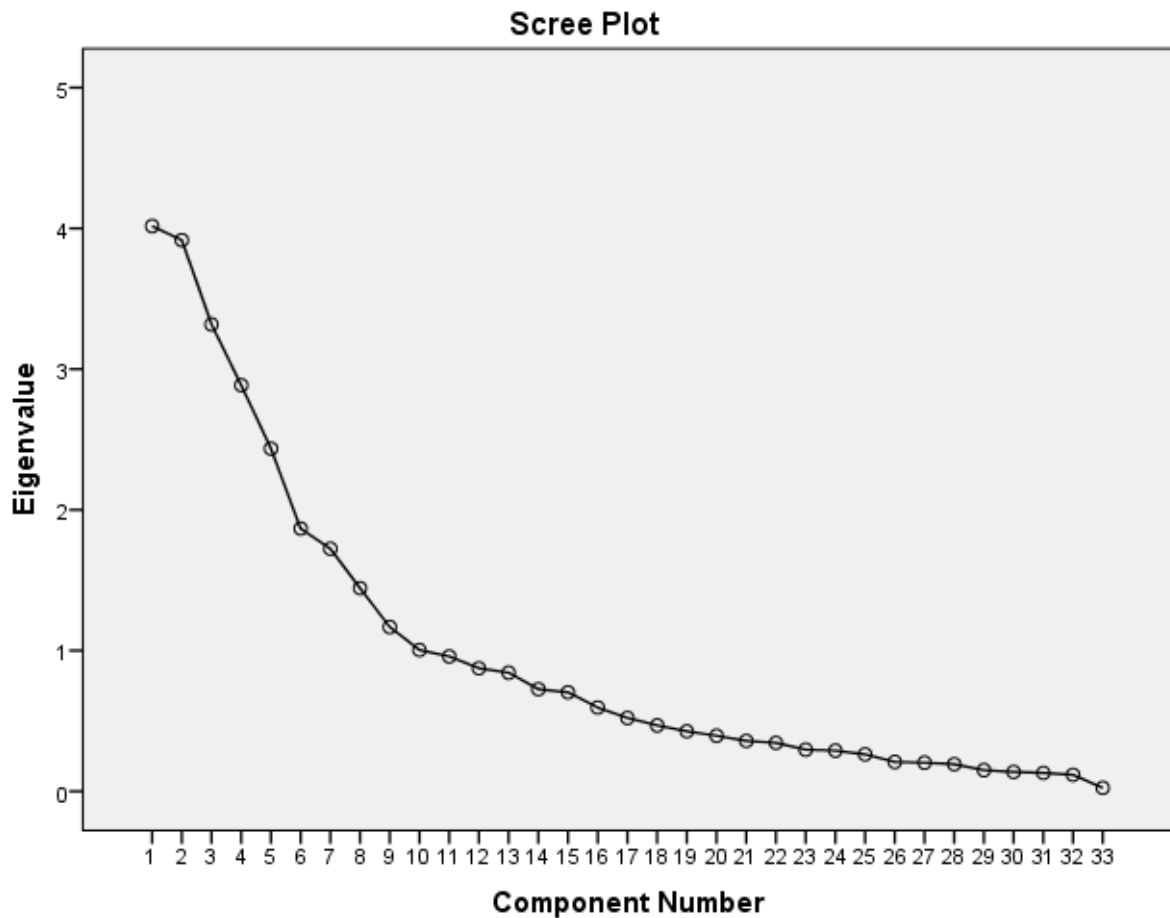


Figure 6.1: Scree plot of component number in factor analysis

The next step was to test the internal consistency of the measurement scale of the three main constructs taken individually. This was completed using their respective loading factor as shown on the rotated component matrix Varimax with Kaiser Normalisation. The first dimension regrouped 11 variable indicators for the three dimensions of LS construct; the second dimension regrouped eight variable indicators for the two dimensions of SC construct; the third regroup four variable indicators for EP outcome construct under one dimension.

Items	Component		
	1	2	3
Leadership inspirational	.716		
Leadership confidence builder	.696		
Leadership anticipate	.525		
Leadership well-informed	.516		
Leadership ambitious	.596		
Leadership performance-oriented	.576		
Leadership reward/effective negotiator	.648		
Leadership integrator	.562		
Leadership motivational	.690		
Leadership team-builder	.737		
Leadership commitment	.740		
SC structural family, friends, partners		.536	
SC structural employees, customers		.523	
SC structural local associations		.560	
SC structural professional services		.620	
SC structural regional/national bodies		.541	
SC structural media		.506	
SC relational local associations		.609	
SC relational professional services		.581	
SC relational family friends partners		.504	
EP outcome social recognition, identity			.713
EP outcome privileged access to info and resources			.666
EP outcome social credentials			.798
EP outcome influence			.745

Table 6.11 Rotated component matrix

The internal consistency was evaluated using **Cronbach's alpha** and the respective inter-item correlations were both considered. **Cronbach's alpha value above 0.70** represents an acceptable measurement model for each construct (Pallant, 2001). It should be noted that for a construct with more than 10 measurement indicators, a **Cronbach's alpha value of 0.50** is a frequent occurrence. In such cases, inter-item correlations should be reported bearing in mind that values below 0.40 suggest that the items could be measuring a different construct (Pallant, 2001). The results of the

reliability test on original scale are presented in Tables 6.11-6.12 with no value below 0.40. but the result for SC construct is below 0.70.

Component	1	2	3
1	.732	.484	.479
2	-.659	.681	.320
3	-.172	-.550	.767

Table 6.12: Component Transformation matrix

The next step was to conduct a reliability analysis of each construct on an adjusted scale. Table 6.13 presents the results showing nine measurement variables for LS factor with Cronbach's alpha increasing from 0.732 on original scale to 0.877 on adjusted scale. For the factor SC, six (6) measurement variables are retained showing an increase in Cronbach's alpha value from 0.681 to 0.791 which is above the threshold of 0.7. The variable measurements for EP outcomes remain unchanged with Cronbach's alpha value of 0.767. A total of 19 variables are retained for the study measurement model.

6.2.2 Model Assessment Process

Assessing an SEM is a seven-step statistical modelling process composed of two parts:

- a) A structural model built on a) a theoretical concept or constructs, b) a path diagram of relationships between factors or constructs represented by latent variables in the model, and c) a set of structural equations hypothesizing relationships illustrated in the path diagram. These three steps were

completed in Chapter Four. The model fitting part is completed by testing the main hypotheses.

Construct	Measurement Variable (corrected item-total correlation)	Loading factor	Cronbach alpha
Entrepreneurial Leadership Attributes	<u>Transformational</u>		0.732
	Inspirational	0.717	
	Confidence builder	0.648	
	Foresight	0.576	
	Well informed/knowledgeable	0.562	
	<u>Value-based</u>		
	Integrator	0.525	
	Ambitious	0.648	
	Reward/effective negotiator	0.516	
	Performance-oriented	0.696	
	<u>Team-oriented</u>		
	Motivational	0.690	
Team builder	0.737		
Commitment	0.740		
Social Capital	<u>Structural</u>		0.681
	Family and friends	0.536	
	Employee and customer	0.523	
	Local associations	0.560	
	Professional services	0.649	
	Regional/national bodies	0.541	
	Media	0.506	
	<u>Relational</u>		
	Local associations	0.609	
	Professional services	0.581	
Family, friends, partners	0.504		
Entrepreneurship Process Outcomes	Social recognition and identity	0.713	0.767
	privileged access to resources	0.666	
	Social credentials	0.798	
	Influence	0.745	

Table 6.13: Reliability analysis on original Scale

b) A measurement model based on relationships between sets of observed and latent variables using factor analysis as a statistical procedure. Because SEM

uses a theory-based confirmatory approach, the factor analytical model, in this case a confirmatory factor analysis (CFA), focuses on the extent to which the observed variables are generated by the underlying latent constructs. Therefore, the strength of the regression path from the factors to the observed variables, also known as loading factors, are of primary interest.

Construct	Measurement Variable (corrected item-total correlation)	Corrected Item-total correlation	Cronbach alpha
Entrepreneurial Leadership Attributes	<u>Transformational</u>		
	Inspirational	0.697	0.859
	Confidence builder	0.679	0.860
	Foresight	0.475	0.874
	Well informed/knowledgeable	0.363	0.879
	<u>Value-based</u>		
	Integrator	0.458	0.875
	Ambitious	0.571	0.869
	Reward/effective negotiator	0.607	0.865
	Performance-oriented	0.567	0.869
	<u>Team-oriented</u>		
Motivational	0.661	0.862	
Team builder	0.689	0.860	
Commitment	0.672	0.861	
Social Capital	<u>Structural</u>		
	Family and friends	0.455	0.774
	Employee and customer	0.350	0.786
	Local associations	0.611	0.753
	Professional services	0.610	0.753
	Regional/national bodies	0.562	0.760
	Media	0.313	0.798
	<u>Relational</u>		
	Local associations	0.498	0.788
	Professional services	0.599	0.753
Family, friends, partners	0.339	0.769	
Entrepreneurship Process Outcomes	Social recognition and identity	0.502	0.749
	privileged access to resources	0.653	0.666
	Social credentials	0.592	0.700
	Influence	0.531	0.731

Table 6.14: Reliability analysis on adjusted scale

Although relations between factors may be of interest, the regression structure among them is not considered in the factor analytical model. The CFA model is

concerned with the link between factors and their measured variables or indicators and as such is called the measurement model in SEM process. Thus, the next steps in the model assessment process are:

- Choosing the input matrix;
- Assessing the identification of the model;
- Evaluating the goodness-of-fit and;
- Interpreting the model.

6.3 Choosing the input matrix

SEM does not analyse raw data. Instead the analysis is based on the variance/covariance matrix of the observed variables with the objective to summarise this matrix into a simpler underlying structure (Brown, 2006). This underlying structure resulting from the measurement model is specified in the form of an SEM by yielding an implied variance/covariance matrix which is compared to the observed variance/covariance matrix in the model fitting.

6.3.1 Testing for factorial validity

Testing for factorial validity is an essential preliminary step in assessing the measurement model. Because SEM summarises a structure of relationships between underlying latent constructs, the validity of the measurement of each construct or factor must be acceptable. It is a judgement call to decide the cut off point for factorial validity. Some factors still show a corrected item-total correlation coefficient below 0.4 and not in line with other factors measuring the same construct, for example LS integrator. As a result, the following factors were removed:

- LS transformational: well-informed 0.363
- LS value-based: integrator 0.458
- SC structural: media 0.313
- SC structural employees, customers 0.350
- SC relational: family, friends 0.339

The final list of factors to determine the input matrix is presented in Table 6.15 below.

Construct	Measurement Variable	Corrected item-total correlation
Entrepreneurial Leadership Attributes	<u>Transformational</u>	
	Inspirational	0.697
	Confidence builder	0.679
	Foresight	0.475
	<u>Value-based</u>	
	Ambitious	0.571
	Reward/effective negotiator	0.607
	Performance-oriented	0.567
	<u>Team-oriented</u>	
	Motivational	0.661
Team builder	0.689	
Commitment	0.672	
Social Capital	<u>Structural</u>	
	Family and friends	0.455
	Local associations	0.611
	Professional services	0.610
	Regional/national bodies	0.562
	<u>Relational</u>	
	Local associations	0.498
Professional services	0.599	
Entrepreneurship Process Outcomes	Social recognition and identity	0.502
	privileged access to resources	0.653
	Social credentials	0.592
	Influence	0.531

Table 6.15: Factors for input matrix

6.3.2 Item parcelling

It is a common practice to reduce the number of indicators or observed variables used in measuring a construct to about three per factor/construct to achieve a simple model particularly where sample size is not large (McCullum and Austin, 2000). Most authors recommend that three indicators per construct is the perfect number to achieve model fit and results validity (Hair et al., 2010, Byrne, 2009, McCullum and Austin, 2000). Item parcelling is used in SEM factorial validity as a way to reduce the number of indicators variables by forming composite items from a number of items. The result is a reduced number of items while accounting for all items initially defined as part of the construct measurement (Schumacker and Lomax, 2004, Byrne, 2009).

The main issue of concern with item parcelling in SEM is the model fitness and parameter estimates and research shows that item parcelling can improve the model fitness especially in cases where the items parcelled are conceptually linked (Bandalos, 2002; Bagozzi and Edwards, 1998; Marsh et al, 1998).

Different techniques compete for item parcelling (Byrne, 2009)

- First, the single factor analysis consists of pairing off items with the highest and the lowest loadings as the first composite based on a single factor solution. The process is executed for the next items being the second highest and second lowest and so on until all items are parcelled.
- Second, the correlation method consists of pairing items using the inter-item correlation starting with the items that show the highest correlation as the first pair. The process moved to the next highest inter-item correlation until all items are paired.

- The random method is a technique whereby items are randomly assigned to parcels.
- The content method is another technique based on the creation of composite items taking into account that their content displays elements of rational grouping.
- Exploratory factor analysis uses results from a factor reduction that is completed without a confirmatory approach analysis.
- Lastly, the empirical equivalence method is based on composites with equal means, variances and reliabilities.

Although all item parcelling methods yield satisfactory and required results the creation of composite items based on their content was deemed more appropriate for this study considering the theoretical framework which identified key factors for each construct and their respective measurement indicators. Firstly, the structural and relational dimensions of SC (Nahapiet and Goshal, 1998) are expected to show a different impact on the entrepreneurship process (Shane and Venkataraman, 2000a; Shane and Baron, 2008). The classification of social networks between closure and brokerage were clearly established in the research context and the theoretical model in the preceding chapters (Granovetter, 1985; Burt, 1992). The categorisation of social networks between 'instrumental' and 'intrinsic' value (Casson and Della Giusta, 2007) makes a clear conceptual distinction in personal aspirations between social interactions. Therefore, forming a composite of items on such a strong and relevant conceptual basis is rational and the researcher was confident to adopt this parcelling method as it did not affect the accuracy of the analysis based on each item.

With regard to LS, entrepreneurial leadership behaviour was analysed based on the three perspectives of leadership theory that have a direct bearing on entrepreneurship (Schumpeter, 1934, Gupta et al., 2004, Burns, 1978, Bass, 1997, House and Aditya, 1997). On this basis, the indicators of LS lent themselves logically to grouping under the perspectives of transformational, team-oriented and value-based leaderships. Finally, the measurements of EP outcome were determined as SC benefits accrued from social interactions (Lin et al., 2008, Shane and Cable, 2002; Shane and Venkataraman, 2000b). It was deemed necessary to measure them individually as the number was initially set at four and remained unchanged after the reliability test of each main construct (see Tables 6.11-13).

Accordingly, the indicators as represented in Table 6.15 were composed and renamed as follows:

Leadership Variable:

- Lead1 = Value-based leadership: ambitious, performance-oriented, effective negotiator/reward
- Lead2 = Transformational leadership: foresight, confidence-builder, inspirational
- Lead3 = Team-oriented leadership: motivational, team-builder, commitment

Social Capital variable

- SC1 = Structural dimension: family/friends, local associations
- SC2 = Structural dimension: professional services, regional networks
- SC3 = Relational dimension: local associations, professional services

Entrepreneurship Process Outcome variable

- EP1 = Recognition
- EP2 = Resource access
- EP3 = Success
- EP4 = influence

The simplified measurement model is now recomposed with 10 factors. The loading factor is obtained by taking the average frequency distribution for each of the 359 observations in the original data set to determine the frequency and loading factor for each new renamed variable.

Construct	Variable new name	Composite items	Loading factor
Social Capital (SC)	SC1	Structural family, friends Structural local associations	.53 .77
	SC2	Structural professional services Structural regional national bodies	.79 .65
	SC3	Relational local associations Relational professional services	.75 .72
Entrepreneurial Leadership (Lead)	Lead1	Ambitious Performance oriented Effective negotiator/reward	.72 .60 .47
	Lead2	Foresight Inspirational Confidence builder	.53 .63 .56
	Lead3	Motivational Commitment Team builder	.64 .78 .79
Entrepreneurship Process Outcome (EP)	EP1 EP2 EP3 EP4	Social Recognition/Identity Privileged access to info and resources Social credentials Influence	.71 .83 .79 .74

Table 6.16: Item Parcels for Measurement Model Input Matrix

6.3.3 Estimation technique: maximum likelihood

There are several estimating techniques applicable to measurement model in factor analysis (Hair et al., 2010, Byrne, 2009; Brown, 2006; Bollen, 1989) which are:

- weighted least squares (WLS)
- generalised least squares (GLS)
- asymptomatic distribution free (ADF)
- maximum likelihood estimating (MLE)

Detailed discussion on the merit of each estimation technique was provided in the methodology chapter. Most authors agree that MLE is the most commonly used technique as it has been found to provide valid results even with small samples (Hair et al, 2010; Byrne, 2009; Schumacker and Lomax, 2004; Brown, 2006). Therefore, MLE was used in this study.

6.3.4 Data input: covariance matrix

The computer program used in this study is AMOS 18 as it was the latest version of SEM software available to the researcher and compatible with the data. It was felt that other SEM software such as MPlus and LISREL would not be appropriate for the analysis since all data used fit the same measurement scale. The data file composed of 10 variables (see Table 6.16) on 359 observations was uploaded from SPSS into AMOS 18 as the input data. This conversion from SPSS into AMOS 18 enabled the researcher to proceed with the next stage of model identification. The graphic representation of the measurement model is illustrated in Figure 6.2.

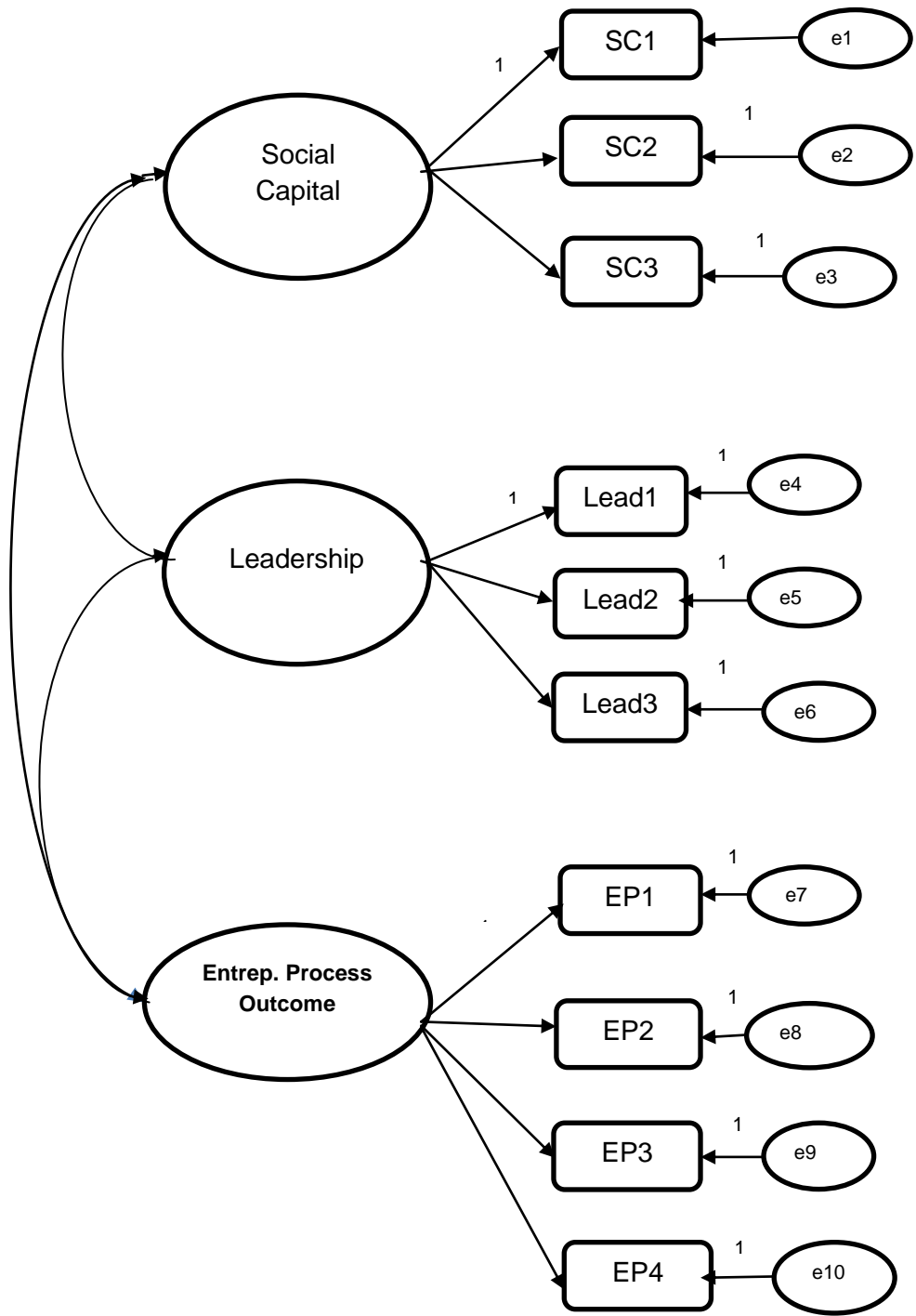


Figure 6.2: The SEM measurement model first trial

6.4 Model Assessment

In this section, the results of the measurement model on the structural model are considered looking at three critical issues which are:

- The model parameters and estimation;

- The model assessment including parameter estimates, feasibility of estimates and appropriateness of standard errors and statistical significance;
- Assessment of the model as a whole.

6.4.1 Model parameters and estimation

Byrne (2009) establishes that as a preliminary analysis of the model parameters and estimates are recommended as the first step in the analysis of SEM results in relation to the inspection of the model. The output components show that the data is consistent with the path diagram as illustrated in the structural model (see Figure 5.4). All observed variables act as dependent variables in the model and all factors and error terms act as unobserved and independent variables in the model.

As discussed in the methodology chapter model identification is another necessary step in the process of model assessment. It was mentioned that model identification can be (i) under-identified, (ii) just-identified or (iii) over-identified. Hair et al (2010) contend that an SEM model must be over-identified. Model identification can be established using one of the following methods.

Observed, endogenous variables	Unobserved, exogenous variables
SC1	Social Capital
SC2	e1
SC3	e2
Lead1	e3
Lead2	e4
Lead3	e5
EP1	e6
EP2	e7
EP3	e8
EP4	e9
	e10
	res1
	res2

Table 6.17: Summary of Variables in the Model

6.4.1.1 Model identification: order condition

The order condition method of model identification establishes that the degree of freedom must be greater than or equal to zero in order for the model to be identified.

Tables 6.18 and 6.19 present the results which confirm that the model is identified.

Computation of Degrees of Freedom	
Number of distinct sample moments	55
Number of distinct parameters to be estimated	23
Degrees of freedom (55-23)	32

Table 6.18: Computation of Degrees of Freedom

Results in Table 6.19 show that, with a degree of freedom of 32, the model is accepted on the order condition. The next step is to establish if the minimum is achieved by computing the Chi-Square and the probability level.

Results
Minimum was achieved Chi-square = 104.58 Degrees of freedom = 32 Probability level = .000

Table 6.19: Results of model identification

6.4.1.2 Model identification: rank condition

The rank order method for model identification requires that each parameter must be uniquely identified. Because of the complexity of this method, Hair et al (2010) recommend that proxy measures be used instead based on two rules. The first proxy

measure is the three measure rule which asserts that any construct with three or more indicators will always be identified. The second proxy measure is the rule of recursive model whereby a recursive model with identified constructs will always be identified. As Figure 6.2 shows the measurement model confirms that each construct has at least three measurement items and the model is non-recursive. Based on the two methods of order condition and rank condition, the researcher concluded that the model is plausible and deemed appropriate to conduct the next step of analysis.

6.4.2 Model parameters estimates

The assessment of the parameters estimates is based on the following issues:

- feasibility of estimates;
- appropriateness of standard errors;
- model as a whole.

6.4.2.1 Feasibility of estimates

The feasibility of estimates is determined by examining the sign and the size of the estimates as well as their consistency with the underlying theory. There is some general guidance in this examination process. Byrne (2009) suggests that estimates falling outside the expected values could indicate problems related to the model not being accurate or the input matrix not providing sufficient information. For example, correlation coefficient >1 ; negative variances; covariance or correlations not positively defined would suggest that parameters are exhibiting unreasonable estimates. Estimates of parameters of covariance and correlations are presented in Appendices 6.1 and 6.2 respectively.

6.4.2.2 Appropriateness of standard errors

When standard errors are excessively small or large it indicates a poor model fit. As data in Appendix 6.3 shows the model is deemed to be within acceptable limits and therefore is assessed to be plausible.

6.4.2.3 Statistical significance of parameter estimates

Once the parameter estimates have been examined for correct sign and size, it is important to assess their significance. The statistic test appropriate in this process is the use of the critical ratio (cr). On the assumption that the statistical significance is established at the level of $p < 0.05$, (cr) value must be higher than 1.96 ($cr > 1.96$) for the hypothesis to be rejected. However, Byrne (2009) argues convincingly that where sample size is too small, non-significant parameters showing $cr < 1.96$ could be retained in the measurement model. Likewise, Schumacker and Lomax (2004) contend that the theoretical justification could offer a valid argument to retain non-significant parameters in the model.

Data on Appendix 6.3 shows that all parameters estimates are significant. First, the regression weights showing factor loading confirm that all estimates are significant with $p < 0.05$. Second, (cr) values confirm that parameter estimates are all significant. Therefore, the model was deemed acceptable on the basis that the feasibility of estimates, standard errors and statistical significance all pointed in the right direction.

6.4.3 Model assessment strategy

Schumacker and Lomax (2004) and Byrne (2009) recommend a two-step process for overall model assessment. The first step is to test the factorial validity of the

measurement model in order to check the measurement model and proceed with any necessary modification while the second step evaluates the structural model.

With regard to assessment strategy, three options were discussed in Chapter Five on Methodology and these are (i) strict confirmatory approach, (ii) model development approach and (iii) competing models approach (Hair et al., 2010). It was also argued that the model assessment strategy for this research was a model development approach whereby the researcher proceeds with a proposed model in the first instance and subsequently makes further improvement through modifications of the structural and/or the measurement model if the preliminary analysis indicates a poor model fit. However, particular attention must be exercised in maintaining the confirmatory characteristics of the model during the modification process (Hair et al., 2010, Byrne, 2009).

6.5 Assessment of goodness-of-fit model

Assessing the model as a whole requires an evaluation using goodness-of-fit indices which include (i) absolute fit, (ii) incremental fit and (iii) parsimonious fit. As discussed in Chapter Four, the use of a range of indices is strongly recommended in order to gain a consensus across the type of indices with regard to the acceptability of the proposed model (Schumacker and Lomax, 2004, Hair et al., 2010, Byrne, 2009); Browne, 2006). Accordingly, the fit indices used are the Chi Square statistic (**χ^2**), Chi Square divided by the degrees of freedom (**χ^2/df**), Comparative Fit Index (***CFI***), Goodness-of-Fit Index (***GFI***), Incremental Fit Index (***IFI***), and the Tucker-Lewis Fit Index also referred to as Non-normed Fit Index (***NNFI***). In addition, the Root

Mean square residue (**RMR**) and the Root Mean square Error of Approximation (**RMSEP**) are also evaluated to reflect the model parsimony.

6.5.1 First trial measurement model

Table 6.20 summarises the results of model fitting indices in comparison with the recommended fitting index values.

Fit Index	Acceptable Fit	Indices for data
χ^2		104.58
Df		32
P	>0.05	0.00
χ^2/df	≤ 2 to 5	3.27
RMR	<0.06	0.03
GFI	≥ 0.90	0.95
RMSEP	≤ 0.05 to 0.08	0.08
CFI	≥ 0.90	0.93
NNFI/TLI	≥ 0.90	0.90
RFI	≥ 0.90	0.86
IFI	≥ 0.90	0.92

Table 6.20: Goodness-of-fit Indices

An examination of the fit indices as reported in Table 6.20 shows that the model fits the data moderately with the exception of **RFI (0.86)** which is below 0.90. With regard to **χ^2 ($p > 0.05$)**, a well-fitting model should have a **p value ($p > 0.05$)** as an index value for model confirmation although most authors agree that this value is very difficult to attain. The value of **χ^2/df** is a proxy measurement for p value which is very difficult to attain in general. Other indices RMR, GFI, RMSEP, CFI, NNFI/TLI and IFI show an acceptable fit. Overall, this is an acceptable model.

6.5.1.1 Checking for construct validity and reliability of the measurement model

Part of construct validation in SEM includes convergent and discriminant validity bearing in mind the key issues at the core of the assessment of the measurement model which are: uni-dimensionality, validity and reliability (Hair et al., 2010). The weakness in using a reliability measure based on Cronbach Alpha in fitting an SEM model is that it assumes that uni-dimensionality exists and therefore does not include (Hair et al, 2010). Convergent validity shows that different indicators of theoretical concepts or overlapping constructs are strongly interrelated by loading on the same factor. Discriminant validity is confirmed when indicators of theoretically distinct constructs are not highly inter-correlated as to suggest that a broader theoretical concept has been erroneously split into two or more factors.

Factor analysis is the commonly accepted method for testing the factorial validity of the measurement model (Byrne, 2009; Brown, 2006). This is achieved by checking the factor loading for each construct. SEM attaches two criteria for meeting factorial validity.

- **Construct reliability**

Fornell and Larcker (1981) established that, for any construct to be reliable in SEM, two conditions are required.

- (i) The first condition is to achieve a **Cronbach's alpha value >0.7** using SPSS scale measurement as shown in Tables 6.6 and 6.7.
- (ii) The second condition is to achieve a Construct or **Composite reliability CR >0.7** from the measurement model estimates of parameters.

- **Construct validity: convergent and discriminant validity**

- (i) First, in meeting the convergent validity, the following conditions must be met.

$$\mathbf{CR > AVE}$$

$$\mathbf{AVE > 0.5}$$

The average variance extracted (AVE) using the standardised regression weights from the measurement model for each construct must be ≥ 0.5 and;

- (ii) Second, in meeting the discriminant validity the following conditions must be met:

Maximum Shared Squared Variance (MSV) and the Average Shared Squared variance (ASV) and the Squared Inter-construct Correlations (SIC) value must be $< AVE$

For the measurement model to be used in fitting the structural model, each construct must meet the required values for average variance extracted (**$AVE \geq 0.5$**) which measures the convergence validity of the construct and ***Cronbach's alpha* (≥ 0.7)** for composite reliability simultaneously (Fornell and Larcker, 1981). After this condition is met, the second test for construct validity can be conducted to confirm that the squared inter-construct correlations (**$SIC < AVE$**). An examination of the standardised regression weights as shown in Table 6.21 above gives the following results.

Construct	Convergence Validity (Average Variance Extracted)≥.5	Composite Reliability (Cronbach Alpha)≥.7
Social Capital	.50	.743
Leadership	.462	.707
Entrepreneurship Process	.494	.794

Table 6.21: Construct Validity for Measurement Model

Although all factors yielded a **Cronbach alpha value > 0.70** the AVE values for construct validity were all below the required 0.50, except for SC construct which achieved just the minimum required value. It was therefore deemed appropriate to reject this model and attempt a better fit using the same input data.

6.5.1.2 Modifications indices

An examination of the results, particularly the modification indices and the covariance of error terms as shown in Tables 6.22 and 6.23, reveal that indicator EP1 is causing problems within EP construct and also within SC construct. First within the EP construct, EP1 is loading on EP2 and EP4. In addition, the errors terms e7 for EP1 is loading on error term e10 for EP4 and this would suggest that both indicators are measuring the same thing. Secondly, with SC construct, EP1 is loading on SC1 and SC2 though with a moderate coefficient. However, an examination of the error terms covariance shows that error term e1 for SC1 has a very high covariance with error term e10 for indicator EP4 which initially appeared to be measuring the same thing as EP1. Moreover, the highest covariance error term is between e1 and EP latent variable. In SEM, modification cannot be conducted between an indicator with error term linked to a latent variable, hence indicators linked to error terms e9, e3 and e10 cannot be considered. Therefore, it was prudent

to conduct a second trial of the measurement model with an input matrix that excluded indicator EP1.

	M.I.	Par Change
e9 <--> Social	6.354	.030
e7 <--> e10	6.658	-.074
e7 <--> e8	8.082	.080
e5 <--> e10	8.712	.073
e5 <--> e9	7.775	-.064
e4 <--> e9	7.997	.044
e4 <--> e8	4.284	-.033
e3 <--> Entrepreneurship	13.119	-.077
e3 <--> e10	7.421	-.072
e1 <--> Entrepreneurship	23.525	.081
e1 <--> e10	19.152	.090

Table 6.22: Modification Indices - covariance of error terms

	M.I.	Par Change
EP4 <--- EP1	4.237	-.081
EP4 <--- Lead2	5.579	.119
EP4 <--- SC1	10.131	.182
EP3 <--- Social	6.415	.291
EP3 <--- Lead2	4.651	-.101
EP3 <--- SC3	4.779	.077
EP3 <--- SC2	7.491	.108
EP2 <--- EP1	5.200	.087
Lead2 <--- EP4	5.948	.099
SC3 <--- Entrepreneurship	10.654	-.266
SC3 <--- EP4	14.533	-.166
SC3 <--- EP2	7.705	-.119
SC3 <--- EP1	5.799	-.100
SC1 <--- Entrepreneurship	20.941	.291
SC1 <--- EP4	32.445	.193
SC1 <--- EP3	9.545	.108
SC1 <--- EP2	10.853	.110
SC1 <--- EP1	7.355	.087

Table 6.23: Modification Indices - Regressions

6.5.2 Second trial measurement model

As explained in the above section, a new measurement model was built using only three indicators of EP construct: EP2, EP3 and EP4. Figure 6.3 below shows the graphic illustration.

6.5.2.1 Model parameter estimations

It was explained in the Methodology Chapter section four that the strategy for this study is the developmental approach whereby the researcher proceeds with trials of the measurement in order to achieve the best fit. Accordingly, the results of the parameters estimates are presented in Tables 6.24 to 6.26 and details of parameter estimates are presented in Appendices 6.4 and 6.5.

Observed, endogenous variables	Unobserved, exogenous variables
SC1	Social Capital
SC2	e1
SC3	e2
Lead1	e3
Lead2	e4
Lead3	e5
EP2	e6
EP3	e7
EP4	e8
	e9
	res1
	res2

Table 6.24: Summary of variables in the model

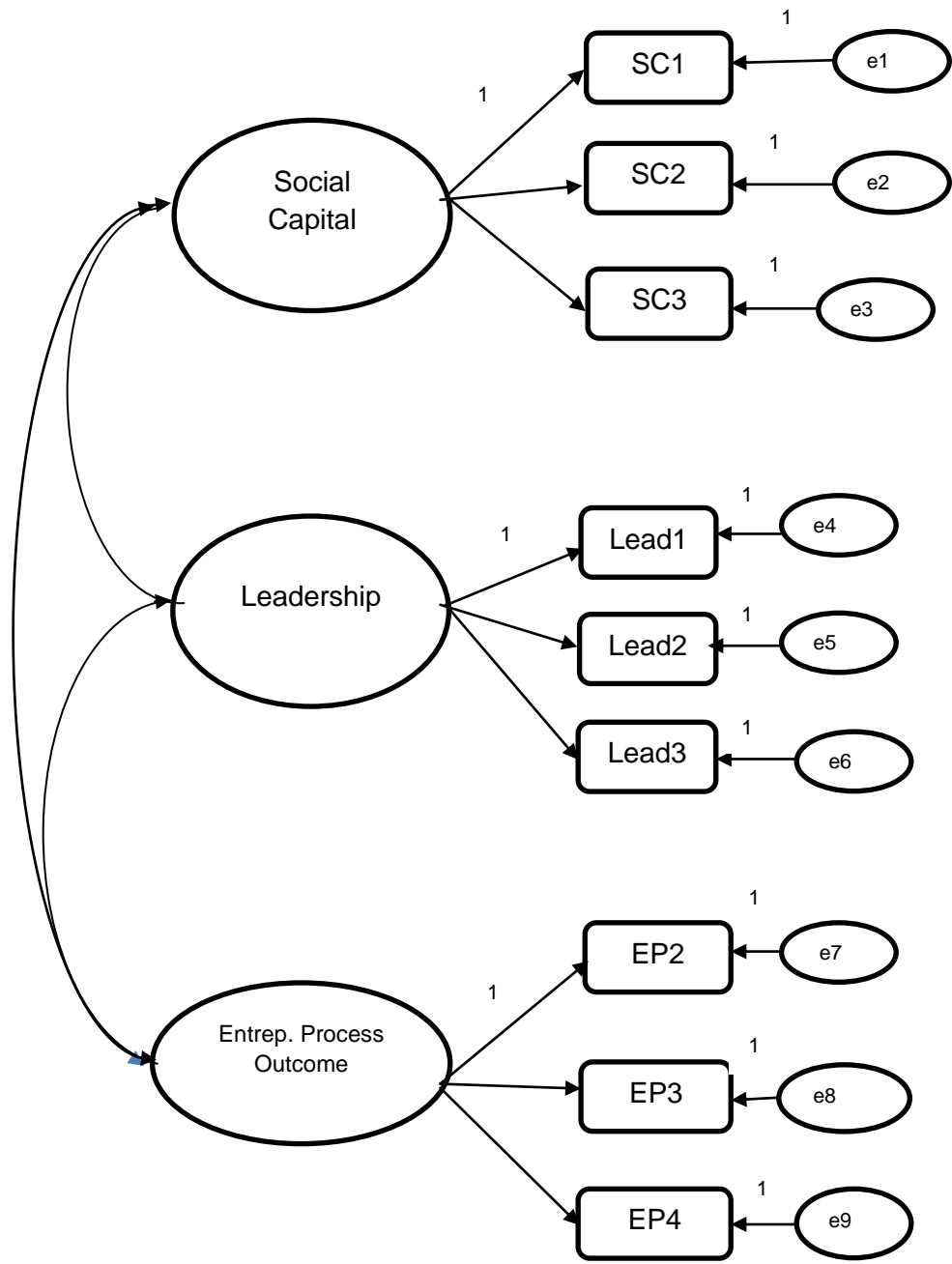


Figure 6.3: The study Measurement Model- second trial

Number of distinct sample moments	45
Number of distinct parameters to be estimated	21
Degrees of freedom (55-23)	24

Table 6.25: Computation of Degrees of Freedom

Results
Minimum was achieved Chi-square = 61.25 Degrees of freedom = 24 Probability level = .000

Table 6.26: Results of model identification

6.4.2.2 Testing for construct/composite reliability and validity of the modified model

Establishing convergent and discriminant validity as well as reliability of the measurement model is essential to building a structural model. When latent variables do not meet adequate validity and reliability the fitness of the SEM cannot be reliable. The following tests are necessary;

- **Reliability:** Composite reliability which measures the loading coefficient of all measurement indicators related to one construct **(CR)>0.7**
- **Convergent Validity:** Convergent validity attests that all measurement indicators correlate well among themselves and within the latent variable. Two tests help to establish that: the composite reliability must be higher than the average variance extracted (AVE); and secondly, AVE>0.50

CR> (AVE)

AVE>0.5

- **Discriminant Validity:** The test of discriminant validity helps to ensure that the measurement indicators of a latent variable do not correlate more highly with indicators outside the latent variable than with those within the construct that they are measuring. Two tests establish discriminant validity: the maximum shared squared variance (MSV) and the Average shared squared variance (ASV) must all be lower than the (AVE)

$$MSV < AVE$$

$$ASV < AVE$$

Table 6.26 summarises the results of construct reliability, convergent and discriminant validity.

Construct	Composite Reliability (CR)>0.7	Convergent Validity (AVE)>0.5	Discriminant Validity (MSV)<AVE	Discriminant Validity (ASV)<AVE
Social Capital	0.75	0.51	0.07	0.06
Leadership	0.75	0.51	0.07	0.07
Entrepreneurship Process	0.77	0.53	0.07	0.06

Table 6.27: Composite reliability, convergent and discriminant validity for measurement model

Some studies also include the squared inter-item correlation (SIC) among validity tests. In those instances (SIC) value, which represents the square correlation coefficient among construct, must have a value lower than the AVE.

$$SIC < AVE$$

Table 6.28 below presents the results.

Having now established that all constructs are reliable and meet the convergence and discriminant validity tests and given that all estimates parameters pointed in the right direction, it was appropriate to proceed with the goodness-of-fit model.

Construct	Leadership	Entrepreneurial Activity	Social Capital
AVE	0.506	0.532	0.506
Leadership	X	0.031	0.074
Entrepreneurial Activity	0.031	X	0.066
Social Capital	0.074	0.066	X

Table 6.28: Construct convergent and discriminant Validity, SIC and AVE comparison

Table 6.28 summarises the results of model fitting indices in comparison with the recommended fitting index values.

Fit Index	Acceptable Fit	Indices for data
χ^2		61.3
Df		24
P	>0.05	0.00
χ^2/df	≤ 2 to 5	2.55
RMR	<0.06	0.03
GFI	≥ 0.90	0.96
RMSEP	≤ 0.05 to 0.08	0.06
CFI	≥ 0.90	0.96
NNFI/TLI	≥ 0.90	0.93
RFI	≥ 0.90	0.90
IFI	≥ 0.90	0.96

Table 6.29: Goodness-of-fit Indices

An examination of the fitting indices in comparison with acceptable fit showed that the modified model not only showed an improvement on the initial model but also

met all the goodness- of-fit indices. As discussed earlier, ($p>0.05$) index is rarely met and most SEM models are approved on the basis of **X^2/Df value ≤ 2 to 5** when all other key indices are met. Therefore, it was appropriate to proceed with fitting the structural model.

6.5.2.2 Summary of the measurement model factorial validity

As discussed in section 6.3.5.2 on factorial validity, the issue was to ensure validity and reliability of the construct. The preliminary factor analysis indicated that the measurement instrument was composed of three factor dimensions with an overall Cronbach alpha value of .891 and no indicator cross-loading between different dimensions. Further factorial analysis was conducted to confirm the construct reliability of each factor on the basis of **factor loading >0.40** and **Cronbach alpha >0.70** . Having satisfied all conditions for construct reliability the number of indicators per construct was reduced to three in order to achieve clarity in the model. This was done using item-parcelling content validity technique. Having renamed the indicators for each construct, 10 factors constituted the data which was uploaded from SPSS into AMOS 18 in order to produce the input matrix, and all parameter estimates were produced as summarised in Appendices 6.2 and 6.3. The measurement model path diagram was also produced. The completion of the model identification process resulted in 32 degrees of freedom making the model over-identified and suitable for assessment of goodness-of-fit. Because the initial measurement model did not meet all criteria for convergent and discriminant validity it was necessary to proceed with model modification. Results in Table 6.29 confirm that the model meets all the goodness of fit indices and can therefore be used in the full SEM analysis.

6.6 The structural model

With a measurement model that fits the data, the interest now is to assess the structural model, particularly the validity of the causal structure as hypothesised in Figure 6.4. The theoretical justification of the causal relationship was discussed in Chapter Five where the relationships between the variable constructs were theorised. Accordingly, the model hypothesised that, a priori, entrepreneurship process EP is the result of entrepreneurial leadership behaviour capable of transforming the 'instrumental' and 'intrinsic' values embedded in social networks into benefits for the discovery, evaluation and exploitation of opportunity. Thus, the model acknowledges that the effect of social capital (SC) on EP is not direct further hypothesising that the path diagram through the mediating role of leadership is stronger than that of a direct link between SC and EP. The significance of these postulated relationships is examined and presented in Figure 6.5.

6.6.1 Research hypotheses

As initially stated, the aim of this research is to investigate the interrelationships between SC and EP on a theoretical proposition that LS is the mediating factor in this interaction (Schumpeter, 1934). The model was further developed showing two paths from SC to LS and LS to EP on the one hand and SC to EP on the other hand, suggesting that the direct relationship between SC and EP is much weaker. Three hypotheses were postulated a priori in the conceptual model in Chapter Four.

It is now appropriate to evaluate the strength of the relationships between SC, LS and EP. The evaluation of the model is construed as a causal model based on the direct and indirect effects generated by the mediating role of LS in this interaction.

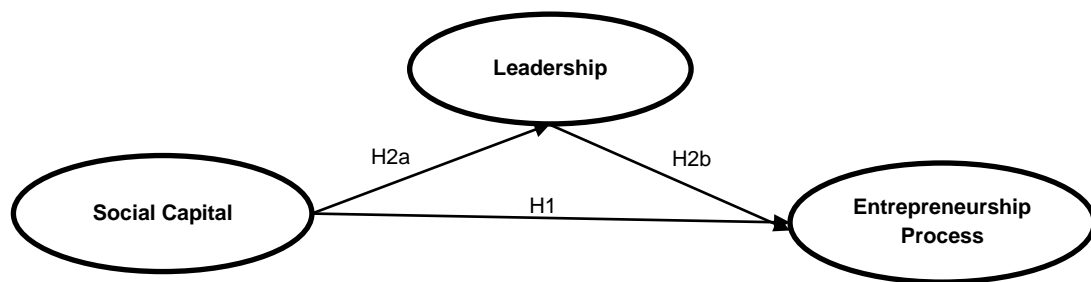


Figure 6.4: The SEM hypothesized model

H1: EP is positively and indirectly related to SC

H2a: LS is positively directly related to SC

H2b: EP is positively related to LS

6.6.2 Significance of estimates

Based on the goodness-of-fit indices attesting that the model is plausible, it is now appropriate to test the strength of the relationships as hypothesised. As recommended by most authors (Hair et al., 2010, Byrne, 2009, Schumacker and Lomax, 2004) an examination of the (**cr**) was used to determine the statistical significance of the coefficients in order to evaluate the hypotheses presented with the structural model in Figure 6.5.

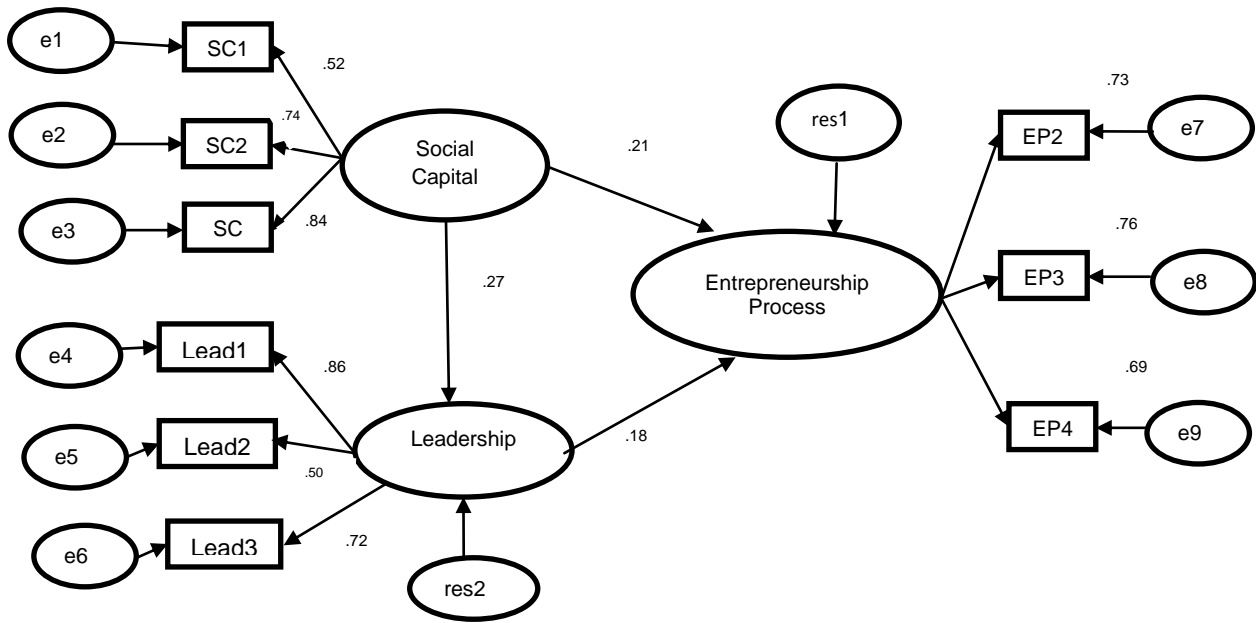


Figure 6.5: The structural model, path diagram and path coefficients

Table 6.30 shows that all (*cr*) values are >1.96 and all *p* values are < 0.05 . The path coefficient of the regression weights are presented in Table 6.30 and Figure 6.6 respectively. The path coefficients are the standardised regression weights of the exogenous latent variable SC on LS and EP and that of LS on EP as shown in Table 6.31 below. Results of tests of Statistical Significance are presented in Table 6.30

			Estimate	S.E.	C.R.	P	Label
Leadership	<---	Social	.418	.108	3.886	***	par_7
Entrepreneurial	<---	Leadership	.229	.090	2.540	.011	par_8
Entrepreneurial	<---	Social	.414	.147	2.817	.005	par_9

Table 6.30: Estimates of Regression Weights, (cr) and (p) Values

Variable	Regression	Variable	Coefficient Estimate
Leadership	←	Social capital	.28
Entrepreneurial	←	Leadership	.18
Entrepreneurial	←	Social capital	.21

Table 6.31: Path Coefficients of the Structural Model

			Estimate
Leadership	<---	Social	.272
Entrepreneurial	<---	Leadership	.177
Entrepreneurial	<---	Social	.209

Table 6.32: Standardised regression weights

The direct effects are illustrated by a single arrow pointing in one direction from one latent variable to another. The indirect effects are represented by a series of arrows. As an example, the indirect effect of SC on EP can be determined by examining the direct effect of SC on LS and the direct effect of LS on EP. The following formula gives the result.

Indirect effect of SC on EP = direct effect of SC on LS * direct effect of LS on EP or (0.27 * 0.18) = 0.048

Total effects, direct and indirect effects, are generated as part of AMOS 18 output and details are presented in Tables 6.33 to 6.35.

	Social	Leadership	Entrepreneurial
Leadership	.272	.000	.000
Entrepreneurial	.257	.177	.000

Table 6.33: Standardised Total Effects

	Social	Leadership	Entrepreneurship
Leadership	.272	.000	.000
Entrepreneurship	.209	.177	.000

Table 6.34: Standardised Direct Effects

	Social	Leadership	Entrepreneurial
Leadership	.000	.000	.000
Entrepreneurial	.048	.000	.000

Table 6.35: Standardised Indirect effects

6.6.3 Evaluation of Hypotheses

Based on the data provided in Tables 6.33 to 6.35 above, an evaluation of the model hypotheses is summarised in Table 6.36 below.

Hypotheses	Path	Direct	Indirect	Total
H1	Social Capital-Entrepreneurship process	.21	.048	.26
H2a	Social Capital - Leadership	.28		.28
H2b	Leadership – Entrepreneurship process	.18		.18
Total H2	Social Capital - Leadership-Entrepreneurship Process			.46

Table 6.36: Evaluation of the Structural Model Hypotheses

Based on the information that the (*cr*) values of the path coefficients are greater than 1.96 and significant at value ($p < 0.05$) it can be concluded that the structural coefficients are all significant. Therefore, H1, H2a and H2b are not rejected as they have significant estimates. ***The total effects of the path diagram under H2 gives a coefficient of .46, which is higher than the total effects of .26 under H1.***

As a result, the postulated relationship between SC and EP (H1: EP is positively **and** indirectly related to SC) where LS acts as the mediating factor (H2a: LS is positively directly related to SC; H2b: EP is positively directly related to LS) is confirmed. The effect of LS is a partial mediation because the relation between SC and EP is significant.

6.7 Operationalization of main findings

Having now confirmed the hypotheses, it is important to turn our attention to their relevance in the research context. As explained in the methodology, the evaluation of the interdependence between the three factors EP, LS and SC is based on the regression weight which establishes the causality in the relationships. Furthermore,

as all factors are latent variables that cannot be observed and measured directly, it is the measurement indicators of each latent variable, also called observed variables, that build the underlying structure by ways of covariance and in so doing determine the regression weight linking those factors. Thus, operationalizing the main findings encompasses the results of the measurement model and an explanation of the regression paths obtained in the structural model.

6.7.1 Contextualisation of the measurement model results

6.7.1.1 Some observations on variables excluded from the measurement model

Some variables among those that were rejected during the input matrix determination process merit some interest. First,

First, Social Capital is a multifaceted concept. Benefits such as 'identity and social recognition' could be motivated by politics, culture, sports for example and not necessarily associated with entrepreneurship (Lin et al., 2008; Burt, 1997; Dasgupta and Seregaldin, 1999). It is therefore not surprising that this measurement indicator was not significant in determining SC benefits that food and drink manufacturers expect to gain from social interactions as part of the EP. Relationships with employees and customers on both SC dimensions do not account in the variables measuring the model. The fact that LS attribute integrator was also rejected from the measurement model variables could provide an explanation. Strategic leadership recognises the competitive edge that intangible resources such as human capital can bring to organisations and this implies an integrating approach to relationships management (Hitt and Ireland, 2002; Katou, 2011). The same result applies to the relational dimension of social interactions with family, friends and partners. Finally, the role of media as a means to develop social interactions of structural dimension

signals a new development towards the use of media platforms such as Master Chef, Gordon's Cuisine, Jamie Oliver and many more that are proving both attractive and successful. It is an emerging trend away from the traditional trade fairs and shows (Weaver and Dickson, 1998; Street and Cameron, 2007; Galloway, 2007; Warren, 2004).

6.7.1.2 Dependent variable: Entrepreneurship Process outcome

In the measurement model, the three variables for EP outcome are (i) EP2 for privileged access to information flows; (ii) EP3 for social credentials generating success and (iii) EP4 for influence that facilitates access to strategic resources. The standardised regression weights (see Appendix 6.6) show that when EP increases by 1 standard deviation, the effect on EP2, EP3 and EP3 is a corresponding increase of 0.732. 0.765 and 0.690 respectively. In other words, social credentials were perceived as the most important outcome from EP with a loading factor of (.765) followed by privileged access to information flows (.732) and finally, influence (.690). This means the majority of respondents to the survey acknowledged that social credentials were the most important outcome from social interactions.

6.7.1.3 Mediator and predicting factor: leadership attributes

The total results of standardised effects in Appendix 6.6 showed that when LS went up by 1 standard deviation, the effect was an increase in (Lead1 value-based leadership) of (.860), in (lead2 for transformational leadership) of (.503) and in (lead3 for team-oriented leadership) of (.725). This result suggests that food and drink manufacturers are more inclined towards a behaviour driven by high-held values (.860) on measuring LS. This measurement indicator refers to attributes of ambitious, performance-oriented and effective negotiator in rewarding employees and business partners. This was followed by team-oriented behaviour with a loading

factor of (.725) based on attributes of motivational, team builder and commitment. The least significant indicator of leadership was related to transformational behaviour loading only (.503) for each increase of 1 in LS and accounting for foresight, inspirational and confidence builder.

6.7.1.4 Independent and predicting factor: Social Capital

Three variables provide an evaluation of Social Capital in the Measurement model: (i) SC1 measuring structural dimension of social ties with family members, close friends, partners and local associations; (ii) SC2 measuring the structural dimension of relationships with sector professional services and regional organisations, and (iii) SC3 measuring the relational dimension of relationships with local associations and professional services. It appears that the relational dimension of SC was most important with a regression weight of (.841), followed by the structural dimension with relationships of brokerage i.e. professional services and regional bodies (.738) and finally the structural dimension of social ties developed from relationships of closure (.517). It is important to interpret these results in light of their distinctive effects.

Evaluating SC structural dimension

Starting with SC1 family, close friends and partners and local associations showed a regression weight of (.517). Looking at SC2, professional services and regional networks were the most used networks of instrumental value with a loading factor of (.738) in determining the measurement for SC. This indicates that although both networks were used as sources of SC instrumental value professional services and regional bodies were more solicited than family members, friends and partners.

Evaluating SC relational dimension

Results showed that for any increase of 1 standard deviation in SC, social interactions of relational dimension respond with a corresponding increase of (.841). There are two interesting facts in this result. Firstly, the two components of this measurement are from relationships with local associations scoring the highest loading factor (.75) and relationships with professional services such as banks and accountants with a loading factor of (.72). Secondly, both social networks are also used for SC of structural dimension, suggesting a strong degree of '*embeddedness*'. Interestingly, it also reveals that while family members, close friends and business partners are useful for providing resources (labour, finance, advice etc.) they are not the predominant choice when it comes to confiding or discussing matters of importance.

6.7.2 Contextualising the hypotheses

Results in Table 6.32 showed the total effects of the path diagram of

- (i) H1: EP is positively but indirectly related to SC; and the path diagram of the interdependence relationships with
- (ii) H2: EP is positively directly related to LS which is positively directly related to SC. This makes two sub-hypotheses, expressed as:
 - H2a: LS is positively directly related to SC
 - H2b: EP is positively directly related to LS

The causality in the relationships between the three factors which confirms these hypotheses is measured by the standardised regression weights as provided in Table 6.31. The mediating effect of LS is established by calculating the total effects

under each hypothesis which was obtained by adding the direct and indirect effects of the results as shown in Tables 6.33-34.

6.7.2.1 Contextualisation of H1: EP is positively and indirectly related to SC

The path diagram of an arrow pointing from SC to EP in Figure 6.5 shows a path coefficient of .21. This coefficient is the regression weight for SC in predicting the outcome of EP and which confirms the causal relationship. The result of this hypothesis testing is also significant with (cr) value of 2.817 and $P < 0$. In other words, the regression weight for SC in the prediction of EP is significantly different from 0 at 0.005 levels. The regression weight estimate is 2.817 standard errors above 0. Although the structural model in Figure 6.6 does not show the indirect effects between factors, the underlying relationships between measurement indicators enable SEM to calculate indirect effects where a latent variable is also a mediator, thus becoming a predictor of another latent variable. Table 6.35 shows that only SC has an indirect effect on EP with a regression coefficient of (0.048). In this non-recursive model the total effect of SC on EP is (.26) confirming that for any increase of (1) in SC there is a corresponding increase of (.26) in EP outcome. This means that for food and drink manufacturers the value in their social networks contributes (.26) for any increase of (1) unit additional in the outcome of EP.

6.7.2.2 Contextualisation of H2: EP is positively directly related to LS which is positively directly related to EP

This hypothesis is represented by the two paths diagram on Figure 6.6. The first path diagram is an arrow from SC to LS with a path coefficient of (.28) showing the regression weight for SC in the prediction of LS, cr 2.540 and ($P = 0.11$). The second path diagram shows an arrow from LS to EP with a path coefficient of (.18)

measuring the regression weight for LS in the prediction of EP, or 2.817 and ($P=0.005$). Both results are significant at $P<0.05$. This gives a total effect of (.46), implying that the mediating role of LS has a positive impact on EP. Table 6.27 showed the results of hypothesis testing with two explanations. The first explanation is that social networks to which food and drink manufacturers belong enhance their leadership attributes by (.28) for any increase of (1) in the value of those networks. The second explanation is that food and drink manufacturers develop only a fractional (.18) for any increase of (1) in the value they get from social interactions in the pursuit of their entrepreneurial goals. The weakness of the regression path from LS to EP at coefficient (.18) suggests that even though the hypotheses are all confirmed, the leadership is not as effective in extracting value from social interactions and the selection of social networks during the EP remains very narrowly defined. Notwithstanding that food and drink manufacturers display a transitional behaviour in using social networks of both intrinsic and instrumental dimensions in the entrepreneurial process, the limitation of those networks is a significant barrier to their ability to spot opportunities and to organise new means-ends in a competitive manner. Equally, the implications of inadequate behaviour associated with a transformational leadership indicates that the process of formulating a clear vision to respond to market changes and convincing others to bring means of production to achieve that goal is not fully completed.

6.8 Memos on additional comments on Social Capital and social networks

As explained in the design of the survey questionnaire participants were encouraged to express personal opinions or to comment on the way social networks affect their business and also if they perceive any benefits to their business in maintaining social interactions. A total of 42 respondents provided useful comments which are summarised by topic in the following subtitles.

6.8.1 Understanding of social networks in the business context

- ***Relationships of ‘closure’: family, close friends and partners***

There appeared to be a clear separation of family and close friends from the whole concept of social networking in a business environment. One respondent acknowledged having only four friends, i.e. spouse and three others while making a clear distinction between friends and acquaintances. The same argument was made by another respondent who claimed that ***“the business competitiveness ought to have ‘no bearing’ on family and close friends”***. In the same vein another respondent ‘indicated’ that divorce has resulted in the business decline. These comments point to two issues. The first issue indicates a misunderstanding of the value that family members and close friends could bring to the business. The second issue would suggest a proclivity for seeing the business as a living entity separate from the individual owner/manager or entrepreneur and the associated relationships of ‘closure’. The notion that a business can compete irrespective of family and close friends’ contribution or influence is not supported by the literature (Nahapiet and Goshal, 1998; Honig and Davidsson, 2003). Family members and close friends could

constitute an essential part to organisational SC above the fact that they are often the primary source of funding as well as a source of labour (Bratkovic et al, 2009).

Other respondents expressed a more positive opinion about relationships of 'closure'. As one participant put it ***“one probably finds a more honest opinion from a close friend or colleague”***. There appeared an agreement that social networking within and outside the business environment is important, but equally acknowledgement that ***“finding the right networks and developing them was key”***. Although some respondents particularly from medium-sized businesses also agreed that social networks were important for business development, there was an admission that having secured a successful route to market as a manufacturer under a supermarket label there was little interest in pursuing any business goal through social networking. As one respondent put it ***“I find little relevance for a manufacturer of supermarket labels”***. This particular comment indicates that planning for uncertainty may not be a key priority in the management of the business.

6.8.2 Industry characteristics affecting social networks

As discussed in Chapter Two on the research context, food and drink manufacturing displays certain characteristics such as owing its origins to Farming Diversification, hence being predominantly rural businesses (EC, 1997). This heritage was strongly reflected in some respondents' opinions. In one particular example, a respondent whose family business dates from 1917 acknowledged that farmers have little understanding of market principles and the manufacturing side of the business is simply to comply with the regulation on farm subsidies ***“we just keep farming, we don't do networking, we respond slowly to market trends”***. There were also issues around the legal status of family business hindering decision-making and affecting the incentive to maintain social networks for business purposes. Others

simply did not understand social networking for a business, asking the following question ***“as a business how do I do social network?”***

6.8.3 The value of social networks

Respondents' opinions on the value extracted from social networks were split between 'instrumental' value and 'intrinsic' value. Some find social networks to be a source of support for personal development through coaching within their specific discipline, e.g. cider producers, readymade meals, dairy products. There was general acknowledgement of ***“making extremely good use of discussion groups across the country”*** in recognition of extra industry SC (Stam and Elfring, 2008). Intra-trade and community relationships were perceived as the main vehicle for developing mutual benefits, delivering high standards and quite importantly keeping control of the business. As one respondent put it ***“relationships among artisanal producers is essentially to expand step by step and up our game. We could grow faster with trade associations but we prefer slow growth in order to stay in the driver's seat”***. This may indicate some inadequacy in forming partnerships beyond familiar social ties (Saxenian, 1994).

Negative opinions were expressed on the capacity of social networks to facilitate access to resources. Banks, business support agencies including the RDA were perceived as living lavishly on public funds without any understanding of how difficult it is to run a business in a recession. One respondent described how frustrating it was to be refused a bank loan after many years of successful business and networking relationships, stating ***“banks prefer to trust bricks and mortar than a living human being and they never say No to an invitation”***.

Other negative opinions on the value deriving from social networks were more revealing of the dual nature of Social Capital, as the following comments suggest. One particular respondent was sceptical about the value of common brands in market development, saying **“communities dominate brands”** (Gorton and Tregear, 2009); while another claimed that social networks are a vehicle for bad news. In the respondent’s opinion, **“bad news always spreads faster than good so limited information should be released if possible, particularly in the SW industry”**. The concept of ‘bond actors’ finds its justification in situations where relationships of closure become a liability for the business (Burton, 2001).

6.8.4 Social Capital benefits

Few respondents among those who expressed opinions on social networks perceived the benefits of Social Capital from a perspective of the business owner/manager or the product, pointing to the fact that **“an excellent product naturally attracts customers, enquiries and sales”**. This could be argued in environments where communication technology facilitates the accumulation of organisational human and social capital (Galloway, 2007). The idea of strong leadership was mentioned emphasizing the sacrifice consented by family members as well as their share in the success. As one respondent put it **“this business has been a success largely through my vision and determination as a leader but my son who works here also gets some recognition but less than me”**. This comment highlights the effects of the leader’s conduct on the organisation (Lin et al, 2008).

6.8.5 Perceived barriers to social networking

In this category the main perceived barriers were location, gender and time resource. A female respondent acknowledged that gender was a barrier in a male-dominated

industry but was hopeful that this will change. Others cited *isolation* and *time* as the main reasons for limited social interactions. These factors have also been acknowledged in previous studies (Street and Cameron, 2007).

6.9 Chapter conclusions

The empirical research is based on data collected from a representative sample. The interpretation of the model confirms the main hypotheses, showing a partial mediation where the causal relationship between SC and EP is confirmed. The total effects of SC on EP show a regression coefficient that is lower than the total effects through the mediating role of LS.

The operationalization of the main findings exposes some LS weaknesses among SW food and drink manufacturers particularly in relation to vision formulation, extra insight and knowledge. The leadership process illustrating the ability to convince others and channel resources into new means of production did not load strongly on LS indicators. The main findings on SC confirmed the over-reliance on two specific networks (local associations and professional services) for relationships of closure and brokerage and this points to a SC of dual nature with 'intrinsic' and 'instrumental' value locked into the same social interactions for the purposes of recognising, evaluating and exploiting opportunities. Relationships with family members, partners and close friends are mainly perceived as means to access an instrumental value of SC.

The model dependent variable affirms that food and drink manufacturers maintain social networks because of SC benefits that those social ties can generate to facilitate EP. In order of importance, the benefits are (i) social credentials, (ii)

privileged access to information flows and (iii) influence to facilitate access to strategic resources. The weakness of the regression weight of LS on EP as well as the order of importance of SC benefits together with relationships of dual usage most used by food and drink manufacturers raise some interesting questions which are examined in the chapter.

CHAPTER SEVEN: DISCUSSIONS

7.0 Introduction

The preceding chapters of this thesis have completed a critical synthesis of the UK food and drink manufacturing sector with an emphasis on the empirical research context in the SW Region. An examination of the extant literature on the interaction between SC, LS and EP as main factors and latent variables helped to formulate the main research question. In explaining the declining competitiveness of food and drink manufacturing, the researcher posited that the relationship between SC and EP was mediated by the role of LS to the extent that LS attributes directly influenced the outcome of EP. Thereafter, the research main hypotheses were developed pointing to causal relationships between the three latent variables.

The study took a realist ontological orientation with a quantitative design in order to test the main hypotheses. The researcher made a further choice for a multivariate analysis technique using SEM to evaluate the causal effects in the interactions between SC, LS and EP. Although causation is rarely found in strictest terms in social sciences, a strong theoretical framework can enable the researcher to achieve causal inference using empirical estimates. The measurement indicators of each latent variable in the conceptual framework provided the essential basis to measure an adequate degree of association between a predictor variable and a dependent variable where no other reasonable causes for the outcome are present. Data analysis confirmed the main hypothesis, i.e. EP is positively but indirectly related to

SC. The partial mediation feature of this non-recursive model was proven in the diagram pathway coefficient of the regression weights between the latent variables as shown in Table 6.36. The main findings uncover the direct effect of LS attributes in determining EP outcomes. More importantly, the direct effect of SC of structural and relational dimensions through the frequency, density and purpose of social interactions on LS is exposed alongside the indirect effect on EP outcome.

This chapter discusses the main findings in light of the conceptual debate relevant to this thesis. In line with the research main aim the results of this study are situated within the scientific debate on Social Capital and Entrepreneurship Process to which the role of entrepreneurial leadership is inextricably linked. The importance of Entrepreneurship is evidenced not only in policy initiatives but, more importantly, in research to encourage new business ventures and to foster the pursuit and successful commercialisation of new opportunities in existing businesses. This chapter is divided in two main sections; Section One assesses the effect of LS on EP outcome and competitiveness; Section Two examines the value of SC as determined by social networks dimensions and the social ties that define those networks. A synthesis of the study main findings is provided as the conclusion.

7.1. Leadership

The operationalization of main findings as explained in the preceding chapter under Section 6.7 points to important results with regard to leadership as summarised below.

- i) The overall effect of the transformational leadership (Lead2) in relation to value-based (Lead1) and team-oriented (Lead3) leadership is weak as shown in the structural model in Figure 6.5. More importantly, some key

characteristics of the transformational leader e.g. **'extra insight'**, **'visionary'** and **'well informed'** are excluded.

- ii) The overall strength of value-based leadership attributes (with a regression weight of (.805) does not reveal some deep seated weaknesses in other conceptually relevant attributes, for example **'intellectually stimulating'** and **'decisive'** as an ability to define gravity, and that are called upon in formulating a compelling vision that others can believe in.
- iii) Notwithstanding the high coefficient of (.725) explained by team-oriented LS attributes certain behavioural characteristics such as **'encouraging'**, **'convincing'**, which must intervene in the process of exploiting opportunity are absent.
- iv) Furthermore, the measurement indicator **'reward'** which signals a behaviour associated with **'win-win problem solver'** **'fairness in treating others'** showed the lowest loading factor of all LS indicators in the model.

In the highly volatile and competitive environment within which SW food and drink manufacturers operate, what do these results tell us?

7.1.1 Transformational leadership dimension of SW food and drink manufacturers

Food and drink manufacturers who completed the self-assessment measurement of leadership confirmed three behavioural characteristics of transformational leadership, and these are:

- (i) **'Foresight'** or the capacity to anticipate future events;

- (ii) **'Confidence-builder'** shown in instilling others with confidence, and;
- (iii) **'Inspirational'** in exalting emotions, values, beliefs and motivation for hard work.

These three attributes associated with transformational leadership were also found to be explanatory variables for organisational positive outcomes in other studies (Gentry and Leslie, 2007; Judge and Piccolo, 2004; Kotter, 2001). What is more revealing in these findings are other strong attributes of transformational leadership that are not present in the model.

Firstly, **'visionary'** as in having an idealised goal is what binds together leader and follower in sharing the same future direction (Burns, 2010). As such, it is the means of motivation and commitment to a future achievement. The absence of this key leadership attribute in the explanatory model confirms the weakness in formulating a vision among SW food and drink manufacturers. This is because the behaviour indicator did not co-vary significantly in response to other variables in the model and was therefore rejected.

Secondly, **'well-informed'**, an attribute associated with intellectual stimulation based on the leader's knowledge and information awareness instils creativity in problem solving and stimulates followers intellectually (Alvolio and Bass, 1995). Even though 94% of respondents agreed that this characteristic was part of their behaviour (with 6% neither agreeing/nor disagreeing) its overall strength in response to other variables was too weak, suggesting that food and drink manufacturers are not very knowledgeable of issues that may affect their industry. Indeed, this was acknowledged in a comment by one participant in these terms **"we farmers, we only know how to farm and to produce good food. We don't respond well to**

market trends.” There is an indication in this comment that even the term **‘manufacturers’** is not a correct description of who they are, as there is a preference to be referred to as **‘producers’** (Treager, 1999).

Thirdly, the leadership attribute **‘extra insight’** describes the presence of a strong intuition and is believed to be a strong characteristic of entrepreneurs who combine the knowledge in their possession with a strong perceptiveness in order to make a conjecture about the future (Storey, 2011; Shane and Venkataraman, 2000; Casson and Della Giusta, 2007). The theoretical association of knowledge, intuition and vision in entrepreneurial behaviour is also confirmed in their relationships to the task of inspiring and modelling a team capable of extraordinary achievement (Bandura, 1970; Katou, 2011). The absence of these three strong characteristics of transformational leadership signals a significant gap in leadership attributes (Gentry and Leslie, 2007; Kotter, 2001). This could be caused by inappropriate knowledge of industry and markets.

7.1.2 Value-based leadership dimension of SW food and drink manufacturers

Value-based leadership was the strongest behavioural indicator among food and drink manufacturers who completed the self-assessment questionnaire. Three measurement indicators explained this behaviour: **‘ambitious’** in pursuing a specific goal, **‘performance-oriented’** and **‘effective negotiators/reward’**. From the SEM explanatory model in Figure 6.5, it is clear that food and drink manufacturers are ambitious in setting a goal and working hard towards achieving it. They also have a strong penchant for continuous improvement and for rewarding employees fairly. The relevance of these behavioural characteristics to the competitiveness of any organisation has been demonstrated in other studies (McCoy, 2007; McCullough and Snyder, 2000; Ghemawat and del Sol, 1998) reinforcing the leader’s self-belief as a

source of inspiration for others (Shamir et al, 1993; Conger and Kanungo, 1987). However, other key characteristics of value-based leadership such as **'positive'** and **'encouraging'** are not present in the explanatory model. In spite of being inspirational SW food and drink manufacturers are ill-equipped to provide reassurance and to advise their employees (House and Aditya, 1997). The absence of a strong vision impairs a system of leader-followers communication capable of hosting shared ambitions and goals as other studies have also found (Dirk and Ferrin, 2001; Ireland and Hitt, 2005; Gupta et al, 2004).

A final observation on the results of value-based leadership concerns the behavioural indicator referred to as **'reward'** or the ability to bargain effectively and fairly which is included in the leadership factor explaining the competitiveness of food and drink manufacturers in the South West. Although it shows the lowest loading factor measuring leadership in the explanatory model, it does raise a conceptually defined question. Research on leadership shows a commonality between transactional and transformational leadership through the behavioural indicator of **'bargainer'** or **'effective negotiator'**. Individual consideration as a dimension of transformational leadership portrays the leader's ability to invest in the development of others in a two-way communication that takes account of personal needs. Similarly, under the transactional leadership the **'contingent reward'** dimension demonstrates the extent to which leader and followers engage through transaction and exchange. This conceptual dichotomy could indicate that SW food and drink manufacturers adopt a transactional approach in dealing with employees and the support is conditional on the completion of a task. Indeed, the absence of a **'visionary'** behaviour indicator coupled with the presence of **'inspirational'** and the

exclusion of **'well-informed'** behavioural indicators points to an atypical leadership style.

7.1.3 Team-oriented leadership dimension of SW food and drink manufacturers

Team-oriented leadership was the second most important behavioural characteristic of food and drink manufacturers which was measured through **'motivation'**, **'team work'** and **'commitment'**. These findings are consistent with other studies which established a strong correlation between the presence of these leadership attributes and a positive impact at personal, team, and organizational levels, with the strongest boost to performance occurring at the team level (Katou, 2011). This particular result also elucidates the impact of **'contingent reward'** as a predictor of individual task performance in a transactional leadership context, whereas in a transformational leadership context it predicts a better contextual performance above and beyond what is delineated by job requirements (Kaiser, 2008). Regarding SW food and drink manufacturers, attributes related to motivation and commitment indicate an approach to LMX more inclined towards a transactional leadership to support employees' individual commitment to the task in the context of an industry that is dominated by small sized organisations.

7.1.4 Examining SW food and drink manufacturers in relation to other leadership styles

The study findings show that SW food and drink manufacturers lack attributes of **'visionary'**, **'well-informed'** and **'intuitive'** to enable them to define a shared vision and absorb uncertainty by drawing from their values of continuous improvement and high ambitions (Gupta et al, 2004). Because of inadequate knowledge, they also fail to convince and encourage employees in clearing the path for the achievement of that vision. As a result, the team is unable to find a common purpose and the leader

cannot define gravity in terms of what is within reach and what is unachievable. Since the scenario enactment and the cast enactment are interrelated, these results indicate that in spite of demonstrating some leadership attributes, SW food and drink manufacturers do not really display entrepreneurial behaviour. The peculiarity of this situation invites some discussion in the light of other effective leadership processes applicable to innovation considering their suitability in enacting a reality that does not yet exist (Schumpeter, 1934).

The uncertainties of the 21st century make it incumbent on leaders to trust others, particularly employees (Jung and Avolio, 2000; Avolio and Bass, 2002). A strategic approach is needed to managing knowledge, skills, experiences and organisational SC as the most valuable resources for any organisation (Hitt and Ireland, 2002; Kotter, 1982; Prahalad and Hamel, 1990).

Examining SW food and drink manufacturers from the perspective of servant leadership the key behavioural characteristics of this leadership approach, to help employees thrive and flourish, are not present in the explanatory model. In spite of strong team-oriented behaviour displaying attributes of commitment, motivational and team builder, the lack of vision, credibility and trust from employees remains a key obstacle (McMinn, 2001; Farling et al., 1999). This is why the '**contingent reward**' LS measurement in the sense of valuing people and empowering them suggests some association with transactional leadership in this study.

Regarding distributed leadership, the ability to share influence by co-performing certain predetermined tasks is emerging as an attractive practice especially in small family businesses (Spillane, 2006; Spillane et al, 2007). This could also be suitable in a working environment where interpersonal trust between employees and BOM is prominent (Dirks and Ferrin, 2001). The study findings point to the conclusion that a

leadership process based on co-performance does not offer an alternative explanation because employees and customers are not valued as part of the business social capital (Carrigan and Buckley, 2008; Ng and Roberts, 2007; Karra et al., 2006; Carney, 2005). There is also the lack of sufficient knowledge which makes it difficult to trust others (Saxenian, 1994).

Finally, ambidextrous leadership offers an alternative for analysing the results of the explanatory model in relation to leadership behaviour common to SW food and drink manufacturers. The study results show that the ability to adjust to the EP stages of evaluating or exploiting opportunity was not shared due to a lack of decisiveness and intellectual stimulation (Rosing et al, 2011; Bledow et al, 2009), as other studies have also found (Einsenbeiss et al, 2008; Jung et al, 2008). As reported in a previous study (FFB, 2005), SW food and drink manufacturers reported in a survey that they were innovative but not very successful in commercialising.

7.1.5 Main aspects of the leadership behaviour of SW food and drink manufacturers

Although they display very strong characteristics of the leadership dimensions making the model, SW food and drink manufacturers do not score well on key indicators, particularly on the following: ***'well-informed'***, ***'extra insight'***, ***'intellectually stimulating'***, ***'convincing'*** and ***'decisive'*** all of which are essential to the process of articulating a clear vision and convincing others to work together to enact it (Gupta et al, 2004; Schumpeter, 1934). When considering servant, distributed and ambidextrous leadership perspectives it becomes more apparent why in spite of very strong values and work ethics, SW food and drink manufacturers find it hard to innovate successfully (FFB, 2005). The main weakness appears to be the absence of intellectual agility to adapt to situations (Lewis et al, 2002) and also to

reflect on and assess their employees' human and social capital at any particular time in the innovation process.

7.2 Social Capital and Social networks

The research findings on SC showed two dimensions used to observe and evaluate the direct and indirect effects of SC on LS and of SC on EP outcome respectively. Results showed that for any increase of (1) in SC the corresponding direct effect on LS was (.28) and direct effect and total effect on EP outcome was (.21) and (.26) respectively. The main determining factors for this effect originated from relationships with '**local associations**' and suppliers of '**professional services**' that were used on both dimensions with a loading factor of (.841) and (.738) respectively. Relationships with '**family members, close friends and partners**' which typically represent social ties of closure was the third contributing factor measuring the instrumental dimension of SC with a loading factor of (.517). Finally, relationships with '**regional and national bodies**' also contributed SC of structural dimension. Some key issues behind these findings need to be examined considering their conceptual significance in this thesis.

- a) The overwhelming reliance on social ties with '**local associations**' and '**professional services**' for both structural and relational dimensions of SC raises two important points: '**over-socialisation**' and '**duality**' of SC;
- b) the association of relationships with '**family members, close friends and partners**' with access to resources draws attention to the problem of '**structural holes**', and;
- c) The explanatory model shows that relationships with '**employees and customers**' which measure '**strong ties**' and '**weak ties**' as critical for

small firm development are too weak (loading factor of .397) to remain in the model (see Table 6.5).

- d) Finally, relationships with *'regional and national bodies'* often quite effective as sources of brokerage for information and resources also point to some conceptual issues in relation to partnerships and innovation.

These findings are examined in light of the extant literature on SC and social networks particularly with regard to their effect as strategic resources in competitiveness (Burt, 1985) or their role as critical assets for any organisation (Nahapiet and Goshal, 1998; Prahalad and Hamel, 1990).

7.2.1 Social interactions with local associations and professional services

Of the six measurement indicators of SC of intrinsic and instrumental value, results show that SW food and drink manufacturers maintain social interactions with two specific groups of people more than any other group and these are members of local associations and providers of professional services.

As discussed in Chapter Two on the research context, food and drink manufacturers in the SW share a very strong tradition of common heritage which is maintained through various memberships based on product, locality and common brands (Gorton and Tregear, 2009). They show a dominant proclivity for forming *'strong ties'* within trade and industry associations as one participant eloquently expressed *"communities dominate brands"*. Although such informal *'strong ties'* can generate tie-supporting norms such as trust, they can also be counterproductive to value creation as in the case of SW food and drink manufacturers. Previous studies confirmed that SC does not always bring benefits to actors engaged in social interactions (Coleman, 1988; Kramer, 2009; Lewicki et al, 1998; Fishman, 2009).

Another important result from this study is that SW food and drink manufacturers use **'professional services'** of accountants, bankers, management consultants and so on for both intrinsic and instrumental value and do not necessarily reap the additional capital they expect from those interactions. This result supports findings from extant studies particularly the work of Fishman (2004; 2009) on differentiating SC from social ties, as well as social ties based on intrinsic value and those initiated by the need to access external power-based resources. From this position, the distinction between network actors driven by the need to gain access to resources and those motivated by the intrinsic value is a fundamental point of difference not easy to establish. As reflected by one participant on the use of social networks, "**banks prefer to trust bricks and mortar than a living human being and they never say No to an invitation**".

The value attributed to the flows of exchange of information and/or resources within social networks is not always intentionally related to the outcomes (Lichterman, 2005; Lizardo, 2006; Kadushin, 2004). As one participant put it **'finding the right networks and developing them is key'**. A recent study on the performance of business associations in the UK (Newbury et al, 2013) also points to the fact benefits of membership association are subject to the circularity inherent to Social Capital which is entrenched in the participation of all members. These findings are also in line with the conceptual model of entrepreneur behaviour in Chapter Five whereby the EP requires social networks of 'strong ties and 'weak ties' simultaneously across multiple networks. Four case studies were completed on how rural entrepreneurs in Denmark transform local SC into economic value (Svendsen et al, 2010). The findings show that only one case was successful because the entrepreneur was able

to attract regional partners in addition to keeping local partners in an unconventional cooperation with effective sanctioning.

It is of interest to examine the relationships between owners and managers in the food and drink manufacturing industry in the SW region and suppliers of **'professional services'** from the perspective of a buyer-supplier relationship. Firms develop SC for mutual operational and strategic benefits (Lawson et al, 2008; Cousins et al, 2007), but taken to extreme such relationships can hinder the business capabilities to effectively adapt to evolving markets as a study of 730 Spanish firms by Villena et al (2011) reveals. Structural and relational SC can become a liability to a firm when frequent and close interactions facilitate exploitation of synergies, and access to valuable resources. With time, the risk of opportunism, loss of objectivity, ineffective decision making and costly investments may outweigh the benefits and ultimately hinder the client's performance, in this instance SME food and drink manufacturers in the SW Region. The curvilinear relationship between performance improvement and structural and relational SC dimensions revealed by Villena et al (2011) points to the study findings in explaining the underlying factors behind the poor competitiveness of SW food and drink manufacturing. In this instance, the duality appears more damaging than the reality of belonging to a referent frame of common understanding, as other studies have shown (Rossetti and Choi, 2005; Inkpen and Tsang, 2005).

7.2.2 Social interactions with family members, close friends and business partners

Relationships with family members, close friends and business partners are fundamentally of instrumental value. However, respondents' comments indicate conflicting views regarding the value of these relationships as an integral part of the

business SC as one respondent iterated that ***“the business competitiveness ought to have no bearing on family and close friends”*** while another stated that ***“one probably finds a more honest opinion from a close friend or colleague”***. Conceptually, social interactions with family, close friends and business partners are essentially ***‘strong ties’*** or relationships of ***‘closure’*** because of inbuilt frequency and density of interactions (Granovetter, 1983; Burt, 1982). Although research shows that both ***‘strong ties’*** and ***‘weak ties’*** can be effective for EP the nature of the relationships with family and close friends does not lend itself to a function of ***‘brokerage’*** because predictably they are classified as ***‘within group’*** communications as opposed to ***‘between groups’*** communications (Burt, 1992; Tiwana, 2007). By giving an instrumental value to relationships of closure, SW food and drink manufacturers in effect limit their scope of brokerage in many ways. Firstly, the limited diversity in opinions and practices present in those interactions alienates real possibilities of bridging structural holes. Secondly, the very nature of those relationships means that access to additional resources particularly financial resources is very narrow. Finally, and most importantly, this indicates a state of ***‘embeddedness’*** of economic activities within social networks that is not supportive of business growth because of their limited interaction with markets as a means of developing knowledge.

7.2.3 Relationships with employees and customers

Social interactions that are intrinsically valued and not perceived as a means to access external resources may prove more powerful in bridging structural holes than those developed purposely to access external resources. Relationships with employees and customers fall into that category, as SC is represented by ***‘the sum of the actual and potential resources embedded within, available through and derived from***

the network of relationships possessed by an individual or social unit' (Nahapiet and Goshal, 1998, p.243). This definition carries two implications in respect of social networking in which SW food and drink manufacturers take part. Firstly, innovation capabilities are limited and these limitations inevitably erect barriers to competitiveness, as other studies have also found (Bontis et al, 2000; Hayton, 2005). Secondly, the lack of active networking with customers prevents the acquisition and development of market knowledge. Research shows that customer knowledge is an intangible critical asset which can form the cornerstone of innovation (Bhagavatula et al, 2010; Wu et al, 2008; Proctor, 1998).

7.2.4 Relationships with regional or national organisations

Relationships with '**regional or national organisations**' such as DEFRA, Taste of the West are essentially '**weak ties**' used for brokerage services because of the knowledge and financial resources that government, suppliers or industry associations can bring to organisations (Bontis et al, 2000). As one respondent commented, such interactions serve as a platform for "**making extremely good use of discussion groups across the country**". But relationships with large trade associations create bonds among independent organisations for purposes of marketing or brand protection which are not necessarily beneficial in the long run (Gorton and Tregear, 2009; Das and Teng, 2002). Particularly with regard to potential for relationships formation with foreign partners, the lack of competitiveness on export markets among SW food and drink manufacturers [the weakest performance at national level (BIS, 2013)] indicates that this is not only due to geographical constraints or industry characteristics (Street and Cameron, 2007). Relationships formation and general attitudes to partnering are deeply influenced by knowledge and personal interests, pointing to the fact that SW food and drink

manufacturers do not export well because the state of knowledge within the business does not support innovative orientation and behaviour (Beecham and Cordey-Hayes, 1998; Young and Olk, 1997; Lee and Tsai, 2005). It is difficult to say whether this is the effect of the dominance of community brands associated with an increasing number of regional and local associations of food and drink manufacturers (Gorton and Tregear, 2009), or if the reverse is true.

7.2.5 Social Capital benefits and EP outcome

The study results showed that SW food and drink manufacturers expect benefits from social interactions in the following order of importance: social credentials (.76), privilege to access resources (.73), and influence (.69)

7.2.5.1 Perceived Social credentials

Social credentials are largely expected in environments where norms and values are fundamentally influenced by or even acquired from socialisation (Granovetter, 2011; Lin et al, 2008). Relationships of dual nature reinforce this outcome because being trusted to honour obligations is very important in instances where obligations may impact on personal capital, as previous studies have revealed (Lin et al., 2008; McAllister, 1995; Gubbin and McCurtain, 2008). Since SC is jointly owned and not tradable (Burt, 2007; Coleman, 1990), the effect of social credentials on investment decisions, partnership formation and human capital development on SMEs in SW food and drink manufacturing is potentially acute as previous studies have found (Craig et al., 2007, Domhoff, 1967, Constant and Zimmerman, 2006; Brunetto and Farr-Wharton, 2003, Saxenian, 1994; Packalen, 2007).

7.2.5.2 Perceived privileged access to resources

Although it is acknowledged that both '**strong ties**' (Aldrich et al., 1997, Coleman, 1988) and '**weak ties**' (Granovetter, 1985) (Casson and Della, 2007, Casson, 1982) can provide strategic resources and information for an organisation, the extant literature contends that '**weak ties**' through '**brokerage**' are more associated with innovation and growth. Because relationships created by the use of brokerage among SW food and drink manufacturers is very limited, this result indicates a tendency to use closed networks where trust matters.

7.2.5.3 Perceived influence

Studies on network structure show that influence is attained mainly through relationships of '**closure**' and '**strong ties**' (Honig, 1998; Packalen, 2007; Domhoff, 1967; Economist, 2012). In the same vein, the sphere of influence confined to closed networks is limiting in, for example, mobilising resources to take an opportunity to successful commercialisation. Research shows that bridging '**structural holes**' enables a business to expand the scope of individual and organisational influence (Packalen, 2007, Frank et al., 2007; Burt, 1992; Granovetter, 1985).

7.2.6 Effect of social network structure on EP for SW food and drink manufacturers

In spite of the highly held values articulated around hard work and high performance, the inspirational capacity of SW food and drink manufacturers falls short of defining a vision, a broad course of action that can take the business to a better competitive position. Particularly, the lack of sufficient knowledge means that they do not know what needs to be done to fulfil their aspirations which have negative implications on resources application. For example, employees may not feel compelled to deliver an extraordinary performance because the sense of direction is lacking and they are not

intellectually stimulated to imagine new ways of doing things. These inadequacies could be perpetuated by an over reliance on closed networks of local associations and suppliers of professional services and the implications for EP are acutely confining their ability to compete.

Starting with opportunity recognition which essentially begins with identifying information asymmetries (Hayek, 1937) and the dissemination and fluidity of information and knowledge within a changing context (Kirzner,1997; 2009) brokerage plays an essential part in establishing potential new connections. The limited brokerage of professional services and regional bodies excludes SW food and drink manufacturers from an adaptive system where distribution of asymmetrical information could lead to a continuous circle of new opportunities (Anderson et al, 2012; Kilduff and Tsai, 2003). A study of German firms has shown similar results (Kern, 1998).

Regarding opportunity evaluation which involves a process of combining knowledge, information and extra insight to evaluate resources (Hayek, 1937, Kirzner, 1982, Aldrich and Zimmer, 1986, Casson, 1982) it is clear that the tendency to develop relationships of closure as discussed earlier does not help SW food and drink manufacturers to make informed judgement about resource value. Furthermore, and because their influence is limited within those closed networks, they could become vulnerable to external decision-making on resource valuation and allocation, once they have exhausted resources within closed networks of social interactions. Thus, the possibility of activating other financial and informational resources to develop a competitive advantage could be excluded (Bourdieu, 1985).

Finally on exploiting opportunity, results show that SW food and drink manufacturers prefer to share common brands (Gorton and Tregear, 2009) and to use trade

associations and local shops for market access (Street and Cameron, 2007). It was also mentioned earlier that the inadequate level of skills combined with a tendency not to form collaborative alliances could hinder the chances of successful market organisation. While difficulties in attracting skilled workers could be attributable to a combination of factors (for example, location, salary, lack of intellectual stimulation), the weakness among SW food and drink manufacturers to develop relationships outside existing networks where untapped sources of SC could be available strongly suggests that their ability to compete is limited (Gedaljlovic et al, 2013; Pearson et al, 2008; Tsai and Goshal, 1998). Brokerage is strongly associated with innovation and growth. An over-reliance on closed networks is thus an anti-thesis to bridging structural holes and gaining the vision advantage in identifying different ways to solve problems and new pathways to build support for new ideas (Schumpeter, 1934; Shane and Venkataraman, 2000).

7.3 Conclusions

Chapter Seven provides a comprehensive examination of the main findings of this thesis in light of the current debate provided by the extant literature. The discussions accord with the study main aim in explaining the factors underlying the poor competitiveness of SW food and drink manufacturers from an entrepreneurial perspective. Referring to the explanatory model in Figure 6.5 it is clear that the weakness of the mediating role of leadership is principally due to two factors: (i) inadequate knowledge and the corollary absence of a compelling vision, and (ii) social interactions in network closure where very few possibilities of brokerage occur to enhance opportunity identification, evaluation and exploitation. Regarding

leadership attributes, not being '**well-informed**' points to difficulties in defining a compelling vision which in turn could indicate that SW food and drink manufacturers are not '**intellectually stimulating**'. These inadequacies diminish their ability to step out of the boundaries of routine to lead the means of production into new channels (Schumpeter, 1934).

These findings are in line with previous studies on entrepreneurship and Social Capital in the context of the competitiveness of firms across various industry sectors and socio-economic contexts. Thus, the study main findings provide reliable explanatory factors to the lack of competitiveness of SW food and drink manufacturers and reinforce the determining role of leadership in competitive environments.

CHAPTER EIGHT – CONCLUSIONS AND IMPLICATIONS

8.0 Introduction

This chapter provides an overview of the thesis in accordance with the research main aim and objectives. It summarises the main findings and the researcher's contribution to knowledge. It then presents the study implications and its limitations before concluding with recommendations for further research.

8.1 The study main conclusions

Over the past two decades, the SW food and drink manufacturing sector has faced increased competition from external and internal factors. Some internal factors, particularly leadership behaviour in SC and EP interaction, form the main question that this thesis answers.

The first objective was to explore the socio-environment of food and drink manufacturing in the SW Region looking at networks of relationships in the UK Food Chain in general and the manufacturing sector in particular; identifying socio-economic factors affecting innovation; and establishing whether there is any link between SC and EP in the South West food and drink manufacturing sector. This objective was attained by completing a critical synthesis of SW food and drink manufacturing as provided in Chapter Two. An examination of the UK Food Chain revealed a network of asymmetrical relationships where SME manufacturers often operate at the lower end of power and influence. It also reveals that UK food and drink manufacturers in general have developed a network of affiliations built on

location or product around which 'common brands' serve as the main market strategy. Other business related networks are formed at national, regional or local levels for the purpose of supporting SEMs in food and drink manufacturing. Interestingly, the socio-environment of the empirical study is characterised by an evolving demography and consumers changing lifestyles, suggesting a vibrant and innovative market. To the extent that the changing socio-environment of which SW food and drink manufacturers are an integral part is a source of innovation, a proposition was made that both SC and EP were present variables in the research context.

The second objective of this thesis was to explore a theoretical framework of business competitiveness with SC and EP as main variables and to develop a theoretical model where the interactions between SC and EP can explain the lack of competitiveness of SW food and drink manufacturers through the mediating role of leadership. To this effect, the limitations of a direct relationship between SC and EP were argued in Chapter Three using the extant literature to hold that leadership attributes also had an impact on business competitiveness. Thus, the conceptual model was hypothesized on a direct relationship between SC and LS, and between LS and EP outcome respectively, showing relationships of interdependence between the three main variables, SC, LS and EP and their measurement indicators in Chapter Five.

The third and final objective of this study was to evaluate and analyse the underlying factors explaining the competitiveness of the South West food and drink manufacturing sector. This began with a choice of appropriate methodology where the researcher took a realist ontological position with the design of a multivariate

data analysis technique using an SEM as covered in Chapter Four. A research instrument was built from the measurement indicators of the three main variables as described in the conceptual model of interaction, and was tested on 50 units from the sample population. 359 SME food and drink manufacturers out of 1,240 selected from the six counties of the SW region responded to the survey. Descriptive statistics show that the 359 respondents making the sample were fully representative of the population and reliability and validity tests were all satisfactorily completed. Hypotheses testing confirmed that EP outcome was the direct effect of SC on LS added to the direct effect on EP. In operationalizing these results, the regression weight of LS on EP which is smaller than that of SC on LS strongly suggests that inadequate leadership attributes of SW food and drink manufacturers is, to a large extent, the main factor behind the declining competitiveness. Equally, the indirect effect of their reliance on networks of closure deprived them of the information, knowledge and resources that relationships of brokerage bring to businesses in order to help them compete.

A detailed examination of these results as covered in Chapter Six is further discussed in Chapter Seven, focusing on the measurement indicators of each variable in order to provide an explanation to the research main question and to attain the study main aim. With regard to LS, three main observations were made. First, the weakness of the transformational LS results from the lack of vision and extra insight among SW food and drink manufacturers. Second, team-oriented LS style appears to be strong in commitment, team work and effective negotiation to reward employees effectively. Lastly, value-based is strong on ambition and continued improvement but very weak on intellectual stimulation and the ability to define gravity.

On SC, social networks of relational and structural dimensions are used to measure the density and frequency of social interactions and the meaning accorded to those ties. In accordance with the extant literature, the structural dimension measures the use of bridging relationships or brokerage and instrumental value in relationships that people maintain because they need something of material value. Relational dimension of SC represents network closure or those social ties that are built on their intrinsic value, familiarity and trust. It is also revealed that SW food and drink manufacturers relied more on two types of relationships. The first category is represented by social interactions with local trade, industry and social associations, and the second is made of relationships with professional services such as management consultants, banks, lawyers, accountants etc. The predominant use of these relationships uncovers the problem of SC duality and over-socialisation of SW food and drink manufacturers and exacerbates their proclivity for the use of 'common brands' as 'common goods'. Surprisingly, relationships with family members, partners and close friends were perceived as social ties of instrumental value and this may be due to other problems, e.g. low-skilled workforce and family business that are not addressed in this study. Family members constitute a primary source of funding for start-ups because of the underlying trust in those relationships and they constitute a typical case of duality in the nature of SC. It is unexpected that other relationships, particularly with professional service providers are maintained for both intrinsic and instrumental value.

In summary, it appears that the lack of sufficient knowledge deprives SW food and drink manufacturers of strategic information which is critical in developing a compelling vision others are convinced it is worth working for. In the same vein, the inadequacy of information and knowledge is intensified by their use of networks of

closure. This situation in effect suggests that they are locked out of systems where non-redundant information helps the discovery, evaluation and exploitation of market opportunities. As a consequence, they cannot really develop a good intuition about their market.

8.2 The Researcher's Contribution

This study has implications on the theoretical understanding of EP as a social construct and more importantly on understanding the lack of competitiveness of SMEs in SW food and drink manufacturing.

8.2.1 Theoretical implications

The study conceptual model makes a significant step in explaining the interaction between the individual entrepreneur BOM and the socio-environment where social interactions help identify information asymmetries as a source of opportunities. Looking back at the literature review, it is clear that existing models explaining EP do not integrate an interactive process between the individual BOM and related social networks in terms of entrepreneurial opportunities and processes (Krueger, Bridge et al, Shane and Venkataraman, 2000; Simon and Della Giusta, 2007). By integrating the entrepreneur's behaviour in the EP-SC relationship, this study offers an analytical framework of entrepreneurship that is more adapted to explain the relationship between SC and EP, and adds to a better understanding of business competitiveness. The distinction between SC and social networks exposes the sources of SC as very distinct from SC resources and re-emphasises the concept **of 'structural holes'** and **'weak ties'** in competition (Gedajlovic, 2013; Burt, 2009; Granovetter, 2009; Kirzner, 2009). Particularly, the study exposes the value of

organisational leadership in an era where knowledge is the new weapon of competition (Zand, 1997).

The second theoretical contribution of this study is the methodology. Although more study is required to fully explain the competitiveness of SMEs, the methodological approach integrates different constructs that were examined separately in previous research. The construct of entrepreneurial leadership has not been analysed before in relation to social networks and their effects on entrepreneurship and competitiveness (Wilson Ng and Thorpe, 2012; Rosing et al, 2011; Gupta et al, 2004). The relationship of interdependence between SC, LS and EP, where LS plays a mediating role enables the measurement of direct and indirect effects and this is an important distinction for practical and management implications particularly for the competitiveness of SMEs in a fast changing global environment. Finally, the measurement model used to develop relationships of interdependence and to evaluate the causality between SC, LS and EP outcomes could contribute to the evaluation of other relationships. In different contexts, the three main constructs could help hypothesise different phenomena of research interest and enrich existing knowledge on SMEs competitiveness.

Finally, the study makes a significant contribution to the literature on Social Capital. Although it is largely agreed that SC is beneficial to individuals and communities, the fact that SC can have a negative effect on communities and individuals is often overlooked. Communities have resources, but the individual's construction of sociability is a key determinant of the outcome from social interactions (Gedaljovic et al, 2013; Newbury et al, 2013). As the study main findings reveal the effect of SC on EP is explained by individual contribution of BOMs to the process of recognising, evaluating and exploiting opportunity, and how effectively are their social interactions

in that process. To this end, the study adds to the extant literature on the conceptualisation of SC as distinctively constituted by social associations and claims made on resources on the one hand, and the amount and quality of those resources on the other (Burt, 2009; Bartkus and Davis, 2009; Nahapiet, 2009; Bourdieu, 2005; 1985; Portes, 1998). Finally, the study contributes to the reconsideration of SC as a de facto source of competitive advantage, as well as an examination of its attributes as both cause and effect due to its intrinsic logical circularity (Gedaljovic et al, 2013; Portes, 1998; Putnam, 2003).

8.2.2 Implications for practice and management

The study has several implications for the competitiveness of SMEs in the SW food and drink manufacturing sector in particular and in UK food and drink manufacturing in general. This study is the first to investigate the declining competitiveness in food and drink manufacturing from an entrepreneurial perspective. Exposing the explanatory factors behind the competitive performance of the sector could enable vested parties to take appropriate action. As the study findings revealed BOMs, trade associations and professional and government bodies are all concerned with the state of this important sector.

For BOMs of SEM food and drink manufacturers, the study findings raise important questions regarding their leadership behaviour, managerial skills and social interactions with significant impact on personal development. It is clear that the lack of sufficient knowledge is a real handicap preventing their business plan to find strategic relevance and appropriateness in the changing marketplace in which they operate. It is also established that this knowledge deficiency affects the ability to develop a clear vision, to intellectually stimulate and encourage employees and to develop the extra insight that is so crucial in business success. It is therefore the

main cause of ineffective leadership behaviour which makes them unable to form successful partnerships and ineffective in attracting a highly-skilled workforce. Increasing their access to industry and market knowledge could help bridge this gap, a deficit that is well acknowledged by some of them. This could be achieved by increasing access to skills for using information technology that can feed them information on consumer lifestyles, ethical issues and demographic trends and their impact and how this can affect food and drink consumption.

With respect to social networks, the findings strongly suggest that BOMs tend to apply the norms and values of their social interactions to their economic activities indicating a phenomenon of over-socialisation particularly in their relationships with local associations and professional services. They need to open up to non-familiar relationships to raise the level of brokerage as an effective route to information and resources in strategic locations such as the catering industry, hospitality, schools and canteens in order to boost sales revenue. Some initiatives are being pursued although timidly. It would be useful to assess existing relationships with professional services and to consider alternative providers including using online services at an initial stage to avoid the current situation of ineffective 'strong ties' in those specific contexts.

The study acknowledges the reality of trade associations in food and drink industries which are characterised by low skills and inadequate resources with priorities often limited to lobbying activities. However, the issue of taking more control of common resources is more relevant and urgent in view of the positive development resulting

from some levy bodies such as HGCA.³⁷ As a levy board, it is funded by farmers, growers and others in the supply chain and it is managed independently of both commercial industry and of Government. With a mission to create a world-class arable industry through independence, innovation and investment, HGCA works to create a UK arable supply chain where all participants are able to profit from a sustainable industry by investing all levies collected on the following activities: research and knowledge transfer, consumer marketing, business development and improvement, exports, market intelligence, communications and support (HGCA, 2013). The research portfolio is remarkable in fostering evidence-based³⁸ solutions to make the agriculture and horticulture industry more sustainable and competitive.

An important aspect of their management practice requiring urgent action concerns relationships with employees and customers. The study findings reveal that relationships with these two groups of social actors were not included in the explanatory model. Regarding customers, this could be explained by the excessive use of 'common brands' as a marketing strategy. A proactive development of new relationships with other direct routes to market in catering for example could bridge this structural deficit in the existing networks and access the information and knowledge so desperately needed. As far as employees are concerned, whether they are family members (as is the case for most SMEs) or not, the tendency towards a transactional approach to managing those relationships does not lend itself to the success of small-sized businesses in dire need of competitive resources. These relationships urgently need to be appreciated as real assets for the business.

³⁷ HGCA is the cereals and oilseeds division of the Agriculture and Horticulture Development Board (AHDB). www.hgca.com/publications.

³⁸ In 2012/13, a sum of £ 578,000 was invested in PhD students' bursaries. www.hgca.com/publications.

They can help set the right balance between closure and brokerage by building maximum advantage through a close network within the business while simultaneously nurturing brokerage networks beyond the team. The same analysis applies to relationships with family members, close friends and partners who seem not to have evolved from the initial position of being a material resource for the business.

The second category of implications concerns trade associations which have developed into ubiquitous and powerful organisations. It is incumbent on managers of these associations to recognise that the growth of individual members is a vital goal and to take strategic action to support that aim. Food and drink associations were crucial at the start of the food diversification programme in order to bring small-sized food producers to market. It is long overdue to progress beyond the traditional regional and local fairs into areas such as export markets and the domestic luxury market. Success story cases of local food and drink manufacturers supplying Fortnum and Mason and Waitrose for example, are an illustration of what is achievable. The European confectionary market seems to have discovered the best tastes as made from Britain. As public finances are getting scarcer trade and industry associations in the SW could enhance the brokerage function for their members using the LEADER programme model which has been successful in other regions.

The study findings have implications for professional services in terms of developing current knowledge of both the industry and the product sector of their clients. SMEs' relationships with service providers are complex and full of prejudice. BOMs use

them in spite of not rating them highly. Service providers often lack expertise to provide the best advice to clients in their respective area and tend to use grants and subsidies to cement the relationships. It is in the interest of service providers, particularly those who are locally based, to develop relevant knowledge and provide effective brokerage where necessary. With the prospects of BOMs also developing industry market knowledge, these particular relationships could grow much healthier and stronger.

Finally, public bodies and government will benefit from the study findings. The macroeconomic importance of food and drink manufacturing at regional and national levels is beyond doubt. With demographic changes and inflation household spending on food and drink will continue to grow. Recent crises such as the horsemeat scandal and the dairy sector fight with supermarkets raise issues of strategic importance. As the trade deficit continues to rise, government could initiate an export promotion programme targeted at SMEs to help small producers break into new markets. Existing programmes offered by the UK Food Chain bodies such as Masterclass and PROBE are prohibitive for small-sized businesses due to their high cost. The NFU is increasingly involved with business solutions and the high number of subscriptions confirms a real appetite for learning and personal development. As revealed in the findings, training needs should focus on personal development in addition to core business solutions. The Rural Business Gateway is another source of rich information but considering resource constraints faced by SMEs in rural areas, it may be a good idea to organise face-to-face training sessions on a one-to-many model to introduce BOMs to new business solutions and to stimulate peer learning and knowledge sharing. As shown in the preliminary factor analysis, the

value of media as a resource for brokerage demonstrates the attractiveness of information technology as a medium for maintaining and developing relationships.

SMEs in food and drink manufacturing could benefit from wider industry support to build industry partnerships and to supply government contracts in local schools, NHS and HM prisons. In the same vein, a successful market entry into large catering markets could reduce the heavy dependency on buying groups and supermarkets and contribute to address the existing relationship asymmetries. This could enable SMEs in food and drink manufacturing to develop successful brokerages, to embrace more creativity within their organisations, to bring different skills into partnerships and to bridge existing structural holes. By taking part in the development of optimal networks for UK food and drink manufacturers particularly in the SW, all vested parties mentioned above and others could enable the food and drink manufacturing industry to gain more competitiveness.

8.3 Study limitations and direction for future research

Similar to all studies, this study has some limitations, particularly in respect of the non-homogeneity of SMEs in the food and drink manufacturing sector. Although data was collected on product sectors this was mainly used for sampling representativeness as opposed to an examination of competitiveness by product sector. Recent data suggests that poultry and pork within the meat product sector are faring better in comparison to beef and lamb. Equally on export markets, confectionery has recorded a constant rise in demand from Continental Europe and alcoholic drinks are also exporting well. This study does not offer a product sector comparative analysis on competitiveness.

Another aspect of non-homogeneity of food and drink manufacturers is land ownership. Approximately two thirds of food and drink manufacturers in the SW were previously farmers and consequently came to the industry as a result of the EU farm diversification policy. The study conceptual model does not differentiate between farm and non-farm owners and therefore does not offer a comparative result on competitiveness on that basis. The same limitations apply to the remoteness from customers and markets in terms of distance from the nearest customer and the size of the organisation which varies between five and 249 employees.

An important limitation to this study is the exclusion of demographic characteristics in the analysis. On the basis of previous studies, it is clear that the years of experience in business, the educational achievement and age are all factors that affect leadership and management performance and subsequently explain some variations in competitiveness. Gender is another descriptive data which could be used to uncover variations in competitiveness between male and female BOMs in food and drink manufacturing.

It would be interesting to use data collected from the survey to complete multi-group analysis in order to examine the potential moderating effects of other factors such as firm size, product category, location, farm ownership and profit levels. Other multivariate techniques such as canonical correlation could also be used for further analysis of survey data on demographic and business characteristics in order to evaluate the strength of the relationship between these groups of variables and the main study variables.

Finally, the study conceptual framework for evaluating relationships of interdependence is purposely limited to three main variable constructs that are particularly relevant to business competitiveness. It is clear that other factors not

included in the study affect competitiveness, for example, the effect of human capital on LS. Recent data acknowledged a remarkable increase in educational achievement and full-time employment in the sector but the study findings do not tell us whether organisations recording this increase compete better.

Future research on the competitiveness of food and drink manufacturing sector should address the limitations of this study to help bridge the knowledge gap. This will help SW food and drink manufacturers to develop a strategic plan for their business and to start forming new relationships from the perspective of acquiring resources to achieve their plan. This approach to future research would enhance the validity of the study findings by addressing specific areas of weakness.

Because all product sectors are not equally affected by the factors in the explanatory model, it would be useful to conduct a comparative study of leadership behaviour by product sector in order to specify the gaps and developmental requirements specific to each product sector. For example, the ready-made meal product sector could face different challenges in the catering industry depending on customer requirements and this could lead to different optimal network structure.

Examining the effect of human capital on the competitiveness of SW food and drink manufacturing could be achieved using data from this study. The educational achievements and years of experience can be introduced as additional variables in the model in order to enrich current understanding and yield comparative results. Policy makers could also benefit from such additional research with resulting programmes and initiatives being more appropriate to address the current gap in competitiveness.

The issue of farm ownership must be further explored to establish to what extent it explains the phenomenon of over-socialisation that restricts access to open network systems. This could help identify specific skills requirements for those businesses that are still the main suppliers of food produce in the UK.

8.4. Conclusions

The evolution of SMEs in food and drink manufacturing in the UK has, to a large extent, shaped the type of social networks developed by those firms. The origins of most in the family farm still influence the reality of small size and the nature of relationships with employees, often family members. In parallel, the fast evolving nature of the industry, the threat from large customers/retailers, and the absence of an optimal network structure within the Food Chain have led most SMEs in the sector and particularly those isolated in remote rural areas to seek understanding and support by forming social ties of proximity. Local associations and professional services such as local banks, accountants, and management consultants and so on constitute the most important sources of SC on structural and relational dimensions.

While closure has generated some positive results in a few cases, (e.g. Taste of the West) the study evidence suggests that benefits from social interactions with professional services remain questionable in view of the continued declining profitability. The resulting weakness in market knowledge from social interaction would point to a decline in competitive advantage. It could be the case that this has produced a leadership unable to articulate a compelling vision and to channel the means of production into successful market organisation. It is sad that this compelling evidence is gathered from a population that is characterised by hard work, a strong ambition and a keenness to constantly improve their performance. With the

restructuring of the UK food chain, the remarkable achievement of levy bodies such as HGCA could indicate some bright prospects for a sustainable and competitive industry and such models of associations should be encouraged and emulated where appropriate.

The UK's food self-sufficiency has been around 60% since the end of the 19th century making imports an indispensable source of food. While it is true that food and drink manufacturing exports have grown significantly since 2008, the trade deficit continues to grow. The Boyce report in 2007 noted that small-sized businesses in the food and drink industry were particularly vulnerable and it is true that, with few exceptions, the rise in exports is mainly attributed to the larger businesses. With growing security threats, the pressures on land and population in most emerging markets, SMEs in food and drink manufacturing could benefit from wider industry support to build industry partnerships. HGCA shows that industry collaboration across the supply chain is a model of a sustainable and profitable network. The growing interest for multiplatform communication now makes information and knowledge more accessible pointing to sustainable ways of bridging the knowledge gaps among SW food and drink manufacturers, particularly in an era of budget austerity.

BIBLIOGRAPHY

- ACS, Z. & AUDRETSCH, D. 1990. *Entrepreneurship as Social Construction: a Multilevel Evolutionary Approach*. MIT Press, Cambridge, MA.
- ADEBANJO, D., 2001. Understanding customer satisfaction: a UK food industry case study. *British Food Journal*. 103, 36-93.
- ADELAJA, A.O., 1992. Productivity growth and input mix changes in food processing. *Northeastern Journal of Agriculture and Resource Economics*. 21 (1), 21-29.
- AHMED, A., AHMED, N. & SALMAN, A., 2013. Critical issues in packaged food business. *British Food Journal*. 107 (10), 760-780.
- AHUJA, G., 2000. Collaboration networks, structural holes and innovation: a longitudinal study. *Administrative Science Quarterly*. 45 (3), 425-455.
- ALDER, P. S. & KWON, S. W., 2002. Social capital: prospects of a new concept. *Academy of Management Review*. 27 (1), 17-40.
- ALDRICH, H. E., BRICKMAN, A. E. & REESE, P. R., 1997. Strong ties, weak ties and stranger: do women differ from men in their use of networking to obtain assistance? In: BIRLEY, S. & MACMILLAN, I. C. (eds.) *Entrepreneurship in a Global Context*. New York: Routledge.
- ALDRICH, H. E. & ZIMMER, C., 1986. *Entrepreneurship through Social Networks*. Cambridge, MA: Ballinger.
- ALLEN, J. & DILLMAN, D., 1994. *Against all odds: Rural communities in the information age*. Westview Press.
- AI-MAHOUN, M. & ANALOUI, F., 2003. Managerial skills and SMEs' development in Palestine. *International Journal of Career Development*. 8 (7), 367-379.
- ALMOG, B. G., 2011. The missing component in MBA programs. *Management Decision*. 49 (10), 1600-1611.
- ALVAREZ, S. A. & BARNEY, J. B., 2007. Discovery and creation: alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*. 1 (1/2), 11-26.
- AMABILE, T. M. & KAMER, S. J., 2007. Inner work-life: understanding the subtext of business performance. *Harvard Business Review*. 85 (5), 72-83.
- ANDERSON, T., W., 2003. *Introduction to Multivariate Statistical Analysis*. 3rd edition. Wiley, New York.
- ANDERSON, A. R., DOO, D. S. & JACK, S. L., 2012. Entrepreneurship as connecting: some implications for theorising and practice. *Management Decision*. 50, 958-971.
- ANGELL, R., MEGICKS, P., MEMER, J., HEFFERNAN, T. & HOWELL, K., 2012. Understanding the older shoppers: a behavioural typology. *Journal of Retailing and Consumer Services*. 19, 259-269.
- ANGLIER, G., HERRMANN, A. & HUBER, F., 2000. *Conjoint Measurement: methods and applications*. Springer-Verlag, Berlin.
- AUDET, J. & ST-JEAN, E., 2007. Factors affecting the use of public support services by SMEs: evidence from a peripheral region of Canada. *Journal of Developmental Entrepreneurship*. 12, 165-180.
- AUGIER, M. & TEECE, D. J., 2009. Dynamic capabilities and the role of managers in business strategy and economic performance. *Organisational Science*. 20 (2), 410-412.
- AUGOUSTINOS, M. & WALKER, I., 1995. *Social Cognition: An Integrated Introduction*, London, Sage.
- AVERMAETE, T., VIAENE, J., MORGAN, E. J. & CRAWFORD, N., 2003. Determinants of innovation in small food firms *European Journal of Innovation Management*. 6, 8-17.
- AWAMLEH, R. & GARDNER, W. L., 1999. Perceptions of leader charisma and effectiveness: The effects of vision content, delivery and organisational performance. *The leadership quarterly*. 10, 345-373.

- BAGON, K., 2009. We pick organic food for its global benefits. *The Times*, 31 July 2009, p.27.
- BAGOZZI, R. P. & EDWARDS, J. R., 1998. A general approach for representing constructs in organisational research. *Organisational Research Methods*. 1, 45-87.
- BAGOZZI, R. P., FORNELL, C. & LARCKER, F., 1981. Canonical correlation analysis as a special case of structural relations model. *Multivariate Behavioural Research*. 16 (4) 437-454.
- BANDALOS, D. L., 2009. The effects of item parceling on Goodness-of-Fit and parameter estimates bias in Structural equation modeling. *Structural Equation Modeling*. 9 (1) 78-102.
- BANDURA, A., 1970. *Principles of Behaviour Modification*. HOLT, RINEHART & WINSTON (Eds.) New York.
- BANSBACK, B., 2011. Maintaining a competitive advantage: *the European livestock sector. Outlook for Agriculture 2010 Conference*. March 16-18, 2010. London
- BANSBACK, B., 2006. What drives European beef production?
- BARON, R. A., 2000. Psychological perspectives on entrepreneurship : Cognitive and social factors in entrepreneur's success. *Current Directions in Psychology*. 14 , 106-115.
- BARON,, R. A., 2006. Opportunity recognition as pattern recognition: how entrepreneurs 'connect the dots' to identify new business opportunities. *Academy of Management Perspectives*. 20 (1), 104-119.
- BARTKUS, V. & DAVIS, J., 2009. *Social Capital: reaching out, reaching in*. Cheltenham, Edward Elgar.
- BASS, B. M., 1985. *Leadership and Performance Beyond Expectations*, New York, Free Press.
- BASS, B. M., 1997. Does the transactional-transformational paradigm transcend organisational and national boundaries ? *Journal of American Psychology*.(52, 130-139.
- BASS, B. M. & AVOLIO, B. J., 1997. *Full-range Leadership Development : Manual for the Multifactor Leadership Questionnaire*. Mind garden, Palo Alto, CA.
- BAUMGARTNER, H. & HOMBURGH, C., 1996. Applications for structural equation modelling in marketing and consumer research. *International Journal of Research in Marketing*. 17 (4/5), 571- 583.
- BAUMOL, W., 1993. Formal Entrepreneurship theory in Economics: existence and bounds. *Journal of Business Venturing*. 8, 197-210.
- BAUMOL, W., 1996. *Entrepreneurship Management and the Structure of Payoffs*. Cambridge, MA, MIT Press.
- BEARMAN, P. & PARIGI, P., 2004. Cloning headless frogs and other important matters: conversation topics and network structure. *Journal of Social Forces*. 83 (2), 535-557.
- BEAUDUCEL, A. & WITTMANN, W. W., 2005. Simulation study on fit indexes in CFA based on data with slightly distorted simple structure. *Structural Equation Modeling*. 12, 41-57.
- BEECHAM, M. A. CORDEY-HAYES, M., 1998. Partnering and knowledge transfer in the UK motor industry. *Journal of Technovation*. 18 (3), 191-205.
- BELL, M. & ALBU, M., 1999. Knowledge systems and technological dynamism in industrial clusters in OPED and developing countries. *Journal of World Development*.(27, 1715-1734.
- BENTLER, P. M.,1988. Causal modelling via structural equation systems. In J. R. Nesselrode and R. B. Cattell (Eds.), *Handbook of multivariate experimental psychology* (pp.317-355). New York, Plenum.
- BENTLER, P. M. & BONETT, D. G., 1980. Significance tests and goodness of fit in the analysis of covariance structures. *Psychology Bulletin*. 88, 588-606.
- BENTLER, P. M. & CHOU, C-P., 1987. Practical issues in structural modeling. *Sociological Methods and Research*. 16, 78-117.
- BERGER, A. N. & FRAME, W. S., 2007. Small business credit scoring and credit availability. *Journal of Small Business Management*. 45, 5-22.

- BERGER, P. L. & LUCKMAN, T., 1966. *The Social Construction of Reality*. London, Penguin.
- BERGLUND, H., 2007. Opportunities as existing and created: a study of entrepreneurs in the Swedish mobile internet industry. *Journal of Enterprising Culture*. 15, 243-273.
- BERSON, Y., SHAMIR, B., AVOLIO, B. J. & POPPER, M., 2001. The relationship between vision strength, leadership style, and content. *The Leadership Quarterly*. 12, 53-73.
- BHAGAVATULA, S., ELFRING, T., VAN TILBURG, A. & VAN DE BUNT, G. G., 2010. How social and human capital influence opportunity recognition and resource mobilisation in India's handloom industry. *Journal of Business Venturing*. 25, 254-260.
- BHASKAR, R., 1989. *Reclaiming reality: a critical introduction to contemporary philosophy*. Verso. London.
- BIRLEY, S., 1985. The role of networks in the entrepreneurial process. *Journal of Business Venturing*. 1, 107-117.
- BIS, 2013. Your Guide to Eatwell Plate. Department for Business, Innovation and Skills, London.
- BIS, 2012a. The Plan for Growth. Department of Innovation and Skills. London.
- BIS, 2012b. Commentary on Regional Economic Performance Indicators. Department for Business, Innovation and Skills. London.
- BIS, 2012c. Business Population Estimates for UK and Regions. Statistical release. Department for Business, Innovation and Skills. London.
- BIS, 2010. Manufacturing in the UK: an economic analysis of the sector. Department for Business, Innovation and Skills. London.
- BLAIKIE, N., 1993. *Approaches to Social Enquiry*. Cambridge. Polity Press.
- BLAKE, R. R. & MOUTON, J. S., 1964. *The Managerial Grid*. Houston. Gulf.
- BLAXTER, L., HUGHES, C. & TIGHT, M., 2001. *How to Research*. Open University Press.
- BLEADOW, R. FRESE, M, ANDERSON, N. R., EREZ, M. & FARR, J. L., 2009. A dialectic perspective on innovation: Conflicting demands, multiple pathways, and ambidexterity. *Industrial and organisational Psychology: Perspectives on Science and Practice*. 2 (3), 305-337.
- BLUNCH, N. J., 2008. *Introduction to Structural Equation Modelling using SPSS and AMOS*. London, Sage.
- BOEKER, W. P., 1988. *Organizational Origins : Entrepreneurial and Environmental Imprinting at the time of Founding* Cambridge, MA, Ballinger Publishing Company.
- BOLLEN, K. A., 1998. *Structural equations with latent variables*. Wiley, New York.
- BOLLEN, K. A. & JORESKOG, K. G., 1985. Uniqueness does not imply identification: a note on confirmatory factor analysis. *Sociological Methods and Research*. 14, 155-163.
- BONTIS, N. 1998. Intellectual capital: an exploratory study that develops measures and models. *Management Decision*. 36, 63-76.
- BONTIS, N., KEOW, W. C. & RICHARDSON, S., 2000. Intellectual capital and business performance in Malaysian industries. *Journal of Intellectual Capital*. 1, 85-100.
- BOSELIE, J. P. & VAN DER WEILE, A., 2002. Employee perceptions of HRM and TQM and the effects of satisfaction and intention to leave. *Managing Service Quality*. 12, 165-172.
- BOSELIE, J. P., DIETZ, G. & BOON, C., 2005. Commonalities and contradictions in HRM and performance research. *Human Resource Management Journal*. 15, 67-94.
- BOURDIEU, P., 2005. *The Social Structures of the Economy*. Cambridge, UK. Polity Press.
- BOURDIEU, P., 1986. The forms of Capital. In: RICHARDSON, J. G. (ed.) *Handbook for Theory and Research for the Sociology of Education*. New York: Greenwood.
- BOURDIEU, P., 1980. Le capital social: notes provisoires. *Actes Recherche Science Sociales*. 30, 3-6.
- BOURDIEU, P. & WACQUANT, L. 1992. *An Invitation to Reflexive Sociology*. Chicago, Ill. University of Chicago Press.
- BOWYER, S., CARAHER, M., EILBERT, K. & CARR-HILL, R., 2009. Shopping for Food: lessons from a London borough. *British Food Journal*. 111, 452-474.

- BOYCE, J., 2007. Review of the Food Chain Initiatives. *In: I, House policy Consultancy Unit Servicing DCLG, (ed.)*. London.
- BRASS, D., J., 2009. Connecting to Brokers: strategies for acquiring Social Capital. *In: BARTKUS, V. & DAVIS, J. (eds.) Reaching Out, Reaching In: Multidisciplinary Perspectives in Social Capital*. Edward Elgar.
- BRAZEL, D. V. & HERBERT, T. T., 1999. The genesis of entrepreneurship. *Entrepreneurship Theory and Practice*. 23 (3), 29-45.
- BRIDGE, S., O'NEILL, K. & MARTIN, F., 2009. *Understanding Enterprise: Entrepreneurship and Small Business, Third Edition*, Basingstoke, Hampshire, UK, Palgrave MacMillan.
- BRUNETTO, Y. & FARR-WHARTON, R., 2003. Factors affecting Australian SMEs decisions to access Government policies and programs promoting collaboration. *American Academy of Management Proceedings*. Seattle, Washington.
- BRUNETTO, Y. & FARR-WHARTON, R., 2007. The moderating Role of trust in SMEs owners/managers' decision-making about collaboration. *Journal of Small Business Management*. 45, 362-387.
- BURNS, J. M., 1978. *Leadership*, New York, Harper & Row.
- BURT, R. S. 1992. *Structural Holes: The Social Structure of Competition*, Cambridge, Harvard University Press.
- BURT, R. S., 1997. The contingent value of social capital. *Administrative Science Quarterly*. 42, 339-365.
- BURT, R. S., 2000. The network structure of social capital. *In: SUTTON, R. I. & STAW, B. M. (eds.) Networks and Organisations*. Greenwich, CT, USA: JAI Press.
- BURT, R. S., 2005. *Brokerage and Closure: an introduction to Social Closure*. Oxford. Oxford University Press.
- BURT, R. S., 2009. Network Duality of Social Capital. *In: BARTKUS, V. & DAVIS, J. (eds.) Social Capital: Reaching Out, Reaching In*. Cheltenham, UK: Edward Elgar.
- BURTON, D., 2001. The Company they Keep : Founders' models for organizing new firms. *The Entrepreneurship Dynamic : Origins of Entrepreneurship and the Evolution of Industries*. Stanford, CA: Stanford University Press.
- BUSINESSLINK.GOV., 2012. *Growth and Improvement Service*. Available Online at www.businesslink.gov. Accessed on 14 March, 2012.
- BUSKERS, V., 2002. *Social Networks and Trust*. Boston, Kluwer Academic Publishers.
- BYRNE, B. M., 2009. *Structural Equation Modeling with AMOS*, New York, Routledge.
- CAINELLI, G., MANCINELLI, S. & MAZZANTI, M., 2007. Social capital and innovation dynamics in district-based local systems. *Journal of Socio-Economics*. 36, 932-948.
- CAMBRIDGE., 2010. The Value of Food and Drink Manufacturing to the UK. *In: IFM, C. F. I. A. G. (ed.)*.
- CAMPBELL, D. E., 2009. Communities, schools and voter turnout: a case study in social norms. *In Social Capital: reaching out, reaching in*. BARTKUS, V. & DAVIS, J. Eds. Pp. 160-165.
- CARDON, M. S., FOO, M., SHEPHERD, D. & WILKUND, J., 2012. Exploring the heart: entrepreneurial emotion is a hot topic. *Entrepreneurship Theory and Practice*. 10, 1-10.
- CARMEN, C., LA LUZ, F., SALUSTIANO. M., 2006. Influence of top management vision and work team characteristics on innovation: the Spanish case. *European Journal of Innovation Management*. 9 (2), 179-201.
- CARMEN, H. & GORTON, M., 2011. Placing agriculture within rural development: evidence from EU case studies. *Journal of Environment and Planning*. 29, 80-95.
- CARMONA-LAVADO, A. G., CUEVAS-RODRIGUEZ, G. & CABELLO-MEDINA, C., 2010. Social and organisational capital: building the context for innovation. *Industrial Marketing Management*. 39, 681-690.
- CARNEY, M., 2005. Corporate governance and competitive advantage in family firms. *Entrepreneurship Theory and Practice*. 29, 249-265.

- CARRINGAN, M. & BUCKLEY, J., 2008. What's so special about family business? An exploratory study of UK and Irish consumer experiences of family business. *International Journal of Consumer Studies*. 32, 656-666.
- CASSON, M., 1982. *The Entrepreneur: An Economic Theory*. Oxford. Martin Robertson.
- CASSON, M. & DELLA GIUSTA, M., 2006. *Economics of Trust*. Cheltenham. Edward Edgar.
- CASSON, M. & DELLA, G. M., 2007. Entrepreneurship and social capital: analysing the impact of social networks on entrepreneurial activity from a rationale perspective. *International Small Business Journal*. 25, 220-244.
- CEC, 1997. Towards a common agricultural and rural policy for Europe. Commission of the European Community. Available at www.ec.europa.eu/agriculture/publi/buck. Accessed on 20 November, 2011.
- CHARBONNEAU, J., 2013. A strategic approach to SME export growth: supporting SMEs in developed and developing countries to be better prepared to enter international markets. International trade centre. April, 01, 2013. Available Online at www.intracen.org/article.
- CHARMAZ, K., 2006. *Constructing Grounded Theory: a practical guide through qualitative analysis*. London. Sage.
- CHEMERS, M. M., 2002. Efficacy and Effectiveness: Integrating models of leadership and intelligence. *Classic Readings in Organizational Behaviour*. Wadsworth: Belmont.
- CHEN, Y. S., LIN, M. J. J. & CHANG, C. H., 2006. The influence of intellectual capital on new product development performance: the manufacturing companies of Taiwan as an example. *Journal of Total Quality Management and Business Excellence*. 17, 1323-1339.
- CHERRYHOLMES, C. H., 1992. Notes on pragmatism and scientific realism. *Educational Researcher*. August-September, 13-17.
- CHILD, J., 1981. Culture, contingency, and capitalism in the cross-national study of organisation. In *Research in Organisational Behaviour*. CUMMINGS, L. L. (Ed.) 303-356.
- CHUA, R., INGRAM, P. & MORRIS, M. W., 2008. From the head and the heart: locating cognition-based and affect-based trust in managers' professional networks. *Academy of Management Journal*. 51, 436-452.
- CLEGG, C., UNSWORTH, K., EPITROPAKI, O. & PARKER, G., 2002. Implicating trust in the innovation process. *Journal of Occupational and Organisational Psychology*. 75 (4), 409-422.
- COHEN, W. M. & LEVINTHAL, D., 1990. Reviewed absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly*. 35 (1), 128-152.
- COHEN, D. & PRUSAK, L., 2001. *In Good Company : How Social Capital Makes Organizations Work*, Boston, MA, Harvard Business School Press.
- COLEMAN, J., 1988. *Foundations of Social Theory*, Cambridge, USA, Belknap Press.
- COLEMAN, J., 1988. Social capital in the creation of human capital *American Journal of Sociology*. 94, 95-120.
- COLIN, C. & SMITH, K., 2006. Knowledge exchange and combination: the role of human capital resource practices in the performance of high-technology firms. *Academy of Management Journal*. 49 (3), 544-560.
- COLLIER, D., 1995. Modelling relationships between process quality errors and overall service process performance. *International Journal of Service Industry Management*. 6 (4), 4-19.
- COLLISON, D., 2006. Rethinking followership: a post-structuralist analysis of follower identities. *The Leadership Quarterly Journal*. 17, 179-189.
- COMTE, A., 1853. *The Positive Philosophy of Auguste Comte*. London. Trubner and Co.

- CONGER, J. A. & KANUNGO, R. N., 1998. *Charismatic Leadership in organisations*. Sage Publications. Thousand Oaks, California.
- CONSTANT, A. & ZIMMERMAN, K. F., 2006. The making of entrepreneurs in Germany : are native men and immigrants alike ? *Journal of Small Business Economics*. 26, 279-300.
- COORPER, A. C., FOLTA, T. B. & WOO, C., 1995. Entrepreneurial information search. *Journal of Business Venturing*. 10, 107-120.
- CORBET, A. C., 2007. Learning asymmetries and the discovery of entrepreneurial opportunities. *Journal of Business Venturing*. 22, 97-118.
- CORNWALL, 2012. Cornwall Food and Drink. Available [Online]. www.cornwallfoodanddrink.co.uk. Accessed on 09/02/2012.
- COTTERILL, P., 1992. Interviewing women: issues of friendship, vulnerability and power. *Women's Studies International Forum*. 15 (5/6), 593-606.
- COVEY, S., 2006. *The Speed of Trust*, London, Simon Schuster.
- COY, S. P., SHIPLEY, M. F., OMER, K. & HKHAN, R. N. A. M., P. L., 2007. Factors contributing to success: a study of Pakistani small business owners. *Journal of Developmental Entrepreneurship*. 12, 181-198.
- CRAIG, B. R., JACKSON III, W. E. & THOMSON, J. B., 2007. Small Firm finance, credit rationing. and the impact of SBA-Guaranteed lending on locale economic growth. *Journal of Small Business Management*. 45, 116-132.
- CRESSWELL, J. W., 1995. *Research Design: Qualitative and Quantitative Approaches*. Thousand Oaks, CA, Sage.
- CRESSWELL, J. W. & PLANO CLARKE, V. L., 2007. *Designing and Conducting Mixed Methods Research*. Thousand Oaks, CA, Sage.
- CRESSWELL, J. W., 2009. *Research Design: Quantitative, Qualitative and Mixed Methods Approaches*. Thousand Oaks, CA, Sage.
- CROTTY, M., 1998. *The Foundations of Social research: meaning and perspectives in the research process*. London, Sage.
- CROWL, T. K., 2001. Grading behaviour and teacher's need for social approval. *Journal of Education*. 104, 291-295.
- CUNLIFFE, A. L., 2002. Reflexive dialogical practice in management learning. *Journal of Management Learning*. 33 (1): 35-61.
- CURRALL, S. C. & JUDGE, T. A., 1995. Measuring trust between organisations. *Organisational Behaviour and human Decision process*. 2, (3), 151-170.
- DAILY, C. M. & DALTON, D. R., 1993. Board of directors leadership and structure: control, and performance implications. *Entrepreneurship Theory and Practice*. 17, 65-81.
- DAIUTE, C. and LIGHTFOOT, C., 2004. *Narrative Analysis: Studying the Development of Individuals in Society*. London, Sage.
- DALBERG, P., 2011. Support to SMEs in developing countries through financial intermediaries. Report to International Trade Centre, ITC. November 2011, Geneva.
- DAMANPOUR, F. & EVAN, W., 1984. Organizational performance and innovation: The problem of organizational lag. *Administrative Science Quarterly*. 29, 392-402.
- DAMANPOUR, F. & GOPALAKRISHNAN, S., 2001. The dynamics of the adoption of product and process innovations in organization. *Journal of Management Studies*. 38, 45-66.
- DAMIJAN, J. P., DE SOUZA, J. & LAMOTTE, O., 2009. Does international openness affect the productivity of local firms ? Evidence from South eastern Europe. *Journal of Economics of Transition*. 17, 559-586.

- DAS, T. K. & TENG, B. S., 1998. Between trust and control : developing confidence in partner cooperation in alliances. *Journal of Academy of Management Review*. 23, 491-512.
- DAS, T. K. & TENG, B. S., 2002. Alliance constellations : A social exchange perspective. *Journal of Academy of Management Review*. (27) 445-456.
- DASGUPTA, P. & SEREGALDIN, I., 1999. *Social Capital: A Multi-faceted perspective*, Washington, D.C., The World Bank.
- DATTA, L., 1994. *Paradigm wars: a basis for peaceful coexistence and beyond*. The qualitative-quantitative debate: New perspectives. San Francisco, Jossey-Bass: 53-70.
- D'AVENI, R. A., 1989. Dependability and organizational bankruptcy: an application of agencies and prospect theory. *Journal of Management Science*. 35, 1120-1138.
- DAVENPORT, S., DAVIES, J. & GRIMES, C., 1999. Collaborative research programmes : building Trust from difference. *Journal of Technovation*. 19, 31-40.
- DAVIDSON, P., 2003. The domain of entrepreneurship research: Some suggestions. In *Advances in entrepreneurship, firm emergence and growth*. Katz & Shepherd (Eds).
- DAY, D. V., SCHEICHER, D. J., UNCKLESS, A. L. & HILLIER, N. J., 2002. Self-monitoring personality at work: a meta-analytic investigation of construct validity. *Journal of Applied Psychology*. 87, 390-401.
- DE CAROLIS, D. M. & SAPARITO, P., 2006. Social capital, cognition and entrepreneurial opportunities: a theoretical framework. *Entrepreneurship Theory and Practice*. 30, 41-56.
- DEFRA, 2003a. Government Strategy on Regional Food. Department for Environment, Food and Rural Affairs. London.
- DEFRA, 2003b. DEFRA Census. Department of Environment, Food and Rural Affairs. London.
- DEFRA, 2003c. Government strategy on regional food. Department for Environment, Food and Rural Affairs. London.
- DEFRA, 2003d. Local Food - A Snapshot of the Sector, Report of the Working Group on Local Food. Department of Environment, Food and Rural Affairs. London.
- DEFRA, 2008a. Ensuring the UK's Food Security in a Changing World. *DEFRA Discussion Paper*. Department of Environment, Food and Rural Affairs. London.
- DEFRA, 2008b. Proportion of domestically produced food used by government departments and also supplied to hospitals and prisons under contracts negotiated by NHS Supply Chain and National Offender Management Service. Public Sector Food Procurement Initiative. Department of Environment, Food and Rural Affairs. London.
- DEFRA, 2009a. The Facts and Figures Unearthed. Department of Environment, Food and Rural Affairs. London.
How we spend our organic pound. *The Times*, 30 July 2009, p.6.
- DEFRA, 2009b. Public Sector Food Procurement Initiative. Department of Environment, Food and Rural Affairs. London.
- DEFRA, 2011. Agriculture in the United Kingdom. Department of Environment, Food and Rural Affairs. London.
- DEFRA, 2012. Implementation of EU Dairy Package. Impact Assessment. 22/10/2012. Department of Environment, Food and Rural Affairs. London
- DEFRA, 2013. Farming and Food. Brief. Department of Environment, Food and Rural Affairs. London.
- DELLA GIUSTA, M., 1999. A model of social capital and access to productive resources. *Journal of International Development*. 11, 921-934.
- DENSCOMBE, M., 2003. *The Good Research Guide for Small-scale Social Research Projects*. 2nd edition, Open University Press.
- DENZIN, N. K., 1978. *The Logic of Naturalistic Enquiry. Sociological Methods: A sourcebook*. New-York. McGraw-Hill.

- DEW, N. & SARASVATHY, S. 2001. Of innoral firms and mortal markets: dissolving the innovators' dilemma: *The Second Annual Technology Entrepreneurship Research Policy Conference*. University of Maryland.
- DE PROPIS, L. & SUGDEN, R., 2006. The Governance of cross-locality networks as a determinant of local economic development. *Journal of Entrepreneurship and Regional Development*. 18, 277-278.
- DEW, N. D. & SARASVATHY, S., 2002. The economic implications of expaptation. *Journal of Evolutionary Economics*. 1-37.
- DIGMAN, J. M., 1990. Personality structure : emergence of the five-factor model. *Journal of Annual Review of Pscychology*. 41, 417-440.
- DIMOV, D., 2007. From opportunity insight to opportunity intention: The importance of person-situation in learning match. *Entrepreneurship Theory and Practice*. 31, 561-583.
- DIMOV, M., 2010. Grappling with the unbearable elusiveness of entrepreneurial opportunities. *Entrepreneurship Theory and Practice*. 10 (42), 57-81.
- DIMOV, D. & GRAS, D., 2010. The emergence and evolution of an opportunity: A historical analysis. Paper presented at the Babson College Entrepreneurship Research Conference. Lausanne, Switzerland. June, 9, 2009.
- DOMHOFF, G. F., 1967. *Who Rules America ?*, Englewood Cliffs, NJ, Prentice-Hall.
- DONEY, M. & CANNON, J., 1997. An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*. 26 (2), 35-51.
- DOREIAN, P. & STOKMAN, F. N., 1997. *Evolution of Social networks*, Amsterdam, Gordon and Breach.
- DRABENSTOTT, M., 1999. Meeting a new century of challenges in rural America. *The Regions*. 13 (4), 16-19.
- DTI, 2005. Regional Competitiveness and State of the Regions. London.
- DUNN, R., 2009. Examining the benefits of organic food. *The Times*, 1 August 2009, p.21.
- DUNCAN, C., 1996. Understanding persistent poverty: social class context in rural communities. *Journal of Rural Sociology*. 61 (1), 16-19.
- EASTERY-SMITH, M. & MALINA, D. M., 1999. Cross-cultural Collabortive Research: towards reflexivity. *Academy of Management*. 42(1), 76-86.
- EASTERBY-SMITH, M., THORPE, R. & JACKSON, P. R., 2008. *Management Research*, London, Sage Publications Ltd.
- ECKARDT, J. T. & Shane, S. A., 2003. Opportunities and entrepreneurship. *Journal of Management*. 29, 333-349.
- EFFP, 2003. Achieving profit and sustainability through collaboration in the supply chain. London.
- EFFP, 2004. Collaborating for profit.
- EFFP 2005. Research into legislative and fiscal barriers to greater collaboration and co-operation.
- EFFP, 2006 Supply chain collaboration: making it happen.
- ELLIOT, J., TEMPLE, M. L., GORTON, M. & TREGGAR, A., 2005. Economic Evaluation of the Regional Food Strategy. University of Newcastle. W. ADAS Consulting Ltd, Wolverhampton.
- ELLIOT, V., 2009. Scientits dig up fresh doubts on the wisdom of going organic. *The Times*, 30 July 2009, p.6.
- ELLIOT, V., 2010. Fillipino farmers rise above the British herd. *The Times*, p.31.
- EISENBEISS, S. A., VAN KNIPPENBERG, D. & BOERNER, S., 2008. Transformational leadership and team innovation: integrating team climate principles. *Journal of Applied Psychology*. 93 (6), 1438-1446.

- ELLMAN, B., 1992. Which type of ties and networks give what kinds of social support? In *Advances in group processes*. LAWLER, E., MARKOVSKI, B. & RIDGEWAY, C. Eds. Greenwich, CT. JAI Press. pp. 207-235.
- EU, 2012. European Commission, Directorate General for Enterprise and Industry, 2012.
- FARE, R., GROSSKOPF, S., NORRIS, M. & ZHANG, Z., 1994. Productivity growth, technical progress and efficiency change in industrial countries. *Journal of American Economic Review*. 84, 66-83.
- FARLING, M. L., STONE, A. G. & WINSTON, B. E., 1999. Servant leadership: setting the stage for empirical research. *The Journal of Leadership Studies*. 6, (1/2), 49-72.
- FARR, J., 2004. Social Capital: a conceptual history. *Journal of Political Theory*. 32, 6-33.
- FCC, 2005. Benchmarking through Business Clubs. Food Chain centre. London.
- FCC, 2005a. Benchmarking through Business Clubs. Food Chain Centre. London.
- FCC, 2005b. Benchmarking through Business Clubs Food Chain Centre. London.
- FDF, 2012. Food and Drink Federation. [Online] www.fdf.org.uk. Accessed on 15/03/2012.
- FDF, 2013. UK Food and Drink Export Performance, Full year 2012. Food and Drink Federation, London.
- FELLOWS, R. & LIU, A., 2003. *Research Methods for Construction. 2nd edition*. Blackwell Publishing.
- FFB, 2005a. A Diagnostic survey of food and drink companies in the South West. Food from Britain. London.
- FFB, 2005b. The state of the South West food and drink industry. Food from Britain. London.
- FFB, 2006. Annual Report and Accounts, 2005-06. Food from Britain. London.
- FIELD, A., 2009. *Discovering Statistics using SPSS*. London. Sage.
- FINE, B., 1999. The development state is dead - long live social capital. *Development and Change*. 30 (1), 1-19.
- FINE, B., 2001. *Social Capital versus Social Theory: political economy and social science at the turn of the millennium*. London, Routledge.
- FINK, M. & KESSLER, A., 2011. Cooperation, trust, performance: empirical results from three countries. *British Journal of Management*. 21, (2), 463-483.
- FISCHER, E. & REUBER, R., 2007. The good, the bad, and the unfamiliar: the challenges of reputation formation facing new firms. *Journal of Entrepreneurship Theory and Practice*. 12, 53-75.
- FISHMAN, R. M., 2009. On the costs of conceptualising social ties as social capital. In: BARTKUS, V. & DAVIS, J. (eds.) *Social Capital: Reaching Out, Reaching In*. Cheltenham, UK: Edward Elgar.
- FLATT, J. S. & KOWALCZYK, J. S., 2008. Creating competitive advantage through intangible assets: The direct and indirect effects of corporate culture and reputation. *ACR*. 16, 13-30.
- FOO, M., 2011. Emotions and entrepreneurship opportunity evaluation. *Entrepreneurship Theory and Practice*. 35 (2), 375-393.
- FORNELL, C. & LARCKER, D. F., 1981. Evaluating Structural equation Models with Unobservable Variables and Measurement Errors. *Journal of Marketing Research*. 18, 39-50.
- FOWLER, F. J., 2002. *Survey Research Methods*. Thousand Oaks, CA, Sage.
- FRANK, H., LUEGER, M. & KORUNKA, C., 2007. The significance of personality in business start-up intentions, start-up realization and business success. *Journal of Entrepreneurship and Regional Development*. 23, 227-251.
- FRYER, B., 1990. *The Practice of Construction Management*, Oxford, BSP Professional Books.
- FSB, 2012. Small Business Statistics. Federation of Small Businesses. Available online at www.fsb.org.uk/stats. Accessed on 27 August, 2013.

- FUKUYAMA, F., 1995. Social capital and the Global Economy. *Journal of Foreign Affairs*. 74, 89-103.
- GADAMER, H.G., 1989. *Truth and Method*. New York, Crossroad.
- GAINELLI, G., MANCINELLI, S. & MAZZANTI, M., 2007. Social capital and innovation dynamics in district-based local systems. *Journal of Socio-Economics*. 36, 932-948.
- GAMBETTA, D., 1988. Can we trust trust? In: GAMBETTA, D. (ed.) *Trust : Making and Breaking Cooperative Relationships*. Oxford: Blackwell.
- GALLOWAY, L., 2007. Can broadband access rescue the rural economy? *Journal of Small Business and Enterprise Development*. 14,(4), 641-653.
- GARDNER, W. L. & AVOLIO, B. J., 1998. The charismatic relationship: a dramaturgical perspective. *Academy of Management Review*. 23, 32-58.
- GARTNER, W., CARTER, N. & HILLS, G., 2003. The Language of Opportunity. In: HJORTH, C. S. A. D. (ed.) *New Movements in Entrepreneurship*. Cheltenham, UK: Edward Elgar.
- GEDALJOVIC, E., HONIG, B., MOORE, C. B., PAYNE, G. T. & WRIGHT, M., 2013. Social capital and entrepreneurship: a schema and research agenda. *Entrepreneurship Theory and Practice*. 10 (42), 455-478.
- GEFEN, D. & STRAUB, D., 2005. A practical guide to validity using PLS-GRAPH: Journal of Communications of the Association for Information Systems. 16, 91-109.
- GEM, 2012. The Global Entrepreneurship Annual Report. 2011.
- GEM, 2010. Global Entrepreneurship Monitor Annual Report.
- GENTRY, W. A. & LESLIE, J. B., 2007. Competencies for leadership development: what's hot and what's not when assessing leadership implications for organisation development. *Organisation Development Journal*. 25, 37-46.
- GERBER, M. E., 1995. *The E-Myth Revisited: why most small businesses don't work and what to do about it*. New York, Harper Collins Books.
- GERBIN, D. W. & ANDERSON, J. C., 1988. An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of Marketing Research*. 25 (4), 26-42.
- GHEMAWAT, P. & DEL SOL, P., 1998. Commitment versus flexibility. *California Management Review*. 40 (4), 26-42.
- GIBB, A.A., 2003. In pursuit of a new enterprise and entrepreneurship paradigm for learning: creative destruction, new ways of doing things and new combinations of knowledge. *International Journal of Management Review*. 4 (3), 213-223.
- GIDDENS, A., 1984. *The Constitution of Society: Outline of the theory of structuration*. Cambridge, Polity Press.
- GILES, D. & WEUN, S., 1997. Assessing the validity of market segments using conjoint analysis. *Journal of Managerial Issues*. 9 (4), 399-418.
- GILL, J. and JOHNSON, P., 1991. *Research Methods of Managers*, Paul Chapman Publishing Ltd.
- GOLDACRE, M. J., DAVIDSON, J. M. & LAMBERT, T. W., 2004. Country of training and ethnic origin of UK doctors: database and survey studies. *British Medical Journal*. 329 (11), 597-600.
- GOLEMAN, D., 2000. Leadership that Gets Results. *Harvard Business Review*. 78, 78-90.
- GOODWIN, R. E. & MULLAN, B. A., 2009. Trust Not in Money : The effect of financial conflict of interest disclosure on dietary behavioural intention. *British Food Journal*. 111, 408-420.

- GORDON, I. R. & MCCANN, P., 2000. Industrial clusters : complex agglomerations and social networks *Journal of Urban Studies*. 37, 513-532.
- GORTON, M., 1999. Spatial variations in markets served by UK-based small and medium-sized enterprises (SMEs). *Journal of Entrepreneurship and Regional Development*. 11, 39-55.
- GORTON, M. & TREGEAR, A., 2008. Government support to regional food producers: an assessment of England's Regional Food Strategy. *Journal of Environment and Planning*. 26, 1047-1060.
- GORTON, M. & TREGEAR, A., 2009. The challenges of sharing: brands as club goods. *European Journal of Marketing*. 43, 826-842.
- GORTON, M. & WHITE, J., 2012. Export strategies and performance in the CIS: case study evidence from the dairy sector. *Journal of Post-Communist Economies*. 21, 475-494.
- GOSHAL, S. & BARTLETT, C. A., 1996. Rebuilding behavioural context: a blueprint for corporate renewal. *Sloane Management Review*. 37, 23-36.
- GRABHER, G., 1993. The weakness of strong ties: the lock-in of regional development in the Ruhr area. In: GRABHER, G. (ed.) *The Embedded Firm: On the Socioeconomics of Industrial Networks*. London: Routledge.
- GRAEN, G. B. & UHL-BEIN, M., 1995. Relationship-based approach to leadership: development of a leader-memembr (LMX) theory of leadership over 25 years: applying a multi-level domain perspective. *The Leadership Quarterly*. 6 (2), 219-247.
- GRANOVETTER, M., 1983. The strength of weak ties: a network theory revisited *Sociological Theory*. 1, 201-233.
- GRANOVETTER, M., 1985. Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*, 91, 481-510.
- GRANOVETTER, M., 1992. Problems of Explanations of Economic Sociology. In: NOHIRA, N. & ECCLES, R. (eds.) *Networks and Organisations: structure, form and action*. Boston. Harvard Business School Press.
- GRANOVETTER, M., 2013. The concept of Embeddedness. Available [Online]. <http://www.youtube.com/watch?v=KXGbcjzmm2M>. Accessed on 09/03/2013.
- GRANT, R. M., 1996. Knowledge, Strategy and the Theory of the Firm. *Strategic Management Journal*. 17, 109-122.
- GRAY, D., 2004. *Doing Research in the Real world*. Sage.
- GREENLEAF, R. K., 1977. *Servant leadership: a journey into the nature of legitimate power and greatness*. Paulist Press. New York.
- GREVE, A. & SALAFF, J. W., 2003. Social networks and entrepreneurship. *Entrepreneurship Theory and Practice*. 28 (1), 1-22.
- GUBBINS, C. & MacCURTAIN, S., 2008. Understanding the dynamics of collective learning. The role of trust. *Advances in Developing Human Resources*. (10) 4, 578-599.
- GUBA, E. & LINCOLN, Y. S., 1994. *Competing Paradigms in Qualitative Research*. Handbook of Qualitative Research. Thousand Oaks, CA, Sage.
- GUEST, D. E., 1997. Human resource management and performance: a review and research agenda. *International Journal of Human Resource Management*. 8, 263-276.
- GUEST, D. E., 1999. Human resource management: the workers' verdict. *Human Resource Management Journal*. 9 (3), 5-25.
- GUEST, D. E., 1999. Human resource management: when research confronts theory. *International Journal of Human Resource Management*. 12, 1092-1106.
- GUPTA, V., MACMILLAN, I. C. & SURIE, G., 2004. Entrepreneurial Leadership: Developing and measuring a cross-cultural construct. *Journal of Business Venturing*. 19, 241-260.

- HABERNAS, J., 1970. Knowledge and Interest. *Sociological Theory and Philosophical Analysis*. London. Macmillan.
- HACKETT, R. D. & WANG, G., 2012. Virtues and Leadership: an integrating framework founded in Aristotelian and Confucian perspectives of virtues. *Management Decision*. 50 (5), 868-899.
- HAIR, J. J. F., BLACK, W. C., BABIN, B. J. & ANDERSON, R. E., 2010. *Multivariate Data Analysis : A global Perspective*. Upper Saddle River, New Jersey, Pearson.
- HAKANSSON, H. & SNEHOTA, I., 1995. *Developing Relationships in Business Networks*, London, Routledge.
- HANIFAN, L. J. 1920. The Community Centre. Boston: Silver Burdett.
- HARDIN, R. 1993. The Street-Level Epistemology of Trust. *Journal of Politics and Society*, 21, 505-529.
- HARRIS, R. J., 2001. A primer of multivariate statistics. 3rd edition. Lawrence Erlbaum Associates. New Jersey.
- HARTOG, J., HOUSE, J. R., HANGES, P. RUIZ-QUINTANILLA, S. A., 1999. Emics and etics of culturally-endorsed implicit leadership theories: are attributes of charismatic and transformational leadership universally endorsed? *Leadership Quarterly*. 10 (2), 219-256.
- HARVEY, M., 2001. The hidden force: a critique of normative approaches to business leadership. *SAM Advanced management Journal*. 66 (4), 36-48.
- HAYEK, F. A. V., 1937. Economics and Knowledge. In: CASSON, M. (ed.) *Entrepreneurship*. Aldershot, England: Edward Elgar Publishing Limited.
- HAYNIE, J. M., SHEPHERD, D. A., & McMULLEN, J. S., 2009. An opportunity for me? The role of resources in opportunity evaluation decisions. *Journal of Management Studies*. 46 (3), 337-361.
- HAYTON, J., 2006. Human capital management and performance in small and medium sized enterprises: a conceptual framework., in (Eds) TANSKY, J. & HENEMAN, R. *Human Resources Strategies for the High Growth Entrepreneurial Firm*. Information Age Press. Greenwich, Connecticut. p. 51-68.
- HAYTON, J. C., 2005. Competing in the new economy: the effect of intellectual capital on corporate entrepreneurship in high-technology new ventures. *R & D Management*. 35, 137-155.
- HEAVEY, C. & MURPHY, E., 2012. A proposed cooperation framework for organisations and their leaders. *Management Decision*. 50 (6), 993-1000.
- HECKSCHER, C. & ADLER, P., 2006. *The Firm as a Collaborative Community:Reconstructing Trust in the Knowledge Economy*. Oxford. Oxford University Press.
- HERON, J., 1996. *Co-operative Inquiry: Research into the Human Condition*. London, Sage.
- HGCA, 2013. Delivering the Future: a proposal to increase HGCA levies on cereals and oilseeds from 2011/12. Available on www.hgca.com. Accessed on 26 August, 2013.
- HGCA, 2013. Available on www.hgca.com. Accessed on 23 August, 2013.
- HILL, G. E., LUMKIN, G. T. & SINGH, R., 1997. Opportunity recognition: perceptions and behaviours of entrepreneurs. In: REYNOLDS, P., BYGRAVE, W., CARTER, N., DAVIDSSON, P., GARNER, W., MASON, C. & MCDUGALL, P. (eds.) *Frontiers of Entrepreneurship Research*. Babson Park, MA: Babson College.
- HIMANEN, P. & CASTELLS, M., 2004. Institutional Models of the Network society: Silicon Valley and Finland. In: CASTELL, M. (ed.). Cheltenham: Edward Elgar.
- HITT, M. A. & IRELAND, R. D., 2002. The essence of strategic leadership: managing human and social capital. *Journal of Leadership and Organisational Studies*. 9, 3-14.
- HOFFMAN, W. H. & SCHLOSSER, R., 2001. Success Factors of Strategic Alliances in Small and Medium-Sized Enterprises : An Empirical Survey. *Journal of Long-Range Planning*. 34, 357-381.

- HOFSTEDE, G., 2001. *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organisations Across Nations*. 2nd ed. Sage. California. j
- HOGAN, R., CURPHY, G. & HOGAN, J., 1994. What we know about personality: leadership and effectiveness. *American Psychologist*. 49, 493-504.
- HOMAS, G. C., 1937. *Certainties and Doubts*. Newbrunswick. New Jersey.
- HONIG, B. 1998. Who gets the goodies ? An examination of microenterprise credit in Jamaica. *Journal of Entrepreneurship and Regional Development*. 10, 313-334.
- HONIG, B. & DAVIDSSON, P., 2000. The role of social and human capital among nascent entrepreneurs. *Academy of Management*. B1-B6.
- HORNER-LONG, P. & SCHOENBERG, R., 2002. Does e-business require different leadership characteristics ? An empirical investigation. *Journal of European Management*. 20, 611-619.
- HOUSE, R. J. & HOWELL, J. M., 1992. Personality and charismatic leadership. *The Leadership Quarterly*. 3, 81-108.
- HOUSE, R. J., 1971. A path goal theory of leader effectiveness. *Administrative Science Quarterly*. 16, 321-338.
- HOUSE, R. J. & SHAMIR, B., 1993. Toward the integration of transformational, charismatic, and visionary theories. *In Leadership Theory and Research: Perspectives and directions*. CHEMERS, M. M. & AYMAN, R. (Eds.) Academy Press. San Diego.
- HOUSE, R. J. & ADITYA, R. N., 1997. The social scientific study of leadership: quo vadis. *Journal of Management*. 23, 409-473.
- HOUSE, R. J., JAVIDAN, M., HANGES, P. J. & DORFMAN, P. W., 2002. Understanding cultures and implicit leadership theories accross the globe : An introduction to project GLOBE. *Journal of World Business*. 37, 1-10.
- HOUSE, R. J., HANGES, P. J., DICKINSON, M. & SHAMIR, B., 2006. Emics and Etics of Culturally-Endorsed Implicit Leadership Theories : Are Attributes of Charismatic /Transformational Leadership Universally Endorsed ? Wharton. GLOBE.
- HOWE, K. R., 1988. Against the quantitative-qualitative incompatibility thesis or dogma die hard. *Educational Research*. 17, 10-16.
- HOWELL, K., E., 2013. *An Introduction to the Philosophy of Methodology*. London. Sage.
- HOYLEY, R., 1995. *The Structural Equation Modelling Approach, in Structural equation Modelling, Concepts, Issues and Applications*. London. Sage Publications.
- HUBBARD, C. & GORTON, M., 2011. Placing agriculture within rural development: evidence from EU case studies. *Environment and Planning C: Government and Policy*. 29, 80-95.
- HUMPHREY, J. & SCHMITZ, H., 2002. How does insertion in global value chains affect upgrading in industrial clusters ? *Journal of Regional Studies*. 36, 1017-1027.
- IATC, 2006. Global partnerships Initiative.
- IGD, 2003. CONSUMER UNIT. Grocery retailing . The market report. Institute of Grocery Distribution. London.
- IGD, 2007a. CONSUMER UNIT. The ageing population: impact on the food & grocery industry. Indsutry Factsheets. Institute of Grocery Distribution. London.
- IGD, 2007b. CONSUMER UNIT. GroceryBuying groups. Institute of Grocery Distribution. London.
- IGD, 2008. CONSUMER UNIT. Portion size: a review of existing approaches. Institute of Grocery Distribution. London.
- IGD, 2009a. CONSUMER UNIT. The changing face of food and grocery. London.
- IGD, 2009b. CONSUMER UNIT. European grocery buying groups. London.
- IGD, 2009c. CONSUMER UNIT. IGD Research. London.
- IGD, 2009d. CONSUMER UNIT. Diet and health. London.
- IGD, 2009e. CONSUMER UNIT- Market overview. London.
- IGD, 2010. Survey on shoppers trends. London.

- IGD, 2012. What is the size of the UK grocery market? UK channel forecast. London.
- IGD, 2012. How much are symbol groups worth? London.
- IGD, 2012. Convenience market to be worth £46 Bio by 2016. London
- IGD, 2012. Shopper Vista Survey. London.
- IGD, 2013. Eating out: The changing environment. Available on [://www.igd.com/our-expertise/Nutrition-food-and-farming/Healthy-balanced-diets/13381/Eating-out-The-changing-environment/#5](http://www.igd.com/our-expertise/Nutrition-food-and-farming/Healthy-balanced-diets/13381/Eating-out-The-changing-environment/#5). Accessed on 13 August, 2013.
- ILBERY B & Maye, D., 2005a. Alternative (shorter) food supply chains and specialist livestock products in the Scottish-English borders. *Journal of Environment and Planning*. 37, 823-844.
- ILBERY B & Maye, D., 2005b. Food supply chain and sustainability: evidence from specialist food producers in the Scottish-English borders. *Journal of Land Use Policy*. 22, 331-344.
- IM, 2010. Value of food and drink manufacturing in the UK. A report to the Food and Drink Federation. Institute of Manufacturing.
- IRELAND, R. D. & HITT, M. A., 2005. Achieving and maintaining strategic competitiveness in the 21st century: the role of strategic leadership. *Academy of Management Executive*. 10, 63-67.
- JENSEN, J. I., 2001. Social networks, resources and entrepreneurship. *Journal of Entrepreneurship and Innovation*. 2, 103-109.
- JENSEN, J. I. & GREVE, A., 2002. Does the degree of redundancy in social networks influence the success of business start-ups? *International Journal of Entrepreneurial Behaviour & Research*. 8, 254-267.
- JOHNSON, G. & SCHOLES, K., 2002. *Exploring Corporate Strategy*. Harlow, England. Prentice Hall.
- JUDGE, T. A. & PICCOLO, R. F., 2004. Transformational and transactional leadership. A meta-analytic test of their relative validity. *Journal of Applied Psychology Association*. 3, 755-768.
- JULIEN, P-A. & RAMANGALAHY, C., 2003. Competitive strategy and performance of exporting SMEs: an empirical investigation of the impact of their export information search and competencies. *Entrepreneurship Theory and Practice*. 27 (3), 227-245.
- KAI MING AU, A. & ENDERWICK, P., 1994. Small firms in international joint ventures in China : The New Zealand experience. *Journal of Small Business Management*. 32, 88-94.
- KARRA, N., TRACEY, P. & PHILLIPS, N., 2006. Altruism and agency in the family firm: exploring the role of family, kinship, and ethnicity. *Entrepreneurship Theory and Practice*. 30, 861-877.
- KATSIKEAS, C. S., LEONIDOU, L. C. & MORGAN, N. A., 2000. Firm-level export performance assessment: review, evaluation and development. *Journal of the Academy of Marketing Science*. 28, 493-511.
- KATOU, A. 2011. A mediation model linking business strategies, human resource management, psychological contract, and organisational performance. *International Journal of Human Resources Development and Management*. 11 (1), 51-67.
- KILDUFF, M. & TSAI, W., 2003. *Social Networks and Organisations*. London. Sage Publications.
- KIRKPATRICK, S. A., WOFFORD, J. C. & BAUM, J. R., 2002. Measuring motive imagery contained in the vision statement. *The Leadership Quarterly*. 13, 139-150.
- KIRZNER, I. M., 1973. *Competition and Entrepreneurship*, Chicago, University of Chicago Press.
- KIRZNER, I. M., 1982. Uncertainty, Discovery and Human Action: a Study of the Entrepreneurial Profile in the Misesian System. In: CASSON, M. (ed.) *Entrepreneurship*. Aldershot, England. Edward Elgar Publishing Limited.
- KIRZNER, I. M., 1997. Entrepreneurial discovery and the competitive market process: an Austrian approach. *Journal of Economics Literature*, XXXV, 60-85.

- KIRZNER, I. M., 2009. The alert and creative entrepreneur. A clarification. *Small Business Economics*. 32, 145-152.
- KLEIN, P. G., 2008. Opportunity discovery, entrepreneurial action, and economic organisation. *Strategic Entrepreneurship Journal*. 2 (3), 175-190.
- KNACK, S. & KEEFER, P., 1997. Does social capital have an economic pay-off?: a cross-country investigation. *Quarterly Journal of Economics*. 112, 1251-88.
- KNIGHT, G. A. & CAVUSGIL, T. S., 2004. Innovation, organizational capabilities, and the born-global Firm. *Journal of International Business Studies*. 35 (4), 124-41.
- KNIGHT, F. H., 1921. Risk, Uncertainty and Profit. In: CASSON, M. (ed.) *Entrepreneurship*. Aldershot, England: Edward Elgar Publishing Company.
- KRAUSE, D. E. & KEARNEY, E., 2007. Implementing process innovation: The benefits of combining delegative-participative with consultative-advisory leadership. *Journal of Leadership and Organisational Studies*. 14 (1), 16-25.
- KRUEGER, N. F., 1995. Prescription for opportunity: How communities can create potential for entrepreneurs. Washington, D.C.: Small Business Foundation of America.
- KUMAR, M. & BASU, P., 2008. Perspectives of productivity : growth in Indian food industry : a data envelopment analysis. *International Journal of Productivity and Performance Management*. 57, 503-522.
- KURATKO, D. F. & HODGETTS, R. M., 1989. *Entrepreneurship*. Chicago. Dryden Press.
- LARZELERE, R. & HUSTON, T., 1980. The dyadic trust scale: towards understanding interpersonal co-operation in organisations. *Journal of Marriage and the Family*. 42 (3), 595-604.
- LAU, A., TANG, E. & YAM, R., 2010. Effects of supplier and customer integration on product innovation and performance: empirical evidence in Hong Kong manufacturers. *Journal of Product Innovation*. 27, 761-776.
- LEAN, J. W. L., 1996. *Support for Post Start-Up Small Business Growth*. Ph D, Plymouth.
- LEE, T. S. & TSAI, H. J., 2005. The effects of business operation mode on market orientation, learning orientation and innovativeness. *Journal of Industrial Management and Data Systems*. 105, 325-348.
- LEROUX, M., 2009. Middle Class Folly Has altered the Food Industry. *The Times*, 30 July 2009, p.6.
- LEVER, E., LESLEY, W., PORTER, N. & NICHOLAS, J., 2009. School food procurement, procurement skills and sustainability. In: ASSOCIATION, L. A. C. (ed.) *School Food Trust - Eat Better Do Better*.
- LITTLE, A. D., 2004. The State of Key Sectors.
- LEVITT, T., 1962. *Innovation Marketing*. London. Pan Books.
- LEWICKI, R., MCALLISTER, D. & BOES, R., 1998. Trust and distrust : new relationships and realities. *Journal of Academy of Management Review*. 23, 438-459.
- LEWICKI, R. J. & BRINSFIELD, C. T., 2009. Trust, distrust and building social capital. In: BARTKUS, V. & DAVIS, J. (eds.) *Social Capital: Reaching Out, Reaching In*. Cheltenham, UK. Edward Elgar.
- LIESCH, P. W. & KNIGHT, G. A., 1999. Information internalization and hurdle rates in small and medium enterprise internationalization. *Journal of International Business Studies*. 30 (1), 383-94.
- LIN, N., COOK, K. & BURT, R. S., 2008. *Social Capital : Theory and Research*, New Brunswick, NJ. Transaction Publishers.
- LORD, R., DE VARDER, C. & ALLIGER, G., 1986. A meta-analysis of the relation between personality traits and leadership perceptions : an application of validity generalization procedures. *Journal of Applied Psychology*. 71, 402-410.
- LOWE, P., MURDOCH, J. & WARD, N., 1995. Beyond models of endogenous and exogenous development. *Beyond Modernization: The Impact of Endogenous Rural Development*. Van Gorcum, Assen: J D van der Ploeg, G van Dijk.
- LUTHANS, F. & KREITNER, R., 1975. *Organizational Behaviour Modification*, Glenview, IL. Scott, Foresman.

- LYNN, B. E., 2000. Intellectual capital: unearthing hidden value by managing intellectual assets. *Ivey Business Journal*. 64, 48-52.
- MASON, G., ROBINSON, C. & BONDIBENE, C., 2013. Firm growth and innovation in UK city-regions. NESTA working paper 13/11. June, 2013.
- MAYER, R., DAVIS, J. & SCHOORMAN, F., 1995. An integrative model of organisational trust. *Academy of Management Review*. 20 (3), 709-734.
- McALLISTER, D. J., 1995. Affect and cognition-based trust as foundations for interpersonal cooperation in organisations. *Academy of Management Journal* 38 (1), 24-29.
- McCALLUM, S. & O'CONNELL, D., 2008. Social capital and leadership development; building stronger leadership through enhanced relational skills *Leadership & Organization Development Journal*.30, 152-166.
- McCLELLAND, D. C., 1985. Human motivation. Scott Foresman (Ed). Glenview, Illinois.
- McCOY, B. H., 2007. Governing values: the essence of great leadership. *Leadership Excellence*. 24 (5), 11-23.
- McCULLOUGH, M. E. & SNYNER, C. R., 2000. Classical sources of human strength: revisiting an old home and building a new one. *Journal of Social and Clinical Psychology*. 19 (1), 1-10.
- McCULLUM, M. & AUSTIN, C. (2000). Applications of structural equation modelling in psychological research. *Annual Review of Psychology*. 51, 201-226.
- McEVILY, B. & ZAHEER, A., 1999. Bridging ties: a source of firm heterogeneity in competitive capabilities. *Strategic Management Journal*. 20, 1133-1156.
- MEGICKS P, J, M. & J, W., 2008. Influences on ethical and socially responsible shopping: evidence from the UK grocery sector. *Journal of Marketing Management*.24, 637-659.
- MEMERY, J., MEGICKS, P, ANGELL, R. & WILLIAMS, J., 2012. Understanding ethical grocery shoppers. *Journal of Business Research*. 65, 1283-1289.
- McGRATH, R. G. & MCMILLAN, I. C., 2000. *The Entrepreneurial Mindset*, Boston, MA, Harvard Business School.
- MISES, L. V., 1996. Human Action: a treatise on economics. Fourth revised edition. Fox & Wilkes (Eds). San Francisco.
- McMULLEN, J. S. & SHEPHERD, D. A., 2006. Entrepreneurial action and the role of uncertainty in the theory of entrepreneurship. *Academy of Management Review*. 31, 132-152.
- McMULLEN, J. S., PLUMMER, L. A. & ACS, Z. J., 2007. What is an entrepreneurial opportunity. *Small Business Economics*. 28, 273-283.
- MORRISON, T. H., 2006. Pursuing rural sustainability at the regional level : lessons from the literature on institutions, integration, and the Environment. *Journal of Planning Literature*. 21, 143-152.
- MURDOCH J, MARSDEN T & J, B., 2000. Quality, nature and embeddedness: some theoretical considerations in the context of the food sector. *Journal of Economic geography*. 76, 107-125.
- MORGAN, D., 2007. Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research*. 1 (1), 48-76.
- MRASH, H. W., HAU, K. T., BALLA, J. R. & GRAYSON, D., 1998. Is more ever too much? The number of indicators per factor in confirmatory factor analysis. *Multivariate Behavioral Research*. 33, 181-220.
- NADVI, K. & HALDER, G., 2005. Local clusters in global value chains : exploring dynamic linkages between Germany and Pakistan. *Journal of Entrepreneurship and Regional Development*. 10, 339-363.
- NAHAPIET, J. & GHOSHAL, S., 1998. Social capital, intellectual capital and the organizational advantage. *Academy of Management Review*. 23, 242-266.

- NAHAPIET, J., 2009. Capitalizing on connections: social capital and strategic management. In: BARTKUS, V. & DAVIS, J. (eds.) *Social Capital: Reaching Out, Reaching In*. Cheltenham, UK: Edward Elgar.
- NEWBURY, R., SAUER, J., GORTON, M., PHILLIPSON, J. & ATTERTON, J., 2013. Determinants of the performance of business associations in rural settlements in the United Kingdom: an analysis of members' satisfaction and willingness-to-pay for association survival. *Environment and Planning*. 45, 967-985.
- Ng, W. & ROBERTS, J., 2007. Helping the family: the mediating role of outside directors in ethnic chinese family firms. *Human Relations*. 60 (2), 285-314.
- Ng, W. & THORPE, R., 2010. Not another study of great leaders: entrepreneurial leadership in a mid-sized family firm for its further growth and development. *International journal of Entrepreneurial Behaviour & research*. 160 (5), 457-476.
- NGAMKROECKJOTI, C., SPEECE, M. & DIMMIT, N. J., 2005. Environmental scanning in Thai food SMEs : the impact of technology strategy and technology turbulence. *British Food Journal*. 107, 285-305.
- NGUYEN, P., 2005. "Public opinion poll, chicken soup and sample size." *Teaching Statistics*. 27 (3), 89-91.
- NICHOLSON, N., 1996. Work and Personality. *Journal of Applied Psychology : An International Review*. 45.
- NICHOLSON, N., 1998. Personality and entrepreneurial leadership : a study of the heads of the UK's most successful independant companies. *European Management Journal*. (16) 529-539.
- NORBURN, D., MANNING, K. & BIRLEY, S. 1986. Beyond Intrapreneurship : The Metamorphosis of Larger Corporations. *Leadership and Organizational Development Journal*. 7, 21-26.
- ONS, 2005. Business Survey. Office of the National Statistics. London.
- ONS, 2006a. Business Survey. Office of the National Statistics. London.
- ONS, 2006b. Annual Business Inquiry. Office of the National Statistics. London.
- ONS, 2006c. Business Survey. London. Office of the National Statistics. London.
- ONS, 2007a. Changing Regional Economies. South West.
- ONS, 2007b. 2006-Based National Population Projections. Office of the National Statistics. London.
- ONS, 2010. National Accounts, Blue Book, Office of National Statistics. London.
- ONS, 2011. Economic Summary of the UK Food Chain, fourth quarter 2011. Office of the National Statistics. London.
- ONS, 2012a. Business Survey. Office of the National Statistics. London.
- ONS, 2012b. UK Population Census. Office of the National Statistics. London.
- ONS, 2013a. Total factor productivity of the agricultural industry. Office of the National Statistics. London.
- ONS, 2013b. Regional Economic Indicators - March 2013. Office of the National Statistics. London.
- OSTROM, E. & Ahn, T. K., 2003. *Foundations of Social Capital*. Edward Elagr. Cheltenham.
- OSTROM, E. 2009. What is Social Capital? In: BARTKUS, V. & DAVIS, J. (Eds.) *Reaching Out, Reaching In: Multidisciplinary Perspectives in Social Capital*. Edward Elgar.
- O'SULLIVAN, D. & JACKSON, M., 2002. Festival Tourism :a contributor to sustainable local economic development. *Journal of Sustainable Tourism*. 10, 325-342.
- PACKALEN, K. A., 2007. Complementing capital : the role of status, demographic features, and social capital in founding teams' abilities to obtain resources. *Journal of Entrepreneurship Thepry and Practice*. 873-890.
- PANSIRI, J. & TEMTIME, Z. T., 2008. Assessing managerial skills in SMEs for capacity building. *Journal of Management Development*. 27, 251-260.
- PAPADOPOULOS, A. G. & LIARIKOS, C., 2007. Dissecting changing rural development policy networks: the case of Greece. *Journal of Environment and Planning C: Government and Policy*. 25, 291-313.

- PATTON, M. Q., 1990. *Qualitative Evaluation and Research Methods, 3rd edition*. Newbury Park, CA, Sage.
- PEARCE, C. L. & CONGER, J. A., 2003. *Shared Leadership: Reframing of hows and whys of leadership*, Thousand Oaks, California, Sage.
- PENROSE, E., 1959. *The Theory of the Growth of the Firm*. New York: John Wiley.
- PICKERNELL, D., O'SULLIVAN, D., SENYARD, J. & KEAST, R., 2007. Social capital and network building for enterprise in rural areas: can festivals and special events contribute ? *Journal of Small Business and Entrepreneurship*.
- PLYMOUTH, 2004. Research conducted by the University of Plymouth for UKTI. Plymouth.
- POLITIS, D., 2008. Does prior start-up experience matter for entrepreneurs learning? A comparison between novice and habitual entrepreneurs. *Journal of Small Business and Entrepreneurship Development*. 15, 472-489.
- POLYANI, K., 2001. The economy as instituted process. In *The Sociology of Economic Life*. GRANOVETTER, M. S. & SWEDBERG, R. (Eds). Edward Elgar.
- POOLE, M. & VAN DE VEN, A., 2004. *Handbook of Organizational Change and Innovation*, New York, NY, Oxford University Press.
- PORTER, M., 1998. Clusters and the New Economics of competition *Harvard Business Review*. 76, 77-90.
- PORTES, A., 1998. Social capital: origins and applications. *Annual Review of Sociology*. 24, 1-24.
- POTTER, C. & BURNEY, J., 2002. Agricultural multifunctionality in the WTO: legitimate non-trade concern or disguised protectionism? *Journal of Rural Studies*. 18, 35-47.
- PRAHALAD, C. K. & HAMEL, G., 1996. *Competing for the Future*. Harvard University Press. Harvard.
- PROCTOR, T., 1998. Innovations in time: what can we learn from history? *Creativity and Innovation Management*. 43, 867-893.
- PUTNAM, H., 1987. *The Many Faces of Realism*. Open Court. La Salle.
- PUTNAM, R., 1993. *Making Democracy Work: Civic Tradition in Modern Italy*. Princeton. Princeton University Press.
- PUTNAM, R., 2001. *Bowling Alone: The Collapse and Revival of American Community*, New York. Simon & Schuster.
- PURCELL, J. & HUTCHINSON, S., 2007. Front-line managers as agents in the HRM-performance causal chain: theory, analysis and evidence. *Human Resource Management Journal* 17 (1), 3-20.
- RAY C., 1998. Culture, intellectual property and territorial rural development. *Sociological Ruralis*. 38, 3-20.
- RAY, S. C. & DESLI, E., 1997. Productivity growth, technical progress and efficiency changes in industrialized countries : comment. *Journal of American Economic Review*. 87, 1033-1039.
- REARDON, T., TIMMER, C. P., BARRETT, C. B. & BERDEGU, J. A., 2003. The rise of Supermarkets in Africa, Asia and Latin America. *Journal of Agricultural Economics*. 85.
- REICHARDT, C. S. & RALLIS, F. S., 1994. *The Quantitative-Qualitative Debate: New Perspectives*. San Francisco, Jossey-Bass.
- RENKO, M., RODNEY, C. & SIMON, M., 2012. Perception of entrepreneurial opportunity: a general framework. *Management Decision* 50 (7), 1233-1251.
- RES, 2012. Rural Enterprise Solution. Available on line at www.res.org.uk. Accessed on 14 April, 2011.
- REUBER, R. & FISCHER, E., 2005. The company you keep : how young firms in different competitive contexts signal reputation through their customers. *Journal of Entrepreneurship Theory and Practice*. 29, 57-78.
- RINDOVA, V. P., WILLIAMSON, I., PETKOVA, A. & SEVER, J., 2006. Being good or being known : an empirical examination of the dimensions, antecedents, and

- consequences of organizational reputation. *Academy of Management Journal*. 48, 1033-1049.
- RITSON, C., 2006. Vision for the Farming and Food Industries and the Role of the Cereals Industry Forum.
- RMIF, 2006. Business Improvement. The Read Meat Industry Federation.
- ROBINSON, S., 2001. The influences of entrepreneurial motives on the way rural women small business owners manage their employees. *Journal of Developmental Entrepreneurship*. 6, 151-168.
- ROBINSON, G. M., 2004. *Geographies of Agriculture: Globalisation, Restructuring and Sustainability*. Harlow, Essex. Printice-Hall.
- RODENBACH, M. & BRETTEL, M., 2012. CEO experience as micro-level origins of dynamic capabilities. *Management Decision*. 50 (4), 611-634.
- ROGERS, A., DAY, J., RANDALL, F. & BENTALL, R. P., 2003. Patients understanding and participation in a trial designed to improve the management of anti-psychotic medication: A qualitative study. *Journal of Social Psychiatry and Psychiatric Epidemiology* . 38, 720-727.
- ROSING, K., FRESE, M. & BAUSCH, A., 2011. Explaining the heterogeneity of the leadership-innovation relationship: Ambidextrous leadership. *The Leadership Quarterly*. 22, 956-974.
- RUSSELL, R. F. & STONE, A. G., 2002. A review of servant leadership attributes: developing a practical model. *The Leadership and Organization Development Journal*. 23 (3), 145-157.
- SALAZAR, A. C., 2004. Modern challenges of new business creation & entrepreneurship in rural areas. *Association of Global Business Conference*. Cancun, Mexico.
- SALIM, R. & KALIRAJAN, K. P., 1999. Sources of output growth in Bangladesh food processing industries : a decomposition analysis. *Journal of the Developing Economies*. 37, 355-374.
- SARASVATHY, S., 2001. Causation and effectuation: towards a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*. 26, 243-263.
- SARASVATHY, S. & DEW, N., 2003. *Effectual networks: a pre-commitment approach to bridging the gap between opportunism and trust*. University of Maryland, University of Virginia.
- SARASVATHY, D., 2011. *Constructing corridors to economic primitives: entrepreneurial opportunities as demand-side artifacts*. University of Maryland.
- SARASVATHY, S. & VENKATARAMAN, S. 2011. Entrepreneurship as method: open questions for an entrepreneurial future. *Entrepreneurship Theory and Practice*. 113-135.
- SAXENIAN, A., 1994. *Regional networks : Industrial Adoptions in Silicon Valley and Route 128*, Cambridge, Harvard University press.
- SAYER, A., 2000. *Realism and Social Science*. Sage (Ed.). London.
- SCHMITZ, H., 1995. Collective efficiency : growth path for small scale industry. *Journal of Developmental Studies*. 31, 529-566.
- SCHMITZ, H. & KNORRINGA, P., 2000. Learning from global buyers. *Jouranl of Development Studies*. 37, 177-205.
- SCHOONHOVEN, C. B. & ROMANELLI, E., 2001. The Local Origins of New Firms. *The Entrepreneurship Dynamic : Origins of Entrepreneurship and the Evolution of Industries*. Stanford, CA. Stanford University Press.
- SCHULLER, T., BARON, S. & FIELD, J., 2000. *Social Capital: critical perspectives*, Oxford, Oxford University Press.
- SCHUMACKER, R. E. & LOMAX, R. G., 2004. *A Beginner's Guide to Structural Equation Modeling*. London. Lawrence Erlbaum Associates.
- SCHUMPETER, J., 1934a. Innovation: The Theory of Economic Development. In: CASSON, M. (ed.) *Entrepreneurship*. Aldershot, England: Edward Elgar Publishing Limited.

- SCHUMPETER, J., 1934b. *The Theory of Economic Development*, New Brunswick, NJ, Transaction.
- SEQUEIRA, J. M. & RASHEED, A. A., 2006. Start-up and growth of immigrant small businesses: the impact of social and human capital. *Journal of Developmental Entrepreneurship*. 11, 357-375.
- SHAMIR, B., HOUSE, R. J. & ARTHUR, M., 1993. The motivational effects of charismatic leadership : a self- concept based theory. *Journal of Organisation Science*. 4, 1-17.
- SHANE, S. & VENKATARAMAN, S., 2000. The Promise of entrepreneurship as a field of research. *Journal of Academy of Management Review*. 217-226.
- SHANE, S. & CABLE, D., 2002. Network ties, reputation, and the financing of new ventures. *Journal of Management Science*. 48, 364-381.
- SHANE, S., 2003. *A General Theory of Entrepreneurship: The Individual-Opportunity Nexus* Cheltenham, Edward Elgar.
- SHANE, S. & KHURANA, R., 2003. Bringing individuals back in : the effects of career experience on new firm founding. *Journal of Industrial and Corporate Change*. 12, 519-543.
- SHANE, S. A. & BARON, R. A., 2008. *Entrepreneurship: A process Perspective*. Mason, Ohio. South-Western Cengage Learning.
- SHIELDS, F. J., 2005. Does rural location matter ? The significance of a rural setting for small businesses. *Journal of Developmental Entrepreneurship*. 10, 49-63.
- SHOTTER, J. 1993. *Conversational realities*. London, Sage.
- SHUCKSMITH, M., 2002. Endogenous development, social capital and social inclusion: Perspectives from LEADER in the UK. *Sociologica Ruralis*. 40, 208-218.
- SHUCKSMITH, M., 2010. Desintegrated rural development? Neo-endogenous rural development, planning and place shaping in diffused power contexts *Sociological Ruralis*. 50, 1-14.
- SIEGEL, D. S. & RENKO, M., 2012. The role of market and technological knowledge in recognising entrepreneurial opportunities. *Management Decision*. 50 (5), 797-816.
- SIRDESHMUKH, D., SINGH, J. & SABOL, B., 2002. Consumer trust, value, and loyalty in relational exchanges. *Journal of Marketing*. 66, 15-37.
- SLOTTE-KOCK, S. & COVIELLO, N., 2009. Entrepreneurship research on network processes: a re view and ways forward. *Entrepreneurship Theory and Practice*. 10 (42), 31-57.
- SMALLBONE, D., JOAO, L., RAPOSÃO, M. & WELTER, F., 2010. *The Theory and Practice of Entrepreneurship: Frontiers in European Entrepreneurship Research*. Edward Elgar, London.
- SMALLBONE, D., LEIGH, R. & NORTH, D., 1995. The characteristics and strategies of high-growth SMEs. *International Journal of Entrepreneurial Behaviour & Research*. 1, 44-62.
- SODANO, V., HINGLEY, M. & LINDGREEN, A., 2008. The usefulness of social capital in assessing the welfare effects of private and third-party certification food safety policy standards: trust and networks. *British Food Journal*. 110, 493-513.
- SOMECH, A., 2006. The effects of leadership style and team process on performance and innovation in functionally heterogeneous teams. *Journal of Management*. 32 (1), 132-157.
- SOSIK, J. J., AVOLIO, B. J. & JUNG, D. I., 2002. Beneath the mask: examining the relationship of self-presentation attributes and impression management to charismatic leadership. *The Leadership Quarterly*. 13, 217-242.
- SOSIK, J. L. & DINGER, S. L., 2007. Relationships between leadership style and vision content : the moderating role of need for social approval, self-monitoring and need for social power. *The Leadership Quarterly Journal*. 18, 134-153.
- SPEKMAN, R. E., ISABELLE, L. A. & MACAVOY, T. C., 2000. *Alliance Competence : Maximizing the Value of your Partnerships*. New York, John Wiley & Sons.
- SPILLANE, J., 2006. Distributed leadership. Jossey-Bass (Ed). San Francisco.

- SPILLANE, J., SHERER, J. & COLDREN, A., 2007. Distributed leadership: leadership practice and the situation. In *Educational Leadership and Reform*. HOY, W. & MISKIL, C. (Eds). IAP Publishing, New York. 149-176.
- STAKE, R., 2006. Qualitative Case Studies, in N.K. Denzin and Y. S. Lincoln (eds). *Handbook of Qualitative research, 3rd Edition*. London, Sage: 443-466.
- STAM, W. & ELFRING, T., 2008. Entrepreneurial orientation and new venture performance: the moderating role of intra and extraindustry social capital. *Academy of Management Journal*. 51 (1), 97-111.
- STARR, J. A. & MACMILLAN, I. A., 1990. Resource cooptation via social contracting : resource acquisition strategies for new ventures. *Strategic Management Journal*. (11), 79-92.
- STATHAPOULOU, S., PSALTOPOULOS, D. & D, S., 2004. Rural enterprise in Europe : a research framework and agenda. *International Journal of Entrepreneurial Behaviour & Research*. 10, 404-425.
- STOGDILL, R., 1974. *Handbook on Leadership : A Survey of the Literature*, New York, NY, Free Press.
- STONE, A. G., RUSSELL, R. F. & PATTERSON, K., 2003. Transformational versus servant leadership: a difference in leader focus. *The Leadership and Organization development Journal*. 25 (4), 349-361.
- STONES, R., 2005. *Structuration Theory*. Basingstoke, Palgrave Macmillan.
- STOREY, D., 2011. Optimism and chance: the elephant in the entrepreneurship room. *International Small Business Journal*. (1) 2-19.
- STRANGE, J. M. & MUMFORD, M. D., 2002. The origins of vision: charismatic versus ideological leadership. *The Leadership Quarterly*. 13, 343-377.
- STRAUSS, A. L. & CORBIN, J., 1998. *Basics of Qualitative Reseacr: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks, CA, Sage.
- STREET, T. C. & CAMERON, A. F., 2007. External relationships and the small business : a review of small business alliance and network research. *Journal of Small Business Management*. 45, 239-266.
- STUART, T. E., 2000. Interorganizational alliances and the performance of firms : a Study of growth and innovation rates in a high-technology industry. *Journal of Strategic Management*. 21, 791-811.
- SWLFP, 2003. *Local Food Business in the South West of England*. South West Regional Development Agency. Bristol.
- SWRDA, 2004. *South West Regional Accounts, 1999*. Bristol.
- SWRDA, 2008. *South West Competitiveness and Employment Programme 2007-13*. Bristol.
- SYNDER, M., 1987. Private appearances/public realities: The psychology of self-monitor. Freeman (ed.) New York.
- TANNENBAUM, R. & SCHMIDT, W., 1973. *How to Choose a Leadership Pattern : A Survey of the Literature*, New York, NY, Free Press.
- TASHAKKORI, A. & TEDDIE, C., 1998. *Mixed Methodology :Combining Qualitative and Quantitative Approaches*. Thousand Oaks, CA, Sage.
- TEAGARDEN, M. B. & VON GLINOV, M. A., 1997. Human resource management in cross-cultural contexts: emic practices versus etic philosophies. *Management International Review*. 37 (1) 720.
- TEECE, D. J., 2007. Expluicating dynamic capabilities: the nature and micro-foundations of (sustainable) enterprise performance. *Strategic Management Journal*. 28 (13) 1319-50.
- TEECE, D. J., 1998. Capturing value from knowledge assests: the new economy, markets for know-how, and intangible assests. *California Management Review*. 40 (3), 55-79.
- THOMSON, A., 2009. It is All About Pleasure. *The Times*, 30 July 2009, p.7.

- TIERNEY, P., FARMER, S. M. & GRAEN, G. B., 1999. An examination of leadership and employee creativity: the relevance of traits and relationships. *Personel Psychology*. 52 (3), 591-620.
- TIWANA, A., 2008. Do Bridging ties complement strong ties: an empirical examination of alliance ambidexterity. *Strategic Management Journal*. 29, 251-272.
- TRASH, T. M. & ELLIOT, A. J., 2003. Inspiration as a psychological construct. *Journal of Personality and Social Psychology*. 84, 871-889.
- TUSHMAN, M. & ANDERSON, P., 1986. Technological discontinuities and organizational environments. *Journal of Administrative Science Quarterly*. 31, 439-465.
- THE ECONOMIST, 2006. Good food and voting with your trolley. *The Economist*. London.
- THE ECONOMIST, 2012. The power of tribes: business people need to reckon with the anglosphere, the Sinosphere and the Indosphere. *The Economist*. London.
- THE ECONOMIST, 2013. Van demon's land. March pp.23-29. *The Economist*. London.
- TREGEAR, A., 2001. *Speciality Regional Foods in the UK: an Investigation from the Perspectives of Marketing and Social History*. Ph D, University of Newcastle upon Tyne.
- USITC, 2010. Small and medium-sized enterprises: characteristics and performance. Publication 4189. United States International Trade Commission. Washington, D. C., USA.
- UZZI, B., 1997. Social structure and competition in inter-firm networks: the paradox of embeddedness. *Administrative Science Quarterly*. 42, 35-67.
- VECCHIO, R., 2003. Entrepreneurship and leadership : common trends and common threads. *Journal of Human Resource Management Review*. 13, 202-317.
- VENKATARAMAN, S. & VAN DE VEN, A. H., 1998. Hostile environmental jolts, transaction sets and new business development *Journal of Business Venturing*. 13, 231-255.
- VOLERY, T. & MENSIK, S., 1998. The Role of trust in creating effective alliances : a managerial perspective. *Journal of Business Ethics*. 17, 987-994.
- VON BARTELANFFY, L. 1962. General systems theory: a critical review. *General Systems*. 7, 1-20.
- WASSERMAN, S. & FAUST, K., 1994. *Social Networks Analysis: Methods and Applications*, Cambridge, Cambridge University Press.
- WARREN, M., 2004. Farmers online: drivers and impediments in adoption of internet in UK agriculture business. *Journal of Small Business and Enterprise Development*. 11, 371-381.
- WATKINS, B. D., 2007. On government programs that increase small firms' access to capital. *Journal of Small Business Management*. 45 (1), 133-136.
- WEAVER, K. M. & DICKSON, P., 1998. Judging the outcome quality of perceived partner behaviors. *Journal of Business Venturing*. 13, 505-522.
- WEAVER, K. M., MARINO, L. D., JHILL, J. S. & TAMBUNAN, T., 2000. Alliance formation in emerging economies in crisis : the influences of strategic posture and perceived environmental uncertainty on firm intentions to use strategic alliances and preferred governance structures. *International Council for Small Business (ICSB) world Conference*. Brisbane, Australia.
- WEI, L. & LAU, C., 2010. High performance work systems and performance : the role of adaptive capability. *Human Relations*. 63 (10), 1487-1511.
- WEST, M. & FARR, J., 1990. *Innovation and creativity at work*, England, John Wiley & Sons Ltd.
- WEST, 2012. Available online at . www.tasteofthewest.co.uk. Accessed 24 January 2012.
- WHO, 2003. WHO Strategy for Food Safety. Geneva.
- WITTINGSTEIN, L., 1953. *Philosophical Investigations*. Oxford, Blackwell.

- WORLD BANK, 2011. Private sector development: analysis of 47,745 firms in 99 countries surveyed in the period 2006-2010. Available online at www.theworldbank.org.
- YOUNG, C. E. & OLK, P., 1997. Strategic alliances : rhe role of individual discretion and personal attachments in the decision to continue. *Western Decision Sciences Institute*. Honolulu, Hawai.
- YORK, J. G. & VENKATARAMAN, S., 2010. The entrepreneur-environment nexus: uncertainty, Innovation and Allocation. *Journal of Business Venturing*. 25, 449-463.
- YUKL, G., 2010. *Leadership in Organisations*. Pearson Education. Upper saddle River, N.J.
- YUKL, G., 1998. *Leadership in Organizations*. Englewoods Cliff, NJ. Prentice Hall.
- YUKL, G., 1996. *Leadership in Organisations*. New jersey. Pearson.
- YUKL, G., 1989. Managerial leadership: a review of the theory and research. *Journal of Management*. 15 (2) 251-289.
- ZAND, E. D., 1997. *The Leadership Triad: Knowledge, Trust, Power*. New York. Oxford University Press.
- ZELIZER, V., 1994. *The Social Meaning of Money*. New York. Basic Books.
- ZHENG, W., KHOURY, E. & GROBMEIER, C., 2009. How do leadership and context matter in R&D team innovation? A multiple case study. *International Journal of Human resource Development*. 13 (3), 265-283.

Appendix 2.1 The Institute of grocery Distribution – IGD

IGD was founded in November 1909 by a group of grocers who came together to create a body that would improve and develop professional standards of training and education in grocery management. As a result, the Institute of Certificated Grocers was formed. In 1972 it merged with the Institute of Food Distribution and IGD was born - the first step towards creating a total chain organisation. In the 90s it diversified to include farming, making it a truly total chain organisation working right across the food and consumer goods industry.

During the course of the last 100 years IGD has adapted to fit the transformation of the food and grocery industry, delivering consumer goods through efficient supply chains, providing millions of jobs and helping to drive the UK economy. It is now a charity governed by a board of trustees with no lobbying interest and operating as a not-for-profit organisation, dedicating all revenues from selling research and services to delivering public benefit. Its services are provided via online subscription sites, events, and services to members with the ultimate goal to develop people, to foster sustainability and to enhance consumers' healthy lives. Its operations are conducted within industry working groups, which are summarised as follows.

- **The Employability Group** was set up in December 2011 to bring people in the industry together to play a vital role in tackling chronic youth unemployment.

- **The Food Chain Emergency Liaison Group** was established to bring together a broad constituency of representatives from the food and grocery industry, Government, trade bodies and relevant agencies to discuss and act upon crisis management issues.
- **The Industry Nutrition Strategy Group (INSG)** was established in April 2003 to find ways to encourage healthy eating as part of a healthy lifestyle throughout the UK.
- **The Industry Sustainability Group (ISG)** raises awareness and creates new ways of working which help tackle environmental and social issues for the benefit of society.
- **The New and Emerging Technology Group** can provide improvements in food production that have significant benefits in feeding a growing world population. Ordinary people need to understand more about the advances being made and this group seeks ways to do this more effectively.
- **The Policy Issues Council** is a forum of chief executives and chairmen from farming, manufacturing, retail, wholesaling and foodservice. It drives change and improvement by addressing the things that ordinary people care about in nutrition, sustainability, skills and other areas.

IGD, 2013. Who we are. Available on www.igd.com. Accessed on 26 August, 2013.

Appendix 2.2 : Benchmarking and Probe

PROBE – the benchmarking technique for processors and marketing groups.

PROBE was initially developed in 1992 by London Business School and IBM Consulting for the purpose of benchmarking UK manufacturing against their European competitors and has subsequently been adopted by the Confederation of British Industry and promoted nationally as the PROBE Benchmarking service (Promoting Business Excellence). The PROBE has been adapted for food companies from the standard version, taking account of the specific structure and characteristics of the industry and its sectors. The aim is to identify priority areas for improvement and provide a mechanism for measuring performance against an industry benchmark.

MASTERCLASS – It is one of the suite products developed by the Society of Motor Manufacturers and Traders (SMMT) Industry Forum, which was established to assist businesses in the pursuit of continuous process improvement through practical shop-floor improvement programmes. Unlike PROBE, a Masterclass is designed explicitly to deliver practical solutions through the involvement of internal staff who are trained to identify problem areas on the factory floor and ‘engineer’ solutions. By working on key ‘focus’ areas and involving people from different parts of the business Masterclass provides a catalyst for change in the organisational approach to continuous improvement.

VALUE CHAIN ANALYSIS – a diagnostic tool that is designed to identify improvement opportunities from a supply chain perspective rather than of a single business. Originally developed for application within the automotive industry, VCA is

based on the principle of 'lean manufacturing' and focuses on process improvement and the elimination of waste in the supply chain. The aim is to use VCA in order to identify opportunities in the supply chain to increase the amount of time spent on value adding processes, reduce the time spent on necessary but no-value-adding processes and eliminate the time spent generating waste. Food industry bodies engaged Cardiff University to adapt and apply the technique for the purpose of identifying strengths and weaknesses in different types of food supply chain opportunities for improvement through more effective co-ordination of the key business processes from farm to fork.

Appendix 5.1: Survey questionnaire



PhD Research Project:

The Competitiveness of the Food and Drink Sector in the UK South West Region

10 August, 2010

Dear Respondent,

I am a PhD student at the University of Plymouth, Business School. I am undertaking a research project on the topic of “Entrepreneurial Activity in the UK South West Region Food and Drink sector”.

I am writing to you to seek your participation in this project by completing a survey questionnaire. Your completed questionnaire will enable me to explore the factors that explain the competitive performance of the food and drink sector. The questionnaire is divided into four sections with questions to which you can respond simply by ticking the appropriate box. The questionnaire will take approximately 20 minutes to complete.

Your participation is crucial for the success of my research project. The information you provide will be kept confidential and will only be used for academic purposes. Also, the research design does not involve identifying you or your business specifically. As the form shows, all data will be assigned alphanumeric identities known only to the researcher. I will provide the participating companies with the major findings on completing my study.

I would very much appreciate your participation in this important survey and ask you to kindly sign below to confirm your agreement. I enclose a pre-paid addressed envelope for your reply.

Yours sincerely,

Lise Hunter

If you require any further information please contact me by telephone: 01752.872.237 or by email: lise.hunter@plymouth.ac.uk.

Agreement to participate in this survey

I understand the objectives of this research which have been explained to me.

I understand that I am free to withdraw at any time and any stage, and ask for my data to be destroyed.

I understand that my anonymity is guaranteed, unless I expressly state otherwise.

Under these circumstances, I agree to participate in the research.

Name..... Company.....

Signature..... Date.....

I – Market Organisation

1. Defining a goal and putting together the resources required to achieve that goal is the most important business activity in market organisation. By ticking the appropriate box, please rank in order of importance the following main business issues that represent a goal in your market organisation.

Scale of Importance >>>	Very important	Important	Neither important nor unimportant	Unimportant	Very unimportant
Goal-related business issues					
Marketing, e.g. introducing a new product such as healthy eating portions, organic					
Marketing, e.g. entering a new market such as school meals, exports, retail					
Business operations, e.g. adapting to a new business structure such as joint venture, supply chain					
Finance, e.g. capital investment, cash flow,					
Human resource, e.g. training of existing staff, recruitment of additional staff					

II – Social Networks

1. It is generally agreed that social networks can provide the required resources for market organisation. Considering your main business goals, please rank the importance of each social network in helping you achieve that goal, by ticking the appropriate box

Scale of Importance >>>	Very important	Important	Neither important nor unimportant	Unimportant	Very unimportant
Social Networks					
Family, close friends, business partners					
Employees, customers					
Contacts within local business support or trade association					
Private sector (e.g. accountant, banker, lawyer, HR expert etc.)					
Contacts in regional or national organisations (e.g. DEFRA, Taste of the West, Grow Fair)					
Media (e.g. TV, internet, twitter)					
Others (please specify)					

2. From time to time, people discuss matters of importance with other people, ranking from family and close friends to people they meet very occasionally but who may be relevant in the context of their endeavours. Please tick the appropriate box that indicates which of the social networks listed below you have discussed an important matter with over the past six months.

Scale of agreement >>>	Frequently	Occasionally	No opinion	Rarely	Never
Social networks Used					
Family, close friends, business partners					
Employees, customers					
Contacts within local business support or trade association					
Private sector (e.g. accountant, banker, lawyer, HR expert etc.)					
Contacts in regional or national industry organisations (DEFRA, Taste of the West, Grow Fair)					
Media (e.g. TV, internet, twitter)					
Others (please specify)					

3. Please use this box to add any personal opinion or comments you wish to express on social networks in relation to your business in particular.

III- Leadership Self-Assessment

4. This section is about the way you perceive yourself in relationships. Please tick the box that best reflects your self-assessment in each of the following statements.

Scale of agreement >>>	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Statements					
When I set high goals, I work hard to achieve them					
I define my standards of performance to reflect the challenge ahead					
I keep myself informed about specific matters related to my industry					
I take interest in general trade and business news, current affairs and markets so that I can develop my ability to plan for the future					
By projecting the future I can anticipate possible events and make appropriate plans					
I trust my partners and employees to play a key role in achieving the plan by showing confidence in their personal abilities					
I speak to my partners and employees with respect to build their self confidence					
I aim to earn the trust of my partners and employees by being specific and fair about their reward					
I encourage my partners and employees to participate in discussion and to share ownership of the success of the plan					
By driving positive emotions, I inspire my partners and employees in their beliefs, values and behaviours					
I work hard in order to keep others motivated and enthused					
I build team work					
I build commitment by constantly seeking improvement through team work					
I prefer my partners and employees to take initiatives and to be creative					
I tend to make firm decisions quickly					
I like to keep control of decision making					
I tend to trust my own knowledge and expertise					

IV. Please tick the box that best indicates your opinion on the following statements.

Scale of agreement >>>	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
Statements					
In general I find relationships outside family and close friends difficult to establish and maintain					
In general, I find relationships outside the family circle to be more rewarding and interactive					
In general, people who interact widely outside family and close friends achieve social recognition					
In general, people with social recognition also have privileged access to information and resources					
In general, people who can access limited resources also increase their ability to succeed					
In general, success brings influence and attracts new friends					

V– Business and Personal Information

To answer the following questions please tick the appropriate box.

Business information

5. Nature of your business : please tick the appropriate box(es) to describe your main business activities

Sector/product categories	box
Dairy (cheese, yoghurts, deserts, ice cream, spreads, etc.)	
Bakery (bread, cereals, biscuits, pastry, ingredients, etc.)	
Confectionery (chocolate, sugar and sweets)	
Alcohol and Soft Drinks	
Prepared Meat (sausage, ham, sliced meats, poultry, pate, etc.)	
Prepared Fish/Seafood (smoked, breaded/battered, shellfish, etc.)	
Ready Meals including pies, sauces, vegetable portions, etc.	

6. Business location : Please provide the first three digits of your postcode

7. Structure of the business : sole trader partnership limited liability Other

8. Number of employees 0-5 6-10 11-15 16-20 over20

9. Average level of sales growth over the past 2-10 years

Less than 0% 0 – 10% 11--20% 21-30% over 30%

10. How far is your business from your nearest customer, in miles?

0 - 5 6 - 10 11 – 15 over 15 Pick up

Pick-up implies that the main customer (co-operative, supply-chain etc.) comes to you to collect the products

11. Do you own a farm ?

Yes No If your answer is Yes, please go to question 15

12. How big is the farm in hectares?

Less than 20 21-50 51-100 over 100

Your personal information

13. Owner/manager gender:

Male Female

14. Age of owner / manager

: 25-35 36-45 46-55 over 55

15. Owner / manager educational achievement : Postgraduate degree Professional qualification

University degree Technical college GCSE below GCSE

16. Years of experience as owner/manager of your business

0-5 6-10 11-15 16-20 21-25 over 25

17. How many hours per week do you spend on leisure activities, i.e. non-business related ?

0-5h 6-10h 11-15 h 16-20h more than 10h

I thank you most sincerely for your time and cooperation in completing this questionnaire. If possible I would like to meet you to discuss this questionnaire. If you agree to take part in an interview, please provide your contact details below:

Name:

Tel : **Email:**

Please tick this box if you are interested in receiving the research main findings

Thank you.

Appendix 6.1: Estimates of Parameters - Variance-covariance Matrix

	par_1	par_2	par_3	par_4	par_5	par_6	par_7	par_8	par_9	par_10	par_11	par_12	par_13	par_14	par_15	par_16	par_17	par_18	par_19	par_20	par_21	par_22	par_23	
par_1	.048																							
par_2	.041	.096																						
par_3	.000	.000	.009																					
par_4	.000	.000	.005	.016																				
par_5	.000	.000	.000	.000	.019																			
par_6	.000	.000	.000	.000	.012	.017																		
par_7	.000	.000	.000	.000	.012	.011	.017																	
par_8	-	-	.000	.000	.000	.000	.000	.000																
par_9	.001	.002	.000	.000	.000	.000	.000	.000	.000															
par_10	.000	.000	.000	.000	-	-	-	.000	.000															
par_11	.001	.001	.000	.000	.000	.000	.000	.000	.000	.000														
par_12	.004	.006	.000	.000	.000	.000	.000	.000	.000	.000	.001													
par_13	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001												
par_14	.000	.000	.000	.000	.006	.005	.005	.000	.000	.000	.000	.000	.003											
par_15	.001	.002	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001									
par_16	.001	.002	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.002								
par_17	.002	.011	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.002	.004							
par_18	.000	.000	.001	.003	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.001						
par_19	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001					
par_20	.000	.000	.001	.003	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.001	.000	.001				
par_21	.000	.000	.000	.000	.001	.001	.001	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.002			
par_22	.000	.000	.000	.000	.001	.001	.001	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.001		
par_23	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	
par_23	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001

Appendix 6.2 : Estimates of parameters - Correlations Matrix

	par_1	par_2	par_3	par_4	par_5	par_6	par_7	par_8	par_9	par_10	par_11	par_12	par_13	par_14	par_15	par_16	par_17	par_18	par_19	par_20	par_21	par_22	par_23	
par_1	1.000																							
par_2	.607	1.000																						
par_3	.000	.000	1.00																					
par_4	.000	.000	.420	1.00																				
par_5	.000	.000	.000	.000	1.00																			
par_6	.000	.000	.000	.000	.696	1.00																		
par_7	.000	.000	.000	.000	.681	.679	1.00																	
par_8	-.317	-.400	-.112	-.192	.000	.000	.000	1.00																
par_9	.000	.000	-.112	-.192	.302	-.300	-.289	.229	1.00															
par_10	-.252	-.318	.000	.000	.240	-.239	-.230	.351	.320	1.00														
par_11	-.754	-.838	.000	.000	.000	.000	.000	.493	.025	.392	1.00													
par_12	.000	.000	-.439	-.739	.000	.000	.000	.338	.338	.046	.016	1.00												
par_13	.000	.000	.000	.000	.786	-.782	-.757	.026	.437	.347	.007	.017	1.00											
par_14	.148	.257	.000	.000	.000	.000	.000	-.102	.000	-.081	-.211	.000	.000	1.00										
par_15	-.232	.307	.000	.000	.000	.000	.000	-.073	.000	-.058	-.091	.000	.000	.086	1.00									
par_16	.112	-.534	.000	.000	.000	.000	.000	.162	.000	.129	.201	.000	.000	.191	-.584	1.00								
par_17	.000	.000	.415	.765	.000	.000	.000	-.150	.150	.000	.000	-.664	.000	.000	.000	.000	1.00							
par_18	.000	.000	-.177	-.044	.000	.000	.000	.014	.014	.000	.000	.053	.000	.000	.000	.000	.000	1.00						
par_19	.000	.000	-.269	-.712	.000	.000	.000	.135	.135	.000	.000	.495	.000	.000	.000	.000	.000	-.657	.019	1.00				
par_20	.000	.000	.000	.000	.198	.196	.186	.000	.073	-.058	.000	.000	-.198	.000	.000	.000	.000	.000	.000	.000	1.000			
par_21	.000	.000	.000	.000	.261	.039	.018	.000	.029	.023	.000	.000	.042	.000	.000	.000	.000	.000	.000	.000	.000	-.044	1.00	
par_22	.000	.000	.000	.000	.042	-.253	.016	.000	.026	.021	.000	.000	.038	.000	.000	.000	.000	.000	.000	.000	.000	-.040	-.194	1.00
par_23	.000	.000	.000	.000	.026	.022	-.219	.000	.016	.013	.000	.000	.024	.000	.000	.000	.000	.000	.000	.000	-.025	-.122	-.109	1.000

Appendix 6.3

Significance of parameter estimates – Maximum likelihood

	Estimate	S.E.	C.R.	P	Label
SC1 <--- Social	1.000				
SC2 <--- Social	1.858	.220	8.460	***	par_1
SC3 <--- Social	2.493	.311	8.027	***	par_2
Lead1 <--- leadership	1.000				
Lead2 <--- leadership	.633	.097	6.549	***	par_3
Lead3 <--- leadership	1.061	.126	8.448	***	par_4
EP1 <--- entrepreneurial	1.000				
EP2 <--- entrepreneurial	1.302	.137	9.538	***	par_5
EP3 <--- entrepreneurial	1.230	.130	9.501	***	par_6
EP4 <--- entrepreneurial	1.198	.130	9.243	***	par_7

Table1: Regression Weights

	Estimate
SC1 <--- Social	.518
SC2 <--- Social	.710
SC3 <--- Social	.853
Lead1 <--- leadership	.810
Lead2 <--- leadership	.418
Lead3 <--- leadership	.746
EP1 <--- entrepreneurial	.564
EP2 <--- entrepreneurial	.763
EP3 <--- entrepreneurial	.755
EP4 <--- entrepreneurial	.711

Table2: Standardised regression weights

	Estimate	S.E.	C.R.	P	Label
Social	.109	.023	4.648	***	par_11
Leadership	.229	.035	6.615	***	par_12
entrepreneurial	.273	.052	5.243	***	par_13
e1	.297	.025	11.971	***	par_14
e2	.370	.045	8.207	***	par_15
e3	.253	.066	3.826	***	par_16
e4	.120	.026	4.591	***	par_17
e5	.434	.035	12.536	***	par_18
e6	.206	.032	6.486	***	par_19
e7	.585	.049	11.894	***	par_20
e8	.333	.038	8.771	***	par_21
e9	.312	.035	8.987	***	par_22
e10	.384	.038	10.027	***	par_23

Table3: Estimates of Variances

Appendix 6.4 : Estimates of parameters – Variance-covariance matrix

	par_1	par_2	par_3	par_4	par_5	par_6	par_7	par_8	par_9	par_10	par_1_1	par_1_2	par_1_3	par_1_4	par_1_5	par_1_6	par_1_7	par_1_8	par_1_9	par_2_0	par_2_1	
par_1	.008																					
par_2	.005	.012																				
par_3	.000	.000	.052																			
par_4	.000	.000	.042	.088																		
par_5	.000	.000	.000	.000	.009																	
par_6	.000	.000	.000	.000	.005	.010																
par_7	.000	.000	-.001	-.002	.000	.000	.000															
par_8	.000	.000	.000	.000	.000	.000	.000	.001														
par_9	.000	.000	-.001	-.001	.000	.000	.000	.000	.000													
par_10	-.002	-.003	.000	.000	.000	.000	.000	.000	.000	.001												
par_11	.000	.000	-.004	-.006	.000	.000	.000	.000	.000	.000	.001											
par_12	.000	.000	.000	.000	-.004	-.004	.000	.000	.000	.000	.000	.004										
par_13	.001	.002	.000	.000	.000	.000	.000	.000	.000	-.001	.000	.000	.001									
par_14	-.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001								
par_15	-.001	-.002	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001							
par_16	.000	.000	.001	.002	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001						
par_17	.000	.000	-.003	.004	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.002					
par_18	.000	.000	.002	-.009	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	-.002	.004			
par_19	.000	.000	.000	.000	.002	.002	.000	.000	.000	.000	.000	.000	-.001	.000	.000	.000	.000	.000	.000	.000	.002	
par_20	.000	.000	.000	.000	-.002	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	-.001	.002
par_21	.000	.000	.000	.000	.000	-.002	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.003

Appendix 6.5 : Estimatyves of Parameters : Correlation Matrix

	par_1	par_2	par_3	par_4	par_5	par_6	par_7	par_8	par_9	par_1_0	par_1_1	par_1_2	par_1_3	par_1_4	par_1_5	par_1_6	par_1_7	par_1_8	par_1_9	par_2_0	par_2_1	
par_1	1.000																					
par_2	.487	1.000																				
par_3	.000	.000	1.000																			
par_4	.000	.000	.623	1.000																		
par_5	.000	.000	.000	.000	1.000																	
par_6	.000	.000	.000	.000	.493	1.000																
par_7	.000	.000	-.281	-.332	-.174	-.151	1.000															
par_8	-.079	-.110	.000	.000	-.170	-.148	.257	1.000														
par_9	-.088	-.122	-.304	-.359	.000	.000	.315	.224	1.000													
par_10	-.492	-.684	.000	.000	.000	.000	.035	.252	.279	1.000												
par_11	.000	.000	-.773	-.833	.000	.000	.420	.026	.454	.014	1.000											
par_12	.000	.000	.000	.000	-.676	-.607	.311	.304	.031	.015	.012	1.000										
par_13	.524	.762	.000	.000	.000	.000	.000	-.089	-.098	-.668	.000	.000	1.000									
par_14	-.236	-.128	.000	.000	.000	.000	.000	.020	.022	.126	.000	.000	-.175	1.000								
par_15	-.326	-.644	.000	.000	.000	.000	.000	.071	.079	.453	.000	.000	-.628	.088	1.000							
par_16	.000	.000	.157	.235	.000	.000	-.079	.000	-.086	.000	-.202	.000	.000	.000	.000	1.000						
par_17	.000	.000	-.266	.290	.000	.000	-.042	.000	-.046	.000	-.061	.000	.000	.000	.000	.058	1.000					
par_18	.000	.000	.141	-.490	.000	.000	.109	.000	.117	.000	.158	.000	.000	.000	.000	-.149	-.603	1.000				
par_19	.000	.000	.000	.000	.464	.374	-.093	-.091	.000	.000	.000	-.411	.000	.000	.000	.000	.000	.000	1.000			
par_20	.000	.000	.000	.000	-.498	-.042	.069	.068	.000	.000	.000	.200	.000	.000	.000	.000	.000	.000	.000	-.288	1.000	
par_21	.000	.000	.000	.000	.038	-.339	.024	.024	.000	.000	.000	.070	.000	.000	.000	.000	.000	.000	.000	-.101	-.186	1.000