

UNIVERSITY OF STRATHCLYDE  
DEPARTMENT OF MARKETING

Competition Strategies in International Markets:  
The Role of Entrepreneurial Orientation and the Internet on the  
Export Performance of UK Based Small and Medium Sized  
Enterprises

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*IN THE MEMORY OF MY FATHER  
TO MY MOTHER AND NOHA  
LOVE, APPRECIATION AND GRATITUDE*

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## ABSTRACT

This thesis explores the potential impact of the Internet and international entrepreneurship on the export performance of UK based Small and Medium Sized Enterprises (SMEs) operating in the following sectors: food and beverages, textiles, clothing and fur, biotechnology and instrumentation, and computers and office machinery.

The findings reveal that, in general, UK based SMEs are moderately committed to Internet technologies and that their owner/managers are innovative, moderately proactive and risk takers. The findings also show that the export performance of SMEs is influenced by a mix of entrepreneurs characteristics (i.e. perceptions of growth, profits and costs of exporting, level of education, work responsibility, work experience and proactivity) and the level of Internet commitment of the firm (i.e. email and Intranet, interconnectivity, Internet information, perceived external Internet benefits and promotion on the Web). These antecedents reflect the current environment where globalisation and advances in information and communication technology (ICT) put pressure on SMEs and give them hope to participate more effectively in international markets. Also, this result gives support to the Resource Based View (RBV) and indicates that UK based SMEs export performance is highly attributed to the resources and competencies at the owner/managers level (i.e. owner/managers social psychological characteristics and entrepreneurial orientation behaviour) and at the level of the firm (i.e. level of Internet commitment). Moreover, the results give some support to the incremental internationalisation process, where almost half of the firms are following the conventional models of internationalisation and export to the psychically close country, namely the USA. Also, the findings support the 'born global' phenomenon where half the firms investigated have started internationalising either from, or shortly after, inception.

Four categories of UK based SMEs were identified, and recommendations made according to the firm level of Internet use (high versus low) and owner/managers entrepreneurial orientation behaviour (high versus low). Implications for policy makers evolved around targeting different SMEs with different export promotion

assistance schemes and international business education programmes, raising awareness about the global scope of Internet e-commerce in helping SMEs enter and succeed in export markets, and fostering networking among firms interested in international markets.

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## LIST OF ABBREVIATIONS

CHP	Corporate Home Page
CWS	Corporate Web Server
DTI	Department of Trade and Industry
ed.	Edited, editor/s
EDI	Electronic Data Interchange
ELC	external locus of control
e.g.	exempli gratia (for example)
EO	entrepreneurial orientation
etc.	et cetera (and so on)
EU	European Union
ICT	Information and Communication Technology
i.e.	id est (that is to say)
ILC	internal locus of control
IT	Information Technology
MNE	Multinational Enterprise
nAch	need for achievement
OECD	Organisation for Economic Co-operation and Development
RBV	resource based view
SME	Small and Medium Sized Enterprise
TC	transaction cost
TCP/IP	Transmission Control Protocol/Internet Protocol
WWW	World Wide Web

# CHAPTER ONE

## INTRODUCTION

### *Chapter Objectives*

- *To introduce the reader to the topic.*
- *To provide a brief statement of the research aims and context.*
- *To explain the structure of the thesis and provide a brief overview of the contents of each chapter.*

## CHAPTER ONE

### INTRODUCTION

The growing liberalisation of world economies, the falling barriers to international trade and advances in information and communication technology (ICT), particularly the widespread use of the Internet and e-commerce pose great challenges as well as provide opportunities for firm internationalisation. One response to the changing environment is an increase interest in entrepreneurship.

The entrepreneurship phenomenon has been referred to as the 'parent of innovation' (Meyers, 1986) because of a strong belief that 'entrepreneurship' serves as the change agent that stimulates economic activity at both national and corporate level (McClelland, 1961; and Covin and Slevin, 1991). Most of the research, theories and models in the entrepreneurship domain focus on the individual manager/entrepreneur, primarily because of the contribution the individual manager can make to the firm's entrepreneurial behaviour and effectiveness (Dess et al., 1997).

A number of authors have criticised research on small firm internationalisation for the lack of attention given to international entrepreneurship (Zahra, 1993; Oviatt and McDougall, 1994; and Coviello and Munro, 1995). However, international entrepreneurship is emerging as a field of study as described by McDougall and Oviatt (1997, p.291) it is "at the intersection of both entrepreneurship and international business fields which represent two growing areas of interest respectively". This growing field may benefit from the long established extant literature on export performance where the effect of management characteristics and behaviour on performance has been extensively researched and documented.

Researchers in both fields, entrepreneurship and international business, can neither ignore the internationalisation of the market place, nor the emerging power of entrepreneurial firms in international competition (McDougall and Oviatt, 2000). There is some agreement in the literature that the entrepreneur is someone who is alert to the opportunity, an innovator and risk taker (Kirzner, 1983; Bygrave and Hofer, 1991; and Caruana et al., 1998), hence it is assumed that entrepreneurs are

better able to identify and exploit the opportunities made possible by the widespread use of the Internet and e-commerce to help the firm grow successfully in export markets.

The Internet is often portrayed as one of the most transforming technological inventions since the industrial revolution (The Economist, 1999). Dunt and Harper (2002) argue that the Internet represents a 'discontinuity' in the process of ongoing technological advance, at least equivalent to the diffusion of electric power. Widdifield and Grover (1995) recognise that "if you are not an active Internet citizen by the mid 1990's you are likely to be out of business by the year 2000". However, others contend that the Internet is not a revolution - it is more an improvement on previous means of communication - such as telephone (Dunt and Harper, 2002).

Therefore, the Internet with its potential to enhance communication and productivity is a technological innovation that poses a challenge as well as an opportunity for the entrepreneur (Hoffman and Novak, 1994; Paul, 1996; and Kantor and Neubarth, 1996). Characterised as cost-less and time-less, the Internet enhances the potential of firms to enter and develop in international markets (Hill, 1997; Leiner et al., 1997; and Organisation for Economic Co-operation and Development 'OECD', 1999). Kotler (2000, p.665) observes that "clearly, marketers are adding online channels to find, reach, communicate and sell" and that "companies small and large are taking advantages of cyberspace's vanishing national boundaries" (p.370). The, emerging technologies have redefined business by eliminating the traditional time constraints, geographic borders and by creating new virtual communities of customers, distributors and suppliers with new demands for products and services (Siu, 2002).

There is some evidence of an existing relationship between the use of the Internet and SMEs performance. However, surprisingly, research on the Internet and exporting, a subset of international business, is an emerging field in which key issues have remained, as yet, largely unexplored (Prasad et al., 2001). In addition, Samiee (1998, p.424) asserts that the "conceptual and empirical evidence regarding the role and the impact of the Internet in business and exporting is quite scant", despite the rapid growth of the Internet in the firm's marketing activities in the last decade

(Sharma, 2002), and regardless of the recognition of the importance of international operations for firms' survival and growth (Prasad et al., 2001). This *lacuna* is only just beginning to be addressed by studies investigating a number of aspects of exporting and the Internet.

As with entrepreneurship, a number of authors have introduced the decision to export as an innovation (Simmonds and Smith, 1968; Roux, 1987; and Samiee et al., 1993). Also Also, Ibeh (1998) and Ibeh and Young (2001) contend that exporting is an entrepreneurial act.

The objective of this study is to integrate key variables from two research streams – entrepreneurship and exporting – into a conceptual model, which incorporates firm's level of Internet commitment construct, in the context of UK based Small and Medium Sized firms (SMEs). The dimensions of the developed construct are SMEs experience with Internet technologies (e.g. email, WWW), level of Internet use, Web function, Internet resource commitment and perceived Internet benefits. It is the aim of this thesis to empirically answer the question whether SMEs commitment to the Internet can boost their export performance?

To this end, this chapter will proceed by presenting and defining the research context, the study aims, and key concepts used throughout the thesis. Subsequently, the expected significance of the research findings will be set out. Finally a brief review of the thesis structure, and the contents of the chapters will be presented.

## **1/1 RESEARCH CONTEXT**

Despite the increasing interest among researchers in how Small and Medium Sized enterprises (SMEs) can help in economic development, there is no consensus as to how to define SMEs. Some researchers have based their definition on quantitative criteria such as: sales or number of employees, while others use qualitative criteria related to management or ownership type (Chulikavit and Rose, 2000). The definition used in this study uses the number of employees where SMEs are defined as firms with less than, or equal to, 250 employees (see section 1/3/1 for a more comprehensive definition).

According to the OECD (2000) SMEs represent over 95% of enterprises in most OECD countries, and they contribute about 25% to 30% of world manufactured exports (Kandasaami, 1998). Their growth is a critical aspect of a nation's continuing economic development and future prosperity (Coviello and Munro, 1995; Yeoh and Jeong, 1995; and Poon and Swatman, 1999). In addition, they are a key provider of employment accounting for well over half of the employment in the private sector (Lymer and Baldwin, 1997; and OECD, 2000).

Carson et al. (1995) acknowledge that SMEs have their own characteristics which affect the way they operate. Compared to multinational enterprises (MNEs), small firms are not bureaucratic (Covin and Slevin, 1989; and Jones et al., 1997), they are often more adaptable to environmental changes (Keng and Jiuang, 1988; and Knight, 2000), are able to react quickly to changes in the marketplace (Yapark, 1985; and Jones et al., 1997), and are receptive to new technologies and can rapidly adapt to specific buyer needs (Oviatt and McDougall, 1994), hence, providing those competitive ingredients that increase stability in a business relationship and reduce both risks and costs (Kotabe and Czinkota, 1992).

Keng and Jiuang (1988) recognise that SMEs are the main providers of technological innovations and entrepreneurship, as many of these firms were founded by entrepreneurs who used to work in large companies and took advantage of targeting market niches that do not attract their larger former employers (Jones et al., 1997; and Knight, 2000). The entrepreneurial management style characterising small firms is often referred to as the single most significant factor influencing the development of a business. In some cases the entrepreneurial profile creates a friendly working environment where the manager tends to know all the employees personally and allows them to participate in all aspects of managing the business, although there is no general sharing of the decision making process (Schollhammer and Kuriloff, 1979). It is constantly acknowledged in the different literatures (i.e. entrepreneurship, exporting and IT) that the competence and experience of management are the most important factors in determining business success.



Despite all the positive characteristics and advantages of SMEs, like anything else they have their pros and cons. SMEs face many internal barriers which can act as constraints in developing an international orientation. First, they lack financial resources that may hinder their ability to identify opportunities arising from the opening-up of national markets, also inadequate financial resources may restrict the exploitation of opportunities already identified (Kalantaridis, 2001). Second, they are faced with a lack of human and managerial resources. And finally, SMEs experience difficulties in acquiring information (Rothwell and Dodgson, 1991; Erramilli and D'Souza, 1993; Buckley, 1997; and Burpitt and Rondineeli, 2000). Such disadvantages restrict SMEs interest in internationalising and may also frustrate their efforts to internationalise (Naidu and Prasad, 1994).

However, of all the above constraints, acquisition of appropriate information and knowledge are fundamental to the expansion of SMEs in foreign markets (Liesch and Knight, 1999). The radical shifts and advances in information and communication technology (i.e. the Internet and WWW) that make information and knowledge acquisition efficient for all firms have increased the number of SMEs who have begun to take their first step toward internationalisation, and to play a key role in international trade (Bonaccorsi, 1992; Bell, 1995; Leonidou and Katsikeas, 1996; Coviello and Martin, 1999; Coviello and McAuley, 1999; Liesch and Knight, 1999; Chulikavit and Rose, 2000; and Dean et al., 2000).

During the last 10 to 15 years, academics as well as policy-makers have turned their attention to the internationalisation of small firms (Kalantaridis, 2001). There is general agreement among researchers that exporting is the most popular mode of international market entry and is especially favoured by SMEs (Diamontopoulos and Schlegelmilch, 1994; Leonidou and Katsikeas, 1996; Chulikavit and Rose, 2000; and Leonidou et al., 2002) partly because exporting is less likely to overextend their capabilities or resources, and it also minimises the firm's exposure to risk (Young et al., 1989). Also, exporting is an important source of revenue for many small and medium sized firms due to its potential for enhancing sales growth, increasing efficiency and improving quality (Burpitt and Rondineeli, 2000; and Masurel, 2001).

UK SMEs contribute about 25% of UK GDP but they account for only 10% of manufactured exports (Maltay and Mitra, 2000). Clearly, they do not play as great part in export trade as they do in the economy as a whole (Tiessen et al., 2001). Moreover, when compared with other EU countries, the export performance of UK SMEs appears to be modest (Morgan and Katsikeas, 1997).

Therefore, UK based SMEs seem to be the best *milieu* to conduct this research due to their entrepreneurial management style, their flexibility to adapt to advances in information and communication technology, and acquire and possess the appropriate information necessary to expand in foreign markets via their dominant mode of entry, 'exporting'.

## **1/2 RESEARCH AIMS**

Following what was stated earlier (see section 1/1) the current research attempts to explore conceptually and empirically the possible role of entrepreneurship and 'Internet commitment' on UK based SMEs export performance.

In order to better understand UK SMEs export performance it is necessary to identify the determinants of export success, thus helping SMEs improve and enhance their performance according to their weight and value in UK export market. Where new business environments are characterised by emerging technologies and fragmented markets, thus pose challenges that will force them to modify or completely abandon many current business practices.

The main aims of the research are to:

- Examine the current level of Internet use among UK based SMEs, and also introduce a general profile of high Internet use firms with respect to: the overall level of Internet commitment, the entrepreneurship approaches, the firm and industry characteristics, and export involvement and performance.
- Investigate the current level of entrepreneurial orientation behaviour among UK based SMEs owner/managers, and establish a general profile of high EO owner/managers with respect to: the overall level of Internet commitment, the

entrepreneurship approaches, the firm and industry characteristics, and export involvement and performance.

- Investigate the link between entrepreneurship approaches (the traits approach, the social psychological approach, and the behavioural approach) and UK based SMEs export performance.
- Explore and assess the impact of level of Internet commitment on UK based SMEs export performance.
- Examine the effect of entrepreneurship approaches (the traits approach, the social psychological approach, and the behavioural approach) on UK based SMEs level of Internet commitment.

To achieve the research aims, based on the relevant literatures and the researcher's knowledge, a set of propositions are addressed (see chapter five). The research follows the positivist paradigm and is analytical in orientation. A mail survey is used to empirically test the research propositions, where a pre-tested and validated questionnaire will be addressed to a total of 960 UK based SMEs manufacturing exporting firms operating in the following industries: food and beverages, textiles, clothing and fur, biotechnology and instrumentation, and computers and office machinery. The selected industries are deemed to have a strong international presence, a high level of exporting activities based on the assessment of the UK Department of Trade and Industry 'DTI' (2001), and make a significant contribution to the economic activity of the country (Poutziouris et al., 2000) (see chapter six for more details).

## **1/3 RESEARCH DEFINITIONS**

Some of the key concepts used throughout the thesis are set out in the following section.

### **1/3/1 Small and Medium Sized Enterprises (SMEs)**

There is no single definition of small and medium sized firms in the UK (OECD, 1999). As mentioned earlier (see section 1/2) both quantitative and qualitative criteria are used by researchers to define small and medium sized enterprises. The definition used in this study is a quantitative one namely, number of employees. This conforms with European Union (EU) conventions (Official Journal of the European Communities, 1996). Accordingly, SMEs are classified in two categories by employment size: 1) firms that have one to forty nine employees constitute the category of small firms and 2) firms that employ fifty to two-hundred and fifty people are classified as medium size firms.

The reasons behind choosing to classify firms according to number of employees instead of sales are: firstly, because it is commonly used in the literature, hence it eases the comparison of the research findings with other studies in the field, and secondly, because it is easily accessible (Kalantaradis, 2000).

### **1/3/2 Internationalisation**

Compared with other internationalisation modes (e.g. licensing, franchising, joint ventures, foreign direct investment), exporting is the dominant approach for SMEs (Poutziouris et al., 2000). The current research looks specifically at internationalisation in terms of exporting. The study adopts Ibeh (1998, p.20) and Ibeh and Young (2001, p.567) definition of exporting as an entrepreneurial act. The authors define exporting as “the process by which individuals either on their own or inside organisations pursue export market opportunities without regard to the resources which they currently control or environmental disincentives which they face”.

### **1/3/3 Entrepreneurship**

There is no general agreement on ‘who is the entrepreneur?’ despite decades of research in the field of entrepreneurship (Shaver and Scott, 1991; and Ensley et al., 2000). Schumpeter (1962) and Carland et al. (1984) argue that one can be entrepreneurial without being self-employed and be self-employed without being entrepreneurial. Therefore, the current research defines the entrepreneur as “the person who has or acquires entrepreneurial characteristics whether s/he is the owner or the manager of the firm and irrespective of the firm age or sector”.

### **1/3/4 The Internet**

The current research adopts Vadapalli and Ramamurthy (1997, p.112) definition of the Internet. The authors define the Internet as “an innovative process, supported or made feasible by technology, by which organisations and individuals communicate, network and do business”.

## **1/4 RESEARCH CONTRIBUTIONS**

It is expected that this research will contribute to the activities of academics, practitioners and policy makers.

With respect to the academic community, the firm’s performance is often considered the ultimate criterion in both conceptual and empirical studies whether in entrepreneurship, exporting, or small business research. Clearly, improving SMEs performance will contribute significantly to export growth. Therefore, it becomes critical to understand the determinants of successful exporting for smaller firms in the new economy (i.e. the Internet and e-commerce). The vast majority of results reported on export performance and/or SMEs are characterised as inconsistent and sometimes conflicting. In addition, the link between entrepreneurship and the role of the Internet on firms’ performance in international markets is still underdeveloped. In addressing this, the current research aims to shed more light on these issues.

For practitioners, the present study will be of value in identifying a profile of the successful entrepreneur, which can be used to help SMEs to be more successful in international markets. Also, having more knowledge about Internet enabled SME

internationalisation may lead to more opportunities for those already engaged in international markets, and may stimulate inactive SMEs to go international. This will make some contributions to the national economic well being.

With respect to policy makers, export performance remains crucial to the overall competitiveness of UK economy, as it represented the main driving force behind the recovery in UK production output in the early 1990's (Poutziouris et al., 2000). It is evident that the prosperity of the UK will be improved if the SME sector engages more actively in the internationalisation process, while with today's changing business environment, the use of the Internet will be a significant help for both large and small firms. Policy makers could and should facilitate the diffusion of the Internet among businesses and eliminate any possible barriers that may hinder its adoption and dissemination. Also, it may be helpful organising a national programme to introduce businesses to the new technology, and advise them how to use the Internet and e-commerce effectively in order to improve their performance in international markets.

## **1/5 RESEARCH STRUCTURE**

Figure 1.1 depicts the thesis structure, and the following section briefly illustrates the contents of the research chapters.

*1/5/1 Chapter One* outlines the research context and the study aims. The key concepts used throughout the research are defined. Subsequently, the research contributions to different audiences namely, academics, practitioners and policy makers are stated. The chapter concludes with a brief review of the structure of the thesis.

*1/5/2 Chapter Two* discusses the main issues highlighted in the 'entrepreneurship' literature. After illustrating the conceptualisations of entrepreneurship, an assessment of entrepreneur typologies is reviewed. Empirical evidence from entrepreneurship research is examined. Then, an overview of the limited empirical studies concentrating on the international aspect of entrepreneurship is outlined.

1/5/3 *Chapter Three* highlights different issues related to the Internet and SME internationalisation. It discusses the origin of the Internet and its proposed definitions, followed by different perspectives of electronic commerce (e-commerce). The chapter discusses the Internet and communication with special reference to electronic mail (email), 'Intranet' and 'Extranet'. Then, the Internet-marketing strategy relationship is analysed. The chapter proceeds with an attempted synthesis of the limited empirical studies that emphasise the impact of the Internet and e-commerce on SMEs internationalisation, followed by an examination and evaluation of the main theoretical foundations underpinning this research. These include: transaction costs theory, the Uppsala model, the Innovation models, the 'born global', the 'early international' and the 'born-again global' phenomena, the network perspective, and the Resource Based View (RBV).

1/5/4 *Chapter Four* reviews the most extensively researched models of the determinants of export performance namely, the Aaby and Slater model, the Madsen contingency approach, and the Zou and Stan model. It then assesses a very fragmented literature on export performance of the firm following the categorisation of Zou and Stan (1998). The chapter concludes with a comprehensive presentation on the different measures of export performance reported in past research, along with the advantages and disadvantages of using single performance measure versus multiple measures.

1/5/5 *Chapter Five* synthesises the literatures from chapters two to four relating to the entrepreneurship literature (chapter two), the Internet and SME internationalisation and the theoretical hypotheses supporting the research (chapter three), and export performance determinants and measures (chapter four). Based on the synthesis of the literature a working model is developed, the study aims are elaborated, and the associated propositions are outlined.

1/5/6 *Chapter Six* justifies the research philosophy adopted. It evaluates the exploratory study results and its conclusions. The chapter also delineates the process undertaken to design, pre-test, validate, and administer the research instrument. A description of the statistical techniques used to test and examine the pre-specified propositions is presented.

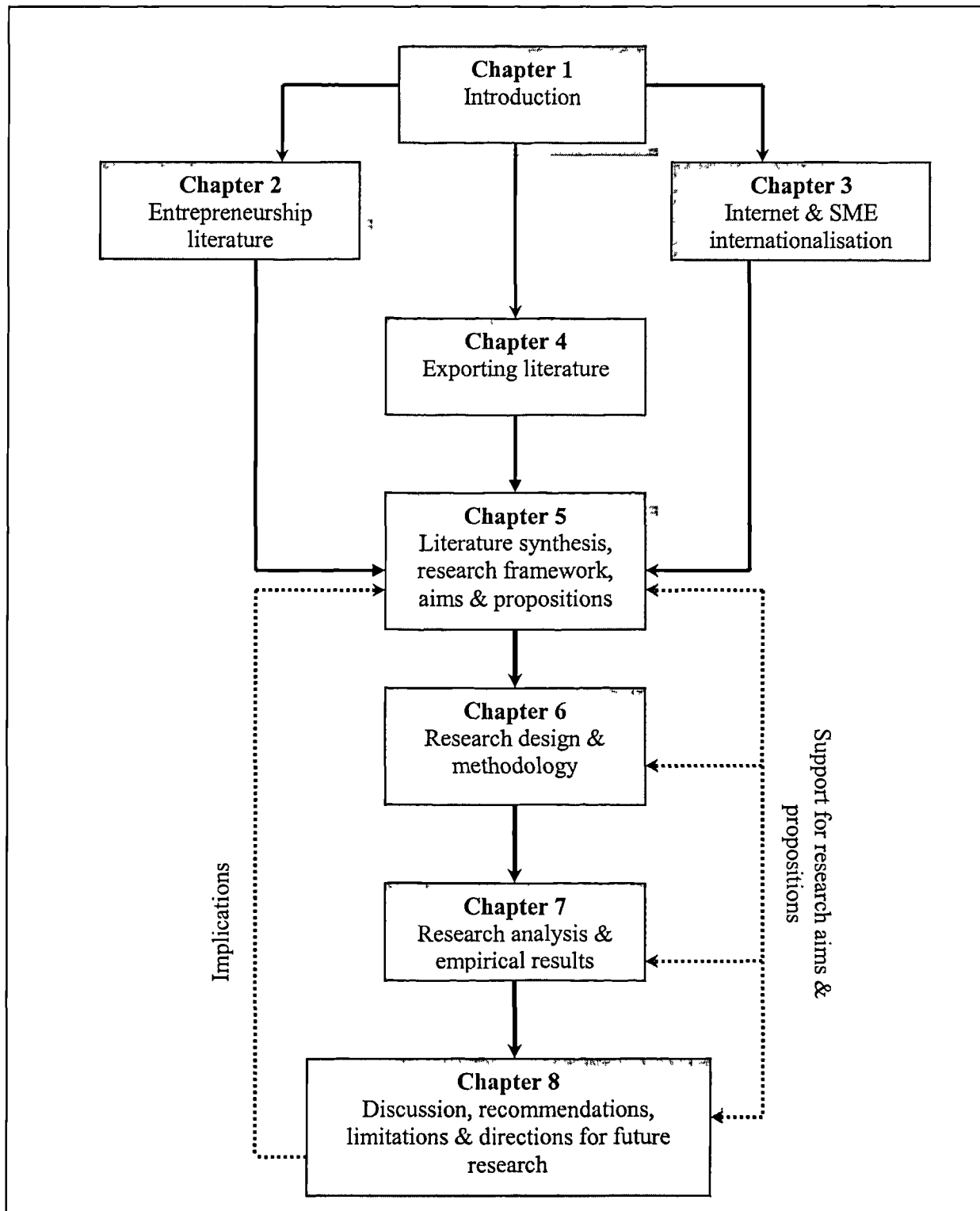
1/5/7 *Chapter Seven* incorporates the findings of the study. It begins by profiling the demographic characteristics of the responding firms. Then, the reliability and validity of the multi-dimensional constructs are highlighted. Thereafter, it proceeds to differentiate firms according to their level of Internet use, followed by analysis that investigate existing differences between high and low Internet use firms with respect to: level of Internet commitment, owner/managers personality traits, entrepreneurial orientation behaviour, export perceptions, social psychological characteristics, firm and industry characteristics, export involvement and export performance indicators. Further analyses are also made in order to evaluate firms according to their owner/managers entrepreneurial orientation behaviour with respect to the foregoing highlighted issues. Finally, a number of stepwise regression models are built, their aim is to identify the significant determinants of UK based SMEs export performance, as well as the critical antecedents of their level of Internet commitment. In general, the causal factors include owner/managers personality traits, entrepreneurial orientation behaviour, export perceptions, and social psychological characteristics.

1/5/8 *Chapter Eight* discusses the key findings, contributions, recommendations, limitations and suggestions for future research. The discussion follows the order of the statistical analysis conducted in chapter seven. The level of Internet use among UK based SMEs is highlighted, followed by a discussion regarding entrepreneurship approaches, firm and industry characteristics, and export involvement and export performance indicators of UK based SMEs high Internet use firms. Further discussion also links UK based SMEs high entrepreneurial orientation owner/managers with the foregoing highlighted issues. Finally, discussion on the determinants of UK based SMEs export performance and level of Internet commitment is drawn.



Using a needs-based approach the study's recommendations are presented in a 2 x 2 matrix, where firms' level of Internet use and owner/managers entrepreneurial orientation behaviour are the controlling aspects. Four categories of firms are established and targeted with pertinent recommendations. Further, general implications for UK based SMEs and policy makers are addressed. Then the chapter as well as this thesis conclude with the research limitations and suggestions for future research.

Figure (1.1) Structure of the Thesis



Source: The researcher.

## CHAPTER TWO

### ENTREPRENEURSHIP: REVIEW OF LITERATURE

#### *Chapter Objectives*

- *To discuss the entrepreneurship phenomenon and how entrepreneurship has been conceptualised from multiple perspectives.*
  
- *To assess the entrepreneur typologies, and examine the entrepreneurship approaches namely, the traits approach, the social psychological approach, and the behavioural approach, and empirical evidence from entrepreneurship research.*
  
- *To present and review the limited empirical studies focusing on the international dimension of entrepreneurship.*

## **CHAPTER TWO**

### **ENTREPRENEURSHIP: REVIEW OF LITERATURE**

This chapter discusses different conceptualisations of entrepreneurship and differentiates between the entrepreneur and intrapreneur. An assessment of the entrepreneur typologies is reported, followed by an examination of the entrepreneurship approaches. These include the traits approach, the social psychological approach, and the behavioural approach along with empirical evidence from the field. Evidence on the international aspect of entrepreneurship is reviewed, and the chapter concludes with a brief summary.

#### **2/1 INTRODUCTION**

Oliver Wendell Holmes states that “I find the great thing in this world is not so much where we stand, as in what direction we are moving”, such comment reflects the status of entrepreneurship discipline today (cf. Landstrom and Sexton, 2000, p.443).

Entrepreneurship has been referred to as the ‘parent of innovation’ (Meyers, 1986), because of a belief that ‘entrepreneurship’ serves as the innovative change agent that stimulates economic activity at both national and corporate levels (McClelland, 1961; and Covin and Slevin, 1991).

At the national level, entrepreneurial firms are a major source of new jobs and growth in employment, and help to raise exports and national productivity in general (Low and MacMillan, 1988; and Birley and Weasthead, 1990). As a consequence, governments around the world encourage entrepreneurial behaviour.

At the corporate level, being entrepreneurial helps sustain a high level of performance (Covin and slevin, 1991; and Yeoh and Jeong, 1995), facilitates competitive advantage (Schollhamer, 1982), enhances and improves the corporate financial performance (Peters and Waterman, 1982).

However, “surprisingly little systematic empirical evidence is available to support the belief in a strong positive relationship between entrepreneurial posture and firm performance” (Covin and Slevin, 1991, p.19). This is largely due to the

operationalisation and measurement of entrepreneurship (Lyon et al., 2000). Also, the field of entrepreneurship has been characterised as being in a premature and formative stage (Cunningham and Lischeron, 1991).

## **2/2 CONCEPTUALISATIONS OF ENTREPRENEURSHIP**

Undoubtedly defining entrepreneurship creates a challenge for researchers exploring this phenomenon (Jones, 2000). Despite agreement among scholars about the positive effects of entrepreneurship on nations and firms prosperity, researchers are still confused as to who is to be considered an entrepreneur, and still argue about the operationalisation of entrepreneurship (e.g. Cunningham and Lischeron, 1991; Lyon et al., 2000; and Hansemark, 2000).

There are different views of who is an entrepreneur. The original meaning of the word 'entrepreneur' comes from the French verb (*entreprendre*), meaning literally {to take, or grasp} [*prendre*] from {between} [*entre*]" (Burt, 1992, p.274). Economists like Cantillon, Schumpeter, Schultz and Kirzner view the entrepreneur as "someone who specialises in taking responsibility and making judgemental decisions that affect the location, form, and the use of goods, resources, or institutions" (Hebert and Link, 1989, p.47)

Knight (1921) takes the view that the entrepreneur is a risk taker and acts in the face of uncertainty, some classicalists perceive the entrepreneur as an owner of capital risked on highly uncertain ventures, which makes him/her the bearer of uncertainty (Batstone and Pheby, 1996).

Behaviourists' describe the entrepreneurship process as managerial behaviour by which individuals consistently exploit opportunities to deliver results beyond one's own capabilities and without regard to the resources they currently control (Stevenson and Jarillo, 1990; and Stevenson, 1997). Further, Drucker (1985, p.28) says that "the entrepreneur always searches for change, responds to it and exploits it as an opportunity". Accordingly, entrepreneurship is identified as a characteristic of employees and managers in the firm (Krackhardt, 1995). A contradictory view about

resources is held by Thompson (1999) who asserts that entrepreneurship is concerned with obtaining and managing resources to exploit opportunity.

There is some agreement that the entrepreneur is someone who is alert to the opportunity and creates an organisation to pursue it (Kirzner, 1983; Bygrave and Hofer, 1991, p.14; and Caruana et al., 1998). Besides sensing the opportunity, some scholars suggest that entrepreneurs have a diverse set of dynamic characteristics such as being an innovator, risk taker, developer of new goods and services, an industrial leader, an organiser, co-ordinator, allocator of economic resources, a contractor and an arbitrator (Schumpeter, 1962; Carland et al., 1984; Batstone and Pheby, 1996; and OECD, 2000). Schumpeter (1962) further describes the innovative entrepreneur as a rare individual who has the ability to envision an invention, acquire the resources to put the invention in a useful form, start a new firm and use the innovation to grow the business successfully. Schumpeter's view of entrepreneurship was criticised because Schumpeter proposed that the entrepreneurs once they have started a business and it is growing successfully they will leave that business to start a fresh (Gunderson, 1990).

Other researchers perceive the nature of entrepreneurship as the process of organisational creation (Gartner et al., 1992), and the entrepreneur as the one who starts up and/or operates a business where there was none before (Hornaday and Aboud, 1971, p.6; and Longenecker et al., 1994). According to this perspective, entrepreneurship ends in the firm when the venture creation stage is complete (Garnier, 1996).

In common with Gartner et al. (1992), Hansemark (2000) highlights two general approaches to defining an entrepreneur. First, the functionalist approach which depends on what an entrepreneur does or has done, according to this approach the entrepreneur is the person who starts a new business. Second, the indicative approach which describes the way an entrepreneur could be recognised, for instance according to his/her occupation or legal status.

The focus of the conceptualisations above is the individual entrepreneur, it is likely that for a firm to be entrepreneurial, the top management or key managers will be entrepreneurs, hence the top management or key managers entrepreneurial behaviour collectively reflect the entrepreneurial behaviour of the firm. Hence, the focus is on the individual entrepreneur within the entrepreneurial firm which is, in general, characterised by risk taking, innovativeness and proactiveness. Conceptually this is the opposite of a conservative firm characterised by risk-averse, reluctance to innovate and reactivity (Khandwalla, 1977; Miller and Friesen, 1982; and Covin and Slevin, 1989). The 'conservative-entrepreneurial' taxonomy is consistent with earlier taxonomies highlighted in the relevant literatures for instance Miles and Snow (1978) 'defender-prospecter' taxonomy, also Mintzberg's (1973) 'adapters-entrepreneurial' organisation taxonomy.

Having explored different views of 'entrepreneurship', it seems that Sexton's (1988, p.4) question is still relevant "is the field of entrepreneurship growing, or just getting bigger?". Defining entrepreneurship creates a challenge for researchers, particularly with such a variation in approaches to entrepreneurship, it is not surprising though that no one definition captures the whole picture and that consensus has not been yet reached about who the entrepreneur is or what s/he does. This problem is partly a consequence of the overlap between entrepreneurship as a speciality and many other disciplines such as economics, finance, history and psychology and despite decades of research in the field, a common definition of 'entrepreneurship' is still elusive (Shaver and Scott, 1991; and Ensley et al., 2000). Finally, Brazeal and Herbert (1999, p.43) note that "for the field of entrepreneurship to move on and to make contributions to the practice of management, consistency and agreement by its practitioners and its researchers should begin".

### **2/2/1 Entrepreneur versus Intrapreneur**

Due to the difficulty that faces entrepreneurship researchers in distinguishing between small-scale entrepreneurs and managers, it is worth defining who is an 'intrapreneur'. Knight (1987, p.285) asserts that "the intrapreneur is a corporate employee who introduces and manages an innovative project within the corporate

environment, as if s/he was an independent entrepreneur”. Pinchott (1985, p.6) defines ‘intrapreneurship’ as “entrepreneurship inside of the corporation”. It may also take different forms as suggested by Schollhammer (1982) for instance, administrative, opportunistic, imitative, acquisitive and incubative. The ‘intrapreneur’ innovates on behalf of an existing firm and must be selected or recognised by, or imposes him/her self on, the firm (Carrier, 1996; and Glancey, 1998).

Despite the importance of the intrapreneur for smaller firms (Zahra and Pearce, 1994), Wortman (1987) observes that most research on intrapreneurship was applied within the context of large firms with an existing lack of empirical research on the smaller ones. Cox and Jennings (1995) report that British intrapreneurs are often chief executives of successful companies, have started without any family connections, have strong loyalty to their current employing organisations, are more innovative, and are challenging, but usually take calculated risks as compared to their British entrepreneurs counterparts, who are risk takers, and who establish their own firms where they are the major shareholders. Consistently, Busenitz and Barney (1997) reveal that managers in more established firms are characterised by being risk averse and are more likely to stick to traditions. Furthermore, Gagnon et al. (2000) find that entrepreneurial Canadian SMEs managers are less successful when adopting the technology. Antoncic and Hisrich (2001) report a statistical positive association between intrapreneurship and Slovenia firms’ growth and profitability, meanwhile similar correlation was observed with US firms’ growth only.

Evidently, it is hard to significantly differentiate between small-scale entrepreneurs and managers as most scholars use the terms interchangeably (Utsch et al., 1996), despite the fact that one can be entrepreneurial without being self-employed and be self-employed without being entrepreneurial (Schumpeter, 1962; and Carland et al., 1984).



## **2/3 ENTREPRENEURIAL TYPOLOGIES**

Different authors have discussed different types of entrepreneurs, this section focuses on various entrepreneurs' typologies/styles, second generation entrepreneurs, and continued entrepreneurs. There are a host of names given to entrepreneurial style in the literature, for example 'craftsman, opportunist, caretaker, manager, promotion, administrative, independent, growth oriented, achiever, security, risk challenge, network, hard worker, technician, proprietaire' (Bamberger, 1982; Woo et al., 1991; and Lee and Chan, 1998) (see Table 2.1). The two most commonly discussed typologies are the 'Craftsmen' and the 'Opportunists' typologies (Smith and Miner, 1983; Lorraine and Dussault, 1987; and Davidsson, 1989). Smith and Miner (1983, p.326) compare "the craftsman and the opportunistic... [types]..... [they find] that the 'craftsman' is characterised by narrowness in education and training, low social awareness and involvement, feeling of incompetence when dealing with the social environment, and a limited time orientation, while on the other hand the 'opportunistic' [type] exhibits breadth in education and training, high social awareness and involvement, confidence while dealing with the social environment, and an awareness of, and orientation to, the future".

The craftsman entrepreneur also refers to the 'craft entrepreneur' or sometimes the 'artisan entrepreneur'. The craftsman entrepreneur is also popularly labelled as the Small Business Owner or SME owner (Katz and Peters, 2001, p.367). In general, the craft entrepreneur starts a business with primarily technical skills, and little business knowledge, s/he is characterised by being paternalistic, reluctant to delegate authority, reactive to changes in market demand rather than proactive in generating new business, and is generally not growth-orientated. Whereas, the 'opportunistic entrepreneur' enters business with sophisticated managerial skills, technical knowledge, adopts a professional management style, employs strategic practices to create and exploit market opportunities, delegates authority and avoids paternalism (Longenecker et al., 1994). The opportunistic entrepreneur is also growth and future orientated and looks for something beyond just making a living today (Katz and Peters, 2001). Hence, firms run by the 'opportunistic entrepreneur' are more likely to achieve higher levels of growth and profitability (Smith and Miner, 1983).

A further attempt was made to associate management styles namely (craft, promotion and administrative) with small firms' growth and profitability. Hornaday and Wheatley (1986) conclude that firms controlled by 'craft' type managers demonstrate the lowest growth rates, because once managers achieve sales and revenue levels that fulfil their need for independence, growing the business is no longer a high priority. In the same study, Hornaday and Wheatley (1986) observe that personal wealth was the crucial motive behind the promotional management style. Finally, firms which have the 'administrative' style management have steady growth rate, are often large firms and the managers are better educated than the craft and promotional style management. Overall, Hornaday and Wheatley (1986) only find slight differences for craft and administrative types in growth rates and profitability.

**Table (2.1) Entrepreneurial Typologies in Past Research**

Study	<p><b>Smith (1967)</b></p> <p><b>1-Craftsmen:</b> Less education/work experience. Blue collar. Less adaptive to change. Lower growth.</p> <p><b>2-Opportunists:</b> Managerial orientation. Broader experience.</p>	<p><b>Braden (1977)</b></p> <p><b>1-Caretakers:</b> Single source of financing. Focus on R&amp;D/custom products.</p> <p><b>2-Managers:</b> Standard and customised products. Use of outside funds.</p>	<p><b>Filly and Aldag (1978); and Hornaday and Wheatley (1986)</b></p> <p><b>1-Craft:</b> Less complex, less adaptive, slower growth. Managers are technically oriented and less likely to take risk.</p> <p><b>2-Promotion:</b> Highly adaptive to change, high profit and growth rates.</p> <p><b>3-Administrative:</b> complex, hierarchical, formal management systems.</p>	<p><b>Dunkelberg and Cooper (1982)</b></p> <p><b>1-Craftsmen:</b> Less well educated, lower growth.</p> <p><b>2-Independent:</b> Highest percentage with graduate school training, lowest work experience, highest growth.</p> <p><b>3-Growth oriented:</b> owned previous firms, more varied background, &amp; supervision experience.</p>	<p><b>Smith and Miner (1983)</b></p> <p><b>1-Opportunists:</b> Associated with more adaptive, higher growth firms.</p> <p><b>2- Craftsmen:</b> associated with less adaptive, lower growth firms.</p>
Types					
Study	<p><b>Lorraine and Dussault (1987)</b></p> <p><b>1-Craftsmen:</b> Less educated &amp; management experience, less explicit goals, small businesses, fewer investors, and production oriented.</p>	<p><b>Davidsson (1988)</b></p> <p>Generally supported Smith's two types of <b>craftsman/rigid firms and opportunist/adaptive firms.</b> However, a 3-group cluster solution would provide stronger contrasts between the two hypothesised types.</p>	<p><b>Lafuente and Salas (1989)</b></p> <p><b>1-Craftsman:</b> An opportunity to prove oneself or build something perfect.</p> <p><b>2-Managerial:</b> Work in a prestigious company, opportunity to develop</p>	<p><b>Lee and Chan (1998)</b></p> <p><b>1-Achiever:</b> Actively researches environment, ambitious, concern for high quality of work, Creative, perceptive with foresight, plans systematically, sees &amp; acts on opportunities, takes carefully calculated risks, takes initiative.</p>	<p><b>Laufer (1975)</b></p> <p>The author distinguishes four types of owners of firms from all industrial sectors, and of different sizes.</p>
Types					

<p><b>2-Opportunists:</b> More balanced attention to different tasks, formal plans.</p>		<p>oneself.</p> <p><b>3-Security/family:</b> Build family welfare.</p> <p><b>4-Risk challenge:</b> Work diversity as key motivation. No clear patterns emerged between entrepreneurial types and personal characteristics, management and performance.</p>	<p><b>2-Network:</b> Customer oriented. Demonstrates some interpersonal competencies. Flexible and adaptable.</p> <p><b>3-HardWorker:</b> Hard working, optimistic, persistent.</p>	<p><b>1-‘L’entrepreneur-manager et innovateur’</b> favours growth. His principal motivation is self-realisation. Financial and personal independence is less important to him.</p> <p><b>2-‘L’entrepreneur-proprietaire’</b> favours growth if it does not infringe on his financial independence. His first interest is maintaining control of his firm.</p> <p><b>3-‘L’entrepreneur-technicien’</b> favours technical efficiency, productivity and profitability rather than growth.</p> <p><b>4-‘L’entrepreneur-artisan’</b> does not consider him/herself as an “entrepreneur”. This person’s main objectives are personal independence and survival of his/her firm. Working for him/her is more important than economic success.</p>
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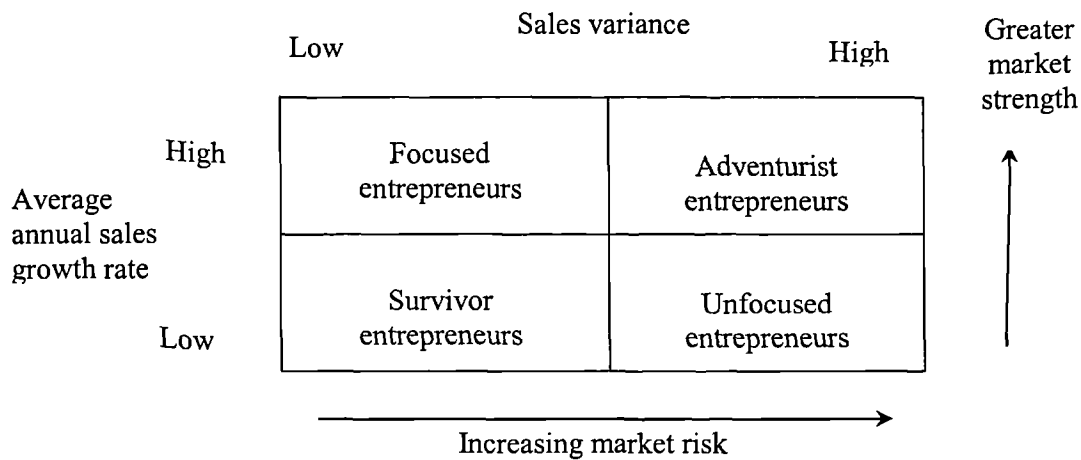
Source: Bamberger (1982, p.30) ; Woo et al. (1991, p.112:114); and Lee and Chan (1998, p.135).

Venkatapathy (1986) distinguishes between first generation entrepreneurs (FGEs) and second generation entrepreneurs (SGEs). The author finds that SGEs pay more attention to running the existing firm, whereas, FGE are more social, more innovative, more self-confident, and exert more effort to have innovative ventures. In a second study, Venkatapathy (1996) finds clear differences between FGEs and SGEs with respect to personality traits, attitudes and self concept.

In the same vein, Lee and Chan (1998) identify three typologies of SGE Chinese in Singapore developed by clustering motivation factors and key characteristics. The first group, the 'achievers' are motivated by the desire to be independent, to own their business and they have a high need for achievement. The second group, the 'networkers' are influenced by their family backgrounds which usually motivate them to start their own business. They also rely on their relationships with their customers in order to keep the business going. The third group, the 'hard workers' are largely inspired by negative circumstances in their lives which rather than discouraging them drive them onward. They are known for their hard work and persistence in overcoming obstacles.

Davidsson (1989) describes a tendency among individuals and organisations that are more entrepreneurial, to pursue novel opportunities on an ongoing basis, this tendency is called 'continued entrepreneurship'. Merz et al. (1994) carry out an investigation to measure 'continued entrepreneurship', which they define as tracking the changes in CEO's managerial styles according to growth rate variations by using 'sales change pattern matrix' (see Figure 2.1). The matrix consists of two components of revenue change, where the vertical axis is the average annual sales growth rate that represents market strength, while the horizontal axis describes sales variance which represents market risk. Overall, the matrix defines four different types of entrepreneurs according to variations in growth rate (Merz et al., 1994).

**Figure (2.1) Sales Change Pattern Matrix**



Source: Merz et al. (1994, p.51).

These are adventurist, focused, survivor and unfocused entrepreneurs. Table 2.2 summarises the key differences between the four types with respect to number of variables (e.g. annual sales growth rate, market strength etc).

The results in Table 2.2 below reveal that the ‘adventurist’ entrepreneur has the highest annual sales growth, the greatest market strength and the highest market risk, s/he is the most proactive and innovative, and works in the least hostile environment. The ‘focused’ entrepreneur is the youngest, works in small firm, and is the least specialised. The ‘survivor’ entrepreneur has the least annual sales growth, the least market strength and the lowest market risk, while the highest profit and s/he is the least proactive and innovative. The reason for achieving high profits might be the result of operating in a less diverse and heterogeneous environment. Finally, the ‘unfocused’ entrepreneur is the oldest, like the survivor entrepreneur, has the least market strength, s/he works in the largest firm, is more analytical, heavily specialised and most decentralised.

**Table (2. 2) Types of Entrepreneurs by Variations in Growth Rate**

<b>Types</b> <b>Variables</b>	<b>Adventurist</b>	<b>Focused</b>	<b>Survivor</b>	<b>Unfocused</b>
<b>Annual sales growth rate</b>	Highest	Higher	Least	Average
<b>Market strength</b>	Greatest	Greater	Least	Least
<b>Market risk</b>	Highest	Low	Lowest	Higher
<b>Age</b>	Younger	Youngest	Older than Focused and Adventurist	Oldest
<b>Size</b>	Large	Smallest	Smaller than Focused	Largest
<b>Profit level</b>	Average 4.2% of sales	Higher profit level 6.1% of sales	Highest profit level 6.6% of sales	Average 4.2% of sales
<b>Organisational strategy</b>	Moderate	Very moderate	Minimal	More analytical
<b>Organising (specialisation in job tasks &amp; decentralisation in decision making)</b>	High specialised than Focused and Survivor. More decentralised than both types as well	The least specialised and average decentralised	Average in terms of specialisation and least decentralised	Most heavily specialised and most decentralised
<b>Strategic direction (proactiveness &amp; innovativeness)</b>	Most proactive and innovative	Moderate in both terms	The least proactive and innovative	Moderate in both terms
<b>Business environment</b>	The least hostile	Less dynamic and more heterogeneous	Low heterogeneity (little diverse)	More dynamic and hostile than the other types

Source: Merz et al. (1994, p.51) and the researcher.

The foregoing section has discussed different styles of entrepreneurs including craft entrepreneur, opportunistic entrepreneur, second generation entrepreneur, and continued entrepreneur. These various types imply that the entrepreneurs are heterogeneous in nature, they come from different backgrounds, exhibit different management styles, and they are further motivated by different factors (Woo et al., 1991).

## **2/4 ENTREPRENEURSHIP APPROACHES**

The entrepreneur's psychological, demographic, and behavioural characteristics, as well as his/her managerial skills are often cited as the most influential factors related to SMEs performance (Man et al., 2002). Responding to Carland et al.'s (1988) call that in order to understand the concept of entrepreneurship, researchers cannot isolate research efforts on only part of the whole, implying that researchers should not focus on only the psychological aspects, or the demographic characteristics, or the behavioural characteristics, subsequently, three approaches are discussed hereafter. These are, the traits approach, which deals with entrepreneurs' personality characteristics, the social psychological approach, which deals with the social context from which the entrepreneur is coming from, and finally the behavioural approach, which answers the question 'what do entrepreneurs do?' in diverse situations and under different circumstances. The behavioural approach dominates the research in the field of entrepreneurship today, whereas the traits approach and the social psychological approach are perceived as complementary (Gartner, 1988; Covin and Slevin, 1991; Zahra, 1993; and Carson et al., 1995).

### **2/4/1 THE TRAITS APPROACH**

The entrepreneurship literature is replete with a large number of personality traits of successful entrepreneurs. These include "calculated risk taking and risk sharing propensity, need for achievement, locus of control, personal values, integrity, need for power, need for affiliation, commitment, determination and perseverance, assuming personal responsibility, a grip on reality, sense of humour, tolerance of ambiguity, stress and uncertainty, decisive, urgent, and tolerance of failure" (Carson et al., 1995, p.51). Lachman (1980) finds that "people who possess the same



characteristics as entrepreneurs do will have a higher tendency or potential to perform entrepreneurial acts, than do people who do not possess such characteristics”. Therefore, in a specific context or society, entrepreneurs could be differentiated from their counterparts using these personality characteristics (Cunningham and Lischeron, 1991).

Despite the fact that personality traits are associated with entrepreneurial behaviour (Collins and Moore, 1970; Shapero, 1975; Schein, 1983; and Kets de Vries, 1985), some authors argue against the use of personality traits to characterise entrepreneurs. Their reasoning is that individual behaviour is not consistent over time, and that personality traits do not predict behaviour (Gartner, 1988; and Shaver and Scott, 1991).

However, a growing number of studies have associated the individual characteristics and personality traits of entrepreneurs with growth and profitability largely within the context of small businesses (Brockhaus, 1980, 1982; Garnier, 1982; Kirzner, 1983; Ronen, 1983; Miller and Friesen, 1983; Carland et al., 1984; Holzmuller and Kasper, 1991; Covin and Slevin, 1991; Robinson and Sexton, 1994; Naidu and Prasad, 1994; Jones-Evans, 1995; Smallbone et al., 1995; Green and Dent 1996; Glancey et al., 1998; Glancey, 1998; and Mazzarol et al., 1999).

In the literature four personality traits have been extensively researched and are seen by many as best describing the entrepreneur’s personality. These personality traits are, need for achievement, locus of control, propensity towards risk, and tolerance of ambiguity, and are reviewed in this section.

#### **2/4/1/1 Need for Achievement (nAch)**

Most of the recent definitions of nAch are based on Murray’s (1959) definition:

*“.....the desire or tendency to do things as rapidly and/or as well as possible, [it also includes the desire] to accomplish something difficult. To master, manipulate and organise physical objects, human beings or ideas. To do this as rapidly and as*

*independently as possible. To overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent" (Murray, 1959, p.164).*

Need for achievement is defined as a person's desire to succeed and to do well, to attain an inner feeling of personal accomplishment, where success is the degree of striving to meet standard of excellence (McClelland, 1961; and Longenecker et al., 1994). Need for achievement is culturally acquired, it symbolises a way of life or a basic attitude toward life rather than a simple drive (McClelland, 1961). Moreover, it represents a key psychological characteristic of an entrepreneur, where high achievers are characterised as taking immediate responsibility for doing things, seeking frequent and concrete feedback on their progress, maintaining control and anticipating things, thus they always plan ahead (Hull et al., 1980; and Miller and Droge, 1986).

In a domestic context, nAch has been used extensively to differentiate entrepreneurs from non-entrepreneurial engineers, accountants, and middle managers (Meyer et al., 1961; Hornaday and Aboud, 1971; Lachman, 1982; Sexton and Bowman, 1985; Begley and Boyd, 1987; and Green and Dent, 1996). However, Cromie and Johns (1982) report no statistically significant difference between entrepreneurs and managers as far as need for achievement is concerned.

Many studies positively associate nAch with successful small firms' owner/managers 'entrepreneurs' and with successful corporate-executives 'intrapreneurs' (McClelland, 1961; Schrage, 1965; Lynn, 1969; Wainer and Rubin, 1969; Ahmed, 1985; Begley and Boyd, 1987; Longenecker et al., 1994; and Utsch et al., 1996). Moreover, Hansemark (2000) associates nAch with gender, finding that Swedish male entrepreneurs as opposed to Swedish female entrepreneurs who started a new business have higher scores for nAch, whilst Swedish female entrepreneurs had lower scores on the same characteristic, even when compared with men who have not yet started a new business.

If nAch is pronounced among entrepreneurs, then it is reasonable to expect that this particular need will drive them towards high performance (Lee and Tsang, 2001). However, the relationship between nAch and firm performance is quite confusing and inconsistent, with some studies finding a relationship with high performance expressed as profit and growth (Scharge, 1965; Wainer and Rubin, 1969; and Lee and Tsang, 2001), while others find no strong relationship between need for achievement and performance (Miller and Toulouse, 1986; Begley and Boyd, 1987; and Entrialgo et al., 2000).

Need for achievement theory is criticised in two ways, firstly, the theory does not differentiate entrepreneurs from non-entrepreneurs as it is applicable to all parties, and secondly, there is no evidence from later research that links nAch to the decision to start a business (Sexton and Bowman, 1985). Hansemark (2000) maintains that nAch is unimportant factor for entrepreneurship.

## **2/4/1/2 Locus of Control**

Locus of control has been the focus of much of the research in social psychology and management disciplines (e.g. Miller, 1983; Miller and Toulouse, 1986; Roth, 1992; and Boone and DeBrabander, 1993). In general, locus of control refers to the degree to which an individual perceives success and failure as being contingent on personal initiative (Rotter, 1966; and Brockhaus, 1982). It also refers to “an individual’s perceived ability to influence events encountered in the person’s life” (Lee and Tsang, 2001, p.586). Locus of control may be thought of as internal or external to the individual. Internal locus of control refers to those who believe that they themselves rather than external events are in control of their destiny and can influence events in their lives (e.g. Brockhaus, 1982; and Begley and Boyd, 1987). In other words entrepreneurs are thought to believe that their own behaviour and abilities shape events. It stands to reason that these entrepreneurs are more willing to venture out on their own without the protection of a large firm (McGrath et al., 1992). On the other hand, an external locus of control represents the belief that a person’s life is

controlled more by luck or fate (e.g. Longenecker et al., 1994; and Entrialgo et al., 2000).

Internal locus of control is related to learning which motivates and supports active striving, whereas an external locus of control is suggested to impede learning and encourages passivity (Rotter, 1966; and Littunen, 2000, p.296). A number of studies find that entrepreneurs have a higher internal locus of control than non-entrepreneurs (Shapero, 1975; Cooper et al., 1988; and Longenecker et al., 1994), and Brockhaus (1980) finds that internal locus of control is capable of differentiating successful entrepreneurs from unsuccessful ones. However, Sexton and Bowman (1985) and Begely and Boyd (1987) find that internal locus of control is as insignificant as need for achievement in distinguishing entrepreneurs from their non-founders counterparts (i.e. small business managers).

There is some evidence to suggest a link between locus of control and firm performance. Miller and Toulouse (1986) confirm that CEO's locus of control leads to higher sales growth and a better return on investment (ROI). Further, Boone and DeBrabander (1993) find that firms directed by CEO's with an internal locus of control perform better than those led by CEO's with an external locus of control. Similarly, Anderson (1977) associates internal locus of control with corporate financial performance, and Lee and Tsang (2001) correlate the construct with the growth of the venture. However, Entrialgo et al. (2000) report no association between managers' internal locus of control and firm success.

Rotter (1966) argues that locus of control is stable across situations rather than situation specific. Anderson (1977) implies that individuals that exhibit an internal locus of control tend to remain 'internals' throughout their lives, and those with an external locus of control remain 'externals' no matter what experiences or situations they face.

## **2/4/1/3 Propensity Towards Risk**

As mentioned earlier propensity towards risk is one of the four personality traits that have been extensively researched and is thought to best portray the entrepreneur personality (Carland et al., 1984; Busenitz and Barney, 1997; and Thompson, 1999). In psychological terms, risk taking propensity can be defined as “dealing with uncertainties and the degree of readiness to bear it” (Ahmed, 1985, p.781). However, there is a view that propensity towards risk is situation specific with some entrepreneurs being cautious and risk averse under certain circumstances and risk takers in others (Brockhaus, 1980; and Kirzner, 1983). For instance, individuals may be reluctant to take risks if they perceive themselves in a win situation and vice-versa (Delmar, 2000), put differently the entrepreneur is sometimes moderate risk taker or even risk averse, when an entrepreneur faces two projects that promise the same rate of return, s/he will systematically choose the one with the lower risk (Meyer et al., 1961; Brockhaus, 1982; Garnier, 1982; Sexton and Bowman, 1983; Ahmed, 1985; and Palich and Begby, 1995).

Accordingly, entrepreneurs are characterised as risk averse and sometimes moderate risk takers. McClelland (1961) and Thompson (1999) argue that entrepreneurs do take risks but only calculated risks which they can understand, can manage, and to a certain extent can control. Katz and Peters (2001, p.367) support this view and argue that entrepreneurs do not take risks but they manage them. Similarly, Davis et al. (1991, p.44) say that “entrepreneurship does not entail reckless decision making, but rather, a reasonable awareness of the risks involved, and an attempt to manage these risks”.

The second view though, is that entrepreneurs do perceive themselves as high-risk takers and sometimes even gamblers (Cox and Jennings, 1995). Buckley (1997, p.72) states that “owners managers often act on impulse and are often greater risk takers than more ‘managerialist’ entrepreneurs”.

Research tends to concentrate on financial risks only, and in general the majority of the studies have not clearly identified the type of risk that has been investigated. However, Jackson et al. (1972, p.486) identify four major categories of situations where risk taking may differ namely: 1) Monetary risk taking, where there is some element of financial risk, 2) Physical risk taking, i.e. taking chances in situations involving bodily harm or physical risk, 3) Ethical risk taking, which is taking chances in situations in which normative ethical values are involved, and 4) Social risk taking, i.e. situations in which the subject's esteem in the eyes of others is at stake. One way to incorporate the different types of risks taking in a study is to follow Slovic (1964) suggestion that conceptualises risk taking as a multidimensional construct, where an individual's risk taking propensities are explored across a range of risky situations.

Begley and Boyd (1987) and Carland et al. (1995) report different levels of risk taking propensity when comparing founders of small businesses to managers in small businesses (non-founders). The results indicate that the founders are less averse to risk than their counterparts. Sexton and Bowman (1985) suggest that propensity towards risk could be used to distinguish between founders and non-founders. Nevertheless, Brockhaus (1980) finds that managers have the same propensity towards risk as entrepreneurs and the general public.

However, the evidence for an association between propensity towards risk and firm performance is mixed. Brockhaus (1980) reports no relationship between risk taking propensity and financial performance, whereas Smith and Miner (1983) find that relative to their counterparts, founders of firms that experience fast growth rates are much more risk averse, which is consistent with the view that entrepreneurs prefer to take calculated risks, which to a certain extent have control over (McClelland, 1961). Clearly, risk taking studies have not produced uniform findings, the inconclusiveness of the results though may be a consequence of methodological issues (e.g. using different measures of risk taking and different levels of analysis such as, the firm or the individual), also, it could be attributed to the variant definitions of what constitutes an entrepreneur (Stewart et al., 1998; and Delmar, 2000).

## **2/4/1/4 Tolerance of Ambiguity**

Tolerance of ambiguity is perhaps the one psychological characteristic that distinguishes the entrepreneurial personality (Low and MacMillan, 1988). Green and Dent (1996) say that tolerance of ambiguity can be acquired and developed through socialisation, learning, and experience rather than being inborn. Budner (1962, p.29) defines tolerance of ambiguity “as the tendency to perceive ambiguous situations as desirable” and Delmar (2000, p.141) argues that tolerance of ambiguity “is an emotional reaction to such ambiguity and uncertainty, and low tolerance results in stress and unpleasantness in a complex situation”. Budner’s (1962) and Delmar’s (2000) definitions of ‘tolerance of ambiguity’ complement each other, for instance according to Budner if the individual will feel threatened in an ambiguous situation then clearly as highlighted by Delmar s/he will feel anxious and uncomfortable.

The evidence suggests that tolerance of ambiguity differentiates entrepreneurs from non-entrepreneurs and is positively associated with firm performance. There is agreement that entrepreneurs exhibit greater capacity to tolerate ambiguity when compared with top executives and non-founders respectively (Schere, 1982; Sexton and Bowman, 1985; and Begley and Boyd, 1987). Moreover, researchers have associated tolerance of ambiguity with firm success (Gupta and Govindarajan, 1984; Dubinin and MacMillan, 1988; and Entrialgo et al., 2000).

## **2/4/1/5 Limitations of the Traits Approach**

The traits approach has been criticised for a number of reasons (Carson et al., 1995). First, the approach cannot distinguish owners of small entrepreneurial firms from successful professional executives in more established organisations. Second, the traits approach perceives entrepreneurship as a static process rather than a dynamic one which changes according to the development stage that the entrepreneur and the firm have reached. Finally, defining the entrepreneur only as the one who starts up a new venture is a very narrow definition of an entrepreneur. To overcome such criticisms, Carson et al. (1995) suggest studying psychological traits in clusters to

allow more people to be seen as 'potential entrepreneurs'. For instance, Timmons and Olin (1999, p.221) introduce an example of clustering of what they call 'desirable and acquirable attitudes and behaviours' for entrepreneurs, which includes: "commitment and determination, leadership, opportunity obsession, tolerance of risk, ambiguity and uncertainty, creativity, self-reliance and ability to adapt and motivation to excel". This proposition is consistent with the view put forward by Schumpeter (1962) and Carland et al. (1984) that the entrepreneur could either be the owner of the firm or an employee in a firm.

Nevertheless, the traits approach continues to be a valuable approach to entrepreneurship with researchers still investigating the possible association between entrepreneurs' personality traits and firms' performance in both domestic and international contexts. The ability of these traits to successfully distinguish entrepreneurs from their counterparts still represents an area of interest to many scholars.

## **2/4/2 THE SOCIAL PSYCHOLOGICAL APPROACH**

The social psychological approach identifies the external factors which are more likely to stimulate entrepreneurial activity. These factors include previous employment and/or work experience, level of education and age (Carson et al., 1995).

### **2/4/2/1 Previous Employment and/or Work Experience**

Much of the research on previous employment and work experience indicates that entrepreneurs in small firms are highly qualified individuals with previous managerial experience (i.e. general managers, sales managers). They may have worked in large companies before (Hisrich, 1988; Bryson, 1996; and Kirby and Jones-Evans, 1997), or have worked in the family business before starting out on their own (Shapero and Sokol, 1982; and Basu and Goswami, 1999). For Bangladeshi entrepreneurs, Afza (2001) finds that 'trading' is the dominant source of



entrepreneurship. Although not all the evidence supports the influence of work experience on the entrepreneur, nevertheless, there is evidence that such experience helps to build the entrepreneur's knowledge base, develops access to market information and business networks, and improves his/her managerial capability (Green and Dent, 1996; and Lee and Chan, 1998). Also, owner/managers past experience can compensate for lack of firm experience (Cooper et al., 1989), and if the work experience is international the owner/managers may accelerate the internationalisation process of new ventures (Shrader et al., 2000).

Cooper et al. (1988) and Lee and Tsang (2001) establish a positive relationship between prior experience and firm performance. The authors find that the entrepreneur's diverse prior experience (e.g. industrial, managerial) is correlated with greater venture growth. However, Evans (1987) and Basu and Goswami (1999) report an inverse relationship between number of years the entrepreneur spends in business and firms' growth rate. The negative association between the entrepreneur's work experience and the firm growth rate implies that the firms grow faster in their first years. Finally, Afza (2001) finds no association between Bangladesh entrepreneurs previous work experience and success.

The exporting literature emphasises the importance of life and professional experience of the entrepreneur as key elements influencing the decision to export (Garnier, 1982). There is evidence that managers with overseas work experience are more likely to internationalise when compared to their counterparts (Kwei-Cheong and Wai-Chong, 1988). Further, Garnier (1982) hypothesises that managers who have lived abroad, worked in a multinational-corporation, and/or spent some time in foreign-service are more likely to export. Moreover, Busenitz and Barney (1997) report that experienced entrepreneurs can significantly influence – if not control – risks associated with international business (e.g. they can gather additional information about foreign markets when required).

## **2/4/2/2 Level of Education**

Both the entrepreneurship and exporting literatures highlight the level of education as a distinctive element affecting entrepreneurial and exporting behaviours. There are differing views on how the level of education affects entrepreneurial behaviour. One view put forward by Pickles and O'Farrell (1987) is that a higher level of education may reduce the individual's motivation to start a new business, the authors argue that basically there are quite enough job opportunities for those holding higher degrees and not vice versa. On the other hand, Garnier (1982) argues that entrepreneurs with a higher level of education will be more open minded, more interested in foreign markets, and thus more willing to assess the feasibility of entering export markets. There are a number of scholars who have investigated the level of education of the entrepreneur in different contexts. Hisrich (1988), Green and Dent (1996) and Lee and Chan (1998) reveal that entrepreneurs from Russia, China, Northern Ireland and UK respectively possess a medium level of education (i.e. approximating to school level exams like 'O' grade). Whereas, authors like Lafuente and Salas (1989), Basu and Goswami (1999) and Afza (2001) report that entrepreneurs from South Asia, Spain, US and Bangladesh correspondingly have a high level of education. Hence, it seems that coming from either developed or developing country does not have much effect on the entrepreneur level of education.

There is support for the positive impact of the entrepreneur's level of education on firm performance and growth rate (Storey et al., 1989; Lafuente and Salas, 1998; Basu and Goswami, 1999; and Kundu and Katz, 2000). Lee and Tsang (2001) observe that in large firms, level of education has an indirect positive association with venture growth moderated by firm size, while an inverse relationship was found in smaller firms. However, Afza (2001) finds no significant association between entrepreneurs' level of education and success in Bangladesh. Although, Storey et al. (1989) argue that academic qualifications do not guarantee success, there is evidence to suggest that even if level of education is not directly relevant to the business, it can still contribute to growth by enhancing the entrepreneur's communication skills and developing his/her analytical and managerial abilities, thus lowering business

development barriers and helping business to expand (Carson, 1990; and Lee and Tsang, 2001).

International business researchers (Reid, 1983; Axinn, 1988; and Thomas and Peyrefilte, 1996) have proposed that educated international managers are assumed to be more 'cosmopolitan', more willing to deal with foreign contacts than less educated managers, more receptive to new ideas, and are expected to perform better than their counterparts as well. However, the relationship between the owner/manager's level of education and international business performance is inconsistent with some researchers reporting an association with export sales and export profitability (e.g. Nakos et al., 1998), while others reveal a weak relationship (e.g. Cavusgil and Naor, 1987), or even no association (e.g. Evangelista, 1994; and Moini, 1995).

### **2/4/2/3 Entrepreneur Age**

Different age groups may be associated with different sets of personal motivations and objectives, and different levels of human and financial capital (Storey, 1994). Longenecker et al. (1994) and Glancey et al. (1998) suggest that the entrepreneur's age at the time of firm formation could be a determinant of subsequent performance. They conclude that younger individuals may have ambition and drive, but are less likely to have the experience and financial capital of older managers. The average age of entrepreneurs reported in the literature varies widely, for instance the average age reported for Russian entrepreneurs' was 34 years, for Northern Irish and Chinese entrepreneurs, their 40's, and for Bangladeshi entrepreneurs the late 30's (Hisrich, 1988; Hisrich and Grachev, 1995; Lee and Chan, 1998; and Afza, 2001). More generally, Thomas and Peyrefilte (1996) find that younger managers are associated with growth, innovation and risk taking, while older managers are more risk averse, and tend to make more conservative decisions. Afza (2001) reports no significant association between the entrepreneurs' age at Bangladesh and level of success.

Aaby and Slater (1989) and Longenecker et al. (1994) suggest that international firms with older managers tend to take fewer risks, and be less willing to innovate and expand internationally. Also, Czinkota and Ursic (1991) report that younger managers tend to be more 'cosmopolitan', more entrepreneurial, and less averse towards risks associated with exporting. As mentioned earlier, the findings that correlate the age of the entrepreneur with firm performance are inconsistent, the researcher supports the view that there is no ideal age for an entrepreneur, implying that there are other factors that may affect firms performance along with the entrepreneur age for instance, industry sector, market served, and/or technology intensity.

### **2/4/3 THE BEHAVIOURAL APPROACH**

The behavioural approach complements the traits and the social psychological approaches. It deals with what the entrepreneurs do, for example, in dealing with their competitors, or when confronted with decision making situations involving uncertainty. Hence, the entrepreneurial orientation (EO) terminology which encompasses innovativeness, proactiveness, and risk taking is used as a general theme to define the behavioural approach (Covin and Slevin, 1989, 1991; Lumpkin and Dess, 1996; Dess et al., 1997; and Zahra and Garvis, 2000).

Entrepreneurial orientation is a multi-dimensional concept, represented as an aggregate measure of innovativeness, proactiveness and risk taking (Kets de Vries, 1977; and Covin and Slevin, 1989). Lyon et al. (2000) state that there are very few studies that have investigated these three dimensions of entrepreneurial orientation. Table 2.3 below summarises some of the key concepts of the 'entrepreneurial orientation' which have been used in past research.

Miller (1983, p.770) suggests that an entrepreneurial firm is one that "engages in product market innovativeness, undertakes somewhat risky ventures, and is first to come up with proactive innovations, beating competitors to the punch. A non-

entrepreneurial firm is one that innovates very little, is highly risk averse, and imitates the moves of competitors instead of leading the way”. Covin and Slevin (1989, p.79) define the entrepreneurial strategic posture as the one “characterised by frequent and extensive technological and product innovation, an aggressive competitive orientation, and a strong risk taking propensity by top management”.

**Table (2.3) Entrepreneurial Orientation Definitional Keywords**

Author	Definitional keywords
McClelland (1976)	<ul style="list-style-type: none"> <li>• Innovation, need to achieve, risk accepting, proactive.</li> </ul>
Meyers (1976)	<ul style="list-style-type: none"> <li>• Innovative.</li> </ul>
Khandwalla (1977)	<ul style="list-style-type: none"> <li>• Financial innovation, proactive, pragmatic.</li> </ul>
Shapero and Sokol (1982)	<ul style="list-style-type: none"> <li>• Proactive, functional, initiator management, decentralisation, rewards to risk-takers.</li> </ul>
Miller and Friesen (1983)	<ul style="list-style-type: none"> <li>• Aggressiveness, innovative new products, novel solutions, logistical innovation, emphasis on research and development.</li> </ul>
Foxall (1984)	<ul style="list-style-type: none"> <li>• Opportunity seeking, control of external parties for own gain.</li> </ul>
Ginsberg (1985)	<ul style="list-style-type: none"> <li>• Aggressive, seek novel solutions, innovative, new products, innovative distribution.</li> </ul>
Morris and Paul (1987)	<ul style="list-style-type: none"> <li>• New product introductions, innovative production and logistics, risk taking, aggressive, seek novel solutions, research and development emphasis, active opportunity scans, bold, growth oriented, pragmatic, compromising, charismatic leaders.</li> </ul>
Covin and Slevin (1989)	<ul style="list-style-type: none"> <li>• Innovative, aggressive, proactive.</li> </ul>

Source: Miles and Arnold (1991, p.51).

Recently, Lumpkin and Dess (2001, p.431) define the three dimensions used to operationalise EO as follows, “*innovativeness* is the willingness to support creativity and experimentation in introducing new products/services, and novelty, technological leadership and R&D in developing new processes, *proactiveness* is an opportunity seeking, forward looking perspective involving introducing new products or services ahead of the competition and acting in anticipation of future demand to create change and shape the environment. *Risk taking* is the tendency to

take bold actions such as venturing into unknown new markets, committing a large portion of resources to ventures with uncertain outcomes, and/or borrowing heavily”.

Several attempts were made to associate the three dimensions of EO highlighted earlier by Lumpkin and Dess (2001) with the financial performance of firms. The research does support the view that EO improves firm’s financial performance in terms of sales growth and profitability (Peters and Waterman, 1982; Schoollhammer, 1982; Namen and Slevin, 1993; Brown, 1996; Wiklund, 1999; and Barrett et al., 2000). Consistently, Becherer and Maurer (1997) report that EO is directly related to change in profits. Collectively, these activities improve the firms’ capability to perceive and recognise market opportunities before their rivals (Zahra and Garvis, 2000). Moreover, Barrett et al. (2000, p.60) conclude that “the more management is proactive toward customers and competitors, innovative in its products and processes, and realistic in its risk-taking behaviour, the stronger will be the firm’s business performance”. These contradict Zahra’s (1993, p.11) assertion that there is “a paucity of empirical documentation of the effect of entrepreneurship on company financial performance”.

There is a common belief among entrepreneurship scholars that the external environment moderates the firm-performance relationship (e.g. Covin and Slevin, 1989; and Zahra and Covin, 1995). The external environment is characterised as either ‘hostile’ or ‘benign’. There are a number of approaches in the literature to define a ‘hostile’ environment. Khandwalla (1977, p.335) describes a hostile environment as “risky, stressful and dominating”. Zahra and Covin (1995, p.48) define hostility as “high levels of competitive intensity, a paucity of readily exploitable market opportunities, tremendous competitive-market-, and/or product-related uncertainties, and a general vulnerability to influence from forces and elements external to the firm’s external environment”. Zahra (1993, p.324) further asserts that “hostility arises from several sources, including declining demand or radically changing innovations that render a firm’s technology obsolete”. Covin and Slevin (1989, p.75) characterise hostile environment as “precarious industry settings, intense competition, harsh overwhelming business climates, and the relative lack of

exploitable opportunities”, and Merz et al. (1994, p.50) assert that “hostility is the degree to which the environment is threatening to firm survival”, whereas, a ‘benign’ or ‘non-hostile’ environment provides rich and plentiful investment and marketing opportunities (Khandwall, 1977; and Covin and Slevin, 1989).

Attempts were undertaken to associate EO with firms operating in ‘hostile’ and/or ‘benign’ environments. Miller and Friesen (1982) find that compared with non-entrepreneurial firms, the environment of entrepreneurial firms’ is significantly hostile. One year later, Miller and Friesen (1983, p.233) separately examined the consequences of performance on the relationship between environmental hostility and entrepreneurial behaviour. The authors argue that “extensive risk taking, forceful proactiveness and a strong emphasis on novelty can be very hazardous when competitive or economic conditions are becoming more taxing (i.e. hostile)”. The authors report that environmental hostility, heterogeneity and dynamism are significantly associated with entrepreneurial behaviour (i.e. proactive, risk-taking, innovative behaviour) in successful firms and not *vice-versa*.

A number of researchers report a positive association between EO and firms’ performance especially among those operating in hostile environments (Covin and Slevin, 1989, 1991; Davis et al., 1991; and Zahra and Covin, 1995). Miller and Friesen (1983) observe a negative relationship between entrepreneurial firm and performance in non-hostile environment. Covin (1991) finds that entrepreneurial firms outperform conservative firms with respect to growth. However, some authors agree that conservative firms can be successful if they are located in the appropriate environment (Khandwalla, 1977; Miller and Friesen, 1982; and Covin and Slevin, 1989). This result supports Covin and Slevin’s (1988, p.217) argument based on a contingency approach that “an entrepreneurial orientation *per se* may not necessarily be desirable in all situations, rather it should only be regarded as good or bad when considered in a particular organisational and environmental context”.

The inconsistent results characterised entrepreneurship research encourages some authors to propose three complementary approaches for measuring EO, namely, managerial perceptions, firm behaviour, and resource allocations (see Table 2.4), the aim of these approaches is to have more valid and reliable entrepreneurship research (Lyon et al., 2000).



**Table (2.4) Entrepreneurial Orientation Measuring Approaches: Advantages and Disadvantages**

Approach	Advantages	Disadvantages
<b>Managerial perceptions</b>	<ul style="list-style-type: none"> <li>• <b>Validity:</b> <ol style="list-style-type: none"> <li>1. Scales can be developed that tap into underlying constructs thus enhancing construct validity.</li> <li>2. Perceptual measures can achieve a higher level of specificity than aggregation methods.</li> <li>3. Perceptions typically provide the most precise assessments of conditions within a firm.</li> </ol> </li> <li>• <b>Practicality:</b> <ol style="list-style-type: none"> <li>1. Convenience: surveys can be very easy to administer, especially when design features such as layout and instructions are carefully prepared.</li> <li>2. Interpretability: use of scales with standardised responses facilitates uniform interpretations and enhances comparability.</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Reliability:</b> <ol style="list-style-type: none"> <li>1. Measures of perceptions may lack internal consistency due to functional bias or 'silo-thinking' of multiple respondents.</li> </ol> </li> <li>• <b>Practicality:</b> <ol style="list-style-type: none"> <li>1. Economy: surveys can be costly to develop, produce, and score, interview techniques may also be time consuming and expensive.</li> <li>2. Interpretability: interview data that requires content analysis and/or standardised coding may create interpretation problems.</li> </ol> </li> </ul>
<b>Firm behaviour</b>	<ul style="list-style-type: none"> <li>• <b>Reliability:</b> <ol style="list-style-type: none"> <li>1. External data sources are generally free of interpretation errors and researchers inference. This is enhanced when inter-rater reliability techniques are used to correlate scores of multiple judges.</li> <li>2. Secondary data is typically free of managerial bias or non-respondent bias.</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Validity:</b> <ol style="list-style-type: none"> <li>1. Difficult to assess how accurately secondary sources represent underlying constructs.</li> <li>2. Construct measurement may be imprecise if data sources are incomplete and/or do not capture the range of relevant items under study.</li> </ol> </li> </ul>

<p><b>Firm behaviour (continued)</b></p>	<p>3. Findings can be compared across studies and studies can readily be replicated.</p> <ul style="list-style-type: none"> <li>• <b>Practicality:</b> <ol style="list-style-type: none"> <li>1. Economy: relatively low cost to administer.</li> <li>2. Convenience: few respondents (judges) required.</li> </ol> </li> </ul>	<p>3. External data content may be contaminated with misleading or extraneous information.</p> <ul style="list-style-type: none"> <li>• <b>Practicality:</b> <ol style="list-style-type: none"> <li>1. Interpretability: accuracy may suffer depending on the expertness of judges.</li> <li>2. Convenience: can be “messy” if extensive secondary sources are required.</li> </ol> </li> </ul>
<p><b>Resource allocations</b></p>	<ul style="list-style-type: none"> <li>• <b>Reliability:</b> <ol style="list-style-type: none"> <li>1. Archival measures, especially firm financial data and organisational demographics, are generally easy to confirm.</li> <li>2. Standardised resource allocation measures, such as expenditures, can be compared across time and across firms, and replicated across studies.</li> </ol> </li> <li>• <b>Practicality:</b> <ol style="list-style-type: none"> <li>1. Economy: a low cost method of measuring EO via resource allocations.</li> <li>2. Convenience: data collection is simple if data is accessible.</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Validity:</b> <ol style="list-style-type: none"> <li>1. Archival measures at best represent only outcomes-the results of decisions and practices. They generally do a poor job of tapping underlying constructs, thus construct validity may be quite low. They can provide adequate performance measures.</li> <li>2. Resource allocation measures may not accurately reflect the content of firm-level activities.</li> <li>3. Resource allocations may lack relevance if industry-level practices and trends are not considered.</li> </ol> </li> <li>• <b>Practicality:</b> <ol style="list-style-type: none"> <li>1. Interpretability: too narrowly constructed for fine-grained analysis.</li> </ol> </li> </ul>

Source: Lyon et al. (2000, p.1064-1065).

## **2/5 INTERNATIONAL ENTREPRENEURSHIP**

International entrepreneurship is one of the emerging areas of international business research (Wright and Ricks, 1994). McDougall and Oviatt (1997, p.291) place international entrepreneurship “at the intersection of both entrepreneurship and international business fields which represent two growing areas of interest respectively”. However, international entrepreneurship has not yet been explored rigorously and research findings are still relatively scarce (Zahra, 1993; Oviatt and McDougall, 1994; Coviello and Munro, 1995; and Rhee, 2002).

Zahra (1993, p.9) defines international entrepreneurship as “the study of the nature and consequences of a firm’s risk-taking behaviours as it ventures into international markets”. McDougall and Oviatt (2000, p.903) put forward a more comprehensive definition of international entrepreneurship as “a combination of innovative, proactive, and risk-seeking behaviour that crosses national borders and is intended to create value in organisation”. Their definition includes all three dimensions of EO, whereas Zahra (1993) concentrates on risk-taking behaviour only. Also, a number of authors agree that international entrepreneurial orientation reflects the firm’s overall proactiveness and aggressiveness in its pursuit of international markets, it is associated with managerial vision, innovativeness and proactive competitive posture overseas (Jennings and Young, 1990; Davis et al., 1991; Miles and Arnold, 1991; Caruana et al., 1998; and Knight, 2000).

Tables 2.5 and 2.6 below illustrate some interesting findings with respect to the entrepreneurial taxonomies and the three common dimensions of “entrepreneurial orientation” that have been examined and tested in previous exporting research (Yeoh and Jeong, 1995).

**Table (2.5) Entrepreneurial Taxonomies in Exporting Research**

<b>Authors</b>	<b>Key findings</b>
<b>Piercy (1981)</b>	Aggressive exporters view exporting as a main source of growth for the company while reactive exporters wait for unsolicited orders or only export when excess capacity cannot be absorbed by the domestic market. Aggressive exporters place greater emphasis on product quality, design and a market-based pricing strategy.
<b>Tesar and Tarleton (1982)</b>	Aggressive exporters actively seek their first order, while passive exporters tend to receive their first order unexpectedly from foreign buyers without any particular effort. Passive exporters also have fewer years of experience in the exporting activities.
<b>Johnston and Czinkota (1985)</b>	Aggressive (proactive) exporters tend to acquire more information about foreign markets, possess greater managerial desire to export, products tend to be more unique, and have greater marketing or technological advantage.
<b>Gantisky (1989)</b>	Innate (aggressive) exporting firms are new ventures established for the purpose of serving overseas markets. They have a polycentric orientation and view foreign market opportunities as being more attractive than those of the local market. In contrast, adoptive (passive) exporters tend to be ethnocentric, are more committed to the firm's domestic opportunities, and allocate fewer resources to exporting than required.
<b>Da Rocha et al. (1990)</b>	Aggressive exporters tend to have more direct contact with their overseas buyers, export involvement of the CEO, greater emphasis on product quality, market diversification, sophisticated planning techniques and quality control activities.
<b>Eshghi (1992)</b>	Passive exporting firms tend to be dominated by managers with a negative attitude towards exporting. These firms are not likely to be strongly committed to export markets because their participation in exporting was accidental rather than a deliberate decision process, and the decision to export was purely reactive (e.g. declining sales in the domestic market).
<b>Samiee et al. (1993)</b>	High innovative exporters relative to their low innovative counterparts have a greater likelihood of establishing export-specific organisation, undertaking export activity on an ongoing basis, using more sources of export information, and relying significantly more on its internal sales personnel for export market contact.

Source: Yeoh and Jeong (1995, p.100).

The table above illustrates the common terminologies used in entrepreneurship and exporting literatures. These include active/reactive (Piercy, 1981), aggressive/passive (Tesar and Tarleton, 1982; and DaRocha et al., 1990), active/passive (Eshghi, 1992) and innate/adoptive (Gantisky, 1989). As Miller (1983, p.771) says “the factors associated with exporting and export performance are, not surprisingly, the same orientations and behaviours identified more generally with ‘entrepreneurship’.

**Table (2.6) Empirical Findings on Dimensions of Export Entrepreneurship**

<b>Dimension</b>	<b>Empirical Findings</b>
<b>Innovativeness</b>	<p>Compared to conservative exporting firms, entrepreneurial exporting firms:</p> <ul style="list-style-type: none"> <li>• Emphasise customer service and support for overseas customers (Ginsberg &amp; Venkartman, 1985; and Beamish et al., 1993).</li> <li>• Are characterised by a heavy emphasis on R&amp;D (McGuinness &amp; Little, 1981; Carlsson &amp; Hansen, 1982; and Cavusgil &amp; Nevin, 1981).</li> <li>• Are likely to emphasise development of new products (Namiki, 1989; and Carlsson &amp; Hansen, 1982).</li> <li>• Expand export volume through market spreading (Reid, 1987; Beamish et al., 1993; Turnbull, 1987; and Diamantopoulos &amp; Inglis, 1988).</li> <li>• Supply innovative, high technology products to overseas market (Namiki, 1989; Beamish et al., 1993; and Suzman &amp; Wortzel, 1984).</li> </ul>
<b>Proactiveness</b>	<p>Compared to conservative exporting firms, entrepreneurial exporting firms:</p> <ul style="list-style-type: none"> <li>• Actively search for new opportunities in additional country markets (Cavusgil, 1984).</li> <li>• Implement formal export research in a systematic fashion (Walters, 1993; and Cavusgil, 1984).</li> <li>• Undertake export planning activities (Ayal &amp; Raban, 1987; Cavusgil &amp; Nevin, 1981; Denis &amp; Depelteau, 1985; Stevenson &amp; Gumpert, 1985; Burton &amp; Schlegelmilch, 1987; and Seringhaus &amp; Rosson, 1990).</li> </ul>

<p><b>Proactiveness (continued)</b></p>	<ul style="list-style-type: none"> <li>• Devote significant amount of resources to information gathering activities (Ayal &amp; Raban, 1987; and Diamantopoulos &amp; Inglis, 1988).</li> <li>• Take advantage of resources provided by various external sources (Cooper et al., 1970; Denis &amp; Depelteau, 1985; Karafakioglu, 1986; and Samiee &amp; Walters, 1991).</li> <li>• Are less likely to rely on unsolicited export orders (Eshghi, 1992; Suzman &amp; Wortzel, 1984; and Kaynak, 1992).</li> <li>• Are motivated to export for 'proactive reasons' (e.g. market share, profits, planning, expansion) (Koh, 1981; Eshghi, 1992; and Lee &amp; Brasch, 1978).</li> </ul>
<p><b>Risk taking</b></p>	<p>Compared to conservative exporting firms, entrepreneurial exporting firms:</p> <ul style="list-style-type: none"> <li>• Perceive competition in export markets as less risky (Tesar &amp; Tarlton, 1982; and Christensen et al., 1987).</li> <li>• Exhibit a stronger international market orientation (Cooper &amp; Kleinschmidt, 1985; Namiki, 1989; Kleinschmidt &amp; Cooper, 1984; Dichtl et al., 1986; and Dichtl et al., 1990).</li> <li>• Tend to perceive government rules and regulations as less of an obstacle to exporting (Rabino, 1980).</li> <li>• Are likely to view their commitment to, and investment in exporting activities as comparable to a domestic counterpart in terms of riskiness (Tesar &amp; Tarleton, 1982; Dichtl et al., 1990; Axinn, 1988; Kaynak &amp; Stevenson, 1982; and Louter et al., 1991).</li> <li>• Tend to perceive the distribution, service, delivery problems and costs as less of an obstacle to exporting (Diamantopoulos &amp; Inglis, 1988; and Lee &amp; Brasch, 1978).</li> </ul>

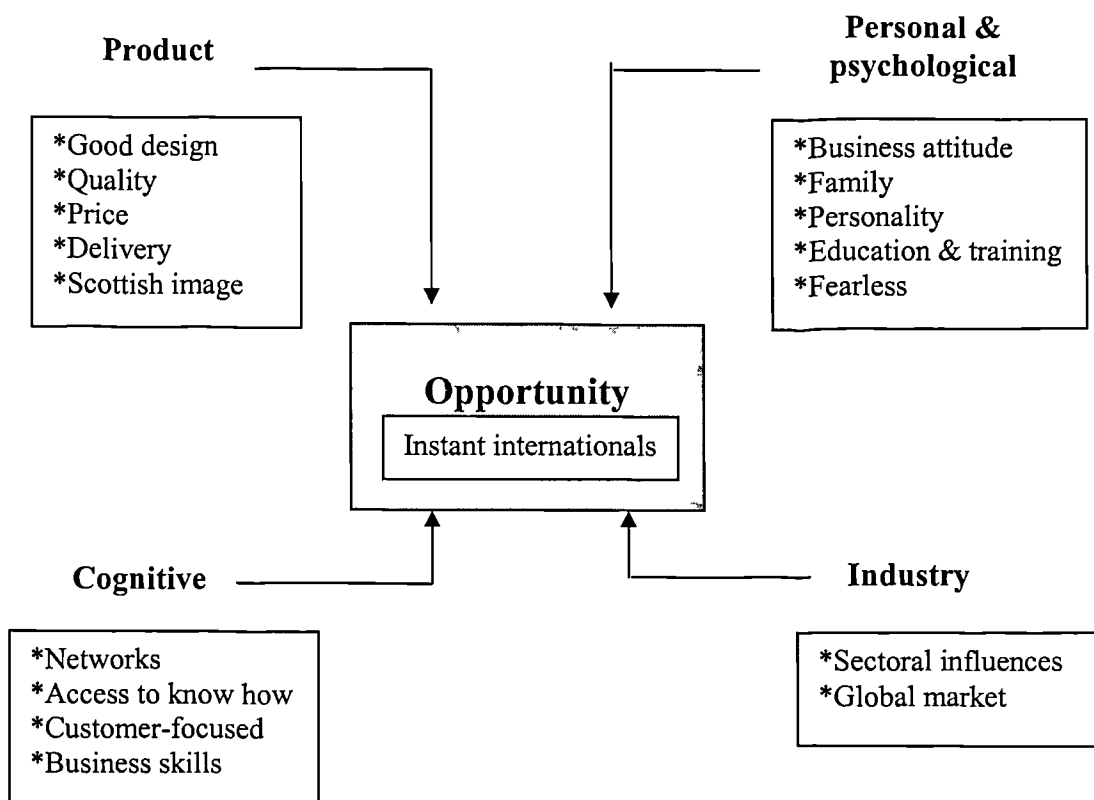
Source: Yeoh and Jeong (1995, p.101).

Thomas and Mueller (2000, p.290) investigate whether “the entrepreneurial attributes namely innovation, locus of control, propensity toward risk, and energy level are universal or ..... vary systematically across cultures”. In their study of nine countries, the posture of the US entrepreneur was used as the ‘ideal’ model in examining

cultural distance. The results indicate that internal locus of control, moderate risk taking propensity, and high energy level decrease as cultural distance from the 'ideal' increases. No variations were reported with respect to innovation orientation. Earlier, McGrath and McMillan (1992) investigated entrepreneurs from three diverse cultural regions. The regions are called, Anglo (i.e. US, UK and Australia), Chinese (i.e. Taiwan and China), and Nordic (i.e. Denmark, Norway, Sweden and Finland). The authors find that entrepreneurs from the three regions share a set of similar beliefs despite the diverse culture surrounding their society. These sets of beliefs successfully differentiate entrepreneurs from non-entrepreneurs in the respective countries.

In the international entrepreneurship literature there is a debate on the key influences of instant internationals. In McAuley's (1999, p.70) study of Scottish arts and crafts sector the term "instant internationals is used to convey what happens to a firm under certain influences". McAuley (1999) identifies four sets of key influences on instant exporters namely, product, personal and psychological, industry, and cognitive (see Figure 2.2). The result reveals that these firms are born global, they neither start with the domestic market, nor with the psychologically close markets, their internationalisation process did not progress in incremental steps, further in most of the cases the exporting experience was unplanned, finally, the author finds that the network theory dominates the 'instant exporters' behaviours.

**Figure (2.2) Key Influences on the Instant Internationals**



Source: McAuley, A. (1999, p.77).

Knight (2000) examines the central role entrepreneurial orientation plays in SME internationalisation. The results indicate that entrepreneurial orientation directs or guides marketing strategy, international preparation and technology acquisition, and indirectly promotes and improves the firm overall international performance. Zahra and Garvis (2000) positively associate International Corporate Entrepreneurship (ICE) with the overall profitability of the firm and growth in both national and international markets. Caruana et al. (1998) explore the role of centralisation and formalisation in explaining entrepreneurial behaviour among manufacturing exporters in Malta. They find that entrepreneurial behaviour is negatively associated with increased centralisation, and positively associated with increased formalisation, and that, smaller firms exhibit more entrepreneurial behaviour in comparison with larger firms. Moreover McDougall (1989) finds that internationally orientated new ventures pursue much more aggressive strategies when compared to their domestic counterparts in the computer and communication manufacturing industry.



Furthermore, following the contingency approach premise that no single structure is appropriate for all tasks, Robertson and Chetty (2000) find that when the New Zealand exporters' strategic orientation (i.e. entrepreneurial or conservative) matches their environments, they both perform equally. Also, Yeoh and Jeong (1995) highly recommend entrepreneurial orientation posture for small exporting firms operating in hostile environments. Finally, Dimitratos et al. (2003) find that the environmental uncertainty of the domestic country, individually, and collectively with the uncertainty of the environment of the foreign country, positively moderate the entrepreneurial style - international performance relationship among Greek firms.

In summary, the studies described briefly above indicate that the relationship between international entrepreneurship and firm performance has only been explored to a limited extent, yet the initial indications are that international entrepreneurship has a positive effect on firm performance.

## **2/6 CHAPTER SUMMARY**

After reviewing various entrepreneurial typologies extensively, it can be concluded that the 'craftsmen' and the 'opportunists' styles are inadequate in describing entrepreneurs, and that illustrating each possible combination of entrepreneurs is far from practical.

Three different approaches to understanding the entrepreneurship phenomenon have been reviewed. These are the traits approach, which focuses on personality characteristics (i.e. need for achievement, locus of control, propensity towards risk, and tolerance of ambiguity), the social psychological approach, which emphasises the context from which the entrepreneur comes, and finally, the behavioural approach. The interrelationship and the interaction between the three approaches are believed to provide more insights into entrepreneurship phenomenon than any one of the approaches by itself. The nature of international entrepreneurship was discussed, and attention has been drawn to the limited empirical research in the area. This suggests that the field is still immature and more research is needed to move the

entrepreneurship discipline forward. For instance, researchers need to reach a consensus with respect to 'who is an entrepreneur'. Also, testing the three dimensions underlying the entrepreneurial orientation concept using the pre-tested and validated construct of Covin and Slevin (1988) regardless of the age of the firm (i.e. young versus well established), firm size (i.e. small versus large), or sector (i.e. traditional versus high technology), to illuminate to what extent the construct is applicable to a wide range of firms. Moreover, empirically testing Lyon et al. (2000) complementary approach for EO namely, managerial perceptions, firm behaviour and resource allocations in order to overcome some of the inconsistencies that characterise entrepreneurship research.

Having emphasised the importance of the owner/managers characteristics, and drawing on the belief that having an owner/manager with particular features is a way of exploiting the potential benefits of the Internet, and make them more tangible at the firm level, the next chapter will change the focus of the research from the owner/managers level to the level of the firm, where the Internet – e-commerce and SME internationalisation will be investigated and analysed.

## CHAPTER THREE

### INTERNET AND SME INTERNATIONALISATION

#### *Chapter Objectives*

- *To briefly discuss the origin of the Internet and propose definitions of the Internet and e-commerce.*
  
- *To analyse the relationship between the Internet and marketing strategy with special reference to product type, the World Wide Web, advertising, pricing, and distribution on the Internet.*
  
- *To present an attempted synthesis of very limited empirical evidence discussing the Internet – e-commerce and SME internationalisation.*
  
- *To evaluate the advantages, barriers and threats to the internationalisation of SMEs as a result of using the Internet.*
  
- *To examine and evaluate the theoretical explanations of firm internationalisation.*

## CHAPTER THREE

### INTERNET AND SME INTERNATIONALISATION

'The Internet' is often portrayed as one of the most transforming technological inventions since the industrial revolution (The Economist, 1999). According to James H. Clark, co-founder and chairman of Netscape Communications:

*"The Internet is the biggest thing that has happened in telecommunications since the telephone. It is going to become as fundamental to the operations of businesses as having a telephone. You won't be able to be in business ..... [w]ithout an Internet connection, because there will be so much business conducted that way"* (The Business Times, 1996, cf. Soh et al., 1997, p.217).

The advances in information and communication technology, particularly the wide spread use of the Internet and e-commerce have provided more opportunities for small firms' internationalisation. This chapter highlights issues that are concerned with the Internet and SME internationalisation. It begins with a brief discussion of the origin of the Internet, and the proposed definitions of the Internet and electronic commerce. The next section deals with the Internet and communication with special reference to electronic mail (email), 'the Intranet' and 'the Extranet'. Then, the Internet–marketing strategy relationship is outlined, followed by a review of the limited empirical studies that address the impact of the Internet on SME internationalisation. The chapter then concludes with a discussion of the main theoretical foundations underpinning this research. The theories and phenomena reviewed are, transaction costs, the Uppsala model, Innovation models, the 'born global', 'early international', and 'born-again global', the network perspective, and the Resource Based View (RBV).

### **3/1 INTERNET AND ELECTRONIC COMMERCE DEFINITIONS**

#### **3/1/1 Internet Origin and Definitions**

The Internet was developed by scientists employed by the US Defence Advanced Research Projects Agency (DARPA) in the early 1960's, who saw great potential in allowing computers to share information on research and development in scientific and military fields (Hoffman and Novak, 1994; Goodman et al., 1994; Leiner et al.,

1997; and Howe, 2000). It was not until the early 1990's that the Internet has been 'opened for business' (Gogan, 1997; and Howe, 2000).

The Internet is a digital communication network that links millions of computers connected to thousands of networks around the world (Chen et al., 1998). It is a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers regardless of geographic location (Griffiths, 1999). The Internet is also an interconnection and collaboration of networks that allows users of disparate heterogeneous computer network to communicate with each other across organisational and geographical boundaries (Nicoll, 1994). The Internet operates on a standard protocol, which allows data to be transferred between otherwise incompatible machines (Hamill, 1997). The Internet is "an innovative process, supported or made feasible by technology, by which organisations and individuals communicate, network and do business" (Vadapalli and Ramamurthy, 1997, p.112). The Internet is a new and highly efficient medium for accessing, organising, and sharing information (Ainscough and Lockett, 1996; and Peterson et al., 1997). The Internet is also an ever changing, increasingly popular medium, that offers new opportunities for SMEs to internationalise (McCue, 1998), given that in many cases, SMEs reflect the more personal and unique characteristics of a community than larger firms' (OECD, 1999).

### **3/1/2 Electronic Commerce Definitions**

Electronic commerce has existed for many decades as Electronic Data Interchange (EDI), or Electronic Funds Transfer (EFT), however, it became more widely used following the introduction of the World Wide Web (WWW) and the liberalisation of the telecommunication sector (Hill, 1997; and OECD, 1999).

It is expected that the largest impact of e-commerce will be on small and medium sized firms, a detailed argument is highlighted later in the chapter (see section 3/4), where the transactional tools associated with e-commerce allow SMEs to extend their geographical reach, enter new product markets, expand and enhance the number of customers within defined target market, and collaborate and access

important information that previously was difficult to acquire (Haynes et al., 1998; Darbyshire et al., 1998; and OECD, 1999, 2000).

The term e-commerce has no widely accepted definition, and could be described in different ways. Broadly speaking, it includes any form of economic activity conducted via electronic connections (Wigand, 1997; OECD, 2000; and Baron et al., 2000). E-commerce is more than buying and selling goods or services electronically, it is the sharing of business information generated, stored or communicated by electronic, optical, or analogous means including Electronic Data Interchange (EDI), email, maintaining business relationships, and conducting business transactions by means of telecommunications networks (Applegate et al., 1996; Zwass, 1996; Kalakota and Whinston, 1996; Hill, 1997; and Baron et al., 2000). Kilian et al. (1994) and Wigand (1997) assert that both EDI and email are central tools underlying the operation of e-commerce, and they may be perceived as value added network services, that allow the user to substitute electronic forms for their paper based counterparts. As a consequence, e-commerce addresses the needs of firms, merchants, and consumers to cut costs while improving the quality of goods and services, and increasing the speed of service delivery (Strader and Shaw, 1997).

To sum up e-commerce is viewed as equivalent to all business related Internet activities such as: gathering market research, providing market intelligence, linking business contacts, posting product and service descriptions, and interacting in business related news groups (Domeisen, 1999). Recently, De-Wulf et al. (2002) develop a reliable model to measure e-commerce effectiveness using the consumer buying process as a framework. The model consists of 7 main stages namely: awareness, navigation, information, transaction, delivery, service, and relationship, the model stages are disaggregated to 25 sub-dimensions.

The above discussion of e-commerce addresses the academic point of view, where academics recognise that e-commerce encompasses a wide range of telecommunications applications with the overall goal of providing sales and services to the customer.

Arguably, practitioners have a different view of e-commerce and may perceive it as mainly buying and selling goods and services via the Internet. This may be quite a narrow perspective and raises concerns that managers may not consider the strategic importance of e-commerce technologies. Hence, they may not invest sufficient funds to fully implement e-commerce applications (Rebello, 1996; and Riggins and Rhee, 1998).

Another perspective of electronic commerce is presented by OECD. The definition below is an example of an international institution's point of view of e-commerce that emphasises both the academics and practitioners perspectives of e-commerce:

*“...Electronic commerce is concerned specifically with business occurring over networks which use non-proprietary protocols that are established through an open standard setting process such as the Internet. The term ‘business’ broadly means all activity that generates value both within a firm (internally) and with suppliers and customers (externally). In this sense it would include internal networks (e.g. Intranets) as well as networks that extend to a limited number of participants (e.g. Extranets). Some of this activity may result in monetary transaction and some will not (OECD, 1999, p.28).*

Academics, practitioners, and international institutions have different perspectives of e-commerce, yet, they all agree upon a narrow definition that includes buying and selling over the Internet, as well as conducting monetary transactions electronically.

### **3/2 COMMUNICATION VIA THE INTERNET**

#### **3/2/1 Electronic Mail**

Email is defined as a “computer-based message that can be electronically manipulated, stored, combined with other information and exchanged with other computers” (Stevens and McElhill, 2000, p.272). No wonder the use of email has changed the way communication is carried out within companies (McBride, 1996). For example, firms can use their email to send documents to their sales force, picture files of new products, sales reports or pricing charts (Avlonitis and Karayanni, 2000). As a consequence, the firms are saving large amount of time and money, besides greatly reducing the need for expensive face-to-face meetings (Sterne, 1995; Knight and Cavusgil, 1996; Collin, 1997; and Howe, 2000). Thus, email enables the

firms to lower their communication costs, and minimises the time and effort needed to deliver communications, which makes the Internet a valuable medium particularly for firms engaged in international trade (Gallagher, 1999).

Compared with regular mail, the telephone or the use of the telegram, electronic mail is a fast and cost effective mean of communicating globally. Thereby, it is one of the more controversial mediums for marketing today, as it allows individuals and/or businesses to reach anyone connected to the Internet, no matter how far away, at no extra cost, at the touch of a button (livinginternet.com; Sterne, 1995; Leiner et al., 1997; Lenug, 1998; and Abraham, 2001).

Email is changing the nature of the relationship firms have with their customers and/or suppliers from “one of reactivity to one of involvement and dialogue” (Kalakota and Whinston, 1997, p.331). It is the quickest and easiest way to keep in touch with both groups by sending updates of manuals, new information on a product, or even software that allows a virtual demonstration of the product (Wilson and Abel, 2002). Moreover, email links to company Web pages allow the development of online consumer panels, where feedback from the panels can instantly be communicated to the appropriate staff, thereby giving the customers one more method to communicate with the firm (Hoffman et al., 1995; Sterne, 1995; Wigand, 1997; Auger and Gallagher, 1997; Hamill and Gregory, 1997; and Wilson and Abel, 2002). Email also allows firms to organise their after sales service in a more attractive and efficient way and to support their customers while they make their buying decision (Sieber, 1996).

### **3/2/2 Intranet and Extranet**

The emergence of the Intranet and the Extranet in recent years has transformed the way firms manage and distribute information (Chen et al., 1998). The Intranet and the Extranet allow cross-functional coordination within the firms by keeping in touch with their offices and/or employees via the Intranet, and collaborating with their suppliers, vendors, partners, and customers via the Extranet. Such cross functional coordination has an important influence on the firm’s innovation and marketing effectiveness (Papows, 1998).



### **3/2/2/1 Intranet**

The term 'Intranet' describes a private computing network internal to an organisation, that uses World Wide Web technology to allow only authorised users/employees online access to a company's information resources through individual desktop computers (Ellsworth and Ellsworth, 1997; Auger and Gallagher, 1997; Chen et al., 1998; Howe, 2000; and Curry and Stancich, 2000). The 'Intranet' "provides global communication within the corporate environment internally rather than externally" (Curry and Stancich, 2000, p.250).

The advantages of the 'Intranet' include the rapid dissemination of up-to-date information among employees in a much more cost-effective way when compared with older means (e.g. memos and newsletters), the reduction in duplication of information, improved communication flows, knowledge enhancement as a result of having more direct access to information, the sharing of best practice and encouragement of innovation through the sharing of preliminary drawings, designs and data online via a virtual meeting, where each participant can be at his or her own desk discussing issues via the phone or using online telephony. This means that less time is spent in face-to-face meetings and faster research and development (Auger and Gallagher, 1997; Baker, 1997; and Curry and Stancich, 2000).

Despite these benefits the potential contribution of the Intranet to business has not been fully exploited yet. There are problems associated with the use of the Intranet which include the control of the contents on the Intranet, ownership of data and information, control of access to different levels of information, information overload and unofficial use of the Intranets (Healy and Iles, 2002).

### **3/2/2/2 Extranet**

An Extranet is a selective extension of a firm's Intranet that uses the Internet protocols and the public telecommunication system to securely communicate and share information with external partners such as suppliers, vendors, or customers (Chen et al., 1998; OECD, 1999; and Healy and Iles, 2002). Hence, the aim of using the Extranet is to promote an open, interactive and collaborative working environment between the firm and its external partners (Healy and Iles, 2002). Firms

can use the Extranet in several ways such as for the exchange of large volumes of data using Electronic Data Interchange (EDI), sharing product catalogues with wholesalers, collaborating with other companies on joint development efforts, jointly developing and using training programmes with other companies, and sharing news of common interest with partners (Anonymous [Marketing News], 1997). The Extranet enables direct contact with customers, which allows marketing communications managers to engage with customers in one-to-one conversation, hence, provides them with market information as well as with demographic and psychographic data (Van Doren et al., 2000).

The Extranet is a powerful tool for market research that provides the firms decision makers with the information needed to develop marketing strategies that better match their customers needs (Sieber, 1996; and Paul, 1996). However, there is evidence that the Extranets are not widely used, therefore, their contribution are not yet fully realised (Perry and Bodkin, 2002; and Healy and Iles, 2002).

### **3/3 THE INTERNET – MARKETING STRATEGY RELATIONSHIP**

The wide spread use of the Internet in marketing in the last decade reflects the agreement in the literature about the Internet efficiency as a marketing and advertising medium (Hoffman et al., 1995; Hoffman and Novak, 1997; Alba et al., 1997; and Sharma, 2002). The Internet is an ‘additive’ marketing channel where its strength is perceived as a complementary resource rather than a ‘substitutive’ for the firms’ traditional resources, activities and ways of competing (Swatman, 2000; and Porter, 2001). Some authors argue that marketing managers should integrate the Internet into their marketing strategy and be prepared to deal with the transition from the traditional approach in marketing to the one in cyberspace (Collin, 1997; Avlonitis and Karayanni, 2000; Van Doren et al., 2000; and Deeter-Schmelz and Kennedy, 2002). Paul (1996) and Avlonitis and Karayanni (2000) suggest that firms who do not incorporate the Internet into their marketing strategy will be at a competitive disadvantage.

### **3/3/1 The Internet and Product Type**

Particularly for marketing to consumers some types of products/services are more suitable to be marketed on the Internet (Peterson et al., 1997; Poon and Joseph, 2000; and Chaffey et al., 2000). For instance, digitisable products (CD, music, newspapers and magazines) are particularly appropriate for electronic markets, as they are taking advantage of both market and distribution mechanisms, resulting in very low transaction costs, and minimising of time needed to fulfil products orders (Strader and Shaw, 1997).

Peterson et al. (1997) set out three dimensions for the categorisation of products and services sold over the Internet. Firstly, the cost and frequency of purchase, where the more frequent the purchase and the lower the cost, the less likely the products are to be sold online. Secondly, when a product or a service has an intangible value in the marketplace such as flight tickets, the advantage of the Internet as a transaction and distribution medium is likely to be higher. Finally, as long as the products or services can be differentiated, then the Internet can serve as an effective segmentation mechanism to guide buyers to their ideal product or service. Therefore, sellers can control the fit between the buyers' requirements and product characteristics.

Lynn et al. (2002) find that products/services with a low purchase risk for the customer are good candidates for the Internet, whereas, high risk purchase products/services are not. Poon and Joseph (2000) investigate the relationship of search/experience goods and tangibility. Where experience goods are those goods whose features can only be evaluated by trying or inspecting the product, while the features of search goods can be evaluated based on externally available information (Poon and Joseph, 2000, p.22). The authors identify four categories of products, namely experience goods/high tangibility, experience goods/low tangibility, search goods/high tangibility and search goods/low tangibility. The results indicate that product characteristics are insufficient to understand the benefit of Internet commerce among small businesses and that other areas such as characteristics of the business sector and value chain should be studied. Peterson et al. (1997) and Poon and Joseph (2000) use different products/services classifications and the findings lead to the conclusion that different categories of products/services may lead to

different results and that further investigation is needed to clarify the relationship between product characteristics and the Internet.

### **3/3/2 The Internet and Promotion**

#### **3/3/2/1 World Wide Web (WWW)**

The introduction of the Web has made the Internet a mass phenomenon (Kalakota and Whinston, 1996, 1997; Nua Internet Surveys; and GVU, 1998). The WWW has turned the Internet into a global, distributed and hyper-linked multimedia database, supplying people with useful information without the need for detailed technical knowledge (Sterne, 1995; Zwass, 1996; Collin, 1997; Frost and Strauss, 1998; Lymer et al., 1998; Van Doren et al., 2000; and Benners-Lee, 2001). Burstein and Kline (1995) refer to the Web as the great marketing superhighway.

Today the World Wide Web is the most dominant commercial use of the Internet, and is regarded by users as 'indispensable technology' (Gray, 1996; and GVU, 1998). Firms have developed Web sites full of information, pictures and product descriptions (Sterne, 1995). However, as more firms use the WWW, the less having a Web site will be a competitive advantage (Lituchy and Rail, 2000).

As a direct marketing channel, the Web supports two-way communication between the merchant and the consumer which could not be found when using other traditional media (Avlonitis and Karayanni, 2000). It also provides a direct interactive shopping channel without a geographical and temporal limit, which facilitates customer's support as well as market activities to a greater degree than traditional media (Hoffman and Novak, 1994; Hoffman et al., 1995; Kalakota and Whinston, 1996, 1997; Poon and Jevons, 1997; and Ernst and Young, 1998).

The WWW is non-linear by nature and by design, the user can jump from topic to topic and site to site all over the Web, and as a result, individual readers will not follow the same path to acquire the necessary information (Ellsworth and Ellsworth, 1997). The WWW is also a pull medium not a push one, thus it offers information to people who are willing to navigate properly and pull it out. Television for instance, is perceived as a push medium, where viewers are receptive to the broadcast

information and they have less control over it than the users of the WWW who have to navigate and search the Web, and may have to try more than one search engine to find what they want. Different authors argue that the better looking, the more appealing to different segments, the easier to navigate, and the more fun and more informative the Web site is, the more likely it is that people will visit the site and return (Sterne, 1995; Auger and Gallagher, 1997; Hamill, 1997; Bennett, 1997, 1998; and Higley, 1998). Liu and Arnett (2000) describe a successful Web site as the one that attracts customers, makes them feel the site is trustworthy, is dependable, reliable and generates customer satisfaction. There is evidence that a Web site that adds value, is highly interactive, is customised to the audience, contains information needed to make a buying decision, is large and expensive, is also enjoyable and entertaining -, is likely to attract new and repeat customers (Rice, 1997; McCue, 1999; Wilson and Abel, 2002; and Huizingh, 2002). Huizingh (2002) reports that among small Internet start-ups and large firms, a customised Web site have a positive effect on management satisfaction with the Web site and the number of its visitors, Web sites were identified using Yahoo and Dutch yellow pages. Summarising the evidence above, a Web site should be characterised by “constant availability of information, interactivity, efficient transfer of information, individuality and integration of communication and transaction” (Bauer et al., 2002, p.157).

Ainscough and Lockett (1996) develop a typology that presents their personal view of how to make the best out of the WWW. The typology aims to reinforce and tighten ‘firm - customer’ relationship by providing customers with information with respect to the product line, the purchasing process either by buying online or by traditional means of ordering, and providing online customer service. *1) The Interactive Brochure* may contain information about the company, its products and/or services and contact information. Online material has advantages over hard copy brochures for instance, low origination costs, no printing costs and instant correction of errors (Davenport, 1996; Auger and Gallagher, 1997; Hamill, 1997; Bennett, 1997, 1998; Wilson and Abel, 2002; and Carroll, 2002). This type of Web site is suitable for start up firms with limited resources. Because it is easy to set up, is an inexpensive method of rapidly disseminating information world-wide, and

carries relatively low risk (Van Doren et al., 2000). 2) *The Virtual Storefront* is similar to an interactive brochure, besides it allows consumers to purchase items online by completing the required forms, either directly if the product consists of digital assets, or indirectly if it is not digital (Rayport and Sviokla, 1994; Urban et al., 1996; Frost and Strauss, 1998; and Van Doren et al., 2000). 3) *The Information Clearinghouse* is a place where questions about products can be answered online, meetings and conferences can be held online at a very low cost to the sponsor. Current technology allows participants to have real time video and audio interaction via the Internet. Finally, 4) *The Customer Service Tool* where firms can set up a frequently asked questions (FAQ) page on their Web site, this could deal with questions about common technical problems, and their solutions which are available to customers 24hours/7days a week (Sterne, 1995; and Ainscough and Lockett, 1996). Also, questions could be answered by providing an email loop (Sterne, 1995). In this way, the Web offers firms the opportunity to nurture loyalty and establish enduring, and more personalised relationships with customers, which is the basis of customer relationship management (Herbig and Hale, 1997; Coltman et al., 2001; and McGowan and Durkin, 2002).

Ainscough and Lockett (1996) say that the typology categories are independent. But the typology does not address quality or ease of use issues and how well firms implement the use of Web pages. Mousley and Simintiras (2001) put forward key success factors for the effective management of Web strategy illustrated in Table 3.1. They classify Web management success factors under the following major categories: the company's outlook and orientation, information content, Web site design, quality of service, publicity and promotion, and maintenance and monitoring. Each category includes a number of pertinent items, which if taken into consideration, will according to the authors, guarantee having an effective Web management and strategy.

It seems that the key success factors presented by Mousley and Simintiras (2001) are a comprehensive version of Ainscough and Lockett (1996) typology. Mousley and Simintiras (2001) have developed the discussion of Web information content and quality of service in addition to other elements. However, Mousley and Simintiras

(2001) do not directly discuss whether or not all the factors in their framework should be implemented for the successful management of a Web site.

**Table (3.1) Key Success Factors for Effective Web Management and Strategy**

Success areas	Company's outlook & orientation	Information content	Web site's design	Quality of service	Publicity & promotion	Maintenance & monitoring
<b>Items of relevance</b>	Management support for the enterprise.	Clearly written content for the Web.	Clear indication of site content.	Improved customer problem solving.	Traditional advertising.	Site analysis (including search engine listings).
	Long-term outlook.	Sufficient information.	Visual design.	Faster service.	Internet advertising.	Ongoing evaluation of extent to which user needs are met.
	Internet seen as adjunct/means to an end.	Value-added information.	Customers' perceptions of quality of products/services.	Follow-up services to customers.	Integration of online & terrestrial marketing- (Web address on all company literature & trade directories, signature files etc.).	Addition of new content.
	Online & terrestrial marketing not seen as distinct.	Sources of content (re-purposed, purpose made, etc).	Navigation ('information architecture').	Interaction/feedback, email enquiries-quality & strategic use/ quick responsiveness.	Free software, gifts, discounts etc.	Checking & maintenance of links & navigation.
	Strategic approach & goals identified.	Information relevancy.	Well organised hyperlinks.	Allow customers to control entire transaction.	Reciprocal linking.	Hardware & software maintenance.
	Analysis of user needs.	Accurate/up-to-date information.	Customised search functions.	Filtering/access to extra info (avoiding overload while making some feel special).	Listing with engines/directories.	
	Customer-centric service orientation adopted/creation of 'user tasks'.	Ethics/standards.	Multimedia content (considering system speed).		Promotion of security encouraging customer confidence.	
		Information to support business objectives.				



<p><b>Items of relevance (continued)</b></p>		<p>Clear, quick, brief company overview &amp; snapshot.</p> <p>Products/services information (including price).</p> <p>Detailed company information (financials, recruitment etc).</p>		<p>Customised information presentation/profiles.</p> <p>Track order status.</p> <p>Simplicity of online payment.</p> <p>Confidentiality of customer information.</p> <p>Playfulness/pleasure.</p> <p>Technical considerations-system, server quality (speed), security.</p>		
<p>The above factors have been found in the works of: Liu and Arnett (2000); Clyde (2000); Poon and Swatman (1999); Simeon (1999); De' and Mathew (1999); Angehrn (1997); Evans and King (1999); Griffith and Palmer (1999); Pant and Hsu (1996); Wan (2000); Lin and Lu (2000); Hamill (1997); Huizingh (2000); Herbig and Hale (1997); Greaves et al. (1999); Web and Sayer (1998); Bayne (2000); Lynas (2000); Seybold and Marshak (1998); Emery (1997); Hoffman and Novak (1996); Bauer and Scharl (2000); Venkatraman (2000).</p>						

Source: Mousley and Simintiras (2001, p.4).

To sum up, “the Web enables firms to provide detailed product information, establish a presence in new markets, enhance their corporate image, encourage consumers involvement in developing their products, establish interactivity with the consumer and handle customer complaints and queries” (Berthon et al., 1996).

Recently, Adam et al. (2002) have compared the results of three studies carried out in UK, New Zealand and Australia which explored the commercial use of the Internet. The results indicate that UK firms outperform their counterparts in New Zealand and Australia with respect to, the strategic use of the Internet to gain competitive advantage, improve cost-effectiveness, and other aspects of relationship management like: handling customers’ queries promptly, maintaining relationships with customers, and providing online customer service. The authors state that the reason for these results is that UK firms may have greater use of the Internet than Australian and New Zealand firms.

With respect to Web sites that are used for export marketing, Bennett (1997) indicates that UK exporters look positively on benefits provided by the Internet, particularly in areas such as market research, image enhancement, cost reduction and improve sales. These benefits are similar to those reported previously by Sterne (1995), Quelch and Klein (1996) and Ellsworth and Ellsworth (1997). However, UK exporters without Web sites believe that the Internet is technically sophisticated and expensive, and above all they perceive personal contact as opposed to electronic contact with customers as highly valuable.

In a later study, Bennett (1998) investigated UK and German perceptions of the contributions of their Web site to their firm’s export marketing activities, and their overall level of satisfaction with the Internet as an international marketing tool. Both groups perceive the following major barriers to exporting: transport and documentation problems, exchange rate fluctuations, import restrictions, getting paid and concerns about intense competition in foreign markets. However, compared with UK exporters, German exporters are less concerned about the expenses of exporting, understanding foreign languages, psychic distance, foreign representation and the need to recruit skilled export staff. Also, they adopt a more structured and

professional approach to Internet management and use, and are more positive about the potential contributions of the Web to export marketing. Furthermore, they are more likely to expand their Web sites activities compared to UK firms. However, the author concludes that German and UK exporters with Web sites perceive traditional export barriers as less problematic than before.

McCue (1999) studied the experiences of 15 small firms' exporters in the US as they marketed their products and services on the Internet. Help was provided to the firms to set up their Web sites and monitor them for one year. After facing lots of starting difficulties such as decreasing sales, low number of Web visitors, and lack of financial resources to market the site, firms that remained in the study accomplished their objectives namely: get new business, attract more customers, and penetrate new markets.

Bennett (1997, 1998) and McCue (1999) give further support to Oviatt and McDougall's (1999, p.29) argument that "the Internet may greatly decrease the time to internationalise and may increase the level of internationalisation among the smallest businesses of the twenty first century". This implies that the earlier the small businesses adopt the constituent technologies of the Internet (e.g. email, Intranet, Extranet, access to the WWW), the faster they will reap the benefits of internationalisation such as economies of scale, increased market share, and building good customer relationships (Kleindl, 2000).

Foreign language Web sites have been investigated in several studies, Pitis and Vlosky (2000) find that American wood exporters multilingual Web sites (i.e. French and Japanese) were no more successful than those with English language sites only. This result contradicts MacLeod's view that "[t]he idea that English as the language of the Internet, and hence of e-commerce, is flawed.....while as many as 98% of e-commerce sites are believed to be in English, over half the people using the Web don't speak it.....firms wishing to trade globally may have to consider providing content in a number of languages" (MacLeod, 2000, p.37).

Also, Shannon (2000, p.66) emphasises that “the businesses that first acknowledge that the ‘e’ in “e-commerce” does not stand for “English” will be the ones that succeed in capturing the market of non-English speakers accessing the Web”. Therefore, if firms aim to attract new customers from different geographic regions, they should communicate with their customers in their home language (Mousley and Simintiras, 2001; and Wilson and Abel, 2002). Further, there is evidence that by 2004, almost 50% of all online sales will be outside the US, thus businesses that fail to prepare for the new global economy will certainly be left behind (MacLeod, 2000; CyberAtlas, 2000b; Shannon, 2000; and Mousley and Simintiras, 2001).

### **3/3/2/2 The Internet and Advertising**

Traditionally, advertising has been one of the major forms of communication between the firm and its customers (Paul, 1996). Today, with the introduction of the Internet, a global advertising communication environment has emerged (Yang, 1997). However, advertising still has the same principal functions in cyberspace as in the physical market place (Perry and Bodkin, 2002), namely to create awareness, to communicate benefits, to promote the trial of products, and encourage customers to make a purchase decision.

The Internet provides the advertising industry with new opportunities as it serves as a catalogue of marketing messages as well as advertising in an interactive fashion (Paul, 1996; Yang, 1997; and Wigand, 1997). Such interactivity, sometimes called ‘interactability’, increases customers’ involvement and acts as a feedback loop between the customers and the firm, resulting in more effective advertising (Levin, 1993; and Wigand, 1997). This allows firms to identify individual customer’s needs which perfectly suit the growing international demand to customise products (Oviatt and McDougall, 1994). This “mass customisation and market-of-one process allows marketers to develop tight customer relationships” (Peppers and Rogers, 1996), and helps firms to retain their customers as long as their needs are met (Kleindl, 2000). Such customisation is almost impossible though when using traditional advertising channels (Kleindl, 2000), therefore, if firms wish to participate in market to one process, particularly SMEs with their limited resources, they need to have a presence

on the Internet (Wigand, 1997). This will add new impetus to the debate on standardisation versus customisation (Yang, 1997; and Wigand, 1997).

In the past, opponents of advertising standardisation have concentrated on differences among consumers in areas such as: language, culture, traditions and habits, while today where the English is the dominant language of the Internet there are fewer apparent differences between consumers, which evidently makes advertising standardisation more appealing then ever (Yang, 1997).

Poon and Jevons (1997) find that when marketers use the same promotional campaigns in traditional media on the Internet, they always achieve disappointing results. An explanation for this is that the Internet users have different demographic characteristics and that marketers should regard the Internet as an alternative to real world environments rather than a simulation of the real world (Gupta, 1995; and Hoffman and Novak,1997). Compared to traditional advertising, interactive advertising allows consumers to access a variety of product information and search for the product they wish to buy (Ray, 1985; and Winski, 1993). Because of the global reach of the Internet, advertising can target larger markets in a more cost-effective way than traditional tools (McCue, 1999). Small and large firms can use the Internet to advertise their products and services 24-hours a day, however, Paul (1996) argues that there are so many Web sites on the Internet and that potential customers may not be able to locate the firms particular Web site. Hence, a firm may consider promoting its products using both traditional media as well as the Internet (Davenport, 1996; and Higley, 1998).

### **3/3/3 The Internet and Price**

The literature on Internet and price has to date focused on electronic markets place (e-markets) which as Hamid and Baharun (2002) point out is rapidly growing. Bakos (1991) defines an electronic market as an “inter-organisational information system that allows the participants buyers and sellers to exchange information about prices and product offerings”. The suggestion is that there is more price competition and greater choices for buyers in e-markets (Smith et al., 1999; The Economist, 2000;

and The New York Times, 2000). E-markets allow firms to reach large groups of customers at low costs, provide buyers with an additional sales channel, and widen the markets and increase efficiencies (Benjamin and Wigand, 1995; Spar and Bussgang, 1996; and Strader and Shaw, 1999).

E-markets make comparing the prices of a broad range of goods easier online for customers than by traditional means (Strader and Shaw, 1997). The low search costs associated with e-markets encourage the entry of new businesses creating increased competition and pressure to sell to consumers at lower prices (Strader and Shaw, 1997; Peterson et al., 1997; and OECD, 1999). As consumers become more aware of price differentials, there is likely to be a move to more price standardisation across borders or at least a narrowing down of price differences (Benjamin and Wigand, 1995; Quelch and Klein, 1996; Hamill and Gregory, 1997; and Strader and Shaw, 1997).

Although consumers benefit from the low prices and costs associated with e-markets, their decision making process may become more complicated (Strader and Shaw, 1999). Jarvenpaa and Todd (1997) describe the different types of risks encountered by buyers as economic, performance, personal and privacy risks. For instance, perceived economic risk is higher when buying products via e-markets because consumers cannot be assured that they have value for money until they receive the products they have ordered (Peterson et al., 1997). Perceived performance risk emerges when the buyers do not have the opportunity to try the product/service prior to purchase, therefore, do not know if the purchase will meet their expectations (Strader and Shaw, 1997; and Peterson et al., 1997). Personal and privacy risks concern the theft of personal and private information collected from consumers shopping online such as credit card numbers (Strader and Shaw, 1997; and Jarvenpaa and Todd, 1997). Consumers acknowledge that these risks are barriers to buying online (GVU, 1998). However, significant progress is being made to develop standards for secure transactions via e-markets (Poon and Jevons, 1997; Jarvenpaa and Todd, 1997; Gogan, 1997; and Samiee, 1998).

However, there is a contrary argument that e-markets will lead to higher prices. The OECD (1999) put forward two reasons why shopping online will lead to higher prices. Firstly, online shopping encourages impulse and spontaneous purchasing that allow the merchant to sell at a higher price. Secondly, online merchants do not want to lose their traditional distribution channels, therefore, they will charge the same price despite the fact that their online costs are lower than selling via traditional means. Also, Grover and Ramanlal (1999) suggest that customisation, personalisation, and bundling strategies lead to higher switching costs, hence, providing firms with the potential to increase prices.

Baker et al. (2001) propose that the value of the Internet lies not in lowering prices, but in optimising them. Firms can take full advantage of the flexibility provided by the Internet, by responding to the fluctuations in supply and demand and charging prices tailored to particular market segments.

Clearly, there are doubts that the Internet will always lead to lower prices. Yet, marketers may be forced to lower prices if low search and entry costs create intense competition, hence, putting pressure on firms to maintain their profit margins (Sharma, 2002). However, shopping online is still in its infancy and much of this thinking is based on early stages of research.

### **3/3/4 The Internet and Distribution**

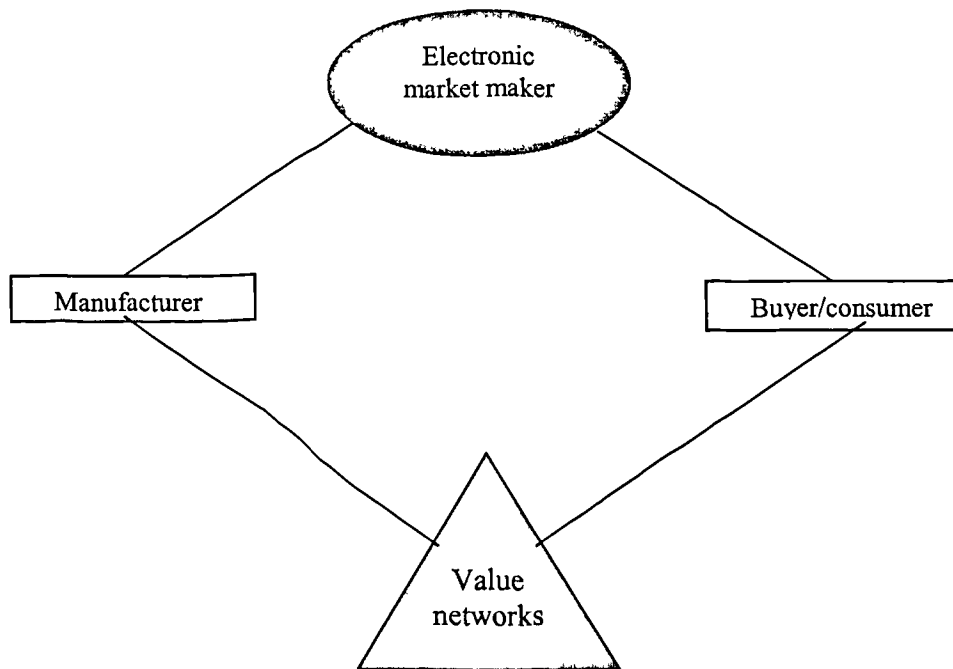
The effects of the Internet on distribution are complex and varied and not yet fully understood. Traditionally, distribution channels play a significant role in international business. Today, the growth of the Internet is changing the role of the intermediaries where under certain circumstances it is possible that intermediaries become obsolete, a process called 'disintermediation' (Malone et al., 1987; Benjamin and Wigand, 1995; and Strader and Shaw, 1999). However, while the Internet will replace certain elements of the value chain, the complete elimination of traditional intermediaries is likely to be rare (Porter, 2001, p.73). The Department of Trade and Industry 'DTI' (2001) in a recent international benchmarking study indicates that while Web site adoption within SMEs is increasing, the main use of Web sites is for promotion and not for e-commerce.

There is a strong belief that the special communication characteristics of the Internet are creating new channels such as, interactive service providers (ISPs), online better business bureaux, and automated ordering services, which represent a transformation in some traditional market channels, this process is called 'reintermediation' (Sarkar et al., 1995; Poon and Jevons, 1997; Samiee, 1998; OECD, 1999; Shaw and Strader, 1999; Adelaar, 2000; Klein and Selz, 2000; Palmer et al., 2000; Schmitz, 2000; and Scott, 2000).

### 3/3/4/1 The Debate of Disintermediation versus Reintermediation

Zwass (1996) and Wigand (1997) argue that one impact of using the Internet is to remove the middleman leading to 'disintermediation'. This is defined as the disappearance of the role of an intermediary such as, a dealer, or a broker, or simply the displacement or elimination of market intermediaries, hence, enabling direct trade with buyers and consumers without agents (see Figure 3.1).

Figure (3.1) "Disintermediation" of the Market Hierarchy



Source: Wigand (1997, p.5).



Obviously, the existence of the Internet allows the manufacturers to efficiently interact with individual and potential customers, given the lack of distance and time constraints, producers can internalise the transaction functions previously handled by local intermediaries in geographically diffused markets (Peterson et al., 1997).

In the view of Coltman et al. (2001, p.63) disintermediation is not about the generation of profits, but rather the difficulty of working out how to move into a new distribution channel without jeopardising existing channel relationships.

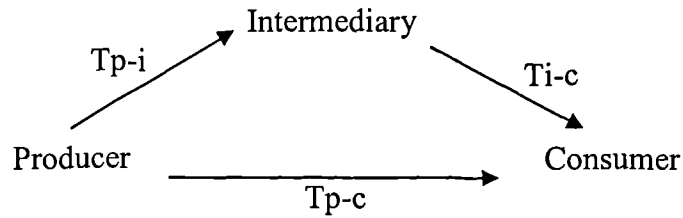
On the other hand, intermediaries play an important role in exchange by limiting the risk to the trading parties, creating economies of scale, and offering functions not easily provided by the exporter (Sarkar et al., 1995). Hence, it is possible that intermediaries who are bypassed by the use of e-markets will resist the system and might be able to unite against the initiating firm, as a consequence, a firm would risk the loss of the majority of its business (Lee and Clark, 1996).

Clearly, the Internet may reinforce the position of traditional intermediaries or promote the growth of new types, put differently 'disintermediation' can not be generalised to all intermediaries services (Schmitz, 2000).

For instance, Quelch and Klein (1996), Hamill and Gregory (1997) and Libersco, (1997) argue that the traditional role of intermediaries has changed in the Internet era only in respect to implementation, and that the strength of the Internet lies in its ability to organise and provide end users with superior information. Further, Bakos (1991), Zwass (1996), Barling and Stark (1998) and Scott (2000) agree that new roles of intermediaries have emerged, for example: 'infomediaries' whose major function is discovering prices, aggregators, match-makers and bringing together buyers and sellers in a specific industry, and third-party guarantors who provide trust based relationships.

As mentioned earlier, the 'disintermediation' phenomenon is associated with low transaction cost, high speed and responsiveness of transactions (see Figure 3.2) (Sarkar et al., 1995; and Prasad et al., 2001).

**Figure (3.2) Disintermediation and Transaction Cost**



Source: Sarkar et al. (1995).

Note:  $Tp-c$  (transaction cost between producer-consumer).

$Tp-i$  (transaction cost between producer-intermediary).

$Ti-c$  (transaction cost between intermediary-consumer).

In a traditional market,  $(Tp-c)$  is usually bigger than  $(Tp-i + Ti-c)$ , therefore, the use of intermediaries is necessary to facilitate producer - consumer contact. While in today's e-market, researchers assume that bypassing intermediaries will reduce transaction costs to zero, and that  $(Tp-c)$  will be smaller than  $(Tp-i + Ti-c)$ , resulting in 'disintermediation' (Malone et al., 1987). Sarkar et al. (1995) and Adelaar (2000) argue that there are different classes of transactions and that not all of them will be affected in the same way, if at all, by e-commerce. Four possible sets of effects on transaction costs are illustrated in the following matrix (see Figure 3.2.1).

**Figure (3.2.1) Disintermediation and Transaction Cost**

		Pre-Internet	
		$Tp-c < Tp-i + Ti-c$	$Tp-c > Tp-i + Ti-c$
Post Internet	$Tp-c < Tp-i + Ti-c$	Internet supplements direct market. 4 Internet direct sellers.	Disintermediation. Threatened intermediaries. 1
	$Tp-c > Tp-i + Ti-c$	Extra-intermediation cybermediaries. 3	Reintermediation supplemented intermediaries. 2

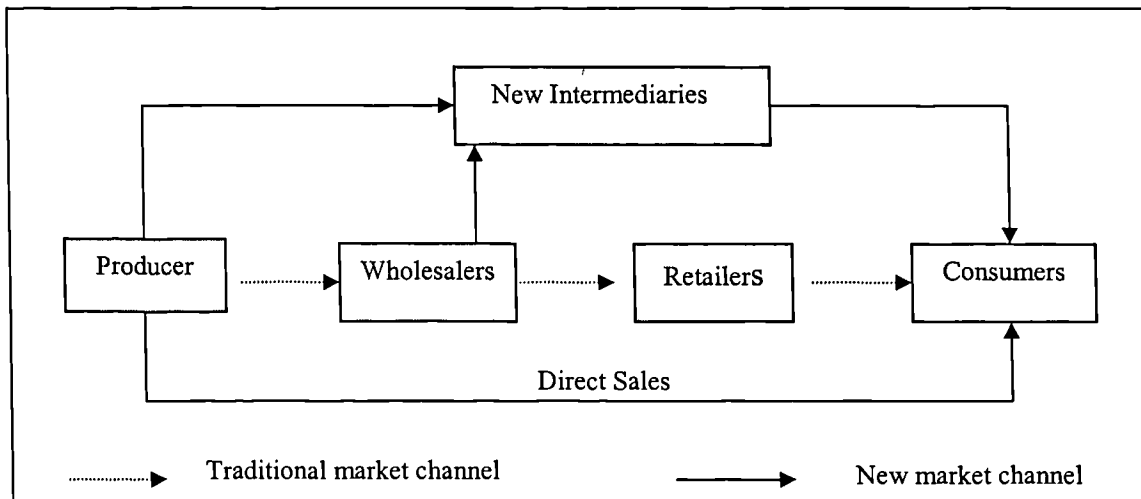
Source: Sarkar et al. (1995).

The matrix starts with the 'disintermediation' process in the first quadrant, which is the result of the use of e-commerce where the transaction cost of the producer-consumer in post Internet use has decreased compared to pre Internet use. The second quadrant is looking at the 'reintermediation', where the transaction cost of producer-consumer is the same in post and pre Internet use, therefore, restructuring the intermediaries' original roles and create great dependency on them to cope with the introduction of the Web. Then in quadrant three where transaction cost of producer-consumer is greater in post Internet relative to pre Internet, hence, allows 'cybermediaries' to emerge and to perform completely new roles relative to the traditional ones. Finally, in quadrant four transaction cost of producer-consumer in pre Internet is low as the one in post Internet, meaning that the Internet complements and adds to the existing distribution and communication strategies rather than eliminates or substitutes the traditional ways (Hymers, 1996).

It should be noted that the new types of intermediaries have value whether created by 'reintermediation', or are totally new intermediaries, 'cybermediaries'. These intermediaries can facilitate product search, evaluation and distribution in the form of virtual malls, and also provide packaging and enhancement of information based goods (OECD, 1999).

Transformations are taking place in the retail market following the introduction of the Internet and e-commerce (Lee and Clarck, 1996) (see Figure 3.3). The Internet enables some producers to market directly to consumers with limited intermediation, giving support to the situation demonstrated in quadrant one and two in Sarkar et al.'s (1995) matrix, where both disintermediation and reintermediation phenomena were encountered. On the other hand, it may lead to an increased number of new intermediaries or may complement the existing distribution infrastructure, thus again confirming Sarkar et al.'s (1995) work particularly with respect to the situations in quadrant three and four in the foregoing matrix (cybermediaries and Internet supplement direct market respectively) (see Figure 3.2.1).

**Figure (3.3) The Impact of the Internet on Industry Value Chain**



Source: Lee and Clarck (1996, p.141).

To sum up, despite the on-going debate about disintermediation and reintermediation, Internet applications are not stand-alone technologies, but must be integrated into the overall value chain, where the Internet enabled e-commerce can cause major transformations in the traditional role of the distribution channels (Porter, 2001). These changes will include bypassing some intermediaries, or restructuring of their original role, or creating completely new cybermediaries which supplement the traditional channels.

### **3/4 THE INTERNET, E COMMERCE AND SME INTERNATIONALISATION**

SMEs are rapidly recognising the importance of the Internet in their day-to-day business, and they are investing in a more technologically advanced commercial environment (OECD, 1999). Firms with less than 500 employees spent over \$200 billion on the technology in 1998, which represent over five times as much spent by larger companies (OECD, 2000). Nevertheless, the DTI (2001) study finds that although the Internet connection rates are high among UK SMEs, few of them are actively exploiting the Internet as a mechanism for improving business performance.

### **3/4/1 The Internet and SME Performance**

There is evidence in the relevant literature of an existing relationship between the adoption and use of the Internet and SME performance. A study by the OECD (2000) establishes a positive association between SMEs growth and performance and their use of computers and the Internet, particularly among micro businesses. The OECD also observes that SMEs who are using the Internet are more dynamic in terms of turnover, profitability, investment and job creation. Smith (1999) also finds some association between the level of IT usage and better performance in Scottish firms. Also, Liu and Barrar (2002) assert that level of investment in computer-based manufacturing technologies (CMTs) is positively correlated with UK manufacturing firms' financial performance. Bharadwaj (2000) observes a positive association between superior IT capability and superior performance in US firms. Finally, Avlonitis and Karayanni (2000) and Prasad et al. (2001) report an indirect effect of the Internet on firms' export performance whether via its integration into the firm's marketing technology or via sales management activities.

However, Anonymous (Management Services, 2000), Avlonitis and Karayanni (2000) and Bharadwaj (2000) find that the Internet, information technology and IT investments together have no effect neither on UK SMEs businesses nor on US and Canadian business-to-business profitability. These contradictory views provide support for the view that "there is still a lack of systematic empirical results regarding the role of the Internet vis-à-vis the marketing activities and performance of business organisations" (Avlonitis and Karayanni, 2000, p.442). The inconsistent findings with respect to IT and firm performance may be due to a lack of understanding of the nature of the firm's IT resources and skills and to the fact that investment in IT serves as a surrogate for assessing a firm's IT intensiveness (Bharadwaj, 2000, p.186).

### **3/4/2 The Internet and Firm Size**

Despite the Internet's popularity among businesses, there is still a great deal of confusion about what the Internet has to offer small exporting firms in particular (Ainscough and Lockett, 1996; Auger and Gallagher, 1997; and Samiee, 1998). As

it is the size of a firm that provides the financial resources to acquire new technology and enables spending on innovative activities (Lal, 2002, p.1204). For the SME, the Internet provides access to potentially millions of buyers and sellers who can complete their transactions cheaply, instantaneously and anonymously (Sterne, 1995; and Spar and Bussgang, 1996). Hamill and Gregory (1997) stress that “the Internet provides a low cost gateway to global markets for SMEs exporters”. Subsequently, Lymer et al. (1997) and Pitis and Vlosky (2000) suggest that the Internet will provide new marketing opportunities domestically and internationally. Also, Oviatt and McDougall (1999) argue that the advancement in computer and communication technology may permit younger and smaller firms to internationalise and to manage more complex foreign transactions than in the past.

While investigating the relationship between firms size – measured by number of employees - and the frequency of Internet use among US small firms, Dandridge and Levenburg (1998) find that the larger the firm the higher the rate of Internet use. Firms that are using the Internet more frequently have plans for growth and exporting, usually have a high rate of Web sites and a strong tendency to search for information with respect to competitors. Palvia et al. (1994) examine the relationship between firm size and the use of new technology. The authors find that large firms exhibit significantly higher profile of technology use, implying that SMEs have a lower level of innovation and slower rates of diffusion. Lal (2002) reports a positive relationship between e-business technologies adopted by firms and firm size, although firm size is not clearly defined. Whilst Lymer et al. (1998) observe that large firms with more established business are slower in adopting new technology and are less influenced by the use of the Internet. Interestingly, Brynjolfsson et al. (1994) find that on the long run the use of IT will have an inverse relationship with firm size implying that the more the firm is involved in IT, the less the size of the firm measured by number of employees will be, however, such relation will not be realised before one or two years following the investments in IT. In summary, the Internet has the potential to make firm size irrelevant, as the efficient use of the Internet is available to all firms of all sizes (Bennett, 1998; and OECD, 1999).

### **3/4/3 The Internet and Information**

The Internet is a powerful, global network, allowing customers to access information about products and firms rapidly at no cost (Tiessen et al., 2000). The relatively low cost of setting up a Web site enables small firms to extend their reach worldwide. SMEs can also gain more and easier access to suppliers, government agencies, networking agencies and their competitors, making them more competitive with large firms (Lymer et al., 1997; and Favaretto and Vescovi, 2002). As Hamill and Gregory (1997, p.11) say that “the Internet .....level[s] ... the corporate field thus allowing small players to compete on equal footing with the multinationals and consequently expand market share”. As a result, firms become global players at an early stage of their development (Herbig and Hale, 1997). The Internet enables small firms to have similar appearance to corporate giants and to operate internationally in ways that previously were impossible (Hoffman and Novak, 1994; Paul, 1996; Quelch and Klein, 1996; Auger and Gallagher, 1997; Gogan, 1997; Poon and Jevons, 1997; Knight and Cavusgil, 1997; Oviatt and McDougal, 1999; Dandridge and Levenburg, 1998, 2000; OECD, 1999; and Abraham, 2001).

The Internet is believed to be the fastest growing information source for UK Small exporters (Anonymous, [Works Management], 1998). Young (1995) asserts that export information is a barrier for small firms internationalisation. Relatively, Voerman et al. (2002) indicate that the more information European SMEs collect the better their export performance. The Internet can help exporters with their diverse information needs to successfully enter international markets by identifying potential market demand, distributors, business partners and customers. The availability of such information to exporters influences the decision to internationalise and the speed of internationalisation as well, thus reducing the significance of information as a barrier to exporting.

Further, Jacobsen (1998) recognises the use of the Internet as a communication tool and a source of information among Connecticut SMEs exporters and suggests five key uses of the Internet: 1) the use of email, although security is an issue, and therefore, safeguards should be in place to maintain information confidentiality, 2) the firm’s foreign agents, representatives, or distributors have access to

product/pricing information, 3) as a way of ordering online, particularly for use by agents, distributors, or representatives of the firm, 4) using the Web site as a promotional tool to interest potential customers and agents, and 5) to access market information through sources like foreign directories and Web sites.

Sorensen and Buatsi (2002) provide support to Jacobsen (1998) in a study of Ghanaian exporters who use email to manage day-to-day business and Web pages to promote their firms. They made less use of the Internet for market research and after sales service. Interestingly, some 40% of the exporters surveyed were using the Internet for e-commerce to buy and sell their products electronically.

Tiessen et al. (2000) and OECD (2000) propose that in general SMEs start using the Internet as a communication tool and information source, then consider basic e-commerce activities such as buying and selling, and finally start to conduct banking and financial transactions electronically.

#### **3/4/4 The Internet and Management Characteristics**

Top management characteristics, attitudes and experiences are key success factors in the adoption and implementation of any IT innovation like the Internet (e.g. Rockard and Cresecenzi, 1984; Gagnon et al., 2000; and Chulikavit and Rose, 2000). One aspect of management characteristics such as socio-demographic variables which include age, gender, and level of education have been repeatedly associated with positive computer and work related attitudes in management, psychological, and sociological research (Gattiker et al., 2000). There is evidence that elderly managers in general are slow to adopt new technology, unless they believe there is an advantage in adopting it, particularly when compared to younger managers (Zeithaml and Gilly, 1983; Igbaria and Parasuraman, 1989; and Lynn et al., 2002).

With respect to the level of education, Zeithaml and Gilly (1983) find that early IT adopters have a better education compared to their counterparts, and Hamid and Baharun (2002) find that the level of education is the most important determinant of



the level of awareness of the potential of e-commerce among Malaysian SMEs. However, Lynn et al. (2002) find that the level of education has no impact on the adoption of the Web.

Lymer et al. (1998) investigate the adoption of the Internet and the attributes of the entrepreneur in six case studies of UK SMEs. They find that whoever is responsible for the introduction of the Internet to the firm exhibits entrepreneurial characteristics - being proactive, challenging, innovative and computer literate. Poon and Swatman (1999) also find that Australian small businesses display entrepreneurial characteristics when developing their Internet activities. In this study, entrepreneurship is seen as the ability to create, innovate, bear risk, manage and achieve targets. Finally, Lal (2002) stresses that the entrepreneurs' knowledge and qualifications play a fundamental role in influencing the degree of adoption of ICT.

Turning to the role of personality, Internet and WWW use, Hoffman et al. (2000) find that those with an internal locus of control use the WWW for more years than externals, also they use the WWW for job/work, shopping, research and references, while externals use it for entertainment, time wasting and chat. The authors assert that the locus of control construct is relevant in understanding Web use and activities. Also, Lomax et al. (2002) report that personality is relevant in understanding the adoption of the Internet, and that different types of personality have different perceptions of the Internet and how to use it. In conclusion, Rubin (1993) describes the absence of research into the usefulness of personality in understanding Internet usage, as a missing piece of the media equation.

### **3/4/5 Internet Advantages and SMEs**

Theoretically, the Internet enables SMEs to gain some business advantages in a cost effective way (Poon and Swatman, 1997, 1999). The OECD (2000) reports that SMEs had the following perceptions of the Internet benefits prior to use: strengthening customer relationships, reaching new customers, optimising business processes, creating new products and services, and reducing costs. In practice, the

Internet can help firms to overcome barriers to exporting which have been identified in export behaviour literature (e.g. Bilkey, 1978; Aaby and Slater, 1989; Chetty and Hamilton, 1993; Cavusgil and Zou, 1994; and Styles and Ambler, 1996). Hamill (1997) identifies critical success factors for exporting. These are: finding the right overseas agent or distributor, effective management of the agency/distributor relationship, strong commitment to exporting, international awareness knowledge and orientation, selectivity in market selection, respect for and orientation to foreign customers, export planning and strategy development, fast communications and documentation procedures, effective marketing mix policies, and taking a long term perspective. The Internet's major contribution for SMEs international success (see Table 3.2) lies in ease of communication (e.g. electronic contacts with foreign agents/distributors) and information (e.g. use of online databases, participating in global electronic networks, and access to global information sources).

**Table (3.2) SME's Critical Success Factors and the Internet's Contribution**

Critical Success Factors	Internet's Contribution
<b>Finding the right overseas agent or distributor</b>	<ul style="list-style-type: none"> <li>• Use of online databases and searches to find suitable representation; and /or reduced dependency on agents/distributors through direct selling.</li> </ul>
<b>Effective management of the agency/distributor relationship</b>	<ul style="list-style-type: none"> <li>• Electronic communications to support more traditional forms of collaboration and contact; creation of virtual communities based on mutual trust.</li> </ul>
<b>Strong commitment to exporting</b>	<ul style="list-style-type: none"> <li>• Increase commitment to overseas markets through participation in global electronic networks.</li> </ul>
<b>International awareness, knowledge and orientation</b>	<ul style="list-style-type: none"> <li>• Increase in international awareness, confidence and commitment through access to global information sources, participation in global network communities, inquiries and feedback to WWW site from potential global customers.</li> </ul>
<b>Selectivity in market selection</b>	<ul style="list-style-type: none"> <li>• Significantly simplified through Internet-based export market research resources.</li> </ul>
<b>Respect for and orientation to foreign customers</b>	<ul style="list-style-type: none"> <li>• Closer company/customer relationships through electronic communications, feedback, inter-activity, etc.</li> </ul>
<b>Export planning and strategy development</b>	<ul style="list-style-type: none"> <li>• Utilisation of the Web's potential in strategic export planning.</li> </ul>
<b>Fast communications and documentation procedures</b>	<ul style="list-style-type: none"> <li>• Electronic communications with foreign agents/distributors, customers, partners' governments, etc.</li> </ul>
<b>Effective marketing mix policies</b>	<ul style="list-style-type: none"> <li>• Targeted marketing.</li> </ul>
<b>Long-term perspective</b>	<ul style="list-style-type: none"> <li>• Internet resources supporting the development of longer term export objectives.</li> </ul>

Source: Hamill (1997, p.314).

Engler (1999) argues that one way for SMEs to stay competitive is to use one of the technology strategies identified in her study (see Table 3.3). Like Hamill's (1997) perception of the Internet's contributions in operationalising SMEs critical success factors, Engler (1999) identifies four technology strategies and their advantages. These are: 1) improved customer service, where online systems allow channel members and consumers to have access to the firm's products and inventory information, 2) electronic commerce strategy, which allows SMEs to access larger markets without incurring substantial costs with respect to setting up new distribution systems, 3) customer-relationship management applications, where online communications help SMEs to develop close and enduring relationships with its customers, and 4) increased business-to-business connections, where SMEs can act as a virtual marketing intermediary linking large businesses with very small suppliers. The corresponding advantages of these strategies are based on communication (e.g. online connections between SMEs and its customers) and information (e.g. online access to inventory and supplies). In summary, the thrust of the argument put forward by Hamill (1997) and Engler (1999) is that difficulties in communication and lack of information coupled with limited resources in SMEs are major impediments for their internationalisation.

**Table (3.3) Technology Strategies and their Advantages**

Strategy	Advantages
<b>Improved customer service</b>	Online systems allow channel members and consumers to gain access to product and inventory information.
<b>Electronic commerce</b>	This allows SMEs access to larger markets without the cost of setting up new distribution systems. It also allows the SME to target narrow markets faster than larger competitors. Lower overhead costs can be carried over to lower prices to customers.
<b>Customer-relationship management applications</b>	Online connections between the SME and its customers increase the speed of response and allow for close to instant communication. Linked Extranets allow SMEs to act as virtual partners with other businesses.
<b>Increased business-to-business connections (Extranets)</b>	SMEs can act as a virtual marketing intermediary linking larger businesses with very small suppliers. Online access to inventory and supplies helps control costs.

Source: Adapted from Engler, 1999 (cf. Kleindl, 2000, p.81).

### **3/4/6 Internet Threats and Barriers for SMEs**

#### **3/4/6/1 Threats**

Kleindl (2000) analyses different types of threats facing SMEs that do not have a presence on the Internet. He argues that traditional advantages of SMEs like serving niche markets and having close relationships with customers in the pre Internet era are threatened in today's 'Information Technology' age (see Figure 3.4).

Firstly, SMEs face the threat of entry into their markets by larger firms, because larger firms now have lower entry cost and can target and serve niche markets which used to be seen as not profitable. Larger firms may also enjoy first mover advantages benefiting from economies of scale, capturing market share, and building good relationships with customers.

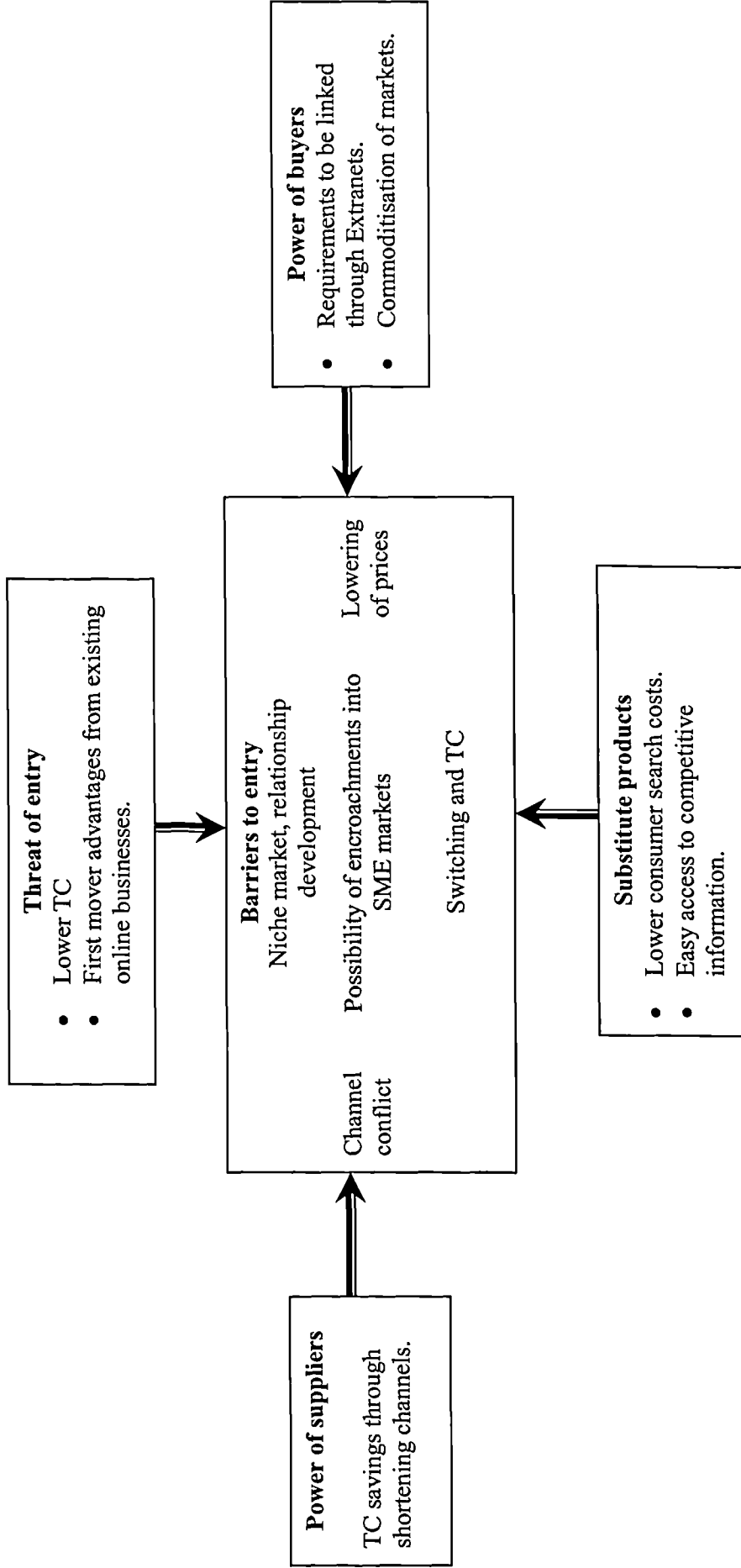
Secondly, with respect to power of suppliers, the Internet incurs some benefits that include lower selling costs, lower transaction costs, access to wider markets, yet transaction savings will result in shorter channels leading to channel conflict (Porter, 2001). Hence, in order not to jeopardise the business with traditional channels some manufacturers will use the Web as a promotional tool only rather than conducting transactions over it.

Finally, low consumer search costs and the easy access to competitive information will decrease the consumers' loyalty to their initial suppliers, as they will be able to choose between suppliers selling same products at lower price, also the low switching cost will enable them to even switch to another supplier (Kleindl, 2000; and Porter, 2001).

However, Manceau and LeNagard Assayag (2002) argue that advantages traditionally attributed to first mover (e.g. costs, technological advance) are less significant with the Internet than with traditional businesses. They explain this by reference to the change in the number of Internet users, the rapid change in technology, and the difficulty of protecting innovations from copycats. Also,

Coltman et al. (2001, p.63) argue that an early adopter of the Internet does not guarantee maintaining his/her position as the market evolves. They add that information technologies by themselves will not produce sustainable competitive advantage, where the first mover has failed to build a defensible position, the early follower is more likely to be well positioned to exploit his/her existing resources and core competencies.

**Figure (3.4) Information Technology Base Threats to Traditional SMEs**



Source: Klindell (2000, p.77), adapted from Michael E. Porter, "Industry Structure and competitive Strategy: Keys to Profitability," Financial Analysis Journal, July-August 1980, p.33.

### 3/4/6/2 Barriers

Although the Internet is removing barriers that traditionally impede SMEs internationalisation, it is likely that the dynamics of e-markets will create limitations that may prevent SMEs from expanding their business (Auger and Gallagher, 1997, OECD, 1999; and Turban et al., 2000). Venkatraman (2000) argues that for SMEs to effectively utilise the Internet and improve export performance relies on the availability of human, technological, and financial resources. Chaston and Mangles (2002) argue that SMEs have to develop distinctive competencies and suggest that a 'resource-based view' of the firm may provide the basis for assessing the ability of SMEs to exploit the Internet as a *route* through which they enhance their performance in cyberspace markets.

Studies have highlighted a number of barriers to the adoption and use of the Internet and e-commerce among SMEs such as, lack of experienced IT staff and/or management interested in information technology, access problems, negative perceptions towards the use of the Internet like cost and security concerns with Internet-based transactions, lack of financial resources needed to develop electronic strategies, and lack of the awareness of the extensive benefits of e-commerce (Hamill and Gregory, 1997; Bennett, 1997; OECD, 1999; 2000; Turban et al., 2000; Anonymous [Management Services], 2000; Chaston et al., 2001; Dunt and Harper, 2002; Hamid and Baharun, 2002; and Sorensen and Buatsi, 2002).

This brief review of literature on the Internet and international business supports Samiee's (1998 p.424) view that the "conceptual and empirical evidence regarding the role and the impact of the Internet in business and exporting is quite scant". Needless to say, businesses have become rapidly aware of the Internet's potential impact and the need to adapt their strategies to take advantage of its potential (Sashi and O'Leary, 2002). However, this *lacuna* is only just beginning to be addressed and research is still at an early stage and most studies only report on how the Internet is used, as Hoque and Lohse (1999, p.393) say, "somewhere between the hype and the hope lies the new frontier of interactive marketing on the Internet and



various online services”. Wider issues including the impact of the Internet on export marketing strategy and export performance are as yet largely unexplored.

### **3/5 INTERNATIONALISATION THEORIES**

This section discusses the main theoretical foundations underpinning this research. The theories and phenomena reviewed are transaction costs, the Uppsala model, Innovation models, the ‘born global’, ‘early international’, and ‘born-again global’, the network perspective, and the Resource Based View (RBV). The rationale behind discussing these particular theories and phenomena is threefold. As delineated by Coviello and McAuley (1999, p.243) “philosophically, the SME literature has evolved to now encompass: 1) the positivist’s analysis of transaction costs and structural market imperfections in the context of international investment, 2) the modern empiricist’s examination of managerial learning and organisational commitment in the process of international expansion, and 3) the relativist’s view, recognising the potential influence of formal and informal network relationships on internationalisation”. Also, the RBV has become an influential theoretical perspective in recent international business research (Peng, 2001, p.803).

#### **3/5/1 TRANSACTION COSTS THEORY**

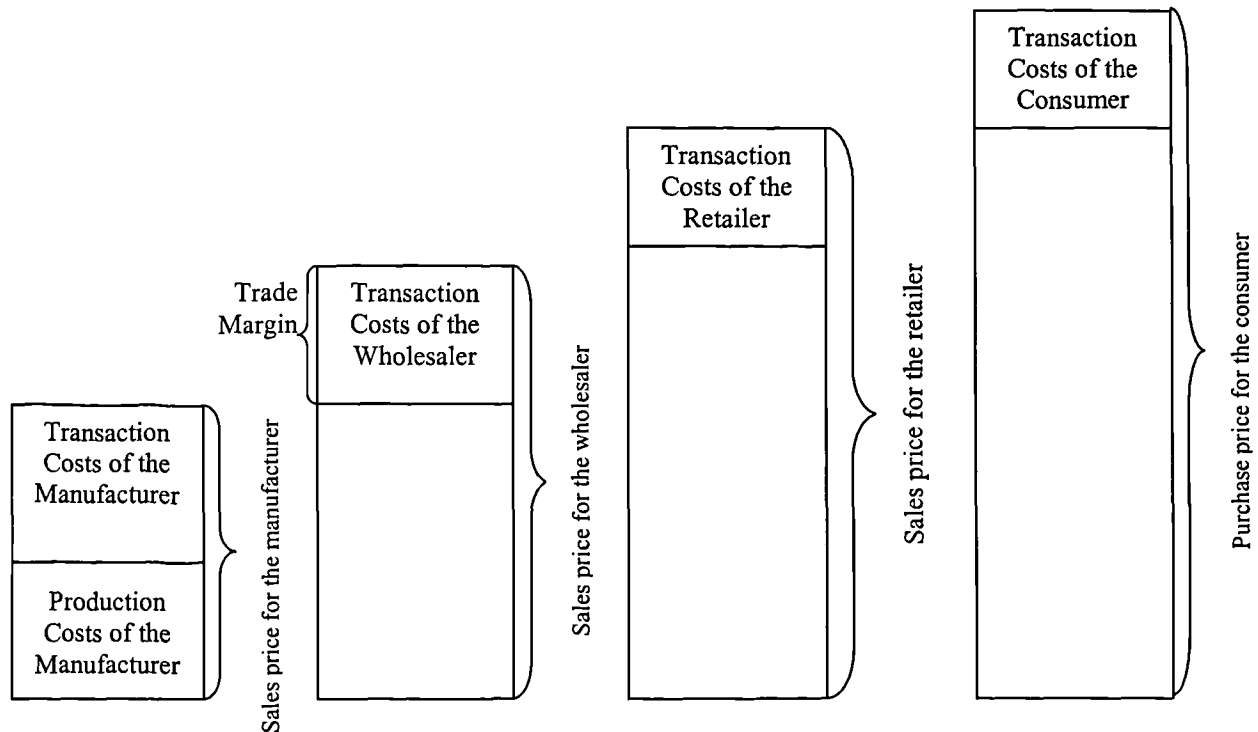
Coase (1937) and Williamson (1975, 1979) are pioneers in the development of transaction costs theory. Over time different conceptualisations and views of transaction costs have appeared. Coase (1937) was the first to recognise that to use the market mechanism particular types of costs should be identified. These costs are: 1) search costs (i.e. the costs of searching for products, sellers, and buyers), 2) contracting costs (i.e. the cost of setting up and carrying out the contract), 3) monitoring costs (i.e. the costs ensuring that the terms of the contract have been met) and 4) adaptation costs (i.e. the cost incurred in making changes during the life of the contract)” (Wigand, 1997, p.8). Together these costs define ‘transaction costs’.

For instance, Lee and Clark (1996) argue that transaction costs are the costs of carrying out a transaction by means of an exchange in the market, where every market transaction consists of search, price discovery, and trade settlement. Picot et al. (1997,

p.108) say that “a transaction is a transfer of property rights between two parties and that preparation, agreement, settlement, adjustment and control of a transaction is called transaction costs”. Williamson (1985) and Mahoney (1992) identify two categories of costs explicitly ‘Ex-ante’ (i.e. before) and ‘Ex-post’ (i.e. after), where the ‘Ex-ante’ costs include search and information, drafting, bargaining and decision making, and safeguarding costs, while ‘Ex-post’ costs consist of monitoring, enforcement, adaptation, haggling, bonding and mal-adaptation costs. Mahoney (1992) asserts that both categories ‘Ex-ante’ and ‘Ex-post’ costs are interdependent. Evidently, different authors are using different names to identify transaction costs, however, they are broadly similar. The ultimate goal of this theory is to reduce the transaction costs (Picot et al., 1997).

Transaction costs can include the expenses associated with the acquisition of information (Williamson, 1999). Wigand (1997) argue that transactions may be broken down into production and coordination costs. In a typical market hierarchy that progresses from ‘manufacturer’ to ‘wholesaler’, ‘retailer’, and ‘consumer’ (see Figure 3.5), coordination costs include the transaction costs of the information processing necessary to coordinate the work of people and machines performing primary processes (Malone et al., 1987, p.485). The use of information and communication technology (e.g. the Internet and the WWW) has speeded up knowledge dissemination and diffusion, resulting in decreasing coordination costs, and as a consequence, this leads to transaction cost savings within the entire market hierarchy (Benjamin and Wigand, 1995; and Picot et al., 1997).

**Figure (3.5) Market Hierarchy and Transaction Costs in a Stepwise Fashion**



Area in which transaction costs may be economised or possibly eliminated when conducting transactions electronically.

Source: Wigand (1997, p.8).

Coase (1937) explains the existence of the firm in terms of 'natural market failure', and argues that market failure results when *bounded rationality* (i.e. known as the limited capacity of the people to accurately evaluate all possible decisions), *opportunism* (i.e. when individuals sometimes exploit a situation to their own advantage), *asset specificity* (i.e. when investing resources that are specific to a certain exchange and of little or no value in an alternative use), and *informational asymmetry* are present simultaneously in the market. Williamson (1975, 1985, pp.30-32) and Hobbs (1996) maintain that the foregoing key concepts emphasise 'transaction costs', signifying that 'transaction costs' appear only when 'bounded rationality', 'opportunism', 'asset specificity' and 'information asymmetry' are concurrently exhibited in a market.

Transaction cost analysis is based on the premise that "the firm will expand until the costs of organising an extra transaction within the firm becomes equal to the costs of carrying out the same transaction by means of an exchange on the open market or the costs of organising in another firm" (Coase, 1937, p.314). Similarly, Klein et al. (1990)

argue that the firm will internalise activities that it can perform at a lower cost, and will rely on the market for activities which other providers have an advantage. The authors add that in markets where competition is intense, transaction costs tend to be low which discourages the internationalisation of activities.

Teece (1986) observes that firms expand their scope of activities in two respective ways: firstly, when opportunistic potential is significant, and secondly, when the threats associated with asset specificity (i.e. small numbers of suppliers), and incomplete information as a result of carrying out activities with contractors are insignificant. Accordingly, there is a trend among firms 'to make' rather than 'to buy' when the assets characteristics are highly specific and very few suppliers dominate these assets, also firms prefer 'to make' when they are uncertain and have inconsistent and misleading information with respect to 'buying' contracts (Williamson, 1975).

The transaction costs theory provides a useful basis for assessing international expansion, suggesting that firms grow by internationalising markets bringing interdependent activities under common ownership, and control up to the point where the benefits of further internationalisation are outweighed by the costs (Westhead et al., 2001, p.337). However, Johanson and Vahlne (1990, p.18) note that firms in the early stages of internationalisation are neither able nor willing to internalise the activities performed by middleman, and once uncertainty falls below a certain level, the ability to internalise is there but the willingness to do it may not exist until something triggers the decision, alternatively when uncertainty is eliminated externalisation might be feasible.

Evidently, transaction costs are neither easy to separate from other managerial costs, nor readily measurable as they represent the potential consequences of alternative decisions (Klein et al., 1990; and Hobbs, 1996). To overcome such difficulty, researchers examine whether organisational relations are aligned with the attributes or the dimensions of transactions in terms of asset specificity, the frequency of economic exchange, and the level of uncertainty. Within this context, the owner/manager exhibits bounded rationality and seeks to minimise the cost of transactions associated with entering international marketplace (Kalantaridis and Levanti, 2000). Asset specificity,

the frequency of economic exchange, and the level of uncertainty are considered the principal factors that make market mediated exchange inefficient (John and Weitz, 1988, pp.121-122), however, Williamson (1985) assures that even when one condition is absent the market can still be effective.

### **3/5//2 INTERNATIONALISATION THEORIES**

Although the term internationalisation has been used extensively, a universally accepted definition remains out of reach (Young, 1987; Welch and Luostarinen, 1988; Morgan and Katsikeas, 1997; and McAuley, 1999). Johanson and Wiedersheim-Paul (1975) argue that the term international refers to either an attitude of the firm towards foreign activities, or to the actual carrying out of activities abroad. Also the internationalisation is perceived as an evolutionary process where the firm increases its international involvement as a function of increased market knowledge and market commitment of the decision maker (Johanson and Vahlne, 1977; Melin, 1992; and Manolova et al., 2002). It is the outward movement of a firm's operations that increase the likelihood of resource commitment to both market spreading and market penetration activities (Piercy, 1981; Turnbull, 1987; and Welch and Luostarinen, 1988). Recently, inward activities and co-operation are identified as part of the internationalisation process (Welch and Luostarinen, 1993; and Korhonene et al., 1996).

Beamish (1990, p.77) defines internationalisation as "the process by which firms increase both their awareness of the direct and indirect influence of international transactions on their future, and establish and conduct transactions with other countries". This is a comprehensive definition because it describes internationalisation as a process, implying it is dynamic, moreover it includes both outward and inward patterns, and it further implies that established relationships through international transactions may influence the firm's growth and expansion to other countries (Coviello and McAuley, 1999; and McAuley, 1999).

The next section discusses the *Uppsala* model and the Innovation-related internationalisation models.

### **3/5/2/1 The Establishment Chain, (Stage Model), Uppsala Model (U-Model)**

Johanson and Wiedersheim-Paul (1975) introduced the first stages model of internationalisation which was later developed and called the *Uppsala model* (Johanson and Vahlne, 1977). The *Uppsala* model includes four stages, starting with no regular exporting activities, followed by export through independent representatives or agents, then sales subsidiary, and finally overseas production/manufacturing units. It is believed that each stage reflects the degree of the firm involvement in a particular market (Johanson and Wiedersheim-Paul, 1975).

According to the *Uppsala* model firms pursue a gradual and sequential process in order to internationalise, and their international expansion is mostly influenced by increased market knowledge and commitment (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977; Welch and Wiedersheim-Paul, 1980; Cavusgil and Nevin, 1981; Dalli, 1994; Coviello and McAuley, 1999; and Coviello and Martin, 1999). In general, firms begin to internationalise via indirect export to markets which are 'psychically close' or similar to their own home market in order to reduce the risk associated with investment in foreign operations (Johanson and Vahlne, 1977; Lau, 1992; and Dalli, 1994). By entering psychically close market, firms enhance their foreign market knowledge, and consequently increase the likelihood of their commitment to further overseas markets as a result of diminishing the perceived risk of market investment and the increased desire to control sales (Johanson and Wiedersheim-Paul, 1975; and Thomas and Araujo, 1985).

Psychic distance refers to "the extent of proximity in geography, language, culture, political systems and business factors like, industry structure, and competitive environment" (Zafarullah et al., 1998, p.22) that prevent or disturb the flow of information between firms and the market (Johanson and Wiedersheim-Paul, 1993). The internationalisation stages theory has been widely researched, and studies have confirmed the validity of its premises. For instance, Calof and Viviers (1995) find that small Canadian and South African firms start exporting to their nearest country in terms of geographic location and culture, and only after learning from their exporting experience they extend their activities to more distant countries.

Drawing on the *Uppsala* model, incremental commitments to internationalisation are expected to be made in small steps, unless the firm has massive resources, works in a quite stable and homogenous market, and has great experience gained from other markets with similar conditions (Johanson and Vahlne, 1977). If this is the case, then firms have the opportunity to select between various modes of internationalisation (Rugman, 1980). These might include franchising, management contract, turnkey contract, contract manufacturing/international subcontracting, industrial co-operation agreements, contractual joint venture, equity, wholly owned subsidiaries, mergers and acquisitions, and strategic alliances (Young, 1990).

Lindquist (1991) in a working paper from the Stockholm School of Economics has investigated the process of internationalisation in three dimensions, i.e. speed of foreign entry, pattern of foreign market selection, and choice of foreign entry form. The speed of entry concerns the time lag between the establishment of the firm and its first international activities and between subsequent entries, the pattern of foreign market selection refers to the sequence of markets entered and penetrated by the firm, and the choice of entry mode refers to the organisation form used by the firm (pp.6-7) (cf. Kandasami, 1998)

These dimensions of the firm internationalisation process could be used to measure and validate the U-model in three respective ways. Firstly, examining the speed of entry identifies whether or not the firm is internationalising in small steps or is leapfrogging stages to accelerate the process. Secondly, studying the pattern of foreign market selection shows whether or not the firm is targeting psychically close country/market as hypothesised in the U-model. Finally, choice of foreign entry mode reflects the firm's actual resources, the type of market the firm operates in, and the amount of international experience the firm has as a result of targeting other foreign markets with similar conditions.

Recently, Manolova et al. (2002) differentiate between small internationalised and non-internationalised US firms with respect to four dimensions of human capital namely: international business skills, international orientation, perceptions of the environment, and demographic characteristics. The findings indicate that while

managerial skills and environmental perceptions successfully distinguish between both groups of firms, demographic factors and international orientation failed to do so.

### **3/5/2/2 Innovation Related Internationalisation Taxonomies (I -models)**

The innovation related models assert that internationalisation is incremental in nature, with various stages reflecting changes in the attitude and behavioural commitment of managers, and they explain internationalisation in terms of innovation adoption behaviour (Bilkey and Tesar, 1977; Reid, 1981; Wortzel and Wortzel, 1981; Czinkota, 1982; Cavusgil, 1984; and Lim et al., 1991). Simmonds and Smith (1968) were the first to introduce the concept of innovation in the export behaviour literature, the rationale behind this approach is that entering an export market is perceived as an innovation in itself within the closed environment in which the firm operates. Roux (1987, p.95) also describes export entry as “a novel action...can be compared to a process of innovation adoption”.

Table 3.4 illustrates various stage models that are derived from Roger's (1983) theory of 'diffusion of innovations' in which managers perceptions and beliefs are influenced and shaped by additional involvement in foreign markets (Thomas and Araujo, 1985; and Anderson, 1993). All of the models propose an incremental 'stages' approach, where firms start with being unwilling to export, than proceed through various stages to become experienced and highly committed to exporting (Zafarullah et al., 1998). It should be noted that, these paths are not obligatory, put differently, for firms to internationalise they do not have to go through every step in any of the chosen models. In fact, firms may follow a variety of *routes* in establishing their international presence. Basically, Welch and Welch (1996) argue that the actual path taken is of less importance than the way in which earlier steps provide the basis for future growth. It could be concluded that incremental success builds the confidence to broaden the firm export activity, which in turn leads to greater internationalisation. In the event of failure, the firm may stay in the stage it has reached, or it may regress to an earlier stage (Wolff and Pett, 2000).



In a study of small computer software firms in Finland, Ireland, and Norway, Bell (1995, p72) finds “very limited support for the view that firms internationalise in small incremental steps and the findings suggest that the process is much less deterministic than these theories and models imply”. Also, Sullivan and Bauerschmidt’s (1990) study of Austrian, Finland’s, Sweden’s and West German forest products firms fails to support the stages theory of internationalisation. Whereas, Gankema et al. (2000) provide further support for the ‘I-models’, finding that European manufacturing SMEs tend to progress through the stages proposed by Cavusgil.

Although there are a number of innovation related models shown in Table 3.4 they have a number of features in common. These are: internationalisation is a gradual process that can be subdivided into a number of stages (Czinkota, 1982), the evolutionary models shown in the Table have similar stages (Kotabe and Czinkota, 1992), and the models lead to a classification of export behaviour that generates heterogeneous profiles of firms reflecting different degrees of development along the internationalisation process (Morgan and Katsikeas, 1997). In the view of Havnes and Andersen (2001) the existing stage models of internationalisation represent a categorical scale of increasing commitment. They see the ‘stage models’ as “following the typical progression of change events in a life cycle model as described by Van de Ven and Poole (1995), where the life cycle follows a single sequence of stage or phase (a unitary sequence), which is cumulative (characteristics acquired in earlier stages are retained in later stages), and conjunctive (the stages are related such that they derive from a common underlying process)”.

Like the *Uppsala* model, the innovation related internationalisation taxonomies (I - models) confirm that a firm’s internationalisation is explained by the amount of knowledge the firm possesses, as well as the uncertainty associated with the decision to internationalise (Morgan and Katsikeas, 1997).

**Table (3.4) Selected Innovation-Related Internationalisation Taxonomies**

Stage Author	Bilkey and Tesar (1977)	Cavusgil (1980)	Reid (1981)	Wortzel and Wortzel (1981)	Czinkota (1982)
Stage 1	Management is not interested in exporting.	Domestic marketing: the firm sells only to the home market.	Export awareness: problem of opportunity recognition, arousal of need.	Importer pull.	The completely uninterested firm.
Stage 2	Management is willing to fill unsolicited orders, but makes no effort to explore that feasibility of active exporting.	Pre-export engagement: the firm searches for information and evaluates the feasibility of undertaking exporting.	Export intention: motivation, attitude, beliefs and expectancy about export.	Basic production capacity marketing.	The partially interested firm.
Stage 3	Management actively explores the feasibility of active exporting.	Experimental export involvement: the firm starts exporting on a limited basis to some psychologically close country.	Export trial: personal experience from limited exporting.	Advanced production capacity marketing.	The exporting firm.
Stage 4	The firm exports on an experimental basis to some psychologically close country.	Active export involvement: exporting to more new countries-direct exporting-increase in sales volume.	Export evaluation: results from engaging in exporting.	Product marketing-channel push.	The experimental firm.
Stage 5	The firm is an experienced exporter.	Committed export involvement: management constantly makes choices in allocating limited resources between domestic and foreign markets.	Export acceptance: adoption of exporting/rejection of exporting.	Product marketing-consumer pull.	The experienced small exporter.

Stage 6	Management explores the feasibility of exporting to other more psychologically distant countries.				The experienced large exporter.
Stage Author	Lim et al. (1991)	Rao and Naidu (1992)	Steinmann et al. (1980)	Wells (1968)	Leonidou and Katsikeas (1996)
Stage 1	Export awareness.	Non-exporters: the firm has no current export activity nor any future interest.	Decision to invest abroad.	Introductory exporting. Adopts A broader approach a life cycle model.	“Pre-engagement” stage includes firms that are active in their domestic market but are not exporting.
Stage 2	Export interest.	Export intenders: the firm is a current non-exporter, but would like to explore future export opportunities.	Establish facilities abroad.	Foreign production and competition starts.	“Initial” stage includes firms that are sporadic or experimental exporters evaluating future export actions.
Stage 3	Export intention.	Sporadic exporters: the firm exports, but in a sporadic fashion.	Manage operations abroad.	Foreign production becomes competitive foreign markets.	“Advanced” stage includes firms that are actively and consistently engaged exporters.
Stage 4	Export adaptation.	Regular exporters: the firm exports on a regular basis.		Foreign production becomes competitive domestic markets.	

Source: Kaynak (1985, p.21); Leonidou and Katsikeas (1996, p.524); and Morgan and Katsikeas (1997, p.73).

Recently, Wolff and Pett (2000) identified internationalisation as a continuum, with internationalisation by stages at one end of the scale and international at founding at the other end of the scale. Terms used interchangeably with 'international at founding' include, 'born global', 'born international', 'global start ups', 'infant international', 'international new venture', and 'instant global' (Wolff and Pett, 2000).

Cavusgil (1994, p.18) states the consequences of the discovery of 'born globals' exporters as follows: "there is emerging in Australia a new breed of exporting companies, which contribute substantially to the nation's export capital. The emergence of these exporters though not unique to the Australian economy, reflects 2 fundamental phenomena of the 1990's: 1) small is beautiful and 2) gradual internationalisation is dead".

Oviatt and McDougall (1994) and McAuley (1999) find that 'international at founding' firms do not follow the normal successive *route* of internationalisation by stages. Further, 'the international at founding' phenomenon is partially attributed to advances in communication, flow of information, transportation, and the growing trend among entrepreneurs to view markets internationally rather than domestically (Oviatt and McDougall, 1994). Knight and Cavusgil (1996) have described two more trends that facilitate the 'born globals'. One trend is the increasing importance of niche markets, forcing small firms into small niches in several countries in order to be competitive. The second trend is the increasing speed of the diffusion of technology and the increased importance of global networks. Knight et al. (2001) find that the majority of exporting firms in New Zealand seafood sector demonstrate 'born global' features, have no domestic market, and export to countries that are not psychically close like Saudi Arabia. This finding confirms that the 'born global' phenomenon can be seen in traditional sectors as well as high technology sectors. Bell et al. (2001, p.186) argue that "born global is not an organisational form *per se* rather it may be seen as a strategy to improve firm value through internationalisation".

The stages models do not recognise that some firms export from the outset and may quickly generate more sales from exporting than from domestic sales (Westhead, 2001). The 'accelerated internationalisation' phenomenon refers to firms engaged in

international business activities earlier in their organisational life cycle than firms may have done previously (Shrader et al., 2000, p.1227). Firms that internationalise rapidly aggressively take advantage of the market growth (Shrader et al., 2000). This behaviour is not consistent with the early stages models of internationalisation, where small firms are seen to have inherent disadvantages in the early part of the internationalisation process (Liesch and Knight, 1999, p.385).

Recently, Bell et al. (2001) identify a third *route* to internationalisation namely, 'born-again global'. The authors define 'born-again global' firms as "well established firms that have previously focused on their domestic markets, but which suddenly embrace rapid and dedicated internationalisation" (2001, p.174). The authors add that sudden change of focus from domestic to international orientation is triggered by an infusion of new human and/or financial resources. The authors find support not only for the emerging 'accelerated internationalisation' phenomenon, but also for the internationalisation by stages theory, and 'born-again global' phenomenon among UK, Australia and New Zealand firms.

The stages model of internationalisation are increasingly challenged by empirical findings that some SMEs are able to internationalise more rapidly than the models predict, and that it is not the only *route* by which small firms internationalise (Bonaccorsi, 1992; Reuber and Fisher, 1999; Wolff and Pett, 2000; Knight, 2000; Bell et al., 2001; and Lu and Beamish, 2001).

### **3/5/2/3 A Critique of Internationalisation Theories**

The critiques of the internationalisation theory argue that, the theory does not explain the nature and character of the firms' international involvement (Sharma and Johansson, 1987; Turnbull, 1987; and Gripsrud, 1990).

Millington and Bayliss (1990) contend that the incremental stepwise development of firms is the exception rather than the rule and that in practice internationalisation paths are often irregular and do not follow the path prescribed by the theory. However, there is a scarcity of longitudinal studies that could fully confirm the truth of this premise (Leonidou and Katsikeas, 1996).

Moreover, Reid (1983), Melin (1992) and Dalli (1994) describe the stepwise process as being too much deterministic as it excludes other strategic options such as, the initiation of local production in a foreign country, which is not featured in many of the innovation models. In fact, firms with an internationally experienced management team can skip the early stages of internationalisation (Cannon and Willis, 1981; Tayeb, 1999; and Gankema et al., 2000). ‘Leapfrogging’ of intermediate stages and stopping the internationalisation process at an intermediate stage prior to full commitment are also quite common (Welch and Luostarinen, 1988; and Gankema et al., 2000). Also, recently Axinn and Mattysens (2001, p.444) have suggested that “in the new economy [the Internet and e-commerce]... an experiential learning approach highlighted by (Johanson and Vahlne, 1990) might even be prohibitive. Companies might be forced to skip stages even if their knowledge is, objectively, too limited to do so”.

Reid (1983) further recognises that internationalisation processes of individual firms are unique and largely situation specific, and that the stage models do not take into consideration individual differences and variations. The different numbers of internationalisation stages across different models reflect semantic differences rather than real ones with respect to the nature of the internationalisation process. Furthermore, there is an absence of clear-cut boundaries between stages, and lack of tests of validity and reliability (Anderson, 1993).

Sharma and Johanson (1987), Engwall and Wallenstal (1988) and Buckley et al. (1992) argue that for service industries the existing theories of internationalisation are inappropriate, because of the special and unique characteristics of services like intangibility, perish-ability, customisation and simultaneity of production and consumption. Also, Bell (1995) and Kundu and Katz (2000) discuss the inadequacy of the internationalisation theories in explaining the internationalisation of small high technology firms and their patterns of entry mode and market selection, once again due to the specific characteristics of high technology industry such as the high research and development costs, short product life cycles, and a concentration of the market, particularly for European-based firms (Young, 1987). Also, using linear models in order to explain complex, dynamic, interactive and frequently non-linear behaviour is a significant limitation to all stage theories (Bell, 1995). In the e-commerce context

Axinn and Mattysens (2001) contend that the static, gradual, linear view embedded in the stages models of internationalisation is hard to sustain, as it cannot accommodate the speed at which international business is developing in the new Internet-based economy. Also, evidence from UK, Australia and New Zealand reveals that in most investigated cases the internationalisation process is not a linear, incremental, unidirectional path (Bell et al., 2001).

Axinn and Mattysens (2001) also highlight the difficulty of maintaining the 'psychic distance' concept in the era of Internet enabled e-commerce which expands markets regardless of geography and time zone. The authors suggest that internationalisation theory has to be restructured either via adapting the existing internationalisation models, or developing an entirely new theory of internationalisation to embrace the new realities of the Internet.

Partly in response to the criticisms of internationalisation theory, academics have turned to network theory as an alternative that can offer a fresh and rich perspective of firms' internationalisation process (Coviello and Munro, 1995). This is discussed in the next section.

### **3/5/3 THE NETWORK PERSPECTIVE**

#### **3/5/3/1 Conceptualisation**

The network perspective draws on the theories of social exchange and resource dependency and focuses on firm behaviour (Axelsson and Easton, 1992). Thus, the boundaries of the firm are determined not only by formal relationships, but also by informal personalised linkages (Coviello and McAuley, 1999; and Kalantaridis, 2000). The network approach assumes that interconnected exchange relationships develop in a dynamic, less structured manner, and that increased mutual knowledge, power, and trust are factors dominating the network which lead to greater commitment between international market actors (Thorelli, 1986; Blankenberg, 1992; Johanson and Mattsson, 1995; and Gulati et al., 2000).

In general, a network consists of sets of two or more connected exchange relations (Cook and Emerson, 1978, p.725). From a firm's perspective a network includes a number of different types of relationships, some are direct exchange relationships and others are not (Blankenburg, 1992). Firms are part of a wider industrial network in which buyers and sellers are tied together through exchanges of technical, commercial, and social nature (Hakansson, 1986). It should be noted that a network is invisible and incomprehensible to outsiders, implying that any firm that is not a member in the industrial network will not realise the existence of the network, and if it does, it will not be able to understand the nature of the relationship among its members.

The advantages of any type of network are to reallocate resources, broaden the firm's capacity by benefiting from other network members capacities, respond quickly to opportunities, access other resources, information, markets, technologies, and skills that are not owned by the firm itself, create barriers for firms who want to join the group, and finally reducing uncertainty (Child and Faulkner, 1998; and Gulati et al, 2000). However, networks can also become a source of constraint on the firm for example, by locking the firm into unproductive relationships, or undesirable strategic situations, and working as entry barriers for firms trying to enter the industry, therefore, 'networks' could be perceived both as a source of opportunity and constraint (Gulati et al., 2000).

### **3/5/3/2 Networking and Internationalisation**

In terms of networks, internationalisation means that the firms develop business relationships in networks in other countries (Johanson and Mattsson, 1995). This can be achieved: 1) through the establishment of relationships in country networks that are new to the firm, i.e. international extension, 2) through the further development of relationships in these networks, i.e. penetration and 3) by connecting networks in different countries, i.e. international integration (Johanson and Vahlne, 1990, p.20).

The network approach perceives internationalisation as more complicated and a less structured process than earlier theories have implied (Bell, 1995). The network approach focuses on non-hierarchical systems, where firms invest to strengthen and monitor their position in international networks, where firms' boundaries signify both formal relationships (e.g. with business, banks, accountants, trade associations) and



informal relationships (e.g. social, personal relationships, families) (Sharma, 1992; Johanson and Mattsson, 1995; and Littunen, 2000). Styles and Ambler (1994) argue that “a firm begins the export process by forming relationships that will deliver experiential knowledge about a market, and then commits resources in accordance with the degree of experiential knowledge it progressively gains from these relationships”. Moreover, according to this school of thought, internationalisation decisions and activities emerge as patterns of behaviour that are largely influenced by the network members (Coviello and Munro, 1995, 1997; Coviello and Martin, 1999; and Coviello and McAuley 1999).

The network approach is frequently used to explain the behaviour of small and/or entrepreneurial firms. According to this approach developing and managing business and social network relationships help small and entrepreneurial firms overcome resources constraints, lack of international experience and their dependency on relationships with others in what so called ‘personal contact network’ (PCN) (Coviello and Munro, 1995; and Zafarullah et al., 1998). Aldrich and Zimmer (1986) argue that the entrepreneur’s personal network acts as a *route* to resources, opportunities and guidance, hence expanding the capabilities of the individual entrepreneur. Bonaccorsi (1992) acknowledges that small firms do exchange information among themselves via social networks, therefore accelerating the exporting process as well as improving their ability to compete. Evidently, developing foreign business and social network relationships make international business easier for SMEs as they provide good opportunities for growth by overcoming size-related barriers, hence, allowing them to gain advantages that in other circumstances would be unattainable (Hakansson, 1986; and Knight, 2000).

Johansson and Mattsson (1995) have proposed a network model of internationalisation based on the degree of internationalisation of both the firm and the market. The network model of internationalisation involves considering how relationships in the domestic, target, and third markets are utilised for market entry, the model identifies four different internationalisation situations (see Figure 3.6).

**Figure (3.6) Network Model of Internationalisation**

Degree of Internationalisation of the Firm	Degree of Internationalisation of the Market		
		Low	High
	Low	The early starter	The late starter
High	The lonely international	The international among others	

Source: Johansson and Mattsson (1995, p.63).

Firms in the early starter cell in Figure 3.6 are characterised by a low level of internationalisation at both the firm and the market level. They often seek close export markets, where customers' preferences are more like their domestic customers preferences, and they follow the stepwise internationalisation process (Tayeb, 1999). When the firms' degree of internationalisation is high and the degree of market internationalisation is low, the result is 'the lonely international' firm, which has extensive experience and overseas relationships, and is therefore able to target distant international markets in order to gain the 'first mover' advantages (Johanson and Mattsson, 1995). By contrast, 'late starter' firms are the least international orientated, but are operating in highly internationalised markets, and are forced to go international even though the firms have low degree of internationalisation. Unlike 'the early starter' though, customers' preferences are more homogeneous, therefore providing the opportunity for late starter firms to internationalise quickly. Finally, the *Uppsala* researchers argue that if 'the late starter' firms continue internationalising they will turn into 'the international among others', where both the firm and market are highly international. These firms are characterised as being less focused on market extension and penetration, and more focused on market co-ordination. The emphasis on market co-ordination is more commonly associated with the activities of MNEs, and therefore, this category is less relevant in explaining the internationalisation of SMEs (Tayeb, 1999, p.207).

Coviello and Munro (1995) examine the impact of network relationships on international market development and the international marketing related activities of entrepreneurial software firms in New Zealand. They notice that firms' internationalise quite rapidly, hence confirming work elsewhere that the traditional internationalisation stages theory is not applicable in all situations and among all industries (e.g. Young, 1987; Sharma and Johansson, 1987; Turnbull, 1987; and Bell, 1995). Moreover, the network relationships with other firms provide the New Zealand entrepreneurial firms with the power to control and to use both marketing infrastructure and capabilities successfully. Johansson (2000) observes that rapid growth in firms is the result of participating in international networks, where market development is influenced by major network partners, thus supporting the proposition that personal networking in general enhances the firm survival and growth.

### **3/5/4 RESOURCE BASED VIEW (RBV)**

The Resource Based View (RBV) of the firm has become an influential theoretical perspective in recent International Business (IB) research (Peng, 2001, p.803). However, the status of the RBV is quite vague (Barney, 2001), with some authors arguing that "the RBV could be seen as a paradigm, while others criticise its lack of tight definition and explanatory power, and others suggest that RBV represents an innovation" (Peng, 2001, p.806).

The RBV perceives the firm as bundles of resources and competences, that enable certain capabilities, options and accomplishments, which act as the driving force for firm expansion to make the best use of their pre-existing skills and resources (e.g. Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Conner, 1991; Peteraf, 1993; and Seth and Houston, 1994). These resources and competences, if they are distinctive or superior relative to those of competing firms, constitute the firm-specific assets that are the basis of the firm competitive advantage (Reuber and Fischer, 1999, p.88). Bell et al. (1998a, b) assert that "the resource-based perspective presents a holistic view of the firm".

Various definitions of resources have been proposed in the literature. For example, Wernerfelt (1984, p.172) says that a resource is “anything which could be thought of as a strength or weakness of a given firm. More formally, a firm’s resources at a given time could be defined as those (tangible and intangible) assets which are tied semi-permanently to the firm. Examples of resources are: brand names, in-house knowledge of technology, employment of skilled personnel, trade contracts, machinery, efficient procedures, [and] capital”. Porter (1990) and Collis (1991) argue that resources include all assets, capabilities, organisational processes, information, technologies, knowledge, and so forth, controlled by firms that enable them to conceive and implement strategies that improve their effectiveness and efficiency and, in the case of SMEs, allow them to obtain differential advantages in foreign markets.

In general, the RBV assumes that firms somehow develop such resources internally, these resources are called ‘strategic resources’ i.e. those that form the basis of the firm’s sustainable competitive advantage (Rangone, 1999). These resources influence the direction of firm growth, as firms can expand efficiently into activities that draw upon existing resources rather than into activities with no relation to current resources. Part of the efficient expansion of the firm is assigning new managers/employees to where they have higher productivity in the firm, which helps to accelerate the growth of the firm (Combs and Ketchen, 1999).

A distinction is also made between resources and capabilities. Grant (1991) implies that resources are inputs into the production process and are the basic unit of analysis, although on their own few resources are considered productive. The author also stipulates that capabilities are the capacity for a team or group of resources to perform some task or activity. While resources are the source of a firm’s capabilities, capabilities are the main source of its competitive advantage. Furthermore, a key ingredient in the relationship between resources and capabilities is the ability of an organisation to achieve co-operation and co-ordination within teams. Capabilities refer to skills based in human competencies, while resources refer to all other assets (Markides and Williamson, 1996).

### **3/5/4/1 The Effects of Resource Endowments on Managerial Action and Performance**

The RBV focuses on the effects of resource endowments on managerial action and performance. According to this perspective inter-firm co-operation attracts managers to share resources within firms and thereby overcome resource-based constraints to growth (Combs and Ketchen, 1999). Yet, on the other hand, Wernerfelt (1984) argues that the firm resources can limit its rate of growth by limiting the firm's choice of markets it may enter, and the levels of profits it may expect. The author further identifies the major resource limitations that might be the reason behind the inadequate growth rate as: shortage of labour and finance, lack of suitable investment opportunities, and insufficient managerial capacity. The RBV perspective suggests that the main reason for firm growth and success may be found inside the firm (Pitelis and Pseiridis, 1999). However, Bell et al. (1998a, b) argue that "firms will have a different mix of resources/competencies and resource/competence gaps, and their strategic responses to these allow for the possibility of different paths to growth and internationalisation".

As for performance, resource-based variations among firms can help explain performance differences as a result of the outputs that can emerge from any unique resources. Wernerfelt (1984), Barney (1991, 2001), Porter (1990), Peteraf (1993) and Rangone (1999) argue that the long term competitiveness of a firm differentiates it from its competitors. The firm's ability to sustain above average performance depends on its endowment of resources, which should be of great value, durable, difficult to imitate, and non-substitutable. Put differently, the firm is focusing on the specialised resources, assets and skills it possesses, which are the fundamental drivers of performance and build its competitive advantage (Barney, 1991; Conner, 1991; Seth and Houston, 1994; and Pitelis and Pseiridis, 1999). Firms with such unique resources may have a greater tendency towards internationalisation, hence, possibly giving firms a competitive advantage over rivals (Bloodgood et al., 1996).

On the other hand, Penrose (1959, p.54) points out that this need not be true, as she observes that a firm may achieve above normal returns not because it has better resources which they are difficult to imitate, but rather the firm's distinctive competence involves making better use of its resources'. Likewise, Priem and Butler (2001, p.25) argue that "inimitability, non-substitutability, and non-transferability are each necessary but not sufficient conditions for sustainability of an existing competitive advantage". Further, Porter (1980) and Grant (1991) highlight that it is the firm unique capability to deploy or transform its resources that results in a sustainable competitive advantage.

Peteraf (1993) argues that the firm's superior resources together with its internal capabilities represent the basis for its competitive advantage, if matched appropriately with environmental opportunities. Hodgson (1998) contends that the firm management is obliged to match and re-new its resources and relationships as time, competition and change erode their value. Moreover, in order to sustain advantage over competitors and evolving customer requirements, firms must develop their resources bases constantly, this process is called upgrading of competitive advantage (Grant, 1991). Evidently, neither unique resources, nor superior capabilities *per se* can maintain a firm's competitive advantage, rather firms need to harmonise the exploitation of existing resources and the development of its resources and capabilities to retain their competitive advantage.

### **3/5/4/2 The Resource-Based View and Internationalisation**

Based on the RBV perspective Wernerfelt (1984) and Bell et al. (1998) argue that when a firm makes its major internationalisation decisions (i.e. country market choice, market servicing mode, product market strategies) it takes into consideration all available resources and capabilities. Additionally, Westhead et al. (2001) examine the impact of resources (e.g. age of manager, information and knowledge) on the internationalisation patterns of UK SMEs, and find that firms whose managers are older, have rigorous information, considerable management know-how and industry-specific knowledge are more likely to be exporters.

Ibeh (2000) investigates how Nigerian SMEs internationalise, using resource-based perspective. The author finds that firms' competencies and capabilities are critical determinants of Nigerian SMEs internationalisation behaviour. He further argues that decision-maker's international orientation and experience, product quality and technology, networking/relationships, and finance and foreign market information are the most important resources. The author finally suggests that firms should improve and strengthen their resource position in order to support their internationalisation process.

However, firms should not only improve and strengthen their internal resources, but also from a contingency approach, they should consider leveraging their external resources, and take into account the nature of the firm's business position as well as the environmental context (Walters and Samiee, 1990).

To sum up, although the RBV has received considerable attention in the literature, and has helped to explain how possession of superior managerial orientations, as well as other strategic resources can serve as fundamental advantages during the internationalisation process of SMEs (Knight, 2000), yet, few empirical studies based on this perspective currently exist. This is partially a result of the disagreement among scholars with respect to the terminology used, for instance Wernerfelt (1984) uses the term 'resources', Dierickx and Cool (1989) use 'strategic assets' and Prahalad and Hamel (1990) utilise 'core competencies', and also to the difficulties of identifying and measuring valuable resources and capabilities (Yeoh and Roth, 1999). Hence, one way to develop the use of the RBV is to encourage scholars to unify the terms used in their studies, and try to build constructs that are able to identify and measure valuable resources.

### **3/6 CHAPTER SUMMARY**

The evidence presented in this chapter reveals that using the Internet as a communication tool (e.g. email, Intranet, Extranet) has changed the way firms are doing business. In particular, the Internet is changing the relationship firms have with their customers, employees, suppliers, and distributors from being reactive to being involved and having a dialogue. Firms are better able to meet the needs of their customers and develop closer relationships.

A range of evidence has been reviewed with respect to Internet and marketing strategy relationships. The literature indicates that the Internet-product type relationship is controversial, where some authors argue that a cost of a product, frequency of purchase, value tangibility, and differentiation of the product are characteristics affecting the possibility of marketing a product on the Internet. Yet, on the other hand, some authors argue that product characteristics are insufficient to understand the benefit of Internet commerce among small businesses, and that other areas such as characteristics of business sector and value chain should also be studied and explored.

Evidence suggests that the Web enables firms to provide detailed product information, establishes a presence in new markets, enhances their corporate image, encourages consumer involvement in developing their products, establishes interactivity with the consumer, and handles customer complaints and queries. Moreover, the literature shows that firms are gaining very little profits from Web promotion, and that its fundamental benefit is giving the firms the necessary experience -as far as marketing strategies are concerned- to be used when the Internet becomes a major commercial tool for everyone.

The Internet-price relationships raise doubts as to whether the Internet will lead to lower prices. Marketers may be forced to lower their prices if low search and entry costs create intense competition, hence putting too much pressure on firms to maintain their profit margins (Sharma, 2002). However, shopping online is still in its infancy and much of this thinking is based on early stages of research.

The impact of the Internet on distribution channels is controversial, with some researchers arguing that the use of the Internet will eliminate some channels, whereas other scholars argue that the Internet creates new distribution channels. The Internet enabled e-commerce will cause a number of changes in the traditional role of the distribution channels either by passing some intermediaries, or restructuring their original role. Alternatively, completely new cybermediaries will emerge out of the special characteristics of the Internet.



There is evidence for a positive relationship between the use of the Internet and firm performance, with larger firms' exhibiting a higher level of Internet adoption and use. The role of the Internet as an information source enables small firms to identify foreign partners, distributors and markets that previously would be inaccessible. Having such information facilitates their international process. An association between the Internet and management characteristics was also identified.

Finally, the Internet helps SMEs to overcome barriers to internationalisation. However, there are limitations to the use of the Internet by SMEs, for instance insufficient resources such as experienced IT and management staff interested in information technology, lack of financial resources and lack of awareness of e-commerce extensive benefits are some barriers hindering the uptake of the Internet and e-commerce among this sector.

Following Rogers (1995) five attributes of innovation, namely: relative advantage, compatibility, complexity, trialability and observability, the researcher suggests that the entrepreneur appreciates the advantages of using the Internet, is more ready to experiment with the innovation, does not perceive the complexity of the Internet as a barrier to adoption, and believes that it represents an opportunity to develop a competitive advantage. Hence, the Internet appears to be consistent with the entrepreneur's values and experiences. Viewed in this light, adoption of the Internet in order to pursue international sales appears to be an entrepreneurial act.

A number of authors have applied different models of technology adoption to the Internet, for instance Triandis model (Chang and Cheung, 2001), the Technology Acceptance Model (TAM) (Cheung et al., 2000; and O'Cass and Fenech, 2003), the Bass model (Formerino, 2003), and the Gompertz model of technology diffusion (Kiiski and Pohjola, 2002). However, this research assumes adoption of the Internet, as well as, Covin and Slevin (1988) entrepreneurial orientation scale used in this study subsumed innovation, hence, covering adoption of innovation literature is beyond the scope of this research.

Moreover, having reviewed transaction costs theory, internationalisation theories, network perspective and resource based view, each perspective has some relevance to this study.

For instance, Hobbs (1996) argues that information is the common factor among the transaction costs (e.g. search, price, monitoring), and that lack of information could be considered an information cost. In common with Benjamin and Wigand (1995) and Picot et al. (1997) who argue that the use of information and communication technology has increased the speed of knowledge dissemination and diffusion, the researcher believes that the use of the Internet among UK SMEs will provide the firms with some of the information necessary with respect to foreign markets, competitors, distributors, prices, and customers, and is likely to decrease the costs of information processing and communication, hence, reducing the firms overall transaction costs.

Also, the researcher is very keen to examine the extent to which internationalisation theories explain the behaviour of UK SMEs, for example do they expand gradually and seek psychically close countries first, or do the 'born global' and 'early international' phenomena explain their internationalisation behaviour.

As mentioned earlier in the chapter, the network approach is largely used to explain the behaviour of small and/or entrepreneurial firms, and help them overcome resource constraints. Therefore, it is believed that the use of the Internet helps to create, widen, broaden and maintain contacts.

Finally, from the RBV perspective firms are bundles of resources and competences (e.g. Conner, 1991; and Peteraf, 1993). These *resources and competences*, if they are distinctive or superior relative to competing firms, constitute firm-specific assets that are the basis of the firm competitive advantage (Reuber and Fischer, 1999, p.88). Consequently, this study will be looking at the resource based view at both the firm level (i.e. IT resources and capabilities), and at the level of owner/managers of UK based SMEs.

To continue the argument underlying this research outlined in chapter two where the entrepreneur is defined as the one who is alert to the opportunity, is innovative and a

risk taker, this chapter analyses the relationship between the use of the innovation (i.e. the Internet) and SME internationalisation, the next chapter will discuss exporting literature, where exporting has been explained by the innovation related models of internationalisation as an innovation adoption behaviour (Bilkey and Tesar, 1977; Cavusgil, 1984; and Lim et al., 1991), and perceived by Ibeh (1998, p.20) and Ibeh and Young (2001, p.567) as an 'entrepreneurial act'.

## **CHAPTER FOUR**

### **EXPORT PERFORMANCE: DETERMINANTS AND MEASURES**

#### ***Chapter Objectives***

- *To present key models of the determinants of export performance.*
  
- *To evaluate a very fragmented literature on export performance of the firm following the structure of the models.*
  
- *To comprehensively categorise and discuss different approaches to measuring export performance.*

## **CHAPTER FOUR**

### **EXPORT PERFORMANCE: DETERMINANTS AND MEASURES**

There is a substantial body of research on export performance, however there are problems with the range of export performance determinants used in studies, as well as the measures and methodologies used. These problems are largely due to the fact that some research treats exporting as a marketing practice, others as management practice, and still others as strategic choice (Axinn, 1994).

This chapter reviews key models of the determinants of export performance namely the Aaby and Slater model, the Madsen contingency approach and the Zou and Stan model. This leads firstly, to a discussion of the internal/controllable determinants of export performance - export marketing strategy and management attitudes and perceptions - and secondly to a discussion of the internal/uncontrollable determinants of export performance, particularly management characteristics and firm characteristics and competencies. Finally, export performance measures are discussed, and the chapter then concludes with a brief summary.

#### **4/1 INTRODUCTION**

Since the post war period, liberalisation, integration and competition in world economies have encouraged firms to engage in exporting activities (Douglas and Craig, 1989). This trend and the generally held view that increased exports benefit society, and the severe trade deficit pressures faced by many developed and developing countries have stimulated academic interest in the export behaviour of firms (Bilkey, 1978; Dichtl et al., 1984; Cavusgil and Naor, 1987; Gripsrud, 1990; and Katsikeas et al., 1996).

Increasing exports can be achieved either by stimulating exporting firms to export more, or by inducing non-exporters to export (Gripsrud, 1990; and Katsikeas, et al., 1996). At a national level, governments formulate export oriented trade strategies and develop assistance programmes to encourage export sales (Katsikeas and Morgan, 1993), while at the firm level, exporting has become increasingly vital for firm prosperity and long term commercial viability (Katsikeas, 1994). Moreover,

exporting is one of the most common ways for firms, particularly SMEs, to internationalise. Exporting compared with other market entry strategies, such as joint ventures and overseas manufacturing, has lower financial risks, lower commitment of resources, and a high degree of flexibility (Katsikeas and Morgan, 1994; and Stottinger and Schlegelmilch, 1998).

#### **4/2 MODELS OF EXPORT PERFORMANCE DETERMINANTS**

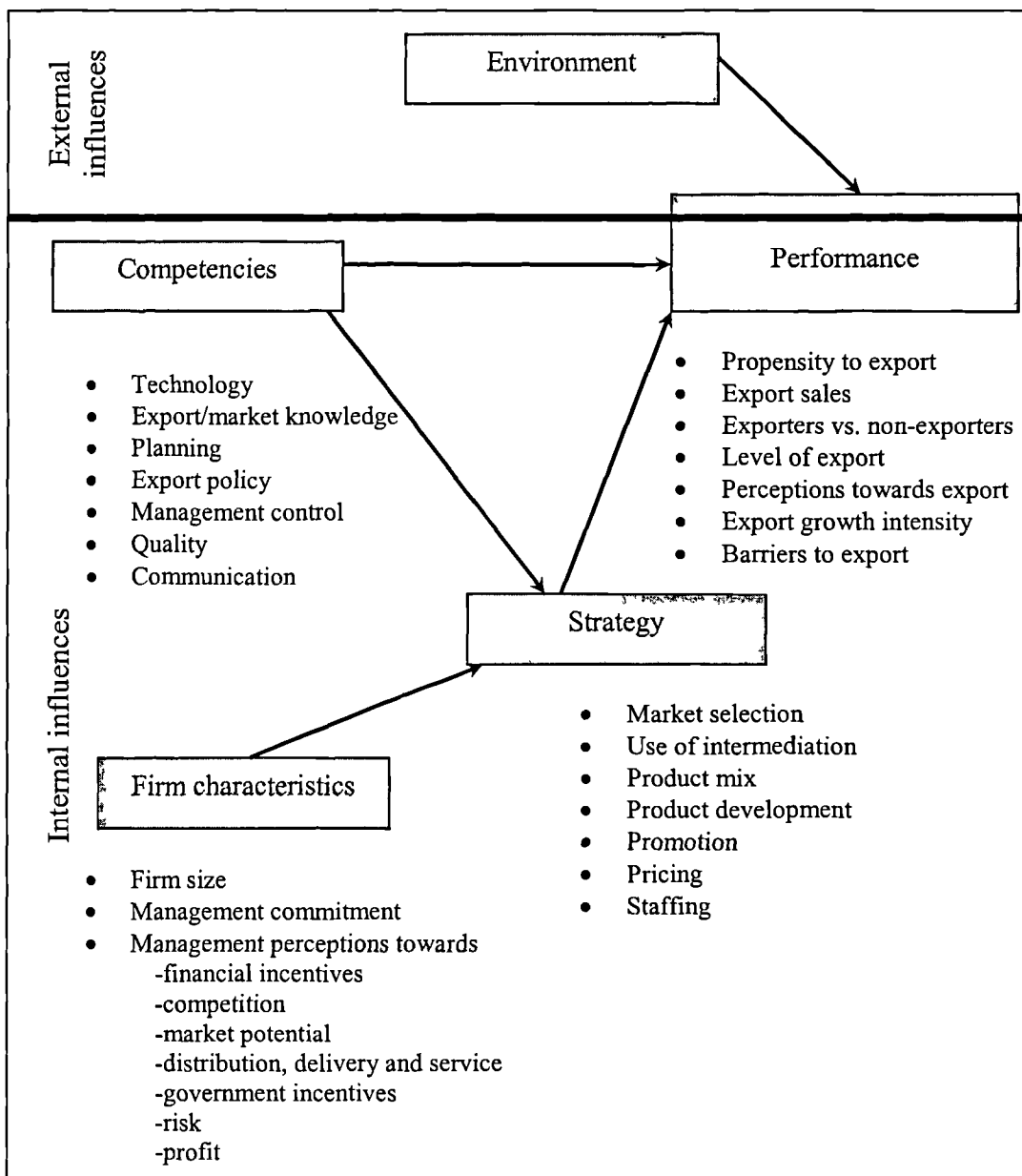
The drive to understand the determinants of performance in business in general and in international marketing in particular is not new. However, progress in conceptualising and identifying factors that determine export performance has been marked by several significant contributions. Aaby and Slater (1989) introduced the 'general model' for assessing export performance, which was considered to be the first attempt to categorise the determinants of export performance. This stimulated other researchers in the field (e.g. Madsen, 1994; and Zou and Stan, 1998) who criticised Aaby and Slater's model and presented two additional models namely, the 'contingency approach' and 'internal/external-controllable/uncontrollable' model respectively. The rationale behind discussing these models is twofold: firstly, they are extensively cited by several authors in the field, and secondly, to track the development of the determinants of export performance from 1989.

##### **4/2/1 The Aaby and Slater Model**

Aaby and Slater (1989) have reviewed 55 studies of firms export behaviour between 1978 and 1988 and produced the general model for assessing export performance and variables (see Figure 4.1). The framework employed in their study synthesised export knowledge at two broad levels: 1) the external environment level, and 2) the firm business strategy and functional level. However, the authors did not evaluate the studies individually, and their review did not reflect their agreement or disagreement with the particular measurement, methodology, or sampling used in the studies. Also, they did not focus on export performance *per se* but included dimensions which represent areas broader than just export performance, such as the exporter/non-exporter dichotomy, propensity to export, and barriers to export (Zou and Stan, 1998). In addition, Bijmolt and Zwart (1994) argue that the factor 'firm

characteristics' in the model (see Figure 4.1) contains a collection of variables that do not have much in common like firm size and management commitment to, and perceptions of, exporting. Firm size is linked to firm level capabilities and the attitudes towards exporting, however by incorporating management commitment and perceptions into the firm characteristics factor the focus has shifted to the level of the owner/manager. The authors argue that firm characteristics may affect not only export strategy as stated by Aaby and Slater (1989), but also all of export policy instruments.

**Figure (4.1) General Model for Assessing Export Performance and Variables**



Source: Aaby and Slater (1989, p.9).

#### 4/2/2 Madsen's Contingency Approach

One response to the inconsistencies in the export literature regarding the importance of export success antecedents' is the 'contingency theory' (Walters and Samiee, 1990; and Katsikeas et al., 2000). According to this approach exporting is perceived as the "firm's strategic response to the interplay of internal as well as external factors" (Reid, 1983; Madsen, 1989; Koh, 1991; Holzumller and Kasper, 1991; and Cavusgil and Zou, 1994). The contingency approach is based on two main premises: firstly, there is no single structure appropriate for all tasks (Hickson et al., 1971; and Ruekert et al., 1985), and secondly, although wide variations regarding effectiveness could possibly be observed, these variations are not random (Robertson and Chetty, 2000).

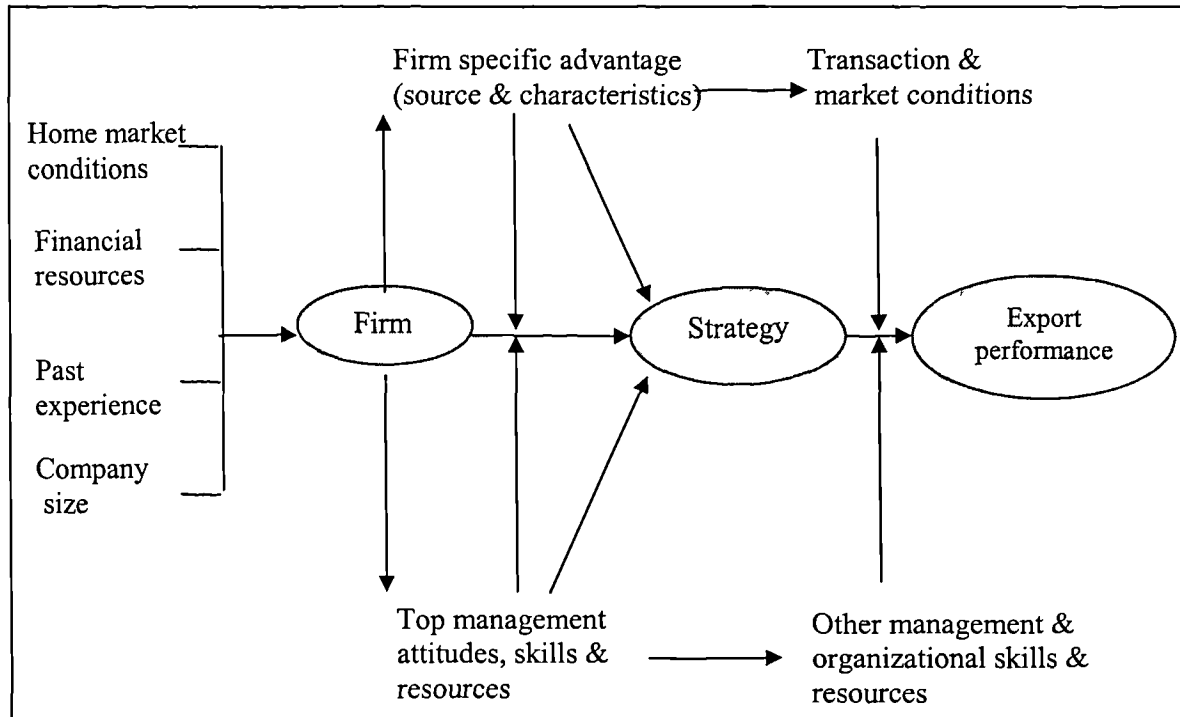
Walters and Samiee (1990) support the contingency approach and assert that:

*"...a perspective that emphasises the importance of the exporter's contextual situation offers a fruitful approach to a better understanding of determinants of export success. This implies that universally valid prescriptions for success are unlikely to be found, and that account needs to be taken of the nature of the firm's business position and the environmental context" (p.35).*

Madsen (1994) has developed a model of the contingency approach to export performance (see Figure 4.2).



**Figure (4.2) Determinants of Export Performance**



Source: Madsen (1994, p.29).

The basic assumption of Madsen's model is that the firm acts under certain financial constraints and that the firm's home market conditions, its past experience and its size affect the firm's top management attitudes, skills and resources, as well as the firm's specific advantage. Both the financial status and home market conditions along with their consequences are responsible for the choice of strategy and its appropriateness. Once more management attitudes, skills and resources are responsible for creating other management and organisational skills and resources, which moderate the quality of strategy implementation. On the other hand, firm specific advantage affects transaction and market conditions, which in turn moderate the appropriateness of a particular strategy. Finally, as illustrated in Figure 4.2 export performance appears to be influenced either directly, or indirectly, by all the elements in the model. Accordingly, it is highly unlikely that one export strategy could be suitable for all situations and in all contexts. Zou and Stan (1998) build on the Madsen's (1994) 'contingency approach' which holds export strategy to be a moderating factor between the firm and export performance. This is discussed in the next section.

### 4/2/3 The Zou and Stan Internal/External-Controllable/Uncontrollable Model

Zou and Stan (1998) have developed an analysis of the export performance literature which overcomes the weaknesses of the Aaby and Slater (1989) model that were highlighted earlier (see section 4/2/1). Unlike Aaby and Slater (1989), Zou and Stan (1998) have reviewed and evaluated 50 studies that focus particularly on export performance. Additionally, the factors (e.g. firm characteristics and competencies) in the framework (see Table 4.1) include variables that are consistent with each other, and reflect and describe the factor itself e.g. firm size, firm international competence, firm age, firm technology. Therefore, the Zou and Stan (1998) model is perceived as the most comprehensive, detailed, and updated framework that identifies the determinants of export performance.

**Table (4.1) Determinants of Export Performance**

	<b>Internal</b>	<b>External</b>
<b>Controllable</b>	<p><b>Export Marketing Strategy</b></p> <ul style="list-style-type: none"> <li>• General export strategy.</li> <li>• Export planning.</li> <li>• Export organisation.</li> <li>• Market research utilisation.</li> <li>• Product adaptation.</li> <li>• Product strengths.</li> <li>• Price adaptation.</li> <li>• Price competitiveness.</li> <li>• Price determination.</li> <li>• Promotion adaptation.</li> <li>• Promotion intensity.</li> <li>• Distribution channel adaptation.</li> <li>• Distribution channel relationships.</li> <li>• Distribution channel type.</li> </ul> <p><b>Management Attitudes &amp; Perceptions</b></p> <ul style="list-style-type: none"> <li>• Export commitment and support.</li> <li>• International orientation.</li> <li>• Proactive export</li> </ul>	

	motivation. <ul style="list-style-type: none"> <li>• Perceived export advantages.</li> <li>• Perceived export barriers.</li> </ul>	
<b>Uncontrollable</b>	<b>Management Characteristics</b> <ul style="list-style-type: none"> <li>• Mgmt's international experience.</li> <li>• Mgmt's education/experience.</li> </ul> <b>Firm's Characteristics &amp; Competencies</b> <ul style="list-style-type: none"> <li>• Firm's size.</li> <li>• Firm's international competence.</li> <li>• Firm's age.</li> <li>• Firm's technology.</li> <li>• Firm's characteristics.</li> <li>• Firm's capabilities/competency.</li> </ul>	<b>Industry Characteristics</b> <ul style="list-style-type: none"> <li>• Industry's technological intensity.</li> <li>• Industry's level of instability.</li> </ul> <b>Foreign Market Characteristics</b> <ul style="list-style-type: none"> <li>• Export market attractiveness.</li> <li>• Export market competitiveness.</li> <li>• Export market barriers.</li> </ul> <b>Domestic Market Characteristics</b> <ul style="list-style-type: none"> <li>• Domestic market.</li> </ul>

Mgmt: management.

Source: Zou and Stan (1998, p.343).

After reviewing the different models of the determinants of export performance, it becomes evident that the exporting field is burdened with a large and fragmented number of export performance antecedents (firm characteristics, export marketing strategy, management attitudes and perceptions, management characteristics, and firm characteristics and competencies), in addition to the great inconsistency of the research methodologies used that may be interpreted as a lack of coherence and consensus among scholars in the field with respect to both issues (i.e. determinants and methodologies) (Bodur, 1994; and Baldauf et al., 2000). Subsequently, very few solid conclusions are available to guide further research (Baldauf et al., 2000), highlighting the critical need for a comprehensive understanding of the determinants of export performance in a global marketplace. There is also a need to conduct a more focused review in order to circumvent such confusion and fragmentation (Zou and Stan, 1998). The following section reviews the various determinants of export performance using the Zou and Stan (1998) categorisation.

### **4/3 Internal/Controllable Determinants of Export Performance**

Following Zou and Stan's (1998) taxonomy, the following section discusses the internal/controllable determinants of export performance, namely export marketing strategy and management attitudes and perceptions.

#### **4/3/1 Export Marketing Strategy**

##### **4/3/1/1 Export Planning**

In this section the importance of export planning and the relationship with firm export experience and stage of internationalisation is discussed, as well as the relationship between export planning and firm size and export performance.

Although random events commonly play a role in the initiation of exporting (Bilkey, 1978), there is a consensus among researchers that formal market planning leads to higher export propensity (Cavusgil and Nevin, 1981; Cavusgil, 1984a; Malekzadeh and Nahavandi, 1985; Burton and Shegelmlich, 1987; Diamantopolous and Inglis, 1988; and Aaby and Slater, 1989).

Aaby and Slater (1989) underscore the importance of systematic planning in export operations. Cavusgil (1984) asserts that firms tend to adopt more formalised planning procedures as they become more experienced in and committed to exporting. Also, Barrett and Wilkinson (1986) find that firms in the early stages of internationalisation do not follow any formal or planned approaches and as their level of involvement increases things get much better and more structured. However, on the other hand, Amine and Cavusgil (1986) assure that very detailed export plans do not guarantee higher levels of export performance, however, giving more time to planning for exporting is a critical success factor.

Barrett and Wilkinson (1986), Ayal and Raban (1987) and Samiee and Walters (1990) associate firm size with export planning where they find, as anticipated, larger firms are most effective export planners and enjoy more success in overseas markets than their non-planners counterparts'.

Generally, export planning and information acquisition have a direct relationship with export success (Kirpalani and MacIntosh, 1980; Bilkey, 1987; Madsen, 1988; Walters and Samiee, 1990; Evangelista, 1994; Bodur, 1994; and Da Rocha and Christensen, 1994), and specifically, export planning is associated with improved export sales, number of export markets, profitability, development of exporting during the last five years and exporter satisfaction (Samiee and Walters, 1990; Bijmolt and Zwart, 1994; and Shoham, 1996).

On the other hand, O'Neill et al. (1987, p.40) find a complex relationship between planning and the performance of manufacturing firms in several north-eastern states of the USA. However, Katsikeas et al. (1996) assert that this finding could be the result of the increasing cost of export planning in specific situations.

It seems that there is wide agreement that planning is desirable (O'Neill et al., 1987). These results emphasise the need for exporters to intentionally explore and develop export markets. The *deliberateness* with which the firm carries out its export activities coupled with the focus on exporting when plans are developed makes planning an important determinant of export performance (Samiee and Walters, 1990).

#### **4/3/1/2 Utilisation of Market Research**

Several studies in the exporting literature have emphasised the need for market research, here defined as “gathering, recording and analysing all facts about problems relating to the transfer and sale of goods and services from the supplier to the consumer or user” (The American Marketing Association, 1961). Studies have highlighted that the utilisation of market research is associated with higher export performance, and that the larger the firm the more market research is carried out (e.g. Cooper and Kleinschmidt 1985; Koh and Robicheaux, 1988; Madsen, 1988; Seifert and Ford, 1989; Lee and Yang, 1990; Koh 1991; Beamish et al., 1993; and Hart et al., 1994).

There is evidence that market research has a strong positive effect on export sales, export growth and composite measures of export performance (Cunningham and Spigel, 1971; Cavusgil, 1984; Madsen, 1987; and Katsikeas et al., 1996). Also, Cooper and Kleinschmidt (1985) find a positive association between sales volume and the use of different marketing tools namely marketing planning, marketing research, segmentation and marketing control among the exporters of manufactured goods. In contrast, Samiee and Walters (1990), Koh (1991) and De Luz (1993) report a negative association between export sales and market research.

Kirpalani and MacIntosh (1980) and Madsen (1988) associate prior market research and prior contacts in the latest market and close monitoring of market changes with greater export achievement and export growth. Whereas, Langeard et al. (1976) suggest that because of the high costs associated with primary research, small firms that carry out secondary research are more successful in export markets. On the other hand, Amine and Cavusgil (1986) find no clear relationship between prior market or channel search and evaluation procedures and higher levels of export performance.

Further looking at firm size and market research, Samiee and Walters (1990) find that large firms with longer market experience and a better financial situation are more likely to allocate resources to marketing research activities. Hart et al. (1994) also associate firm size with the use of informal market research, although the authors have noticed a lack of consensus among British SMEs exporters with respect to the use of marketing research while taking exporting decisions. Moreover, Cunningham and Spigel (1971) and Cavusgil (1984b) find that the more the firm is committed to exporting the more its market research department handles export research and the more complex the research becomes. Also, Diamantopoulos and Schlegelmilch (1990) in a study of 80 Finish SMEs exporters found a number of differences with respect to the use and/or non-use of export market research. These were: 1) the users of export marketing research were larger, 2) they produced a wider range of products, 3) they served more regions, 4) they perceived themselves as more competitive in export distribution than their counterparts, and 5) they had separate

department to carry out export research matters. These results confirm the association between market research and firm size and exporting decisions.

#### **4/3/1/3 General Export Strategy**

The increasing globalisation of world markets has made international marketing strategy more important than ever (Shoham, 1996). However, even though thousands of words have been written in order to define 'strategy', there is a lack of agreement about what exactly strategy is. For instance, Buzzell and Gale (1987, p.18) define strategy as "the policies and key decisions adopted by management that have major impacts on financial performance. These policies and decisions usually involve significant resource commitments and are not easily reversible". In the same vein, Hofer and Schendel (1978) define strategy as "management's scope and resource commitments to achieve long-run success" (cf. Baldauf et al., 2000, p.66). Furthermore, Galbraith and Schendel (1983) see strategy as a consistent stream or pattern of managerially controllable decisions. Evidently, there is agreement among scholars that 'strategy' refers to a management arrangement which includes committing resources to accomplish long term success (e.g. financial, growth). This is a general definition of the term strategy, however, what this research is really concerned with is export marketing strategy

There are many definitions and views of export marketing strategy (Wind and Robertson, 1983). For instance, Cavusgil and Zou (1994, p.4) define export marketing strategy as: "the means by which a firm responds to the interplay of internal and external forces to meet the objectives of the export venture". This definition considers all aspects of the traditional approach to marketing strategy (i.e. product, promotion, pricing and distribution). Cavusgil (1983) identifies four variables that influence successful export marketing strategy specifically: 1) the basic company offering, 2) contractual links with foreign distributors and agents, 3) promotion, and 4) pricing. Following Aldrish (1979), Porter (1980) and Venkatraman and Prescott (1990), Cavusgil and Zou (1994) adopt the principal of strategy-environment co-alignment, where the fit between the strategy and its external context

has significant positive association with firm performance (Anderson and Zeithaml, 1984; and Gupta and Govindarajan, 1984).

Namiki (1994) introduces an operational definition of export marketing strategy where “strategy is a consistent pattern or combination of decision components representing market selection (i.e. the degree of worldwide orientation and market segmentation), marketing mix and marketing mix adaptation to foreign markets, which characterises the way businesses tend to compete in export markets”. Namiki’s working definition is comprehensive encompassing market selection and adaptation of marketing mix. The discussion now turns to the issues of concentration/diversification, standardisation-adaptation, and generic strategies.

Concentration/accumulation strategies, sometimes referred to as ‘concentration/diversification’ strategies, reflect one aspect of export marketing strategy. In research studies very few firms are using export market concentration policy, and so it is quite difficult to prove its validity, besides effectiveness of the strategy may vary between industries and firms. However, Piercy (1981) supports the general ‘concentration’ argument which states that “the greatest temptation is to diffuse first-rate resources rather than to concentrate them”. Also, Douglas (1996) stresses the importance of concentration strategy to Peruvian SMEs and further emphasises its positive impact on their export performance. Recently, Leonidou et al.’s (2002) meta-analysis reveals that use of a market concentration strategy is related positively to overall export performance. Meanwhile, Madsen (1987), Lee and Yang (1990) and Donthu and Kim (1993) report that neither strategy concentration/diversification, nor being first mover or follower is associated with higher export profitability and growth respectively, and that their effect are largely insignificant. These results suggest that the type of export strategy *per se* does not necessarily affect firms’ export performance.

The key consideration in the debate on standardisation versus adaptation is whether marketing strategy should be standardised or adapted according to foreign market conditions (Douglas and Craig, 1989). Conceptually, the degree of marketing standardisation versus adaptation is a function of product, industry, market,



organisation and environmental characteristics, these factors -individually and collectively- affect standardisation differently in various decision areas (Walters, 1986; Buzzell and Gale 1987; Jain, 1989; and Cavusgil et al., 1993).

Standardisation also offers the opportunity to realise economies of scale (Levitt, 1983; and Jain, 1989). Levitt (1983) refers to standardisation of international marketing strategy as using a common product, price, distribution and promotion programme on a worldwide basis, particularly where technology is removing the need to adapt elements of marketing strategy.

Table 4.2 highlights some of the findings with respect to the relationship between export marketing strategy standardisation/adaptation and the firm export performance.

The findings highlighted below show the disagreement among scholars about whether firms should standardise or adapt their marketing strategy. However, researchers strongly recommend that firms adapt their marketing mix to the exporting country context (Samiee and Roth, 1992; and Bhaskaran, 1999).

**Table (4.2) Export Marketing Strategy-Export Performance Relationship**

Export Marketing Strategy - Export Performance Relationship	Findings
Standardisation	<ul style="list-style-type: none"> <li>• Schneeweis (1985) and Shoham (1996) report that standardising some strategies does enhance firm performance.</li> <li>• Seifert and Ford (1989) suggest that firms exporting industrial goods would be better off when standardising their marketing mix except for promotion.</li> </ul>
Adaptation	<ul style="list-style-type: none"> <li>• Shoham and Albaum (1995) and Shoham (1996) establish a positive relationship between general adaptation and export performance.</li> <li>• Louter et al. (1991) assert that SMEs are more into adaptation approach than standardisation one.</li> <li>• Bhaskaran (1999) argues that Australian exporters have faced instability in their export volume and market share as a result of not adopting their marketing strategies to the specific social and political conditions of the exporting country Malaysia.</li> <li>• Douglas (1996) reports that when Peruvian SMEs adapt their marketing mix, it positively influences their attitudes towards exporting, yet their overall performance did not improve much.</li> </ul>
No difference	<ul style="list-style-type: none"> <li>• Samiee and Roth (1992) find no differences in performance among firms that standardise or adapt their strategy.</li> </ul>

Source: e.g. Shoham and Albaum (1995); Shoham (1996) and Bhaskaran (1999).

A less commonly used approach to categorise export marketing strategies is the products/markets (P/M) typology introduced by Axinn et al. (1996) and based on the work of Buzzell (1968); Levitt (1983), Porter (1985) and Kotler (1991) (see Figure 4.3).

The P/M typology, an alternative approach to concentration/diversification, is based on where the firm exports and the degree of within country segmentation, as well as on the degree to which the firm adapts its products.

**Figure (4.3) Products/Markets (P/M) Typology of Export Strategy**

	<b>Adapt Products for Export</b>	<b>Do not Adapt Products for Export</b>
<b>Export to Many Countries</b>	<p>Cell 2</p> <p><b>CUSTOMISED BROAD-BASED EXPORTERS</b></p> <p><i>Analogus frameworks:</i>  <i>Buzzell (1968)</i>  <i>Multinational strategy (Levitt, 1983). Flexible Global Strategy (Kotler1991)</i>  <i>Differentiation Strategy (Porter1985)</i></p>	<p>Cell 1</p> <p><b>STANDARDISED BROAD-BASED EXPORTERS</b></p> <p><i>Analogus frameworks:</i>  <i>Global strategy (Levitt, 1983)</i>  <i>Overall cost leadership strategy (Porter, 1985)</i></p>
<b>Export to Few Countries</b>	<p>Cell 3</p> <p><b>CUSTOMISED FOCUSED EXPORTERS</b></p> <p><i>Analogus framework:</i>  <i>Differentiation focus (Porter, 1985)</i></p>	<p>Cell 4</p> <p><b>STANDARDISED FOCUSED EXPORTERS</b></p> <p><i>Analogus framework:</i>  <i>Cost focus (Porter, 1985)</i></p>

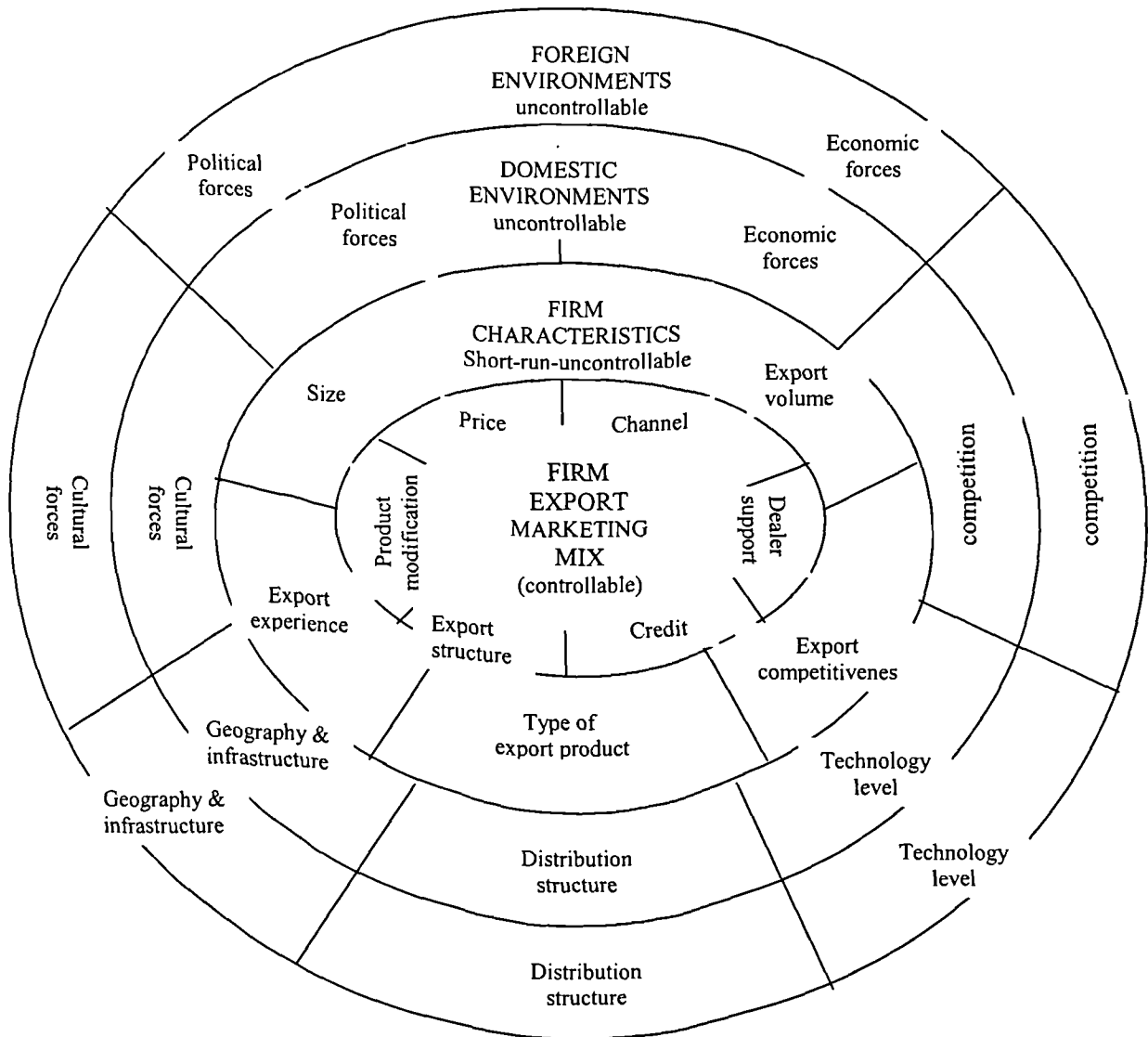
Source: Axinn et al. (1996, p.31).

Axinn et al. (1996) indicate that export performance of customised and standardised broad based exporters is very poor when measured by either sales or profits. Although significant differences between customised and standardised focused exporters were found when using profit as a measure of performance. The former result could be explained in light of Porter's (1985) justification that cost focus (standardised focused) exporters exploit differences in cost behaviour in some segments, while differentiation focus (customised focused) exporters exploits the needs of buyers in certain segments. Hence, if a focused exporter adopt a standardisation (cost based) strategy then lowering costs to gain international market entry could affect profit (Porter, 1985). On the other hand, there is no significant association between customised and standardised focused exporters when using sales as a measure of performance (Axinn et al., 1996). According to Porter (1985), if a firm can achieve sustainable cost leadership (cost focus) or differentiation

(differentiation focus) then the focuser will be an above average performer in his/her industry.

Cateora and Graham (1999, p.7) suggest that “international marketing involves creating a marketing mix that is optimal with respect to the business environment of each country to which the firm’s product is sold. The authors argue that the international marketing mix is controllable by management, but home and host country business environments are not”. Therefore, Cateora (1983) demonstrates a typological model for analysing the firm’s export marketing mix (see Figure 4.4). This particular schematic model is preferred than more recent diagrams introduced by Cateora as it fits the context of export marketing strategy standardisation/adapatation well.

**Figure (4.4) Schematic model of the export marketing mix for a given type of product in relation to the firm’s characteristics, the firm’s home country business environment and the business environment of the country to which the product is exported**



Source: Cateora (1983, p.4).

“The above figure indicates that a firm’s model for analysing its export marketing mix should be appropriate to the firm’s characteristics, the type of product exported, the firm’s home country business environment and the business environment of every country to which the firm exports. Each consideration listed above (see Figure 4.4) is an aggregate of many components all of which should be examined when selecting an appropriate export marketing mix” (Bilkey, 1987, p.158). It seems that

the term marketing mix strategy is used synonymously and interchangeably with export marketing strategy (Levitt, 1983; and Buzzell and Gale, 1987).

Namiki (1994) finds two types of export marketing strategies namely low price leadership and innovative differentiation to correspond with above average export profitability. Consistently and recently, Baldauf et al. (2000) examine the relationship between the former export strategies reported by Namiki (1994) and export performance measured by export effectiveness, export intensity, and export sales among Austrian exporters. The results indicate a positive relationship between differentiation strategies and export effectiveness and a negative association with export intensity and export sales. On the other hand, the results show that low cost strategy is negatively associated with export effectiveness, and its relationship with export intensity and export sales was insignificant.

Amine and Cavusgil (1986) argue that there is relatively little empirical research that associates specific types of marketing strategies with export success. Also, Namiki (1994) finds a weak relationship between export market strategy and export growth and that export intensity is not an adequate measure of export market strategy. Admittedly, findings about a general relationship between export strategy and firm performance deemed inconclusive (Shoham, 1996). Unfortunately, researchers concerned with export marketing strategy are using simple measures of performance and a limited number of explanatory strategy variables, therefore, more research is needed to justify the effect of export marketing strategy on both single and multiple measures of export performance (Shoham, 1996).

#### **4/3/1/4 Product Adaptation**

Product standardisation/adaptation policies are an important aspect of export marketing strategy and are perceived as an antecedent of export performance. In this section differing views of the association between product adaptation, product type and product line management and export performance measures (e.g. export growth, export profitability) are discussed.

Although the cost savings from standardisation are appealing for firms, product adaptation receives more attention in the literature, and arguably, marketing oriented firms will modify their products to appeal to different groups of customers in different markets. Product adaptation is defined in terms of the degree to which the firm's actual and augmented product elements are adapted for export markets to accommodate differences in environmental forces, consumer behaviour, usage patterns and competitive situations (Leonidou et al., 2002, p.61). The findings on product adaptation and export performance are mixed. A number of researchers associate product adaptation with export growth, market share, export performance and export profitability, largely due to the ability of an adapted product to better satisfy foreign consumers' needs and preferences and to be transferred easily to the foreign market (Cooper and Kleinschmidt, 1985; Walters and Samiee, 1990; Donthu and Kim, 1993; Szymanski et al., 1993; and Johnson and Arunthanes, 1995). Leonidou et al. (2002) find that the only significant results linking product adaptation and superior export performance come from studies using export sales based performance measures.

On the other hand, Johnson and Arunthanes (1995) and Shoham (1996) report that product adaptation has no influence on export performance measured by profitability and sales, further its effect on financial performance is yet unclear. Moreover, Amine and Cavusgil (1986) notice that firm's performance is improved with less product adaptation for exporting.

Turning to the issue of 'product type' and its role in product adaptation decisions, Das (1994) reports an association between the nature of the product and export intensity, also Gripsrud (1990) finds that product categories influence the firms attitudes towards future exports. Moreover, Jain (1989) and Johnson and Arunthanes (1995) argue that consumer products require adaptation because they address human needs and wants of various societies, meanwhile industrial products do not need modifications for export markets. Evidently, empirical evidence concerning product type and standardisation/adaptation is equivocal.

The relationship between product line management and export performance is inconclusive, where some authors associate product lines customisation with export profitability (Walters and Samiee,1990, and Shoham,1996). While Christensen et al. (1987) conclude that firms with multiple product lines are more successful in their export activities than their counterparts. Moreover, Beamish et al. (1993) find a positive relationship between wide product line and the UK and Canadian SMEs export sales. Whereas, Kirpalani and MacIntosh (1980) associate narrow product lines with higher levels of export sales. The authors contend that a wide product line may diffuse the firm's exporting resources, and consequently may diminishes its success.

There is a consensus in the marketing literature that firms following a product standardisation policy achieve superior performance and success which is explained by economies of scale, learning curves effects, and improving quality by applying standardised marketing concepts (Christensen et al., 1987; Louter et al., 1991; De Luz, 1993; and Styles and Ambler, 1994). Nevertheless, Samiee and Roth (1992) report no association between product standardisation and export performance. They argue that despite the well known advantages of standardisation, profitability may suffer because sometimes standardised products may not match foreign customers' needs.

#### **4/3/1/5 Product Uniqueness**

This section discusses the different views of scholars with respect to the relationship between product uniqueness and export performance. The findings are inconsistent in nature, with some authors reporting an association with performance and success in export markets, while others present an opposing view, or even no association.

A number of authors suggest that a unique, differential, or very sophisticated product and patent is a major export stimulus and the common explanation of export success that influences firms' export behaviour (Tesar and Tarleton, 1982; Kaynak and Kothari, 1984; Albaum et al., 1994; and Thirkell and Rmadhani, 1998).



Evidence indicates that product uniqueness significantly influences export profitability, growth as compared to competitors, satisfaction with market share, export proportion of sales, export success and export performance (Cunningham and Spigel, 1971; Tesar and Tarleton, 1982; Madsen, 1988; Louter et al., 1991; Styles and Ambler, 1993; and Moen, 2000). Product strength is also associated with export sales (Hirsch, 1971; Bilkey, 1982; Rosson and Ford, 1982; and Cavusgil, 1984). In addition, McGuinness and Little (1981) and Beamish et al. (1993) argue that product characteristics have a positive influence on export success.

However, some negative findings about product uniqueness and export success have been reported (Kirpalani and MacIntosh, 1980; and Louter et al., 1991). Louter et al. (1991) find that due to the premium price associated with product uniqueness the overall export sales ratio decreases. Whereas, the empirical findings show that product uniqueness and quality do not contribute significantly to export success and export profitability (Wiedersheim-Paul and Erland, 1979; Ayal and Hirsch, 1982; Cooper and Kleinschmidt, 1985; Cavusgil and Naor, 1987; and Koh, 1991).

Overall, the evidence of a relationship between product uniqueness and export performance is still ambiguous with some authors reporting a positive association, while others find a negative or no association.

#### **4/3/1/6 Price Adaptation**

*“Pricing is the moment of truth - all of marketing comes to focus in the pricing decision” (Cory, 1962).*

The following section highlights the importance of pricing as a key factor in marketing strategy and export success.

There are two important reasons to regard price as a fundamental element in marketing strategy (Samiee, 1987). Firstly, price translates the firm's efforts into profits and revenues, hence indicates its success in the long run. Secondly, to change

pricing policy usually requires minimal expenditures unlike other aspects of marketing strategy. Yet, Myers and Cavusgil (1996) and Stottinger (2001) observe that despite the importance of pricing it has attracted little research interest compared with other marketing tools.

Cavusgil (1988) identifies a number of variables that influence export pricing: 1) the nature of the product or industry, 2) the location of the production facility, 3) the distribution system, 4) the location and environment of the foreign market, 5) U.S. government regulations, and 6) the attitude of the firm's management. The author adds that except for the fifth variable the rest of the variables could be generalised to any other firm when making price decisions that are considered critical for marketing executives. Particularly, since price is known as the most flexible and differentiated marketing mix instrument (Louter et al., 1991).

Exporters state that price is that part of the marketing mix that requires most adaptation for exporting, where a growing number of researchers establish a significant positive relationship between export price adaptation/customisation and export success (Kirpalani and MacIntosh, 1980; Piercey, 1981; Bilkey, 1982; Koh and Robicheaux, 1988; Koh, 1991; and Shoham, 1996). Leondiou et al.'s (2002) meta-analysis shows a strong positive link between price adjustment and both overall and individual export performance measures with the exception of export sales. Piercy (1981) finds that some firms would largely differentiate their product prices across markets while others do not. However, there are some contradictory findings for example, Amine and Cavusgil (1986) report that the correlation between price and performance is largely inconclusive, and Siefert and Ford (1989) conclude that there is no significant difference in pricing patterns across firms size and exporting experience.

Turning to price competitiveness, the development of the Internet has given added impetus to the debate about standardisation/adaptation of pricing. The differentiation of prices across markets becomes hard to sustain because of the transparency of information and the availability of competitors prices.

Stottinger (2001) indicates that only two German international business executives out of 45 interviewed assert that they had to adjust their prices to their competitors' prices – because of price comparisons on the Internet - rather than matching their prices level across markets. The remaining 43 executives were quite confident that the Internet will not put them under the pressure of standardising their prices. Madsen (1987, 1988) argues that price competitiveness has a weak and marginal effect on export performance. Similarly, Louter et al. (1991) report a weak association between price competitiveness and profitability and a positive effect on export sales ratio. Myers et al. (2002) expect that in a more competitive export environment, competitive export pricing positively influences export performance. Whereas, Hirsch (1971) and De Luz (1993) find no significant correlation between price competitiveness and export growth. These negative results indicate that price competitiveness has a minor effect on export performance.

In spite of the importance of export pricing as the only marketing strategy variable that generates revenue, exporters perceive other factors like product quality and customer service as critical aspects contributing to the firm export performance (Wortzel and Wortzel, 1981). Admittedly, further investigation is required to better comprehend the dynamics of this variable taking into consideration the new challenges forced by the new technology (i.e. the Internet).

#### **4/3/1/7 Promotion Adaptation**

Although the decision to standardise or adapt promotion strategy is a key concern for exporters (Leonidou et al., 2002), few empirical investigations look at this particular area. This section outlines the relationship between promotion adaptation and export performance measures.

Cavusgil and Zou (1994) report a moderate and inverse relationship between promotion adaptation and export performance. They argue that the sensitivity of promotional efforts to cross cultural variables and the high cost of promotion adaptation are the reasons for this result. While on the other hand, Jain (1989) reports a positive association between standardising advertising and firm performance. Also,

Louter et al. (1991) assert that a standardised promotion policy does improve export profitability in certain industries.

In conclusion, Leonidou et al. (2002) suggest that promotion adaptation exhibits a strong positive association with overall export performance regardless of the time, place and products focused on in the studies reviewed. However, analysis of individual export performance measures reveals that promotion adaptation has a strong effect only on export sales growth and export intensity, while its impact on export profits is limited.

With respect to promotion intensity, a number of studies establish a positive association between promotion intensity and export sales growth, export profits, export intensity and satisfaction with exporting (Kirpalani and MacIntosh, 1980; Cavusgil and Kaynak, 1982; Siefert and Ford 1989; Shoham, 1996; and Leonidou et al., 2002). Siefert and Ford (1989) observe that small firms in the USA have different levels of promotional budgets based on their exporting experience - the longer they have been exporting the larger their promotional budgets. Also, the authors notice that large firms are more satisfied with their exporting performance. The explanation given is that firms with more export experience realise the value of promotion, and are convinced that they cannot achieve a desirable level of export sales without that promotion.

Clearly, the effect of promotional effort on various measures of export performance is mixed and yet unclear, therefore it is an interesting area that needs further research and investigation.

#### **4/3/1/8 Distribution Channel Adaptation**

Research into channels of distribution is relatively extensive and a growing number of studies have established a positive relationship between distribution strategy and export performance (Bilkey, 1982; Gronhaug and Lorenzen, 1982; Rosson and Ford, 1982; Yaprak, 1985; Chan, 1992; Axinn et al., 1994; and Da Rocha and Christensen, 1994).

However, compared with other areas of export marketing strategy, the standardisation/adaptation of distribution channels has not received much attention (Rosenbloom et al., 1997). Nevertheless, Louter et al. (1991) report that a standardised distribution policy improves export profitability in certain industries, while Leonidou et al. (2002) report a strong positive association between distribution adaptation and export intensity and export profit level.

#### **4/3/1/9 Distribution Channel Relationships**

Channel relationships are generally thought of as dealer/distributor support, communication, motivation and involvement in decision making with the channel members. A growing number of studies highlight channel relationships as a key determinant of export sales, profits, growth and success (Bilkey, 1982, 1985; Rosson and Ford, 1982; Cavusgil and Kaynak, 1982; Madsen, 1988; Kirpalani and Robinson, 1989; Koh, 1991; Chan, 1992; Styles and Ambler, 1994; and Moen, 2000).

Craig and Beamish (1989) hypothesise that successful exporters establish personal relationships with their foreign representatives, and also meet them more frequently than less successful exporters. Rosson and Ford (1982) find a positive association between the intensity of contact among Canadian manufacturers and their UK distributors, and export performance. The authors assess the intensity of contact by the numbers of: letters, phone calls, visits, telex messages and other contact frequency. Rosson and Ford's (1982, p.66) evidence leads them to "affirm the importance of closeness in reducing the distance between manufacturer and distributor in leading to enhanced performance". Further, Styles and Ambler (2000) observe that the exporter/distributor relationship among Australian and UK SMEs follows an evolutionary or developmental approach, this observation is supported by Frazier (1983) and Dwyer et al. (1987).

#### **4/3/1/10 Satisfaction with International Marketing Channels**

One of the most important decisions a firm takes when deciding to go international particularly via exporting, is to identify the appropriate distribution channel structures to use (Kim, 1998). For instance, Chan (1992) finds that firms who use direct export channels have higher export profitability. On the other hand, Kirpalani and MacIntosh (1980) find no significant relationship between the export channels used and export success. It should be noted that international distribution channel structures are very difficult to change for a variety of reasons including: foreign government restrictions, resource scarcity, and the cost of changing channel. Also, an incorrect choice of channel leads to poor results and low satisfaction because of low operation performance in the initial entry market.

Hunt and Nevin (1974) and Lusch (1976) argue that satisfaction with international marketing channels improves moral and cooperation among channel members and reduces dysfunctional conflict. Even though, Ahmed (1977) argues that controlling behavioural problems between channel members in international markets is very difficult, nevertheless it is very important.

#### **4/3/2 MANAGEMENT ATTITUDES AND PERCEPTIONS**

##### **4/3/2/1 Export Commitment and Support**

In this section views on the relationship between top level management support, commitment to exporting and export performance are examined.

The level of firm commitment to exporting is defined as a general willingness by management to devote adequate financial and/or managerial and human resources to export related activities (Aaby and Slater, 1989). There is a great deal of evidence that top-level management support and commitment to export development has a direct and positive impact on export performance, success and growth (Cunningham and Spiegel, 1971; Bilkey and Tesar, 1977; Kirpalani and MacIntosh, 1980; Cavusgil and Nevin, 1981; Gronhaug and Lorenzen, 1982; Rosson and Ford, 1982; Gomez-

Mejia, 1988; Axinn, 1988; Sriram et al. 1989; Cavusgil and Kirpalani, 1993; Donthu and Kim, 1993; Cavusgil and Zou, 1994; Bijmolt and Zwart, 1994; Gray, 1997; and Cacic et al., 2002). Not surprisingly with so much research carried out on this topic there are some weak or neutral findings, for instance, Madsen (1988) reports that top management support exhibits a positive but weak impact on export performance.

Sriram et al. (1989) establish a significant negative association between level of commitment and export intensity. The authors explain this contradictory result by reference to a gap between perceived and actual export performance assessed by export managers. They suggest that export managers are not being honest in their assessment of export performance.

There is a substantial body of evidence that associates management motivation and commitment with export performance (Kirpalani and MacIntosh, 1980; Cavusgil and Nevin, 1981; Rosson and Ford, 1982; Reid, 1983; Thomas and Araujo, 1985; Amine and Cavusgil, 1986; Axinn, 1988; Madsen, 1988; Young et al., 1989; Cavusgil and Kirpalani, 1993; Cavusgil and Zou, 1994; and Gray, 1997). Relatively few studies report no significant association with either export profitability or export sales growth (Koh, 1991; De Luz, 1993; and Douglas, 1996).

Although there are some negative results, it seems reasonable to suggest that high management commitment and motivation allow firms to proactively exploit export market opportunities and pursue effective export marketing strategies that improve their overall export performance.

#### **4/3/2/2 Management Attitudes and Perceptions**

Management attitudes and perceptions are fundamental determinants of export performance and this relationship is well established in the pertinent literature. This section discusses the empirical investigations that correlate management attitudes and perceptions towards profits, costs, risks and complexity associated with exporting with success in international markets.

“Empirical evidence points exclusively to the decision makers’ attitude, experience, motivation and expectations as primary determinants in firms engaging in foreign marketing activity” (Reid, 1983, p.109). Further, Hughes (1971, p.10, 11) asserts that “attitudes are a hypothetical construct that describe potential human behaviour”. A large body of the existing literature positively associate management attitude toward exporting, export orientation and commitment to export success (Cunningham and Spigel, 1971; Fenwick and Amine, 1979; Kirpalani and MacIntosh, 1980; Cavusgil and Nevin, 1981; Reid, 1983; Czinkota and Johnston, 1983; Cavusgil, 1984; Dichtl et al., 1990; Calof, 1994; and Cicic et al., 2002). Moreover, Johnston and Czinkota (1982) assert that relative to firms with a reactive attitude, proactive exporters enjoy greater export sales, follow cohesive marketing strategies, and place more emphasis upon customer service. By contrast, Bijmolt and Zwart (1994) argue that attitude towards exporting is playing a weak role in determining export success among SMEs.

Looking at managers’ perceptions toward exporting, Roy and Simpson, (1981, p.17, 18) assert that “perception is the chief factor that determines the way a person adapts to its world.... people do perceive selectively as a result of their needs, drives, motives and attitudes”. Miesenbock (1988) and Aaby and Slater (1989) conclude that the management and/or the decision maker perceptions and characteristics are the most important determinants of export success. Previous research relates perceived barriers to export activities, and scholars note that perceived barriers reflect management attitudes and perceptions towards exporting and the importance of various export barriers (e.g. Bilkey and Tesar, 1977; Cavusgil and Nevin, 1981; and Cavusgil, 1982). These findings suggest that it is important for the management to maintain a positive attitude towards the outlook of export operations. Nevertheless, Cooper and Kleinschmidt (1985) report that perceived export barriers has low significance for strategy, and Gripsrud (1990) says that perceived export barriers has no effect on management attitude towards future exports. In general, perceived barriers associated with exporting may be considered as an indirect measure of a firm’s attitude toward exporting.



Louter et al. (1991) have found that positive management perceptions towards risk associated with exporting is a key success factor in export market. "Perception of risk implies that risk is some physical entity that can be seen, tasted, smelled or otherwise identified" (Katz and Peters, 2001, p.371). Relative to non-exporters, export managers tend to have lower perceptions towards risks and costs and higher ones towards profits (Roy and Simpson, 1981; Cavusgil and Naor, 1987; and Masurel, 2001). Further, the more the firms are involved in international business the more likely it is their perceived risks associated with exporting diminish (Barrett and Wilkinson, 1986). However, it is important to note that negative perceptions towards the risks associated with exporting are substantial barriers to export, and that perceived export complexity is negatively associated with export performance (Axinn, 1988). Moini (1995) reports an insignificant association between perceived export profits, risks and costs and export success among small Wisconsin manufacturing firms.

Clearly, perceptions towards risks, profits, costs and complexity associated with exporting are important factors that determine a firms' export orientation, and that knowledge of the nature of management attitudes, perceptions and awareness towards exporting are key antecedents of export performance.

#### **4/4 Internal/Uncontrollable Determinants of Export Performance**

Following Zou and Stan's (1998) classification, the next section discusses the internal/uncontrollable antecedents of export performance, which consist of two major components, namely: management characteristics, and firm characteristics and competencies as highlighted in the related literature.

##### **4/4/1 Management Characteristics**

The personal characteristics, calibre and experience of management are key ingredients in understanding the export behaviour of the firm, its decision processes and its success (Kaynak, 1985; and Carson, 1990). Miesenbock (1988) asserts that "the key variable in small business internationalisation is the decision maker of the

firm. As he or she is the one to decide starting, ending, and increasing international activities, as well as laying down the goals concerning exporting and determining the organisational commitment". In the same vein, Holzmuller and Kasper (1990, p.218) argue that "a company's decision to extend its marketing activities to markets abroad is ultimately taken by the individual decision maker". Obviously, the importance of management characteristics is particularly tangible in small firms "where the power is generally concentrated in the hands of one or very few persons" (Garnier, 1982, p.121).

As a consequence, a growing body of literature identifies management characteristics that are believed to be associated with the level of firm internationalisation and/or performance (Cavusgil and Nevin, 1981; Reid, 1983; Dichtl et al., 1990; and Louter et al., 1991). Also, the work of Gomez-Mejia (1988) and Diamantopoulos and Schlegelmilch (1994) associates the firm's human resources strategies with export performance. However, Ibeh (2000) asserts that studies of the decision maker characteristics that help SMEs to grow internationally are producing conflicting results. Da Rocha (1994) reports that insufficient attention has been given to the international dimension of the relationship between human resources management and export performance. Like any debate, there are always two sides with some authors running counter to the general notion and report insignificant results of the relationship between management characteristics and export performance (Fenwick and Amine, 1979; Schlegelmilch and Ross, 1987; and Moini, 1995).

#### **4/4/1/1 Management's International Experience**

In this section the importance of management's international experience in pursuing and exploiting opportunities in international domains, different types of management international exposure, the relationship between management's international experience and export measures and success are discussed.

Several authors argue that environmental characteristics (Roux, 1977) and management knowledge and skills with respect to overseas markets and operations (Moini, 1995; and Katsikeas et al., 1996) are key factors for firms' growth. These factors reduce the ambiguity and complexity of pursuing international markets, hence export executives become more capable of using appropriate marketing strategies that allow them to accelerate their internationalisation process. A highly internationally orientated decision maker is more capable of recognising information about exporting and acting upon that information (Olson and Wiedersheim-Paul, 1987). The more internationally experienced the top management team is, the earlier the small firm enters the foreign market, implying that internationally orientated managers are the driving force of small firms towards early and successful internationalisation (Lim et al., 1993; and Reuber and Fisher 1999).

There are different types of international exposure, for instance, international conferences, living, working and travelling abroad and personal visits to overseas markets. These types of international exposure provide different opportunities and advantages for export managers. For example, personal visits to overseas markets can provide information for evaluating the appropriateness of the product, then evaluating the risk in the foreign market and the opportunity for motivating overseas agents (Cunningham and Spigel, 1971). Also, managers who travel abroad become more familiar with foreign cultures, decreasing their concern about 'psychic distance' and enhancing their likelihood of engaging in foreign trade (Axinn, 1988; and Dichtl et al., 1990). In general, all types of international exposure allow export managers to develop their own network of contacts (Oviatt and McDougall, 1994; and Coviello and Munro, 1997). Finally, managers' international experience helps firms to identify and develop international opportunities while reducing the risks of operating in the international market place, hence the international experience of managers is a predictor of attitude towards future exporting (Gripsrud, 1990).

The vast majority of authors indicate that the more international exposure top management has (e.g. travel, work and live abroad) the more the firm is actively and aggressively involved in exporting (Cunningham and Spigel, 1971; Tesar and

Tarleton, 1982; Garnier, 1982; Barrett and Wilkinson, 1986, Kwei-Cheong and Wai-Chong, 1988; Moini, 1995; Gray, 1997; and Thirkell and Dau, 1998).

Also, a growing number of scholars associate managers' international experience with higher export growth rates, export intensity, export sales, export profitability and stronger export performance (Schlegelmilch and Ross, 1987; Axinn, 1988; Dichtl et al., 1990; Holzmuller and Kasper, 1990; Czinkota and Ursic, 1991; De Luz, 1993; Das, 1994; Nakos et al., 1998; and Kundu and Katz, 2000). However, a small number of studies establish a negative association between managers' international experience and anticipated export growth (Lignos and Ursic, 1984; and Ursic and Czinkota, 1989).

#### **4/4/1/2 Management Level of Education**

Management's education is an important factor affecting the firm's decision to go international, and the level of management education is a key determinant of export performance.

Educated managers are assumed to be more 'cosmopolitan' and more willing to deal with foreigners compared to less educated managers (Reid, 1983; and Axinn, 1988). Kwei-Cheong and Wai-Chong (1988) report that Singaporean exporting managers are better educated than their counterparts in non-exporting firms. Some authors establish a positive relationship between the manager's level of education and export propensity, export sales, export profitability and a positive attitude towards exporting (Reid, 1983; Barrett and Wilkinson, 1986; Schlegelmilch and Ross, 1987; Axinn, 1988; and Nakos et al., 1998).

On the other hand, Cavusgil and Naor (1987) report a weak relationship between export managers' level of education and export performance, and Ursic and Czinkota (1989), Czinkota and Ursic (1991), Evangelista (1994), Moini (1995) and Gray (1997) find no significant relationship between the managers formal level of education and export performance. The suggestion is that level of education has an

indirect effect on export performance and may be used as a secondary measure of export performance in subsequent research.

Burton and Schelegelmilch (1987) and Kundu and Katz (2000) argue that managers of successful exporting firms consider training as important element in exporting as it reflects top management's commitment to recruit and retain 'internationally minded' staff. Also, Kaynak and Kuan (1993) associate the number of well-trained employees involved in exporting with the firm export performance.

#### **4/4/1/3 Command of Foreign Languages**

Many successful exporting companies have management with no language ability and feel that a command of foreign languages is not fundamental for international business (Swift, 1991). Although this may be true, it would seem that knowledge of foreign languages is useful in exporting. This section discusses the relationship between management's foreign language ability and export performance.

A number of researchers highlight the value of language ability for export achievement (Hunt and Nevin 1974; Bilkey, 1978; Reid, 1983; and Turnbull and Welham, 1985). Empirical investigations correlate managers' proficiency in foreign languages with higher export growth, export sales, export profitability and stronger export performance (Schlegelmilch and Ross, 1987; Ursic and Czinkota, 1989; Holzmuller and Kasper, 1990; Czinkota and Ursic, 1991; and Nakos et al., 1998). Diamantopolous and Inglis (1988) and Dichtl et al. (1990) argue that managers who are bilingual are more willing to conduct business with foreigners, and Reeves (1990) finds that firms lacking managers with foreign language skills are more likely to lose overseas business opportunities.

However, there are some weak or negative findings, Cavusgil and Naor (1987) establish a weak association between foreign language skills and export marketing, and Moini (1995) finds no significant association between manager's knowledge of foreign languages and export performance. These results imply that exporters can

still be successful and competent without possessing foreign language capabilities. However, according to Quinn (1996) “a well implemented language strategy takes the “beginners luck” out of exporting and injects far more security for continued growth.... customers respond better when you demonstrate your commitment to their country by learning their language....hence profits increase” (cf. Cromie et al., 1997, p.18). Evidently, language ability is fundamental to achieve the most favourable outcomes, although it may not be a key success factors in international markets. Needless to say, speaking your customers’ language creates ‘psychological closeness’, which in general leads to better export performance (Dichtl et al., 1990).

#### **4/4/1/4 The Age of the Decision Maker**

The age of the decision maker is believed to have a significant effect on firms’ export activity. The relationship between decision maker age and export performance and success has been extensively researched in the international business literature, though the findings are yet unclear.

Bilkey (1978), Aaby and Slater (1989) and Dichtl et al. (1990) associate the age of the decision maker with export propensity, however Czinkota and Ursic (1989), Evangelista (1994) and Nakos et al. (1998) report an inverse relationship between age and export sales and export profitability. They argue that the inverse relationship between decision maker age and export performance is attributable to the more ‘cosmopolitan’ nature of younger managers and to their positive perceptions towards risk associated with exporting. This suggests that firms with older managers tend to take fewer risks and are less willing to innovate and expand internationally (Aaby and Slater, 1989).

However, Kaynak and Kuan (1993) find that firms with older managers tend to have higher performance, whilst Czinkota and Ursic (1991), Moini (1995) and Nakos et al. (1998) establish no significant relationship between export manager age and both of export growth and export sales. There is some evidence for an industry effect as in the Kwei-Cheong and Wai-Chong (1988) investigation of Singaporean SMEs in the

electronic and furniture sectors, the authors find that export managers in the electronic sector are younger than their non-exporters counterparts, whereas, in the furniture sector exporters were comparatively older than non-exporters. This suggests that decision maker age may be related to industry type and technological intensity.

#### **4/4/2 Firm Characteristics and Competencies**

Firms' characteristics and competencies are a key influence on the internationalisation process and export performance in both manufacturing and service sectors, further they are dominating the general export literature (Axinn, 1988; Aaby and Slater, 1989; Cavusgil and Zou, 1994; and Kundu and Katz, 2000). The following subsection discusses firms' characteristics and competencies, namely: firm size, age, technology, international competence and capabilities/competencies.

##### **4/4/2/1 Firm Size**

Firm size is one of the most analysed variables in the exporting literature. Although extensively researched, its impact on export performance is still ambiguous and inconclusive (Bilkey, 1978; Reid 1983; Czinkota and Ursic 1983; Dichtl et al., 1984; Cavusgil, 1984; and Bonaccorsi 1992).

It is argued in the literature that it is easier for large firms to start exporting and run international business than small firms (Hirsch, 1971; Samiee and Walters, 1990; and OECD, 1999). In this context, large firms have the following advantages, more underutilised resources that enable them to direct greater efforts to export activities (Bourgeois, 1980), a greater ability to expand resources and absorb risks (Garnier, 1982; and Erramilli and D'Souza, 1993), and a larger pool of financial and managerial resources which enable them to become better competitors in international arena (Reid 1983; Keng and Juan, 1989; Bonaccorsi 1992; Chetty and Hamilton, 1993; and Kaynak and Kuan, 1993). Finally, Bonaccorsi (1992) asserts that large firms do not really have any other alternative except going international if they are to increase their sales.

There is some agreement that the greater the firm size the higher its export performance, export profitability, export sales, export intentions, export propensity, export intensity and export revenue (Hirsch, 1971; Cavusgil and Nevin, 1981; McGuinness and Little, 198; Garnier, 1982; Reid, 1983; Cavusgil, 1984a; Yapark, 1985; Kaynak, 1985; Walters, 1985; Cavusgil and Naor, 1987; Burton and Schlegelmilch, 1987; Kwei-Cheong and Wai-Chong, 1988; Keng and Jiuan, 1988; Miesenbock, 1988; Culpán, 1989; Craig and Beamish, 1989; Axinn et al., 1994; Moini, 1995; Wagner, 1995; Douglas, 1996; Nakos et al., 1998; Beamish et al., 1999; Poutziouris et al., 2000; Baldauf et al., 2000; and Moen, 2000). Czinkota and Johnston (1983) believe that beyond a certain level of export sales larger firms do not have superior export performance.

On the other hand, the proposition that the smaller the firm the less likely it is to be an exporter is not universally accepted. Empirical investigations have provided evidence to the contrary (e.g. Bonaccorsi, 1992; Oviatt and McDougall, 1994; Philp, 1998; and Wolff and Pett, 2000). Glancey (1998) and Wolff and Pett (2000) have shown that SMEs can have higher growth rates in larger firms. This implies that small firms are capable of competing side by side with large ones and their lack of size is not a handicap in exporting. Further, a growing number of scholars find a negative association between firms' size and international success, export performance, future attitude towards exporting and export intensity (Cooper and Kleinschmidt 1985; Gripsrud, 1990; Louter et al., 1991; Naidu and Prasad, 1994; Beamish et al., 1999; and Kundu and Katz, 2000).

There is a large body of evidence to suggest that firm size does not differentiate between export performance and export propensity, export sales, export profitability, export growth, importance of exporting, awareness and appreciation of export advantages and benefits and stage of export development (Bilkey and Tesar, 1977; Bilkey, 1978; Kirpalani and MacIntosh, 1980; Cavusgil, 1982; Czinkota, 1982; Czinkota and Johnston, 1983; Cavusgil, 1984; Amine and Cavusgil, 1986; Gomez Mejia, 1988; Axinn, 1988; Diamantopolous and Inglis, 1988; Moon and Lee, 1989; Louter et al., 1991; Bodur, 1994; Evangelista, 1994; Atuahene-Gima, 1995;



Katsikeas et al., 1996, Douglas, 1996; Philip, 1998; Gray, 1997; Moen, 1999; and Wolff and Pett, 2000). Also, Cavusgil (1984), Bonaccorsi (1992), Lau (1992), Calof (1994) and Bijmolt and Zwart (1994) assert that firm size does not represent a barrier to successfully access foreign markets.

An explanation for the lack of a relationship between firm size and export activities is that size acts as an accompanying variable or as a substitute for greater availability of production, financial and human resources. Therefore, the effect of size on export activities is indirect (Bilkey, 1978; and Cavusgil, 1982, 1984). However, it is interesting to note that Wolff and Pett (2000) hypothesise that where a positive relationship between firm size and export intensity is established this tends to be used to confirm the stages model of internationalisation, whilst those studies where negative or no relationship between firm size and export intensity is found support the resource based view of the firm. However, the empirical evidence did not support this hypothesis, and the results suggest that very small and medium-sized US firms are exporting as effectively as their larger counterparts.

One possible explanation for the mass of contradictory findings is that different measures are used to operationalise firm size. Some authors use number of employees, level of sales, or sometimes value of firm assets, while others use number of technical and non-technical employees, and number of product lines (Reid, 1983).

#### **4/4/2/2 Firm Age**

A number of studies have investigated firm's age as a potential influence of firm's behaviour in international market. The following section discusses different views with respect to the relationship between firm's age and exporting.

Kirpalani and MacIntosh (1980), Garnier (1982), Ursic and Czinkota (1989), Glancey (1998) and Autio et al. (2000) observe that younger firms are more active in exporting and display significantly higher growth rates than the older firms. The explanation for this is that younger firms tend to devote more managerial resources

to their foreign market resulting in a better export performance. Also, younger firms frequently face difficulties in saturated domestic markets and are forced to diversify overseas. Keng and Jiuan (1988) report no direct relationship between firm age and being active exporter.

Kwei-Cheong and Wai-Chong (1988) note that Singaporean SMEs exporters in the electronic sector are younger than non-exporting firms, whereas in the furniture sector exporting firms are older than non-exporting. Das (1994) finds that older firms have a higher export sales ratio, and Welch and Wiedersheim-Paul (1980) argue that older firms are more likely to be exporters.

However, there are a number of weak or contradictory findings, Bilkey and Tesar (1977) report that in general older firms are self-satisfied with their domestic market position, and therefore, they are less inclined to expand abroad. Bodur (1994), Nakos et al. (1998), Kundu and Katz (2000) and Baldauf et al. (2000) establish a negative association between firm age expressed as the number of years in business and export performance, export intensity, export profitability and export sales. These negative relationships confirm earlier findings suggesting higher performers are younger and more likely to be successful exporters. Yet, on the other hand, Reid (1983), Gomez-Mejia (1988), Bell (1994), Nakos et al. (1998) and Poutziouris et al. (2000) find that firm age is not associated with export sales and does not have much effect on export performance.

Hence, like firm size, the relationship between firm age and exporting activities is not clear and more research needs to be undertaken.

#### **4/4/2/3 Firm Technology**

This section discusses studies that address the relationship between technology and export performance. There is evidence for a positive association between technological intensity and export sales, export growth and export performance (McGuinness and Little, 1981; Cavusgil, 1984; Cooper and Kleinschmidt, 1985; Schlegelmilch and Ross, 1987; Burton and Schlegelmilch, 1987; Gomez-Mejia,

1988; Sriram et al., 1989; and Atuahene-Gima, 1995). However, Kirpalani and MacIntosh (1980) establish a negative association between technology intensity and overall export success. Further, Cavusgil and Naor (1987) and Axinn (1988) find a weak association between technology intensiveness and export activities, and Hirsch (1971), Reid (1983) and Christensen et al. (1987) report no association between these variables.

Looking at firm size and R&D relationships, Poutziouris et al. (2000) find that UK SME exporters invest less in research and development. The authors explain their result by reference to the fact that SMEs do not capitalise in investment in intangible assets like patents. Samiee and Walters (1990) establish significant relationship between firm size and R&D and comment that regardless of size the firms are not giving sufficient attention to the technology. Recently, Kalafsky and MacPherson (2001) find a strong association between export performance and R&D activity among US firms operating in the machine tool industry.

Reid (1983) and Aaby and Slater (1989) note that the effect of the firm technological intensity on export performance is uncertain, and in their research they find that simply generating technical knowledge does not in itself create competitive advantage. Therefore, it seems that “any firm regardless of technological intensity, may have a chance to compete successfully in export markets” (Madsen, 1987, p.193).

It appears that evidence on technology intensity and export performance is inconsistent, and future research should give more attention to the context in which the technology level is studied.

#### **4/4/2/4 Firm International Experience**

Firms' international experience has been shown to influence firms' export behaviour (Kaynak and Kuan 1983; Reid 1983; Diamantopoulos and Inglis 1988; and Cavusgil and Zou 1994).

A number of scholars have established a positive relationship between export experience and export success, export levels, and export performance (Fenwick and Amine, 1979; Kirpalani and MacIntosh, 1980; Reid, 1983; Cavusgil, 1984b; Amine and Cavusgil, 1986; Axinn, 1988; Madsen, 1988; Atuahene-Gima, 1995; and Douglas, 1996). It is interesting to note that Lal (2002) finds a positive association between the internationally orientated firms and the adoption of more advanced e-business tools.

There is some evidence for no significant relationship between firm's international experience and export involvement, export profitability, and export sales (Diamantopoulos and Inglis, 1988; and Nakos et al., 1998). Bilkey (1982) and Louter et al. (1991) report negative correlation between export experience and perceived export profitability, also they notice that less experienced firms have better performance. The explanation for such a negative relationship is that experienced exporters are more willing to accept lower profits in order to increase export sales, and in addition they may have a more realistic and lower perception of export profitability than new exporters.

#### **4/4/2/5 Firm Capabilities/Competencies**

'Quality control' represents one of the commonly researched firm capabilities and competencies highlighted in the pertinent literature. Quality control is often referred to as one of the most important core competencies of a firm for entering and remaining in foreign markets (Da Rocha and Christensen, 1994). Yet, as with all other export performance determinants, the empirical evidence from international studies in this area is uncertain and mixed (Aaby and Slater, 1989).

Several authors have established positive correlation between quality control and export growth and performance (Kirpalani and MacIntosh, 1980; Burton and Schlegelmilch, 1987; De Luz, 1993; and Thirkell and Dau, 1998). Christensen et al. (1987) argue that quality control effectively discriminates between successful and unsuccessful exporters. They conclude that relative to less successful exporters, successful exporters have better quality control departments managed by better

educated personnel. Also, Da Rocha et al. (1990) show that quality control successfully differentiates between aggressive and passive exporters. The aggressive exporters are more likely to have a more formal system of quality control. However, Katsikeas et al. (1996) establish a negative correlation between control activities and export performance.

Evidently, quality control differentiates between successful and unsuccessful exporters, as well as aggressive and passive exporters. However, the relationship with export performance is inconsistent with some positive associations with export growth reported, and some negative associations or even no correlation reported with the stage of export development and involvement respectively. Further research is needed on the relationship between firm capabilities/competencies and export performance and involvement.

#### **4/5 EXPORT PERFORMANCE MEASURES**

Despite the central importance of performance in any discussion about export strategy, most research has focused on the determinants of export performance rather than the performance construct itself (Shoham, 1998). Appropriate performance measurement is an issue that has been extensively debated in the marketing literature (Avlonitis and Karayanni, 2000). The following section reviews objective versus subjective measures, and single versus multiple indicators, and summarises export performance measures used in previous studies (see Table 4.3). The range of measures used (i.e. economic, non-economic, miscellaneous, and generic) are the reason for the fragmentation of the empirical findings on export performance and the lack of theoretical development in the area (Madsen, 1987; Aaby and Slater, 1989; Axinn, 1994; Cavusgil and Zou, 1994; and Zou et al., 1998).

Measuring export performance is a fundamental research issue, and the debate on export performance measures centres on two types: namely, objective and subjective measures, sometimes referred to as hard and soft measures or financial and non-financial ones (Dess and Robinson, 1984; Ford and Leonidou, 1991; Griffin and Page, 1993; Hart, 1993; Evangelista, 1994; Morgan and Katsikeas, 1997; Styles, 1998; and Shaw, 2000). Hard measures include export sales, export growth and

export profitability, whereas soft measures focus on managers self-perceptions of performance. Objective measures are usually the first preference of researchers, however, confidentiality reasons and difficulty in obtaining the required data from published sources are problems associated with this type of data. Using objective measures often creates problems of comparisons across firms because of the differences in accounting and sales recording procedures. Also, there is no standard by which to judge whether the firm has exploited all the profitable opportunities available, and hence raises doubts about what the data represents (Hunt and Nevin, 1974; Cavusgil, 1984; and Hart, 1993). On the other hand, subjective measures have been shown to be valid indicators of performance and are now often used in conjunction with objective measures to give a comprehensive assessment of export performance (Venkatraman and Ramanujan, 1987; Doyle and Hooley, 1992; and Douglas, 1996).

Recently, Zou et al. (1998) introduced a multidimensional performance construct - the 'EXPERF'- scale. This consists of both objective and subjective measures and contains three categories of measures (i.e. financial, strategic, and satisfaction). The authors recommend and encourage other researchers to test the 'EXPERF' scale in as many different contexts as possible in order to achieve and develop a universal and acceptable construct of export performance. Currently, the ideal situation is using both objective and subjective measures when assessing and evaluating export performance (Morgan and Katsikeas, 1997).

The second part of the debate on measuring export performance is the use of single versus multiple measures. Although traditionally export success has been measured using a single indicator such as export sales or export intensity, these measures have been criticised by many researchers as they are heavily influenced by firm demographic characteristics, and the complexity of measuring export success requires a measurement scale constructed from a set of variables (Cunningham and Spigel 1971; Fenwick and Amine 1979; and Reid, 1983). Moreover, research that only considers a single dimension of performance is more likely to produce

misleading results that hinder theory building (Dominguez and Sequeria, 1993; and Lumpkin and Dess, 1996).

Hence, recent export performance studies use multiple measures along two or three sub-dimensions (Shoham, 1998; and Lages, 2000). Such practice is based on a number of reasons: first, to enhance the accuracy of exporting studies by realising the strengths of each indicator, and minimise the impact of their shortcomings, and by improving the explanatory power between independent and dependent variables of performance (Evangelista, 1994). Second, multi-indicator measures are believed to be more reliable and have less measurement error than single ones (Churchill, 1987). Finally, using multiple measures provides a reasonable and better picture of export performance compared with using a single indicator, since different measures of export performance capture different aspects of the strategic and operational phenomena (Cooper and Kleinschmidt, 1985; and Dominguez and Sequeria, 1993).

As a consequence, there is increasing agreement that performance is a complex multi-dimensional construct where no one criterion is adequate to provide a reliable assessment (Reid, 1983; Cavusgil, 1984; Cooper and Kleinschmidt, 1985; Chakravarthy, 1986; Madsen, 1988; Craig and Beamish, 1989; Samiee and Walters, 1990; Bijmolt and Zwart, 1994; Morgan and Katsikeas, 1997; Shoham, 1998; Styles, 1998; Katsikeas et al., 2000; and Man et al., 2002). Even so, Matthyssens and Pauwels (1996, p.91) argue that using multiple measures to assess performance has two problems, namely: “the boundary between ‘success’ and ‘failure’ is difficult to delineate, [and] further it is difficult to combine multiple measures in one overall index”.

There is a debate about the appropriate level of analysis, whether it should be at the firm, product, industry, or national level. Export performance research is at a cross roads, because it is impossible to be certain whether differences and conflicting results are a consequence of the independent variables examined, or the result of using different levels of analyses, or even an outcome of the different measurement scales of export performance (Hart, 1993; and Zou et al., 1998). Leonidou et al. (2002) suggest that the product (line)-market venture should be used as the level of

analysis, as this approach can overcome many of the export performance measurement problems inherent in corporate-level investigations.

Evidently, the considerable diversity of both conceptual and operational measures of export performance indicates that, like the broader marketing literature there is no uniformly accepted conceptualisation and operationalisation of export performance in export marketing strategy literature (Madsen, 1987; Aaby and Slater, 1989; Walters and Samiee, 1990; Cavusgil and Kirpalani, 1993; Chetty and Hamilton, 1993; Cavusgil and Zou, 1994; Diamantopoulos and Schlegelmilch 1994; Myers and Cavusgil, 1996; Zou et al., 1998; and Zou and Stan, 1998). However, there is a broad agreement on the use of multi-dimensional measures of export performance (Cavusgil and Zou, 1994; Styles, 1998; Zou and Stan, 1998; and Zou et al., 1998).

**Table (4.3) Classification of Export Performance Measures**

<b>Performance Measures</b>	<b>Illustrative Studies</b>
<b>Economic measures</b>	
<b>Sales-related</b>	
<b>Export sales ratio</b>	Glejser et al. (1980); Kirpalani & MacIntosh (1980); Lall & Kumar (1981); Gomez-Neto (1982); Fleury & Galindo (1983); Sood & Adams (1984); Cooper & Kleinschmidt (1985); Hirsch & Bijaoui (1985); Beamish & Munro (1986, 1987); Schlegelmilch (1986); Burton & Schlegelmilch (1987); Schlegelmilch & Ross (1987); Axinn (1988); Gomez-Mejia (1988); Schlegelmilch & Crook (1988); Culpan (1989); Namiki (1989); Schlegelmilch & Diamantopoulos (1989, 1994); Sriram et al. (1989); Axinn & Thach (1990, 1991); Fraser & Hite (1990); Holtzmuller & Kasper (1990, 1991); Lee & Yang (1990); Samiee & Walters (1990); Dominguez & Sequeira (1991, 1993); Louter et al. (1991); Seringhaus (1991, 1993a/b); Kaynak (1992); Beamish et al. (1993); Chetty & Hamilton (1993); Dominguez et al. (1993); Ito & Pucik (1993); Kaynak & Kuan (1993); Walters (1993); Axinn et.al. (1994); Bodur (1994); Crick et al. (1994); Das (1994); Hansen et al. (1994); Namiki (1994); Shoham & Albaum (1994); Styles & Ambler (1994); Marandu (1995); Sriram & Manu (1995); Holtzmuller & Stotinger (1996); Bijmolt & Zwart (1994); Czinkota & Ursic, (1991); Moen



	(1999); Baldauf et al. (2000); Robertson & Chetty (2000); Wolff & Pett, (2000); Dean et al. (2000).
<b>Export sales growth</b>	Kirpalani & MacIntosh (1980); Lall & Kumar (1981); Rosson & Ford (1982); Sood & Adams (1984); Cooper & Kleinschmidt (1985); Hirsch & Bijaoui (1985); Christensen et al. (1987); Schlegelmilch & Ross (1987); Madsen (1989); Namiki (1989); Schlegelmilch & Diamantopoulos (1989); Becker & Lenberg (1990); Dichtl et al. (1990); Lee & Yang (1990); Walters & Samiee (1990); Dominguez & Sequeira (1991,1993); DeLuz (1993); Dominguez et al. (1993); Donthu & Kim (1993); Ito & Pucik (1993); Miller et al. (1993); Walters (1993); Walters (1993); Axinn et al. (1994); Cavusgil & Zou (1994); Das (1994); Naidu & Prasad (1994); Namiki (1994); Shoham & Albaum (1994); Styles & Ambler (1994); Johanson & Arunthanes (1995); Zou et al. (1998); Shaw (2000); Moen (1999, 2000); Dean et al. (2000); Beamish et al. (1999).
<b>Export sales volume</b>	Fenwick & Amine (1979); Lall & Kumar (1981); McGuinness & Little (1981); Rosson & Ford (1982); Sood & Adams (1984); Cavusgil (1984a); Cooper & Kleinschmidt (1985); Bello & Williamson (1985); Bilkey (1985); Madsen (1989); Samiee & Walters (1990); Dominguez & Sequeira (1991, 1993); Chan (1992); Cavusgil & Kirpalani (1993); Dominguez et al. (1993); Ito & Pucik (1993); Kaynak & Kuan (1993); Shoham & Albaum (1994); Styles & Ambler (1994); Axinn et al. (1996); Doulas, (1996); Piercy et al. (1998); Zou et al. (1998); Shoham (1998); O'Donnell & Jeong (2000); Baldauf et al. (2000); Dean et al. (2000).
<b>Export sales intensity of product</b>	McGuinness & Little (1981).
<b>Export sales per employee</b>	Diamantopoulos & Schlegelmilch (1994).
<b>Export sales per export manager</b>	Diamantopoulos & Schlegelmilch (1994).
<b>Contribution of exporting to sales revenue stability</b>	Raven et al. (1994).
<b>Export sales volume of new products</b>	Atuahene-Gima (1995).
<b>Export sales ratio growth</b>	Lall & Kumar (1981); Gomez-Neto (1982); Fleury & Galindo (1983); Gomez-Mejia (1988); Culpan (1989); Holtzmuller & Kasper (1991); Naidu & Prasad (1994); Shoham & Albaum (1994); Styles & Ambler (1994); Holtzmuller & Sttotinger (1996);

	Czinkota & Ursic, (1991); Robertson & Chetty (2000).
<b>Profit-related</b>	
<b>Export profitability</b>	Bilkey (1982, 1985); Beamish & Munro (1986, 1987); Schlegelmilch & Ross (1987); Koh & Robicheaux (1988); Madsen (1989); Lee & Yang (1990); Samiee & Walters (1990); Koh (1991); Louter et al. (1991); Beamish et.al. (1993); Kaynak & Kuan (1993); Walters (1993); Crick et al. (1994); Namiki (1994); Crick & Katsikeas (1995); Johanson & Arunthanes (1995); Axinn et al. (1996); Piercy et al. (1998); Bijmolt & Zwart (1994); Shoham (1998); Moen, (1999); Robertson & Chetty (2000).
<b>Export profitability growth</b>	Becker & Lenberg (1990); Dominguez & Sequeira (1991); Miller et al. (1993); Axinn et al. (1994); Cavusgil & Zou (1994); Naidu & Prasad (1994); Shaw (2000).
<b>Export profit ratio</b>	Kaynak & Kuan (1993); Axinn et al. (1994); Sriram & Manu (1995).
<b>Contribution of exporting to profits</b>	Louter et al. (1991); Cavusgil & Kirpalani (1993); Raven et al. (1994); Zou et al. (1998).
<b>Export profit growth of new products</b>	Atuahene-Gima (1995).
<b>Market share-related</b>	
<b>Export market share growth</b>	Gomez-Mejia (1988); Shaw (2000).
<b>Market share</b>	Cavusgil & Kirpalani (1993); Johanson & Arunthanes (1995); Sriram & Manu (1995); Piercy et al. (1998); Zou et al. (1998); O'Donnell & Jeong (2000).
<b>Non-economic measures</b>	
<b>Product-related</b>	
<b>New products exported</b>	Singer & Czinkota (1994); Atuahene-Gima (1995).
<b>Proportion of product groups exported</b>	Diamantopoulos & Schlegelmilch (1994).
<b>Acceptance of products by distributors</b>	Angelmar & Pras (1984).
<b>Contribution of exporting to product development</b>	Raven et al. (1994); O'Dennell & Jeong (2000).

<b>Market-related</b>	
<b>Export country/market number</b>	Sood & Adams (1984); Culpan (1989); Samiee & Walters (1990); Axinn et al. (1994); Shoham & Albaum (1994).
<b>Export market penetration</b>	Singer & Czinkota (1994); Styles & Ambler (1994).
<b>New market(s) exports</b>	Fleury & Figueiredo (1980); Singer & Czinkota (1994).
<b>Contribution of exporting to market development</b>	Raven et al. (1994); O'Donnell & Jeong (2000).
<b>Markets in which exporting was ceased %</b>	Christensen et al. (1987).
<b>Miscellaneous</b>	
<b>Began exporting</b>	Singer & Czinkota (1994).
<b>Contribution of exporting to scale economies</b>	Raven et al. (1994).
<b>Contribution of exporting to company reputation</b>	Raven et al. (1994).
<b>Years of exporting</b>	Sood & Adams (1984).
<b>Projection of export involvement</b>	Fleury & Figueiredo (1980); Diamantopoulos & Inglis (1988); Diamantopoulos & Schlegelmilch (1994).
<b>Number of export transactions</b>	Culpan (1989).
<b>Generic measures</b>	
<b>Perceived export success</b>	Sriram et al. (1989); Louter et al. (1991); Cavusgil & Zou (1994); Shoham & Albaum (1994); Zou et al. (1998).
<b>Satisfaction with overall export performance</b>	Seifert & Ford (1989); Evangelista (1994); Shoham & Albaum (1994); Zou et al. (1998); Bijmolt & Zwart (1994).
<b>Achievement of export objectives</b>	Cavusgil & Kirpalani (1993); Cavusgil & Zou (1994); Naidu & Prasad (1994); Katsikeas et al. (1996); Myers & Cavusgil (1996).
<b>Contribution of the export venture to the firm's competitiveness</b>	Zou et al. (1998).

<b>Contribution of the export venture to the firm's strategic position</b>	Zou et al. (1998).
<b>Attitudes toward export</b>	Brady & Bredan (1979); Johnston & Czinkota (1982).
<b>The degree to which the venture is meeting expectations</b>	Zou et al. (1998).

Source: Cavusgil and Zou (1994), Morgan and Katsikeas (1997), Zou et al. (1998), Katsikeas et al. (2000) and the researcher.

#### 4/6 CHAPTER SUMMARY

The development of models of export performance was discussed, specifically with reference to Aaby and Slater's (1989) 'general model' for assessing export performance, the contingency approach used by Madsen (1994), and Zou and Stan's (1998) model which uses internal/external - controllable/uncontrollable categorisation.

Using the Zou and Stan (1998) taxonomy, this chapter has considered the evidence for the internal/controllable determinants of export performance. The elements of the internal-controllable determinants of export performance are: firstly, export marketing strategy, which includes export planning, market research utilisation, general export strategy, product adaptation, product uniqueness, pricing, price adaptation, promotion adaptation, distribution channel adaptation, and satisfaction with international marketing channels. And secondly, management attitudes and perceptions, which embrace export commitment and support, and management attitudes and perceptions. Although there has been a great deal of research into the determinants of export performance, much of the results are largely inconclusive. There are several reasons for this including, the use of different export performance measures, which makes the comparison of results problematic concerning the relationship between any of the internal/controllable antecedents and export performance.

The internal/uncontrollable antecedents are: firstly, management characteristics, which include management international experience, management education, command of foreign languages, and age of the decision maker. Secondly, firm characteristics and competencies, which comprise firm size, age, technology, international competence and capabilities/competencies. Like the internal/controllable determinants, there is a great deal of research on the internal/uncontrollable antecedents, however, the results are also inconsistent.

The chapter concludes with a discussion of the use of export performance measures. Different approaches to measure export performance are discussed, namely objective and subjective measures, as well as single and multiple indicators. A summary table is included which illustrates the different classifications of export performance measures. The trend in export performance studies is to use multiple indicators, one promising development in the field is to establish a more widely used export performance construct such as the 'EXPERF' scale. This will help ease the process of comparing and contrasting the results in future research.

Having reviewed different approaches for measuring export performance, the decision was taken to use pre-tested and validated measures, namely Cavusgil and Zou's (1994) export performance construct, which encompasses both objective and subjective measures. The rationale behind using this construct is to utilise and test measures from established literature (i.e. exporting) in new emerging fields (i.e. international entrepreneurship and Internet).

The next chapter will summarise and synthesise the research literatures reviewed in chapters two to four, make a clear statement of the argument underlying the research framework, and set out the research aims and propositions.

**CHAPTER FIVE**  
**LITERATURE SYNTHESIS, RESEARCH FRAMEWORK**  
**AND RESEARCH PROPOSITIONS**

*Chapter Objectives*

- *To summarise and synthesise the pertinent research literatures.*
  
- *Based on the synthesis of the pertinent literatures an argument leading to the research framework is presented.*
  
- *To make a clear statement of the research aims together with the propositions.*

**CHAPTER FIVE**  
**LITERATURE SYNTHESIS, RESEARCH FRAMEWORK**  
**AND RESEARCH PROPOSITIONS**

**5/1 SYNTHESIS OF THE LITERATURE**

Based on a synthesis of the literature reviewed in chapters' two to four, the research framework is developed, the aims and the research propositions are set out.

**5/1/1 Entrepreneurship**

In chapter two different conceptualisations of entrepreneurship and various entrepreneurial typologies were extensively reviewed.

Three approaches to entrepreneurship were examined. Firstly, the traits approach, which deals with the personality characteristics of the entrepreneur (i.e. need for achievement, locus of control, propensity towards risk, and tolerance of ambiguity), secondly, the social psychological approach, which emphasises the context from which the entrepreneur is coming from (i.e. previous employment/work experience, level of education, and age) and finally, the behavioural approach, which looks at what the entrepreneur does. This approach encompasses innovativeness, proactiveness and risk taking. The interrelationship and the interaction between the three approaches are believed to provide more insights to the entrepreneurship phenomenon than any one of these approaches.

Although the link between entrepreneurship and exporting was explored, there are as yet few empirical studies that analyse the entrepreneurship phenomenon in an international context. This is particularly true for the impact of entrepreneurship on SMEs' export performance, suggesting that this field is still undeveloped and that more research needs to be done.

## **5/1/2 The Internet and SME Internationalisation**

The Internet is a communication tool and is changing the way firms do business. The Internet is changing the relationships firms have with their customers, employees, suppliers and distributors from being reactive in nature to one of involvement and dialogue, potentially leading to closer relationships.

With respect to the Internet and marketing strategy some authors have suggested that a major reason for success on the Internet is that some products are more suitable than others to be sold electronically (e.g. music). However, other researchers have asserted that product characteristics are an insufficient explanation to understand the Internet commerce benefit among small businesses, and have suggested that other areas such as characteristics of business sector and value chain should also be studied.

As far as the Internet and promotion is concerned, it was found that the Web enables firms to provide detailed product information, establish a presence in new markets, enhance their corporate image, encourage consumer involvement in developing their products, establish interactivity with the consumer, and handle customer complaints and queries. Moreover, the few studies in the area assert that firms are gaining very little from Web promotion.

In chapter three the association between level of Internet use and price was discussed. Some researchers assert that the use of the Internet will lead to price reductions, while others assume that online prices will increase as a result of an increase in impulse and spontaneous purchases. Whatever the case, it will not happen automatically as it depends on having enough competition.

Despite the on going debate among researchers with respect to the impact of the Internet on distribution channels, there is consensus that Internet enabled e-commerce will cause major transformations in the traditional role of the distribution channels, by either bypassing some intermediaries, or restructuring or supplementing their original role, or by creating completely new cybermediaries.



Chapter three also shows that firms use of the Internet is strongly influenced by factors at the management level (e.g. age, level of education) and at the level of the firm (e.g. firm size) where larger firms exhibit higher levels of technology use and adoption. The review in chapter three has linked the use of the Internet as an information source with ease of internationalisation and firm performance.

Finally, it should be noted that despite the Internet's contributions in overcoming the barriers facing SMEs internationalisation, the Internet has some limitations that can obstruct the international expansion of SMEs. Also, the researcher would like to point out that the empirical evidence that the observations above are based on is still at an early stage of development, and that the impact of entrepreneurship on Internet has only been partially explored so far.

In chapter three the term internationalisation was defined and the various theoretical explanations underlying the existing research were reviewed. The conclusion was drawn that no single theory can explain all aspects of internationalisation, and that firms' international behaviour needs to be perceived holistically.

The Internet may contribute to the firms' internationalisation in several ways.

Firstly, the Internet has provided firms with some information about foreign markets, competitors, distributors, prices and customers, which is likely to lower the cost of information processing and communication, hence reducing the firms overall transaction costs.

Secondly, the Internet can help small firms run by an entrepreneurial owner/managers to develop their relationships with others in what is called a Personal Contact Network (PCN) to do business. The Internet may also help SMEs to overcome their lack of financial resources.

Thirdly, the use of information and communication technology (e.g. the Internet) is partially responsible for the emergence of the 'international at founding' phenomenon among firms, as well as the general and a growing trend among entrepreneurs to view markets internationally rather than domestically.

Clearly, the internationalisation of SMEs can be influenced by firms using the Internet to overcome the information related barriers (lack of information, lack of international experience and lack of international contacts) and resource related barriers (lack of financial and/or human resources). The use of information and communication technology and networking ease the information related barriers, whereas the owner/managers' specific characteristics overcome the resource related barriers.

Finally, from the RBV perspective firms are conceptualised as bundles of resources and competences (e.g. Conner, 1991; and Peteraf, 1993). These resources and competences, if they are distinctive or superior relative to competing firms, constitute firm-specific assets that are the basis of the firm competitive advantage (Reuber and Fischer, 1999, p.88). Consequently, this study looks at the resource based view at both the firm level (i.e. IT resources) and at the level of owner/managers of UK based SMEs.

### **5/1/3 Export Performance Literature: Determinants and Measures**

The literature review covered the extensively cited models of the determinants and measures of export performance and the internal/external-controllable/uncontrollable antecedents of export performance.

There is evidence that firms' internal/controllable factors affect export performance. The internal/controllable aspects are export marketing strategy, which includes export planning, market research utilisation, general export strategy, product uniqueness, product, price, promotion and distribution adaptation, satisfaction with international marketing channels, and management attitudes and perceptions.

Export performance is strongly influenced by the internal/uncontrollable factors at the management level. These include the international experience of management, management's level of education, command of foreign languages, and the age of the decision maker. These factors are particularly important in the small and medium size firms where the power is generally concentrated in the hands of one or very few persons. Likewise, at the firm level it was found that firm size, age, technology,

international competence and capabilities/competencies affect export performance significantly.

Different approaches to measuring export performance are evident in the literature. Such approaches include objective and subjective measures as well as single and multiple indicators. However, the recent trend in export performance studies is to use multiple indicators which combine objective and subjective ones. Furthermore, Zou et al.'s (1998) 'EXPERF' scale represents a further step towards achieving a universally accepted export performance construct.

#### **5/1/4 Concluding Summary**

The above synthesis of the literature shows that the Internet helps SMEs to overcome barriers to internationalisation. The Internet provides SMEs with some of the information needed to facilitate and further accelerate their internationalisation process, reducing the firms' information costs, hence decreasing the firms' overall costs. It also connects owner/managers to other members of their personal network regardless of geographic location and time zone. These benefits of the Internet are believed to improve SME performance.

However, for SMEs to profit from these benefits they need to make human, technological and financial commitments to the Internet. It is worthwhile noting that it is not only a matter of committing resources to the Internet, but also knowing how to use the technology effectively. In general, effectiveness is acquired over time as a result of frequent usage.

This changes the focal point of attention from the firm to the owner/manager. It is believed that the owner/managers specific characteristics (e.g. personality traits, social psychological characteristics, perceptions and entrepreneurial orientation) influence the firm's level of Internet commitment, and that having an owner/manager with particular characteristics is one way for the firm to realise the benefits of the Internet.

However, whether SMEs can and will utilise the Internet effectively in order to enhance and improve their export performance remains conceptually and empirically largely unexplored. Nevertheless, SMEs have rapidly become aware of the Internet's

potential impact and need to adapt their export market strategies to take advantage of the Internet potentials, this makes the impact of the Internet on the firm's exporting activities an interesting area to explore and develop.

## **5/2 RESEARCH FRAMEWORK**

Entrepreneurship has been referred to as the 'parent of innovation' (Meyers, 1986). From a behavioural perspective entrepreneurship is a managerial behaviour by which individuals consistently exploit opportunities to deliver results beyond one's own capabilities. Also, there is some agreement that the entrepreneur is someone who is alert to the opportunity, an innovator and risk taker (Kirzner, 1983; Bygrave and Hofer, 1991; and Caruana et al., 1998). Schumpeter (1962) describes the innovative entrepreneur as a rare individual who starts a new business and uses innovation to grow the business successfully. Evidently, the individual entrepreneur is the focus in the entrepreneurship research, where the key managers or top management entrepreneurial behaviour collectively reflect the entrepreneurial orientation of the firm.

International entrepreneurship is one of the emerging areas of international business research (Wright and Ricks, 1994), however it has not yet been explored rigorously and research findings are still in relative scarcity (Zahra, 1993; Oviatt and McDougall, 1994; Coviello and Munro, 1995; and Rhee, 2002).

McDougall and Oviatt (2000, p.903) define international entrepreneurship as "a combination of innovative, proactive and risk seeking behaviour that crosses national borders and is intended to create value in organisations".

This emerging field of international entrepreneurship complements research on the export behaviour and internationalisation process of firms by clearly focusing on the role of the individual entrepreneur (Rasmussen and Madsen, 2002, p.22). Also, it may benefit from the long established extant literature on export performance where the effect of management characteristics and behaviour on performance has been extensively researched and documented. Hence, the personality traits, social psychological characteristics and entrepreneurial orientation behaviour of the owner/managers are researched in an attempt to examine their impact on the firm's

commitment to the innovation (i.e. the Internet) and export success. It is worth noting that a growing number of authors have associated the owner/managers' personality traits, social psychological characteristics and EO behaviour with firm performance in a domestic context.

Consistent with the behavioural perspective of entrepreneurship, it is assumed that the entrepreneurs are better able to identify and exploit the opportunities made possible by the advances in information and communication technology, particularly the wide spread use of the Internet and e-commerce to help the firm grow successfully in export markets.

The Internet is one of the most transforming technological inventions since the industrial revolution (The Economist, 1999). It is "an innovative process supported or made feasible by technology by which organisations and individuals communicate, network and do business" (Vadapalli and Ramamurthy, 1997, p.112). There is some evidence of an existing relationship between the use of the Internet and SMEs performance. However, research on the Internet and exporting, a subset of international business is an emerging field in which key issues have remained, as yet, largely unexplored (Prasad et al., 2001). In addition, Samiee (1998, p.424) asserts that the "conceptual and empirical evidence regarding the role and the impact of the Internet in business and exporting is quite scant", despite the rapid growth of the Internet in the firm's marketing activities in the last decade (Sharma, 2002), and regardless of the recognition of the importance of international operations for firms' survival and growth (Prasad et al., 2001). This *lacuna* is only just beginning to be addressed by studies investigating a number of aspects of exporting and the Internet.

As with entrepreneurship, a number of authors have introduced the decision to export as an innovation (Simmonds and Smith, 1968; Roux, 1987; and Samiee et al., 1993). The rationale behind using this approach is that entering export market is perceived as an innovation in itself within the closed environment in which the firm operates. Recently, Ibeh (1998, p.20) and Ibeh and Young (2001, p.567) contend that exporting is an entrepreneurial act where it is defined as "the process by which individuals either on their own or inside organisations pursue export market

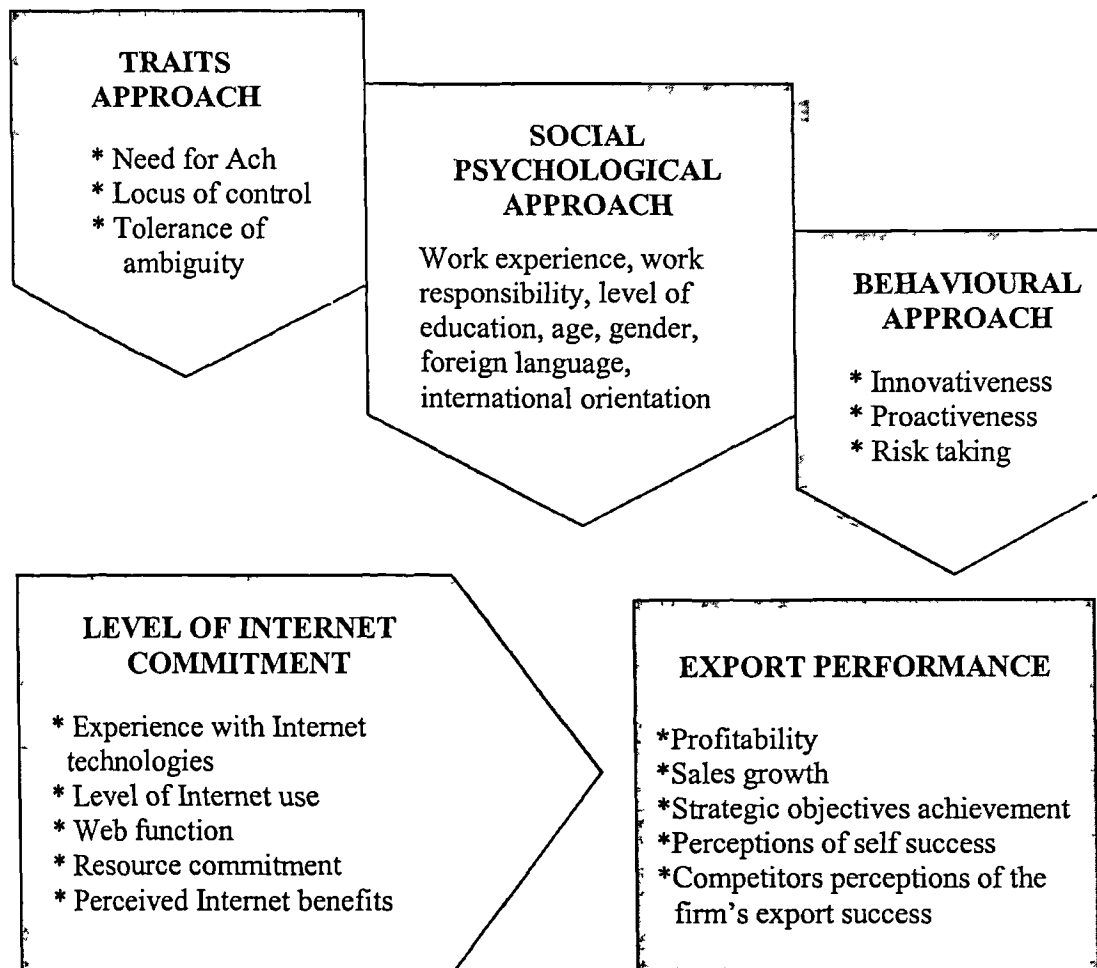
opportunities without regard to the resources which they currently control or environmental disincentives which they face”.

This research investigates the impact of entrepreneurship approaches and level of Internet commitment on UK based SMEs export performance. The line of argument underlying the research framework is that the more entrepreneurial the owner/manager, the more likely it is s/he may use the Internet in exporting and the more successful the firm export performance can be.

Evidently, there is a mixture of influential factors at both the owner/managers level and the level of the firm that affect UK based SMEs commitment to the Internet and their export performance. It is not expected though that all of the dimensions illustrated in the research framework (see Figure 5.1) will have significant and direct impact on export performance due to the moderating role export strategy is known to play between firm level dimensions and performance (Madsen, 1994; and Cavusgil and Zou, 1994).

It is worthwhile highlighting that this research framework is to be considered the link between the secondary research (i.e. the literature review) and the primary one that will be addressed thoroughly in a subsequent chapter (see chapter 7).

**Figure (5.1) Research Framework**



Ach: achievement.  
Source: The researcher.

### **5/3 RESEARCH AIMS AND PROPOSITIONS**

As already stated in chapter one the current research attempts to empirically explore the possible role of entrepreneurship and the level of Internet commitment on SME export performance. In order to achieve this goal, based on the pertinent literatures as well as the researcher's knowledge, the following research aims and their propositions are addressed.

### **5/3/1 Research Aim 1**

To examine the use of the Internet among UK based SME's, and to develop a general profile of high Internet use firms with respect to the following sets of variables: level of Internet commitment, the owner/managers characteristics, the firm and industry characteristics, and export involvement and performance.

#### *Research Propositions 1 and 1a*

In order to evaluate UK based SMEs level of Internet use a multi-dimensional scale is developed and assessed for validity and reliability. The construct dimensions reflect the major uses of the Internet as highlighted in chapter three, namely as a communication tool and as an information source. Further, other multi-dimensional scales are also developed to assess the firms' level of Internet commitment, in general this includes: resource commitment, perceived Internet benefits and Web function. In addition, firms' experience with Internet technologies (e.g. email, Intranet, Extranet) is measured by the number of years the firm has been using each technology. It is worth noting that the constructs developed are based on the findings outlined in chapter three as well as on the preliminary interviews that were conducted prior to the primary research (see chapter six).

*P1: Firms can be distinguished according to their level of Internet use. Relative to firms with low Internet use, high Internet use firms are likely to:*

- a- Make more use of the Internet as a communication tool.*
- b- Make more use of the Internet as an information source.*

*Pla: Relative to their counterparts, high Internet use firms are likely to differ with respect to:*

- a- Experience with Internet technologies (e.g. email, Intranet, Extranet.)*
- b- Committing resources to the Internet (Internet training, Interconnectivity).*
- c- Perceived internal and external Internet benefits.*
- d- Web site function (i.e. effectiveness, transactional, promotional).*



### Research Propositions 2 and 3

Chapters two, three and four exhibit evidence from national as well as international contexts that factors at the owner/managers level (i.e. personality traits, entrepreneurial behaviour, perceptions and social psychological characteristics) are particularly significant in the context of SMEs whilst going international or using new technology. Hence, in order to profile high Internet use firms at the owner/managers level the following propositions are developed.

*P2: Relative to their counterparts, high Internet use firms are likely to differ with respect to the following owner/managers characteristics:*

- a- Need for achievement.*
- b- Internal locus of control.*
- c- External locus of control.*
- d- Entrepreneurial orientation behaviour.*
- e- Perceived export complexity.*
- f- Perceived export risks.*
- g- Perceived export profits.*
- h- Perceived export costs.*
- i- Perceived export growth.*

*P3: There are differences between firms with a high level of Internet use and their counterparts with low Internet use with respect to the following owner/managers social psychological characteristics:*

- a- Work responsibility.*
- b- Work experience.*
- c- Age.*
- d- Gender.*
- e- Level of education.*
- f- Foreign languages proficiency.*
- g- International orientation.*

#### Research Proposition 4

Chapter three provides evidence that advances in information and communication technology may permit younger and smaller firms to internationalise and to manage more complex foreign transactions than in the past (Oviatt and McDougall, 1999). Also, the literature in this chapter reveals that the limited empirical studies in the area of information and communication technology and small firms' internationalisation focus largely on high tech sector (e.g. software), whereas little attention is given to medium and low tech industries such as textiles and food and beverages. Hence, high Internet use firms will be differentiated from low Internet use firms at the firm level (i.e. size, age, independency and ownership) and at the level of the industry (i.e. industry sector, market served and technology intensity).

*P4: There are differences between firms with high level of Internet use and their counterparts with low Internet use with respect to:*

- a- Firm characteristics.*
- b- Industry characteristics.*

#### Research Proposition 5

Lack of information with respect to foreign markets is acknowledged as a key issue that can hinder the internationalisation process particularly among SMEs. There is evidence that the Internet helps exporters with their diverse information needs to successfully enter international markets, and also influences the decision to internationalise as well as the degree and speed of internationalisation. Also, in chapter three, conflicting views with respect to the association between SMEs performance and the use of the Internet and IT capabilities were reported. As a consequence, research proposition 5 will differentiate between high Internet use firms and their counterparts with respect to export involvement and export performance.

*P5: Relative to their counterparts, high Internet use firms are likely to differ with respect to:*

- a- Number of foreign countries entered.*
- b- Export experience.*
- c- Export ratio for the financial year (2000-01).*
- d- Sales growth.*
- e- Profitability.*
- f- Strategic objectives achievement.*
- g- Perceived self-success.*
- h- Competitors' perceptions of the firm's export success.*

### ***5/3/2 Research Aim 2***

To investigate the current level of entrepreneurial orientation behaviour among UK based SME owner/managers, and further profile them with reference to the research variables.

#### ***Research proposition 6***

As highlighted in chapter two the concept of entrepreneurial orientation (EO) is a multidimensional construct encompassing innovativeness, proactiveness and risk taking. Although very few studies have actually investigated the three dimensions jointly, particularly in an international context, a pre-tested and validated nine item construct of entrepreneurial orientation behaviour developed by previous researchers (e.g. Miller, 1983; and Covin and Slevin, 1989) will be used to assess the firms' owner/managers EO behaviour.

*P6: Firms can be differentiated according to their owner/managers' entrepreneurial orientation behaviour. Relative to firms with low EO owner/managers, high EO owner/managers are likely to:*

- a- Be more innovative.*
- b- Be more proactive.*
- c- Be risk taking.*

### Research Propositions 6a and 6b

Chapter two reveals that in a specific context, entrepreneurs can be differentiated from their counterparts using personality traits e.g. need for achievement and locus of control (e.g. Kets de Vries, 1985; and Cunningham and Lischeron, 1991). Chapter two also introduces managerial perceptions as a complementary approach to measure entrepreneurial orientation (Lyon et al., 2000), further chapter four highlights the importance of management perceptions as significant antecedents of the firms' performance. Subsequently, it is highly likely that perceptions will distinguish between high entrepreneurial orientation owner/managers and their counterparts (see P6a).

In addition to the influence of the owner/managers personality traits, chapter two also shows that social psychological characteristics (i.e. previous employment and/or work experience, level of education and age) are more likely to stimulate entrepreneurial behaviour. Research proposition 6b addresses this relationship.

*P6a: Relative to their counterparts, firms with high EO owner/managers are likely to differ with respect to the following characteristics:*

- a- Need for achievement.*
- b- Internal locus of control.*
- c- External locus of control.*
- d- Perceived export complexity.*
- e- Perceived export risks.*
- f- Perceived export profits*
- g- Perceived export costs.*
- h- Perceived export growth.*

*P6b: There are differences between firms with high EO owner/managers and their counterparts with low EO owner/managers with respect to the following social psychological characteristics:*

- a- Work responsibility.*
- b- Work experience.*
- c- Age.*
- d- Gender.*
- e- Level of education.*
- f- Foreign languages proficiency.*
- g- International orientation.*

#### *Research Proposition 7*

The goal of research proposition seven is to explore the relationship between a firm's level of Internet commitment and their owner/managers' entrepreneurial orientation behaviour. Chapter three reveals that among UK SMEs whoever is responsible for the introduction of the Internet to the firm exhibits entrepreneurial characteristics-being proactive, challenging, innovative and also computer literate (Lymer et al., 1998). Further, following the findings of chapter two that entrepreneurial behaviour embraces innovativeness, proactiveness and risk taking, it is proposed that high entrepreneurial orientation owner/managers are likely to differ from their counterparts with respect to level of Internet commitment.

*P7: Relative to firms with low EO owner/managers, firms with high EO owner/managers are likely to differ with respect to:*

- a- Experience with Internet technologies (e.g. email, Intranet).*
- b- Committing resources to the Internet (Internet training, Interconnectivity).*
- c- Perceived internal and external Internet benefits.*
- d- Web function (i.e. effectiveness, transactional, promotional).*

### Research Proposition 8

The purpose of this research proposition is to prove or disprove the findings highlighted in chapter two where much of the previous studies find that small and young firms are run by an entrepreneurial owner/manager. Also, the findings reveal that, in general, entrepreneurial owner/managers are found in entrepreneurial firms that are characterised by a heavy emphasis on R&D (e.g. McGuinness and Little, 1981; and Cavusgil and Nevin, 1981) and those who supply innovative, high technology products to overseas markets (e.g. Namiki, 1989; and Beamish et al., 1993).

*P8: There are differences between firms with high entrepreneurial orientation owner/managers and their counterparts with respect to:*

- a- Firm age.*
- b- Firm size.*
- c- Firm independency.*
- d- Firm ownership.*
- e- Industry sector.*
- f- Market served.*
- g- Technology intensity.*

### Research Proposition 9

In chapter two entrepreneurial orientation behaviour dimensions were discussed. It was found that owner/managers who are entrepreneurially orientated actively search for opportunities in new country markets, are motivated to export for proactive reasons (e.g. market share, profits), they further develop foreign business and social networks relationships and exchange information among themselves, hence accelerating the exporting process as well as improving their ability to compete. Therefore, it is proposed that firms with high EO owner/managers are likely to differ from their counterparts with respect to their degree of involvement in international markets.

Also, chapter two reports controversial opinions in both national and international contexts with respect to the effect of entrepreneurial orientation on firms' performance, where some researchers support the view that EO improves firms' financial performance in terms of sales growth and profitability (e.g. Wiklund, 1999; and Barrett et al., 2000). Similarly, others find that entrepreneurial orientation indirectly promotes and improves firms' overall international performance (e.g. Knight, 2000), while researchers such as Sapienza and Grimm (1997) report no association between entrepreneurial orientation and firm performance.

*P9: Relative to their counterparts with low EO owner/managers, firms with high EO owner/managers are likely to differ with respect to:*

*a- Number of foreign countries entered.*

*b- Export experience.*

*c- Export ratio for the financial year (2000-01).*

*d- Sales growth.*

*e- Profitability.*

*f- Strategic objectives achievement.*

*g- Perceived self-success.*

*h- Competitors' perceptions of the firm's export success.*

### **5/3/3 Research Aim 3**

To investigate the effect of the owner/managers personality traits, entrepreneurial orientation behaviour, perceptions and social psychological characteristics on UK based SMEs export performance.

#### **Research proposition 10**

The goal of research proposition 10 is to examine whether or not owner/managers characteristics are significant antecedents of UK based SMEs export performance. Chapters two and four discuss in great detail the influence of the decision maker and/or owner/manager's characteristics on performance in both national and international contexts. Both literatures looked at the owner/managers from different

perspectives namely their personality traits, social psychological characteristics, perceptions and EO behaviour.

*P10: There are significant relationships between owner/managers' personality traits, social psychological characteristic, export perceptions, entrepreneurial orientation behaviour and the following export performance indicators:*

*a- Sales growth.*

*b- Profitability.*

*c- Strategic objectives achievement.*

*d- Perceived self-success.*

*e- Competitors' perceptions of the firm's export success.*

#### ***5/3/4 Research Aim 4***

To explore and assess the impact of 'level of Internet commitment' on the export performance of UK based SMEs.

#### ***Research Proposition 11***

A review of the evidence in chapter three on the relationship between level of IT, use of the Internet and firm performance among SMEs reveals contradictory findings. Some scholars find positive association, others note indirect effects (e.g. Avlonitis and Karayanni, 2000), while others observe no association in samples of UK and US SMEs (e.g. Bharadwaj, 2000). Because the 'level of Internet commitment' construct (see research proposition 1) has been developed and used for the first time in this study it will be assessed for reliability and validity and – if of acceptable quality - will subsequently be used as the independent variable to test research proposition 11. It will also be considered as the dependent variable to examine research proposition 12.



*P11: There are significant relationships between level of Internet commitment and the following export performance indicators:*

*a- Sales growth.*

*b- Profitability.*

*c- Strategic objectives achievement.*

*d- Perceived self- success.*

*e- Competitors' perceptions of the firm's export success.*

### ***5/3/5 Research Aim 5***

To examine the effect of the owner/managers characteristics on UK based SMEs 'level of Internet commitment'.

### **Research Proposition 12**

Chapter three discusses the importance of top management characteristics, attitudes and experiences as key success factors in the adoption and implementation of any IT innovation (i.e. the Internet) (e.g. Chulikavit and Rose, 2000).

*P12: There are significant relationships between owner/managers personality traits, social psychological characteristics, export perceptions and entrepreneurial orientation behaviour and the following variables/factors of UK based SMEs level of Internet commitment:*

*a- Experience with the Internet technologies (e.g. email, Intranet, Extranet).*

*b- Internet resources (i.e. Internet training, Interconnectivity).*

*c- Internet use (i.e. Internet information, Internet communication).*

*d- Perceived Internet benefits (i.e. internal, external).*

*e- Web function (i.e. effectiveness, transactional, promotional).*

To sum up, this chapter has synthesised the research literatures on entrepreneurship, the Internet and exporting as well as the theoretical bases underpinning the present study. The research framework has been introduced, the aims and propositions have been discussed and developed. The next chapter discusses the research process undertaken to test and examine the pre-specified propositions.

## CHAPTER SIX

### RESEARCH DESIGN AND METHODOLOGY

#### *Chapter Objectives*

- *To describe and justify the research philosophy adopted.*
  
- *To discuss and evaluate the results of the exploratory study.*
  
- *To outline the multi-stage approach adopted for the design, pre-testing, validation and administration of the research instrument.*
  
- *To assess the response rate and non-response bias.*
  
- *To describe the statistical techniques used to test the research propositions.*

## **CHAPTER SIX**

### **RESEARCH DESIGN AND METHODOLOGY**

This chapter describes the research process undertaken to test and examine the research propositions. The chapter addresses the philosophy of the research and outlines its methodology. The results and conclusions of the exploratory study are discussed, followed by the design of the research questionnaire, pre-testing and validating the research instrument are described, and the administration of the postal survey and the statistical techniques used to analyse the data are presented. Thereafter, the research propositions are tabulated and the chapter then concludes with a brief summary.

The research follows the positivist paradigm and is analytical in orientation. A mail survey was used to empirically test the research propositions addressed in chapter five, where a pre-tested and validated questionnaire was administered to a total of 960 UK based SMEs manufacturing exporting firms operating in the following industries: food and beverages, textiles, clothing and fur, biotechnology and instrumentation, and computers and office machinery. The selected industries are deemed to have a strong international presence, and a high level of exporting activities based on the assessments of the UK DTI' (2001). The study relied on the key informant technique in drawing out responses from the sampled frame (i.e. who ever responsible for exporting activities in the firm). A total of 280 questionnaires were returned resulting in an overall response rate of 29.8%, of which 122 questionnaires were incomplete and were excluded from further analysis making the usable number of questionnaires 158.

## 6/1 RESEARCH PHILOSOPHY

Research methods can be classified in various ways, however one of the most common distinctions is between quantitative and qualitative research approaches in management or organisational research (Williams, 1998). Qualitative and quantitative methods have various definitions. Qualitative methods have been described as “an array of interpretive techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world” (Van Maanen, 1988, p.9). These methods involve emphasising meaning, experiences and descriptions (Coolican, 1990). “The qualitative approach is holistic in orientation, treating the phenomenon as a whole system and searching for patterns that lie within its bounds” (Cupchik, 2001). Further, it is “any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification” (Strauss and Corbin, 1990, p.17).

On the other hand, quantitative research is defined as “research aiming at reducing ambiguity through transforming perceptions into pre-structured, quantifiable categories” (Alvesson and Deetz, 2000, p.55). Where quantification can be defined as the process of measuring on some numerical basis that is whenever we count or categorise, we quantify (Coolican, 1990). Cupchik (2001) highlights that “the quantitative approach in psychology is analytical in orientation and while it acknowledges the facticity of.....[the truth or the reality with respect to].... social phenomena, it fractionates them and reduces them to simpler and more or less analogous models”.

Although qualitative and quantitative research can be defined independently, Barbara Wildemuth introduces a combined definition for both ‘interpretivism and positivism’ as follows:

*“... It is true that the positivist approach, with its goal of discerning the statistical regularities of behaviour, is oriented toward counting the occurrences and measuring the extent of the behaviours being studied. By contrast, the interpretive approach, with its goal of understanding the social world from the viewpoint of the actors within it, is oriented toward detailed description of the actors’ cognitive and*

*symbolic actions, that is, the meanings associated with observable behaviours, (1993, p.451)''.*

Kerlinger has been quoted saying “there is no such thing as qualitative data. Everything is either 1 or 0” (Miles and Huberman, 1994). On the other hand, Campbell asserts that “all research ultimately has a qualitative grounding” (cf. Miles and Huberman, 1994, p.40). However, it is unnecessary to perceive the quantitative/qualitative research paradigm as an ‘either/or dichotomy’ as there is no need to put them against each other in a competing position (McKereghan, 1998). Clearly, such a battle among qualitative and quantitative researchers is ‘essentially unproductive’ as there is an agreement that both research methods need each other (Miles and Huberman, 1994). Patton (1990) encourages a ‘paradigm of choices’ that seeks “methodological appropriateness as the primary criterion for judging methodological quality”, this will allow for “situational responsiveness that strict adherence to one paradigm or another will not” (p.39).

Table 6.1 below distinguishes between the two research paradigms, positivism and social constructionism. Each paradigm differs on eight underlying key features namely: the observer, human interests, explanations, research progresses, concepts, units of analysis, generalisation and sampling requirements. Despite these differences both approaches rest on rich and varied traditions that come from multiple disciplines (Trochim, 2002).

**Table (6.1) Contrasting Implications of Positivism and Social Constructionism**

	<b>Positivism Paradigm</b>	<b>Social Constructionism Paradigm</b>
<b>The observer</b>	Must be independent.	Is part of what is being observed.
<b>Human interests</b>	Should be irrelevant.	Are the main drivers of science.
<b>Explanations</b>	Must demonstrate causality.	Aim to increase general understanding of the situation.
<b>Research progresses through</b>	Hypotheses and deductions.	Gathering rich data from which ideas are induced.
<b>Concepts</b>	Need to be operationalised so that they can be measured.	Should incorporate stakeholder perspectives.
<b>Units of analysis</b>	Should be reduced to the simplest terms.	May include the complexity of 'whole' situations.
<b>Generalisation through</b>	Statistical probability.	Theoretical abstraction.
<b>Sampling requires</b>	Large numbers selected randomly.	Small numbers of cases chosen for specific reasons.

Source: Easterby-Smith et al. (2002, p.30).

There is a tendency among researchers to perceive both quantitative and qualitative research as the ideal ends of a continuum along which actual research is taking place (McKereghan, 1998). Although some researchers believe that qualitative and quantitative methodologies cannot be combined because the assumptions underlying each tradition are very different. Other researchers think they can be used in combination only by alternating between methods. Qualitative research is appropriate to answer certain kinds of questions in certain conditions, for instance they are appropriate in situations where one needs to first identify the variables that might later be tested quantitatively, or where the researcher has determined that quantitative measures cannot adequately describe or interpret a situation (Hoepfl, 1997). Quantitative methods are right for other situations and under different circumstances.

However, on the other hand, some scholars believe that both research methods can be effectively joined in the same research project (Strauss and Corbin, 1990; and Patton, 1990). Using both qualitative and quantitative methods is called '*triangulation*'. Webb et al. (1966) were among the first to introduce the term triangulation into the social sciences as a research approach. Triangulation is defined as "a research technique wherein multiple methods are used to analyse the same theoretical question" (Lyon et al., 2000, p.1066). "The common theme in discussions of triangulation has been the desire to overcome problems of bias and validity, it has been argued that the deficiencies of any one method can be overcome by combining methods and thus capitalising on their individual strengths" (Blaikie, 1991, p.115). As a consequence, the main advantage of triangulation as a research approach is to increase the research credibility by using different data sources that involve time, space and persons in order to verify or falsify generalisable trends detected in one data set *data triangulation*, by using two or more researchers' with different background *investigator triangulation*, by using different perspectives to interpret data *theory triangulation*, and by using multiple methods to gather data *methodological triangulation* (Guba and Lincoln, 1989; Patton, 1990; Miles and Huberman, 1994; and Oppermannt, 2000). Subsequently, triangulation "reduces the risk of systematic distortions inherent in the use of only one method" (Maxwell, 1998, p.93).

However, looking at the other side of the coin, the idea of using different research instruments to produce results has been criticised by some researchers (e.g. Fielding and Fielding, 1986). They suggest that "theoretical triangulation does not necessarily reduce bias, nor does methodological triangulation necessarily increase validity. Theories are generally the product of quite different traditions, so when they are combined, one might get a fuller picture, but not a more 'objective one'. We should combine theories and methods carefully and purposefully with the intention of adding breadth and depth to our analysis, but not for the purpose of pursuing 'objective' truth" (Fielding and Fielding, 1986, p.33). Moreover, Miller (1983, p.77) suggests that: "the principal use of any metaphor is to illuminate meaning, when it fails to do this, it should be abandoned, in qualitative research, the concept of triangulation should be allowed to die peacefully".

In light of the preceding discussion, the researcher believes that there is no such thing as a right or wrong research approach, every researcher's ultimate goal is to achieve his/her research objectives, as a consequence s/he chooses the method that best facilitates the accomplishment of that ultimate target. Hence, following the majority of export marketing research, and drawing on the relative advantages of the quantitative research for instance its objectivity, the validity and reliability of its results, the opportunity to replicate the study and taking into consideration the time scale of the current study, as well as the extensive number of variables under investigation the decision was taken to adopt the quantitative approach. However, qualitative methods have been used in the development of the questionnaire.

A mail survey has been chosen for a number of reasons. First, the task does not require interaction with the respondents. Second, the researcher has a representative sample frame that includes a full representation of the population to be surveyed and excludes unqualified individuals. Third, the respondents can provide and record their own responses without the researcher being there. And finally, having a large sample that is dispersed over a broad geographic area highlights the need for mail survey in order to reduce the research cost of travel (Alreck and Settle, 1985, p.47).

Only one informant was chosen to fill in the questionnaire namely, the export manager. As supported in the literature, relying on one single informant has lots of advantages. As such, the most knowledgeable individual in the firm will provide the information (Lyon et al., 2000, p.1066). Specifically in small firms where the owner in most cases is the one responsible for exporting, thus his/her views will represent those of the firm. Further, approaching only one respondent in each firm is a source of encouragement for firms to participate in the study, and finally, approaching one informant reduces research costs with respect to time and money (Jennings and Young, 1990). Nevertheless, interviewing two or more respondents could add more insights to the research but due to time and cost constraints the decision was taken to approach only one respondent in each firm.

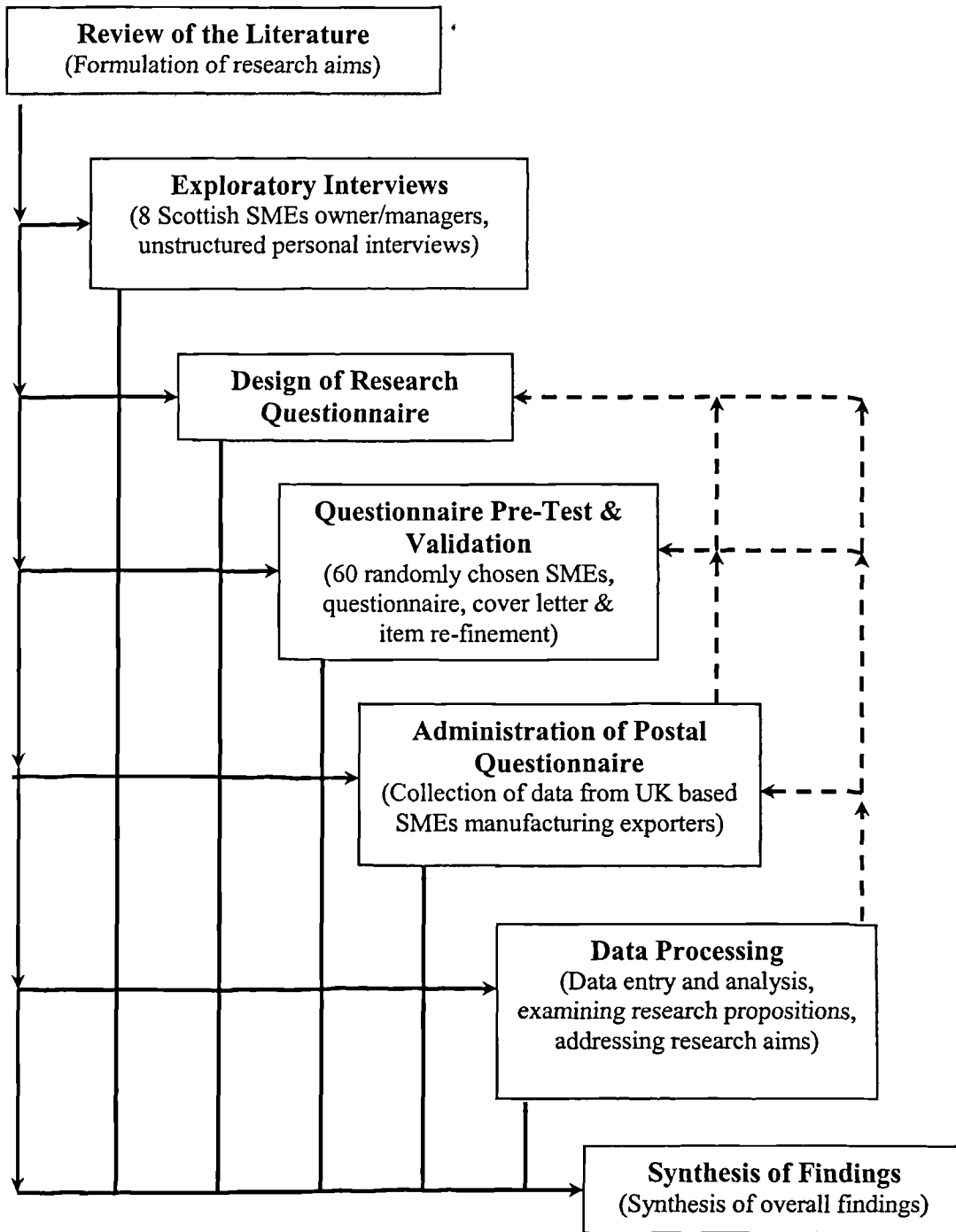
The following section demonstrates the sequential steps of the research methodology.



## **6/2 RESEARCH METHODOLOGY**

This section addresses the methodology applied in the research. Having reviewed the pertinent literatures on entrepreneurship, the Internet and SME internationalisation, and export performance determinants and measures, a multi-stage approach is used for the empirical research as outlined in Figure 6.1.

Figure (6.1) The Research Process



Source: Adapted from Alreck and Settle (1985, p.31).

## **6/2/1 Exploratory Interviews**

The main reason behind conducting an exploratory study was to explore SME exporters' level of Internet commitment. A sample of eight Scottish manufacturers' exporters was interviewed including one firm with more than 250 employees. The interview guide used was developed from the limited literature in the area. The firms were chosen from the online data-base Trade UK. A letter was sent to the owner/export manager, followed by a telephone call to set up an appointment. Each interview lasted an hour on average and was tape recorded for later transcription.

Assessment of the dimensions of entrepreneurial orientation namely innovativeness, proactiveness and risk taking were derived from measures used by Zahra and Garvis (2000). Drawing on Knight's (2000 p.14) view of risk taking "as reflecting the propensity to devote resources to projects that entail a substantial possibility of failure along with chances for high returns", two questions were asked about risk and uncertainty. The level of Internet commitment was identified in terms of level of Internet use (email, Intranet, Extranet), Web function, and resource commitment.

## **6/2/1/1 Results of Exploratory Interviews**

The exploratory interviews took place between February and early April 2001. The profile of the responding firms is shown in Table 6.2. The products manufactured include: clothing, process heating equipment, power distribution and process control, plastic products for automotive and telecom sectors, aluminium products, screw compressors, car components, and educational products and designs. The firms have an average of 121 full time employees, 24 years in exporting and 5 years experience with the Internet. The US market and/or Europe are the major export destinations for all firms in the sample.

**Table (6.2) Export Experience, Products Types and Export Markets**

<b>Firms activity</b>	<b>Export experience (years)</b>	<b>Types of products</b>	<b>Export markets</b>
<b>Clothing</b>	7	Jackets, trousers, kilts, accessories, shoes.	US, Canada, Australia, Western Europe.
<b>Process heating equipment manufacturer</b>	61	Process heating equipment.	Hong-Kong, Japan, Egypt, Malaysia, Australia.
<b>Switchgear manufacturer</b>	2 directly, 10 indirect.	Power distribution and process control.	UK, Gulf & Middle East, Philippine.
<b>Automotive and telecom</b>	20	Automotive (plastic products, screen printed, plastic heats with graphic and numbers), with telecom (plastic, mobiles key caps, mobiles front and back covers).	All over Europe (e.g. Sweden, Germany, Finland), Mexico, US, Australia.
<b>Aluminium products manufacturer</b>	20	Wall products.	France, Germany, Norway, the Middle East.
<b>Compressors manufacturer</b>	50	Compressors.	Europe, US, China, Japan, Korea.
<b>Car components</b>	20	Wide range of components.	Europe (e.g. Holland, Denmark, France, Germany), Malta, Cyprus, Israel.
<b>Robotics and model makers</b>	1	Educational products (ex. robotics) and designs.	US, Europe, Brazil, Uruguay, Turkey, Cyprus, Mexico, South America.

Source: The researcher.

## **Internet Results**

*Experience with the Internet.* There was a consensus among interviewees that the reason for using the Internet is to have a presence in international markets “before it is too late” (all firms). Interestingly, companies said that they search the Internet for new markets as they do not have the resources to go and get inquiries from distant markets, and in one case a company sold to Brazil which under normal conditions it would not even think of doing because it would be beyond its capabilities. Moreover, companies 3 and 7 surf the Internet in order to attract overseas customers and find out about their competitors.

*Level of Internet use.* There was agreement that the Internet is an effective tool of communication. One manager said that: “... if we do not use the email system we would not be able to communicate and this is a negative sign from a client point of view” (firm 1). The result shows that four firms (3, 4, 5 and 6) have an email system on a departmental basis (marketing, finance, purchase and sales). While in the other four firms (1, 2, 7 and 8) only the owner has email. Four firms (3, 4, 5 and 6) said they were using email internally to communicate with their employees. Other firms were not fully convinced about the benefits of the Intranet. They considered it inefficient and an unnecessary way to communicate in a small firm. However, all the firms with a Web site use the Internet to contact their suppliers, distributors and overseas clients.

## **Web Function**

*Web type.* All the firms’ Web sites are either used as a promotional tool (firms 2, 3, 4, 5 and 6) or for supporting e-commerce activities (firms 1, 7 and 8) (see Figure 6.2). Using the Web site as a promotional tool provides customers with information on the firm’s history, product range and contact addresses and phone numbers. Firms also reveal an inability to support e-commerce either because customised products are not suitable for this type of selling, or firms do not want to take business from their distributors and jeopardise a good relationship with them. One respondent said “...we have to be very careful, we do not wish to be seen to be taking the profit out of the hands of our distributors” (firm 6).

**Web language.** Four firms (2, 6, 7 and 8) provide up to six foreign languages other than English. Four firms (1, 3, 4 and 5) reported using English only, claiming that language has never been a barrier for them as they mainly serve either the European or US market (see Figure 6.2).

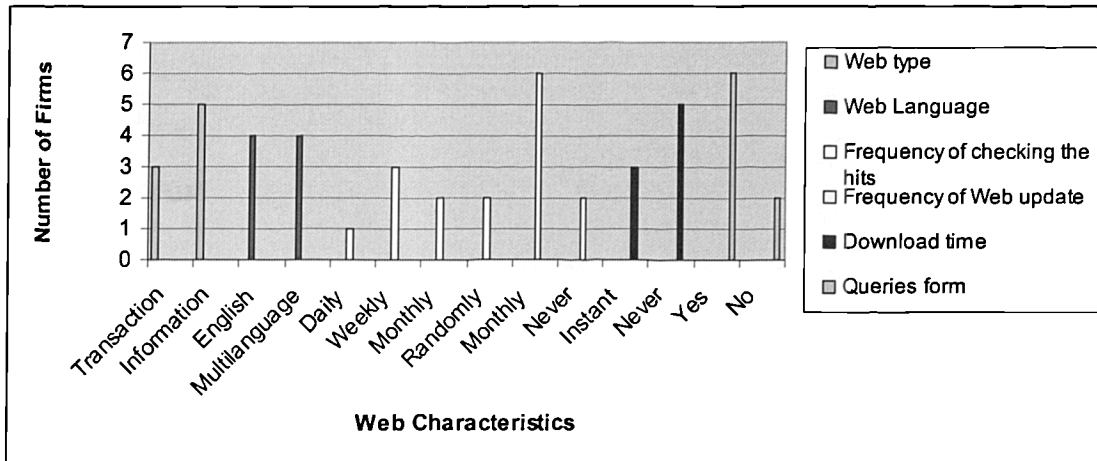
**Web effectiveness.** There was a surprising dissimilarity among SMEs in the extent to which they investigate their Web effectiveness. Firm 1 looked at the Web hits on a daily basis, while firms (2, 7 and 8), (5 and 6) and (3 and 4) did so on a weekly, monthly and randomly basis respectively (see Figure 6.2). Only two firms, 3 and 8 tracked their hits as the respondent for firm 8 said “...we analyse the hits in terms of how many pages are visited, which products are of most interest, and which geographic area the hits are coming from. This is good to analyse and decide where your target market should be”.

**Web update.** Six firms (1, 2, 5, 6, 7 and 8) update their Web site on a monthly basis (see Figure 6.2). One of the managers mentions that “they notice that the number of hits goes down if they do not update the Web” (firm 6). Two firms (3 and 4) have never updated their Web site.

**Web download time.** Three firms (2, 6 and 8) were interested in users being able to download their Web pages instantly (see Figure 6.2).

**The Web as a service tool.** Six firms (1, 4, 5, 6, 7 and 8) support their Web site with a query form and/or FAQ page which also has the facility for customers to ask for additional information (see Figure 6.2).

Figure (6.2) Web Function

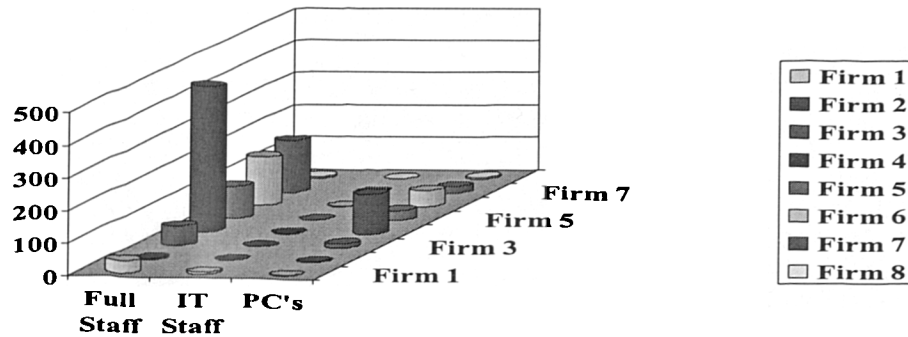


Source: The researcher.

### Resource Commitment

Resource commitment is defined as the financial, technological and human resources devoted to the Internet related activities. This reflects the extent to which the firm is actually involved with, and committed to, the innovation. **IT staff.** Number of IT staff to full time employees' range from 1 to 6 compared with 3 to 450 employees. However, it is inequitable to generalise such result for all firms interviewed as for instance, firm number 8 has 6 full time employees and 1 IT member, on the other hand, firm number 4 has 450 employees and report having 2 IT staff only (see Figure 6.3). Further, relative to the firms full time employees that range from 3 to 450, the number of PC's available range from 1 to 125, which reflects a high level of commitment to the Internet across all firms', particularly firm number 8 that has an equal number of full time employees and PC's. **Internet budget.** Half of the firms interviewed had an IT budget between 2% and 16% of their turnover. Other firms reported spending money on IT whenever they need to.

**Figure (6.3) Resource Commitment**



Source: The researcher.

### **International Entrepreneurial Orientation**

**Innovativeness.** When the interviewees were asked if they had introduced any new product lines recently, seven owner/managers (1, 2, 4, 5, 6, 7 and 8) reported introducing new product lines within the last couple of years and only one (3) had not (see Figure 6.4). Also, all firms, except one, report emphasising on marketing tried and tested products.

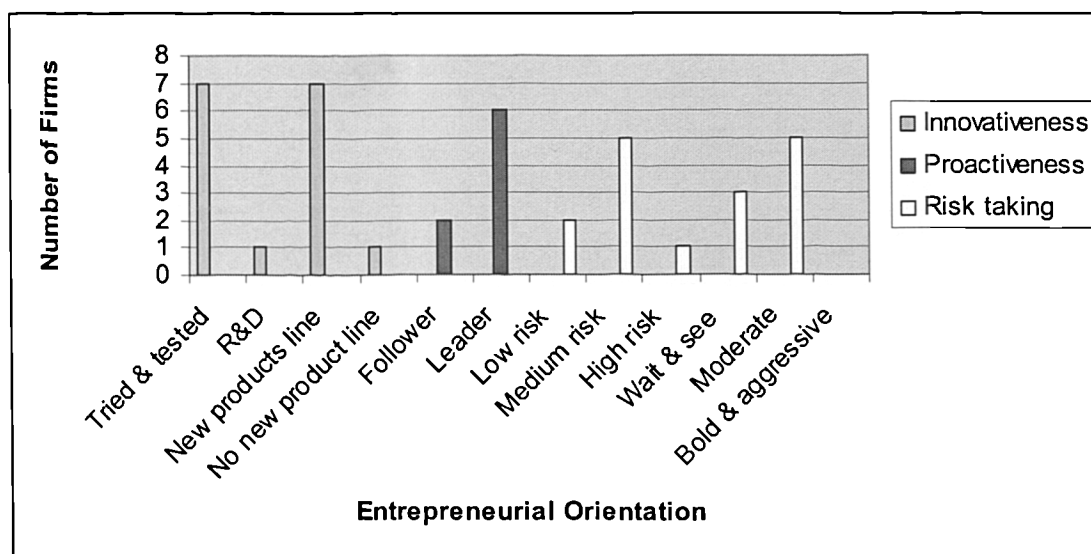
**Proactiveness.** As far as proactiveness is concerned, six managers (1, 2, 3, 4, 5 and 8) were assessed as being leaders in their field - as one manager said “we try to keep ourselves one step ahead of our competitors but never for too long as once we introduce something new the others copy it” (firm 1). Managers in firms 6 and 7 were assessed as followers’. Manager 6 said that “we tend to be the follower to the others MNE, we tend to respond to them, the MNE develops and we copy”. Additionally, manager (7) said that: “we are just a copier and very much driven with what our customers need”.

**Risk-Taking.** Regarding risk taking the majority of the firms (2, 3, 4, 6 and 7) were assessed as moderate risk takers. When asked about decision making situations involving uncertainty, three managers (4, 5 and 6) preferred a “wait and see”



strategy. One commented that, “it is too risky to take a bold and aggressive strategy from the beginning” (firm 4), while the other five managers (1, 2, 3, 7 and 8) were moderately risk takers (see Figure 6.4). Also, consistent with the view that entrepreneurs may be cautious and risk averse under some circumstances while risk taking in others (Brockhaus, 1980), most of the interviewees report perceiving risk taking as situation specific.

**Figure (6.4) International Entrepreneurial Orientation**



Source: The researcher.

**Other Characteristics.** As for demographic characteristics such as level of education, the majority of the sample possesses school or sub-degree level qualifications and most of the respondents are between 40 and 50 years old. There was no evidence that ethnicity, foreign language ability or living abroad differentiates between entrepreneurs and their counterparts. As far as exploring firm’s level of Internet commitment and owner/managers international entrepreneurial orientation behaviour, the preliminary indications in this exploratory study are that firms are moderately committed to the Internet and their owner/managers exhibit modest to high levels of international entrepreneurial orientation.

On the basis of the interviews conducted it seems possible that firms’ with high international entrepreneurial orientation (assessed on three dimensions collectively - innovativeness, proactiveness and risk-taking) will have higher export performance

in terms of profitability and sales growth and will achieve their strategic objectives easier than their counterparts.

### **6/2/1/2 Conclusions Drawn from the Exploratory Interviews**

The purpose of the exploratory research was to explore a small sample of Scottish based exporting SMEs commitment to the Internet, and to assess the model of the Internet enabled international entrepreneurship. The SMEs in this study are using the Internet as a communication tool, with owner/managers using the email system, the Intranet, and the Extranet to communicate with their customers, distributors and suppliers.

SME exporters are using their Web sites to promote themselves and their range of products, rather than Internet enabled e-commerce. The development of multi-lingual Web sites reflects management understanding of the potential benefits of communicating with their overseas customers and suppliers in their own language. Nevertheless, it would seem that firms could make better use of data about Web site hits.

Top management support of the development of the Internet in a firm is reflected in the financial, technological and human resources committed. Firms in this study have specialised IT personnel and half of them have special IT budgets. Also surprisingly, the larger firm (number 4) seems to have an inadequate number of IT staff relative to its full time employees.

The firms interviewed demonstrate a high level of innovation in terms of number of new product lines introduced in the past two years. Further, all firms except for two (numbers 6 and 7) exhibit proactiveness and leadership, but broadly speaking the firms are neither risk-takers (entrepreneurial) nor risk-averse (conservative), they are somewhere in between. SMEs interviewed prefer taking moderate risks with the prospect of stable returns.

Overall, although this research is exploratory, it has shed some light on how a small sample of Scottish exporting SMEs used the Internet and has provided some support

to the conceptual model. Further research will be undertaken to test the propositions set out earlier (see chapter five).

### **6/2/2 Selection of Sample Frame, Sectors and Sample**

Before proceeding with the design of the research instrument, the sample frame is selected, the sectors to be investigated are identified and the criteria of the sampling units are highlighted.

*Sample frame* “is a complete listing of the population from which the sample of interest is to be drawn” (Maxim, 1999, p.108). Alreck and Settle (1985, p.73) suggest the following steps to select a sample frame:

- 1- The sample frame is required to identify the entities or units to be surveyed.
- 2- The sample frame should be all-inclusive, so that every unit in the population to be surveyed is included.
- 3- The frame for the sample should exclude any units that are not part of the population being surveyed.
- 4- The entries listed in the sample frame must be specified in exactly the same way as the sampling units were specified.
- 5- When the sample is clustered, stratified, or both the sample frame must indicate cluster boundaries and/or strata membership for the individual units.

Accordingly, the “*Financial Analysis Made Easy*” FAME database was selected as the sampling frame for the current research in that it satisfied the criteria for sample firm selection. FAME is a financial database containing information on 270,000 major British companies, with turnovers in excess of £500,000, extracted from the Jordan Watch and Jordan Survey databases. The FAME database contains up to five years of detailed financial information on firms, together with some descriptive details including SIC code, number of employees, firm type etc. (Stewart and McAuley, 2000). Using this data base could help minimise sampling error, and it also matches Sudman’s (1983) recommendations for sampling in that units were included only once, and the information was up to date, accurate, covered the whole population, and was convenient to use. From this data base a total of 960 firms were identified and selected. The firms were telephoned to

cross-check the information on the database, specifically with respect to whether or not the firm is still exporting, the firm address and the name of the most appropriate respondent to approach (i.e. exporting manager or whoever responsible for exporting in the firm). Cross checking was not possible in every case because some of the information provided was incorrect or the phone number has been changed.

The sample frame covered the following industries (food and beverages, textiles, clothing and fur, biotechnology and instrumentation, and computers and office machinery). The selected industries were deemed to have a strong international presence. These industries have high level of exporting activities based on the assessments of the UK DTI (2001), they are also significant parts of British manufacturing industry. Also, manufacturing firms ensure a degree of similarity in the type of business operations (Covin and Slevin, 1991). Additionally, the manufacturing sector is the most successful in using the IT and the Internet to improve communication with business partners whether suppliers, distributors or customers (Anonymous, [Business Europe], 2000).

***Sampling units*** are “the basic observational units on which the measurements are taken. Sampling units contain elements and are used for selecting elements into the sample” (Maxim, 1999, p.108). Alreck and Settle, (1985, p.71) suggest the following guidelines to specify sample units properly:

- 1- “The sampling unit should be specified so that it is the smallest single entity from which the data can be obtained.
- 2- If the unit contains several individuals who might provide different data, the specification of the unit is too broad and should be narrowed.
- 3- If responses from individuals would be redundant or over represent some entities, the specification is too narrow and should be broadened.
- 4- If the survey data are to be compared with existing survey or secondary data, the same sample units must be used for the survey, or the data will not be comparable”.

**The following are the criteria for a firm to be eligible for inclusion in the study:**

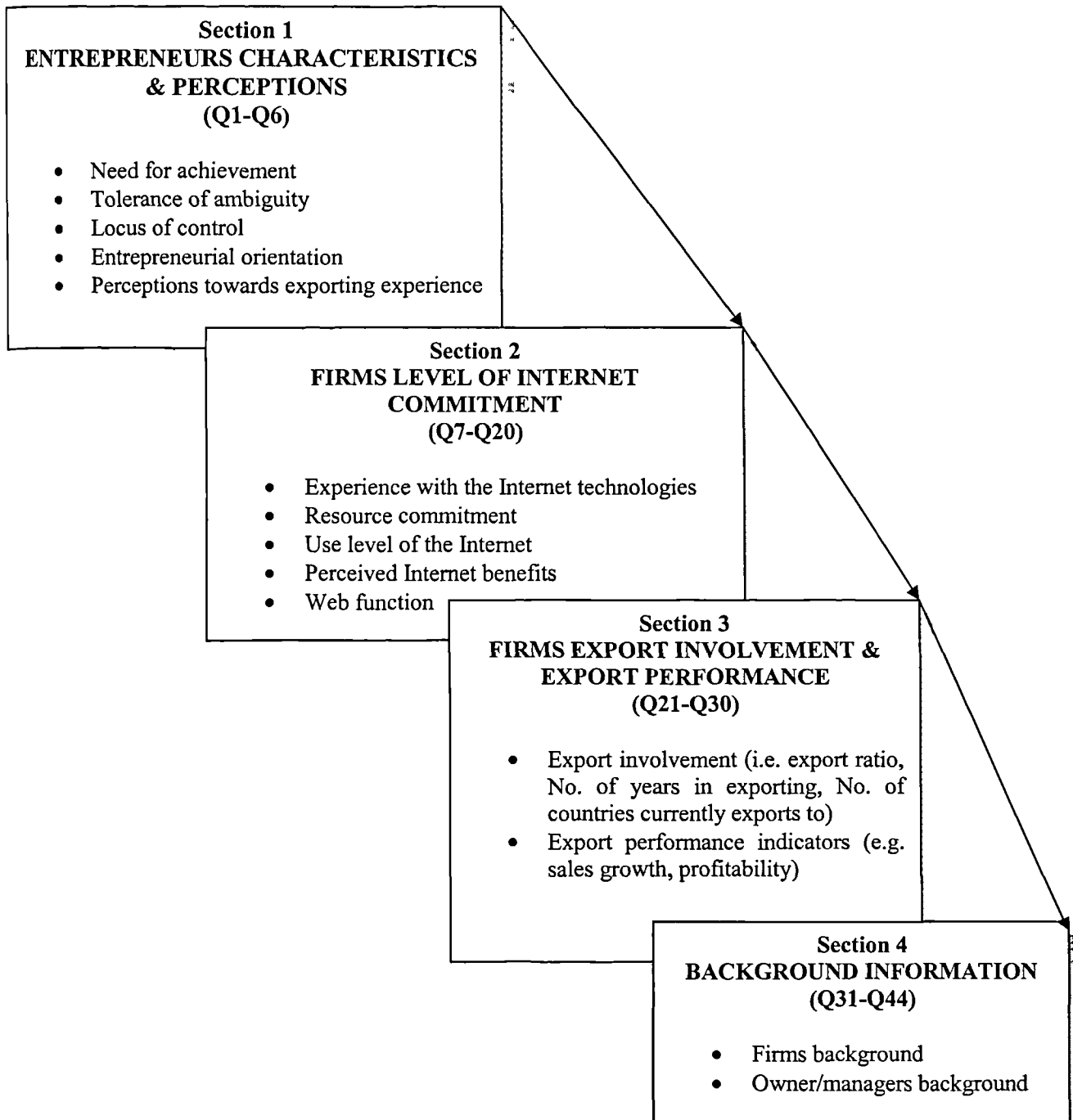
First, firms are engaged in exporting activities. Second, firms are UK based manufacturers. Finally, firms fall in the small-medium size category (SMEs). The aim was to provide some degree of homogeneity in the sample, bearing in mind the importance of exporting to these particular firms in their early stage of internationalisation (Leonidou and Katsikeas, 1996). Subsequently, firms with more than 250 employees were omitted from this study. This figure is consistent with the EU conventions (Official Journal of the European Communities, 1996) and the operational definitions of small firms adopted by other researchers (e.g. Oviatt and McDougall, 1994; Moini, 1995; Knight and Cavusgil, 1996; and OECD, 1999, 2000).

### **6/2/3 Questionnaire Design**

In general, the survey is defined as “a quantitative method and is utilised to examine widespread social issues whereby the results of a sample can be generalised upon to reflect the society as a whole” (Westmarland, 2001). Therefore, the reason behind using mail survey questionnaire was to collect adequate and sufficient data from the sampling units (UK based SMEs) and their owner/managers that facilitate testing and examining the research propositions. The questionnaire was designed to extract data with respect to owner/managers personality traits (i.e. need for achievement, tolerance of ambiguity, locus of control), entrepreneurial orientation behaviour (i.e. innovativeness, proactiveness and risk taking), perceptions toward exporting experience, social psychological characteristics (e.g. age, level of education, work experience, foreign language ability). Also, the data reflects firms’ level of Internet commitment (i.e. Internet experience, use level of Internet, Web function, resource commitment, perceived Internet benefits) and export performance indicators (sales growth, profitability, strategic objectives achieved, perceptions of self-success and competitors’ perceptions of the firm’s export success), moreover, basic data that helps profile the responding firms were drawn out such as firm age, size, ownership and export involvement (see appendix 1).

The research instrument is designed in four sections. Section one focuses on entrepreneurs' characteristics and perceptions, section two deals with firms' level of Internet commitment, section three addresses firms' export involvement and export performance indicators, finally, section four deals with the firms and their owner/managers background information (see Figure 6.5). Ease of completion was taken into consideration specially that the questionnaire was considered fairly long and low response rate was anticipated. Therefore, most questions scales were interval by nature using either five or seven point *Likert* scale and/or *Frequency Verbal* scales. The questionnaire has only one open-ended question where respondents were asked to describe one example of an export arrangement that has been affected by the use of the Internet. The remaining questions were categorical where respondents were asked to tick where appropriate.

**Figure (6.5) Structure of the Questionnaire**



Source: The researcher.

## **6/2/4 Pre-testing and Validating the Questionnaire**

To pre-test and validate the research instrument multiple phases were taken. Initially face validity of the constructs was assessed with the co-operation of several academics familiar with research in international marketing and entrepreneurship. Using a draft questionnaire, a pilot test was conducted early September 2001 on 60 UK SME manufacturers' exporters in the target industries. The Trade UK online data base was used as a sample frame for the piloting phase. This particular data base is considered by the relevant government authority to be among the most comprehensive, accurate and up-to-date data base of exporters of its kind. Essentially, Trade UK provides the data necessary for efficient contact, including addresses, telephone numbers and names of key export managers and the size of the firm measured by number of employees (Styles, 1998, and Styles and Ambler, 2000). The aim of piloting the research questionnaire was to evaluate the new items developed for the research, to ensure their clarity and their relevance, to determine accuracy and to assure content validity (Reuber and Fischer, 1997; Katsikeas et al., 1997; and Lumpkin and Dess, 2001).

Nineteen completed questionnaires were returned making a response rate of 31.6%, these responses were excluded from the final study. The preliminary study shows that questions 26, 27 and 30 needed minor revisions in order to enhance their clarity and to ease completion. Adjustments were made on the basis of this feedback, and a final version of the research questionnaire was then developed.

## **6/2/5 Administration of the Questionnaire, Response Rate and Non-Response Bias**

The pre-tested and validated questionnaire was administered between October and January 2001/2002 to a total of 960 firms (see Table 6.3). To help improve the response rate a number of actions were taken. The researcher follows the procedure developed by Dillman (1978) based on a series of specifically timed mailings including an initial mailing along with a covering letter that was sent late October 2001 describing the study and its purpose, request participation and assure confidentiality and anonymity. Self-addressed envelope to return the completed questionnaire was also included with the research instrument. The



respondents were offered a summary of the findings if they indicated interest (Caruana et al., 1998; and Robertson and Chetty, 2000). A postcard reminder was sent out one week after the initial mailing (early November 2001) which is sometimes called 're-dropping' to urge those who have not sent the questionnaire to complete it and return it (Alreck and Settle, 1985). Then three weeks after the original mail out (19 November 2001) a letter, replacement questionnaire and a self-addressed envelope were sent to all non-respondents (Lumpkin and Dess, 2001). Finally, in order to enhance the response rate follow up phone calls were also conducted after sending the second mail out till before Christmas vacation 2001, and continued after the break till end of January 2002, which represents the cut-off date.

It should be noted that 23 responses were discarded from further analysis for different reasons. 10 firms employed more than 250 employees, 11 are neither exporters nor manufacturers, in addition 2 firms went into receivership and liquidation thus did not meet the sampling frame requirements. Subsequently, the number of the surveyed firms went down to 937 (see Table 6.3). In aggregate, a total of 280 questionnaires returned resulting in an overall response rate of 29.8%, out of which 122 questionnaires were incomplete or included inadequate data therefore were excluded from further analysis making the usable number of questionnaire 158. The first mailing generated 87 usable questionnaires, and the follow-up second mailing 3 weeks later yielded an additional 71 usable returns, resulting in an overall usable response rate of 19.3%.

Given that the survey was unsolicited, the length of the questionnaire was an issue in obtaining a sound response rate, and the respondents were small and medium sized firms which, in comparison with large firms, may have a lower response rate, the response rate of 19.3% is considered satisfactory and comparable to studies on similar topics in marketing (Jaworski and Kohli, 1993). This response rate ensures good representation of the population being studied and justifies statistical processing of the data being gathered. Nevertheless, it would have been desirable to achieve a higher response rate but the duration and scope of the project were limited.

**Table (6.3) Sample Frame**

	<b>Food &amp; beverages</b>	<b>Textiles, clothing &amp; fur</b>	<b>Biotechnology &amp; instrumentation</b>	<b>Computers &amp; office machinery</b>	<b>Total</b>
<b>Firms in the sector</b>	276	321	239	124	960
<b>Firms surveyed</b>	270	314	233	120	937
<b>Total responses</b>	76 (28.1%)	96 (30.5%)	74 (31.7%)	34 (28%)	280 (29.8%)
<b>Useable responses</b>	43 (18.1%)	44 (16.7%)	53 (25%)	18 (17.3%)	158 (19.3%)

Source: The researcher.

To assess non-response bias the questionnaires were ordered sequentially by date of reception, hence enabling the application of the ‘extrapolation’ method suggested by Armstrong and Overton (1977). This method compares the responses of ‘early’ respondents, i.e. those who completed the questionnaire before sending the second wave out with the respondents who completed the second wave questionnaire. The ‘extrapolation’ method assumes that ‘late’ respondents are similar to the non-respondents, whereas ‘early’ respondents are assumed to be similar to the respondents in the sample. A t-test was performed to examine the differences between early and late respondents, no significant differences were identified at  $p = 0.05$  level, indicating that response bias does not represent a problem in the current research.

### **6/2/6 Data Analysis**

The data was analysed using the Statistical Package of Social Sciences (SPSS+PC). A number of steps were undertaken to test and examine the research propositions. All the multi-items measures used in the present study were subject to a two step purification process (Churchill, 1987).

Firstly, *Cronbach's Alpha* was applied to measure the research constructs' reliabilities. Where reliability is defined as "the extent to which a variable or set of variables is consistent in what it is intended to measure, reliability relates to the consistency of the measure(s)" (Hair et al., 1998, p.90). The reliability of the constructs was measured twice: first, before factor analysing the construct and second, the reliability of the derived composite measures was examined to make sure that each case is contributing to the concept the composite measure had been designed to capture (Hair et al., 1998).

The multi-dimensional constructs namely (need for achievement, tolerance of ambiguity, locus of control, entrepreneurial orientation, perceived export complexity, Internet resource commitment, Internet use, perceived Internet benefits and Web function) matched the suggested benchmarks for reliability (0.6) stated by (Nunnally and Bernstein, 1994), except for the 'tolerance of ambiguity' construct which was eliminated from subsequent analysis due to its very low alpha coefficient 0.01. Further, the decision to delete any variable in order to improve the alpha coefficient was made after factor analysing the construct.

Secondly, *Factor analysis* was conducted to validate the research constructs and to further reduce the research data. Validity is "the extent to which a measure or set of measures correctly represents the concept of study, it is concerned with how well the concept is defined by the measure(s)" (Hair et al., 1998, p.90). Moreover, according to Nunnally and Bernstein (1994) *factor analysis* represents one of the early statistical procedures which should be conducted when validating an instrument, as it shows which of the questions are contributing to the measurement of the phenomenon under study.

A number of steps were taken to apply the reduction technique properly though. Firstly, a visual examination of the correlation matrices of the factor analysis of each research construct was made to ensure their suitability for factoring.

Secondly, the Bartlett test of Sphericity for all items was checked to declare its significance, also the Kaiser-Meyer-Olkin measure of sampling adequacy was verified to assure that it is greater than 0.6.

Thirdly, examination of the Anti-Image-Correlation-Matrices was conducted to delete any value that did not meet the minimum level of Measure of Sampling Adequacy, MSA 0.5 (Hair et al., 1998).

Finally, only factors with Eigen values greater than one and items with factor loadings greater than the significant cut-off point of (0.45 for sample size n=150, Hair et al., 1998) were included, Principal Component Analysis and/or Principal Axis Factoring extraction methods was applied along with Varimax and/or Oblim Kaiser Normalisation rotation method respectively, the aim was to test the dimensionality and to derive the factors employed in subsequent analyses. Composite indices were then computed by summing those items exhibiting loadings greater than 0.45 within each factor, taking into account that items which failed to load reasonably on a factor were subsequently dropped, while those which stand alone outside of a factor, were included in later analysis as variables on their own (Philip, 1998).

The first proposition of this research is that firms' could be differentiated according to their level of Internet use along a continuum ranging from high to low (P1).

Based on the exploratory interviews and the limited empirical studies in the area of Internet usage among SMEs exporting firms, a battery of 14 statements was composed using *five-point Verbal Frequency* scale in order to operationalise firms' level of Internet use (see appendix 1, question 14).

Cluster Analysis, both hierarchical and non-hierarchical methods, was applied. A major issue with that particular statistical analysis is identifying the appropriate number of clusters. Following Lehmann (1979) initial guidelines and the given sample size of 158, the appropriate number of clusters for the available data falls in the range of two to five clusters. Hence, hierarchical clustering was used to derive solutions within these ranges. "Ward's method was chosen to minimise the within-cluster differences and to avoid problems with 'chaining' of the observations found in linkage methods" (Hair et al., 1998). Hierarchical clustering

analysis was also used because of its demonstrated robustness, its ability to maximise within-cluster homogeneity and between cluster heterogeneity (Hair et al., 1998).

The Agglomeration Schedule of Hierarchical Cluster Analysis using Ward's Method has illustrated the cluster analysis result. The clustering (agglomeration) coefficient shows rather large increases in going from four to three clusters, three to two clusters and two clusters to one cluster. To further help identify large relative increases in the cluster homogeneity, the percentage of change in the clustering coefficient for ten to two clusters was calculated (Hair et al., 1998). Further, Non-hierarchical procedures were used to 'fine-tune' the results by utilising the hierarchical results as a basis for generating the seed points.

It should be noted that multicollinearity represents a potential problem associated with cluster analysis technique, with highly correlated variables weighting clusters more heavily in their favour, therefore, the summated factors scores initiated from conducting factor analysis on multi-items scales were used as they simplify the data and reduce the amount of multicollinearity.

To further validate the result obtained from the cluster analysis further analyses were undertaken. A *t-test* was applied whenever the independent variables under investigation were metric (e.g. firms' level of Internet commitment), while *Chi-square* was used when the independent variables were categorical (e.g. social psychological characteristics) respectively.

To continue profiling the responding firms' *stepwise discriminant analysis* was applied. Given the categorical nature of the dependent variable namely, the two clusters high and low Internet use firms, and the interval or metric feature of the independent variables specifically, personality traits, entrepreneurial orientation behaviour and export perceptions. The stepwise procedure was chosen over *simultaneous discriminant* analysis as it is considered to be better suited for studies involving a large number of independent variables, and it aids in rank ordering the variables in terms of their discriminating power (Das, 1994; and Hair et al., 1998).

The variables that entered the discriminant function were selected on the basis of the *Mahalanobis* distance between groups, using a minimum tolerance level of 0.001 and a minimum F to enter of 1.0. This procedure is preferred when the objective is to identify the most powerful discriminating variables since stepwise inclusion of variables causes the removal of those with high multicollinearity and the *Mahalanobis* selection criteria enables the maximisation of the distances across groups with adjustment for unequal variances (Bodur, 1994; and Hair et al., 1998).

The analysis proceeded by clustering the responding firms according to their owner/managers entrepreneurial orientation behaviour which encompasses (innovativeness, proactiveness and risk taking). A 9-item construct on a seven point *Likert* scale, developed and tested for reliability by previous researchers, (e.g. Miller, 1983; Covin and Slevin, 1989; and Covin, 1991) is used to measure the three dimensions of entrepreneurial orientation. The mean rating of these items was used as the firm's owner/managers entrepreneurial orientation, where the higher the score the more entrepreneurial the firm owner/managers (Covin, 1991). Once more, *stepwise discriminant analysis*, *Chi square* and *t-tests* were applied according to the type of the independent variables (i.e. metric, categorical).

In order to examine the various causal relationships highlighted in the research framework (see chapter five), *stepwise regression* analysis was employed, and as a consequence a number of regression models were built.

*Stepwise multiple regression* analysis represents a method of selecting variables for inclusion in the regression model. It starts by selecting the best predictor of the dependent variable (e.g. sales growth, profitability). It is advisable to use that technique particularly for discriminating between several independent variables in a model building process. Also, this technique is a search procedure usually used to examine the contribution of each independent variable to a regression model using successive steps. Hence, independent variables are included in the model according to the incremental explanatory power which they can add to the

regression model. It should be noted that the independent variables are added as long as their partial correlation coefficients are statistically significant. Also, they may be dropped if their predictive power drops to a non-significant level when another independent variable is added to the model (Hair et al., 1998). Moreover, the explanatory variables were grouped in the same way as illustrated in the research framework: entrepreneurs' personality traits, social psychological characteristics and exporting perceptions, entrepreneurial orientation behaviour and level of Internet commitment.

### 6/3 RESEARCH PROPOSITIONS

A set of propositions was used to examine the manner in which the research concepts might be related (see Table 6.4), where “the assertion of a relationship between two or more concepts is called a proposition” (Maxim, 1999, p.34).

**Table (6.4) Research Propositions**

<b>Proposition</b>	<b>Statistical test</b>
<p><b>Proposition 1</b></p> <p>Firms can be distinguished according to their level of Internet use. Relative to firms with low Internet use, high Internet use firms are likely to:</p> <ul style="list-style-type: none"> <li>a- make more use of the Internet as a communication tool</li> <li>b- make more use of the Internet as an information source</li> </ul>	<p>Cluster analysis</p>
<p><b>Proposition 1a</b></p> <p>Relative to their counterparts, high Internet use firms are likely to differ with respect to:</p> <ul style="list-style-type: none"> <li>a- experience with Internet technologies</li> <li>b- level of Internet training</li> <li>c- level of interconnectivity</li> <li>d- perceptions of external Internet benefits</li> <li>e- perceptions of internal Internet benefits</li> <li>f- Web effectiveness</li> <li>g- conducting transactions on the Web</li> <li>h- using the Web as a promotional tool</li> </ul>	<p>T-test</p>

<p><b>Proposition 2</b></p> <p>Relative to their counterparts, high Internet use firms are likely to differ with respect to the following owner/managers characteristics:</p> <ul style="list-style-type: none"> <li>a- need for achievement</li> <li>b- internal locus of control</li> <li>c- external locus of control</li> <li>d- entrepreneurial orientation behaviour</li> <li>e- perceived export complexity</li> <li>f- perceived export risks</li> <li>g- perceived export profits</li> <li>h- perceived export costs</li> <li>i- perceived export growth</li> </ul>	<p>Stepwise discriminant analysis</p>
<p><b>Proposition 3</b></p> <p>There are differences between firms with a high level of Internet use and their counterparts with low Internet use with respect to the following owner/managers social psychological characteristics:</p> <ul style="list-style-type: none"> <li>a- work responsibility</li> <li>b- work experience</li> <li>c- age</li> <li>d- gender</li> <li>e- level of education</li> <li>f- foreign language proficiency</li> <li>g- international orientation</li> </ul>	<p>Chi-Square test</p>
<p><b>Proposition 4</b></p> <p>There are differences between firms with high level of Internet use and their counterparts with low Internet use with respect to:</p> <ul style="list-style-type: none"> <li>a- firm characteristics</li> <li>b- industry characteristics</li> </ul>	<p>Chi-Square test</p>
<p><b>Proposition 5</b></p> <p>Relative to their counterparts, high Internet use firms are likely to differ with respect to:</p> <ul style="list-style-type: none"> <li>a- number of foreign countries entered</li> <li>b- export experience</li> <li>c- export ratio for the financial year (2000 – 01)</li> <li>d- sales growth</li> <li>e- profitability</li> <li>f- strategic objectives achievement</li> <li>g- perceived self-success</li> <li>h- competitors' perceptions of the firm's export success</li> </ul>	<p>T-test</p>



<p><b>Proposition 6</b></p> <p>Firms can be differentiated according to their owner/managers' entrepreneurial orientation behaviour. Relative to firms with low EO owner/managers, high EO owner/managers are likely to:</p> <ul style="list-style-type: none"> <li>a- be more innovative</li> <li>b- be more proactive</li> <li>c- be risk taking</li> </ul>	<p>Cluster analysis</p>
<p><b>Proposition 6a</b></p> <p>Relative to their counterparts, firms with high EO owner/managers are likely to differ with respect to the following characteristics:</p> <ul style="list-style-type: none"> <li>a- need for achievement</li> <li>b- internal locus of control</li> <li>c- external locus of control</li> <li>d- perceived export complexity</li> <li>e- perceived export risks</li> <li>f- perceived export profits</li> <li>g- perceived export costs</li> <li>h- perceived export growth</li> </ul>	<p>Stepwise discriminant analysis</p>
<p><b>Proposition 6b</b></p> <p>There are differences between firms with high EO owner/managers and their counterparts with low EO owner/managers with respect to the following social psychological characteristics:</p> <ul style="list-style-type: none"> <li>a- work responsibility</li> <li>b- work experience</li> <li>c- age</li> <li>d- gender</li> <li>e- level of education</li> <li>f- foreign language proficiency</li> <li>g- international orientation</li> </ul>	<p>Chi-square test</p>
<p><b>Proposition 7</b></p> <p>Relative to firms with low EO owner/managers, firms with high EO owner/managers are likely to differ with respect to:</p> <ul style="list-style-type: none"> <li>a- experience with Internet technologies</li> <li>b- level of Internet training</li> <li>c- level of interconnectivity</li> <li>d- perceptions of external Internet benefits</li> <li>e- perceptions of internal Internet benefits</li> <li>f- Web effectiveness</li> <li>g- conducting transactions on the Web</li> <li>h- using the Web as a promotional tool</li> </ul>	<p>T-test</p>

<p><b>Proposition 8</b></p> <p>There are differences between firms with high entrepreneurial orientation owner/managers and their counterparts with respect to:</p> <ul style="list-style-type: none"> <li>a- firm age</li> <li>b- firm size</li> <li>c- firm independency</li> <li>d- firm ownership</li> <li>e- industry sector</li> <li>f- market served</li> <li>g- technology intensity</li> </ul>	<p>Chi-square</p>
<p><b>Proposition 9</b></p> <p>Relative to their counterparts with low EO owner/managers, firms with high EO owner/managers are likely to differ with respect to:</p> <ul style="list-style-type: none"> <li>a- number of foreign countries entered</li> <li>b- export experience</li> <li>c- export ratio for the financial year (2000 – 01)</li> <li>d- sales growth</li> <li>e- profitability</li> <li>f- strategic objectives achievement</li> <li>g- perceived self-success</li> <li>h- competitors' perceptions of the firm's export success</li> </ul>	<p>T-test</p>
<p><b>Proposition 10</b></p> <p>There are significant relationships between owner/managers' personality traits, social psychological characteristics, export perceptions and entrepreneurial orientation behaviour and the following export performance indicators:</p> <ul style="list-style-type: none"> <li>a- sales growth</li> <li>b- profitability</li> <li>c- strategic objectives achievement</li> <li>d- perceived self-success</li> <li>e- competitors' perceptions of the firm's export success</li> </ul>	<p>Stepwise regression analysis</p>
<p><b>Proposition 11</b></p> <p>There are significant relationships between level of Internet commitment and the following export performance indicators:</p> <ul style="list-style-type: none"> <li>a- sales growth</li> <li>b- profitability</li> <li>c- strategic objectives achievement</li> <li>d- perceived self-success</li> <li>e- competitors' perceptions of the firm's export success</li> </ul>	<p>Pearson correlation &amp; Stepwise regression analysis</p>

<p><b>Proposition 12</b></p> <p>There are significant relationships between owner/managers personality traits, social psychological characteristics, export perceptions and entrepreneurial orientation behaviour and UK based SMEs level of Internet commitment:</p> <ul style="list-style-type: none"> <li>a- experience with the Internet technologies</li> <li>b- Internet training</li> <li>c- interconnectivity</li> <li>d- Internet information</li> <li>e- Internet communication</li> <li>f- perceived external Internet benefits</li> <li>g- perceived internal Internet benefits</li> <li>h- Web effectiveness</li> <li>i- transactions on the Web</li> <li>j- promotion on the Web</li> </ul>	<p>Stepwise regression analysis</p>
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Source: The researcher.

#### 6/4 CHAPTER SUMMARY

The existing research combines qualitative and quantitative methods. The steps that have been taken to certify that the data collection technique is valid and reliable were described and justified. The statistical tests to be applied to examine the research propositions were outlined.

The research concentrates on the UK and is cross sectional in nature (food and beverages, textiles, clothing and fur, biotechnology and instrumentation, computers and office machinery), where a mail survey was used to collect data from SMEs. Unlike many studies that focus on the internationalisation of SMEs which used cross-tabulations or univariate analysis, the current study is utilising multivariate statistical techniques to allow the impact of a limited number of explanatory factors to be considered jointly (McDougall and Oviatt, 1997). The research results will be presented in the next chapter (see chapter seven).

## CHAPTER SEVEN RESEARCH FINDINGS

### *Chapter Objectives*

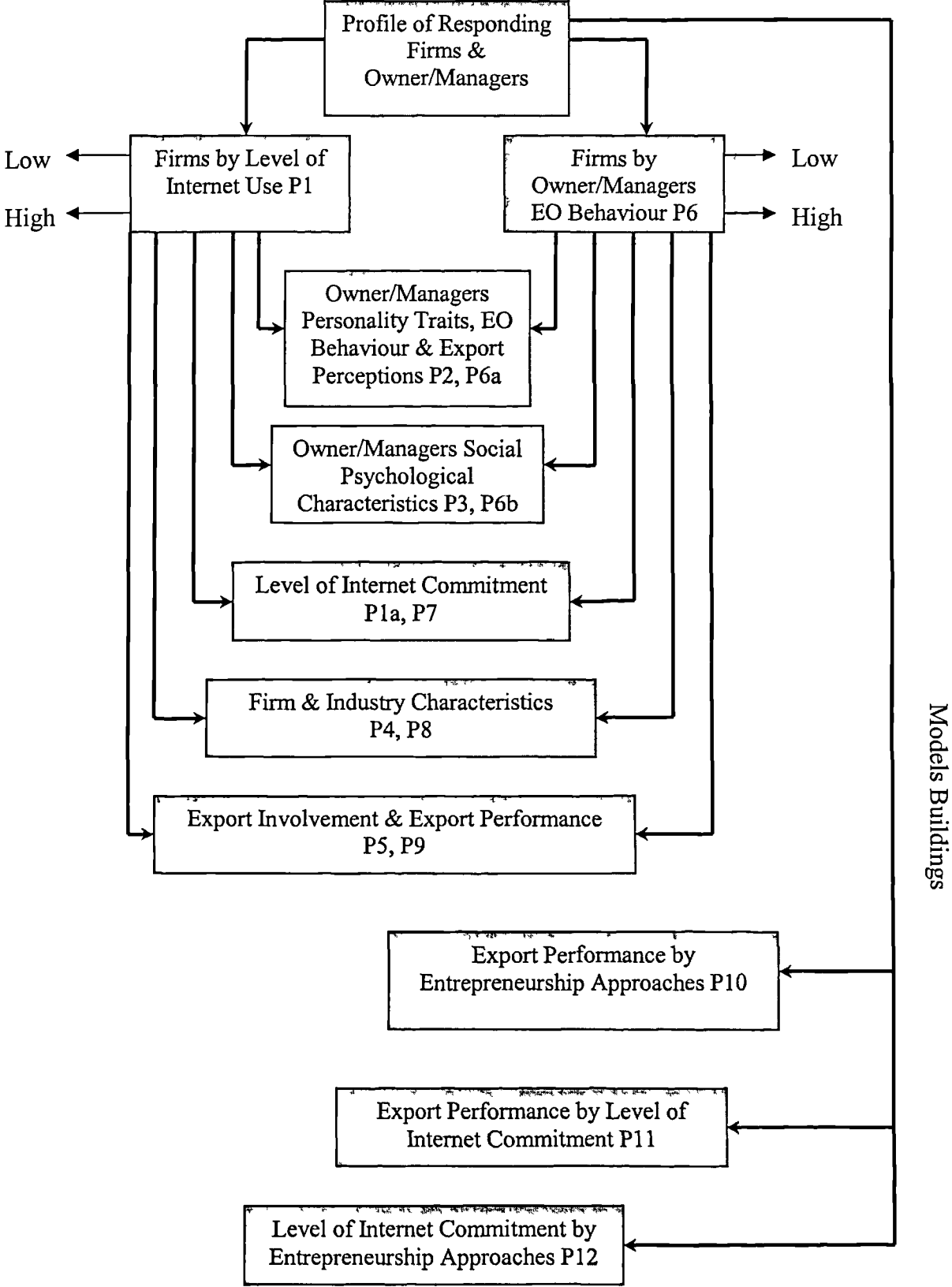
- *To achieve the research aims highlighted in chapter five.*
- *To present the results of multivariate statistical analysis namely, cluster analysis, stepwise discriminant analysis and stepwise regression analysis, and bivariate cross-tabulations and t-tests applied to test the research propositions developed in chapter five.*
- *To interpret and discuss the results and their implications.*

## **CHAPTER SEVEN**

### **RESEARCH FINDINGS**

This chapter sets out the findings of the study. The chapter starts with a profile of the responding firms and the demographic characteristics of their owner/managers, examines the reliability and validity of the multi-dimensional constructs used in the research, and differentiates firms according to their level of Internet use. This is followed by an analysis of differences between high and low Internet use firms with respect to level of Internet commitment, owner/managers personality traits, entrepreneurial orientation behaviour, export perceptions, social psychological characteristics, firm and industry characteristics, export involvement and export performance indicators. Further analyses are also carried out to evaluate firms according to their owner/managers entrepreneurial orientation behaviour with respect to the research constructs mentioned above. Finally, a number of stepwise regression models are built, the aim is to identify the significant determinants of UK based SMEs export performance, as well as the critical antecedents of their level of Internet commitment. In general, the causal factors include owner/managers personality traits, entrepreneurial orientation behaviour, export perceptions and social psychological characteristics. Figure 7.1 demonstrates the flow of the analysis.

Figure (7.1) Flow Chart of the Analysis



Source: The researcher.

## **7/1 INTRODUCTION**

As mentioned in the previous chapter, the data were collected via mail survey, the research questionnaire was mailed to 960 UK manufacturers exporting firms with less than, or equal to 250 employees. A total of 280 questionnaires were returned, of which 158 were usable, giving an overall response rate of 29.8%, and a usable response rate of 19.3%.

Firstly, a profile of the responding firms and their owner/managers is outlined, and secondly, based on the analysis of the data provided by the respondents, the research findings are presented. The analysis follows the research aims, these are 1) differentiating firms according to their level of Internet use, 2) differentiating firms with respect to owner/managers entrepreneurial orientation behaviour, 3) identifying the critical determinants of export performance at both the owner/managers level and at the level of the firm, and 4) the antecedents of level of Internet commitment.

## **7/2 A PROFILE OF RESPONDING FIRMS**

Table 7.1 illustrates the profile of responding firms. A number of comments should be made with respect to the information reported in the table. First, the data is cross sectional by nature where the food and beverages, textiles and clothing and fur industries represent 54.7%, while biotechnology and instrumentation and computers and office machinery industries count for 45.3% of the sample. Second, approximately 61% of the firms are well established with more than 20 years in business, while only 39% are relatively young firms. This result should be perceived in the light of having more than 50% of the firms in low to medium tech industries where the majority of firms are well established. Third, around 73% of the firms have more than 10 years experience in exporting. Fourth, almost one third of the firms comply with the European Union (EU) definition of small firms and employ less than 50 employees, while the rest are medium sized firms (Official Journal of the European Communities, 1996). Fifth, the vast majority of the firms are independent and UK owned with 66.9% and 79.4% respectively. It is worth noting that no significant differences have occurred between independently owned firms and subsidiaries with respect to the research main construct namely personality traits,

entrepreneurial orientation, Internet commitment and export performance, hence the decision was taken to incorporate the subsidiaries cases in subsequent analyses. Sixth, almost half of the respondents serve Business-2-Business markets 48.7%, and finally, the respondents are distributed among high, medium and low technology intensity industries as follows (29.5%, 39.1% and 31.4%).

**Table (7.1) Profile of Responding Firms**

	<b>f</b>	<b>%</b>
<b>Industry Sector (n =157)</b>		
Food and beverages	43	27.4
Biotechnology and instrumentation	53	33.8
Computers and office machinery	18	11.5
Textiles, clothing and fur	44	27.3
<b>Firm age (n = 146)</b>		
1-10 years	22	15.1
11-20 years	35	23.9
21-30 years	25	17.1
31-50 years	19	13.1
51 and above	45	30.8
<b>Firm size (n = 157) (No of employees)</b>		
Small (50 and less)	55	35
Medium (51 to less than or equal to 250)	102	65
<b>Export experience (n = 155)</b>		
New exporters (6 years and below)	17	11
Experienced exporters (7 to 10 years)	25	16
Very experienced (11 years and above)	113	72.9
<b>Independency (n = 145)</b>		
Independently owned	97	66.9
Subsidiary	48	33.1
<b>Ownership (n = 131)</b>		
UK owned	104	79.4
Non-UK owned	27	20.6
<b>Market served (n = 156)</b>		
Consumer market	37	23.7
Business-to-Business	76	48.7
Mixture of both	43	27.6
<b>Technology intensity (n = 156)</b>		
High tech	46	29.5
Medium tech	61	39.1
Low tech	49	31.4



### **7/3 RESPONDENTS BACKGROUND**

Table 7.2 indicates that: first, only 6.5% and 11% of the respondents are founders and/or owners respectively. This implies that the research is looking at potential entrepreneurs defined as those who have or acquire entrepreneurial characteristics without being self-employed. Also, as far as gender is concerned the majority of owner/managers are male 81.1%.

Second, exporting is the dominant work responsibility among the respondents 72.8%, followed by sales 70.3%, marketing 58.9%, others 36.1%, then production 17.7%. The cumulative percentage adds up to more than 100 because respondents were asked to tick all the responsibilities that apply.

Third, 10.2% of the respondents were below 30 years of age, 58% of the sample was between 30 and 50 years of age, and 31.8% were over 50 years. The study indicates that 61.1% of the respondents have been working in the same industry for more than 10 years, while the rest were distributed as follows: less than 1 year of experience 5.1%, less than 5 years work experience 19.1%, and finally, less than 10 years experience in the same industry 14.6%.

Fourth, the majority of the respondents possess some level of education. A total of 45.6% have 'O' grade/Standard grade, 38.6% have a degree/postgraduate degree, 36.7% have 'A' level/Highers/SYS, 32.9% have professional qualification, 21.5% have technical education represented in HNC/HND degrees, 7.6% have no formal qualification, and 7% have apprenticeship. The data shows that a fairly large proportion of the respondents are well educated and almost half of them have the minimum level of education namely 'O' grade/Standard grade.

Finally, 11.4% of owner/managers were born abroad compared with 88.6% of local origin. Two thirds of the respondents, 66.9% have travelled abroad, 28.5% and 31% have lived and worked abroad respectively, and 73.1% have had at least one overseas business trip in the last 12 months. Command of foreign languages represents one more aspect of owner/managers' international orientation and the majority of the respondents 79.1% have at least knowledge of one foreign language besides English.

**Table (7.2) Respondents' Profile**

	<b>n</b>	<b>f</b>	<b>%</b>
<b>The founder</b>	155	10	6.5
<b>The owner</b>	155	17	11
<b>Work responsibility</b>			
Marketing	158	93	58.9
Sales	158	111	70.3
Production	158	28	17.7
Export	158	115	72.8
Others	152	57	36.1
<b>Work experience</b>	157		
Less than 1 year		8	5.1
1-5 years		30	19.1
6-10 years		23	14.6
11-15		36	22.9
16-25		28	17.8
Over 25		32	20.4
<b>Age</b>	157		
Under 25		7	4.5
25-30 years		9	5.7
31-40 years		53	33.8
41-50 years		38	24.2
Over 50 years		50	31.8
<b>Gender</b>	154		
Male		125	81.1
Female		29	18.9
<b>Level of education</b>			
'O' grade/Standard grade	158	72	45.6
'A' level/Highers/SYS	158	58	36.7
HNC/HND	158	34	21.5
No formal qualification	158	12	7.6
Degree/Postgraduate degree	158	61	38.6
Professional qualification	158	52	32.9
Apprenticeship	158	11	7
<b>International Orientation</b>			
Born abroad	158	18	11.4
Travel abroad	157	105	66.9
Live abroad	158	45	28.5
Work abroad	158	49	31.0
No. of overseas business trips	156	114	73.1
<b>Foreign Languages</b>			
At least one foreign language	158	125	79.1

## 7/4 RELIABILITY AND VALIDITY OF THE RESEARCH CONSTRUCTS

*Cronbach's Alpha* was applied to measure the reliability of the research constructs. All the multi-dimensional constructs namely (need for achievement, locus of control, entrepreneurial orientation, perceived export complexity, Internet resource commitment, Internet use, perceived Internet benefits and Web function) have matched the suggested benchmarks for reliability 0.6 stated by (Nunnally and Bernstein, 1994), except for the 'tolerance of ambiguity' construct which was eliminated from subsequent analysis because of its very low alpha coefficient 0.01 (see Table 7.3). Further, the decision to delete any variable in order to improve the Alpha Coefficient was made after factor analysing the construct.

*Factor analysis* was conducted to validate the research constructs and to further reduce the research data. A number of steps were taken to apply the reduction technique properly though.

First, a visual examination of the correlation matrices of the factor analysis of each research construct indicates that there are a number of correlations that exceed 0.3, therefore all matrices were suitable for factoring.

Second, the *Bartlett test of Sphericity* for all items was significant, and the *Kaiser-Meyer-Olkin* measure of sampling adequacy was greater than 0.6, basically the values lay between 0.64 and 0.9.

Third, examination of the *Anti-Image-Correlation-Matrices* was conducted and a decision was taken to eliminate any value that did not meet the minimum level of *Measure of Sampling Adequacy*,  $MSA = 0.5$  (Hair et al., 1998). It is worth noting that for all the research variables the MSA fell between 0.61 up to 0.95.

Fourth, only factors with Eigen values greater than one and items with factor loadings greater than the significant cut-off point of (0.45 for sample size  $n = 150$ , Hair et al., 1998) were included, *Principal Component Analysis and/or Principal Axis Factoring* extraction methods was applied along with *Varimax and/or Oblim Kaiser Normalisation* rotation method respectively (see appendix 3). Table 7.3 depicts the reliability of the research constructs and the extracted factors.

**Table (7.3) Constructs and Factors Reliability Coefficients**

<b>Construct/Factor</b>	<b>Number of items per construct</b>	<b>Alpha per construct</b>	<b>Number of items per factor</b>	<b>Alpha per factor</b>
<b>Need for achievement</b>	5	.61	4	.61
<b>Tolerance of ambiguity</b>	6	.01	-----	-----
<b>Locus of control</b>	18	.78		
• Internal locus of control			6	.65
• External locus of control			2	.55
<b>Entrepreneurial orientation</b>	9	.82	9	.82
• Innovativeness			3	.62
• Proactiveness			3	.70
• Risk taking			3	.78
<b>Perceived export complexity</b>	8	.49	6	.55
<b>Internet resource commitment</b>	6	.69		
• Interconnectivity			3	.85
• Internet training			3	.91
<b>Internet use</b>	14	.92		
• Internet information			7	.92
• Internet communication			7	.87
<b>Perceived Internet benefits</b>	12	.92		
• Perceived external Internet benefits			8	.93
• Perceived internal Internet benefits			4	.86
<b>Web function</b>	13	.71		
• Web effectiveness			4	.81
• Transactions on the Web			4	.74
• Promotion on the Web			2	.88

## **7/5 ANALYSIS OF LEVEL OF INTERNET USE AMONG EXPORTING FIRMS**

### **7/5/1 Internet Use and Exporting Firms**

The first research proposition is that firms' could be differentiated according to their level of Internet use along a continuum ranging from high to low (P1).

Based on the exploratory interviews and the limited empirical studies in the area of Internet use among SMEs exporting firms, a battery of 14 statements was developed using a *five-point Verbal Frequency* scale in order to operationalise firms' level of Internet use (see appendix 1, question 14).

Cluster Analysis, both hierarchical and non-hierarchical methods, was applied. A major issue with that particular statistical analysis is identifying the appropriate number of clusters. Following Lehmann (1979) initial guidelines and the given sample size of 158, the appropriate number of clusters for the available data falls in the range of two to five clusters. Hence, hierarchical clustering was used to derive solutions within these ranges. "Ward's method was chosen to minimise the within-cluster differences and to avoid problems with "chaining" of the observations found in linkage methods" (Hair et al., 1998).

The Agglomeration Schedule of Hierarchical Cluster Analysis using Ward's Method has illustrated the cluster analysis result. The clustering (agglomeration) coefficient shows rather large increases in going from four to three clusters ( $1890.947 - 1701.064 = 189.883$ ), three to two clusters ( $2366.706 - 1890.974 = 475.732$ ) and two clusters to one cluster ( $3366.859 - 2366.732 = 1000.127$ ). To further help identify large relative increases in the cluster homogeneity, the percentage of change in the clustering coefficient for ten to two clusters was calculated (see appendix 4) (Hair et al., 1998). The largest increase was observed in going from two clusters to one cluster, therefore the two clusters solution was selected.

Further, Non-hierarchical procedures were used to 'fine-tune' the results by utilising the hierarchical results as a basis for generating the seed points. Given the similarity

of the results from the two methods applied namely, hierarchical and non-hierarchical, it confirms the hierarchical results.

Table 7.4 illustrates the mean scores of the two clusters on every statement of the construct, there are 63 firms in the first cluster and 93 firms in the second. Further, Table 7.5 depicts the univariate F ratios and the significance levels for the differences between the cluster means, the two clusters are significantly different with respect to all the 14 statements. Moreover, it was noticed that cluster 2 has higher means scores on all the studied variables compared to cluster 1, hence high Internet use firms are represented by cluster 2 and low Internet use firms are represented by cluster 1.

**Table (7.4) Mean Scores of the Indicator Variables of High and Low Internet Use Clusters**

Variables	<b>*Final Cluster Centres</b>	
	<b>Cluster 1</b>	<b>Cluster 2</b>
	<b>(n = 63) Low Internet use firms</b>	<b>(n = 93) High Internet use firms</b>
INTERNET USE1	1.94	4.03
INTERNET USE2	1.83	3.57
INTERNET USE3	1.73	3.40
INTERNET USE4	1.60	2.81
INTERNET USE5	1.67	3.32
INTERNET USE6	2.25	3.86
INTERNET USE7	1.71	2.78
INTERNET USE8	1.29	1.87
INTERNET USE9	1.85	3.56
INTERNET USE10	1.77	3.32
INTERNET USE11	1.60	3.19
INTERNET USE12	1.79	3.54
INTERNET USE13	1.58	3.08
INTERNET USE14	1.73	3.35

\*Final Cluster Centres were obtained from subcommand FILE.

**Table (7.5) Significance Testing of Differences between High and Low Internet Use Clusters Centres**

Variables	Cluster		Error		F	p-value
	Mean Square	df	Mean Square	df		
INTERNET USE1	145.1	1	.9	154	157.7	.000***
INTERNET USE2	100.6	1	1.0	154	99.9	.000***
INTERNET USE3	92.5	1	1.3	154	67.4	.000***
INTERNET USE4	47.9	1	1.0	154	45.4	.000***
INTERNET USE5	91.2	1	.8	154	101.6	.000***
INTERNET USE6	86.2	1	.7	154	116.6	.000***
INTERNET USE7	38	1	1.2	154	30.7	.000***
INTERNET USE8	11.1	1	.7	154	15	.000***
INTERNET USE9	96.1	1	1.0	154	94.5	.000***
INTERNET USE10	80.1	1	1.0	154	73.4	.000***
INTERNET USE11	83	1	1.1	154	71.1	.000***
INTERNET USE12	101.2	1	.9	154	103.4	.000***
INTERNET USE13	74.7	1	1.2	154	61.9	.000***
INTERNET USE14	87.5	1	1.0	154	83.1	.000***

\*\*\*  $p \leq 0.01$

#### **7/5/1/1 Level of Internet Commitment of High Internet Use Firms**

To further validate the results obtained from the cluster analysis, the high and low Internet use clusters were investigated with respect to the overall level of Internet commitment (P1a). Overall level of Internet commitment was disaggregated to nine factors, each was measured using multiple item constructs, where the majority were on a five-point *Likert* scale and *Verbal Frequency* scale (see appendix 1, questions 7 to 16, 19 and 20).

*Factor* analysis was conducted to reduce the number of variables into manageable factors namely (Internet training, interconnectivity, perceived external and internal Internet benefits, Web effectiveness, transactions on the Web and promotion on the Web).

Because the variables are metric the independent samples t-test was applied. The univariate test for homogeneity of variance, *Levene's* statistic, shows significant differences across the two groups of firms, indicating that the homogeneity of variance assumption has been violated. A remedy to the violation of the t-test assumption is to assume that we have unequal variances to these particular variables and to compare their correspondents' t-values as depicted in Table 7.6.

**Table (7.6) Level of Internet Commitment by Firms' Level of Internet Use**

<b>Variables/Factors</b>	<b>Mean value of low Internet use firms</b>	<b>Mean value of high Internet use firms</b>	<b>t value</b>	<b>2-tailed p</b>
<b>Internet technologies</b>				
• Email	3.8	5	-2.5	.01***
• World Wide Web	3.3	4.7	-3.4	.00***
• Corporate home page	3.2	4.4	-2.3	.01***
• Corporate Web server	2.8	5	-3.3	.00***
• Intranet	3.4	3.9	-.5	.56
• Extranet	3.5	4.6	-.5	.58
• Internet telephony	22.1	4.2	4.3	.00***
• Internet videoconferencing	2.1	3.1	-.4	.68
<b>Internet training</b>	1.7	2.2	-2.4	.01***
<b>Interconnectivity</b>	29.8	27.6	.3	.70
<b>Perceived external Internet benefits</b>	2.6	3.7	-9.2	.00***
<b>Perceived internal Internet benefits</b>	2.5	3	-3.8	.00***
<b>Web effectiveness</b>	2.1	2.7	-3.3	.00***
<b>Transactions on the Web</b>	1.5	2	-1.7	.07*
<b>Promotion on the Web</b>	3.3	4	-3.4	.00***

\* $p \leq 0.10$ , \*\*\*  $p \leq 0.01$

The foregoing analysis indicates that relative to low Internet use firms, high Internet use firms are more *experienced with Internet technologies* (email, WWW, corporate home page, corporate Web server), *have more Internet training*, *have higher perceptions of external and internal Internet benefits*, *have higher Web effectiveness*, *conduct more transactions on the Web*, and *finally make more use of the Web as a promotional tool*. Also, regardless of being significant or not, firms with a high level of Internet use consistently show higher means on all factors as anticipated except for Internet telephony and interconnectivity. Bearing in mind that the latter factor consists of number of employees who use the Internet as part of their job, number of PC's the firm has, and number of PC's that are directly connected to



the Internet, this implies that although high Internet use firms are lacking human and/or financial resources in favour of their counterparts, however, scarcity of resources did not prevent them from using the Internet intensively and being committed to it. To sum up, in general, firms with a high level of Internet use illustrate high level of Internet commitment with respect to all the proposed factors.

#### **7/5/1/1 Support for Propositions 1 and 1a**

Having successfully obtained a stable and interpretable two cluster solution based on a reliable and valid construct of Internet use, and also having verified that result by conducting additional analysis with respect to firms' level of Internet commitment, sufficient empirical support could be said to exist for research propositions 1 and 1a of this study, that firms could be differentiated according to their level of Internet use to high versus low, and that in general, firms with a high level of Internet use exhibit higher levels of Internet commitment.

#### **7/5/2 Personality Traits, Entrepreneurial Orientation Behaviour and Export Perceptions of High Internet Use Firms' Owner/Managers**

Drawing on the relative importance of the individual manager's characteristics, attitudes and experiences for the successful adoption and implementation of any IT innovation (e.g. the Internet) (Roackard and Crescenzi, 1984; Gagnon et al., 2000; and Chulikavit and Rose, 2000), it was deemed reasonable to find out if personality traits, entrepreneurial orientation behaviour and perceptions associated with exporting activities could differentiate between owner/managers in high versus low Internet use firms (P2).

Given the categorical nature of the dependent variable 'level of use of the Internet', and the interval or metric feature of the independent variables, *stepwise discriminant* analysis was applied. The stepwise procedure was chosen over simultaneous discriminant analysis as it is considered to be better suited for studies involving a large number of independent variables, and it aids in rank ordering the variables in terms of their discriminating power (Das, 1994), therefore it is the appropriate test to examine this research proposition (Hair et al., 1998).

The high and low Internet use clusters were taken as the dependent variable, and owner/managers personality traits, EO behaviour and export perceptions were the independent variables. The factors extracted from factor analysis were used rather than the original constructs (see appendix 1, questions 1, 3, 4, and 6 and appendix 3).

It is worth noting that stepwise discriminant analysis starts with all variables excluded from the model, then based on the *Mahalanobis* distance between groups, using a minimum tolerance level of 0.001 and a minimum F to enter of 1, variables are selected to enter the discriminant function. This procedure is preferred when the objective is to identify the most powerful discriminating variables, since stepwise inclusion of variables causes the removal of those with high multi-collinearity, and the *Mahalanobis* selection criteria enables the maximisation of the distances across groups with adjustment for unequal variances (Bodur, 1994; and Hair et al., 1998).

The result shows that out of nine variables included in the analysis, only two independent variables namely *need for achievement and perceived export growth* significantly discriminate between owner/managers in high versus low Internet use firms, according to their discriminant loadings and ranking which are shown in Table 7.8. The discriminant function is highly significant with a canonical correlation of 0.37 and  $p = 0.000$ . It is concluded that relative to their counterparts, high Internet use firms' have owner/managers with a high need for achievement and a higher perceptions of growth associated with exporting (see Table 7.7).

**Table (7.7) Comparison of Group Means of High and Low Internet Use Firms**

<b>Variables/Factors</b>	<b>Low Internet use firms</b>	<b>High Internet use firms</b>	<b>Sig.</b>
Need for achievement	5.2	5.6	.005***
Internal locus of control	4.3	4.2	.484
External locus of control	3.2	3	.200
Entrepreneurial orientation	4.4	4.6	.214
Perceived export complexity	2.8	2.8	.796
Perceived export risks	3.9	3	.648
Perceived export profits	2.9	3	.501
Perceived export costs	4	3.9	.638
Perceived export growth	3.5	4.2	.000***

\*\*\*  $p \leq 0.01$

**Table (7.8) Results of Stepwise Discriminant Analysis with 'Level of Use of the Internet' as the Dependent Variable**

<b>Variables/Factors</b>	<b>Standard Weights Value</b>	<b>Discriminant Loadings</b>		<b>Univariate F Ratio</b>	
		<b>Value</b>	<b>Rank</b>	<b>Value</b>	<b>Rank</b>
Need for achievement	.54	.57	2	8.13***	2
Internal locus of control	N.I.	.04	9	.49	ns.
External locus of control	N.I.	-.10	5	1.65	ns.
Entrepreneurial orientation	N.I.	.30	3	1.55	ns.
Perceived export complexity	N.I.	-.06	7	.06	ns.
Perceived export risks	N.I.	.05	8	.20	ns.
Perceived export profits	N.I.	.14	4	.45	ns.
Perceived export costs	N.I.	.08	6	.22	ns.
Perceived export growth	.81	.84	1	17.41***	1

\*\*\*  $p \leq 0.01$ , N.I. = not included, n.s. = not significant at  $p \leq 0.05$

### **7/5/2/1 Partial Support for Proposition 2**

There is only partial empirical support for proposition 2. The findings obtained from the *discriminant analysis* above reveal that only two variables namely, need for achievement and perceived export growth, out of the proposed nine variables significantly differentiate between owner/managers in high versus low Internet use firms.

Although not significant, owner/managers in high Internet use firms' exhibit a higher level of EO compared to owner/managers in low Internet use firms. Also, being less averse to perceived risks and costs related to exporting, but having higher perceptions of export profits are all characteristics associated with owner/managers in high Internet use firms.

Insignificant though, the result for 'locus of control', as a personality trait repeatedly acknowledged in entrepreneurship literature, shows that relative to their counterparts, owner/managers in high Internet use firms have a lower 'external locus of control' (see Table 7.7), suggesting that they do not believe that their lives are largely controlled by luck or fate. Also, they do not believe that they themselves are controlling their destinies and influencing their own lives as reflected in the relatively low mean of 'internal locus of control'. The evidence is contradictory in that, on one hand owner/managers in high Internet use firms have a lower 'external locus of control', meanwhile their counterparts have a higher 'internal locus of control', suggesting that relating owner/managers 'locus of control' to firms' level of Internet use does not add much to our understanding.

### **7/5/3 Social Psychological Characteristics of High Internet Use Firms Owner/Managers**

Top management social-psychological features such as age, gender and level of education have been recognised as important characteristics in management, psychological and sociological research (Gattiker et al., 2000). Remarkably, this line of research has emphasised the significant association between these demographic factors and computer and work-related attitudes. Therefore, another objective of the current research is to profile high Internet use firms according to their

owner/managers social psychological characteristics namely, work responsibility, work experience, age, gender, level of education, foreign language proficiency and international orientation (P3). Given the categorical nature of the independent variables, *Chi-square* analysis was used and the results are illustrated in Table 7.9.

**Table (7.9) Owner/Managers Social Psychological Characteristics by Firms Level of Internet Use**

Variables	Chi-square and/or Fisher exact value	df	Sig.
<b>Work responsibility</b>			
• Marketing	.51	1	.47
• Sales	1.90	1	.16
• Production	.15	1	.69
• Export	1.62	1	.20
• Others	.17	1	.67
<b>Work experience</b>	6.49 <sup>a</sup>		.26
<b>Age</b>	4.17 <sup>a</sup>		.38
<b>Gender</b>	.66 <sup>a</sup>		1
<b>Level of education</b>			
• 'O' grade/Standard grade	1.01	1	.31
• 'A level/Highers/SYS	.54	1	.46
• HNC/HND	.28	1	.59
• No formal qualification	.49	1	.48
• Degree/Postgraduate degree	3.55	1	.06*
• Professional qualification	.02	1	.88
• Apprenticeship	.07	1	.77
<b>Foreign language proficiency</b>			
• French	7.54 <sup>a</sup>		.10*
• Italian	9.80 <sup>a</sup>		.02**
• German	2.02 <sup>a</sup>		.74
• Japanese	.85 <sup>a</sup>	1	.84
• Russian	2.81		.09*
• Spanish	4.96 <sup>a</sup>		.29
• Others (1)	8.09 <sup>a</sup>		.04**
• Others (2)	3.35 <sup>a</sup>		.24
<b>International orientation</b>			
• Born abroad	.13	1	.70
• Travel abroad	12.77	1	.00***
• Live abroad	2.99	1	.08*
• Work abroad	3.62	1	.05**
• No. of overseas business trips	32.27 <sup>a</sup>	1	.02**

<sup>a</sup> Fisher's exact test was calculated when the expected frequencies were less than 5.

\*  $p \leq 0.1$ , \*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$

The result indicates that *level of education* (degree/post graduate degree), *foreign language proficiency* (French, Italian, Russian, others i.e. Arabic, Greek, Dutch) and *international orientation* (travel to English speaking countries, living abroad, working abroad and number of overseas business trips) significantly differentiate owner/managers in high versus low Internet use firms. Furthermore, the result reveals no statistical difference with respect to owner/managers age, gender, work experience and work responsibility among the two clusters under investigation. To sum up, managers' working in high Internet use firms are highly educated, have a good command of foreign languages and are internationally orientated.

### **7/5/3/1 Partial Support for Proposition 3**

The findings exhibit only partial empirical support for research proposition 3. *Chi-Square analysis* highlights that only three variables, level of education, proficiency of foreign languages and international orientation out of seven demographic characteristics significantly distinguish owner/managers in high Internet use firms from their counterparts in low Internet use firms.

Although insignificant, there are a higher percentage of owner/managers who have responsibility for exporting in firms with a high level of Internet use. The situation was the same for sales and marketing responsibilities

*Cross Tabulation* reveals that in terms of work experience, high Internet use firms have a higher ratio of owner/managers with less than 10 years experience. Although insignificant, owner/managers' age seems to have a neutral effect on Internet use as firms in both clusters have the same percentage 44.5% of owner/managers who are 40 years of age or less. As for gender, most of the owner/managers in both clusters were male with 80% plus. There were a slightly higher percentage of female managers in low Internet use firms.

With respect to level of education, owner/managers in high Internet use firms constantly report higher percentages on all levels of education except for 'no formal qualification, professional qualification, and apprenticeship', which to a certain extent confirms previous result that states that high Internet use firms have a higher

percentage of owner/managers with less than 10 years experience, the assumption is those with higher education start work later, hence their work experience should be less compared with those who left school with no qualifications or 'O' grade. Despite the fact that possessing a degree, postgraduate degree is significant at  $p \leq 0.1$ , it comes second among owner/managers in high Internet use firms and fourth among their counterparts, suggesting that level of education does play a key role in using the Internet.

Some foreign languages namely French and Russian significantly differentiate owner/managers in high versus low Internet use firms at  $p \leq 0.1$ . Respondents in high Internet use firms have higher percentages on all foreign languages except for German.

In terms of owner/managers international orientation, high Internet use firms have a higher percentage of owner/managers who have traveled, lived, worked abroad and have at least one overseas business trip in the last 12 months. However, they have a lower percentage of owner/managers with ethnic ties who were born outside the UK.

#### **7/5/4 Firm and Industry Characteristics of High Internet Use Firms**

Given the non-metric nature of the independent variables, *Chi square* test and/or *Fisher's Exact* test is used to look at any existing differences between high and low Internet use firms with respect to firm and industry characteristics (P4). Firm characteristics include firm age measured by number of years the firm has been in the business, firm size measured by number of employees, firm independency (i.e. independently owned or a subsidiary) and firm ownership (i.e. UK owned or non-UK owned). Industry characteristics are industry sector (i.e. food and beverages, biotechnology and instrumentation, computers and office machinery, textiles and clothing and fur), market served (i.e. consumer markets, business to business markets or a mixture of both), and technology intensity (i.e. high, medium and low).

Although the *Chi-square* test cannot support the direction of causality among variables, it can confirm the existence of a relationship between the clusters. Table

7.10 shows that only firm size significantly differentiates between high and low Internet use firms.

**Table (7.10) Firm and Industry Characteristics by Firms Level of Internet Use**

Variables	Chi-square and/or Fisher exact value	df	Sig.
<b>Firm Characteristics</b>			
• Firm age	70.2	1	.53
• Firm size	64.2 <sup>a</sup>	---	.08*
• Firm independency	.34	1	.56
• Firm ownership	1	1	.30
<b>Industry Characteristics</b>			
• Industry sector	6.96 <sup>a</sup>	---	.11
• Market served	3.50	2	.17
• Technology intensity	3.07	2	.21

<sup>a</sup> Fisher's exact test was calculated when the expected frequencies were less than 5.

\*  $p \leq 0.10$

#### **7/5/4/1 Weak Support for Proposition 4**

The cross tabulation indicates that with respect to firm size, 39.3% of high Internet use firms are small with less than fifty employees compared to 27.1% in low Internet use firms, indicating an inverse relationship between number of employees and Internet use, suggesting that smallness is not a deterrent of Internet use.

There is no real evidence to suggest that any of the remaining firm characteristics namely age, independency and ownership is significant discriminators between high Internet use firms and their counterparts.

However, in terms of firm age, over two thirds of exporting firms in both clusters (high and low Internet use) were founded ten or more years ago, signifying that firm's age has a neutral effect on Internet use. Nevertheless, the *Pearson* correlation reveals a significant negative association between the use of the Internet and firm age ( $r = - 0.22$  at  $p = 0.01$ ), implying that younger firms are more likely to use the Internet.



The 'biotechnology and instrumentation' sector dominates the cluster of firms with a high level of Internet use, whereas firms in 'textiles and clothing and fur' are the most numerous in the low level of Internet use cluster. Also, 'food and beverages' is second for both clusters. Consequently, it was understandable that technology intensity in high Internet use firms covers high and medium technology, whereas low Internet use firms are medium to low technology. Despite being insignificant, the former results highlight an existing association between industry sector, technology intensity and the use of the Internet. Furthermore, with respect to market served the findings show that 'Business-2-Business' is the leading market in both clusters.

#### **7/5/5 Export Involvement and Export Performance Indicators of High Internet Use Firms**

An independent samples *t*-test analysis was undertaken to explore any differences between high and low Internet use firms with regard to export involvement measured by number of country/markets entered regularly, number of years in exporting and the export ratio for the financial year 2000/2001, and export performance measured by sales growth, profitability, strategic objectives achievement, perceived self success, and competitors' perceptions of the firm's export success (P5).

Inspection of the means (see Table 7.11) reveals significant differences between high Internet use firms and their counterparts with respect to *export ratio, perceived self success, and the competitors' perceptions of the firm's export success* in favour of high Internet use firms.

**Table (7.11) Export Involvement and Export Performance by Firms Level of Internet Use**

Variables	Mean value of low Internet use firms	Mean value of high Internet use firms	<i>t</i> value	2-tailed <i>p</i>
<b>Export involvement</b>				
• Number of foreign country/markets	18.6	23.7	-1.5	.12
• Export experience (No. of years)	33.6	24.0	1.5	.13
• Export ratio for the financial year (2000/2001)	35.3	48.8	-2.6	.01***
<b>Export measures</b>				
• Sales growth	2.2	2.3	-.3	.76
• Profitability	2.4	2.6	1.4	.15
• Strategic objectives achievement	150	147.7	.3	.72
• Success1	6.3	7.3	-2.7	.00***
• Success2	5.9	6.8	-2.4	.01***

\*\*\*  $p \leq 0.01$

#### **7/5/5/1 Partial Support for Proposition 5**

The result shows that the export ratio, self perception of success, and competitors' perceptions of the firm's success in export markets significantly differentiate between high and low Internet use firms. The t-test reveals a number of insignificant but interesting results, for instance, high Internet use firms outperform their counterparts with regard to the number of country/markets entered regularly, sales growth and profitability, but an inverse relationship between number of country/markets entered regularly and export experience has occurred. Relative to their counterparts high Internet use firms were less experienced in exporting, yet they entered more foreign countries. This result implies that using the Internet contributes to the export involvement of the firm and does not hinder international expansion. In fact a high level of Internet use may be a reason behind accelerating these firms internationalisation.

## **7/6 ANALYSIS OF ENTREPRENEURIAL ORIENTATION BEHAVIOUR AMONG EXPORTING FIRMS**

### **7/6/1 Owner/Managers Entrepreneurial Orientation and Exporting Firms**

Another aim of the current research is to classify the owner/managers of UK based SMEs according to their entrepreneurial orientation behaviour (P6).

In the literature entrepreneurial orientation behaviour is perceived as a multi-dimensional construct which includes 'innovativeness, proactiveness and risk taking' (e.g. Covin and Slevin, 1991). This construct has been operationalised, pre-tested and validated as a set of nine statements where every three statements measure one dimension on a seven-point *Likert* scale (see appendix 1, question 4).

The statistical analysis used here is similar to that used in section (7/5/1) while differentiating responding firms according to their level of Internet use. Cluster analysis with 'Ward' method technique was used to differentiate between high and low owner/managers entrepreneurial orientation behaviour. Two distinct clusters of owner/managers entrepreneurial orientation behaviour were identified, where cluster 1 refers to high entrepreneurial orientation (EO) owner/managers, while cluster 2 identifies those with low entrepreneurial orientation (EO).

The results also show that high entrepreneurial orientation owner/managers significantly outperform their counterparts on all nine entrepreneurial orientation statements (see appendix 5). To conclude, 'UK based SMEs owner/managers can be clustered according to their entrepreneurial orientation behaviour to high versus low'.

### **7/6/2 Personality Traits and Perceptions of Exporting of High Entrepreneurial Orientation Owner/Managers**

To further validate the result of the *Cluster analysis*, both clusters are examined with respect to: 1) owner/managers personality traits namely, need for achievement, internal and external locus of control and 2) owner/managers perceptions towards export complexity, risks, profits, costs and growth (P6a). *Stepwise Discriminant Analysis* was used to profile high and low entrepreneurial orientation owner/managers according to their personality traits and perceptions of exporting.

Out of the eight variables that describe owner/managers personality traits and perceptions of exporting only three successfully enter the model namely, *need for achievement, perceived export growth, and perceived export complexity* according to their discriminant loadings (see appendix 6). The remaining five variables did not significantly distinguish between the two clusters. The discriminant function is highly significant with a canonical correlation 0.30 and  $p = 0.002$ . To sum up, high entrepreneurial orientation owner/managers have a high need for achievement, high perceptions of export growth, and low perceptions of the complexity of export (see Table 7.12).

**Table (7.12) Comparison of Group Means of High and Low EO Owner/Managers**

Variables/Factors	High EO owner/managers	Low EO owner/managers	Sig.
Need for achievement	5.5	5.2	.02**
Internal locus of control	4.2	4.3	.52
External locus of control	2.9	3.3	.11
Perceived export complexity	2.8	2.9	.02**
Perceived export risks	3.8	3.8	.82
Perceived export profits	3	2.9	.71
Perceived export costs	4	3.8	.12
Perceived export growth	4.1	3.6	.01***

\*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$

### **7/6/3 Social Psychological Characteristics of High Entrepreneurial Orientation Owner/Managers**

High entrepreneurial orientation owner/managers are profiled with respect to social psychological characteristics which are work responsibility, work experience, age, gender, level of education, foreign language proficiency, and international orientation (P6b). *Chi-square* test is used here as all of the independent variables are measured on nominal scales.

Table 7.13 shows that a low level of education (*no formal qualification*) is a characteristic significantly associated with low EO owner/managers, and international orientation (*travel abroad*) significantly characterises high EO owner/managers. Clearly, none of the remaining characteristics significantly distinguish between both clusters under investigation.

**Table (7.13) Social Psychological Characteristics by Owner/Managers EO Behaviour**

Variables	Chi-square and/or Fisher exact value	df	Sig.
<b>Work responsibility</b>			
• Marketing	.01	1	.94
• Sales	.68	1	.40
• Production	.54	1	.45
• Export	.05	1	.81
• Others	.56	1	.45
<b>Work experience</b>	1.68 <sup>a</sup>		.90
<b>Age</b>	6.94 <sup>a</sup>		.13
<b>Gender</b>	1.04	1	.30
<b>Level of education</b>			
• 'O' grade/Standard grade	.34	1	.55
• 'A level/Highers/SYS	.49	1	.48
• HNC/HND	.26	1	.6
• No formal qualification	7.96	1	.01***
• Degree/Postgraduate degree	1.26	1	.26
• Professional qualification	1.37	1	.24
• Apprenticeship	.34	1	.55
<b>Foreign language proficiency</b>			
• French	4.51 <sup>a</sup>		.34
• Italian	1.79 <sup>a</sup>		.81
• German	3.87 <sup>a</sup>		.42
• Japanese	1.65 <sup>a</sup>	1	.56
• Russian	2.45		.11
• Spanish	6.16 <sup>a</sup>		.16
• Others (1)	6.03 <sup>a</sup>		.18
• Others (2)	1.64 <sup>a</sup>		.79
<b>International orientation</b>			
• Born abroad	.25	1	.87
• Travel abroad	3.52	1	.06*
• Live abroad	.07	1	.78
• Work abroad	.18	1	.66
• No. of overseas business trips	13.03 <sup>a</sup>		.99

<sup>a</sup> Fisher's exact test was calculated when the expected frequencies were less than 5.

\*  $p \leq 0.10$ , \*\*\*  $p \leq 0.01$

### **7/6/3/1 Partial Support for Propositions 6a and 6b**

There is only partial support evident in Table 7.12 for research proposition 6a which states that relative to their counterparts, firms with high EO owner/managers are likely to differ with respect to personality traits and exporting perceptions. Evidently, only need for achievement, perceived export growth and complexity significantly distinguish between both clusters.

Although insignificant, the result also shows that relative to their counterparts, high entrepreneurial orientation owner/managers have a higher perceptions of profits associated with exporting. Also, high and low EO owner/managers have similar perceptions of export risks. Surprisingly, low entrepreneurial orientation owner/managers recognise exporting as a low cost experience relative to those with high entrepreneurial orientation behaviour.

With respect to internal and external locus of control, the result shows that relative to their counterparts, high entrepreneurial orientation owner/managers have a low level of internal and external locus of control, implying that locus of control does not explain owner/managers entrepreneurial orientation behaviour.

Although the result in Table 7.13 show only partial support for research proposition 6b, where level of education and travel abroad significantly distinguish between high and low entrepreneurial orientation owner/managers. However, the *cross tabulation* result is interesting with respect to the remaining variables as follows.

High entrepreneurial orientation owner/managers major work responsibility is sales, whereas exporting dominates low EO owner/managers work responsibility. Further, looking at owner/managers age and work experience, high entrepreneurial orientation owner/managers are more likely to be above 40 years, and have less than 10 years work experience in the same industry.

As far as gender is concerned, both clusters have a high proportion of male owner/managers although the percentage is higher in firms with high EO owner/managers. Conversely, firms with low EO owner/managers have a higher percentage of female owner/managers.

Moreover, high and low entrepreneurial orientation owner/managers have a moderate level of education, implying that education is not a key factor associated with entrepreneurial behaviour. Further, owner/managers with a high entrepreneurial orientation are more proficient in foreign languages.

Finally, amongst owner/managers with a high entrepreneurial orientation there are a lower percentage of managers with ethnic links. While on the other hand, they have a higher international orientation with respect to living and working abroad, and number of overseas business trips, though insignificant, this may indicate that it is more likely to associate high entrepreneurial orientation owner/managers with international orientation.

#### **7/6/4 Level of Internet Commitment of High Entrepreneurial Orientation Owner/Managers**

Another objective of the research is to examine whether there are any differences between owner/managers with a high/low entrepreneurial orientation with respect to level of Internet commitment (P7). As mentioned earlier (see section 7/5/1/1), the Internet commitment construct is operationalised using nine factors extracted from applying *Factor analysis*, together with one question that measures experience with Internet technologies (e.g. email, WWW).

**Table (7.14) Level of Internet Commitment by Owner/Managers EO Behaviour**

<b>Variables/Factors</b>	<b>Mean value of high EO owner/managers</b>	<b>Mean value of low EO owner/managers</b>	<b>t value</b>	<b>2-tailed p</b>
<b>Internet technologies</b>				
• Email	4.4	4.7	-.56	.57
• World Wide Web	4.1	4.4	-.68	.49
• Corporate home page	3.7	4.5	-1	.32
• Corporate Web server	4.1	4.5	-.48	.63
• Intranet	3.6	4.1	-.57	.56
• Extranet	3.4	5.9	-.89	.40
• Internet telephony	4.2	22.1	-4.31	.01***
• Internet videoconferencing	3.6	1.8	1.13	.29
<b>Internet training</b>	2.2	1.7	2.3	.01***
<b>Interconnectivity</b>	31.4	21.4	2.1	.03**
<b>Internet information</b>	2.8	2.4	1.9	.05**
<b>Internet communication</b>	3	2.7	1.9	.05**
<b>Perceived external Internet benefits</b>	3.4	3.0	2.3	.02**
<b>Perceived internal Internet benefits</b>	2.9	2.6	2.3	.01***
<b>Web effectiveness</b>	2.6	2.2	2.3	.02**
<b>Transactions on the Web</b>	1.8	1.9	-0.56	.57
<b>Promotion on the Web</b>	3.9	3.4	2.3	.01***

\*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$

In Table 7.14 there are significant differences between high entrepreneurial orientation owner/managers and their counterparts at  $p \leq 0.05$  with respect to *experience with Internet technologies (Internet telephony), Internet training, interconnectivity, Internet information, Internet communication, perceived external and internal Internet benefits, Web effectiveness and promotion on the Web*. Remarkably, in all but two of the proposed factors high entrepreneurial orientation owner/managers have higher means than their counterparts’.



### 7/6/4/1 Partial Support for Proposition 7

Proposition 7 is largely supported. Significant differences do exist between high and low entrepreneurial orientation owner/managers with respect to the overall level of Internet commitment. More specifically high entrepreneurial orientation owner/managers report high levels of Internet commitment on eight out of nine factors examined. This result is anticipated and consistent with Lymer et al. (1998) and Poon and Swatman (1999) who argue that entrepreneurial behaviour was behind the introduction of the Internet among UK and Australia SMEs respectively.

### 7/6/5 Firm and Industry Characteristics of High Entrepreneurial Orientation Owner/Managers

Chi-square test was undertaken to explore the relationship between high and low entrepreneurial orientation owner/managers and their firms and industry characteristics (P8).

**Table (7.15) Firm and Industry Characteristics by Owner/Managers EO Behaviour**

Variables	Chi-square and/or Fisher exact value	df	Sig.
<b>Firm Characteristics</b>			
• Firm age	78.86 <sup>a</sup>		.05**
• Firm size	59.09 <sup>a</sup>		.22
• Firm independency	.01	1	.89
• Firm ownership	.18	1	.66
<b>Industry Characteristics</b>			
• Industry sector	4.59 <sup>a</sup>		.31
• Market served	1.21	2	.54
• Technology intensity	.38	2	.82

<sup>a</sup> Fisher's exact test was calculated when the expected frequencies were less than 5.

\*\*  $p \leq 0.05$

The analysis shows that only *firm age* significantly differentiates between high and low entrepreneurial orientation owner/managers at the 95% confidence level, alpha = 0.05 (see Table 7.15), while no associations are established between any of the remaining variables namely firm size, firm independency, firm ownership, and

industry characteristics, and high and low entrepreneurial orientation owner/managers.

#### **7/6/5/1 Weak Support for Proposition 8**

Evidently firm age is the only firm characteristic that significantly distinguishes between high entrepreneurial orientation owner/managers and their counterparts. *Chi-square* analysis shows that relative to their counterparts, and contrary to the literature, high EO owner/managers are more likely to be found in well established firms with more than 10 years old. Only 11.1% of the firms in the sample were less than ten years old.

Although insignificant, in respect to firm size measured by number of full time employees, the results indicate that there is a higher probability of finding high entrepreneurial orientation owner/managers working in medium size firms with more than 50 employees rather than in smaller firms.

The result also shows that within every cluster there were a high percentage of owner/managers in independent firms as well as in UK owned firms, implying that besides being insignificant, both characteristics seem to have indeterminate association with owner/managers entrepreneurial orientation behaviour.

Also industry sector, market served, and technology intensity did not significantly differentiate high and low EO owner/managers. However, the cross tabulation shows that high and low EO owner/managers are concentrating on serving Business-2-Business markets. There is an approximately equal percentage of high and low EO owner/managers across industry sectors and across levels of technology intensity, except for the computers and office machinery sector, which has a lower percentage of owner/managers. It appears that there is no association in any way between industry sectors, technology intensity and owner/managers entrepreneurial orientation behaviour, also contrary to the literature that associate entrepreneurship with knowledge intensive industries, the results indicate that high and low EO owner/managers are distributed among the industry sectors investigated (i.e. food

and beverages, biotechnology, computers and office machinery and textiles, clothing and fur) and their corresponding technology level.

### 7/6/6 Export Involvement and Export Performance Indicators of High Entrepreneurial Orientation Owner/Managers

Assuming that there will be some differences between high entrepreneurial owner/managers and their counterparts with respect to export involvement and export performance indicators, independent samples *t*-test analysis is applied (P9).

**Table (7.16) Export Involvement and Export Performance by Owner/Managers EO Behaviour**

Variables	Mean value of high EO owner/managers	Mean value of low EO owner/managers	<i>t</i> value	2-tailed <i>p</i>
<b>Export involvement</b>				
• Number of foreign country/markets	21.7	22.2	-.18	.85
• Export experience (No. of years)	25.2	31.9	-1.19	.23
• Export ratio for the financial year (2000/2001)	42.2	45.5	-.62	.53
<b>Export measures</b>				
• Sales growth	2.4	2	2.2	.02*
• Profitability	2.5	2.5	-.42	.66
• Strategic objectives achievement	148.7	147.9	-.12	.90
• Success1	7	6.6	1.20	.23
• Success2	6.6	6.4	.43	.66

\*\*  $p \leq 0.05$

The result shows that only *sales growth* positively and significantly differentiates between both clusters in favour of high EO owner/managers (see Table 7.16).

### **7/6/6/1 Weak Support for Proposition 9**

The *t* test result gives very weak support for research proposition nine. Out of eight proposed indicators only one, 'sales growth', successfully distinguishes between high and low entrepreneurial orientation owner/managers.

Nevertheless, inspection of the means of the export performance indicators (see Table 7.16) suggests that sales growth, achievement of strategic objectives, perceived self success, and competitors' perceptions of the firm's export success could possibly be associated with high EO owner/managers, however these are insignificant except for sales growth.

Moreover, high EO owner/managers have lower means compared with their counterparts with respect to number of foreign country/markets, export experience, and export ratio, indicating that high EO owner/managers are less involved in export markets. This result confirms the main stream in entrepreneurship literature where entrepreneurs are described as moderate risk takers and sometimes risk averse.

### **7/7 STEPWISE REGRESSION ANALYSIS: BUILDING THE MODELS**

The following section is a mile stone for the current research, as it aims to examine the research model and its various causal relationships. Hence, stepwise regression analysis is employed and a number of models are built.

The explanatory variables are grouped in the same way as in the research model (see chapter 5): entrepreneurs' personality traits, social psychological characteristics and exporting perceptions, entrepreneurial orientation behaviour and level of Internet commitment. These groups are subject to *stepwise multiple regression* analysis that represents a method of selecting variables for inclusion in the regression model. It starts by selecting the best predictor of the dependent variable (e.g. sales growth, profitability). Further, independent variables are included in the model according to their incremental explanatory power which they can add to the regression model. It should be noted that the independent variables are added as long as their partial correlation coefficients are statistically significant at  $p \leq 0.05$ . Also, they may be

dropped if their predictive power drops to a non-significant level when another independent variable is added to the model (Hair et al., 1998).

A number of pertinent issues should be highlighted regarding the interpretation of the regression models:

- A significant model *F* indicates that the variable (s) in the model have good predictive ability.
- Variable (s) included in the model represent the best predictor (s) of the dependent variable (e.g. sales growth, profitability).
- *Multiple R* reflects the degree of association between the independent variable (s) that entered the model and the dependent variable.
- The *Coefficient of determination*  $R^2$  value indicates the percentage of total variation of dependent variable explained by the independent variable (s).
- The *Beta coefficient* (*b*) represents the amount of change in the dependent variable for a one-unit change in the independent variable.
- The *Partial t value* indicates whether or not there is significant linear relationship between each independent variable and the dependent one.

## **7/7/1 ENTREPRENEURSHIP APPROACHES AND EXPORT PERFORMANCE RELATIONSHIPS**

*Stepwise multiple regression* analysis is applied to predict SMEs export performance measured by sales growth in the last five years, profitability in the last five years, the weighted sum of strategic objectives achieved, perceived self success, and competitors' perceptions of the firm's export success, based on owner/managers personality traits - need for achievement, internal and external locus of control-, entrepreneurial orientation behaviour namely, innovativeness, proactiveness and risk taking, perceptions towards exporting experience specifically, perceived export risks, profits, costs, growth, and complexity, and finally, social psychological characteristics namely, work responsibility [marketing, sales, production, export, others], work experience measured by number of years working in the same industry, age, gender, level of education [no formal qualification, 'O'grade/ Standard grade, 'A' level/Highers/SYS, HNC/HND, degree/postgraduate degree, professional qualification, apprenticeship], foreign language proficiency [French, Italian, German,

Japanese, Russian, Spanish, others], and international orientation [born, travel, live and work abroad, number of overseas business trips made in the last 12 months].

**Table (7.17) Regression Analysis of Entrepreneurship Approaches and Export Performance Measures**

Independent X Dependent Y	Sales growth		Profitability		Strategic objectives achieved		Success1		Success2	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	
<b>Personality traits</b>										
Mean factor of nAch	.04	-.04	-.1	.09	.06					
Mean factor of ILC	.07	-.06	.01	.04	.07					
Mean factor of ELC	.04	.02	.01	-.06	-.06					
<b>EO behaviour</b>										
Innovativeness	.13	.04	.08	.09	.03					
Proactiveness	.04	-.05	<b>-6.47**</b>	.08	.03					
Risk taking	.07	-.01	-.03	-.01	-.04					
<b>Perceptions</b>										
Perceived export risks	.09	.12	-.01	-.05	-.12					
Perceived export profits	.01	-.01	-.06	<b>.4**</b>	.1					
Perceived export costs	.1	<b>-.14**</b>	-.1	.05	-.02					
Perceived export growth	<b>.35***</b>	.14	-.1	<b>.72***</b>	<b>.79***</b>					
Perceived export complexity	-.07	.09	.04	.07	.01					
<b>Work responsibility</b>										
Marketing	<b>.44*</b>	-.02	.01	.08	.02					
Sales	.08	.04	.06	.11	.06					
Production	-.06	-.13	-.01	-.05	-.03					
Exporting	.01	-.01	<b>-18.54**</b>	<b>.72**</b>	.1					
Others	-.04	.07	.00	-.02	.05					
<b>Work experience</b>										
Age	.02	-.09	.06	<b>-.03**</b>	-.05					
Gender	.01	.04	.03	-.07	-.01					
	.06	-.03	.07	.01	.06					
<b>Level of education</b>										
'O' grade/Standard grade	-.07	-.04	-.04	-.04	.03					
'A' level/Highers/SYS	-.02	.01	-.09	-.01	.06					

HNC/HND	-0.14	-0.06	0.08	-0.05	-0.08
No formal qualification	.11	.05	27**	-0.1	.06
Degree/postgraduate degree	.07	-0.01	.1	-0.02	.01
Professional qualification	-0.02	.07	-0.03	.06	.05
Apprenticeship	-0.04	-0.11	.1	-0.04	-0.1
<b>Foreign language proficiency</b>					
French	-0.01	.00	-0.08	.06	.01
Italian	.05	.06	.00	.03	.02
German	-0.01	.03	.05	.01	-0.08
Japanese	.02	.02	.03	.02	.04
Russian	-0.15	.08	.08	-0.02	.04
Spanish	-0.1	.01	-0.03	-0.06	-0.04
Others (1)	.05	-0.01	.08	-0.06	-0.06
Others (2)	.13	.03	-0.05	.11	-0.01
<b>International orientation</b>					
Born abroad	.01	-0.04	-0.09	.13	.14
Travel abroad	.02	.01	-0.02	.04	-0.03
Live abroad	-0.1	-0.15	-0.05	-0.00	-0.01
Work abroad	-0.12	-0.08	.05	.02	.06
No. of overseas business trips	.11	-0.03	-0.09	.06	-0.01
<b>Model indices</b>					
Multiple R	.36	.2	.34	.48	.37
R <sup>2</sup>	.13	.04	.12	.23	.14
F	7.97	5.13	5.71	10.58	21.67
p ≤	.001***	.03**	.001***	.000***	.000***
df	2	1	3	4	1

The entries in the table are beta coefficients values (b)

\*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$

nAch: need for achievement, ILC: internal locus of control, ELC: external locus of control, EO: entrepreneurial orientation.



Stepwise regression analysis has been used to examine the relationship between entrepreneurship approaches and UK based SMEs export performance (P10). Models 1 through 5 (see Table 7.17) show the regression results where personality traits, entrepreneurial orientation behaviour, export perceptions, and social psychological characteristics represent the independent variables (x), while export performance measures (e.g. sales growth, profitability) are the dependent ones (y).

Respondents were asked to indicate their firms' sales growth rates in the last five years of exporting activity on a scale ranging from (1-5% to 20+%), and profitability using three-point scale where 1 = loss, 2 = break-even and 3 = profit (see appendix 1, questions 26 and 27) (Cavusgil and Zou, 1994; and Styles, 1998). Because some firms were holding data on performance, the decision was taken to use the mean of sales growth and profitability in the last three years instead of five.

Following Cavusgil and Zou (1994), the dependent variable, strategic objectives achieved includes eight objectives (e.g. gain a foothold in the export market, respond to competitive pressure) for more details (see appendix 1, question 30), respondents were asked to distribute a 100 points according to the importance of the objectives the firm had, and further state which of the chosen objectives were achieved in the last five years of exporting. Consistent with Cavusgil and Zou (1994) and Styles (1998) a weighted sum of the owner/managers responses was computed and used in subsequent analyses.

Finally, respondents were asked to rate their firm's export success during the last five years of exporting, as well as their competitors' perceptions of their success on 10 point scale ranging from (1 = unsuccessful to 10 = successful) (see appendix 1, questions 28 and 29) (Cavusgil and Zou, 1994; and Styles, 1998).

All models are significant at  $p \leq 0.05$  or lower. Also, the models, with the exception of the profitability model (see Table 7.17), are considered good ones according to their  $R^2$  value, where the independent variables that entered the models explain a range of 12% up to 23% of the firms export performance. Further examination of t-values and 'multiple R' reveals that there is overwhelming statistical evidence indicating that all variables that entered the regression models are linearly associated

and moderately correlated with export performance indicators (e.g. sales growth, profitability).

The result indicates that owner/managers perceptions towards exporting experience are significant determinants of export performance. Models 1, 4 and 5 (see Table 7.17) show that owner/managers perceptions towards export growth are positively and significantly associated with export sales growth, self-perception of export success, and the competitors' perceptions of the firm's export success ( $p \leq 0.01$ ) respectively, implying that an increase in the owner/managers perceptions of export growth will result in the likelihood of an increase in export performance (e.g. sales growth) by 0.35, 0.72 and 0.79 respectively. Evidently, perceived export growth has more effect on the competitors' perceptions of the firm's export success than on the other two export performance measures.

Moreover, model 4 (see Table 7.17) shows that owner/managers perceived export profits have a positive and significant impact on perceived self-success, where an increase in the owner/managers perceptions of export profits will result in an increase in the firm perception of its export success by 0.40.

The result also highlights the negative association between owner/managers perceived export costs and profitability, where an increase in the owner/managers perceptions of export costs will result in the likelihood of a decrease of export profitability by 0.14. Such a result implies that owner/managers perceptions towards costs associated with exporting will slow down expansion in order to cut costs, resulting in the likelihood of a decrease of export profits. Overall, the profitability model (see Table 7.17) is weak, where owner/managers perceived export costs explain only 4% of the variation in profitability while the remaining 96% is largely unexplained.

The findings also show that owner/managers work responsibility as well as work experience are major antecedents of the firms export performance. The result reveals a positive and significant association between marketing as a work responsibility and sales growth. Meanwhile, the relationship between exporting as the owner/managers work responsibility and export performance is inconsistent and even controversial.

For instance, it has a huge negative impact on strategic objectives achieved, implying that working in exporting is not the key to gain a foothold in export market. The sales or marketing manager would achieve a better result, which may be due to their experience in the domestic market, or possibly to the adaptation of domestic marketing strategy, or perhaps to having a sales plan for the export market. Meanwhile, exporting as a work responsibility is positively correlated to perceived self success.

Work experience has a negative influence on perceived self success, implying that the longer the owner/managers have been working in the same industry, the greater the likelihood of a decrease in perceived self-success in export markets. Put differently, less experienced owner/managers are more likely to perceive themselves as successful in export markets.

The owner/managers level of education (i.e. no formal qualification) has a positive effect on the achievement of the strategic objectives, where an increase in the owner/managers level of education will lead to an increase in the strategic objectives achieved by 27% (see Table 7.17). The empirical evidence also shows that owner/managers who behave proactively are more likely to affect the firms' strategic objectives achievement negatively by 6.47.

Finally, the findings stress that personality traits, innovativeness, risk taking, perceived export risks and complexity, work responsibility namely sales, production and others, age, gender, level of education with the exception of no formal qualification, foreign language proficiency, and international orientation have no bearing on firms' export performance.

#### **7/7/2 LEVEL OF INTERNET COMMITMENT AND EXPORT PERFORMANCE RELATIONSHIPS**

Another aim of the current research and certainly the most important one is to investigate the relationship between UK based SMEs 'level of Internet commitment' and export performance (P11). The nine factors extracted from *factor analysis* that represent 'level of Internet commitment' are used hereafter in the regression analysis (see Table 7.3). While the relationship between 'experience with the Internet

technologies' and export performance indicators are examined using *Pearson Correlation*.

### **7/7/2/1 Experience with Internet Technologies and Export Performance Relationship**

*Pearson* Correlation was conducted to investigate any existing association between key Internet technologies (e.g. email, WWW) and export performance indicators (e.g. sales growth, profitability) (see Table 7.18).

The result shows that the number of years the firm has been using the email system is positively correlated with export sales growth. This result supports points raised by the owner/managers in a qualitative question where they describe how the Internet influences an export arrangement. There was agreement among the owner/managers that using the Internet has increased the number of enquiries the firms is receiving and most of these eventually turned into orders. The findings suggest a positive correlation between the use of the Intranet and strategic objectives achieved. However, the Intranet is principally used to contact employees inside the firm, while the firms strategic objectives are largely international by nature, hence, it seems that the use of the Intranet influences the achievement of such objectives indirectly for instance, by making the firm more efficient, which in itself indirectly help to pursue international activities.

The relationship was strong between the use of each of the Internet technologies (e.g. email, WWW) and the rest of the technologies, except for Internet telephony and Internet videoconferencing. This indicates that the bond between the different technologies is quite robust, and using one particular technology (e.g. email, WWW) will lead to the use of others. However, the relationship between the Internet telephony and Internet videoconferencing appears to be somehow different, perhaps because it is a slightly higher level of technology and needs special arrangements, particularly with respect to Internet videoconferencing. Further, it should not be forgotten that the primary focus of this research is UK based SMEs, where it is assumed that their size may not require the wide spread use of such high

technologies. This is confirmed by the perfect positive correlation between Internet telephony and Internet videoconferencing (see Table 7.18).

Table (7.18) Experience with Internet Technologies and Export Performance (Correlation)

Sales growth	1																			
Profitability	0.28***	1																		
SOA	-0.04	-0.04	1																	
Success 1	0.33***	0.40***	-0.33***	1																
Success 2	0.25***	0.29***	-0.26***	0.71***	1															
Email	0.20**	0.12	0.10	0.03	0.10	1														
WWW	0.13	0.08	0.07	0.03	0.10	0.85***	1													
CHP	0.08	0.16	0.04	0.02	0.17	0.81***	0.88***	1												
CWS	0.16	0.17	0.14	0.05	0.08	0.85***	0.96***	0.97***	1											
Intranet	0.07	-0.04	0.27**	-0.19	-0.06	0.73***	0.75***	0.69***	0.76***	1										
Extranet	0.15	0.31	0.30	-0.01	0.20	0.88***	0.93***	0.94***	0.95***	0.98***	1									
Internet Telephony	0.49	0.35	-0.11	-0.75	-0.30	-0.04	0.25	0.15	0.78	0.54	0.98	1								
Internet Video Conferencing	0.54	0.18	-0.54	0.21	-0.32	0.35	0.36	0.35	0.38	0.80	0.80	1.00***	1							
*** $p \leq 0.01$																				
** $p \leq 0.05$																				

SOA: Strategic objectives achievement.

Success 1: Perceived self success.

Success 2: Competitors' perceptions of the firm's export success.

WWW: World Wide Web.

CHP: Corporate Home Page.

CWS: Corporate Web Server.

It should be noted that out of the total sample (n = 158) only 2 (1.3%) did not have access to the Internet. Of the remaining 156, 67 (42.4%) have described an export arrangement that has been affected by the use of the Internet, while 89 (56.3%) did not.

The following are the issues highlighted by the respondents while describing an export arrangement that has been affected by the use of the Internet.

- The email system is booming internationally, it is replacing the fax. As a communication tool, it is cheap, quick and very effective. Further, it provides regular contact during and after working hours with overseas customers, partners, and distributors despite time zone differences.
- The use of the Internet facilitates getting new customers with new orders, as one respondent mentioned that 'they conduct a German order totally on the Internet until the delivery stage without seeing each other', a second respondent reveals that 'they got one American customer in one year, now that customer accounts for 25% of the firm's sales'. The use of the Internet also facilitates dealing with potential overseas customers in Australia as stated by a third respondent. It eases agreement according to a fourth one who said that 'they set up licensing agreement with Chinese company', and finally, it increases the enquiries received in general, and reduces the time needed to respond particularly to export enquiries rather than relying on postal system.
- Moreover, the use of the Internet helps some firms penetrate foreign markets i.e. Malaysian and Asian markets, identifying marketing opportunity in a Scandinavian country, sales to the Far East, sales to new foreign countries without paying a sales visit to that country, where all visits and demonstrations were arranged via the Internet, exporting products to Dubai, and provision of outdoor golf kiosks to Holland.
- Speeding up the sales process, customs clearance, bank paper work, hence cutting down the overheads, consequently, the customer satisfaction is much

higher. The Internet facilitates tracking of shipments and tracing any payment stoppages, moreover, accepting online transactions via master and visa cards has increased trade.

- Furthermore, the Internet helps firms to recruit new distributors and meet potential ones, as one respondent says that 'potential distributors contact us through our Web site from markets not previously served'. Further, it helps firms to find and monitor other distributors' activities that are available on the Internet and helps to establish a local distributor.
- The use of the Extranet allows the firm's agents to know about the product upgrades so that they can close sales. Provide the customers with an online catalogue and/or technical manuals, also up-to-date information with respect to product customisation, and sometimes the firm Web site is supported with temporary demonstration of the product (s).

Despite the fact that *Pearson* correlation analysis did not reveal much regarding the association between the use of the Internet technologies and firms' export performance, however, on the other hand, owner/managers comments filled that gap and highlighted different contributions as a consequence of the use of the different Internet technologies while conducting overseas business that could be summarised as follows: regular contact with customers, suppliers etc, receiving of and responding to enquiries, receiving unsolicited orders, reducing the overheads, penetrating foreign markets, locating distributors, and increasing sales.

Clearly, this reveals that using Internet technologies will definitely increase the firms' export sales, which in turn will result in an increase in perceived self success, based on the positive correlation between export sales and perceived self-success (see Table 7.18). Moreover, the *Pearson* correlation indicates that perceived self success has a good positive correlation with export profitability, and is strongly correlated to competitors' perceptions of the firm's export success (Table 7.18). Such a result implies that an increase in perceived self success will result in the likelihood of an increase in both export profitability, and competitors' perceptions of the firm's



export success. Despite the lack of statistical evidence, the qualitative results above give partial support to research proposition (P11).

The following section illustrates the results of the stepwise regression analysis used to examine the impact of 'level of Internet commitment' on UK based SMEs export performance.

### **7/7/2/2 Level of Internet Commitment and Export Performance Relationships**

Stepwise Regression analysis is applied to test how 'level of Internet commitment' influences UK based SMEs export performance. Models 1 through 4 in Table 7.19 display the results, where 1- Internet resource commitment factors, 2- level of Internet use factors, 3- perceived Internet benefits factors and 4- Web function factors represent the independent variables (x), while export performance indicators (e.g. sales growth) are the dependent ones (y).

All models are significant at  $p \leq 0.05$  or lower (see Table 7.19). Models 1 and 2 (sales growth and strategic objectives achieved) are considered weak models according to their  $R^2$  value, where 'promotion on the Web' explains only 5% of the variation in sales growth and strategic objectives achieved respectively, while the rest 95%, remain largely unknown. According to the same parameter - $R^2$ - models 3 and 4 (perceived self-success and competitors' perceptions of the firm's export success) are stronger. The result reveals that 13% of the variation in the firm's perceived self success is largely due to perceived external Internet benefits, and the three predictors that entered the regression model 4 (see Table 7.19) accounted for 16% of the variation in competitors' perceptions of the firm's export success. In addition t-values indicate that all factors entered the regression models (i.e. interconnectivity, Internet information, perceived external Internet benefits and promotion on the Web) are linearly correlated to the dependent variables (i.e. sales growth, strategic objectives achieved, self-perception of success and competitors' perceptions of the firm's export success).

Models 1 and 2 in Table 7.19 show that 'promotion on the Web' has a positive significant association with export sales growth ( $p \leq 0.05$ ), while it has a negative significant correlation with 'strategic objectives achieved ( $p \leq 0.05$ ) respectively.

The result indicates that an increase in the use of the Web as a promotional tool is more likely to result in an increase in the firm's export sales by 0.22. This result is no surprise as the more the firm is presenting, publicising and promoting itself, as well as its range of products on the WWW, the more likely it will receive unsolicited orders or enquiries, that ultimately turn into future sales.

The result indicates a negative association between using the Web as a promotional tool and achieving the firms' strategic objectives (see model 2, Table 7.19), where an increase in the use of the Web as a promotional tool will result in a decrease in the firms' strategic objectives achieved by 7.46. This result is unlikely to happen under normal circumstances, where the firm promotes itself using traditional means as well as in the cyberspace, hence increasing the awareness of its products, improving market share and responding to competitive pressure.

Models 3 and 4 (see Table 7.19) show the effect of 'level of Internet commitment' factors in relation to the firms' perception of export success and the competitors' perceptions of the firm's export success. The models show that 'perceived external Internet benefits' is significantly and positively associated with both measures of success ( $p \leq 0.01$ ). This implies that the more the use of the Internet contributes to the firm's overall image, attracting new customers, generating international awareness of the business and penetrating unfamiliar foreign markets, the more likely the overall self-perception of export success as well as the competitors' perceptions of the firm's export success will escalate.

Model 4 also shows that both interconnectivity and Internet information are significantly associated with competitors' perceptions of the firm's export success ( $p \leq 0.05$ ). Although, the effect of interconnectivity on export success is negative, yet it is very minimal -0.01, in addition and unexpectedly, Internet information has a significant negative impact on competitors' perceptions of the firm's export success, where an increase in using the Internet as an information source will decrease the

dependent variable by 0.57. This negative association is quite puzzling and does not really say much as it raises doubts as to why the firms' competitors would perceive them as less successful in international markets when using the Internet to identify potential foreign customers, potential business partners and foreign distributors.

Finally, the empirical evidence shows that Internet training, Internet communication, perceived internal Internet benefits, Web effectiveness and transactions on the Web have no effect on UK based SMEs export performance.

**Table (7.19) Regression Analysis of Level of Internet Commitment and Export Performance Measures**

Independent X Dependent Y	Sales growth	Strategic objectives Achievement	Success 1	Success 2
	Model 1	Model 2	Model 3	Model 4
<b>Internet resource commitment</b>				
Interconnectivity	.01	.04	.16	-.01**
Internet training	.02	-.01	-.06	-.00
<b>Internet use</b>				
Internet information	-.13	.02	-.10	-.56**
Internet communication	.04	-.05	.12	.11
<b>Perceived Internet benefits</b>				
Perceived external Internet benefits	.05	.00	.93***	1.29***
Perceived internal Internet benefits	.05	-.12	-.03	.04
<b>Web function</b>				
Web effectiveness	.07	.03	.02	.01
Transactions on the Web	.01	-.07	.04	.11
Promotion on the Web	.22**	-7.46***	.06	.12
<b>Model indices</b>				
Multiple R	.21	.23	.37	.4
R <sup>2</sup>	.05	.05	.13	.16
F	4.57	6.28	19.59	7.31
p ≤	.04**	.02**	.000***	.000***
df	1	1	1	3
The entries in the table are beta coefficients values (b)				
** p ≤ 0.05, *** p ≤ 0.01				

### **7/7/3 ENTREPRENEURSHIP APPROACHES AND LEVEL OF INTERNET COMMITMENT RELATIONSHIPS**

The final aim of the current research is to examine the effect of entrepreneurship approaches (the traits approach, the social psychological approach and the behavioural approach) on UK based SMEs level of Internet commitment. It should be noted that multi-dimensional constructs were developed in order to measure the level of Internet commitment – except for experience with the Internet technologies - and that *factor analysis* was used. Nine factors were extracted and used in the regression analysis (see Table 7.3). To apply the regression procedure, the level of Internet commitment variables/factors were selected as the dependent variables (y) (see section 7/7/2), to be predicted by independent variables (x) representing owner/managers personality traits, entrepreneurial orientation behaviour, perceptions towards export experience, and social psychological characteristics mentioned earlier in the chapter (see section 7/7/1).

Table 7.20 illustrates the regression analysis result followed by a discussion of the models.

**Table (7.20) Regression Analysis of Entrepreneurship Approaches and Level of Internet Commitment**

Independent X	Ex. with email		Ex. with WWW		Ex. with CHP		Ex. with CWS		Ex. with Intranet		Ex. with Extranet		Internet training		Inter-connectivity		Internet Information		Internet Communication		External Internet benefits		Internal Internet benefits		Web Effectiveness		Transactions on the Web		Promotion on the Web	
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)	Model (12)	Model (13)	Model (14)	Model (15)															
<b>Dependent Y</b>																														
<b>Personality traits</b>																														
Mean factor of nAch	-06	-00	-08	-02	-11	.07	-02	-02	.01	.09	.15	.11	.06	-04	.09	.01	.06	.14***	.01	.11	.06	.14***	.01	.06	.06	-04	.09	.09		
Mean factor of ILC	-13	-10	-07	-15	-17	.13	-11	-11	-09	-03	.04	.04	.14	-03	-01	-07	.14	-01	.04	.04	.04	-07	-07	.14	-03	-01	-01	-01		
Mean factor of ELC	.01	-00	-03	-02	-12	-23	.13	.04	.04	-06	-14	-12	.02	-06	-05	-09	.02	-09	-09	-12	-12	-09	-09	.02	-03	-05	-05	-05		
<b>EO behaviour</b>																														
Innovativeness	-09	-10	-12	-11	-77**	-14	.22***	4.55**	.13**	.15	.06	.14***	.24***	-28**	-01	.14***	.24***	.06	.14***	.06	.14***	.14***	.06	.14***	.24***	-28**	-01	-01	-01	
Proactiveness	-07	-08	-07	-20	-11	-20	.10	.06	.05	.03	.21***	.21***	.14	.46***	.24***	.01	.14	.03	.03	.03	.03	-02	.07	.07	.14	.46***	.24***	.24***	.24***	
Risk taking	.03	.02	-05	.02	.01	-10	.06	-01	-03	.03	.03	-02	.07	.02	-06	.07	-15	.07	.07	.07	-02	.07	.07	.07	.02	.02	-06	-06	-06	
<b>Perceptions</b>																														
Perceived export risks	-14	-08	-04	-07	-06	-22	.01	-06	.01	.01	-06	-06	-06	-06	-06	-06	-06	-06	-06	-06	-06	-06	-06	-06	-06	.03	.03	-07	-07	
Perceived export profits	-03	-06	-03	-13	-06	-18	-10	.07	.04	.04	.01	.01	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	-04	-04	.00	.00	
Perceived export costs	-03	.05	-01	.13	.19	.01	-12	-04	-01	-01	-13	-20***	-05	-02	-02	-05	-10	-10	-10	-10	-10	-10	-10	-10	.02	.02	-02	-02	-02	
Perceived export growth	.11	.01	.00	-04	-13	-15	.18**	6.36***	.20***	.30***	.30***	.25***	.09	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.16	.16	.22***	.22***	
Perceived export complexity	.01	.04	-02	.01	.10	.09	-09	-08	-12	.06	.06	.00	-06	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.72**	.72**	-10	-10	
<b>Work responsibility</b>																														
Marketing	.09	.14	.17	.14	.02	.15	-01	-11	.42***	.08	.08	.08	.11	.02	.10	.11	-01	.11	.11	.11	.08	.08	.11	.11	-01	.02	.10	.10	.10	.10
Sales	.11	.09	.10	.00	-01	-01	.43**	-14	.01	.10	.13	.13	.13	.07	.03	.13	.07	.13	.13	.13	.13	.13	.13	.13	.07	.03	.03	.03	.03	.03
Production	.03	-01	-05	-12	-16	-04	.06	.00	-06	.01	-09	-09	.11	.11	.12	.11	.11	.11	.11	.11	-09	-09	.11	.11	.11	.12	.12	.12	.12	.12
Exporting	.08	.11	.06	.10	.02	.01	-01	-11	.05	.09	.02	.02	-02	-02	.07	-02	-02	-02	-02	-02	.02	.02	-02	-02	-02	.07	.07	-07	-07	-07
Others	.03	-04	-08	-12	-14	-13	.01	-01	.02	.03	-02	-02	.06	.09	.12	.06	.09	.06	.06	.06	-02	-02	.06	.06	.09	.12	.12	.12	.12	.12

Independent X	Dependent Y														
	Ex. with email	Ex. with WWW	Ex. with CHP	Ex. with CWS	Ex. with Intranet	Ex. with Extranet	Internet training	Inter-connectivity	Internet Information	Internet Communication	External Internet benefits	Internal Internet benefits	Web Effectiveness	Transactions on the Web	Promotion on the Web
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)	Model (12)	Model (13)	Model (14)	Model (15)
Work experience															
Age	-09	.05	-.13	-.16	-.06	-.16	-.02	-.05	-.10	-.06	-.13	-.13	-.01	.03	-.11
Gender	-.08**	-.08**	-.11**	-.18	-.14	-.05	.06	-.09	-.09	-.04	-.02***	-.12	.00	.04	-.12
Level of education	.04	.06	.11	.05	-.06	.08	.04	.04	-.05	-.08	-.05	-.05	-.02	-.11	-.00
'O' grade/Standard grade	-.15	-.13	-.09	-.08	-.15	-.05	-.08	-.10	-.01	.37***	.04	-.02	-.11	-.06	.13
'A' level/Highers/SYS	-.01	-.01	.01	.10	.14	.07	.01	-.01	.05	.04	.05	-.01	-.05	-.01	.13
HNC/HND	-.00	.04	.14	.03	-.06	-.04	-.03	-.09	.07	-.00	-.04	.02	-.09	.01	.01
No formal qualification	.03	-.04	.01	-.02	-.04	-.03	-.05	-.02	-.01	-.04	.01	-.02	.05	.09	-.08
Degree/ostgraduate degree	.00	-.05	-.12	-.12	-.04	-.05	.02	.09	.00	.08	-.02	.03	.02	.07	.13
Professional qualification	.02	.00	-.04	-.12	-.10	-.05	.14	-.05	.05	.09	.04	-.02	-.00	-.02	.08
Apprenticeship	.08	.03	.14	.01	-.02	-.23	-.02	.15	.12	.00	.02	.09	.04	-.06	.15
Foreign language proficiency															
French	-.45**	-.07	-.08	-.18	-.15	.32	.02	.01	-.06	-.01	-.07	-.01	-.15	-.05	-.01
Italian	.03	-.02	-.02	-.06	-.08	-.02	.13	-.02	.24***	.14	.07	.01	.28***	-.02	.01
German	-.01	-.02	-.01	-.01	-.03	-.32	.04	.07	-.01	.02	.01	-.15***	.07	-.09	.01
Japanese	.07	.01	.11	-.13	-.04		.06	-.02	-.07	.03	.01	-.01	.01	.01	-.10
Russian	.06	-.01	-.02	-.12	-.11		.14	.07	.02	.08	.01	-.02	.14	.10	.05
Spanish	.03	.00	.01	.04	.21	.32	.09	.01	.02	.07	.02	-.05	-.02	-.03	.09
Others (1)	.11	.05	.06	.02	-.01	.09	.08	.13	-.07	.10	-.04	.02	-.10	-.12	-.01
Others (2)	.02	.00	-.02	.03	-.01	.02	.01	.09	.01	.07	.01	.06	.02	-.01	.07
International orientation															

Independent X	Dependent Y														
	Ex. with email	Ex. with WWW	Ex. with CHP	Ex. with CWS	Ex. with Intranet	Ex. with Extranet	Internet training	Inter-connectivity	Internet Information	Internet Communication	External Internet benefits	Internal Internet benefits	Web Effectiveness	Transactions on the Web	Promotion on the Web
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)	Model (12)	Model (13)	Model (14)	Model (15)
Born abroad	-.14	-.13	-.16	-.21	-.21	-7.96***	.00	-.06	.04	.03	.14	-.01	.03	.10	.04
Travel abroad	-.16	-.14	-.08	-1.91**	-.12	-.10	.11	.12	-.09	-.14	-.10	-.05	-.00	.12	-.04
Live abroad	-.03	-.10	-.10	-.08	-.09	-7.67***	.04	-.02	-.04	.10	-.02	-.07	-.13	-.07	-.10
Work abroad	.11	.00	-.01	.02	.08	4.87***	.08	.12	.03	.10	-.01	.42***	.02	-.02	.00
No. of overseas business trips	.06	.01	.04	.09	-.08	-.30	-.05	.01	.02	.07	-.02	.08	.12	-.04	.12
<b>Model indices</b>															
Multiple R	.25	.2	.21	.27	.28	.79	.37	.29	.44	.38	.48	.35	.40	.35	.36
R <sup>2</sup>	.06	.04	.05	.08	.08	.62	.14	.08	.20	.14	.23	.12	.16	.12	.13
F	4.53	5.17	5.18	5.50	4.93	9.34	7.26	6.41	8.61	11.84	10.52	6.38	11.93	5.50	8.79
p ≤	.01***	.03**	.03**	.02**	.03**	.000***	.000***	.000***	.000***	.000***	.000***	.000***	.000***	.000***	.000***
df	2	1	1	1	1	3	3	2	4	2	4	3	2	3	2

The entries in the table are beta coefficients values (b)

\*\* p ≤ 0.05, \*\*\* p ≤ 0.01

- nAch: need for achievement.
- ILC: internal locus of control.
- ELC: external locus of control.
- EO: entrepreneurial orientation behaviour.
- Ex: Experience.
- WWW: World Wide Web.
- CHP: Corporate Home Page.
- CWS: Corporate Web Server.

Before discussing the result of the regression analysis a number of issues need to be first highlighted;

First, experience with the Internet technologies (e.g. email, WWW, Intranet) was measured by number of years the firms have been using each technology.

Second, to measure Internet training respondents were asked to indicate the extent to which they provide their marketing, export and IT staff with formal Internet training (e.g. courses, workshops on e-commerce, advice and training on how to conduct business on the Internet) using a five point scale that ranges from virtually never to always. As mentioned earlier (see Table 7.3) the Internet training construct was highly reliable at  $\alpha = 0.91$ .

Third, the interconnectivity construct was expressed as number of employees who use the Internet as part of their job, number of PC's available to the firm and number of PCs' that are directly connected to the Internet. The construct's coefficient  $\alpha$  is 0.85 (see Table 7.3).

Fourth, the Internet information construct measures the extent to which the respondents were using the Internet to identify foreign competitors, foreign distributors, foreign technologies, foreign markets, potential business partners and potential foreign customers. The former construct demonstrates high level of *Cronbach alpha* = 0.92 (see Table 7.3).

Fifth, the Internet communication construct measures the extent to which the respondents were using the Internet to contact their overseas customers, suppliers, their employees, to deal with international public authorities, to receive overseas orders and enquiries and further to order goods and services from abroad. The earlier construct exhibits high level of *Cronbach alpha* = 0.87 (see Table 7.3).

Sixth, to measure perceived external Internet benefits respondents were asked to indicate the effects of using the Internet on the following: the firm's overall image and its sales, penetrating unfamiliar foreign markets, developing relationships with customers, generating international awareness of the business, getting feedback from



foreign customers, gaining competitive advantage over rivals and attracting new customers. The perceived external Internet benefits construct consists of eight sentences and exhibits the highest *Cronbach alpha* = 0.93 in this study (see Table 7.3).

Seventh, the perceived internal Internet benefits construct measures the changes associated with the use of the Internet on the number of middlemen the firm needs in distribution, the firm's order processing costs, the firm's administrative procedures and the way the firm is contracting its services (e.g. Warehousing). The construct has an *alpha reliability* of 0.86 (see Table 7.3).

Eighth, to measure Web effectiveness respondents were asked to indicate the importance of doing the following on a weekly basis: update the Web site, check who accesses the Web site, check how fast the Web site can be downloaded and the perceptions of the users of the Web site. The Web effectiveness construct was reliable at *alpha* = 0.81 (see Table 7.3).

Ninth, transactions on the Web were measured by asking the respondents to indicate the extent to which they accept online orders via their firm's Web site, distribute their firm's products directly via the Web and offer online after sales service and track progress of orders. The transactions on the Web construct demonstrates an acceptable level of reliability where *Cronbach alpha* = 0.74 (see Table 7.3).

Finally, promotion on the Web was measured by asking respondents to indicate the extent to which they use the Web site to present, publicise and promote their firms as well as their products on a five-point scale ranging from 1= virtually never to 5 = always. The promotion on the Web construct has an *alpha reliability* of 0.88 (see Table 7.3).

Models 1 through 15 (see Table 7.20) show the stepwise regression analysis of entrepreneurship approaches and level of Internet commitment. The models indices indicate that they are all significant at calculated F ranges between 4.53 and 11.93 and  $p \leq 0.05$  or lower. Yet, not all of the models are considered good ones according to the  $R^2$  value, which is sometimes as low as 0.04, while others are as high as 0.62

(see Table 7.20). Another general observation with respect to the regression models in Table 7.20 is that all of the predictors have low to medium correlations with the dependent variables except for model 6 where the predictors have a strong correlation with experience with the Extranet (see multiple R values in Table 7.20), also there is overwhelming statistical evidence to infer the existence of a linear relationship between all the predictors and the dependent variables. Hence, the models indices allow for their interpretation and demonstrate their validity and ability to predict and estimate 'level of Internet commitment'.

Evidently, owner/managers entrepreneurial orientation behaviour which encompasses innovativeness, proactiveness and risk taking is a significant determinant of firms' level of Internet commitment. The result declares that owner/managers innovative behaviour is positively correlated to Internet training, interconnectivity, Internet information, perceived internal Internet benefits and Web effectiveness, while it has a negative impact on the firms' experience with the use of the Intranet and transactions on the Web. The positive relationships are in the anticipated direction and imply that when the owner/manager is behaving in an entrepreneurial way and the emphasis is on innovative products, R&D and technological leadership, then it is more likely that s/he will adopt the Internet and be committed to it.

However, it came as a surprise that innovativeness has a statistically negative effect on the firms' experience with the use of the Intranet, where an increase in the owner/managers innovativeness by one unit on average will result in the likelihood of a decrease of using the Intranet within the firm by 0.77 (see Table 7.20). The former result is inconsistent with the literature where it is assumed that the owner/managers entrepreneurial orientation behaviour has positive influence on the use of the technology in general.

Also, the empirical findings show that the proactive behaviour of the owner/managers has a statistically positive association with perceived external Internet benefits, transactions on the Web and promotion on the Web, where an increase in the proactive behaviour of the owner/managers will result in the

likelihood increase in the latter factors. It should be noted that proactiveness represents one major dimension of the owner/manager entrepreneurial orientation behaviour. It is anticipated though that when the owner/manager is characterised by being bold and daring, initiates particular acts to which his/her competitors then follow or imitate and wants to maintain market leadership, then s/he will maintain positive perceptions towards the external benefits associated with the use of the Internet, also will grab the opportunity of promoting the firm and its range of products or services, distributing and further selling the firm products via the Web.

The evidence further indicates that the owner/managers perceptions towards growth, costs and complexity associated with exporting are significant antecedents of a number of 'level of Internet commitment' factors. Remarkably, owner/managers perceptions of export growth are a determinant of the following six aspects of 'level of Internet commitment', Internet training, interconnectivity, Internet information, Internet communication, perceived external Internet benefits and promotion on the Web, where an increase in the owner/managers perceptions of export growth will result in the likelihood of an increase in 'the level of Internet commitment' factors mentioned earlier.

The result shows a negative association between the owner/managers perceptions of export costs and their perceptions of the external benefits correlated with the use of the Internet. Such a result implies that as long as the owner/managers believe that going international incurs more costs than serving domestic market, then the chances for the firms to profit from the use of the Internet externally (e.g. penetrating unfamiliar foreign markets, generate international awareness of the business) will diminish.

The empirical findings positively associate the owner/managers perceptions of export complexity with transactions on the Web. The results suggest that the more the owner/managers perceive exporting as a complex experience, the more transactions they will conduct over the Web, put differently, for these firms the Web is a mean to go international without encounter all the hassle and fuss associated with distributing and selling the firms products in a foreign country.

The owner/managers work responsibility (i.e. marketing and sales) is a significant determinant of Internet information and Internet training respectively. This is quite revealing in the sense that marketing manager would be particularly interested in using the Internet to gather information with respect to foreign competitors, foreign distributors and potential business partners. Also, the aim of a sales manager might be maximising the firm sales by using traditional methods besides those available in cyberspace. One way to achieve this is to provide members of staff with the appropriate Internet and e-commerce training.

The evidence shows that the age of the owner/managers has a negative impact on the firms experience with email, WWW, Corporate Home Page (CHP) and perceived external Internet benefits. This indicates that the older the owner/managers are, the later the firms will use email, launch a Web site or even a CHP and also the less likely they are to take advantage of the external Internet benefits such as attracting new customers or penetrating unfamiliar markets, moreover generally speaking, older managers tend to resist the technology.

The owner/managers level of education (i.e. 'O' grade/Standard grade) is positively associated with Internet communication. It is anticipated though that a minimum level of education is a pre-requisite to effectively use the Internet as a communication tool, and to further facilitate and ease the communication process via the Internet with overseas customers and suppliers and guarantee success.

The owner/managers foreign language ability has a significant positive association with Internet information and Web effectiveness, while it negatively affects the firm experience with the email and perceived internal Internet benefits. The positive relationships could be interpreted in the following way. Speaking the customers' languages may help to develop the relationship with the customers. Also, having foreign languages other than English allows owner/managers to access foreign Web sites looking for creative ideas to make their own sites more attractive and appealing to users. The evidence is mostly language specific rather than a general finding across all languages.

Finally, the empirical evidence suggests that owner/managers international orientation features (i.e. born, travel, live and work abroad) have a significant influence on experience with Corporate Web Server (CWS), experience with the Extranet and perceived internal Internet benefits.

The findings reveal that the owner/managers who travel to non-English speaking countries are more receptive to Internet technologies in general, this effect is particularly noticed for CWS (see Table 7.20).

Moreover, the result suggests that in general the owner/managers international orientation is the reason behind the firms experience with the use of the Extranet. In the model (see Table 7.20) the owner/managers who were born in the UK and lived abroad for a lengthy period of time negatively affects the firm experience with the use of Extranet, whereas owner/managers with foreign work experience exhibit positive effect. Also, the owner/managers foreign work experience increases the owner/managers perceptions towards the internal benefits associated with the use of the Internet.

Finally, the evidence suggests that the following have no association on 'level of Internet commitment': personality traits, risk taking, perceived export risks and profits, work responsibility (i.e. production, exporting and others), work experience, gender, level of education (i.e. 'A' level/Highers/SYS, HNC/HND, no formal qualification, degree/postgraduate degree, professional qualification and apprenticeship) and number of overseas business trips.

## 7/8 SUMMARY OF FINDINGS

The foregoing analyses examined a number of propositions that differentiate between UK based SMEs according to their level of Internet use and their owner/managers entrepreneurial orientation behaviour. More investigation was undertaken to examine a number of causal relationships between entrepreneurship approaches, level of Internet commitment and export performance. These findings are summarised in Table 7.21.

**Table (7.21) Summary of the Results**

Propositions	Outcome
<p><b>Proposition 1</b></p> <p>Firms can be distinguished according to their level of Internet use. Relative to firms with low Internet use, high Internet use firms are likely to:</p> <ul style="list-style-type: none"> <li>a- make more use of the Internet as a communication tool</li> <li>b- make more use of the Internet as an information source</li> </ul>	<p>Supported Supported</p>
<p><b>Proposition 1a</b></p> <p>Relative to their counterparts, high Internet use firms are likely to differ with respect to:</p> <ul style="list-style-type: none"> <li>a- experience with Internet technologies</li> <li>b- level of Internet training</li> <li>c- level of interconnectivity</li> <li>d- perceptions of external Internet benefits</li> <li>e- perceptions of internal Internet benefits</li> <li>f- Web effectiveness</li> <li>g- conducting transactions on the Web</li> <li>h- using the Web as a promotional tool</li> </ul>	<p>Largely supported</p>
<p><b>Proposition 2</b></p> <p>Relative to their counterparts, high Internet use firms are likely to differ with respect the following owner/managers characteristics:</p> <ul style="list-style-type: none"> <li>a- need for achievement</li> <li>b- internal locus of control</li> <li>c- external locus of control</li> <li>d- entrepreneurial orientation behaviour</li> <li>e- perceived export complexity</li> <li>f- perceived export risks</li> <li>g- perceived export profits</li> <li>h- perceived export costs</li> <li>i- perceived export growth</li> </ul>	<p>Supported Not supported Not supported Not supported Not supported Not supported Not supported Not supported Supported</p>

<p><b>Proposition 3</b></p> <p>There are differences between firms with a high Internet use and their counterparts with low Internet use with respect to the following owner/managers social psychological characteristics:</p> <ul style="list-style-type: none"> <li>a- work responsibility</li> <li>b- work experience</li> <li>c- age</li> <li>d- gender</li> <li>e- level of education</li> <li>f- foreign language proficiency</li> <li>g- international orientation</li> </ul>	<p>Not supported Not supported Not supported Not supported Supported Supported Supported</p>
<p><b>Proposition 4</b></p> <p>There are differences between firms with high level of Internet use and their counterparts with low Internet use with respect to:</p> <ul style="list-style-type: none"> <li>a- firm characteristics</li> <li>b- industry characteristics</li> </ul>	<p>Weak support Not supported</p>
<p><b>Proposition 5</b></p> <p>Relative to their counterparts, high Internet use firms are likely to differ with respect to:</p> <ul style="list-style-type: none"> <li>a- number of foreign countries entered</li> <li>b- export experience</li> <li>c- export ratio for the financial year (2000 – 01)</li> <li>d- sales growth</li> <li>e- profitability</li> <li>f- strategic objectives achievement</li> <li>g- perceived self success</li> <li>h- competitors' perceptions of the firm's export success</li> </ul>	<p>Not supported Not supported Supported Not supported Not supported Not supported Supported Supported</p>
<p><b>Proposition 6</b></p> <p>Firms can be differentiated according to their owner/managers' entrepreneurial orientation behaviour. Relative to firms with low EO owner/managers, high EO owner/managers are likely to:</p> <ul style="list-style-type: none"> <li>a- be more innovative</li> <li>b- be more proactive</li> <li>c- be risk taking</li> </ul>	<p>Supported Supported Supported</p>
<p><b>Proposition 6a</b></p> <p>Relative to their counterparts, firms with high EO owner/managers are likely to differ with respect to the following characteristics:</p> <ul style="list-style-type: none"> <li>a- need for achievement</li> <li>b- internal locus of control</li> <li>c- external locus of control</li> <li>d- perceived export complexity</li> <li>e- perceived export risks</li> <li>f- perceived export profits</li> <li>g- perceived export costs</li> <li>h- perceived export growth</li> </ul>	<p>Supported Not supported Not supported Supported Not supported Not supported Not supported Supported</p>

<p><b>Proposition 6b</b></p> <p>There are differences between firms with high EO owner/managers and their counterparts with low EO owner/managers with respect to the following social psychological characteristics:</p> <ul style="list-style-type: none"> <li>a- work responsibility</li> <li>b- work experience</li> <li>c- age</li> <li>d- gender</li> <li>e- level of education</li> <li>f- foreign language proficiency</li> <li>g- international orientation</li> </ul>	<p>Not supported Not supported Not supported Not supported Partially supported Not supported Partially supported</p>
<p><b>Proposition 7</b></p> <p>Relative to firms with low EO owner/managers, firms with high EO owner/managers are likely to differ with respect to:</p> <ul style="list-style-type: none"> <li>a- experience with Internet technologies</li> <li>b- level of Internet training</li> <li>c- level of interconnectivity</li> <li>d- perceptions of external Internet benefits</li> <li>e- perceptions of internal Internet benefits</li> <li>f- Web effectiveness</li> <li>g- conducting transactions on the Web</li> <li>h- using the Web as a promotional tool</li> </ul>	<p>Weak support Supported Supported Supported Supported Supported Not supported Supported</p>
<p><b>Proposition 8</b></p> <p>There are differences between firms with high entrepreneurial orientation owner/managers and their counterparts with respect to:</p> <ul style="list-style-type: none"> <li>a- firm age</li> <li>b- firm size</li> <li>c- firm independency</li> <li>d- firm ownership</li> <li>e- industry sector</li> <li>f- market served</li> <li>g- technology intensity</li> </ul>	<p>Supported Not supported Not supported Not supported Not supported Not supported Not supported</p>
<p><b>Proposition 9</b></p> <p>Relative to their counterparts with low EO owner/managers, firms with high EO owner/managers are likely to differ with respect to:</p> <ul style="list-style-type: none"> <li>a- number of foreign countries entered</li> <li>b- export experience</li> <li>c- export ratio for the financial year (2000 – 01)</li> <li>d- sales growth</li> <li>e- profitability</li> <li>f- strategic objectives achievement</li> <li>g- perceived self success</li> <li>h- competitors' perceptions of the firm's export success</li> </ul>	<p>Not supported Not supported Not supported Supported Not supported Not supported Not supported Not supported</p>



<p><b>Proposition 10</b></p> <p>There are significant relationships between owner/managers' personality traits, entrepreneurial orientation behaviour, export perceptions and social psychological characteristics and the following export performance indicators:</p> <ul style="list-style-type: none"> <li>a- sales growth</li> <li>b- profitability</li> <li>c- strategic objectives achievement</li> <li>d- perceived self success</li> <li>e- competitors' perceptions of the firm's export success</li> </ul>	<p>Partially supported</p>
<p><b>Proposition 11</b></p> <p>There are significant relationships between level of Internet commitment and the following export performance indicators:</p> <ul style="list-style-type: none"> <li>a- sales growth</li> <li>b- profitability</li> <li>c- strategic objectives achievement</li> <li>d- perceived self success</li> <li>e- competitors' perceptions of the firm's export success</li> </ul>	<p>Partially supported</p>
<p><b>Proposition 12</b></p> <p>There are significant relationships between owner/managers personality traits, entrepreneurial orientation behaviour, export perceptions and social psychological characteristics and the following of UK based SMEs level of Internet commitment:</p> <ul style="list-style-type: none"> <li>a- experience with Internet technologies</li> <li>b- Internet training</li> <li>c- interconnectivity</li> <li>d- Internet information</li> <li>e- Internet communication</li> <li>f- perceived external Internet benefits</li> <li>g- perceived internal Internet benefits</li> <li>h- Web effectiveness</li> <li>i- transactions on the Web</li> <li>j- promotion on the Web</li> </ul>	<p>Partially supported</p>

Source: The researcher

### **7/8/1 Findings Concerning High Internet Use Firms**

Based on 'the Internet use' battery, responding firms were successfully clustered into high and low Internet use firms, implying that high Internet use firms utilise the Internet as a communication tool, for instance, to contact their overseas customers and overseas suppliers, and also as an information source to identify foreign competitors, foreign distributors and potential foreign customers. Moreover, the overall level of Internet commitment among UK based SMEs high Internet use firms

was remarkably high on all proposed factors except for 'Internet telephony and interconnectivity'.

The owner/managers need for achievement, perceived export growth, level of education including (possessing degree or postgraduate degree), command of foreign languages and international orientation including (travel, live and work abroad) are cited as significant characteristics that favour owner/managers in high Internet use firms. Also, export involvement consisting of the export ratio for the last financial year, and export performance indicators namely, perceived self success, and the competitors' perceptions of the firm's export success were significantly associated with high Internet use firms.

Firm size also significantly differentiates high Internet use firms from their counterparts, yet, there is not enough evidence to infer the existence of significant differences between high and low Internet use firms with respect to firm age, independency and ownership, as well as industry sector, market served and technology intensity.

#### **7/8/2 Findings Concerning Firms with High Entrepreneurial Orientation Owner/ Managers**

Responding firms were successfully clustered according to their owner/managers entrepreneurial orientation behaviour into high versus low, where high EO owner/managers are characterised by being innovative e.g. have strong emphasis on innovative products, R&D, technological leadership, are moderately proactive e.g. initiate actions to which competitors then respond and moderate risk takers e.g. have moderate tendency to take on high risk projects with some chances of success but a very high rate of return.

High EO owner/managers exhibit a high need for achievement, have high perceptions of export growth, and perceive exporting activities as less complex than domestic ones. Further, the level of education expressed as no formal qualification and international orientation including (travel abroad) significantly differentiate between owner/managers in both clusters. Moreover, high EO owner/managers are

committed to the Internet except for the Internet technologies and transactions on the Web.

It should be noted that out of firm characteristics, industry characteristics, export involvement, and export performance indicators, only firm age and sales growth significantly distinguish high EO owner/managers from their counterparts.

### **7/8/3 Findings Concerning the Determinants of Export Performance**

The owner/managers perceptions towards export growth, costs and profits, their proactive behaviour, work experience as well as work responsibility, namely, marketing and exporting, and their level of education (i.e. no formal qualification) are significant determinants of UK based SMEs export performance. Also, using the Internet as an information source, the firm's Web site as a promotional tool, having positive perceptions towards external benefits associated with the use of the Internet, and allocating enough resources for the Internet (i.e. human and technological) are critical antecedents of UK based SMEs export performance. On the other hand, the result suggests that owner/managers personality traits have no bearing on the firms export performance and their level of Internet commitment.

None of the Internet commitment factors have any influence on UK based SMEs export profitability. In general, export performance regression models exhibit a weak to moderate coefficient of determination  $R^2$  except for perceived self success and competitors' perceptions of the firm's export success, given the lack of comprehensive measures of export performance in the relevant literature and the strong correlation between both measures of success, this result is no surprise.

An attempt was made to use more sophisticated statistical analysis techniques, specifically *Structural Equation Modelling (SEM)*, following (Cavusgil and Zou, 1994), besides being time consuming, the preliminary results were not sufficiently encouraging to proceed with the analysis, as they did not exhibit much difference with respect to the models' coefficient of determination.

#### **7/8/4 Findings Concerning the Determinants of Internet Commitment**

The owner/managers entrepreneurial orientation behaviour namely, innovativeness and proactiveness, international orientation including (born, live, work and travel abroad), foreign language ability, age, level of education precisely 'O' grade, work responsibility specifically (marketing and sales), and finally, their perceptions towards growth, costs, and complexity associated with exporting are significant determinants of the firms' level of Internet commitment.

Overall, the regression models of the firms' level of Internet commitment were much better than export performance ones, where the variables/factors accounted for a higher percentage of the variation of the dependent variables, except for most of the Internet technologies models and interconnectivity. Given the high reliability and validity of the Internet commitment constructs, this result was largely anticipated.

The next and final chapter will discuss the research findings, implications for UK based SMEs and policy makers will be identified, as well as the research limitations and suggestions for future research.

# CHAPTER EIGHT

## DISCUSSION, RECOMMENDATIONS, LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

### *Chapter Objectives*

- *To discuss the research findings in relation to the research framework and aims developed in chapter five.*
- *To assess the contributions of the research to the exporting and entrepreneurship fields as well as to research methodology.*
- *To identify implications for UK based small and medium sized firms and policy makers.*
- *To identify the limitations of the research and to put forward suggestions for future research.*

**CHAPTER EIGHT**  
**DISCUSSION, RECOMMENDATIONS, LIMITATIONS**  
**AND DIRECTIONS FOR FUTURE RESEARCH**

The discussion of findings in this chapter follows the order of the statistical analysis in chapter seven. The results discussed are those on the level of Internet use among UK based SMEs, level of Internet commitment of high Internet use firms, the entrepreneurship approaches of high Internet use firms, firm and industry characteristics of high Internet use firms, export involvement and export performance indicators of UK based SMEs high Internet use firms. Links with UK based SMEs high entrepreneurial orientation owner/managers and the results above are also discussed together with findings on the determinants of UK based SMEs export performance and level of Internet commitment.

Based on the research findings and discussion, a needs-based approach is adopted to present the study recommendations, resulting in 2x2 matrix, where firms' level of Internet use and owner/managers entrepreneurial orientation behaviour are the controlling aspects. Four categories of firms are established and targeted with pertinent recommendations. Further, general implications for UK based SMEs and policy makers are addressed. The chapter and this thesis conclude with the research limitations and suggestions for future research.

**8/1 LEVEL OF INTERNET USE AMONG UK BASED SMEs EXPORTING FIRMS**

Although much of the research regarding SMEs internationalisation was conducted before the Internet became widely used and before the introduction of the WWW (Tiessen et al., 2000), there is evidence that SMEs are rapidly recognising the importance of the Internet as a fundamental aspect of their day-to-day business and they are gearing up to compete in a more technologically advanced commercial environment (OECD, 1999).

The present study is one of the early empirical studies that differentiates between UK based SMEs manufacturing exporters according to their level of Internet use. Based

on a newly developed scale, consisting of 14 statements representing two specific factors namely, Internet communication and Internet information, two clusters of firms were clearly identified on a continuum of Internet use from low to high. The result shows that high Internet use firms outperform their counterparts with respect to using the Internet as a communication tool (e.g. to contact their overseas customers, suppliers) and as an information source (e.g. to identify their foreign competitors, distributors, potential foreign customers). However, in general, the level of use of the Internet among UK based SMEs ranges from low to medium.

Further validation of this result was undertaken where both clusters were differentiated according to their overall level of Internet commitment. The result highlights that high Internet use firms use the Internet technologies (i.e. email, World Wide Web, Corporate Home Page and Corporate Web Server) more extensively than their counterparts. Moreover, relative to low Internet use firms, high Internet use firms were providing their employees (i.e. IT, marketing and exporting) with formal Internet training, they had higher perceptions of external Internet benefits (e.g. the Internet helps penetrate unfamiliar foreign markets, generate international awareness of the firm's business), as well as internal Internet benefits (e.g. the Internet has changed the firm order processing costs, has changed the firm administrative procedures). Consistent with the literature (i.e. Sieber, 1996; and Van Doren et al., 2000) the result shows that high Internet use firms were using their Web sites as a promotional tool and they were keeping their Web as effective as possible in order to retain their existing customers and to further attract new ones (e.g. Sterne 1995; Auger and Gallagher, 1997; and Hamill, 1997). Moreover, they were using their Web to enable e-commerce. Nevertheless, the overall level of Internet commitment among UK based SMEs is quite moderate.

## **8/2 ENTREPRENEURSHIP APPROACHES OF UK BASED SMEs HIGH INTERNET USE FIRMS**

The owner/managers characteristics, attitudes and experiences are relatively important to the successful adoption and implementation of any IT innovation (e.g. the Internet) (Roackard and Crescenzi, 1984; Chulikavit and Rose, 2000; and Gagnon et al., 2000). The results show that a high need for achievement is a

characteristic associated with high Internet use firms' owner/managers, the latter were also found to have higher perceptions toward exporting growth, suggesting that working in an intensive IT environment helps to maintain a positive international outlook. Although insignificant, inspection of the means shows that high Internet use firms' owner/managers have a moderate entrepreneurial orientation.

Top managers' social-psychological features such as level of education, age and gender are acknowledged as important characteristics in management, psychological and sociological research, associated with computer and work related attitudes (Gattiker et al., 2000). Consistent with Zeithaml and Gilly (1983) high Internet use firms' owner/managers possessed a high level of education, implying that level of education plays a significant role in the use of IT.

Nevertheless, the current study reports no significant association between the owner/managers age in high Internet use firms and their counterparts. In fact the result shows that slightly more than half of the respondents in both clusters were more than 40 years old, hence contradicting the idea that elderly managers in general are slow in adopting new technology unless they believe that there is an advantage behind adopting it (Zeithaml and Gilly, 1983; and Lynn et al., 2002).

Also, no significant association was found between the gender of owner/managers in high Internet use firms and their counterparts, however it is worth noting that there is a slightly higher percentage of females in low Internet use firms', suggesting that femaleness may be anti-technology or slower in accepting and adopting the innovation.

Further profiling of high Internet use firms' owner/managers reveals that they are internationally orientated (i.e. travel, live and work abroad) despite the fact that the vast majority were born in the UK, also they are talented with respect to foreign language ability.



### **8/3 FIRM AND INDUSTRY CHARACTERISTICS OF UK BASED SMEs HIGH INTERNET USE FIRMS**

Hamill and Gregory (1997) comment that “the Internet provides a low cost gateway to global markets for SMEs exporters”, thus opening up new markets, as well as providing new opportunities domestically and internationally (Lymer et al., 1997; and Pitis and Vlosky, 2000).

The current study shows that firm size significantly discriminates between high Internet use firms and their counterparts. Consistent with the literature, the result infers an inverse relationship between number of employees and the use of the Internet, implying that the more the firm is involved in IT, the smaller the firm’s measured by number of employees (Brynjolfsson et al., 1994), meanwhile this result contradicts (Palvia et al., 1994; Dandridge and Levenburg, 1998; and Lal, 2002) findings where the larger the firm the higher the rate of the use of Internet and e-commerce technologies. The reason for this contradictory view may be due to industry sector effect and product specificity, given that industry sector was very close to significantly differentiating between high and low Internet use firms at  $p = 0.11$ .

Furthermore, almost forty per cent of high Internet use firms are small firms with less than fifty employees, this provides additional support for Hamill and Gregory (1997, p.11) who assert that “the Internet allows small players to compete on equal footing with the multinationals and consequently expand market share”. As a result it permits them to become global marketers at an early stage of their development and further diminishes the advantages (e.g. financial and human resources) large multinational organisations have (Herbig and Hale, 1997). Although Oviatt and McDougall (1999) have suggested a possible link between firm age and the Internet, an insignificant result was noted between firm age and high and low Internet use firms among UK based SMEs, however *pearson* correlation indicates a significant negative association between firm age and technology use, implying that younger firms were faster in using the technology than older ones.

The present study shows that industry sector was the closest variable after firm size to significantly differentiate high and low Internet use firms, where a high percentage of high Internet use firms were in 'biotechnology' sector and firms with low level of Internet use were chiefly in 'textiles, clothing and fur'. Hence, gives support to Poon and Joseph (2000) who argue that characteristics of business sector and value chain should be studied in order to understand the benefits of Internet commerce among small businesses.

#### **8/4 EXPORT INVOLVEMENT AND EXPORT PERFORMANCE INDICATORS OF UK BASED SMEs HIGH INTERNET USE FIRMS**

The result shows that high Internet use firms had a significantly better export ratio for the financial year (2000/2001) than low Internet use firms. The findings also reveal that export experience and number of foreign country/markets entered were close to significantly differentiating between high and low Internet use firms at  $p = 0.13$  and  $0.12$  respectively. Relative to their counterparts', high Internet use firms had less exporting experience expressed as number of years, however they were more involved in foreign markets. This result provides further validation to Oviatt and McDougall (1999) who argue that the advancement in computer and communication technology may permit small firms to internationalise and to manage more complex foreign transactions than in the past.

Oviatt and McDougall (1994) attributed "the international at founding" phenomenon to advances in communication, flow of information, transportation and the growing trend among entrepreneurs to view markets internationally rather than domestically". Insignificant results were found with respect to 'born global' firms, identified as those who do not follow the normal successive *route* of internationalisation by stages (Oviatt and McDougall, 1994; and McAuley, 1999). However, based on Robinson and McDougall's (1998) definition of new ventures as firms which are six years old or younger, the result shows that 46 (54%) new ventures were found among high Internet use firms as opposed to only 25 (42.2%) identified in low Internet use firms. This result confirms Oviatt and McDougall's (1994) work and implies that technology motivates and stimulates people to start their own business and become early international.

Consistent with Smith (1999) and OECD (2000) who report that level of IT and Internet use is associated with better performance in Scottish firms and SMEs, statistically significant results indicate that relative to their counterparts, UK based SMEs high Internet use firms had a higher perception of their own success in export markets and were viewed by their competitors as more successful as well. Moreover, consistent with Anonymous (Management Services, 2000), Avlonitis and Karayanni (2000) and Bharadwaj (2000) no significant differences were found between UK based SMEs high Internet use firms and their counterparts with respect to export sales growth, export profitability and strategic objectives achieved. However high Internet use firms report higher levels of sales growth and profitability, implying that the use of the Internet influences UK based SMEs export performance. Nevertheless, the inconsistent findings regarding the use of IT and firm performance may be due to lack of understanding of the nature of the firm's IT resources and skills as highlighted by Bharadwaj (2000).

#### **8/5 THE OWNER/MANAGERS ENTREPRENEURIAL ORIENTATION AMONG UK BASED SMEs EXPORTING FIRMS**

The entrepreneurship literature has identified entrepreneurial orientation (EO) as a concept that encompasses innovativeness, proactiveness and risk taking (Covin and Slevin, 1989, 1991; Lumpkin and Dess, 1996; Dess et al., 1997; and Zahra and Garvis, 2000). The current research contributes to the limited empirical studies that have actually investigated the entrepreneurial orientation using all three dimensions in an international context (Yeoh and Jeong, 1995; Ibeh, 1998; Lyon et al., 2000; and Ibeh and Young, 2001).

Based on nine statements developed and tested for reliability by Khandwalla (1977), Miller (1983), Covin and Slevin (1989) and Covin (1991), two distinct clusters emerged namely, high and low entrepreneurial orientation owner/managers. The result indicates that UK based SMEs high entrepreneurial orientation owner/managers have a strong emphasis on innovative products and R&D, have marketed new product lines and/or changed existing ones, are moderately proactive while dealing with their competitors, for instance, by initiating actions to which their

competitors then respond and also they are moderate risk takers (e.g. have moderate tendency to take on high risk projects with some chances of success but a very high rate of return and adopt a moderate posture between 'wait and see' and 'bold and aggressive' attitude in order to maximise their profitability).

This result is consistent with the export entrepreneurship literature (e.g. McGuinness and Little, 1981; Cavusgil and Nevin, 1981; Cooper and Kleinschmidt, 1985; Namiki, 1989; Dichtl et al., 1990; Beamish et al., 1993; Ibeh, 1998; and Ibeh and Young, 2001) and with a number of authors in the entrepreneurship literature who argue that the entrepreneurs are risk averse or moderate risk takers (e.g. Meyer et al., 1961; Schumpeter, 1962; Garnier, 1982; Sexton and Bowman, 1983; Ahmed, 1985; and Palich and Begby, 1995).

#### **8/6 THE PERSONALITY TRAITS AND SOCIAL PSYCHOLOGICAL CHARACTERISTICS OF UK BASED SMEs HIGH EO OWNER/MANAGERS**

Carson et al. (1995) have pointed out that the entrepreneurship literature is rather rich in terms of the number of personality traits of successful entrepreneurs identified such as, need for achievement, locus of control and stress and uncertainty. Consistent with the entrepreneurship literature (e.g. Lachman, 1980; Cunningham and Lischeron, 1991; Longenecker et al., 1994; and Utsch et al., 1996) the result reveals that high need for achievement is a personality trait significantly associated with UK based SMEs high entrepreneurial orientation owner/managers. Also, consistent with Sexton and Bowman (1985) and Begely and Boyd (1987) the findings infer that locus of control has failed to distinguish between high and low entrepreneurial orientation owner/managers in UK based SMEs.

Consistent with the exporting literature (Roy and Simpson, 1981; Cavusgil and Naor, 1987; and Masurel, 2001) the study shows that, relative to their counterparts, high entrepreneurial orientation owner/managers have high perceptions of export growth and a low perception of the complexity of exporting. This result reflects the attitude of owner/managers towards exporting as an international experience - which is fairly positive - and their perceptions regarding the complexities associated with it.

Both the exporting and entrepreneurship literatures highlight the importance of the owner/managers social psychological characteristics to understand firm export behaviour (Kaynak and Kong, 1985; Carson, 1990; and Carson et al., 1995). The result in this study infers that the level of education (i.e. no formal qualification) significantly distinguishes high entrepreneurial orientation owner/managers from their counterparts. Further, in contrast with the level of education of entrepreneurs from a number of countries (i.e. Russia, China, Northern Ireland and UK) (Hisrich, 1988; Green et al., 1996; and Lee and Chan, 1998), UK based SMEs high entrepreneurial orientation owner/managers, in general, had a low level of education.

The result also shows that travel abroad as one feature of international exposure significantly distinguishes between high and low entrepreneurial orientation owner/managers. One advantage associated with travelling abroad is that the owner/managers become more familiar with foreign cultures, which decreases their concern about 'psychic distance', and subsequently makes them more likely to engage in foreign trade (Axinn, 1988; and Dichtl et al., 1990).

The insignificant effect of the age of UK SMEs owner/managers on the two clusters under investigation provides further support to believe that there is no ideal age for an entrepreneur, and that it does not really matter whether the entrepreneur is young or old (Hisrich and Grachev, 1995).

#### **8/7 THE LEVEL OF INTERNET COMMITMENT OF HIGH EO OWNER/MANAGERS**

The results infer that high entrepreneurial orientation owner/managers are characterised by being innovative and moderately proactive and risk seeking, as a consequence, they are more likely to exploit Internet enabled opportunities and thus show a higher level of commitment to the Internet. Overall, the results show that relative to their counterparts, UK based SMEs high entrepreneurial orientation owner/managers exhibit a significantly higher level of Internet commitment, though at a moderate level. High EO owner/managers are allocating more resources to the Internet (e.g. technological, financial and human resources), they use the Internet to contact their overseas customers, suppliers, employees, as well as to identify their

foreign competitors, foreign distributors and foreign markets. Moreover, they are using their Web sites more extensively than their counterparts as a promotional tool to present, publicise and promote their firm and their range of products/services, and also relative to their counterparts they are keeping their Web sites as effective as possible. Furthermore, high entrepreneurial orientation owner/managers have higher perceptions of both the internal and external Internet benefits.

These results are consistent with Lymer et al. (1998) and Poon and Swatman (1999) who argue that entrepreneurial behaviour is behind the introduction of the Internet among SMEs in both UK and Australia. Also, it seems that UK SMEs moderate commitment to the Internet is helping to diminish the barriers that traditionally known to impede SMEs access to global markets (Auger and Gallagher, 1997; and Hamill, 1997).

The insignificant result with respect to conducting transactions on the Web which are associated with a high level of risk confirms an earlier result (see section 8/5) and work elsewhere (Brockhaus, 1982; Garnier, 1982; and Sexton and Bowman, 1983) that entrepreneurs are moderate risk takers. Another explanation of this result is that accepting transactions on the Web sites may have nothing to do with risk taking behaviour, but is as much to do with the reality that for SME exporters buying and selling on the Internet is still at its infancy with very few transactions conducted on the Internet.

#### **8/8 FIRM AND INDUSTRY CHARACTERISTICS ASSOCIATED WITH UK BASED SMEs HIGH EO OWNER/MANAGERS**

Unlike the general trend in the entrepreneurship literature that assumes that owner/managers who possess entrepreneurial characteristics are found in young firms, the empirical findings show that high EO owner/managers were more likely to be found in well established firms that were at least ten years old, implying that the firm's experiential knowledge accumulated over the years in the same industry, influences the EO behaviour of the owner/managers. The argument here is that this experience helps to build the entrepreneur's knowledge base. EO behaviour could be acquired over time unlike other owner/managers psychological traits (e.g. locus of

control) that are stable across situations rather than situation specific. This is no matter what the owner/manager experiences are, or the situations the entrepreneur is facing (Rotter, 1966; Anderson, 1977; and Lee and Chan, 1998). This result is also consistent with Wortman (1987) and Low and McMillan (1988) who argue that entrepreneurship is no longer restricted to independent new venture creation process or start up firms. Moreover, it supports Stevenson and Jarillo (1990) and Acs et al. (2001) view that in practice many well-established firms are engaged in highly successful entrepreneurship, hence, the term entrepreneurship refers not to a firm's size or age, but to a certain kind of activity.

Unlike McAuley (1999) who argues that product and industry categories affect entrepreneurial 'instant exporters' in the Scottish arts and crafts, the result reveals that industry sector does not significantly distinguish high EO owner/managers in UK based SMEs from their counterparts. Also, unlike research in international entrepreneurship that has associated entrepreneurial behaviour with knowledge-intensive and high technology sectors (e.g. McDougall et al., 1994; and Bloodgood et al., 1996), this investigation indicates that this was not the case as high and low EO owner/managers were distributed among the industry sectors studied (food and beverages, biotechnology and instrumentation, computers and office machinery and textiles, clothing and fur) and their corresponding technology level.

#### **8/9 EXPORT INVOLVEMENT AND EXPORT PERFORMANCE INDICATORS AMONG UK BASED SMEs HIGH EO OWNER/MANAGERS**

Export involvement expressed as (i.e. number of foreign country/markets entered regularly, export experience and export ratio) has failed to differentiate between UK based SMEs high and low EO owner/managers. However, inspection of the means shows that high EO owner/managers are less involved in international markets. One interpretation of this result might be that having entrepreneurial orientation behaviour does not necessarily mean going international, also high EO owner/managers may feel that they are still able to generate profits in their domestic

market, and given their moderate risk taking behaviour, it may not be the time to become extensively involved in international markets.

Evidence in the study also indicates that the born global phenomenon defined earlier in the chapter (see section 8/4) significantly differentiates between owner/managers with a high and low entrepreneurial orientation (48.3% and 50.9%), surprisingly more 'early international' firms were found among low EO owner/managers. This unexpected result supports the comment made earlier with respect to high EO owner/managers who may still successfully find their way in the domestic market, unlike their counterparts who may have been forced to diversify their activity internationally to grow and generate profits.

Export sales growth was significantly higher among firms with high entrepreneurial orientation owner/managers, hence, this provides further support for EO improving a firm's financial performance (e.g. Zahra, 1993; Namen and Slevin, 1993; Wiklund, 1999; and Barrett et al., 2000). Also, consistent with Sapienza and Grimm (1997) this study has found no significant association between high and low EO owner/managers and the remaining export performance measures. This result contradicts Becherer and Maurer (1997) who argue that entrepreneurial orientation is directly related to changes in profits, and also challenges Barrett et al. (2000) who say that the more the firm's management is entrepreneurially orientated, the stronger its business performance.

## **8/10 THE DETERMINANTS OF UK BASED SMEs EXPORT PERFORMANCE**

### **8/10/1 The Relationship between Entrepreneurship Approaches and UK based SMEs Export Performance**

Unlike the growing number of studies that associate the personality traits of the owner/managers with growth and profitability largely within the context of small businesses (e.g. Jones-Evans, 1995; Smallbone et al., 1995; Green et al., 1996;



Glancey et al., 1998; Glancey, 1998; Mazzarol et al., 1999; and Lee and Tsang, 2001) this study has shown that personality traits namely, need for achievement and locus of control are insignificant determinants of UK based SMEs export performance. However, this result is consistent with Miller and Toulouse (1986) and Begley and Boyd (1987) who report no strong relationship between need for achievement and performance, and Entrialgo et al. (2000) who find no association between managers' internal locus of control and firm success.

The lack of association between personality traits and export performance may be due to methodological issues with respect to export performance measures and/or personality constructs applied. Despite the fact that the latter are pre-tested and validated scales, nevertheless, they had a relatively low level of alpha reliability. The insignificant effects of personality traits found in this study suggest that earlier studies that focus on the impact of the owner/managers psychological characteristics on firms' performance may have been misplaced (Lee and Tsang, 2001).

Counter to the exporting literature that suggests that managers' international and overseas experiences are associated with comparatively higher export growth rates, export intensity, export sales, export profitability and stronger export performance (e.g. Axinn, 1988; Dichtl et al., 1990; Holzmuller and Kasper, 1990; Czinkota and Ursic, 1991; De Luz, 1993; Das, 1994; Nakos et al., 1998; and Kundu and Katz, 2000), the current study demonstrates that the owner/managers international orientation has no bearing on UK based SMEs export performance. This implies that despite lacking internationally orientated owner/managers, SMEs can still be successful in international markets.

This study confirms the positive association between 'no formal qualification' that represents the level of education of the owner/managers and the achievement of strategic objectives. This result is consistent with Storey et al. (1989) who argue that academic qualifications do not guarantee success. However, it is neither consistent with international business researchers (e.g. Reid, 1983; Barrett and Wilkinson, 1986; Schlegelmilch and Ross, 1987; Axinn, 1988; and Nakos et al., 1998) who

argue that the higher the level of education of the manager, the greater the firm export performance, nor with entrepreneurship scholars (e.g. Lafuente and Salas, 1998; and Basu and Goswami, 1999) who support the positive impact of the level of education of the entrepreneur on firm performance.

Consistent with Moini (1995), there is no significant association between the owner/managers proficiency in foreign languages and export performance. This implies that exporters can still be successful without being competent in foreign languages. Also, the insignificant association between the age of the owner/managers and export performance supports work elsewhere (Czinkota and Ursic, 1991; Moini, 1995; Nakos et al., 1998; and Afza, 2001).

There is an inverse relationship between the owner/managers work experience and the self-perception of success in export markets. This is consistent with Evans (1987) and Basu and Goswami (1999), who report that the longer the entrepreneur spends in business, the slower the firms' rate of growth, given that there is a tendency among firms to grow faster in their early years. The owner/managers work responsibility (i.e. for marketing and exporting) was positively and significantly associated with export sales and perceived self-success in export markets. Exporting as a work responsibility was negatively correlated with the achievement of strategic objectives.

Roy and Simpson (1981, p.17, 18) say that 'perception is the chief factor that determines the way a person adapts to its world.... people do perceive selectively as a result of their needs, drives, motives, and attitudes'. This study has established a positive association between the owner/managers perceptions of growth and profits associated with exporting and export sales and success. However, a negative relationship was found between the owner/managers perceptions of export costs and profitability. This is consistent with Roy and Simpson (1981), Cavusgil and Naor (1987) and Masurel (2001) who argue that export managers tend to have lower perceptions of export risks and costs and higher perceptions of profits, hence, emphasising the importance of the perceptions of owner/managers in determining the firms export performance.

Unlike Johnston and Czinkota (1982) who argue that proactive attitudes should be reinforced among exporters, the current study shows that the owner/managers proactive behaviour is negatively related to UK based SMEs strategic objectives achieved. Moreover, contrary to a number of scholars (Peters and Waterman, 1982; Schoollhammer, 1982; Zahra, 1993; Namen and Slevin, 1993; Brown, 1996; Wiklund, 1999; and Barrett et al., 2000) who support the view that EO improves the firm's financial performance in terms of sales growth and profitability, the results highlight that the owner/managers innovativeness and risk taking are not associated with export performance, however, these results are consistent with Sapienza and Grimm (1997). The lack of consistency between the EO behaviour of owner/managers and export performance suggests that being entrepreneurially orientated is not always a key for export success.

#### **8/10/2 The Relationship between Level of Internet Commitment and UK based SMEs Export Performance**

Another contribution of the current study is that it is one of the early empirical studies that examines the impact of Internet commitment on UK based SMEs export performance. The study shows that using email provides UK based SMEs with a mean of regular contact with their overseas customers, partners and distributors despite time zone differences. Also, apart from all the other Internet technologies (e.g. WWW, Corporate Home Page, Corporate Web Server), electronic mail was positively associated with sales growth. Evidently, the use of the email is affecting sales growth indirectly in two ways. Firstly, by cutting communication costs and minimising the time and effort needed to communicate, which makes the Internet a valuable medium particularly for firms engaged in international trade (Gallagher, 1999). Secondly, firms are receiving an increased number of enquiries many of which eventually become orders.

There is a positive correlation between the use of the Intranet and the achievement of strategic objectives. One explanation for this is that, although the Intranet is principally used to contact employees inside the firm, and the firms strategic objectives are largely international by nature, it seems that the use of the Intranet

influences the achievement of such objectives indirectly, for instance, by making the firm more efficient by rapidly disseminating up to date information, improving the flow of communication and reducing the duplication of information, which indirectly help to pursue international activities.

There is a positive association between using the Web site as a promotional tool and export sales. The positive association is no surprise, as the more the firm is promoting itself and its range of products, the more likely it will receive unsolicited orders or enquiries that will turn ultimately into future sales. There was a negative correlation between using the Web site as a promotional tool and the achievement of strategic objectives. However, arguably in normal circumstances the negative correlation is unlikely to happen, where the firm promotes itself using traditional means as well as in the cyberspace, hence, increasing the awareness of its products, improving market share and responding to competitive pressure.

This study suggests that the higher the owner/managers perceptions of the external Internet benefits for instance, the Internet helps UK based SMEs to penetrate unfamiliar markets, develop relationship with customers, generate international awareness of the business and useful feedback from their foreign customers, the higher their perceptions of self-success, and their competitors' perceptions of their export success as well. This result is largely anticipated because of the strong positive correlation between both measures of export success.

In this study, UK based SMEs' 'interconnectivity' (i.e. number of employees using the Internet as part of their job, number of PC's the firm has and number of PC's that are directly connected to the Internet) is negatively associated to competitors' perceptions of the firm's export success, where the higher the resources (human and technological) committed to the Internet the lower the competitors' perceptions of the firm's export success. This result implies that the firm's competitors might have 'technophobia' and perceive the Internet as complicated and sophisticated.

The current study establishes an inverse relationship between UK based SMEs use of the Internet as an information source and their competitors' perceptions of their export success. This result is quite puzzling and does not say much, instead it raises

doubts as to why the firms' competitors would perceive them as less successful in international markets when using the Internet to identify potential foreign customers, potential business partners and foreign distributors.

The qualitative responses show that the Internet has helped firms to meet and recruit potential distributors, and eventually it has speeded up this process. In addition the Internet has helped exporters to discover the activities of other distributors operating on the Internet.

The insignificant association between level of Internet commitment and export profitability may be due to the fact that not all firms are successful in creating an effective IT capability. Also, it may be due to the small number of manufacturers and customers who actually use the Internet-e-commerce, suggesting that SMEs should not only rely on this medium for profits.

### **8/10/3 The Relationship between Firm Characteristics and UK based SMEs Export Performance**

Although the influence of firm size and age on export performance have been extensively analysed by a number of scholars (e.g. Cavusgil and Zou, 1994; Axinn et al., 1996; Kundu and Katz, 2000; and Shrader et al., 2000) the results are ambiguous and inconclusive.

Consistent with a growing number of exporting studies (e.g. Moon and Lee, 1989; Louter et al., 1991; Bodur, 1994; Katsikeas et al., 1996, Moen, 1999; and Wolff and Pett, 2000) this research did not establish any relationship between firm size and export performance, implying that firm size does not make a difference with respect to the firm export performance. Another explanation of this result proposed by Bilkey (1978) and Cavusgil (1982, 1984) is that size acts as a substitute for greater availability of resources, hence, affecting export activities indirectly because of the relationship between size and management quality and resources availability.

Consistent with Bodur (1994), Nakos et al. (1998), Glancey (1998), Kundu and Katz (2000) and Baldauf et al. (2000) there is an inverse relationship between firm age

expressed as number of years in business and UK based SMEs export sales. This implies that younger firms are more active in export markets and display a significantly higher rate of sales. It also indicates that younger firms may frequently face difficulties in saturated domestic markets and are forced to diversify overseas.

## **8/11 THE DETERMINANTS OF UK BASED SMEs LEVEL OF INTERNET COMMITMENT**

Another major contribution of the current research is examining the possible association between owner/managers characteristics (e.g. personality traits, social psychological characteristics and entrepreneurial orientation behaviour) and UK based SMEs level of Internet commitment expressed as experience with the Internet technology, Internet training, interconnectivity, Internet information, Internet communication, perceived external and internal Internet benefits, Web effectiveness, transactions on the Web and promotion on the Web. The empirical studies that investigate the relationship between the owner/managers characteristics and SMEs commitment to the Internet are quite scant, hence, to the author knowledge this is the first time that a level of Internet commitment construct has been developed and tested for validity and reliability.

There are a large number of personality traits that are used to describe the successful entrepreneur in the entrepreneurship literature. Of particular interest to this study is that need for achievement and locus of control have no significant association with UK based SMEs Internet commitment, hence, providing further evidence that personality traits do not predict behaviour (Gartner, 1988; and Shaver and Scott, 1991).

There is a negative association between the international orientation of the owner/managers and UK based SMEs experience with the Internet technologies, particularly corporate Web server and the Extranet, implying that those who were born in the UK, travel to English speaking countries and live in non-English country have more negative effect on Internet technologies as opposed to their counterparts

with ethnic ties, who travel to non-English speaking countries and live in English speaking countries. On the other hand, the owner/managers foreign work experience was positively correlated to the use of Extranet and perceived internal Internet benefits. This result highlights the importance of the experiential knowledge the owner/manager gains as a result of his/her interaction with the foreign environment and the positive influence such knowledge has on his/her perceptions with respect to the adoption and use of the technology.

Another feature of the international orientation of the owner/manager posture is his/her proficiency in foreign languages. The result obtained was quite confusing, for instance, foreign language ability was negatively correlated to UK based SMEs experience with email and perceived internal Internet benefits, however it was positively associated with the firms Internet information and Web effectiveness. The positive relationships could be interpreted in the following way. Speaking the customers' languages may help to develop the relationship with the customers. Also, having foreign languages other than English allows owner/managers to access foreign Web sites looking for creative ideas to make their own sites more attractive and appealing. The evidence is mostly language specific rather than a general finding across all languages. In that respect, the researcher conducted further analysis to understand this result by recoding foreign language ability as a dummy variable (English versus foreign languages). No significant association was found between owner/managers proficiency in foreign languages and UK based SMEs level of Internet commitment. This provides further support for the notion that the evidence is mostly language specific rather than a general finding across all languages.

The study shows that the level of education of the owner/managers is positively linked to UK based SMEs Internet communication, implying that educated international owner/managers are better able to deal with foreign contacts and are more receptive to new ideas like using the Internet as a communication tool.

The results also highlighted an inverse relationship between the age of owner/managers and UK based SMEs' experience with various Internet technologies

(i.e. email, WWW, corporate home page) and perceived external Internet benefits. This result reflects the ambition and drive of younger owner/managers and their positive perceptions towards risk associated with the use of technology. Meanwhile, the result confirms Zeithaml and Gilly (1983), Aaby and Slater (1989), and Lynn et al. (2002) who argue that older managers are reluctant to take risks, are less willing to innovate and to adopt the new technologies.

There is good empirical support for owner/managers perceptions of export growth being a significant determinant of UK based SMEs Internet commitment. The results highlight a positive association between perceived export growth and Internet training, interconnectivity, Internet information, Internet communication, perceived external Internet benefits and promotion on the Web. Evidently, maintaining positive outlook towards growth in international markets as opposed to domestic markets stimulates and motivates UK based SMEs to seek every possible *route* either traditional or via cyberspace to facilitate and accelerate their international expansion.

There is a significant positive association between the owner/managers perceptions of the complexity of exporting and transactions on the Web, implying that the more the owner/managers perceive exporting as a complex experience, the more transactions they will conduct over the Web to overcome some of the difficulties associated with exporting finance and obtaining payment for sales made to foreign buyers, also conducting transactions on the Web will ease communications and documentation procedures. This result supports Hamill and Gregory (1997) work which infers that “the Internet provides a low cost gateway to global markets for SMEs exporters”, thus opening up new markets as well as providing new opportunities domestically and internationally (Lymer et al., 1997; Hamill, 1997; and Pitis and Vlosky, 2000).

There was a negative association between the owner/managers perceptions of the costs associated with exporting and perceived external Internet benefits, suggesting that the more the owner/managers perceive the experience of going international incurs more costs than serving the domestic market, the less likely they will perceive



the positive external benefits associated with the use of the Internet (e.g. generating international awareness of the business, generating useful feedback from the foreign customers), given that most of these advantages are international by nature. Clearly, UK based SMEs owner/managers perceptions towards exporting experience (i.e. growth, complexity and costs) are influencing the firms' commitment to the Internet.

This study reports a positive correlation between the owner/managers work responsibility and Internet training and Internet information. This result highlights the importance of sales and marketing as the owner/managers work responsibility where they should be taken into consideration while organising Internet training courses, seminars and workshops in order to target the right staff.

The owner/managers EO behaviour (i.e. innovativeness and proactiveness) is associated with the commitment to the Internet. The owner/managers innovative behaviour was positively associated with Internet training, interconnectivity, Internet information, perceived internal Internet benefits and Web effectiveness, while a negative correlation was observed with the Intranet and transactions on the Web. Also, the owner/managers proactive behaviour is positively associated with perceived external Internet benefits, transactions on the Web and promotion on the Web. This result is consistent with Lymer et al. (1998) who find that whoever is responsible for the introduction of the Internet in UK SMEs exhibits entrepreneurial characteristics- being proactive, challenging, innovative and also computer literate. This result was anticipated as those who possess entrepreneurial characteristics are more likely to exploit the Internet enabled opportunities and show a high level of commitment to the innovation (i.e. the Internet) which entails an entrepreneurial act in itself.

#### **8/11/1 The Relationship between Firm Characteristics and UK based SMEs Level of Internet Commitment**

There is a positive correlation between firm size and Internet commitment, particularly Internet training and interconnectivity, it is worth noting that these two factors collectively represent the 'Internet resource commitment' factor. This result

signifies that the larger the firm the more likely it will allocate more resources (financial, human and technological) to the innovation. The result is consistent with Venkatraman (2000, p.22) who argues that "... The dot-com operations are a war for talent, it is a war for three types of resources- human, technological, and financial", and (Lal, 2002, p.1204) who asserts that it is the size of a firm that provides the financial resources to acquire new technology and enables spending on innovative activities.

An attempt to link firm age with Internet commitment reveals an inverse relationship, particularly with respect to Internet information, perceived external Internet benefits and experience with email, however a positive correlation was found between firm age and experience with Internet telephony. It seems that younger firms are faster in adopting and using the Internet than their counterparts, evidently, younger firms are reaping the benefits of using the innovation at an early stage, particularly in international markets. The positive correlation is understandable though, as Internet telephony represents a slightly higher level of Internet technology that firms will adopt and use as they grow larger and older in later stage of development.

#### **8/12 INTERNATIONALISATION THEORIES AND UK BASED SMEs EXPORTING FIRMS**

The internationalisation theory assumes that, in general, firms begin to internationalise via indirect export to markets which they are 'psychically close' in order to reduce the risk associated with investment in foreign operations (Johanson and Vahlne, 1977; Lau, 1992; and Dalli, 1994).

This study provides some support for the internationalisation theory, where 51.7% of the firms investigated are following the conventional models of internationalisation. The responding firms seem to internationalise in incremental steps and start exporting to the 'psychically close' country namely the USA. The USA is the first country that the majority of the firms exported to. It is not surprising that the USA and the UK have a great deal of similarity in terms of language, economic and political systems, and as a result UK firms can relatively easily perceive and exploit

opportunities in the US market. France and Germany, which are assumed to be countries close to the UK in a geographical sense, both came in second and third positions respectively. The USA as the most important export country has, needless to say, a very large domestic market both in terms of population and disposable income, offering a wealth of opportunities to entrepreneurs (Kalantaridis, 2000).

Some support for the 'born global' phenomenon has emerged with almost half the firms starting to export during the first six years of founding. Given that the present study is cross sectional in nature, this gives further support to Madsen and Servais (1997) who argue that the 'born global' phenomenon is not restricted to any particular industry, but is also visible in other manufacturing industries, as well as in services and retailing, and to Knight et al. (2001) who find that the majority of exporting firms in a traditional sector i.e. seafood sector demonstrate 'born global' features. Taken together, this evidence contradicts the general trend of studies on 'born globals' which have focused on knowledge intensive and high-technology firms (McDougall et al., 1994).

An attempt was made to explain UK based SMEs internationalisation behaviour using the resource based view. The findings indicate that the following are the most important resources for high Internet use firms. 1) using the Internet technologies, 2) maintaining positive perceptions of internal and external Internet benefits, 3) having high Internet training reflected in high investment to upgrade employees skills to ensure that the firms staff are capable of fulfilling their job roles to a standard exceeds the one achieved by competition, 4) an effective Web site, using the Web cleverly as a promotional tool and having Web enabled e-commerce to maintain current customers and attract potential ones by ensuring that the firm's Web site matches their customers expectations, and 5) owner/managers international orientation particularly their tacit knowledge gained from working, travelling, and living abroad and the capability to leverage such knowledge in a way not matched by competitors. UK high Internet use firms export involvement and success in export markets are highly attributed to these resources and competences.

In the same vein the results show that on top of the above mentioned resources except for – Web enables e-commerce and Internet technologies - using the Internet as a communication tool and as an information source, and devoting human and technological resources to Internet matters (i.e. interconnectivity) are characteristics associated with high EO owner/managers, and to which the firms' export sales growth are largely attributed.

Moreover, the results have shown that the resources and competencies of UK based SMEs are significant antecedents of the firms' internationalisation behaviour. UK based SMEs have successfully used the Internet as well as their owner/managers proactive behaviour, perceptions towards costs, profits and growth associated with exporting, level of education, work responsibility and work experience to achieve above normal returns in international markets in terms of sales growth, profitability, strategic objectives achieved, and success. Also, the owner/managers age, level of education, international orientation, foreign language ability, work responsibility, perceptions of exporting, innovative and proactive behaviour are critical determinants of UK SMEs commitment to the Internet. Consistent with Penrose (1959), Porter (1980) and Grant (1991), SMEs success in foreign markets is not due to having better resources that is difficult to imitate, but it is the result of the firms' unique capability and distinctive competence that involves deploying or transforming their available resources, hence, give the firms a source of competitive advantage over their opponents.

## **8/13 SUMMARY OF THE DISCUSSION**

Sections 8/1 to 8/12 have discussed the conclusions which have emerged from the present study, and have highlighted how they are consistent with, or opposed to, those outlined in the pertinent literatures (i.e. entrepreneurship, the Internet and exporting). The current research is one of the early empirical studies that investigate the entrepreneurship phenomenon in international markets, and also measures quantitatively the firms 'commitment to the Internet', and further examines the

relationship of 'commitment to the Internet' with export performance of UK based SMEs.

In general, high Internet use firms have exhibited a moderate level of commitment to the innovation, their owner/managers had a high need for achievement, high perceptions of export growth, a high level of education (possessing degree or postgraduate degree) and they were internationally orientated and bilingual. Further, high Internet use firms were significantly involved in export markets. Although the percentage of new ventures was higher among high Internet use firms, the findings related to 'born global' phenomenon was not significant.

High EO owner/managers exhibited a high level of innovativeness, moderate proactivity and risk taking. They had a high need for achievement, high perceptions of export growth and low perceptions of export complexity. No formal qualifications significantly distinguished between high and low EO owner/managers, yet the percentage was higher in low EO owner/managers, and they were internationally orientated particularly with respect to travel abroad. Moreover, high EO owner/managers exhibited a low to moderate level of Internet commitment. Finally, the age of the firm and sales growth significantly distinguished between high and low EO owner/managers. Also 'born global' phenomenon significantly differentiated between high and low EO owner/managers.

The study also highlighted that the owner/managers perceptions towards export growth, costs and profits, their proactive behaviour, work experience, and work responsibility, as well as their level of education were significant determinants of export performance. Critical antecedents of UK based SMEs export success included: using the Internet as an information source, the firms' Web site as a promotional tool, having higher perceptions of external Internet benefits, allocating enough resources to the Internet (i.e. human and technological) and further using the Internet technologies (i.e. email and Intranet).

The research suggested that the owner/managers EO behaviour namely (i.e. innovativeness and proactiveness), international orientation, foreign language ability,

age, level of education, work responsibility and their perceptions of growth, costs, and complexity associated with exporting were significant determinants of UK based SMEs Internet commitment.

Finally, the present study provided some support to the internationalisation theory. Almost half of the responding firms were following the conventional models of internationalisation where they were exporting to a 'psychically close' country first, while the other half of the firms were 'early international' where they started exporting during the first six years of founding. Additionally, the result supported the resource based view among UK based SMEs.

The implications of these conclusions for different parties including firms and policy makers will subsequently be outlined (see section 8/15).

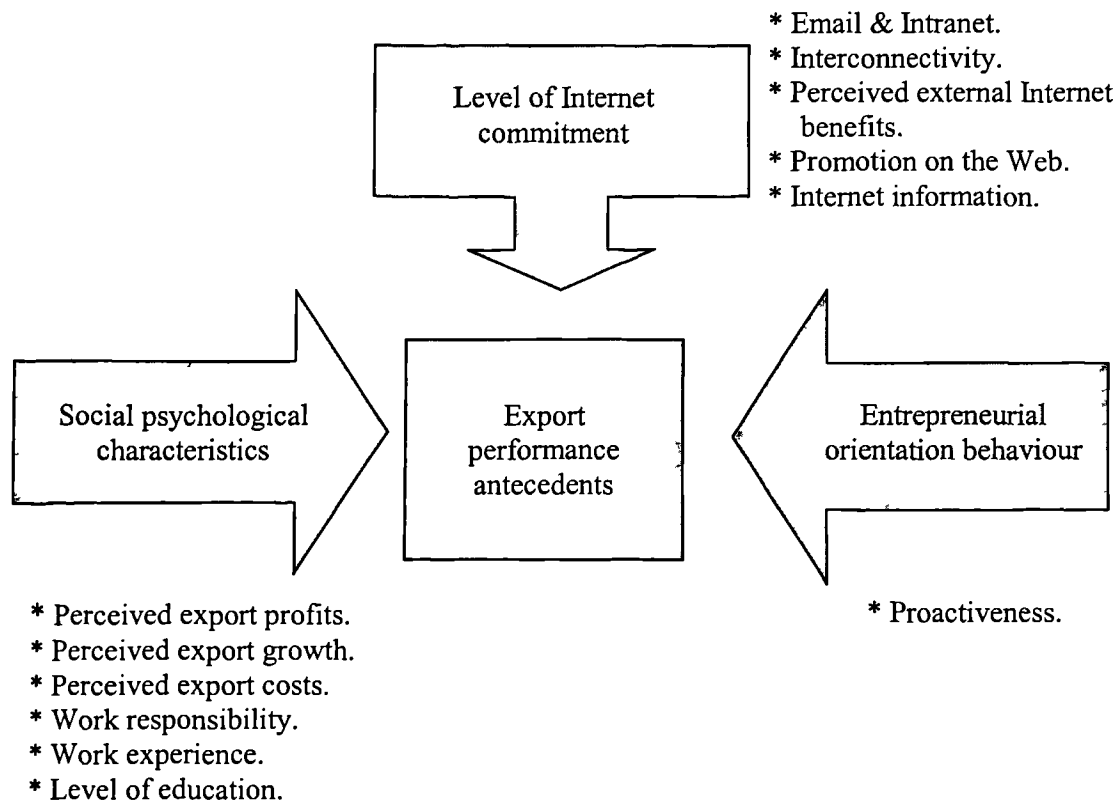
#### **8/14 RESEARCH CONTRIBUTIONS**

The originality of the present research stems from the fact that there is a dearth of empirical evidence on the impact of entrepreneurship characteristics and the Internet on the export performance of SMEs. Unlike the general trend in exporting studies that concentrates on larger firms this research has focused on small and medium sized (SMEs) exporting firms. The findings have shown that the determinants of export performance of SMEs include a mixture of influential factors at both owner/managers and firm levels. These antecedents reflect the current environment where globalisation and advances in information and communication technology (ICT) provide opportunities for SMEs and give them hope to participate more effectively in international markets.

To better consider the research contributions, the research findings in chapter seven were used to develop a model of the antecedents of SMEs export performance (see Figure 8.1). The model encapsulates the research key findings with respect to UK based SMEs export performance. The export performance of SMEs is influenced by a mix of significant factors at the owner/managers level and the level of the firm. The export performance of SMEs is induced by such owner/managers characteristics as perceptions towards export profits, growth and costs, work responsibility and

experience, level of education and proactiveness, also by the level of Internet commitment of the firm which includes email, Intranet, interconnectivity, perceived external Internet benefits, promotion on the Web and Internet information.

**Figure (8.1) Export Performance Antecedents**



Source: The researcher.

This study has contributed to the exporting literature by examining multiple export performance measures, both objective and subjective, in relation to several possible antecedents. By doing so, the accuracy of the study has been enhanced as a result of realising the strengths of each indicator, and minimising the impact of their shortcomings, and by improving the explanatory power between independent and dependent variables of performance (Evangelista, 1994). Also, using multiple export performance measures has given more reliability to the study and has lessened the measurement error (Churchill, 1987). Finally, using multiple measures has provided a reasonable and better picture of export performance, since different measures of export performance captured different aspects of the strategic and operational

phenomena (Cooper and Kleinschmidt, 1985; and Dominguez and Sequeria, 1993). The understanding and further improving of the comprehension of these relations are significant. The insights can be used as starting points for the pursuit of activities to realise higher export performance, something which is often considered the ultimate criterion in both empirical and conceptual studies in entrepreneurship, exporting or small business research.

This research has also contributed to the exporting and entrepreneurship literatures by responding to the persistent call from previous researchers (Yeoh and Jeong, 1995; Ibeh, 1998; Lyon et al., 2000; Lumpkin and Dess, 2001; and Ibeh and Young, 2001) to explicitly consider the multiple dimensions underlying the entrepreneurial orientation (EO) concept used in this study. Moreover, by investigating entrepreneurship approaches in exporting markets, the current study has added to the few empirical studies that focus on international entrepreneurship, and has shed some light on this phenomenon.

The study has contributed to theory by adding to the few empirical studies based on the Resource Based View (RBV). The results showed the richness of RBV perspective as the basis for assessing the ability of SMEs to exploit the Internet as a *route* through which they enhance their performance in cyberspace markets. Also, this perspective has helped to explain how possession of superior managerial characteristics can serve as fundamental advantages which improve SMEs performance in international markets.

The study has contributed to methodology in four ways. First, using multiple indicators of export performance which have been pre-tested and validated in previous studies (i.e. Cavusgil and Zou, 1994), the findings show that relative to the objective measures (i.e. sales growth, profitability), the subjective measures (i.e. the self assessment approach that includes perceived self success and competitors' perceptions of the firm's export success) have shown to be more effective and valid indicators of performance, and by using them in conjunction with objective measures they gave a comprehensive assessment of export performance (Venkatraman and Ramanujan, 1987; Doyle and Hooley, 1992; and Douglas, 1996).



Second, the study has used an interdisciplinary approach, by using pre-tested and validated export performance constructs, integrating and exploring them in emerging fields (namely, international entrepreneurship and Internet). Hence this helps identifying new antecedents of export performance that reflect the new economy, Internet and e-commerce, in which the firm operates, and further address persistent calls for more interdisciplinary research among international business researchers.

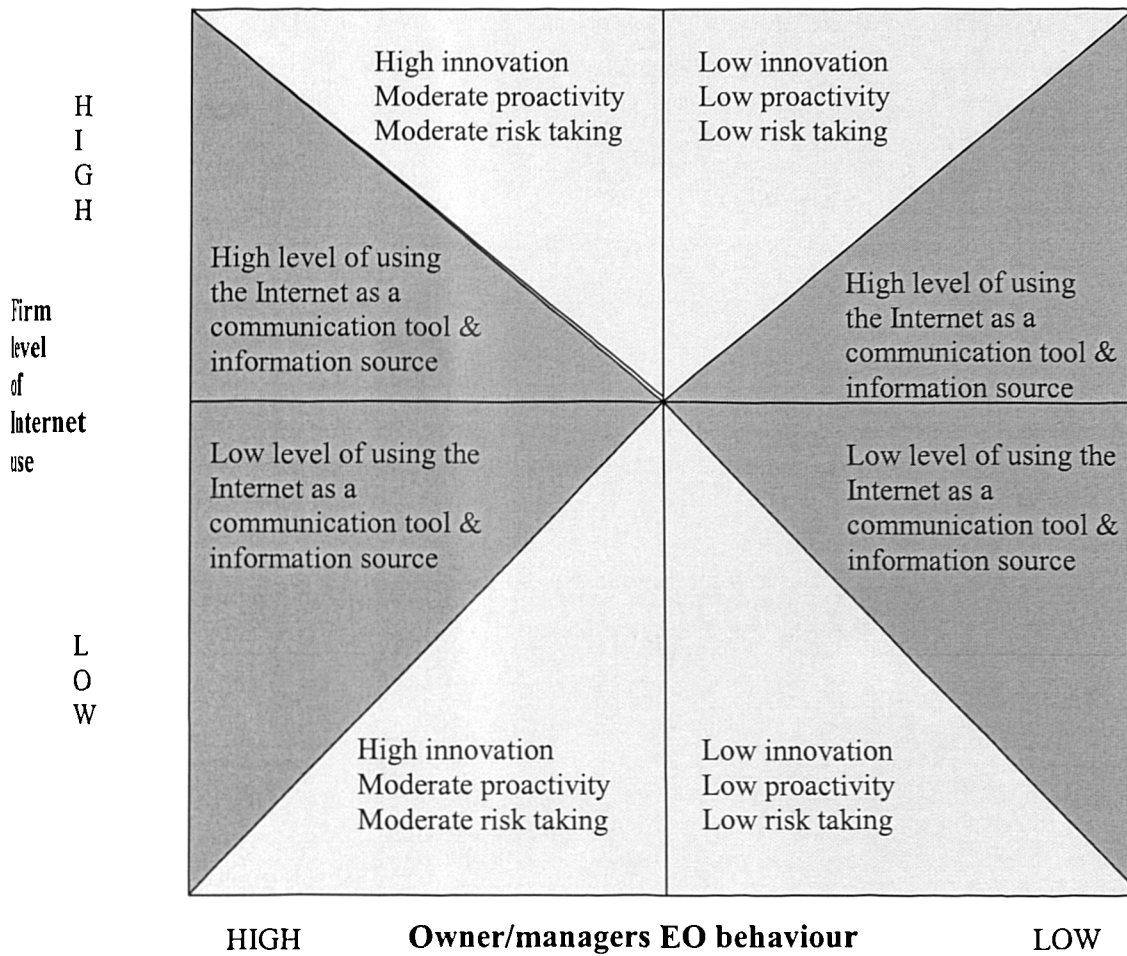
Third, utilising multivariate statistical techniques (i.e. cluster analysis, stepwise discriminant analysis and stepwise regression analysis) to allow the impact of a limited number of explanatory factors to be considered jointly (Westhead, 1995; McDougall and Oviatt, 1997; and Westhead et al., 2001), hence, overcoming a limitation repeatedly acknowledged in the majority of exporting studies that have often only presented univariate cross-tabulations (Masurel, 2001, and Westhead et al., 2001).

Finally, owing to the absence of a comprehensive construct that measures firms' level of Internet commitment, this study has extracted a set of criteria from the relevant literature and preliminary interviews with practitioners in order to develop a detailed scheme that allows the assessment of this concept (i.e. firms' level of Internet commitment). It is worth emphasising that this construct has a high level of reliability and validity which is also supported by the relatively high explanatory values for some of the explored relationships (see regression models, chapter 7).

## **8/15 RECOMMENDATIONS**

Following the stream of exporting studies that call for sensitive export promotion assistance programmes for small firms, that take into consideration their needs at different stages of development, the current study pursues the same needs-based approach adopted by previous researchers (e.g. Keng and Jiuan, 1988; Bell, 1994; and Ibeh, 1998). Unlike the Boston Consultant Group matrix (BCG), the two controlling aspects in this research matrix are the firms' level of Internet use and the owner/managers entrepreneurial orientation behaviour, four categories of UK based SMEs exporting firms are established (see Figure 8.2).

**Figure (8.2) Exporting Firms by Level of Internet Use and Owner/Managers Entrepreneurial Orientation Behaviour**



Source: The researcher.

**8/15/1 High Internet Use Firms / Low EO Owner/Managers**

Looking at the firm level, evidently exporting firms in this category have the competencies and capabilities that allow them to succeed in international markets. These competencies are reflected in using the Internet on a large scale. According to the findings firms in this category are moderately committed to the Internet (e.g. resource commitment, Web function, perceived external and internal Internet benefits). However, it is believed that firms in this category are at a competitive disadvantage at the management level. Lacking entrepreneurially orientated owner/managers, as well as trained and skilled personnel who are capable of using

the firms' available resources will hinder these firms from making the best use of the technology.

These firms have a variety of solutions to leverage their weakness that is emphasised at the management level. For instance, they can hire employees who already have some degree of entrepreneurial orientation. Also, given that entrepreneurial orientation is a type of behaviour that may be acquired and further improved by learning from experience, firms may organise access to development courses either internally or externally. During these development courses managers can be exposed to a variety of simulations which encourage them to deal with situations which are risky and uncertain. Such courses may improve the skills of the owner/managers and possibly increase self-confidence in taking risky decisions.

If compared with BCG matrix, firms in this category would match the problem child, meaning that they would consume resources and generate little in return, however, they have the potential to become stars if provided with the right assistance and training programmes as highlighted earlier. The former should be perceived in view of the government prospect to exporting as a way to accumulate foreign exchange reserves, increase employment levels, improve productivity, and enhance societal prosperity (e.g. Katsikeas et al., 2000).

### **8/15/2 Low Internet Use Firms / High EO Owner/Managers**

Firms in this category are in an exact opposite situation to the one discussed earlier, where the firms have excellent human resources reflected in high EO owner/managers (i.e. innovative, proactive and risk taking), yet, faced with greater levels of uncertainty and/or ignorance, SMEs find it quite difficult to embrace the Internet effectively at a high level. The government has a role to play in order to remove the barriers (e.g. lack of resources, information, and technophobia) that impede SMEs from integrating the Internet in their business.

For instance, the government could organise seminars targeted at SME exporting firms with a low level of Internet use. The aim is threefold: first, to introduce SMEs to the new technology in order to overcome their 'technophobia', second, to help

them exploit the potential benefits of the emerging technology (i.e. the Internet) and third, to advise them on how to use the technology effectively in order to improve their overall performance. Moreover, government agencies should encourage the implementation of Internet-e-commerce by ensuring a reasonable telecommunication infrastructure which provides easy access to the Internet. These actions may help to remove some anxieties about Internet adoption and use.

Within the firm, owner/managers are encouraged to use their skills to better exploit their firms' available resources. The target is to improve overall performance, particularly in international markets to ensure firms survival in a highly globalised marketplace.

Firms in this category correspond to products in the cash cow cell in BCG matrix. It is assumed that the appropriate coordination and harmonisation between SMEs entrepreneurially orientated owner/managers and the government effort manifested in organising assistance programmes as highlighted earlier, will help the targeted SMEs to generate more than it is invested in them. In other words, such assistance programmes will help improve SMEs overall performance in export markets.

### **8/15/3 Low Internet Use Firms / Low EO Owner/Managers**

Firms in this category have a deficiency at both the firm and management level. At the firm level, the use of the Internet is not wide spread, which might be the result of a lack of financial resources, as well as a serious shortage of trained, skilled and experienced personnel capable of using the innovation effectively. In addition, at the management level, these firms lack entrepreneurially orientated owner/managers who are ready to develop the use of the Internet in their firms. In this sense, the problem with this category of firms is twofold, on one hand, if SMEs can afford the technology, they lack the trained personnel to use it, and on the other hand, if they have the appropriate owner/managers, they will encounter financial problems which will hamper their use of the Internet.

Where SMEs are facing financial problems, they should seek every possible option to get the appropriate fund. In that respect, the UK government has launched the

Small Business Service (SBS) in April 2000 that runs national services to help small firms achieve their potential, such as the Small Firms Loan Guarantee Scheme, the High Technology Fund, and Smart Grants for Technology Transfer.

For SMEs to overcome their lack of entrepreneurially orientated and technically skilled owner/managers, the government could initiate computer-based training programmes similar to ones run for US firms where the aim is to provide SMEs with trained personnel at both technological and managerial level. At the technological level, the exposure to the technology will reduce and eliminate the fear and resistance to the use of the technology. At the managerial level, during these courses SMEs owner/managers are able to take decisions about simulated business opportunities, and they can also learn from, and share experiences with, other owner/managers attending the programme. Based on the US models, these computer-based training programmes should be flexible with respect to place, time, and speed of the delivery. The courses could be taken in a variety of locations, and the owner/managers can adjust the programme to suit their own pace of learning. Course leaders are able to track the progress of the owner/managers and monitor the completion of the course.

Firms in this category are similar to products in the dog cell in BCG matrix. These products absorb cash from the firm instead of generating it, therefore it is better to get rid of them. However, it is believed that following some of the aforesaid recommendations will assist these firms, and help them realise their potential and improve their overall performance.

#### **8/15/4 High Internet Use Firms / High EO Owner/Managers**

Firms in this category benefit from using the Internet on a large scale, as well as have the appropriate management capabilities that are suitable to cope with such technology. Firms in this particular cell evidently need less assistance from the government with respect to training programmes, and getting funds, or loans to build a technology infrastructure. These firms match the stars in BCG matrix, they tend to generate high amounts of income, yet, they have to keep themselves up dated particularly while working in such a rapidly changing technological environment.

Nevertheless, the government should encourage these firms to share their experiences and knowledge with firms in other cells (see Figure 8.2), by promoting networking and partnership with them, and to hold responsible - as part of their social responsibility - for helping them overcoming the abovementioned weaknesses.

Finally, the needs based approach adopted in this research suggests that viewing either the firms' level of Internet use, or their owner/managers entrepreneurial orientation behaviour as the exclusive force of SMEs export performance may be dealing with only one side of the coin.

## **8/16 IMPLICATIONS**

### **8/16/1 Managerial Implications for SMEs**

It is suggested that SMEs compare their own profiles with the profile of successful exporting firms, at both the firm and the management level, developed in this study (see Figure 8.1). This might serve as a useful way to boost their firms' growth, improve their financial performance, strengthen their competitive, edge and further ensure their survival in a rapidly changing international business climate (Samiee and Walters, 1990).

It is also suggested that SMEs, for recruitment purposes, should consider the two validated successful owner/managers profiles exhibited in this study (i.e. related to export performance and level of Internet commitment). It is worth noting though that the entrepreneurial profile pertinent to Internet commitment will directly enhance the firms' performance, as there is much in common between the two profiles. Hence, as mentioned earlier, such profiles could be useful in determining the qualifications and criteria for recruitment purposes, and for identify the characteristics of managers that could be developed with the intention of improving export performance.

In this study UK based SMEs exporters are moderately committed to the Internet, and are considered to be at an early stage in terms of the effective use of the technology. For instance, they are missing out on the benefits of using the Extranet to contact suppliers and distributors, resulting in a failure to see the possible changes of

the use of the Extranet on the number of middlemen the firm needs and on the firm's administrative procedures. In this respect, it is recommended that there should be a collaborative effort between SMEs and the government in order to have a formalised policy and infrastructure in place to facilitate the sharing of knowledge about the Extranet and other Internet technologies among SMEs and their divisions.

However, a recent survey has shown that some 71% of UK government bodies researched did not have an Extranet facility, interesting enough given that one of the main thrusts of Prime Minister Blair's New Labour Government in the UK is an emphasis on modernisation through the medium of Internet technology (Healy and Iles, 2002, p.120). To this end, government bodies should look at themselves first to corroborate that they do prioritise basic Internet connectivity and infrastructure.

### **8/16/2 Implications for Policy Makers**

It is recommended that policy makers and practitioners who want to improve small and medium sized firms export performance should bear in mind that different firms should be targeted with different export promotion assistance schemes and international business education programmes. Both export promotion assistance schemes and education programmes should not only correspond to their export development stage, but also to their owner/managers entrepreneurial orientation, and further to their level of Internet use, as exporters must learn and train how to operate internationally via the Internet.

It is worth emphasising that the UK government is currently using the Internet particularly to support small firms to go international via the Web sites [www.tradeuk.com](http://www.tradeuk.com) and [www.british-exports.com](http://www.british-exports.com), both of which have a comprehensive database of British exporters which provide key information (e.g. telephone number, address, SIC code). To further ease and encourage more firms to go international, the government could imitate El-Salvador's electronic export system that enables exporters to obtain electronically via the Internet all the required documents and the corresponding authorisation at any time (Anonymous, [International Trade Forum], 2001). To this end, the government will be helping to

overcome the negative perceptions towards the costs of exporting evident in this study.

In the same way, the government could use the media and technology (i.e. launching Web sites) to create awareness of information and communication technology (ICT) among SMEs, and to overcome their lack of knowledge of Internet technologies. The government could also publicise and build awareness of how Internet-e-commerce enabled SMEs internationalisation, thereby opening up more opportunities to those already engaged in international markets, meanwhile motivate and possibly stimulate other SMEs to go international. It is suggested that the government could organise training programmes in all areas of ICT in order to fulfil the SMEs need for personnel with the requisite skills and experience for e-matters.

The government could also develop the SMEs level of Internet use by establishing telecommunications development funds to finance projects to improve and facilitate their access to information and communication technology. There is an opportunity for local business networks of mentors/experts, peers and business associations to lobby the relevant authorities and providers to expand the IT network.

The government can encourage SMEs to seek the appropriate governmental assistance that corresponds to the level of technology in their firm, hence, encouraging them to be more Internet-technology orientated. Finally, it could be useful to monitor and evaluate the implementation of information and communication technology programmes in SMEs.

## **8/17 RESEARCH LIMITATIONS**

The empirical findings and implications drawn from this study must be interpreted in the light of a number of limitations.

Firstly, the context in which the present study was conducted is quite limited. The research is restricted to UK based small and medium sized manufacturing exporters firms. Given that SME manufacturing exporters may operate differently relative to service firms, larger firms, and exporting firms operating in other countries (e.g. Carson, 1990; and Carson and Cromie, 1990), it is recommended that the specific



features of the research background should be taken into consideration when interpreting and generalising these results to other exporting *milieu*.

Secondly, this study is exploratory in nature, and cross sectional as it investigates four different industries namely, (i.e. biotechnology and instrumentation, computers and office machineries, textiles, clothing and fur, and food and beverages). This limitation restricts the generalisability of the research findings to other populations (e.g. industries) in the UK or elsewhere.

Thirdly, it is worth noting that the research findings correspond only to the level of UK based SMEs Internet commitment in export markets at the time of this study, therefore, the current research results should be regarded as an indicative and not conclusive.

### **8/18 DIRECTIONS FOR FUTURE RESEARCH**

Future research should be designed to overcome some of the limitations of this study.

First, although costly, difficult and time-consuming, applying longitudinal approaches in future empirical studies are more likely to provide additional insights into the dynamic aspects of the Internet enabled international entrepreneurship and firms' export performance than cross-sectional studies.

Second, future research efforts should extend the scope of this study by including important contextual variables such as, the external environment (e.g. politics, competition), and/or strategy to the research framework, which may help explain some of the insignificant findings in this study. One direction for future research is to investigate the barriers that hinder firms' commitment to the Internet (e.g. relationship with distributors, type of product, and lack of human, financial and technological resources), also exploring security of personal information and information overload, where the number of Web sites and the volume of information on the Internet are growing exponentially.

Third, further testing in other environments of the reliability and validity of firms' level of Internet commitment construct is required. The processes by which the Internet improves SMEs export performance needs to be explored further and additional Internet related variables which influence firm performance need to be identified.

Fourth, future empirical enquiries would benefit if replications of this study can be carried out in other exporting contexts that use different levels of analysis (e.g. individual product-market venture, industry sector, country, technology intensity) bearing in mind that this study used both the firm-level and the owner/managers level to measure its major constructs. Furthermore, the nature of IT and the Internet domain is subject to extremely rapid technological change, in addition to the growing trend among businesses to adopt the Internet infrastructure more widely and intensively, particularly in international markets, provide further support for the replication of the present study.

Fifth, future research should focus on firms outside the manufacturing sector, and across other sizes of firms in order to determine whether the conclusions reached in this study are applicable in the context of other areas of UK business community. For instance, future research should include coverage of SMEs operating in service sectors. Services deserve to be studied separately as they are the fastest growing area of UK economy, and the use of the Web in the internationalisation of services in general, as well as the intensive use of information by knowledge-based industries suggesting that the Internet and e-commerce will enhance the growth of service exports by enabling SMEs to participate further in international trade (Dunt and Harper, 2002).

Sixth, the present study relies on a single informant who had knowledge of the firms export activities and their level of Internet commitment. However, the use of multiple respondents from each firm is preferable and would provide more credible data. Multiple respondents could be chosen from several departments (e.g. marketing, finance) and from various management levels, so that the analysis could

be extended to see how employees in separate departments and at various management levels differ with respect to the major variables in this study.

Finally, despite using multivariate analysis to test this study's propositions, perhaps future studies could use different statistical techniques (e.g. path analysis, structural equation modelling - SEM) that can provide better insights and understanding of the relationships among the core factors in the study (e.g. entrepreneurs characteristics, Internet commitment and export performance). Also, future studies should consider utilising multiple methodologies (i.e. quantitative and qualitative) to help identify the key factors behind firms' commitment to the Internet. The aim behind using different statistical techniques and/or plural methodologies is to validate and further strengthen the existing research findings.

It is the researcher's hope that the findings, recommendations and suggestions for future research in this thesis have contributed meaningfully to the understanding of UK based exporting SMEs who use the Internet technologies and will stimulate further research in the area.

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**APPENDIX 1**  
**RESEARCH QUESTIONNAIRE**



**Dear Sir/Madam,**

In fulfilment of the requirements for the award of a Ph.D. (Marketing) degree of the University of Strathclyde, Glasgow, Scotland, United Kingdom. I am carrying out research into *the impact of the Internet on export success*. As you are aware, many manufacturers' exporters use the Internet in some way, even if it is relatively minor, yet its influences on their export performance are not clear.

The investigation aims at collecting data on international managers' characteristics, firms international orientation, firms' Internet use and performance of *UK Small and Medium Sized Exporting Firms*.

Your company is part of a representative sample of *UK (e.g. Food and beverages, Biotechnology, Computer and Office Machinery, Textiles, Clothing and Fur) Manufacturing Firms selected from a database of national exporters*.

I would very much appreciate if you kindly complete the enclosed questionnaire, I would be also grateful if you tried to answer all questions, taking into consideration that there is no right or wrong answer. If none of the response choices exactly corresponds with your opinion, please select the choice that best approximates your ideal response. Then kindly return the questionnaire in the pre-paid envelope that is enclosed for your convenience.

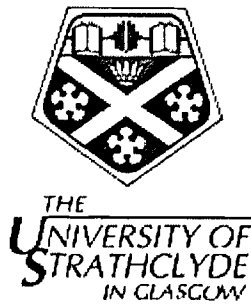
I would like to assure you that all responses provided would be treated as *highly confidential and anonymity of respondents will be preserved*. Further the findings will be reported on an aggregate level.

I will be very willing to send you a *free copy of the executive summary of the research findings* if you so enclosed a business card including your e-mail address along with the completed questionnaire.

Thank you very much indeed for your assistance and support

Yours sincerely





## GENERAL QUESTIONNAIRE GUIDELINES

1. This questionnaire is designed for **UK based exporting firms with less than 250 employees**. The participants should be **manufacturers** with at least **3 years experience in exporting**.
2. It is very important that an individual with major responsibilities for export marketing decisions in your company fills out this questionnaire. If someone in your firm is better qualified than you please pass this questionnaire to him or her.
3. I would like to assure you that all the information provided by you will be treated as highly confidential and the anonymity of respondents will be preserved
4. On request, respondents will be sent a copy of the executive summary of the research findings. Please enclose a business card including your e-mail address along with the completed questionnaire to enable us to forward the executive summary to you in March 2002. Please also enclose a business card if you wish to be removed from the mailing list, or if you are unable to complete the questionnaire for whatever reason.

Thank you very much indeed for your assistance and support.

## QUESTIONNAIRE

The following section deals with entrepreneurial characteristics.

### I. ENTREPRENEURS CHARACTERISTICS:

**Q1 Please indicate the extent to which you *disagree or agree* with the following statements, using the scale provided ranging from 'strongly disagree' to 'strongly agree'.**

Please circle your response on the scale below

	<u>Strongly disagree</u>		<u>Neutral</u>			<u>Strongly agree</u>	
I do my best work when my job assignments are fairly challenging.	1	2	3	4	5	6	7
I try very hard to improve on my past performance at work.	1	2	3	4	5	6	7
I take moderate risks and stick my neck out to get ahead at work.	1	2	3	4	5	6	7
I try to avoid any added responsibility in my job.	1	2	3	4	5	6	7
I try to perform better than my co-workers.	1	2	3	4	5	6	7

**Q2 Please indicate the extent to which you *disagree or agree* with the following statements, using the scale provided ranging from 'strongly disagree' to 'strongly agree'.**

Please circle your response on the scale below

	<u>Strongly disagree</u>		<u>Neutral</u>			<u>Strongly agree</u>	
A good job is one where what is to be done and how it is to be done are always clear.	1	2	3	4	5	6	7
What we are used to is always preferable to what is unfamiliar.	1	2	3	4	5	6	7
A person who leads an even, regular life in which few surprises or unexpected happenings arise, really has a lot to be grateful for.	1	2	3	4	5	6	7
It is more fun to tackle a complicated problem than to solve a simple one.	1	2	3	4	5	6	7
People who insist upon a yes or no answer just don't know how complicated things really are.	1	2	3	4	5	6	7
Many of our important decisions are based upon insufficient information.	1	2	3	4	5	6	7

**Q3 Please indicate the extent to which you *disagree or agree* with the following statements, using the scale provided ranging from ‘strongly disagree’ to ‘strongly agree’.**

	<u>Please circle your response on the scale below</u>						
	<u>Strongly disagree</u>			<u>Neutral</u>			<u>Strongly agree</u>
In the long run people get the respect they deserve in this world.	1	2	3	4	5	6	7
Unfortunately, an individual’s worth often passes unrecognised no matter how hard he/she tries.	1	2	3	4	5	6	7
Becoming a success is a matter of hard work, luck has little or nothing to do with it.	1	2	3	4	5	6	7
Getting a good job depends mainly on being in the right place at the right time.	1	2	3	4	5	6	7
When I make plans, I am almost certain that I can make them work.	1	2	3	4	5	6	7
It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.	1	2	3	4	5	6	7
In my case getting what I want has little or nothing to do with luck.	1	2	3	4	5	6	7
Many times we might just as well decide what to do by tossing a coin.	1	2	3	4	5	6	7
Who gets to be the boss often depends on who was lucky enough to be in the right place at the right time.	1	2	3	4	5	6	7
Getting the people doing the right thing depends upon ability, luck has little or nothing to do with it.	1	2	3	4	5	6	7
Most people don’t realise the extent to which their lives are controlled by accidental happenings.	1	2	3	4	5	6	7
There really is no such thing as “luck”.	1	2	3	4	5	6	7
In the long run the bad things that happen to us are balanced by the good ones.	1	2	3	4	5	6	7
Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.	1	2	3	4	5	6	7
Many times, I feel that I have little influence over the things that happen to me.	1	2	3	4	5	6	7



**4.5 In dealing with its competitors my firm ....**

**Strongly disagree**

(Please circle your response on the scale below)

Is very seldom the first business to introduce new products, administrative techniques, operating technologies, etc..

1    2    3    4    5    6    7

**Strongly agree**

Is very often the first business to introduce new products, administrative techniques, operating technologies, etc..

**4.6 In dealing with its competitors my firm.....**

**Strongly disagree**

(Please circle your response on the scale below)

Typically seeks to avoid competitive clashes, preferring a “live and let live” posture.

1    2    3    4    5    6    7

**Strongly agree**

Typically adopts a very competitive, “undo the competitors” posture.

**4.7 In general, the top manager(s) of my firm has.....**

**Strongly disagree**

(Please circle your response on the scale below)

A strong tendency to take on low risk projects (with normal & certain rates of return).

1    2    3    4    5    6    7

**Strongly agree**

A strong tendency to take on high risk projects (with some chances of success but a very high rate of return).

**4.8 In general, the top managers of my firm believe that .....**

**Strongly disagree**

(Please circle your response on the scale below)

Due to the conditions in which the firm operates, it is best to act cautiously to achieve objectives.

1    2    3    4    5    6    7

**Strongly agree**

Due to the conditions in which the firm operates, bold acts are necessary to achieve objectives.

**4.9 When confronted with decision making situations involving uncertainty, my firm.....**

**Strongly disagree**

(Please circle your response on the scale below)

Typically adopts a cautious, “wait & see” posture in order to minimise the probability of making costly decisions.

1    2    3    4    5    6    7

**Strongly agree**

Typically adopts a bold, aggressive posture in order to maximise the probability of exploiting potential opportunities.

**Q5 Please indicate your *perception* of the following aspects of exporting compared with the domestic market, using the scale provided ranging from ‘much less than domestic’ to ‘much more than domestic’.**

**Please circle your response on the scale below**

	<u>Much less than domestic</u>		<u>About the same as domestic</u>		<u>Much more than domestic</u>
The risks of exporting are	1	2	3	4	5
The profits from exporting are	1	2	3	4	5
The costs of exporting are	1	2	3	4	5
The growth of exporting is	1	2	3	4	5

**Q6 Please indicate your *perception* of the following aspects of exporting compared with the domestic market, using the scale provided ranging from ‘strongly disagree’ to ‘strongly agree’.**

**Please circle your response on the scale below**

	<u>Strongly disagree</u>		<u>Neutral</u>		<u>Strongly agree</u>
Obtaining payment for sales made to foreign buyers is relatively simple.	1	2	3	4	5
Obtaining export financing is a complicated process.	1	2	3	4	5
The paper work involved in processing an export sale is easy to understand.	1	2	3	4	5
Evaluating the performance of sales distributors in foreign markets is difficult.	1	2	3	4	5
Export financing is easy to get.	1	2	3	4	5
Exporting is just too complicated to be bothered with.	1	2	3	4	5
Locating sales agents/distributors in foreign markets is easy.	1	2	3	4	5
My firm would check on the credit rating of a foreign buyer before responding to an inquiry.	1	2	3	4	5



**Q13 Please indicate *the extent to which* you ‘disagree’ or ‘agree’ that using the Internet is part of your every day work for exporting?.....**

**Please circle your response on the scale below**

<u>Strongly disagree</u>		<u>Neutral</u>		<u>Strongly agree</u>
1	2	3	4	5

**Q14 Please indicate *the extent to which* you use the Internet to do the following, using the scale provided ranging from ‘Virtually never’ to ‘Always’.**

**Please circle your response on the scale below**

	<u>Virtually never</u>				<u>Always</u>
	1	2	3	4	5
Contacting your overseas customers.	1	2	3	4	5
Contacting your overseas suppliers.	1	2	3	4	5
Contacting employees.	1	2	3	4	5
Dealing with international public authorities.	1	2	3	4	5
Receiving overseas orders.	1	2	3	4	5
Receiving overseas enquiries.	1	2	3	4	5
Ordering goods and services from abroad.	1	2	3	4	5
Recruiting personnel.	1	2	3	4	5
Identifying foreign competitors.	1	2	3	4	5
Identifying foreign distributors.	1	2	3	4	5
Identifying potential business partners.	1	2	3	4	5
Identifying potential foreign customers.	1	2	3	4	5
Identifying foreign technologies.	1	2	3	4	5
Identifying foreign markets.	1	2	3	4	5



**Q15 Please indicate whether the *effects of the Internet* have been positive or negative, using the scale provided ranging from ‘Very negative’ to ‘Very positive’**

	<u>Please circle your response on the scale below</u>				
	<u>Very negative</u>		<u>No effect</u>		<u>Very positive</u>
The Internet has changed our firm’s overall image.	1	2	3	4	5
Use of the Internet has changed our firm’s sales.	1	2	3	4	5
The Internet has changed the number of middlemen our firm needs in distribution.	1	2	3	4	5
The Internet has changed our firm’s order processing costs.	1	2	3	4	5
The Internet has changed our administrative procedures.	1	2	3	4	5
The Internet has changed the extent to which we contract out services, e.g. Warehousing.	1	2	3	4	5

**Q16 Please indicate the *effects of the Internet on the following*, using the scale provided ranging from ‘Strongly disagree’ to ‘Strongly agree’.**

	<u>Please circle your response on the scale below</u>				
	<u>Strongly disagree</u>		<u>Neutral</u>		<u>Strongly agree</u>
Use of the Internet has helped our firm to penetrate unfamiliar foreign markets.	1	2	3	4	5
Use of the Internet has helped to develop relationship with our customers.	1	2	3	4	5
Use of the Internet has helped to generate international awareness of our business.	1	2	3	4	5
Use of the Internet has generated useful feedback from our foreign customers.	1	2	3	4	5
Use of the Internet has given our firm a competitive advantage over rivals.	1	2	3	4	5
Use of the Internet has helped our firm to attract new customers.	1	2	3	4	5

**Q17 Please describe one example of an export arrangement that has been affected by using the Internet.**

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**Note: If your firm does not have a web site, please go directly to Q 21.**

**Q18 What is your firm's Web site address (URL) please:**

http://\_\_\_\_\_

**Q19 Please indicate *the extent to which* you use your Web site to do the following, using the scale provided ranging from 'Virtually never' to 'Always'.**

	<u>Please circle your response on the scale below</u>				
	<b><u>Virtually</u></b>				<b><u>Always</u></b>
	<b><u>never</u></b>				
Presenting, publicising and promoting our firm on the WWW.	1	2	3	4	5
Presenting our firm's products on the WWW.	1	2	3	4	5
Selling our firm's products via ordering on line.	1	2	3	4	5
Distributing our firm's products directly via the internet.	1	2	3	4	5
Offering after sales service.	1	2	3	4	5
Tracking progress of orders.	1	2	3	4	5

**Q20 Please indicate *the importance of* the following statements as far as your Web site is concerned, using the scale provided ranging from 'Not important at all' to 'Very important'.**

	<u>Please circle your response on the scale below</u>				
	<b><u>Not important</u></b>				<b><u>Very important</u></b>
	<b><u>at all</u></b>				
We update our web site on a weekly basis.	1	2	3	4	5
We investigate our web site's effectiveness by checking who accesses it on a weekly basis.	1	2	3	4	5
We check how fast our Web site can be downloaded on a weekly basis.	1	2	3	4	5
We research the perceptions of users of our web site.	1	2	3	4	5
We use language(s) other than English in our Web site.	1	2	3	4	5
Our web site is well organised and easy to navigate.	1	2	3	4	5
Our web site is supported with a query form and/or FAQ page	1	2	3	4	5

The following section deals with export performance.

**III. EXPORT PERFORMANCE**

Q21 Please indicate the 1<sup>st</sup> country ever that you exported to?

Country \_\_\_\_\_ Year \_\_\_\_\_

Q22 Please indicate the number of countries your firm currently exports to? \_\_\_\_\_

Q23 Please indicate the most important country / market you export to

\_\_\_\_\_

Q24 Please indicate how many years the firm has been exporting?

\_\_\_\_\_

Q25 Please indicate your firm's export ratio for the financial year 2000-2001, measured by the volume of export sales as a proportion to total sales \_\_\_\_\_ %

Q26 In the table below, please indicate your firm's sales growth rates in the last five years of exporting activity (where relevant), where year one is the most recent year.

<b>Sales growth</b>					
<b><u>Please circle your response on the scale below for each year</u></b>					
	1-5 %	6-10 %	11-15 %	16-20 %	20+ %
Year 1	1	2	3	4	5
Year 2	1	2	3	4	5
Year 3	1	2	3	4	5
Year 4	1	2	3	4	5
Year 5	1	2	3	4	5

Q27 In the table below, please indicate whether your firm has made a profit, broken-even or made a loss, in the last five years of exporting activity (where relevant), where year one is the most recent year.

<b>Profitability</b>			
<b><u>Please circle your response on the scale below for each year</u></b>			
	Loss	Break-even	Profit
Year 1	1	2	3
Year 2	1	2	3
Year 3	1	2	3
Year 4	1	2	3
Year 5	1	2	3

**Q28 Please rate your firm's export success during the last five years of exporting, using the scale provided ranging from 'unsuccessful' to 'successful'.**

<b>Unsuccessful</b>	<u>Please circle your response on the scale below</u>								<b>Successful</b>
1	2	3	4	5	6	7	8	9	10

**Q29 Please indicate how your competitors in your export markets would rate your firm's export performance, using the scale provided ranging from 'unsuccessful' to 'successful'.**

<b>Unsuccessful</b>	<u>Please circle your response on the scale below</u>								<b>Successful</b>
1	2	3	4	5	6	7	8	9	10

**Q30 From the list below, please select the appropriate objective (s) set by management for the firms exporting activities over the last five years.**

**a) Assume that you have 100 points to distribute among the selected objectives proportional to their importance, how would you allocate the points so that the total adds up to 100?**

Strategic objectives	Importance
a- Gain a foothold in the export market.	_____
b- Increase the awareness of our product/company.	_____
c- Respond to competitive pressure.	_____
d- Improve our company's market share position.	_____
e- Expand strategically into foreign markets.	_____
f- Increase the profitability of the company.	_____
g- Just respond to enquiries from abroad.	_____
h- Other (specify) _____	_____

**b) Which of the above objectives were achieved in the last five years of exporting activity? Please circle the letter to the left corresponding to the objectives.**

**The following section deals with your firm background.**

**IV. BACKGROUND INFORMATION**

**Q31 In what year was your company founded? \_\_\_\_\_**

**Q32 Is your firm**                      a-  Independently owned              b-  A subsidiary

**Q33 Is your firm**                      a-  UK owned                                      b-  Non-UK owned

**Q34 Please indicate the total number of employees the firm has? \_\_\_\_\_**

**Q35 Your firm's products are primarily sold in.... (tick all that apply)**

a-  Consumer markets              b-  Business-to-Business markets              c-  A mixture of both

**Q36 Please choose the industry category that best describes your business....**

- Food & Beverages.                       Office Machinery & Computers.  
 Fishing industry.                               Textiles, clothing & fur.  
 Biotechnology & instrumentation.

**Q37 Is your industry considered.....**

- a-  High tech                              b-  Medium tech                              c-  Low tech

**Q38 What is your position in the firm \_\_\_\_\_.**

◆ **Please describe your status in the firm?**

- Are you the founder?                       Yes                               No  
 Are you the owner?                               Yes                               No

◆ **Please indicate your area of responsibility (s)? (tick all that apply)**

- Marketing       Sales       Production       Export       Others

**Q39 Please indicate how many years have you been working in this industry?**

- Less than 1 year                               11-15 years  
 1- 5 years     16-25 years  
 6- 10 years     Over 25 years

**Q40 From the following, please indicate to which age group you belong?**

- Under 25       25 – 30       31 – 40       41 – 50       Over 50

**Q41 Please tick as appropriate       Male                       Female**

**Q42 Please indicate what level of education you have attained? (tick all that apply)**

- O grade, Standard grade.                       Degree, postgraduate degree  
 A level, Highers, SYS.                               Professional qualification  
 HNC/HND     Apprenticeship  
 No formal qualification

**Q43 Please indicate your degree of fluency in the following foreign language(s), using the scale provided ranging from 'Not at all' to 'Excellent'.**

	<u>Not at all</u>	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Excellent</u>
French	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Italian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
German	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Japanese	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Russian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spanish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Q44 Were you born in the UK?**       Yes       No

**Q45 Please indicate where you spent your last summer vacation?**

In English speaking countries.       In non-English speaking countries.

**Q46 Have you ever lived in a country where English is not the first language for more than 6 months?**

Yes       No

**Q47 Have you ever worked in a foreign country for 6 months or more?**

Yes       No

**Q48 Please indicate how many overseas business trips you made over the last 12 months?**

\_\_\_\_\_

**Thank you very much indeed for your time and co-operation.**

**Please enclose a business card (including e-mail address) with the completed questionnaire if you would like to receive an executive summary of the findings.**

**Please return the completed questionnaire in the enclosed pre-paid envelope to:**

Rasha Mostafa  
University of Strathclyde  
Department of Marketing  
Stenhouse Building  
173 Cathedral Street  
Glasgow, G4 ORQ

**APPENDIX 2**  
**SOURCES OF THE RESEARCH CONSTRUCTS**

## SOURCES OF THE RESEARCH CONSTRUCTS

Construct/variable	Source (s)
Need for achievement (nAch) Q1	Lumpkin and Erdogan: online at <a href="http://www.usasbe.org/conferences/1999/99%20papers/lumpkin.pdf">http://www.usasbe.org/conferences/1999/99%20papers/lumpkin.pdf</a>
Tolerance of Ambiguity Q2	Budner (1962) and Lumpkin and Erdogan (1999), following the latter authors, items that deal with student-teacher relationship and those unrelated to working life where eliminated from Budner's original scale of tolerance-intolerance of ambiguity.
Locus of control Q3	Rotter scale of Internal-External locus of control and Lumpkin and Erdogan (1999).
Entrepreneurial orientation Q4	Miller,D. and Friesen,P. (1982); Covin and Slevin, (1988); Naman and Slevin, (1993).
Perceived export risks and profits Q5.1, Q5.2	Cavusgil and Naor (1987).
Perceived export costs and growth Q5.3, Q5.4	Leonidou,L.; Katsikeas,C. and Piercy,N. (1998).
Perceived export complexity Q6	Axinn (1988).
Experience with Internet technologies Q7	Brock,J. (2000).
Q8 to Q14	The researcher (mainly from the literature)
Perceived internal and external Internet benefits Q15 and Q16	Bennett,R. (1997) and Auger,P. and Gallagher,J. (1997).
Q17, Q18 and Q19	The researcher.
Q20.1 Q20.2	Brock,J.(2000).
Q20.3, Q20.4, Q20.5, Q20.6, and Q20.7	The researcher.
Degree of internationalisation Q21 to Q25	Stewart,D. (1997)
Export performance indicators Q26 to Q30	Cavusgil,T. and Zou,S. (1994) and Styles,C. (1998)
Background information Q31 to Q38	The researcher
Professional experience Q39	Da Rocha,A., Christensen, H., Da Cunha, and Eduardo,C. (1990)
Age Q40	Dichtl et al., (1983)
Level of education Q42	Cavusgil,T. and Naor,J. (1987)
Owners/managers international orientation Q43 to Q47	Dichtl et al., (1983)
Number of overseas business trips Q48	Cavusgil,T. and Naor,J. (1987)



**APPENDIX 3**  
**FACTOR ANALYSIS RESULTS**

**Component Matrix: Need for Achievement (nAch)**

	Factor 1
nAch Q1.1	<b>0.763</b>
nAch Q1.2	<b>0.734</b>
nAch Q1.3	<b>0.672</b>
nAch Q1.5	<b>0.587</b>
Eigen values	1.917
Percentage of Variance	47.91%
Cumulative Variance Explained	47.91%
Extraction Method: Principal Component Analysis.	
Only one component was extracted. The solution cannot be rotated.	

**Factor Matrix: Locus of Control**

	Factors	
	1	2
LOCUS OF CONTROL Q3.1	<b>0.508</b>	
LOCUS OF CONTROL Q3.2	<b>0.448</b>	
LOCUS OF CONTROL Q3.3	<b>0.451</b>	
LOCUS OF CONTROL Q3.4		
LOCUS OF CONTROL Q3.5		
LOCUS OF CONTROL Q3. 6		<b>0.509</b>
LOCUS OF CONTROL Q3.7	<b>0.524</b>	
LOCUS OF CONTROL Q3.8		
LOCUS OF CONTROL Q3.9		<b>0.419</b>
LOCUS OF CONTROL Q3.10		
LOCUS OF CONTROL Q3.11		
LOCUS OF CONTROL Q3.12		
LOCUS OF CONTROL Q3.13		
LOCUS OF CONTROL Q3.14		
LOCUS OF CONTROL Q3.15		
LOCUS OF CONTROL Q3.16	<b>0.533</b>	
LOCUS OF CONTROL Q3.17	<b>0.538</b>	
LOCUS OF CONTROL Q3.18		
Eigen Values	3.99	2.4
Percentage of Variance	18.77%	10.1%
Cumulative of variance explained	18.77%	28.84%
Extraction Method: Principal Axis Factoring.		
Rotation Method: Oblimin with Kaiser Normalisation.		

### Factor Matrix: Entrepreneurial Orientation

	Factors	
	1	2
ENTREPRENEURIAL ORIENTATION Q4.1	<b>0.456</b>	0.001
ENTREPRENEURIAL ORIENTATION Q4.2	<b>0.614</b>	0.341
ENTREPRENEURIAL ORIENTATION Q4.3	<b>0.499</b>	0.007
ENTREPRENEURIAL ORIENTATION Q4.4	<b>0.559</b>	0.232
ENTREPRENEURIAL ORIENTATION Q4.5	<b>0.695</b>	0.422
ENTREPRENEURIAL ORIENTATION Q4.6	<b>0.528</b>	0.006
ENTREPRENEURIAL ORIENTATION Q4.7	<b>0.527</b>	-0.325
ENTREPRENEURIAL ORIENTATION Q4.8	<b>0.759</b>	-0.439
ENTREPRENEURIAL ORIENTATION Q4.9	<b>0.657</b>	-0.0318
Eigenvalues	3.7	1.2
Percentage of variance	41.2%	13.34%
Cumulative variance explained	41.2%	54.54%

Extraction Method: Principal Axis Factoring.  
Rotation Method: Oblimin with Kaiser Normalisation.

### Component Matrix: Export Complexity

	Factor
	1
EXPORT COMPLEXITY Q6.1	<b>0.531</b>
EXPORT COMPLEXITY Q6.2	<b>0.699</b>
EXPORT COMPLEXITY Q6.3	<b>0.520</b>
EXPORT COMPLEXITY Q6.4	<b>0.467</b>
EXPORT COMPLEXITY Q6.5	<b>0.570</b>
EXPORT COMPLEXITY Q6.7	<b>0.519</b>
Eigenvalue	1.853
Percentage of variance	30.87%
Cumulative variance explained	30.87%

Extraction Method: Principal Component Analysis.  
Only one component was extracted. The solution cannot be rotated.

**Pattern Matrix: Internet Resource Commitment**

	Factors	
	1	2
INTERNET RESOURCE COMMITMENT Q8	0.156	<b>0.657</b>
INTERNET RESOURCE COMMITMENT Q9	0.007	<b>0.919</b>
INTERNET RESOURCE COMMITMENT Q10	0.006	<b>0.932</b>
INTERNET RESOURCE COMMITMENT Q11	0.105	-0.136
INTERNET RESOURCE COMMITMENT Q12.1	<b>0.833</b>	0.182
INTERNET RESOURCE COMMITMENT Q12.2	<b>0.964</b>	0.006
INTERNET RESOURCE COMMITMENT Q12.3	<b>0.921</b>	0.005
INTERNET RESOURCE COMMITMENT Q13	0.239	0.0004
Eigen values	3.164	2.07
Percentage of variance	39.55%	25.93%
Cumulative variance explained	39.55%	65.49%

Extraction Method: Principal Axis Factoring.  
 Rotation Method: Oblim with Kaiser Normalisation.

**Rotated Component Matrix: level of Internet Use**

	Factors	
	1	2
INTERNET USE Q14.1	0.237	<b>0.883</b>
INTERNET USE Q14.2	0.259	<b>0.779</b>
INTERNET USE Q14.3	0.313	<b>0.505</b>
INTERNET USE Q14.4	0.337	<b>0.580</b>
INTERNET USE Q14.5	0.008	<b>0.840</b>
INTERNET USE Q14.6	0.232	<b>0.833</b>
INTERNET USE Q14.7	0.158	<b>0.583</b>
INTERNET USE Q14.8	<b>0.589</b>	0.104
INTERNET USE Q14.9	<b>0.837</b>	0.217
INTERNET USE Q14.10	<b>0.851</b>	0.235
INTERNET USE Q14.11	<b>0.865</b>	0.232
INTERNET USE Q14.12	<b>0.772</b>	0.381
INTERNET USE Q14.13	<b>0.80</b>	0.229
INTERNET USE Q14.14	<b>0.802</b>	0.324
Eigen value	7.034	1.985
Percentage of Variance	50.24%	14.17%
Cumulative Variance Explained	50.24%	64.42%

Extraction Method: Principle Component Method.  
 Rotation Method: Varimax with Kaiser Normalisation.

### Rotated Component Matrix: Perceived Internet Benefits

	Factors	
	1	2
INTERNET BENEFITS Q15.1	<b>0.695</b>	0.287
INTERNET BENEFITS Q15.2	<b>0.686</b>	0.356
INTERNET BENEFITS Q15.3	0.255	<b>0.770</b>
INTERNET BENEFITS Q15.4	0.130	<b>0.885</b>
INTERNET BENEFITS Q15.5	0.229	<b>0.819</b>
INTERNET BENEFITS Q15.6	0.141	<b>0.823</b>
INTERNET BENEFITS Q16.1	<b>0.808</b>	0.249
INTERNET BENEFITS Q16.2	<b>0.848</b>	0.187
INTERNET BENEFITS Q16.3	<b>0.841</b>	0.125
INTERNET BENEFITS Q16.4	<b>0.882</b>	0.112
INTERNET BENEFITS Q16.5	<b>0.798</b>	0.255
INTERNET BENEFITS Q16.6	<b>0.879</b>	0.007
Eigen Values	6.53	2.051
Percentage of Variance	53.77%	17.09%
Cumulative variance Explained	53.77%	70.868%

Extraction Method: Principal Component Method.  
Rotation Method: Varimax with Kaiser Normalisation.

### Rotated Component Matrix: Web Assessment

	Factor		
	1	2	3
WEB ASSESSMENT Q19.1	0.158	0.007	<b>0.880</b>
WEB ASSESSMENT Q19.2	0.164	0.172	<b>0.845</b>
WEB ASSESSMENT Q19.3	0.003	<b>0.800</b>	0.178
WEB ASSESSMENT Q19.4	-0.0003	<b>0.828</b>	0.135
WEB ASSESSMENT Q19.5	-0.004	<b>0.558</b>	0.295
WEB ASSESSMENT Q19.6	0.223	<b>0.672</b>	-0.165
WEB ASSESSMENT Q20.1	<b>0.690</b>	0.254	0.139
WEB ASSESSMENT Q20.2	<b>0.731</b>	0.001	0.350
WEB ASSESSMENT Q20.3	<b>0.816</b>	0.003	0.103
WEB ASSESSMENT Q20.4	<b>0.799</b>	0.006	0.147
WEB ASSESSMENT Q20.5	0.360	0.404	-0.0002
WEB ASSESSMENT Q20.6	0.409	-0.105	0.445
WEB ASSESSMENT Q20.7	0.204	0.266	0.410
Eigen-Values	4.046	1.981	1.67
Percentage of Variance	31.126%	15.24%	10.51%
Cumulative Variance Explained	31.126%	46.36%	56.88%

Extraction Method: Principal Components Method.  
Rotation Method: Varimax with Kaiser Normalisation.

**APPENDIX 4**  
**CLUSTER ANALYSIS RESULTS ACCORDING TO LEVEL OF**  
**INTERNET COMMITMENT**

## CLUSTER ANALYSIS RESULTS ACCORDING TO LEVEL OF INTERNET COMMITMENT

### Analysis of Agglomeration Coefficient for Hierarchical Cluster Analysis

Number of Clusters	Agglomeration Coefficient	Percentage Change in Coefficient to Next Level
10	1243.805	3.88
9	1292.109	3.86
8	1342.065	4.44
7	1401.731	4.86
6	1469.979	7.77
5	1584.333	7.36
4	1701.064	11.16
3	1890.947	25.15
2	2366.706	42.25
1	3366.859	

The clustering (agglomeration) coefficient shows rather large increases in going from four to three clusters ( $1890.947 - 1701.064 = 189.883$ ), three to two clusters ( $2366.706 - 1890.974 = 475.732$ ), and two to one cluster ( $3366.859 - 2366.732 = 1000.127$ ). To further help identify large relative increases in the cluster homogeneity, the researcher calculate the percentage of change in the clustering coefficient for ten to two clusters (Hair et al, 1998). The largest increases were observed in going from two to one cluster as highlighted in the above table, therefore the two cluster solution was selected.

**APPENDIX 5**  
**CLUSTER ANALYSIS RESULTS ACCORDING TO THE**  
**ENTREPRENEURIAL ORIENTATION OF THE**  
**OWNER/MANAGERS**



**CLUSTER ANALYSIS RESULTS ACCORDING TO THE  
ENTREPRENEURIAL ORIENTATION OF THE OWNER/MANAGERS**

**Analysis of Agglomeration Coefficient for Hierarchical Cluster Analysis**

Number of Clusters	Agglomeration Coefficient	Percentage Change in Coefficient to Next Level
10	1358.951	4.38
9	1418.437	4.52
8	1482.503	4.35
7	1546.996	5.60
6	1633.552	5.83
5	1728.755	6.28
4	1837.318	6.58
3	1958.305	14.40
2	2240.349	29.00
1	2890.096	

The clustering (agglomeration) coefficient shows rather large increases in going from four to three clusters (1958.305 – 1837.318 = 120.987), three to two clusters (2240.349– 1958.305 = 282.044), and two to one cluster (2890.096 – 2240.349 = 649.747). To further help identify large relative increases in the cluster homogeneity, the researcher calculate the percentage of change in the clustering coefficient for ten to two clusters (Hair et al, 1998). The largest increases were observed in going from two to one cluster as highlighted in the above table, therefore the two cluster solution was selected.

**Mean Scores of the Indicator Variables of High and Low EO Owner/Managers**

Entrepreneurial orientation EO (Q4)	*Initial Cluster Centres	
	Cluster 1 (n = 98) High EO owner/managers	Cluster 2 (n = 58) Low EO owner/managers
Innovativeness Q4.1	5.01	3.64
Innovativeness Q4.2	5.56	3.46
Innovativeness Q4.3	5.31	3.32
Proactiveness Q4.4	4.77	3.46
Proactiveness Q4.5	4.91	2.96
Proactiveness Q4.6	4.71	3.57
Risk taking Q4.7	4.44	3.11
Risk taking Q4.8	4.59	2.29
Risk taking Q4.9	4.55	2.61

\* Input from FILE Subcommand

### Mean Scores for the Indicator Variables of High and Low EO Owner/Managers

Entrepreneurial orientation EO (Q4)	*Final Cluster Centers	
	Cluster 1 High EO owner/manager (n = 98)	Cluster 2 Low EO owner/manager (n = 58)
Innovativeness Q4.1	5.32	3.83
Innovativeness Q4.2	5.93	4.12
Innovativeness Q4.3	5.60	3.86
Proactiveness Q4.4	5.01	3.72
Proactiveness Q4.5	5.16	3.55
Proactiveness Q4.6	4.92	3.81
Risk taking Q4.7	4.61	3.50
Risk taking Q4.8	4.78	3.17
Risk taking Q4.9	4.73	3.31

\* Final cluster centres were obtained from subcommand FILE.

### Significance Testing of Differences between High and Low EO Owner/Managers Clusters Centres

Entrepreneurial Orientation Q4	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
Innovativeness Q4.1	80.755	1	1.789	154	45.145	0.000***
Innovativeness Q4.2	119.088	1	1.589	154	74.961	0.000***
Innovativeness Q4.3	110.310	1	1.730	154	63.773	0.000***
Proactiveness Q4.4	60.264	1	1.770	154	34.048	0.000***
Proactiveness Q4.5	94.626	1	1.544	154	61.298	0.000***
Proactiveness Q4.6	44.733	1	1.872	154	23.898	0.000***
Risk taking Q4.7	45.074	1	1.258	154	35.824	0.000***
Risk taking Q4.8	93.637	1	1.255	154	74.585	0.000***
Risk taking Q4.9	73.920	1	1.270	154	58.224	0.000***

\*\*\*  $p \leq 0.01$

**APPENDIX 6**  
**STEPWISE DISCRIMINANT ANALYSIS RESULTS WITH**  
**OWNER/MANAGERS ENTREPRENEURIAL ORIENTATION**  
**BEHAVIOUR AS THE DEPENDENT VARIABLE**

**Results of Stepwise Discriminant Analysis with Owner/Managers EO as the Dependent Variable**

Variables/Factors	Standard Weights Value	Discriminant Loadings		Univariate F Ratio	
		Value	Rank	Value	Rank
Need for achievement	0.51	0.60	2	5.50**	2
Internal locus of control	N.I.	0.03	8	0.41	ns.
External locus of control	N.I.	-0.17	4	2.56	ns.
Perceived export complexity	-0.57	-0.57	3	4.92**	3
Perceived export risks	N.I.	0.11	6	0.50	ns.
Perceived export profits	N.I.	0.10	7	0.14	ns.
Perceived export costs	N.I.	0.14	5	2.38	ns.
Perceived export growth	0.61	0.62	1	5.80***	1

\*\*  $p \leq 0.05$ , \*\*\*  $p \leq 0.01$ , N.I. = not included, n.s. = not significant at  $p \leq 0.05$ .