Chapter 4
Research Methodology

4.1 Introduction:-

This chapter discusses the methodology used to conduct the research study as well as the issues related to the chosen research methodology when investigating the different factors affecting the adoption of E-Marketing by industrial and trading UK SBEs, the different forms, tools and levels of implementation of E-Marketing by these enterprises as well as the relationship between E-Marketing adoption and marketing performance of these SBEs. Through this discussion the steps that were taken to address the research design, the data collection and analysis methods used to conduct the research study will be illustrated. These issues are addressed in light of the basic research objectives and the relevant research questions discussed in chapter one and the research framework discussed in chapter seven.

Firstly it discusses some possible research designs and methodologies and provides a brief review of the literature of research methodologies, research strategies and research methods implemented in the fields of E-Marketing and SBEs. Based on this analysis, the research methodology for this study is justified in terms of its appropriateness and usefulness to achieve the basic research objectives. The research population, research sample, data collection methods, stages of collecting the data from the field, the procedures and problems encountered during each stage of the fieldwork as well as the actual data collected and methods of analysis are also explained in this chapter.

4.2 Research Methodologies and Strategies:-

According to Sarantakos (1998) research methodology is "*the theory of methods*" (Sarantakos, 1998; P: 465); it is the way in which one makes sense of the object of enquiry. Robson (2002) defines it as: "*The theoretical, political and philosophical backgrounds to social research and their implications for research practice and for the use of particular research methods*" (Robson, 2002; P: 549). According to Morvaridi (2005), the most prevalent methodologies in social sciences and humanities research methodology are quantitative and qualitative research (Morvaridi 2005; P: 2). Moreover, Sarantakos (2005) argues that social science can be conducted within a quantitative or qualitative context.

4.2.1 Quantitative research:-

Quantitative approach is one of the most used approaches to conduct social research. It is rooted in a strong academic belief that puts significant and substantial trust in numbers that represent different opinions and/or concepts. As a result, quantitative research can be conducted through emphasising quantification in the collection and analysis of data. It relies mainly on a hypothesis which is derived from theory deductively; the objective is to test the theory by way of observation and data collection, the findings of which, following analysis, would either confirm or reject the theory (Morvaridi 2005; P: 2). According to Bryman (1989), quantitative approach is clamed to be infused with positivism which is an approach to the study of people which commends the application of the scientific method.

4.2.2 Qualitative research:-

In contrast, the qualitative approach concentrates mainly on words and observations to express reality and tries to describe people and research phenomena in natural situations (Amaratunga, 2002; P: 19). Although quantitative and qualitative methodological approaches are different, it is wrong to oppose them as two competing methodologies (Morvaridi 2005; P: 3). This research argues that qualitative research facilitates and illustrates quantitative research and quantitative research does the same thing with both approaches helping to add to the available accumulative knowledge. This is in line with the arguments of Bryman (1989) and Clark (1998). Within this context, Bryman (1989) argue that quantitative and qualitative researches are different ways of "knowing" (Bryman, 1989; P: 27). Moreover, Clark (1998) argues that philosophically the qualitative and quantitative paradigms are not as diverse or mutually incompatible as is often conveyed (Clark, 1998; P: 1243).

On the other hand, Lincoln and Denzin (2002) summarised different aspects related to qualitative research as follows: "*Qualitative research is many things at the same time. It is multi-paradigmatic in focus. Its practitioners are sensitive to the value of the multi-method approach. They are committed to the naturalistic perspective and to the interpretive understanding of human experience. At the same time, the field is inherently political and shaped by multiple ethical and political allegiances*" (Lincoln and Denzin, 2002; P 1047).

4.2.3 Research Strategy:-

Saunders and Thornhill (2003) define research strategy as: "*A general plan of how the researcher will go about answering the research questions*". (Saunders and Thornhill, 2003; P: 90). They distinguish between eight research strategies, namely: experiments, surveys, case studies, grounded theory, ethnography, action research, cross-sectional studies and exploratory studies. However, the three main strategies used by most researchers are: experiments, surveys and case studies because of great benefits associated with using them (Robson, 2002).

Bryman (1989) defines survey strategy as: "*The collection of data on a number of units with a view to collecting systematically a body of quantifiable data in respect of a number of variables which are then examined to discern patterns of association*" (Bryman, 1989; P: 104). According to Saunders, this approach is a popular and common strategy in management and business research (Saunders and Thornhill, 2003; P: 92).

On the other hand, while case study can be defined as: "*A strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence*" (Robson, 2002; P: 178), experiment strategy can be defined as: "*The measurement of the effects of manipulating one variable on another variable and it is generally related to the natural sciences*" (Robson, 2002; P: 88).

4.2.4 Triangulation Strategy:-

Triangulation[1] is a valuable and widely used strategy (Robson, 2002; P: 174) because it examines the research problem from more than one viewpoint so that the study become more robust. It can be defined from different angles; while Denzin (1978) defines it as: "*The combination of methodologies in the study of the same phenomenon*" (Denzin, 1978; P: 301), Saunders and Thornhill (2003) define it as: "*The use of different data collection methods within one study*" (Saunders and Thornhill. 2003; P: 99).

Moreover, there are four basic types of triangulation identified by Denzin (1978) which are: data triangulation (refers to the use of a mixture of data sources in a certain study), investigator triangulation (refers to the use of different researchers), theory

[1] The term Triangulation is taken from land surveying, knowing a single landmark only locates the person somewhere along a line in direction from the landmark, whereas with two landmarks a person can take bearings in two directions and locate himself at their intersection (Fielding and Fielding, 1986; P: 23)

triangulation (refers to the use of multiple theories) and methodological triangulation which refer to the use multiple methodologies to study a single problem (Denzin, 1978; P: 301). Clearly there are a number of different approaches and it is important to select an appropriate means to investigate the research question.

4.3 The Importance of the Selection of an Appropriate Research Approach:

Selecting the appropriate research approach, when studying social science, is one of the most demanding decisions for any researcher. Consequently, awareness of all the research paradigms, assumptions, methodologies and methods may facilitate the choice of research approach. The next part of this chapter presents the research paradigm and approach selected during the development of the research framework and the rationale for selecting these specific approaches.

4.3.1 Primary Research Assumptions:-

Hiles (1999) argues that it is important to note that what defines human science is not its methodology but its paradigms. Guba and Lincoln (1994) defines a paradigm as: "*A set of basic beliefs that deals with ultimates or first principles which represent a worldview that defines, for its holder, the nature of the world , the individual's place in it and the range of possible relationships to that world and its parts*" Guba and Lincoln (1994, p: 107).

Moreover, Hiles (1999) argue that all scientific research follows a set of procedures that must begin with a group of assumptions, a set of beliefs, and a paradigm. Nevertheless, choosing a certain paradigm for a study does not establish directly what strategies and types of data collection and analysis methods can be employed (Hiles, 1999, p: 1). On the other hand, according to Guba and Lincoln (1994), a paradigm is a basic belief systems based on ontological, epistemological and methodological assumptions (Guba and Lincoln, 1994, p: 107). The fundamental beliefs that define a paradigm can be determined by the responses given by proponents of a certain paradigm to three fundamental questions which are: the ontological question, the epistemological question and the methodological question, which are defined by Guba and Lincoln (1994; P: 108) as follows:-

- The ontology question: "*What is the form and the nature of reality? And, therefore, what is there that can be known about it?*"

- The epistemology question: "*What is the nature of the relationship between the knower, or the would-be knower, and what can be known? It is concerned with how we know the world and what is the relationship between the inquirer and the known*".
- The methodology question: "*How can the inquirer (the would-be knower) go about finding out whatever he/she believes can be known? It focuses on how we obtain knowledge about the world and indicates which research techniques are considered appropriate for collecting valid empirical evidence*." (Guba and Lincoln, 1994; P: 108)

According to Guba and Lincoln (1994), there are four major paradigms that structure and organise social science research namely: positivism, post-positivism, critical theory and constructivism or interpretivism. These paradigms, their associated strategies, approaches and methods as well as the differences among them are illustrated in table 4-1.

Positivist and constructivism (interpretive) paradigms represent two contrasting constellations of beliefs about how valid and applicable knowledge may be generated (Denzin, 2000). Traditionally, there has been a deep emphasis on quantification in most aspects of science (Guba and Lincoln, 1994). This led to a large scale adoption of the positivist approach by most researchers in social science. The main reasons for this include: the common belief that only quantitative data are highly valid and provide high level of research quality (Sechrest, 1992), the positivist approach enables a researcher to replicate the findings of one study in a different study or in a different context (Winfield, 1990) and the availability, reliability and ease of use of a solid collection of statistical and mathematical tools and models that can be used within the approach (Guba & Lincoln, 1994). However, there are some criticisms that face the positivist approach. Within this respect, one of the most common criticisms about the positivist approach arise from the argument that positivism is a poor and misleading approach to conducting social science research since it assumes an objective external reality upon which inquiry can converge (Hirschheim, 1992). Moreover, Guba and Lincoln (1994) illustrate a variety of problems associated with the positivist approach which include context stripping, exclusion of meaning and purpose, disjunction of grand theories with local contexts, inapplicability of general data to individual cases and exclusion of the discovery (Guba and Lincoln, 1994, p: 106).

Table 4.1: Basic assumptions and practical issues of different research paradigms

Item	***Positivism***	***Post-Positivism***	***Critical theory***	***Constructivism / interpretive***
Ontology	***Naive Realism*** - Real reality (apprehendable reality) is assumed to exist. - Knowledge is summarised in the form of time and context free generalisations which take the form of cause-effect laws.	***Critical realism*** - Reality is assumed to exist but to only imperfectly apprehendable because of flawed human intellectual mechanisms and the fundamentally intractable nature of phenomena.	***Historical realism:*** Reality is assumed to be apprehendable that was once plastic and was shaped by a congeries of social, political, cultural, economic, ethnic, and gender factors.	***Relativist*** - Realities are apprehendable in the form of multiple intangible mental constructions, socially and experientially based. - Reality is relative to observer, as there are many socially constructed realities that are not subject to any natural laws.
Epistemology	***Dualism/ Objectivism*:** - The investigator and the investigated object are assumed to be independent entities and can not affect each other. - When influence in either direction (threats to validity) is recognised or suspected various strategies are followed to reduce or eliminate it. - Findings are true	***Modified Dualism/ Objectivism*:** - It is possible to approximate reality but it is never fully known. - Special emphasis is placed on external guardians of objectivity such as critical traditions and the critical community. - Findings are probably true	***Transactional/ Subjectivist*:** - The investigator and the investigated object are assumed to be interactively linked, with the values of the investigator inevitably influencing the inquiry. - Therefore findings are value mediated	***Transactional/ Subjectivist*:** - The investigator and the object of investigation are assumed to be interactively linked so that the findings are literally created as the investigation proceeds. - Therefore findings are created by the investigator.
Methodology	***Experimental and***	***Modified experimental/***	***Dialogic and dialectical***	***Hermeneutical/***

	manipulative Questions and/or hypotheses are stated in propositional form and subjected to empirical test to verify them; possible confounding conditions must be carefully controlled to prevent outcomes from being improperly influenced.	***manipulative*** - Emphasis is placed on "critical multiplism" (a refurbished version of triangulation) as a way of falsifying hypotheses, - The methodology aims to redress some of the research by doing inquiry in more natural settings, collecting more situational information, and reintroducing discovery as an element in inquiry - All these aims are accomplished largely through the increased utilisation of qualitative techniques.	- The transactional nature of inquiry requires a dialogue between the investigator and the subjects of the inquiry. - This dialogue must be dialectical in nature to transform ignorance and misapprehensions into more informed consciousness	***dialectical*** - The variable and personal nature of social constructions suggests that individual constructions can be elicited and refined only through interaction between and among investigator and respondents. - The final aim is to distil a consensus construction that is more informed and sophisticated than any of the predecessor constructions.
Inquiry aim	Explanation, prediction and control		Critique and trans formation; restitution and emancipation	Understanding; reconstruction
Nature of knowledge	Verified hypotheses established as facts or laws.	Nonfalsified hypotheses that are probable facts or laws.	Structural/historical insights.	Individual reconstructions coalescing around Consensus.
Knowledge accumulation	Accretion - "building clocks" adding to "edifice of knowledge"; generalisations and cause-effect linkages.		Historical revisionism; generalisation by similarity.	More informed and Sophisticated reconstructions; vicarious experience.
Goodness or quality criteria	conventional benchmarks of "rigor": internal and external validity, reliability and objectivity		historical situatedness; erosion of ignorance	trustworthiness and authenticity
Values	Excluded—influence denied		Included—formative	

Source: Adapted from (Guba & Lincoln, 1994)

On the other hand, the constructivism (interpretive) paradigm has arisen as an important approach that has the ability to create and provide a deep understanding of different social phenomena (El-Said, 2005). Though, there is great debate about the ability to generalise the findings of this approach and whether they may be generaliseable to larger populations (Winfield, 1990). Meanwhile, as illustrated in table 4.1, Guba and Lincoln (1994) distinguish between the constructivism (interpretive) and critical theory paradigms arguing that critical theory paradigm is primarily characterised by the researcher evaluative viewpoint which is not clear in interpretive research. Quite the opposite, some other researchers' see that the two theories are related (e.g. Walsham, 1993; Galbraith, 1993 and Creswell and Miller, 2000). Within this context, Walsham (1993) argues that critical theory illustrate the different roles of the interpretive approach for any research that is related to or has a social content.

Moreover as illustrated in table 4.1, the post-positivist approach seems to be positioned between the positivism paradigm and the interpretivism paradigm. In this respect, Lincoln and Guba (2000) argue that the post-positivist approach has been developed in response to the different challenges that faced the positivism approach. Schurr (2007) argues that the post-positivist approach appears to be the positivist's response to the limitations of positivism within the realities of university publish-or-perish policies (Schurr, 2007; P: 166). Within this context, many researchers support a paradigm shifting from positivism assumptions to post-positivism's critical realism, which might provide reality that can be absolutely understood (Winfield, 1990). Some researchers are in favour of utilising an appropriate post-positivist approach in social science research, particularly when studying or investigating phenomena that will help to build a theory (as in the case of this research). They observe that the use of several methods stressed by the post-positivism approach is suitable in order to support the reliability of research findings. Considering the different characteristics of the research paradigms discussed in this section, the following section of the chapter illustrates the process of choosing the appropriate research approach for this research.

4.3.2 Selecting the Post-Positivism Research Approach:-

From this research point of view, there is no optimal approach that can be used for any type of investigation regardless of the nature of enquiry. Moreover, it is

believed that the research approach depends on the problem that the research is trying to solve and the questions that the research is trying to answer. Within this context, this research aims to investigate the different factors that might have an impact on the adoption of E-Marketing by SBEs as well as the effect of this adoption on the marketing performance of these enterprises. In other words, the main aim of the research is to test and investigate the causal relationship between E-Marketing adoption and the SBEs marketing performance.

As illustrated in chapters two and three, there is paucity in the literature investigating the adoption of E-Marketing by SBEs and the impact of this adoption on marketing performance. Consequently, when conducting this research it is not appropriate to generate the research hypotheses depending only on the available literature in the fields of E-Marketing and SBEs. In this respect, a robust in-depth examination of the phenomenon is needed as a starting point to generate appropriate hypotheses as well as a reliable formulation of the research problem. Moreover, a case study based on qualitative methods will be very useful and will help to answer the questions of 'how' and 'why' in relation to the adoption of E-Marketing activities and the impact of this adoption on marketing performance. Consequently, both descriptive and quantified descriptions of the phenomenon that employs both quantitative and qualitative techniques will be used in this study.

In fact, according to Guba and Lincoln (1994) the post-positivism inquiry tends to investigate the cause and effect relationships among hypotheses, which are primarily assumed to be false. On the other hand, Hirschheim (1992) argue that post positivism is also characterised by the fact that there is no single correct method of science but many methods. Consequently, the post-positivism approach emphasises the usage of multiple methods, measures and/or observations, which might include both qualitative and quantitative techniques.

Based on the above discussion, there are sufficient philosophical and practical reasons for depending on the post-positivist approach in conducting this research. There are two main reasons for this choice. Firstly, this research aims to illustrate and explore the different contexts of the enquiry as a starting point towards establishing a cause and effect relationship between the phenomenon's main constructs. This main

objective cannot be classified as either purely positivistic nor purely interpretivist research, since it incorporates elements of both paradigms. Consequently, this research falls logically into post-positivism, which is positioned between positivism and interpretivism (Lincoln and Guba, 2000). Secondly, the mixed approach for this inquiry adopted by this research is argued to be within the post-positivism approach which emphasises the use of a variety of techniques from the positivist and the interpretivist paradigms (El-Said, 2005). Table 4.2 illustrate the methodology and stages related to this research in relation to the accepted philosophy:

Table 4.2**:** Research methodology and stages in relation with the research philosophy

Methodological/ research Phases	***Process and/or Objective***
Exploratory Phase	
Phenomenon Investigation	Achieving deep objective understanding of the phenomenon under investigation, as well as an interpretive understanding of research questions. Reviewing the related literature in more than one discipline within the main scope of the research, give insights on the relevant previous work and determine the gaps in this literature. Achieving deep interpretive understanding of research constructs through qualitative methodology.
Framework Constructing	Identifying the main research hypotheses in light of the phenomenon investigation phase. Identifying the research constructs as well as the interrelationships among these constructs. Constructing the hypothetical research framework.
Framework Testing Phase	
Framework Testing	Constructing the data collection instruments. Designing the experiential survey. Designing the sample collecting quantitative data. Providing a positivist understanding of the phenomenon by empirically testing the research framework.
Analysing the Data	Analysing the collected data. Validating the results and providing conclusion and recommendations. Providing research contributions. Providing research limitations.

4.4 Identifying the most appropriate research methodology and methods:-

To identify the most appropriate research methodology and methods to the research study, and because this research argue that research methodology, strategy, and methods or techniques employed in any research must be suitable for answering the questions that the researcher wants to answer and the aims that he/she wants to reach. The researcher must take into consideration the methodology and methods employed in other studies in the same field. In this respect, it is necessary to start by investigating the research methodologies, research strategies and methods used in contemporary research within the fields of E-Marketing and SBEs, in light of the research questions, aim and objectives.

4.4.1 Research question:-

The study attempts to answer the following questions:-

1- What are the different factors affecting the adoption of E-Marketing by industrial and trading SBEs?

2- What are the different forms, tools and levels of implementation of E-Marketing by industrial and trading SBEs?

3- What is the relationship between E-Marketing adoption and the marketing performance of industrial and trading small business enterprises?"

However, the main objective of the research is to analyse the different factors affecting the adoption of E-Marketing used by UK SBEs and the contribution of this adoption to the SBEs marketing performance to develop a theoretical model to understand and interpret the use of E-Marketing by SBEs in the UK. Accordingly, the most appropriate research methodology to this research study will be that methodology that provides the researcher with the right tools to answer the above research questions and achieve the research aims.

4.4.2 Methodologies and methods used in contemporary E-Marketing research:-

The research identified a broad range of the literature review in its wider broad sense and after examination, and in spite of the fast increase in E-Marketing research

in the last two decades; it appears that only from the late 1980s research on E-Marketing began to appear in the literature. These research studies investigated and covered a broad rang of E-Marketing areas, such as Internet Marketing, Mobile Marketing, E-Mail Marketing, Intranet Marketing and Extranet Marketing.

To examine the different methodologies and methods used in contemporary E-Marketing research, the literature related to the fields of E-Marketing and SBEs has been investigated from a methodological context in the period from 1993 to 2009. The literature time period started from 1993 because of two reasons; firstly, The World Wide Web (WWW), which is the main E-Marketing element, started in 1993 and secondly, studies related to E-Marketing began to appear in the literature from the late 1980s to mid 1990s.

The following online databases were searched to provide a comprehensive bibliography of the E-Marketing methodological literature: Emerald (MCB) Database, EBSCO Electronic Database, Proquest Direct Database, Science Direct (Elsevier) Database, ABI/Inform database and University of Bradford catalogue. The review of the literature yielded 387 studies. Although it was planned initially (because of the limited resources regarding time and effort) to construct a representative un-probability sample from the literature in order to come up with an accurate and fair representation of the methodological literature characteristics, and to investigate the methodologies and methods used in contemporary E-Marketing research, it was decided to take all the studies resulting from the literature into consideration because of the relatively limited number of studies yielded.

By reviewing these literatures, it was found that the majority of studies within the literature were conceptual with a percentage of 41 % of the total number of studies. It was also found that the majority of empirical studies depended on qualitative methodology with a percentage of 28 % of the total number of studies followed by a 24 % of the total number of studies depending on quantitative methodologies. On the other hand, triangulation methodology was implemented in 6 % of the total number of studies. These findings are illustrated in the following figure.

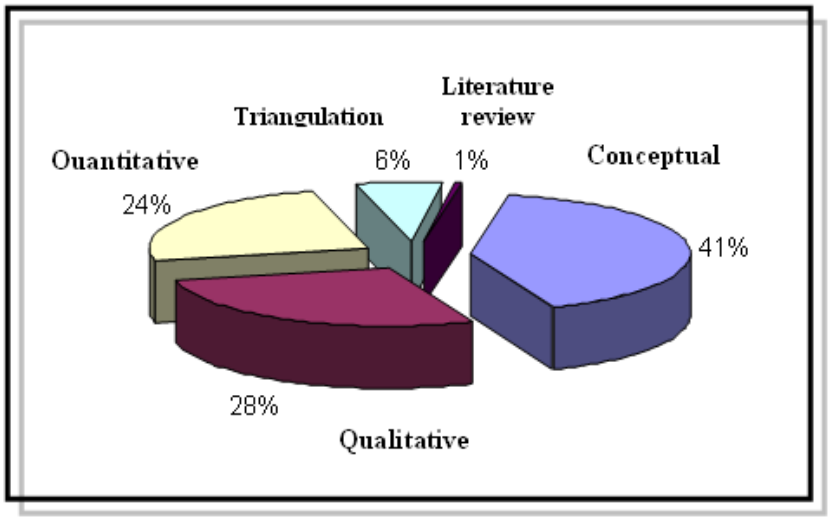

Figure 4-1: Research methodologies implemented in E-Marketing literature

With regards to the research strategies adopted by the researchers within the field, it was found that the majority of studies depended on survey strategy with a percentage of 28 % of the total number of studies (48 % of the total number of empirical studies) and as illustrated in figure 4-2; 20 % of the researchers applied case study strategy (34 % of the total number of empirical studies), 8 % applied exploratory strategy (14 % of the total number of empirical studies) and 2 % applied experiment strategy (4 % of the total number of empirical studies).

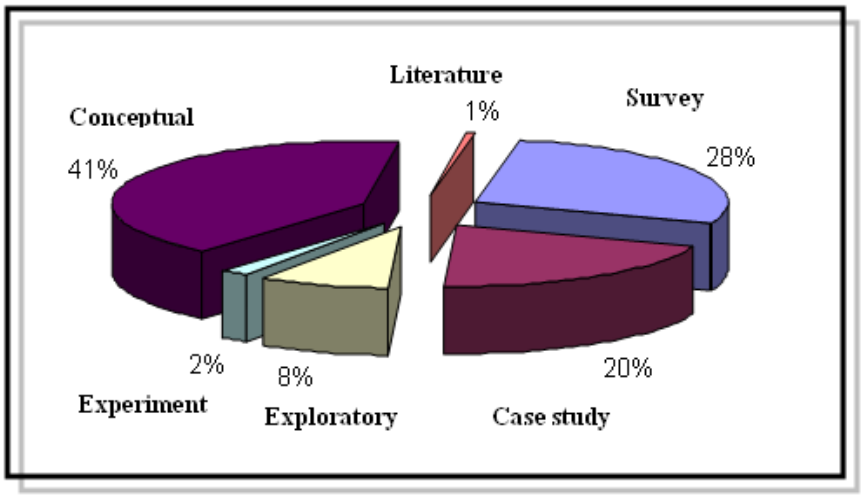

Figure 4-2: Research strategies implemented in E-Marketing literature

On the other hand, with regard to the research methods implemented by researchers from 1993 to 2009 in the field of E-Marketing , it was found that the majority of researchers depended on questionnaires with a percentage of 28 % of the total number of studies (48 % of the total number of empirical studies) and as illustrated in figure 4-3; 24 % applied interviews (40 % of the total number of

empirical studies), 4 % applied observation (8 % of the total number of empirical studies) and 3 % applied focus groups (4 % of the total number of empirical studies).

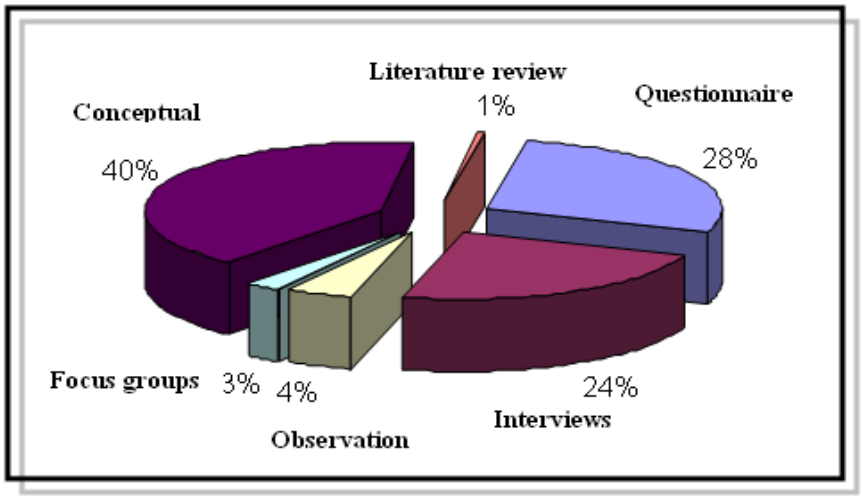

Figure 4-3: Research methods implemented in E-Marketing literature

To investigate the direction of the research methodologies, research strategies and research methods employed by studies in the fields of E-Marketing and SBEs from 1993 to 2009, the literature outcomes were categorised into three periodical stages, namely, the period from 1993 to 1997, the period from 1998 to 2002 and the period from 2003 to 2009. Tables 4-3, 4-4 and 4-5 illustrate the distribution of research methodologies, research strategies and research methods according to these three stages.

Table 4-3: Research methodologies employed by researchers in the fields of E-Marketing and SBEs from 1993 to 2009

N	***Methodologies***	***Number of studies***			***%***		
		1993 - 1997	***1998 - 2002***	***2003 - 2009***	***1993 - 1997***	***1998 - 2002***	***2003 - 2009***
1	Conceptual methodology	***51***	***63***	***45***	***78 %***	***46 %***	***24 %***
2	Qualitative methodology	***7***	***38***	***63***	***11 %***	***28 %***	***34 %***
3	Quantitative methodology	***7***	***26***	***60***	***11 %***	***19 %***	***32 %***
4	Triangulation	***0***	***8***	***17***	***0 %***	***6 %***	***9 %***
5	Literature review	0	1	1	0 %	1%	1 %
Total		***65***	***136***	***186***	***100 %***	***100 %***	***100 %***

From table 4-3, it is noticed that although the majority of the studies conducted from 1993 to 2009 were conceptual papers with a percentage of 41 % of the total number of studies, the number of studies depending on this approach declined across the literature period. Within this respect, conceptual studies declined

from 78% of the total number of studies from 1993 – 1997 to 46 % of the total number of studies from 1998 – 2002 and then declined more to reach 24% of the total number of studies from 2003 – 2009. This reflects not only growing attention from the researchers in the field of E-Marketing towards conducting empirical studies as a result of achieving mature conceptualisation of the major concepts within the field, but its also suggests that the field is in its infancy in terms of research development. It is also noticed that the majority of the empirical studies conducted from 1993 – 2009 depended on qualitative methodology with a percentage of 28 % of the total number of studies and the number of studies using this approach increased across the literature period. Within this respect, qualitative studies increased from 11 % of the total number of studies from 1993 – 1997 to 28 % of the total number of studies from 1998 – 2002 and then increased more to reach 34 % of the total number of studies from 2003 – 2009. Moreover, only 24 % of the total number of studies conducted from 1993 – 2009 depended on quantitative methodology and the number of studies depending on this approach increased across the literature period. Within this respect, quantitative studies increased from 11 % of the total number of studies from 1993 – 1997 to 19 % of the total number of studies from 1998 – 2002 and then increased more to reach 32 % of the total number of studies from 2003 – 2009.

Based on the previous findings, although there is a great increase in the number of empirical studies, most of the studies conducted from 1993 – 2009 were either conceptual or qualitative with a percentage of 69 % of the total number of studies, which reflects the need to conduct more quantitative studies in the field of E-Marketing.

On the other hand, it is also noticed that the number of studies conducted based on triangulation methodology increased across the literature period. Within this respect, these studies increased from zero studies from 1993 – 1997 to 8 studies with a percentage of 6 % of the total number of studies from 1998 – 2002 and continued increasing to reach 17 studies with a percentage of 9% of the total number of studies from 2003 – 2009. This not only reflect the growing importance of triangulation as a research methodology in the field of E-Marketing but also reflects academic researchers' attitudes towards triangulation methodology as a suitable methodology to be employed in investigating different issues within the field. This research argues

that the increase in triangulation usage is due to the benefits associated with its usage and that the emergence of triangulation studies implies that there is more need to validate earlier studies towards theory building within the field.

With regards to research strategies employed across the literature period, as can be seen from table 4-4, it is noticed that not only are survey and case study strategies the most commonly used research strategies from 1993 – 2009 in the field of E-Marketing but also the number of studies conducted depending on these two strategies increased dramatically from 1993 – 2009. Within this respect, studies conducted depending on survey strategy increased from 7 studies with a percentage of 11% of the total number of studies from 1993 – 1997 to 34 studies with a percentage of 25 % of the total number of studies from 1998 – 2002 and continued increasing to reach 68 studies with a percentage of 36 % of the total number of studies from 2003 – 2009. On the other hand, studies conducted depending on case study strategies increased from 5 studies with a percentage of 8 % of the total number of studies from 1993 – 1997 to 24 studies with a percentage of 18 % of the total number of studies from 1998 – 2002 and continued increasing to reach 48 studies with a percentage of 26 % of the total number of studies from 2003 – 2009. This reflects academic scholars' attitudes towards survey and case study strategies as suitable research methods to be employed in investigating different issues within the field of E-Marketing due to the benefits associated with the usage of both of them.

Table 4-4: Research strategies employed by researchers in the fields of E-Marketing and SBEs from 1993 to 2009

N	***Research strategies***	***Number of studies***			***% of the total***			***% of empirical***		
		1993 - 1997	***1998 - 2002***	***2003 - 2009***	***1993 - 1997***	***1998 - 2002***	***2003 - 2009***	***1993 - 1997***	***1998 - 2002***	***2003 - 2009***
1	Survey	***7***	***34***	***68***	***11 %***	***25 %***	***36 %***	***50 %***	***47 %***	***49 %***
2	Case study	***5***	***24***	***48***	***8 %***	***18 %***	***26 %***	***35 %***	***34 %***	***34 %***
3	Exploratory	1	11	20	2 %	8 %	11 %	7.5 %	15 %	14 %
4	Experiment	1	3	4	2 %	2 %	2 %	7.5 %	4 %	3 %
5	Conceptual	51	63	45	77 %	46 %	24 %	-	-	-
6	Literature review	0	1	1	0 %	1 %	1 %	-	-	-
Total		***65***	***136***	***186***	***100***	***100***	***100***	***100***	***100***	***100***

With regards to research methods employed by researchers in the fields of E-Marketing and SBEs from 1993 to 2009, as can be seen from table 4-5, it is noticed that not only are questionnaires and interviews the most commonly used research methods from 1993 – 2009 in the field of E-Marketing but also the number of studies conducted depending on these two research methods increased dramatically from 1993 – 2009. Within this respect, studies conducted using questionnaires increased from 7 studies with a percentage of 11% of the total number of studies from 1993 – 1997 to 34 studies with a percentage of 25 % of the total number of studies from 1998 – 2002 and continued increasing to reach 67 studies with a percentage of 36 % of the total number of studies from 2003 – 2009. On the other hand, studies conducted using interviews increased from 5 studies with a percentage of 8 % of the total number of studies from 1993 – 1997 to 25 studies with a percentage of 18 % of the total number of studies from 1998 – 2002 and continued increasing to reach 61 studies with a percentage of 33 % of the total number of studies from 2003 – 2009. This reflects academic scholars' attitudes towards questionnaires and interviews as suitable research methods to be employed in investigating different issues related to E-Marketing due to the benefits associated with the usage of both of them.

Table 4-5: Research methods employed by researchers in the fields of E-Marketing and SBEs from 1993 to 2009

N	***Research Methods***	***Number of studies***			***% of the total***			***% of empirical***		
		1993 - 1997	***1998 - 2002***	***2003 - 2009***	***1993 - 1997***	***1998 - 2002***	***2003 - 2009***	***1993 - 1997***	***1998 - 2002***	***2003 - 2009***
1	Questionnaire	***7***	***34***	***67***	***11 %***	***25 %***	***36 %***	***50 %***	***47 %***	***48 %***
2	Interviews	***5***	***25***	***61***	***8 %***	***18 %***	***33 %***	***36 %***	***35 %***	***44 %***
3	Observation	2	9	6	3 %	7 %	3 %	14 %	12 %	4 %
4	Focus groups	0	4	6	0 %	3 %	3 %	0 %	6 %	4 %
5	Conceptual	51	63	45	78 %	46 %	24 %	-	-	-
6	Literature review	0	1	1	0 %	1 %	1 %	-	-	-
Total		***65***	***136***	***186***	***100***	***100***	***100***	***100***	***100***	***100***

Based on the previous discussion and the review of the methodological literature for the research methodologies, research strategies and research methods employed by researchers in the fields of E-Marketing and SBEs from 1993 to 2009, this research can argue that there is a need to conduct more quantitative studies to increase the degree of generaliseability of the findings of such studies. Moreover, this

research suggests that when conducting such studies a triangulation methodology can be used depending on survey and case study research strategies by employing questionnaires and interviews as research methods. Appendix 12 illustrates a classification of the literature according to the methodology employed.

4.5 The methodology and methods of this study:-

E-Marketing studies have utilised a combination of qualitative and quantitative approaches. It is noticed that qualitative approaches have been used mainly where profound understandings were needed in respect of particular E-Marketing phenomena, whilst quantitative approaches have been useful in cases where the data was available. On the other hand, this research argues that commonly there is no optimal research methodology or technique since every methodology, method or technique has some drawbacks or limitations. A researcher must employ the most appropriate research methodology and method to his/her research.

Based on that, and the previous discussions, the general principle is that the research methodology, strategy, and methods or techniques employed must be appropriate for the questions that the researcher wants to answer. It is believed that triangulation approach is the most suitable methodology to be used in this research. Data, method and methodological triangulation will take place, in which quantitative and qualitative data will be collected based on a combined research strategy (survey and case study strategies) using questionnaires and interviews to address different levels of the study. The survey strategy allows the answer of the 'what' question of the research, such as: what is the relationship between using E-Marketing by the SBEs and its marketing performance? On the other hand, the semi-structured interviews strategy gives in-depth information and answers the 'how' and ‘why’ questions (for example: why the relationship is taking one direction instead of another?).

4.5.1 Why triangulation?

The main logic of triangulation is based on the major principle that: “*No single method ever adequately solves the problem*” (Denzin, 1978; P: 28). Furthermore using only one method is more vulnerable to error linked to that particular method (Patton, 1990; P: 188); therefore the use of different methods in studying the same phenomenon should lead to a greater validity and reliability than a single

methodological approach, because any bias inherent in a particular method would be neutralised when in conjunction with other methods. Moreover, every method has its own advantages and disadvantages, strengthens and weaknesses and combining these methods can be both helpful and useful so one can benefit from the advantages and strengthens and avoid the disadvantages and weaknesses. This is in line with Bryman (1995) who claims that each of the qualitative and quantitative methods has several features, which can be regarded as advantages or disadvantages (table 4-6)

Table 4-6: Dissimilar Features in Quantitative and Qualitative Methods

Dimension	***Quantitative***	***Qualitative***
Contact between researcher and informants	Brief or non-existent	Close contact with participants
Relationship between researcher and field	Outsider looking into field by applying pre-defined framework to investigate subject	Researcher has to get close and be insider to field being investigated
Theory/ concepts	Operationalised	Emerge as research develops
Approach	Structured Researcher-driven	Open and unstructured Subject-driven
Findings	Time and place-independent Rigid, hard, rigorous and reliable	Relate to specific time periods and locales Rich and deep
Focus	Views social world in static manner and neglects role and influence of change in social life	Views linkages between events and activities and explores people's interpretations of factors which produce such connections

Source: Bryman (1995)

So, even though triangulation requires a commitment to greater amounts of effort, time and funds, it has the advantage of removing the bias that is often associated with the use of a single technique. As a result, this research will depend on triangulation to increase the validity and credibility of the research conclusions, to increase confidence level of the findings, to increase the ability of generalisation, to answer the research questions and to meet the research objectives both effectively and professionally. Particularly that based on the knowledge gained from the review of the literature there is a lack of scientific studies in the field of E-Marketing in general. Based on that, combining methods in this research is indispensable.

4.5.2 Why questionnaires and interviews?

* This research will depend on questionnaires to conduct survey strategy because it:-

- Is an efficient highly structured data collection instrument.
- Is considered the most widely used data collection techniques among researchers especially in management and business research (Saunders and Thornhill 2003).
- Increase the generality of the data (Mason, 1984).
- is a good way of collecting information quickly and cheaply (Bell, 1999).
- Has the ability to cover a large number of participants.

This research therefore argues that questionnaires are the most appropriate tool to collect the survey data in a way that helps to answer the research questions and reach its aims effectively and professionally rather than any other tool.

* On the other hand, the main reasons that lead to the choice of cases as a supportive research strategy are:-

- The sole reliance on the questionnaire survey does not help in answering the 'How' and 'Why' questions whereas case studies have substantial ability to generate answers to the 'Why' questions as well as the 'What' and 'How' questions (Yin, 1994; P: 38).
- It allows gaining a rich understanding of the context of the research besides being a very worthwhile way of exploring existing theory, challenging existing theory and providing a source of new hypotheses (Saunders and Thornhill, 2003; P: 93).
- Understanding E-Marketing practices is relatively undeveloped and one of the characteristics associated with cases research is that it is suitable for new research areas when a fresh perspective is needed

* The main reasons that lead to the choice of interviews as the data collection technique for case studies are that interviews are very helpful to:-

- Find out new insight and identify general patterns (Robson, 2002).
- Understand relationships between variables (Saunders and Thornhill, 2003).
- Provide high level of flexibility and response rate.
- Provide the opportunity to observe non-verbal behaviour.

- Provide control over the environment, order of the questions, time, date and place.

As a result, this research argues that interviews are better than any other data collection method to collect the data for case studies. Beside that Kaplan and Duchon (1988) believe in the appropriateness of the interviews approach for studies in which research is in its early stages, and where the context and respondents are of particular importance to the study (just like this research). This research argues that the complexity of the context being investigated and the diversity of the issues related to E-Marketing sustainability make the case study interviews approach both fruitful and particularly useful.

4.6 The research data:-

4.6.1 Secondary data:-

Secondary data is: *"the data already collected in some other context than the present study"* (Robson, 2002; P: 552). It provides the necessary background information, builds credibility for the research report and helps to clarify the problem during the exploratory research process. In order to collect the secondary data and to get a richer picture of the level of importance of the elements that constitute E-Marketing adoption, implementation and the factors that contribute to the success of this implementation, a literature review were conducted. This included published literature, reports, secondary case studies, published vendor success stories and official, governmental and SBEs web sites on the Internet.

4.6.2 Primary data:-

Primary data is: *"the data collected specifically for the research project being undertaken"* (Saunders and Thornhill. 2003: 486). It has been collected based on two research strategies, namely, survey and case studies from Egypt and the UK. While survey strategy provides several data collection methods like questionnaire, interview and participant observation, the case study strategy involves various methods, such as documentary analysis, interview, participant observation and focus group. For the purpose of conducting this research, questionnaires will be used to conduct survey strategy and interviews and focus group to conduct the qualitative part of the research.

4.7 Implementation of data collection methods:-

4.7.1 Sample design:-

As explained in chapter one the original intention of this research was to conduct a comparative study between two countries (Egypt as a developing country and the UK as a developed one). But from the findings of the first exploratory study conducted in Egypt and due to the more elementary level of E-Marketing practices by Egyptian SBEs, it was more appropriate to focus this research exclusively on UK SBEs since this is more likely to generate more reliable and generaliseable results (the Egyptian exploratory study will be discussed in detail in chapter five). Consequently, this research will apply the research framework to UK industrial and trading SBEs sectors, to investigate the potential for managerial insights. Therefore, as it is extremely difficult to reach an entire population for any research, for empirical reasons, this research will examine a sample of the population. As research investigations usually involves several hundred or thousands of elements, it would not be possible to collect data from, or to test, or examine, every element in terms of time, cost, and other human resources (Sekaran, 2000). Other scholars in the fields of social science like Bryman and Bell (2003), Aaker and Day (1986) and Churchill (1979) agree that the use of samples is an appropriate and sufficient alternative if the research population is large in size or when the cost or time associated with the collection of data from the population is high. But it is recognised that, from an empirical viewpoint, supported generalisations are usually based on partial information because the object of any enquiries is a population consisting of a finite number of individuals, each with some measure that is observable (Branett, 2002).

In this respect, the sample design will be a process that involves a number of tasks and decisions in sampling. The main purpose of this process is to construct a subset of the research population which is adequate and sufficient to represent the population under investigation. Krathwohl (1997) defines sampling procedures as: *"The ways of selecting a small number of units from a population to enable researchers to make reliable inferences about the nature of that population"* (Krathwohl, 1997; P: 160). Moreover, Aaker et al (2004) defines sampling as: "*The*

process of surveying only a sample of the whole population to make inferences about the population" (Aaker et al., 2004; P: 760).

The sample design within this research will include the following steps:-

1. Definition of the research population
2. Definition of the population frame
3. Determination of the sampling technique (sample type)
4. Determination of the sample size

These different steps are discussed in the following part of the chapter and the research sample design process is illustrated in figure 4-4.

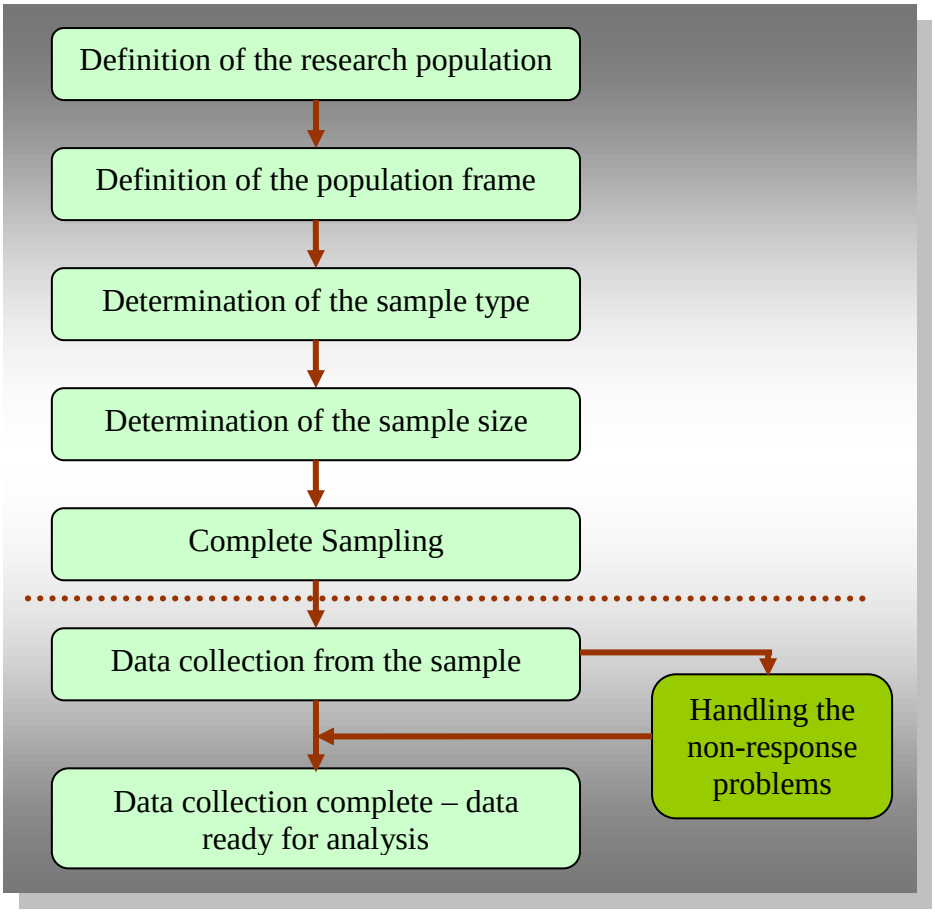

Figure 4.4: The research sample design process

4.7.1.1 The research population and population frame:-

The first step in determining the research sample is to define the research population of interest both clearly and accurately (Schofield, 1996). According to Kumar (2000), the population is the set of all objects that have some common set of

predetermined characteristics with respect to some research problems. On the other hand, Sekaran (2000) defines population as: "*The entire group of people, events, or thing of interest that the researcher wishes to investigate*" (Sekaran, 2000; P: 266). Moreover, Sekaran (2000) defines population frame as: "*The listing of all the elements in the population from which the sample is drawn*" (Sekaran, 2000; P: 266).

When determining the research population within this research, four basic characteristics must be obtainable in each enterprise if it is to be considered in the research population was used. These characteristics are:-

1. The company should be a small business enterprise.
2. The company should be based in the UK.
3. The company should be an industrial or trading SBE.
4. The company should be using E-Marketing to conduct its marketing activities.

The main purpose of this was to select a population of UK industrial and trading SBEs that use E-Marketing in conducting their marketing activities. Unfortunately, there is no single database or business directory that can provide complete information about such enterprises. Most of the available databases or business directories (e.g. FAME and Business Directory London) provide only general information about the registered enterprises in it but it does not provide any information about the adoption of E-Marketing by these enterprises. On the other hand, as the study planned to obtain responses from different industries so that generalisation of the findings could be established, the research population frame was generated from some databases and business directories through searching enterprises that are based in the UK and can satisfy the essential requirement to be considered as SBEs (number of employees and annual turnover). Nine sources were used to construct the population frame namely: E – Business Directory, Business Directory London, Internet Business Directory, Bigwig, Freeindex, Countyweb, Business Directory UK, Alibaba Business Directory and FAME Business Directory.

These nine sources were used to construct the population frame because:-

1- They provide detailed information on the enterprises registered in it.
2- They provide information about large numbers of enterprises (e.g. FAME database provides detailed financial and accounting information for 1.8 million firms registered in the UK – Nachum, 2003).

3- They provide the ability to evaluate the registered enterprises to make sure that it can satisfy the essential requirement to be considered as SBEs (number of employees and annual turnover).
4- They are very common databases and business directories among small business owners (based on the results of the research pilot study within the UK).

Based on the search conducted in the nine previously mentioned databases and business directories, a population frame was constructed containing detailed sub-industry classification information for 2124 SBEs within the UK. This information included the enterprise name and web address. These 2124 enterprise fulfilled the first three characteristics to be included in the population frame. To ensure that these enterprises met the fourth criteria (using E-Marketing to conduct marketing activities) and to confirm that it really met the first three characteristics, each single web address of the yielded enterprises was visited by the researcher (totalling 2124 addresses) to make sure that these enterprises are small in size, uses E-Marketing to conduct its marketing activities and to complete any missing data about any of these enterprises. This scanning process was conducted for two months over the period of time from 15/8/2008- 15/10/2008. Based on this investigation and scanning, 171 enterprises were excluded from the population frame for the following reasons:-

1. Some sites were terminated and not working any more.
2. Some enterprises had more than one link in the databases and business directories and as a result of that counted more than one time.
3. Some enterprises were classified by the databases and business directories as small businesses while in reality they were not small in size with regards to the number of employees and annual turnover.

Investigating and determining whether each of these enterprises is considered to be a small business or not was the most difficult phase in the scanning process. It was conducted through investigating the information provided in the enterprise web site. Some enterprise mentioned clearly that they are small, but for most of the enterprises it was a must to visit some icons (sub-web pages) like **"**About Us**"** or **"** Company Profile**"** to find out whether they are small in size or not. This scanning procedure was essential and determining the population frame without conducting it

may have lead to spurious results and obliterated the random base for the research sample. Since in such a situation it would not meet the criteria for a probability sample, where each person or unit in the population has an equal probability of being selected (De Vaus, 1996). Consequently, a modified population frame database was constructed from the enterprises that met the relevant applicable four population criteria discussed earlier. This modified population frame database contained complete detailed information about the enterprises in it, which included the enterprise name, address, the enterprise web address, e-mail address (or the URL for the contact us web page in the enterprise website in case of not finding an e-mail address for the enterprise), marketing department contacts, phone numbers and fax number.

On the other hand, as mentioned earlier, the study planned to obtain responses from different industries so that generalisation of the findings could be established. The modified population comprises SBEs in eleven specific industries, namely, automotive, agriculture, chemical and allied products, constructions, computers and IT, engineering, food and drink, healthcare, leisure, publishing and textiles. Distribution of the population frame according to industry is illustrated in table 4-7. Meanwhile, table 4-8 illustrate the Distribution of research population by location

Table 4-7: The distribution of the research population according to industry

N	***Industry***	***Frequency***	***Percent***
1	Automotive	223	11 %
2	Agriculture	201	10 %
3	Chemical and Allied Products	197	10 %
4	Constructions	30	2 %
5	Computers and IT	422	21 %
6	Engineering	115	6 %
7	Food and drink	368	19 %
8	Healthcare	97	5 %
9	Leisure	35	2 %
10	Publishing	15	1 %
11	Textile	250	13 %
	Total	***1953***	***100.00%***

Table 4-8: Distribution of research population by location

Location	***Frequency***	***Percent***
England	1423	73 %
Scotland	234	12 %
Wales	181	9 %
N. Ireland	115	6 %
Total	***1953***	***100.0***

The distribution of the research population is representative of the UK SBEs population. As discussed in chapter six (section 6.2), the majority of the UK SBEs are located in England (87%) followed by Scotland (5%), Wales (5%) and finally Northern Ireland (3%). Since the differences between the research population and the UK SBEs population distribution according to location is relatively very small, the distribution of the research population is more likely to be representative of the UK SBEs population. Based on that, the research population is not only reliable and can be used in studying the research phenomena but also has high potential to gain meaningful results and will allow generalisation of the research findings.

4.7.1.2 Sample type:-

According to Sekaran (2000) a research sample can be defined as: "*A subset of the population*" (Sekaran, 2000; P: 266). On the other hand, Schofield (1996) define research sample as: "*A set of elements selected in some way from a population"* (Schofield, 1996; P: 25). Moreover, Bryman and Bell (2003) define it as: "*The segment of the population that is selected for investigation, it is a subset of the population"* (Bryman and Bell, 2003; P: 93).

Generally, there are two main types of research samples: probability and non-probability samples (De Vaus, 1996; Schofield, 1996; Bryman and Bell, 2003 and Sekaran, 2000). A probability sample is a sample in which each element within the population has an equal, or at least a known, probability of being selected within the sample. Bryman and Bell (2003) define probability sample as: "*The sample that has been selected using random selection so that each unit in the population has a known chance of being selected*" (Bryman and Bell, 2003; P: 93).

In probability sampling, as a result of the fact that all the units within the population have the same probability of being included in the sample, Bryman and

Bell (2003) and Bryman and Cramer (1994) argue that it is generally assumed that probability sample will be a more representative sample of the population and that the main aim of using it is to reduce the sampling error and to keep it to a minimum. On the other hand, in order to have a random probability sample certain procedures to ensure that the different units within the population have equal probabilities of being chosen can be used (e.g., systematic random sampling, simple random sampling, cluster random sampling, and stratified random sampling). In contrast, a non-probability sampling contains some procedures that do not include random sampling at some stage in the process (Krathwohl, 1997: P: 171). Within the same line, Bryman and Bell (2003) define probability sample as: "*A sample that has not been selected using random selection method…this implies that some units in the population are more likely to be selected than others"* (Bryman and Bell, 2003; P: 93).

According to Sekaran (2000) non-probability samples can be divided into convenience sampling, quota sampling and purposive (judgmental) sampling. Convenience sampling is used when the researcher selects sampling units that are conveniently available. In purposive sampling, a researcher selects sampling units for a certain purpose (De Vaus, 1996). Figure 4-5 illustrates the classification of sampling techniques.

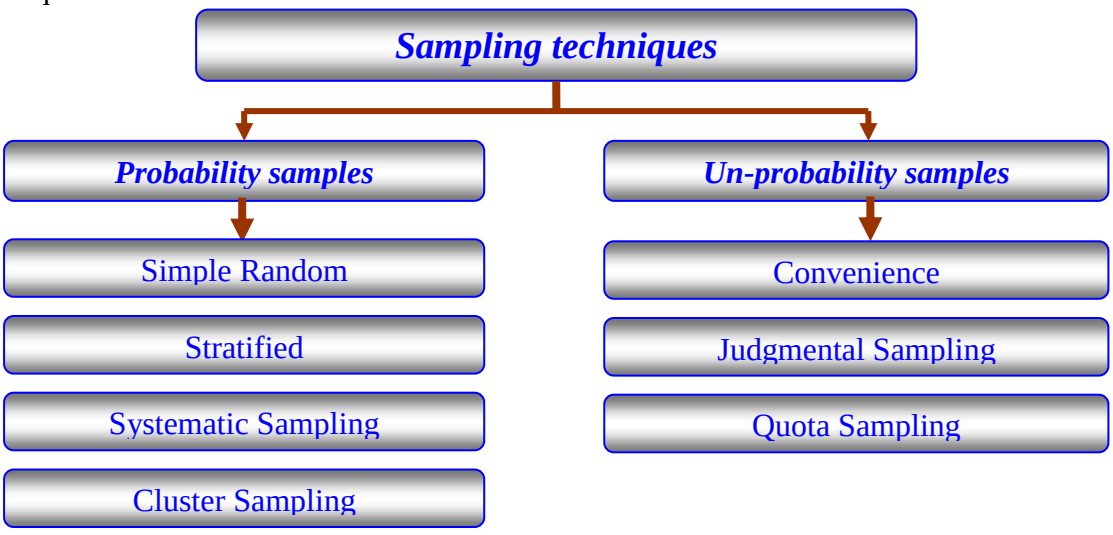

Figure 4-5: Sampling techniques.
Source: Adopted from Sekaran (2000).

However, for the purposes of conducting this research study, probability samples are both preferable and desirable because (as discussed earlier) these type of samples are more likely to produce a representative sample, reduce the sampling error and keep it minimum and enable estimates of the sample's accuracy. Accordingly, the

ideal arrangement would be a probability sample taken from the research population frame.

When determining the most suitable type of probability samples to be used within this research, the efficiency of the different probability samples must be taken into consideration. As the efficiency of the sample is measured by the size of its sampling errors relative to other samples of equal cost, as illustrated by Sudman (1976), stratified sampling is intended to provide the smallest sampling error. This is also confirmed by Sekaran (2000) who illustrated that stratified random sampling is the most efficient among all probability designs Sekaran (2000; P: 281).

Consequently, for the purposes of conducting this research and in order for the eleven main industries to have good representation, stratified sampling is selected. As discussed earlier, this study planned to obtain responses from different industries so that generalisation of the finding can be made.

4.7.1.3 Sample size:-

Because of the limited resources (regarding time and effort) of the researcher and to come up with an accurate and fair representation of the population characteristics, the researcher depended on a stratified research sample which has been selected randomly from the population of 1953 SBEs resulting from the sampling frame. It was planned to determine the sample size according to the Aaker and Day (1986) sample size equation which is highly accepted by social science researchers since it takes into account the degree of required confidence, the sample error, ratio of population characteristics available in the sample (50% in social sciences) and population size. According to Aaker and Day (1986) the sample size can be determined depending on the following equation:-

$$S = Z \sqrt{\frac{p\,(1-p)}{n}} \sqrt{\frac{N-n}{N-1}}$$

Where: *Z = Degree of required confidence (95 %)*
S = Sample error (5%)
P = Ratio of population characteristics available in the sample (50%)
N = Population size
n = Sample size

Many scholars like Bryman and Cramer (1998), De Vaus (1996), Sekaran (2000) and Bryman and Bell (2003) illustrate that a large and adequate sample size is the main method to ensure that the data collected would provide a reliable basis for drawing inferences, making recommendations and supporting decisions. Within this respect, a large and adequate sample size would remove bias and meet the criteria required by the analytical methods used within the research. However, Bryman and Cramer (1998) highlight that the sample size has to be related to the size of the population. Moreover, Malhotra (2004) highlight that the required sample size depends on factors such as the proposed data analysis techniques used to analyse the data. On the other hand, according to De Vaus (1996) the required sample size depends on two key factors, namely, the degree of accuracy the researcher require for the sample, and the extent to which there is variation in the population in regard to the key characteristics of the study (De Vaus, 1996; P: 70).

Based on the argument of Malhotra (2004), a researcher has to consider data analysis techniques used within the study when determining the study sample size. Within this respect, the most demanding proposed data analysis technique for this study is Structural Equation Modelling (SEM) which is sensitive to sample size and less stable when estimated from small samples (Garson, 2009; Tabachnick and Fidell, 2001). By reviewing the literature it was found that there are no generally accepted criteria for determining a specific sample size for using structural equation modelling (Hair et al, 1998; Garson, 2009; MacCallum et al., 1996; Chin, 1998; Mitchell, 1992 and Khong, 2005).

However, there are some general guidelines that have been proposed by some researchers with regards to the suitable sample size to be used when using structural equation modelling in data analysis. Within this respect, Hair et al (1998) suggest that a sample with a size of less than 100 is considered to be a small sample. They also suggest that a medium sample size is between 100 and 200, and a large sample size in more than 200. On the other hand, Garson (2009) suggest that a sample size has to be more than 100. Moreover, many researchers have used a sample size of around 100 to conduct research using structural equation modelling (e.g. Khong, 2005; Graham, 2005; Eid 2003 and Battor 2008). Based on that, it is generally regarded that a sample size of 100 is the practical acceptable size for using structural equation modelling.

Considering this sample size as a guide, the sample size in different degrees of required confidence was calculated using the Aaker and Day (1986) sample size equation. As illustrated in table 4-9, for achieving a 90 % degree of confidence the sample size needs to be 21 and a sample size of 87 SBE will generate a degree of confidence of 95%.

Table 4.9: Implementing Aaker and Day sample size equation in different degrees of required confidence

N	Degree of confidence	Sample size (SBE)
1	90 %	21 SBE
2	95 %	87 SBE

Meanwhile, Aaker et al (2004) illustrate that a common approach in determining the sample size is to find similar studies and use their sample size as a guide (Aaker et al, 2004; P: 403). In light of the argument of Aaker et al (2004), many scholars within the fields of social sciences like Michael and Beck (1995) argue that simple random sampling (SRS) yields a sampling fraction of 1/10 (Michael and Beck, 1995; P: 3). In line with that, De Vaus (1996) considers that having a population of 50 using the sample of 10 is sufficient and that the sampling fraction would be 1/5 (De Vaus, 1996; P: 64). Within this respect, a sample size of twenty percent of the total population is accepted by most researchers within the field. Eid (2003) and Michael and Beck (1995) are examples of researchers who used a sample size of twenty percent of the total research population.

To this point, as far as this study is concerned, the research sample was chosen to represent twenty percent of the research population. The information from 391 SBEs from the intended population frame was collected. The sample size was chosen to represent twenty percent of the research population because:-

1- This sample size is expected to fulfil the requirements of all the statistical techniques used within the study.
2- This sample size is appropriate to justify the cost and time limitations of the researcher.
3- This sample size exceeds the sample size required to achieve 95% degree of confidence according to the Aaker and Day (1986) sample size equation which is highly recognised among researches in the field.

4- A sample size of twenty percent of the total population is accepted by most researchers within the field.

Table 4-10 provides the study-stratified sample.

Table 4-10: Distribution of companies of each industry in the sample

Industry	*Population Size*	*Strata Ratio*	*Sample Size*
Automotive	223	11 %	43
Agriculture	201	10 %	39
Chemical and Allied Products	197	10 %	39
Constructions	30	2 %	8
Computers and IT	422	21 %	82
Engineering	115	6 %	23
Food and drink	368	19 %	74
Healthcare	97	5 %	20
Leisure	35	2 %	8
Publishing	15	1 %	4
Textile	250	13 %	51
Total	***1953***	***100%***	***391***

4.7.1.4 Unit of analysis:-

The unit of analysis is the unit from which information is obtained (De Vaus, 1991). As the main aim of this research is to clarify the different factors affecting the adoption of E-Marketing by UK industrial and trading SBEs, as well as the impact of this adoption on SBEs marketing performance, the unit of analysis is conducted at the organisational level of analysis. Therefore, the SBE owner, marketing manager and/or sales manager perceptions of E-Marketing adoption and the impact of this adoption on performance are measured. They are regarded as the main source of the information because they are the key decision-makers in the SBE and directly responsible for planning, adopting and implementing E-Marketing activities within the small enterprise.

4.7.2 Construction of the Questionnaire:-

Questionnaire construction is a very important aspect in conducting any research. In order to achieve effective questionnaire design, research aims and objectives should be formulated before the questionnaire is designed (Sudman and Bradburn, 1982; P: 261), because a good questionnaire is one that accomplishes the

researcher's objectives. Accordingly, the main objective of the research questionnaire is to gather data that would help to answer the research questions addressed by the study.

The questionnaire (see appendix one) has been designed to measure the research variables (independent and dependent) as well as measuring the relationships between these variables and to extract information from the SBEs regarding their E-Marketing adoption, implementation and marketing performance. Moreover, to insure developing a good questionnaire the Tull and Hawknis (1980) model for questionnaire design was adopted (see appendix four). The questionnaire was divided into six different parts, each one of them addressing one particular area of interest. Part one contained questions that give background information about the SBE, part two measured the different factors affecting the adoption of E-Marketing by SBEs, part three measured the main independent variable of the study (E-Marketing adoption), and part four measured the different E-Marketing tools, forms and levels of implementation within the small businesses. Part five looked at the current and future marketing performance of the SBEs, and finally part six contained some questions related to the individual respondents.

In designing the questionnaire great attention has been given to the questions, it was short, direct, clear and comfortable in discussing to ensure getting the right data and to avoid any harm to the participants. Beside that the questions that may have two meanings or may lead to specific answers were avoided. On the other hand, the questionnaire depended on several kinds of questions**,** which were developed by the researcher. Within this context, the questionnaire included open questions, yes and no, category, ranking, scale and quantity questions. Different groups of questions have been used to cover each item and clear instructions were given to the participants to avoid any confusion.

Because the research depended on SPSS (the Statistical Package for Social Sciences – V16) for analysing the collected data, a coding scheme was designed prior to the process of collecting the data. Moreover, the order and flow of the questions in the questionnaire was considered to get a logical flow of questions to help in collecting the data. Gaining consent from the participants' enterprises has been done on a fully informed and freely given bases; the questionnaire was introduced carefully

to the respondents to ensure having a high response depending on a cover letter which declared that participation is voluntary. Also, it was used to give the participants full information about the research which included: the title and purpose of the research/ the research team (the researcher and the supervisors)/ the research sample and who is being asked to participate/ the kinds of data required/ assurances about participants privacy, confidentiality and anonymity/ assurances about data security and that it is only for the purpose of, and will be used only for scientific research /……..etc).

4.7.2.1 Research measures

Churchill (1999) defines measurement as: "the rules for assigning to objects to represent quantities of attributes" (Churchill, 1999; P: 447). In this study, the multiple-item Likert scales are used to measure research variables because it is an appropriate interval scale that measures behavioural variables. This is in line with Churchill (1979) who proved that multiple-item measures better serve the purposes of marketing research than single-item measures (Churchill; 1979: P: 66). Peter (1979) also indicated that multiple-items scale increase the reliability and validity of the scales. Moreover, Likert scale is very common in E-Marketing and Marketing studies (e.g., Eid et al, 2006; Ramsey and McCole, 2005; Eid 2005; Eid 2003; Haron, 2002; Battor, 2008). The Likert scale points in this study are restricted to five [ranging from strongly disagree (1) to strongly agree (5)] because this is consistent with previous studies in E-Marketing that use the five-point scale (e.g. Eid et al 2006; Eid 2005; Ramsey and McCole, 2005; McCole and Ramsey 2004; Chaston and Mangles 2003; Eid, 2003;) and practically it is much better for the respondents to answer using five-point scales.

There are five main constructs in this research namely E-Marketing adoption, E-Marketing forms, E-Marketing tools, E-Marketing implementation levels, E-Marketing impact on marketing performance. All the variables in the research are latent variables which can not be measured directly. Accordingly, the operationalisation of these variables was done through generating multiple scale items to measure these variables in quantitative terms.

All the measures of the research constructs has been developed and tested by the researcher except for the measures related to the TAM and IDT factors which was

adopted from the measurements used by Moore and Benbasat (1991) to measure perceived ease of use, perceive relative advantage (usefulness) and perceived compatibility (see chapter three – section 3.3). This was mainly due to the lack of existing well-established measures to measure the research constructs. All these research measures has been developed based on the in depth literature review as well as the results of the research exploratory studies and have been found valid and reliable based on the results of the pilot study as well as different reliability tests (namely item-to-total correlation and Cronbach's Alpha). As discussed in detail in chapter nine (section 9.2), the values of item-to-total correlation and Cronbach's Alpha were considerably and significantly higher than the reliability acceptable levels suggested by Edgett (1991) and Nunnaly (1978). More details about the pilot study as well as the validity of the research measures are discussed in sections 4.8.1 and 4.9 of this chapter. The following table present the research measures as well as its source.

Table 4-12: Research measures

N	Constructs	Items	Source
1	***E-Marketing adoption***	***Internal Factors:***	The researcher based on the in depth literature review and the results of the research exploratory studies
		SBE owner skills	
		I find it easy to use E-Marketing tools for conducting my business.	
		I find it easy to interact with E-Marketing tools	
		Interacting with E-Marketing tools require a little mental effort by me.	
		I think that the Internet and other E-Marketing tools are very important to conduct business.	
		There is a sufficient support from the top management for the adoption of E-Marketing .	
		SBE organisational culture	
		E-Marketing tools are in consistent with the values of our enterprise.	
		The attitude of our staff goes in line with E-Marketing adoption.	
		E-Marketing tools are in consistent with the beliefs of our enterprise.	
		The behaviour of our staff is in line with E-Marketing adoption.	
		Marketing team within my enterprise use E-Marketing tools as a very useful tool.	
		SBE resources	
		We have good, qualified and skilled marketing staff in our enterprise.	
		We have good technological infrastructure in our enterprise.	
		We have sufficient financial resources in our enterprise for adopting E-Marketing .	

		We conduct E-Marketing because we have sufficient financial resources.	
		We will implement E-Marketing even if we did not have sufficient financial resources.	
		We will implement E-Marketing even if we did not have skilled and qualified staff.	
		We can not conduct E-Marketing without good and sufficient technical resources.	
		Type of products	
		One of the factors that influenced our decision of adopting E-Marketing is the types of products produced by our enterprise.	
		We would implement E-Marketing regardless of the types of products produced by our enterprise.	
		The type of products produced by our enterprise did not affect our decision of adopting E-Marketing .	
		If we changed the types of products that we produced, we might choose not to adopt E-Marketing .	
		SBE International orientation	
		We would implement E-Marketing regardless of our national or international business orientation.	
		We adopted E-Marketing because it is useful for our international business.	
		We do not need to adopt E-Marketing because we work on the local level.	
		We adopted E-Marketing because we plan to expand our business internationally	
		SBE size	
		We are too small to adopt E-Marketing .	
		The size of our enterprise did affect our decision to adopt E-Marketing .	
		We will adopt E-Marketing when we become a bigger enterprise.	
		We adopted E-Marketing regardless of our enterprise size.	
		TAM and IDT factors	Adopted from Moore and Benbasat (1991)
		Relative Advantage (Usefulness)	
		Using E-Marketing enables me to accomplish tasks more quickly.	
		Using E-Marketing improves the quality of the work I do.	
		Using E-Marketing makes it easier to do my job.	
		Using E-Marketing increases my productivity.	
		Using E-Marketing gives me greater control over my work.	
		Using E-Marketing enhances my effectiveness on my job.	
		Using E-Marketing improves my job performance.	
		Compatibility	
		Using E-Marketing is compatible with all aspects of my work.	

		Using E-Marketing is completely compatible with my current situation	
		I think that using E-Marketing fits well with the way I like to work.	
		Using E-Marketing fits into my work style.	
		Ease of use	
		My interaction with E-Marketing is clear and understandable.	
		I believe that it is easy to get E-Marketing to do what I want to do.	
		Overall, I believe that E-Marketing is easy to use.	
		Learning to use E-Marketing is easy for me.	
		External Factors	The researcher based on the in depth literature review and the results of the research exploratory studies
		Competitive pressure	
		Competitive pressure is one reason for our adoption of E-Marketing .	
		The Business environment supports conducting E-Marketing	
		There are enough legal acts to provide a supportive business environment for E-Marketing .	
		Competitive pressure is the main reason for our adoption of E-Marketing .	
		We adopted E-Marketing to avoid losing our market share to competitors who are already using E-Marketing .	
		We adopted E-Marketing as a response to market trends.	
		We adopted E-Marketing regardless of market trends and competitive pressure	
		Governmental influence	
		We adopted E-Marketing because of the incentives provided by the government.	
		We adopted E-Marketing because of the protection provided by the government.	
		We adopted E-Marketing because of government influences.	
		There was no influence of the government on our decision of adopting E-Marketing .	
		Our customers do not like purchasing through the Internet.	
		Our customers do not trust E-Marketing tools	
		There is a lack of trust between enterprises conducting E-Marketing activities.	
		Our customers prefer to pay in cash instead of electronic payment methods	
		The customers usually do not trust E-Marketing tools because of security issues.	
		The customers usually do not trust E-Marketing tools because of privacy issues.	
		The customers usually do not trust E-Marketing tools because they distrust the companies that provide products using these tools.	

		The majority of our customers are able to utilize technology.	
	E-Marketing Implementation		
2	***E-Marketing Forms***	We conduct marketing activities depending on traditional marketing.	The researcher based on the in depth literature review and the results of the research exploratory studies
		We conduct marketing activities using traditional marketing techniques, but we plan to adopt E-Marketing	
		We do not have any access to the internet or any Electronic Marketing means.	
		We use E-Marketing resources to communicate with our customers.	
		We use E-Marketing resources to advertise our products	
		We use the internet in accessing other companies sites	
		We use E-Marketing resources to support our enterprise traditional commercial activities	
		We have a systematic or regular updates for our web site	
		Our website is connected to a small customer database.	
		Our enterprise interacts with its customers through registration forms, newsletters and e-mail accounts.	
		We use E-Marketing resources to conduct commercial transactions	
		We have a computerised customer database that we use to perform marketing activities	
		Our enterprise plan to minimize the manual input on conducting electronic transactions to create an automated workflow and Business - to – Business automated processes to fulfil all our customers' needs	
		We conduct marketing activities depending on Business to Business (B2B)	
		We conduct marketing activities depending on Business to Consumer (B2C)	
		We conduct marketing activities depending on Business to Government (B2G)	
		We do not conduct marketing activities depending on: B2B, B2C and B2G but we plan to do that in the future.	
3	***E-Marketing tools***	Our enterprise does not use the internet in conducting its marketing activities	The researcher based on the in depth literature review and the results of the research exploratory studies
		Our enterprise does not use e-mail in conducting its marketing activities	
		Our enterprise does not use mobile marketing in conducting its marketing activities	
		Our enterprise depends heavily on the internet in conducting marketing activities	
		Our enterprise uses its intranet in conducting marketing activities	
		Our enterprise uses its extranet in conducting marketing activities	
4		In our enterprise we depend on Internet Marketing	

	E-Marketing implementation level	to conduct up to --- % of our marketing activities In our enterprise we depend on E-Mail Marketing to conduct up to --- % of our marketing activities In our enterprise we depend on Mobile Marketing to conduct up to --- % of our marketing activities In our enterprise we depend on Intranet Marketing to conduct up to --- % of our marketing activities In our enterprise we depend on Extranet Marketing to conduct up to --- % of our marketing activities In our enterprise we depend on Business to Business (B2B) to conduct up to --- % of our marketing activities In our enterprise we depend on Business to Consumer (B2C) to conduct up to --- % of our marketing activities In our enterprise we depend on Business to Government (B2G) to conduct up to --- % of our marketing activities	The researcher based on the in depth literature review and the results of the research exploratory studies
5	***E-Marketing impact on marketing performance***	In my enterprise, implementing E-Marketing leaded to: - New Sales - New Customers - Increased Profits - Good Customer Relationships - Reduction of sales costs - Faster discovery of customer needs - Greater customisation of products - New markets - Fast communication with customers - Increased customer satisfaction - Developing new products - Faster adaptability of customer needs - Providing better service quality - Increased market share - Increased brand equity	The researcher based on the in depth literature review and the results of the research exploratory studies

4.8 Data preparation (reliability and validity):-

"Reliability and validity are tools of an essentially positivist epistemology"

(Watling, as cited in Winter, 2000; P. 7)

To gain meaningful results from the data analyse stage, some steps were conducted to make sure that the data was well prepared and to assess the reliability and validity of the measurements used in the survey. These steps are discussed in the following sections of the chapter.

Howell et al (2005) illustrate that validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to

measure. Moreover, measurement validity is mainly concerned with the assessment of the scales to make sure that the scales measures what it is supposed to measure. Based on that, Haron (2002) argues that validity is the degree to which the measure captures the construct it was designed to measure and indicates whether the research instrument is used accurately to measure what it is supposed to measure or not. There are three different approaches to validity analysis within social science namely content validity, criterion validity and construct validity approaches.

With regards to validity's definition, Joppe (2000) sees validity as a tool to: "*determine whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words, does the research instrument allow you to hit "the bull's eye" of your research object? Researchers generally determine validity by asking a series of questions, and will often look for the answers in the research of others"* (Joppe, 2000; P. 1). On the other hand, Bell (1999) defines validity as: "*Regarding an item measures or describes what it is supposed to measure or describe"* (Bell, 1999; P: 104). Moreover, while validity is concerned with the study's success at measuring what the researchers set out to measure, reliability is concerned with the accuracy of the actual measuring instrument or procedure (Howell et al, 2005).

Joppe (2000) defines reliability as: "*The extent to which results are consistent over time and an accurate representation of the total population under study …and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable*" (Joppe, 2000; p: 1). In addition Robson (2002) defines reliability as: "*The extent to which a measuring device, or a whole research project, would produce the same results if used on different occasions with the same object of study"* (Robson, 2002; P: 551). On the other hand, Kirk and Miller (1986) identify three types of reliability which relates to:-

(1) The degree to which a certain measurement remains the same.

(2) The stability of a measurement over time.

(3) The similarity of measurements within a given time period (Kirk and Miller, 1986, P: 41 and 42).

Within this study, the assessment of reliability and validity of the measurements used in the survey have been conducted through two stages namely content validity and data preparation (which in turn has been conducted through data editing, data coding, data entry and final review as well as purification of the study measures).

4.8.1 Content validity:-

The process of assessing the research measurements reliability and validity started with ensuring the content validity of the research instrument. According to Carmines and Zeller (1991) content validity can be defined as: "*The extent to which a measurement reflects the specific intended domain of content*" (Carmines & Zeller, 1991, p.20). On the other hand, The USA Environmental Protection Agency - USEPA (2009) defines it as: "*The ability of the items in a measuring instrument or test to adequately measure or represent the content of the property that the investigator wishes to measure*" (The United States Environmental Protection Agency, 2009, P: 1).

Based on these definitions and the arguments of researchers (Carmines and Zeller, 1991; Nunnally and Bernstein, 1994 and Haron 2002), a measure has content validity if there is a general agreement among the subjects and researchers that the instruments has measurement items that cover all the content domain of the variables being measured. Moreover, according to McDaniel and Gates (1996), a measurement must satisfy some certain criteria before it can be applied in an empirical fieldwork. These criteria are:-

1. Carefully defining what is to be measured.
2. Conducting a careful literature review and interviews with the target population.
3. Let the scales be checked by experts.
4. The scale has to be pre-tested.

For the purpose of ensuring the content validity of this research instrument, the criteria proposed by McDaniel and Gates (1996) was adopted. Within this respect, the proposed research variables were developed and defined carefully through a deductive process from the literature review as well as an inductive process through semi-structured interviews with the target population (SBEs with the UK). Moreover, the research questionnaire and scales has been checked, reviewed and examined by

the researcher as well as academic research experts from Bradford University School of Management, Strathclyde Business School, Wolverhampton Business School, St Andrews Business School and Cairo University Business School. Within this examination process, the dimensionality of the research scales and it relevance to the target population was examined. Afterwards, the suitability and acceptability of the research questionnaire were tested through a pilot study of small business entrepreneurs and small business marketing managers within West Yorkshire County as well as academic staff and doctoral researchers within Bradford University School of Management and across the UK. Based on that, the research scales within this study are considered to possess content validity since if has gone through all the needed actions and procedures to gain this validity.

4.8.2 Data Preparation (Data editing, coding, entry and review):-

Data preparation within this study has been conducted through four stages, namely data editing, data coding, data entry and final review. The first stage in preparing the data for analysis was data editing. Within this stage, the raw data collected from the field was edited for the purpose of achieving the following objectives:

1. Detecting any errors and omissions.
2. Correcting any errors or omissions where possible
3. Ensuring that data quality standards are met and achieved.

The second stage in preparing the data for analysis was data coding. Within this stage, all the raw data collected from the field was coded through coding all the research variables into a format that is suitable for the statistical package that was used for analysing the data (SPSS). Each variable was given a unique label to differentiate it from other variables and each sub-item within each of the research variables was given a unique number to differentiate it from other sub-items. This stage helped in setting the data into the right format to be useable by the computer software used to analyse it. The third stage was data entry. Within this stage, the coded data resulted from the second stage were entered into the statistical package for the Social Science (SPSS) manually. The final stage of data preparation was the final review of the entered data. In this stage, the data entered were reviewed to make sure

that the values of the data have been entered into the computer software correctly. The review process was conducted by the researcher and one other researcher within Bradford University School of Management through having the researcher assistant to read the codes directly from the coded questionnaires while the researcher is listening and making sure that the values are correct in the SPSS data file. By finishing this stage, the data became ready for analysis.

4.9 Purification of measures:-

After completing the data entry and reviewing processes, all the measures used within the research were then tested and purified by assessing their reliability and validity prior to any future data analysis. The main aim of this process is to make sure that all the measures used within the research is sufficiently and significantly reflecting the underlying variables that it is attempting to measure. This will not only provide support for triangulation of the research results but will also provide a more significantly meaningful explanation of the phenomena that the research is investigating. On the other hand, a reliable and valid measuring instrument enhances the methodological rigour of the research (Eid, 2003).

Purification of the measures within this study has been done depending on the internal consistency approach through a two stages process based on item-to-total correlation and coefficient alpha (Cronbach alpha). Item-to-total correlation and the Cronbach alpha coefficient is considered to be a very popular reliability index in the field of social science research (Haron, 2002; Eid 2003; Shoobridge, 2004, Churchill, 1979 and Mat-Saad, 2001).

4.9.1 Item-to-total correlation test:-

Item-to-total correlation is one of the most widely accepted reliability measures among social science researchers. It is mainly based on the determination of the relationship of a particular item to the rest of the items in a specific dimension (Haron, 2002). According to Churchill (1979), using item-to-total correlation ensures that the items making up a specific dimension share a common core. When using item-to-total correlation for the purification of measures (which can be calculated by SPSS), according to Edgett (1991), only those items with an item-to-total correlation of 0.3 or more can be accepted and should be retained for further analysis because

these are the only items that are considered to have high reliability. On the other hand, any items with an item-to-total correlation less than 0.3 should be removed and excluded because it has low correlation unless they represent an additional domain of interest.

4.9.2 Coefficient alpha (Cronbach alpha):-

According to Nunnally (1978), the estimation of reliability is based on the average correlation between items within a dimension which is concerned with internal consistency. The statistical technique used in determining the reliability based on this internal consistency is called "Coefficient Alpha" and known among researchers as "Cronbach alpha".

Cronbach's alpha is a coefficient of reliability (or consistency) first named as alpha by the American educational psychologist Lee J. Cronbach (1916 - 2001) (Kupermintz, 2003). Cronbach alpha technique is based on the calculation of the mean reliability coefficient for all possible ways of splitting a set of items into two halves (Haron, 2002). Cronbach's alpha can be calculated as a function of the number of test items and the average inter-correlation among these items according to the following formula:-

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

Where N represents the number of items, $\bar{c}$ represents the average inter-item covariance among the items and $\bar{v}$ is the average variance. Based on this formula the value of Cronbach's alpha will increase if the number of items increased, or if the average inter-item correlation is high.

Within this context, while high alpha score indicate more internal reliability in the measurement scale, a low alpha score reflects that the measurement scale used do not actually capture the construct that it was supposed to measure. Many researchers have proposed different levels of reliability coefficients for exploratory research where the data gathering instruments are not validated. For example, Magal et al., (1988) suggest that a reliability coefficient of 0.6 or higher is acceptable. Also, Nunnally (1978) suggest that a Cronbach alpha value of 0.5 to 0.6 would be sufficient to consider a scale as a reliable one and a Cronbach alpha value of more than 0.6

indicates that the scale is more reliable. Moreover, Van de Ven and Ferry (1980) contended that a value of 0.7 or higher is sufficient. For the purpose of this study, the Magal et al., (1988) and Nunnally (1978) point of view will be adopted within this research.

Within this study Cronbach alpha was used to assess the reliability of the research measurement scales for the following reasons:-

1- Cronbach alpha coefficient is considered to be a very reliable, accepted and widely used reliability index in the field of social science research (Haron, 2002; Eid 2003; Shoobridge, 2004 and Mat-Saad, 2001).
2- Cronbach alpha is applicable to this study since it requires the measurement scale to include equal intervals (Peter, 1979) and the study used Likert scale (equal intervals scale) to measure the research variables.
3- Depending on Cronbach alpha will ensure the reliability of the research measurement scales which in turn will lead to have a more meaningful explanation of the E-Marketing phenomena investigated within this study.

Cronbach alpha were calculated for all the measuring instruments in the research questionnaire namely; E-Marketing adoption, compatibility, ease of use, relative advantage, owner skills, organisational culture, SBE resources, SBE size, type of product, international orientation, competitive pressure, government influence, cultural orientation, implementation level, impact on future performance and finally impact on current performance. Any item with a Cronbach alpha value less than 0.6 will be excluded.

4.9.3 Reliability Analysis Results:-

The statistical package for social science was used to calculate the item-to-total correlation as well as the coefficient alpha (Cronbach alpha) to perform the reliability analysis process for the research measures. The process started with the calculation of item-to-total correlation and coefficient alpha to obtain the total dimension of the constructs. Within this respect, Cronbach alpha was calculated first for all the research measures to determine its level of reliability. Based on calculations Cronbach alpha coefficient ranged from 0.649 to 0.924, which was considerably higher than the reliability acceptable level of 0.60 suggested by Magal et al., (1988)

and Nunnally (1978). Consequently, based on coefficient alpha results the research measures are satisfactory acceptable for conducting further data analysis through inferential statistics to test the research hypothesis.

To confirm the coefficient alpha results, item-to-total correlation was calculated for all the items within each domain (112 items in total) to determine the degree of correlation for each item which was then used to determine the low item-to-total correlation items. Out of the research dimensions, eleven items in three dimensions were found to have a low item-to-total correlation that is below the acceptable limit of 0.3. These items include three items in internal factors group, one item in the external factors group and seven items in the E-Marketing adoption group. Based on the results of the item-to-total correlation, although coefficient alpha results were acceptable, the items with low item-to-total correlation were removed in order to improve the reliability of the research scales. Moreover, both item-to-total correlation and coefficient alpha (Cronbach alpha) was recalculated.

After removing all the eleven items and recalculating the item-to-total correlation, the item-to-total correlation values for all the items were found to have a high value which is above the acceptable limit of 0.3, and the correlation ranged from 0.314 to 0.919. Afterwards, Cronbach alpha was recalculated and it was found that not only all the research measures were found to have a value of coefficient alpha which is significantly above the acceptable level of 0.60 and ranging from 0.728 to 0.924, but also the values of the coefficient alpha recorded an improved reliability. The results of the item-to-total correlation and coefficient alpha (Cronbach alpha) first and second analysis are presented and discussed in chapter nine in more detail. These results (as summarised in table 4 – 12) confirm that the research instrument and scales used within this research possesses a high level of reliability and is satisfactorily acceptable for conducting further data analysis through inferential statistics to test the research hypothesis.

Table 4-12: Reliability Analysis for the Research Variables

Item Code	***Item***	***Cronbach's Alpha***	***Total Number of Items***
A	A. Internal factors:		
A1	Entrepreneur (owner) skills	.802	5

A2	Organisational culture	.762	5
A3	The SBE resources	.807	4
A4	Type of the product	.728	4
A5	International orientation	.828	4
A6	Size of the firm	.783	4
A7	Perceived ease of use	.924	7
A8	Perceive relative advantage	.858	4
A9	Perceived compatibility	.846	4
B	B. External Factors:-		
B1	Competitive pressure	.889	6
B2	Government influences	.913	4
B3	Cultural orientation towards E-Marketing	.836	8
C	C. E-Marketing adoption	.847	10
H1	The current effect of implementing E-Marketing on the marketing performance	.736	16
H2	The future effect of implementing E-Marketing on the marketing performance	.862	15

4.9.4 Data collection of the questionnaires:-

After the pilot test and checking the validity and reliability, the questionnaire was sent by mail to be returned after completion to the researcher by prepaid unmarked envelope which provides confidentiality for the participants, avoid any harm to them, and gives them the chance to choose a suitable time to complete the questionnaire. Additionally a link for an electronic version of it was sent to the research participants via e-mail. The completion of the questionnaire was followed by e-mails and telephone calls (reminders) to the participants, but that was done for a suitable and reasonable number of times and in appropriate timing to avoid any harm to the participants. Finally, after receiving the completed questionnaires, the answers of each respondent was organised, coded and entered into SPSS. It was then analysed by using the appropriate techniques.

The survey questionnaire targeted a sample of 391 SBEs within the UK that were selected randomly from a population of 1953 SBEs within the same region. Of the 391 SBEs, a total of 153 questionnaires were returned. This included 14 returned (not completed) with a label stating “Gone Away” or “Not in this address any more.” A further 19 questionnaires were returned with a covering letter explaining why they had not been completed. For the most part of the responses, the participants indicated that it was not the enterprise guiding principles to participate in surveys or that they

did not participate in the research as a result of lack of time due to work pressures. Also 3 questionnaires were returned without completing all the needed questions within the questionnaires and another 3 questionnaires were complete but the annual sales of these enterprises exceeded 8.5 millions pounds and were excluded from participating in the study as these enterprises can not be considered as SBEs according to the definition used within this study. Therefore, the number of returned completed questionnaires was 114. Table 4-13 provides a summary of the responses distribution and rate. The response rate scored 32.38% (the useable response rate scored 29.16%) and was calculated depending on the technique developed by De Vaus (1991; P: 99) and Bryman and Bell (2003; P: 104). Based on these methods the response rate is calculated according to the following equation:-

$$\frac{\textit{Number of usable questionnaires}}{\textit{Total sample – unusable or un-contactable member of the sample}} \textit{ X 100}$$

Table 4 -13: SBE Survey Response Summary

Total number of questionnaires	391
Number of completed and returned questionnaires	114
Unreachable SBEs	14
Number of SBEs declined participation	19
Uncompleted questionnaires / not SBEs	6
Response rate	***32.38 %***

4.10 Semi-structured interviews:-

On the basis of the findings of the Egyptian primary survey, as well as the quantitative findings of the UK primary survey, in-depth interviews have been applied to collect the research data. Yin (1994) argues that semi-structured interviews is a suitable choice of research method when researchers have small control over the environment; when the phenomena under investigation is contemporary; and when the context of the research is important. Since case studies would enable the researcher to gain an in-depth understanding of why and how the SBEs under investigation were using E-Marketing, it was adopted. Moreover, Bryman (1989) argues that case studies provide one of the chief arenas in which quantitative and qualitative research can be combined (Bryman, 1989; P: 175). He further adds that semi-structured interviews is

relevant to studies that focus on the understanding of areas of organisational functioning that are not well documented (like this research) which make the semi-structured interviews approach more suitable for conducting this research.

On the other hand, this research argues that interviews are better than any other data collection method to collect the data of case studies. Beside that Kaplan and Duchon (1988) believe in the appropriateness of the semi-structured interviews approach for studies in which research is in its early stages, and where the context and respondents are of particular importance to the study (just like this research). This research argues that the complexity of the context being investigated and the diversity of the issues related to E-Marketing sustainability make the semi-structured interviews approach both fruitful and of particular usefulness.

According to Patton (1990) there are six main types of questions that can be asked within an interview which are experience, opinion, demographic and background, feeling, knowledge, and sensory questions. And there are no fixed rules of sequence in organising an interview (Patton, 1990; P: 294). The interviews depended mostly on the opinion, background and knowledge questions. The questions focused primarily on detailed insights and perceptions of E-Marketing adoption issues, its operational value, how it will affect the customers and the marketing performance of the SBEs.

The basis employed in the selection of the SBEs and the respondents for the semi-structured interviews was based on the Glaser and Strauss (1968) concept of theoretical sampling, in which the choice of SBEs was based on the level of implementation of E-Marketing, the relative size of their business, their expressed views on E-Marketing and its effects on the business performance and their business sector. Participants were selected from a sample of SBEs which had already participated in the survey and who agreed to engage in further participation in the research. The interviewees were the marketing managers and the SBE owners as they are the key persons involved in implementing E-Marketing in the SBEs.

The case studies within the research were planned to be conducted as a chain of sequenced interviews and the interviews were recorded as a sequence of field notes and subsequently transcribed into more detailed files, which were then verified with

the semi-structured interviews participants for accuracy. The case studies provided a more in-depth investigation of the motivation and experience that could not be obtained by the survey. The semi-structured interviews results provided a level of validation of the information gathered through the survey.

4.11 Chapter summary:-

Within this chapter the methodology used to conduct the research study as well as the issues related to the chosen research methodology were discussed. This discussion was built on the outcomes of chapters two and three and through it the steps that were taken to address the research design, the data collection and analysis methods used to conduct the research study were illustrated. These issues were addressed in light of the basic research objectives and the relevant research questions. The chapter started by providing a basic background about the different research methodologies and strategies and the importance of selecting an appropriate research approach, research methodology and strategy. Afterwards, the basic assumptions and practical issues of different research paradigms were illustrated and discussed. Based on this discussion, the chapter proved that there are sufficient philosophical and practical reasons for depending on the post-positivist approach as the research approach for this research. Moreover, the research methodology and stages were discussed with reference to the adopted research philosophy.

Subsequently to identify the most appropriate research methodology and methods to conduct this research, a review of the literature on the available research methodologies, research strategies and research methods implemented by scholars within the fields of E-Marketing and SBEs from 1993 to 2009 were discussed and illustrated. Based on this review as well as the evaluation of this literature, it was found that most of the researchers who contributed to the field of E-Marketing depended on a single methodology or method when conducting research studies and that most of the studies conducted have some critique points regarding the methodologies and methods used in it. The discussion within the chapter illustrated that there is no optimal research methodology or method since each methodology or method has some drawbacks or limitations, but a researcher must employ the most appropriate research methodology and method to his research. Based on that it was illustrated that this research will depend on a data, method and methodological

triangulation, in which quantitative and qualitative data will be collected depending on a combined research strategy based on survey and semi-structured interviews through questionnaires, focus groups and interviews to address different levels of the study. The selection of the research methodology for conducting this study was justified in terms of its appropriateness and usefulness to the research in order to achieve the basic research objectives.

Afterwards issues related to the research data were discussed in detail. The research primary and secondary data were first discussed and based on this discussion the implementation of the data collection methods was explored in detail. Within this context the issues related to the research sample design, the research population, the research sample, the sample type, the sample size, unit of analysis, data collection methods, construction of the research questionnaire, stages of data collection from the field, the procedures and problems encountered during each stage of the fieldwork as well as the actual data collected and the methods of data analysis were presented and discussed in detail within the chapter.