

# Evaluating the public's perception of NSO websites using a non-standard mixed methodological approach

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## Summary

In the last twenty years most National Statistics Offices have committed considerable resources to the development of their web presence and for many, a NSO's website is their first contact with the organisation. It is therefore important that NSO websites are fit for purpose. For example, the website should allow for the simple and effective retrieval of data and its related meta data. As there is no standard design for NSO websites it is important that the interfaces they provide are intuitive and adequate for what their public requires. This paper discusses methodological issues surrounding the evaluation of the public's perceptions of NSO websites. It is based on experiences gained in a multinational study. The basic argument put forward by the paper is that for effective evaluation, an extended mixed methods approach is needed that recognises the limitations that standard evaluation methods based on the concept of bounded rationality pose.

## 1. Introduction

The web is becoming an increasingly important tool for National Statistics Offices as evidenced by the recent papers by Gardner(2009), Thygesen and Sundgren(2009), Bosch and Jonge(2009), Smith and Rogers(2009), Snudrel(2009), and Grossenbacher(2009). In terms of public accountability and acceptance a NSO's website is often the first and main interface available. It is therefore important that NSO's websites are 'fit for purpose'. To date, most of the discussion on NSO's use of websites has been concerned with content rather than cognitive issues. The issue then arises as to how to evaluate an NSO's website. Website evaluation is a complex area, much of the research is concerned with developing complex models on 'searchability' (c.f. Hu 2009). At a more practical level many usability studies are undertaken building on the seminal works of Rubin(1994) and Dumas and Redish(1993). Such studies normally set users tasks and record how quickly and successfully they can complete the tasks. Sometimes, some users are subjected to in-depth interviews about their experiences of the websites. Such studies are however limited as it can be argued that website usability is concerned with perceptions and attitudes as well as just outcomes and in-depth interviews often encourage politically correct responses and fail to uncover feelings, beliefs, attitudes and motivations which many interviewees find difficult to articulate (Webb, 1992). In both psychology and consumer research projective techniques are used to uncover such issues. The purpose of this paper is to explore the usefulness of the qualitative approach of projective techniques in the evaluation of NSO websites. In particular, it addresses the issue of whether projective techniques can measure the perceptions that target groups have to NSO. If the perceptions of a NSO target group are negative it is unlikely that the work of the NSO will be enhanced by its website.

As no study of NSO websites using projective techniques has yet been undertaken, the assessment of their usefulness is based on a related study of how small and medium enterprises (SMEs) in the tradeable services sector perceive public policy aimed at encouraging e-business. To help understand whether the findings can be generalised the paper considers perceptions in Northern Ireland, Republic of Ireland and New Zealand.

The structure of the paper is as follows. In the next section the background to various strands of the paper are introduced. Firstly the ideas behind projective techniques are presented. The section finishes with a discussion of the background to the case study of the attitudes of SME owner-managers in the tradeable service sector. The methodology adopted in the three country study is then outlined. This is followed by a summary of the results obtained by the various techniques. The paper then attempts to evaluate whether projective techniques are a useful tool for NSO website evaluation. The paper concludes by suggesting future directions for research in NSO website evaluations.

## 2. Background

A major problem with standard website evaluation techniques is the reliance on a simple mixed methodology. In particular, to simply to 'ask the questions' in an open-ended method is generally insufficient (Hoskin, 2002). In the seminal works by Edwards (1954) and March and Simon (1958) the concept of 'bounded rationality' was introduced. The basic idea is that decisions are not made entirely on rational grounds. The challenge facing researchers who want to understand 'real' decision behaviour is the need to focus on perceptual psychological and cognitive factors that cause decision-makers to make imperfect decisions. That is how the decision-makers interpret new information and direct their behaviour towards the attainment of organisational goals. One possible instrument to achieve such an understanding is projective techniques. In this paper the use of these techniques as a method of evaluation of policies is considered.

To many people projective techniques are synonymous with the Rorschach Inkblot Test. Underlying the techniques is the assumption that unconscious desires and feelings can be inferred by presenting a subject with an ambiguous situation in which he or she has to use the "ego defense" mechanism of projection. The subject is free to interpret and respond to the ambiguous stimuli (material that can be variously interpreted) from his or her own particular frame of reference (Churchill, 1991; Kassarian, 1974; Loudon and Della Bitta, 1993; Solomon, 1994). As there is no right or wrong answer, it is hoped that the subjects will project their own unconscious feelings in their answers (Solomon, 1994:25). Projective techniques may be classified as a structured-indirect way of investigating the whys of situations (Webb, 1992)

The techniques were initially developed in clinical psychology where they were used for personality assessment and psychoanalytic treatment (Bellak, 1992; Graham & Lilly, 1984; Kassarian, 1974). More recently the usefulness of the techniques has been established in consumer and marketing research (Berkman & Gilson, 1986; Loudon & Della Bitta, 1993 and Kassarian, 1974). In situations where they are applied they are not used to measure (that is more the territory of other techniques such as surveys), but to uncover feelings, beliefs, attitudes and motivations which many consumers find difficult to articulate (Webb, 1992). Projective techniques help the researcher enter the private worlds of subjects to uncover their inner perspectives in a way they feel comfortable with (Gordon & Langmaid, 1988; Loudon and Della Bitta, 1993).

The stimuli range from structured (clear and definite) at one extreme, to very ambiguous (unstructured) at the other extreme. It is assumed that the more unstructured and ambiguous they are, the more the subjects will project their emotions, motives, attitudes and values. The structure of a stimulus determines the degree of choice available to the subject. If it is highly structured, for example a questionnaire that requires the subjects to read a list of statements and answer "true" or "false" to each, it leaves very little choice. The subject has an unambiguous choice among clear alternatives and the stimuli will probably be interpreted similarly by almost everyone who reads them (Graham and Lilly, 1984). Ambiguous stimuli (with little structure), for example Rorschach inkblots, present a wide range of alternative choices and the subjects may choose their own interpretations. Semi-ambiguous pictures and sentence completion techniques represent an intermediate position on the stimulus continuum (Wagner, 1995; Graham and Lilly, 1984).

It is generally accepted that in consumer and marketing research applications, projective techniques should constitute relatively ambiguous stimuli to permit the subjects to interpret them in terms of their own perceptions and in their own words. The design of the instruments should however offer enough direction to evoke some association with the concept of interest (Churchill, 1991; and Gordon and Langmaid, 1988).

The question addressed in this paper is whether these techniques provide an alternative method of obtaining insight into the 'fit for purpose' nature of NSO's websites. As there are not yet any published studies of the use of projective techniques in the area, this is done by considering the use of the techniques in a study conducted between 2001 and 2004 with the overall aim of investigating e-business developments among tradeable service sector SMEs in Northern Ireland, Republic of Ireland and New Zealand. The study had several objectives. This paper concentrates on the findings of the specific research aim that investigates owner-managers' perceptions of government support for e-business. This can be seen as similar to users perceptions of an NSO website.

The study concentrated on the tradeable services sector because of its increasingly central role in economic development. Most advanced economies are becoming dominated by their continually growing services sector (c.f. Zeithaml and Bitner 1996 and Wymbs, 2000)). One of the main factors for this growth has been the development of tradeable services (Miles, 2001; Bilderbeek et al, 1998). They seem to represent a high value knowledge-based sector that possesses the vital

and active ingredients necessary to shape positive economic change. It can be argued that firms in this sector seem to have, among other things, long-term growth prospects; employment potential and ability to cluster where the rewards from technology transfer and spill over effects are highest. For example McGuire (2002) suggests that the most dynamic trade routes of the 21st century will be dominated by transactions in intangibles rather than goods, where global economic integration and technological (e-business) developments lead to a continual expansion of the range of traded services. Thus the importance of tradeable services to economic growth is likely to increase significantly with rapid development of the service economy and the rise of e-business.

Historically in most advanced economies a large proportion of service firms have been small enterprises. Such firms are playing an increasingly important role in high value and sustainable innovative economic growth. Internationally it is estimated that approximately 80 per cent of economic growth can be ascribed to the business activity of SMEs (Jutla et al, 2002). Exploitation of marketing competencies directly linked to ICT is often seen as central to their survival and growth (Durkin and McGowan, 2001). It is speculated that by using such technologies SMEs will be able to capture global markets, sell to international customers and compete favourably with large corporations (DTI 2003; Liikanen, 2001; Tetteh & Burn, 2001). However, such speculation seems to ignore two important factors. Firstly firms are heterogeneous in their capabilities, resources and past experiences (Wernerfelt, 1984) and (Barney, 1991) and secondly that there is clear evidence (see for example Srinivasan et al, 2002; Martin and Matlay, 2003 and Raymond 2001) of differences in innovation propensity and style across different service sectors and regional economies.

Recent research (for example Fillis et.al. 2004) has shown that despite technology being a facilitator for improved business practice in terms of developing electronic markets and e-business, SMEs are generally not capitalising on this new mode of conducting business. Many public sector studies suggest that the slow uptake of e-business methods among SMEs is closely associated with internal influences such as managerial attitudes, resources, time pressures, and lack of marketing and information technology skills (see Go Digital Report 2002; DTI Benchmarking report, 2003). Such a view is supported by many academic studies that go on to suggest a central role for governments in promoting the use of ICT in SMEs (Brown, 2002; Martin and Matlay, 2001; Taylor and Murphy 2004) They argue that governments generally do not understand the propensity of SMEs to adopt, assimilate and develop their use of e-business to enhance the way they operate. Relying entirely on output measures of policy impacts means that issues such as how owner-managers perceive technological change, the need for change and the appropriateness of incentives governments are providing to support and achieve it are missed, or only at best slightly understood. Similar results have been found in evaluation studies for the European Union (EU, 2005a and EU, 2005b). It is this gap in understanding SMEs perceptions of government support for e-business that provided the impetus for the study behind this paper. In the next section the methodology adopted by the study is outlined and this is followed by a brief presentation of the results obtained both by using the mixed methodology and in particular the projective techniques. The paper then considers whether these techniques are a useful tool in SME policy evaluation.

### **3. Methodology**

For the study a convenience sample of SMEs was drawn. The European Commission's 1996 definition of SMEs was used in deciding the initial population. The population was further refined by considering only those SMEs that could be classified as being involved in knowledge intensive business services (KIBS). The firms were located in Northern Ireland, Republic of Ireland and New Zealand. These countries were chosen because they possessed similar characteristics (culture, peripheral location, high dependence on small organisations). In addition research suggested that despite their respective governments' e-business support initiatives, there was a significant technological lag among SMEs in terms of the 'level' of e-business activities (Gray et al, 2003; O'Toole, 2003; Clarke et al, 2003).

To provide a background to the qualitative study a questionnaire was developed from extant literature, and piloted on a small group of academics and business people in Northern Ireland. A total of 1,300 questionnaires were mailed to a cross-section of owner-managers KIBS in the three countries: 400 in Northern Ireland, 400 in the Republic of Ireland and 500 in New Zealand. Contact addresses were solicited from industry organisations and commercial data providers. The questionnaire was first operationalised in Northern Ireland followed by the Republic of Ireland, and finally New Zealand. Appropriate country-specific changes were made for each country. The questionnaire consisted of both simple factual questions and questions aimed at obtaining views about

issues. For the latter a five-point scale with 1 being strongly disagree to 5 being strongly agree was used.

For the qualitative analysis semi-structured interviews and the projective techniques of word association and completion techniques were used. Semi-structured interviews were conducted with 46 SMEs self-selected from the survey responses. Following on from this a self sample of 10 respondents from each country were selected for further analysis using projective techniques. Word association and completion techniques were chosen as the most useful and feasible projective 'tests' to employ. Word association required owner-managers to read a list of words and then choose those they most associated with the topic. The word association tests included both positive and negative associations relative to perceptions of current e-business support and included words such as generalised, irrelevant, useful, complicated, patronising, and brilliant, with the option given to respondents to add more appropriate words. The completion technique chosen required the participants to complete visible bubble cartoons. The criteria applied in their construction (completion tests) were that they had to be relevant to key issues that emerged from the quantitative survey and ultimately useful to achieve the objectives of the research. The completion tests were created with the aid of web-based resources (images sourced from <http://www.google.co.uk>). A speech bubble was filled in to assist in the initiation of a conversation, argument, thoughts, perceptions, feelings and emotions.

As an example, the completion tests contained in Image 1 and Image 2 were utilised to establish how the owner-managers perceive government bodies could be of better support to them in their existing and future e-business developments. The speech bubble of the government representative was completed and the following scenario accompanied the projective test:

*SMEs may need support from government bodies to assist them in their uptake and use of Internet-based technologies*

Respondents were then asked to consider the illustrations and fill in the bubbles to depict what they thought the person was saying and thinking in response to the government representative.

#### Image 1 Government support completion test



To collate and analyse the results obtained from the use of the completion techniques a quasi-quantitative mapping technique based on qualitative content analysis (Kracauer, 1953), and a modified matrix technique utilised by Swan and Newell (1994) was adopted. Mapping provided the basis for interpreting the responses into useable 'concepts'. This involved a three stage approach. Firstly content analysis was used as a 'surfacing' technique to search the projective responses for frequency of word usage. From this analysis the 'concepts' were derived. At this stage any espoused relationship between the key words and the concepts are ignored. The second stage was 'link description' where concepts that were related to key words were 'linked'. The final stage of the mapping process was property clarification. That is each concept and the relationships that are linked to it were considered (for example the link between technical capabilities and tendency to seek government support), and then used to explain the meaning of the concept.

## Image 2 Government support completion test



The modified matrix technique was used to uncover *cause and effect* beliefs that may influence perceptions and behaviour associated with the research problem. The 'half grid' approach was used rather than a 2X2 approach as it reduced the number of times a relationship needed to be considered, (Swan and Newell, 1994). A causal grid was created in which the variables from the context analysis were listed in the rows and columns. A '0' was entered if there was no relationship between the row variables and the column variables; a '1' if the row variable caused a change in the column variable, or a -1 if the column variable caused a change in the row variable). The grids for the individual respondents were combined to give a group representation by finding the average for each cell. The main focus of the analysis was the calculation of an 'out-degree' and an 'in-degree' score for each variable in the grid. These scores were obtained by summing the values in the columns and rows, respectively. The out-degree score indicates the number of paths leading from each variable in the grid. The higher the score the more a variable can be seen to *cause changes* in the other variables. Similarly the in-degree score measures how much a variable is *influenced* (effect) by other variables and is relative to the number of paths leading to a particular variable from other variables. A higher in-degree score indicates that a variable is seen predominately as an outcome or effect of changes in the other variables. Finally the variables were ranked by both scores. By combining the outcomes of the modified matrix with the qualitative responses achieved from the word association, completion tests and in-depth interviews, the impacts of the related issues associated with government support were further reinforced and clarified.

## 4. Results

The final response rate for the quantitative survey was 30 per cent (393 completed questionnaires). The lowest response was from the Republic of Ireland with only 83 forms returned. The response rate for Northern Ireland (151) and New Zealand (158) were similar. The majority of firms who responded were micro enterprises, (66%). Within the sample Northern Ireland had the highest percentage of micro enterprises (74%) while New Zealand had the lowest percentage (57%). The average number of employees in the firm was the highest in New Zealand at 19. It also had the most variation in the number of employees with a standard deviation of 29. Northern Ireland firms had the smallest number of employees at 8 and the least variation with a standard deviation of 10. The corresponding figures for the Republic of Ireland were 11 and 22. Table 1 presents an overall profile of respondents in terms of business sector by region. In-part this can be explained by the inclusion in the response of a number of large legal firms in the New Zealand sample, whereas no legal firms responded in either Northern Ireland or the Republic of Ireland.

In terms of access and usage of ICT the majority of the businesses surveyed (95%) had at least one computer and modem to facilitate web-based communication. However, the percentage of firms that had a web site was much lower (64%). Only 36% of the web sites have been operational for over 3 years. The level and degree of integration of key information systems with internet-enabled technologies tended to be quite 'primitive'. The main reasons for having a presence on the Internet were: to advertise and promote the organisation's name and intent (60%); to communicate specific product-service information (54%); because their competitors had a Web site (49%); to enhance

customer service (44%); and to communicate with customers and/or suppliers (42%). Only 4% maintained a web presence to receive payments.

In all three countries the biggest barrier to e-business development was identified as a lack of government support. Statistically there was no significant difference for this barrier between the nations. The survey showed that while the majority of SMEs recognised the importance of employing ICT to develop an e-business strategy and a lack of government support was confirmed as the main barrier to e-business developments, few were prepared to seek government support. Only five of the original survey sample (two in NI; two in ROI and one in NZ) had sought support from government sources.

The semi-structured interviews failed to elicit much understanding of the responses from the quantitative survey. Most interviewees seemed to have little understanding of the general area of ICT. In a semi-structured interview situation there was a lack of response to the prompts given. Also the non-verbals observed gave an impression of them being uncomfortable about discussing the issues. Thus, the project was faced with the general problem of simple mixed methodology research and the specific issue of a lack of internal consistency and insight between the two surveys. To address this, an emphasis was placed on the projective techniques.

**Table 1 Profile of respondents**

Business Sector	% of Sample/(n)		
	NI	ROI	NZ
Financial Consultant/Services	23.8 (36)	21.7 (18)	17.1 (27)
Management/Business Consulting	16.6 (25)	7.2 (6)	13.3 (21)
Computer Services/Software Development	9.9 (15)	10.8 (9)	6.3 (10)
Architectural/Building Services	9.3 (14)	12.0 (10)	10.8 (17)
Recruitment/Employment Services	7.3 (11)	18.1 (15)	3.2 (5)
Marketing/Advertising	7.3 (11)	4.8 (4)	2.5 (4)
Publishing/Printing	6.6 (10)	7.2 (6)	10.1 (16)
Legal	0.0 (0)	0.0 (0)	23.4 (37)
Other	19.2 (29)	18.1 (15)	11.4 (18)

The main result of the word association tests was that 82% of the respondents associated negative words with the level of help and support provided by governments. The most used associations were *'generalised'*, *'simplistic'*, and *'patronising'*. Respondents added 'Other' more appropriate words, with two recurrent associations being made. That is the perception that the extent of government help and support is *'non-existent'* or respondents would raise the questions that generally asked *'what bloody support?'*

Eight variables were derived from the content analysis. Table 2 provides brief descriptors of the variables that respondents had 'linked' either positively or negatively with the stimuli presented to

them. For example, the variable 'innovation' is relative to perceptions associated with the use of ICT to facilitate e-business (for more detail on descriptors contained in Table 2 contact the authors). These variables were used as the basis for the matrix analysis, the results of which are given in Table 3. This analysis supported the quantitative analysis. The variable 'government support' has the lowest ranking out-degree score of 2.57, which suggested that it is the *least likely* to cause change in the e-business decisions of owner-managers. The table can be interpreted as showing that while 'technical skills' ability is perceived by a majority of the respondents as being caused by the propensity to seek 'government support' (0.70); the 'uncertainty' (perception of risk) associated with e-business causes an increase in the propensity to seek 'government support' (0.73); and appropriate 'resources' (financial) fundamentally cause 'technical skills' ability to increase (0.83), these factors *have not*, in practice, caused the majority of these SMEs to seek government support. The negative relationship between government support and resources (-0.40) suggests that funding for e-business from government sources does not cause SMEs to seek it.

**Table 2. Descriptors of repertory cause and effect grid variables**

Grid Variable	Description
Innovation	Level of innovation propensity
Commitment	Owner-managers commitment to Internet-based technologies
Resources	Financial ability to adopt and maintain Internet-based technologies
Government	Propensity to seek government support (finances, training initiatives)
Technical	Level of technical competences in the firm
Product	New product development opportunities
Competition	Attitudes towards the threat of competition in the e-business environment
Uncertainty	Perception of risk relative to the business/e-business environment

**Table 3. Causal relationships as perceived by the sample and indegree and outdegree scores**

	Resources	Uncertainty	Competition	Government	Technical	Innovation	Commitment	Product	Outdegree Score	RANK
<b>Government</b>	-0.40	0.63	0.52	0.00	<b>0.70</b>	0.40	0.12	0.60	<b>2.57</b>	<b>8</b>
<b>Innovation</b>	0.35	-0.40	0.58	0.60	0.3	0.00	0.75	0.73	2.91	7
<b>Technical</b>	0.50	0.63	0.58	0.45	0.00	0.20	0.64	0.36	3.08	6
<b>Product</b>	0.85	0.70	-0.20	0.60	0.45	0.50	0.33	0.00	3.23	5
<b>Commitment</b>	-0.45	0.80	0.28	0.35	0.16	0.80	0.00	0.73	3.25	4
<b>Competition</b>	0.74	0.25	0.00	0.20	0.60	0.54	0.50	0.90	3.73	3
<b>Resources</b>	0.00	0.50	0.70	0.44	<b>0.83</b>	0.30	0.63	0.46	3.86	2
<b>Uncertainty</b>	0.60	0.00	0.30	<b>0.73</b>	0.60	0.93	0.72	0.13	4.41	1
<b>Indegree Score</b>	2.19	2.83	3.16	3.27	3.64	3.67	3.69	3.91		
<b>RANK</b>	8	7	6	5	4	3	2	1		

The content and mapping analysis are an attempt to provide a quasi-quantitative analysis of the qualitative data derived from the projective techniques. While they provide a good summary of the results they hide something of the Pandora's Box of attitudes and perceptions that the techniques uncover. It is at this point that the richness of the qualitative responses adds in-depth meaning to perceptions held. Reporting such qualitative results succinctly is difficult<sup>1</sup>. However briefly explained the findings did uncover the fact that negative perceptions of government support policies were caused by entrepreneurial bravado; lack of trust in government bodies; problems with government departments not being able to disseminate helpful information associated with support policies for e-business; and the laborious red-tape issues that are inherent in the bureaucratic structures that prevent applications for government support being timely and sympathetic to the real business needs of owner-managers'.

## 5. Discussion

The results of the quantitative analysis supports the contention of Bennett and Robson (1998); Storey (1994); Kai-Uwe Brock (2000) and Fallon and Moran, (2000) by only providing a limited understanding of the *contextual* issues and circumstances which may affect firms. In all three countries it highlighted the lack of government support as being the main barrier to e-business development but failed to address the issue of why this should be the case. Adopting a traditional qualitative approach using semi-structured interviews proved, as discussed by Hoskin (2002), to be insufficient to obtain much insight into the issues raised by the quantitative study. In the face-to-face interview situation respondents' constrained their discussion of the issues and seemed to provide answers that were of a 'politically correct' nature because they were what they expected the interviewer to want.

The word association test gave a simple way for the owner-managers to consider their perceptions of their respective governments' current supporting roles in providing them with information and practical help about how to develop an e-business. The responses from the projective techniques seemed to provide much deeper cognate thoughts (e.g. pre-conscious, conscious, intuitive, associative) relative to the concepts of interest. The way the interviewees interpreted the cartoons revealed much about their own emotions, feelings and perceptions. The visuals helped to focus the owner-managers on the 'heart' of the subject: their perceptions. This served to minimize the 'politically correct' discourse that interviewees tend to produce.

The ability of the context and matrix analysis to extract the concepts closely related to owner-managers' perceptions is central to the validity of the approach. The findings of this analysis are supported by the triangulation of the results with the word association tests and the quantitative survey. Thus the use of these instruments can be justified. Importantly the projective techniques had the ability to get beyond the rational replies respondents made in an interview situation (Hoskin, 2002; Branthwaite, 2002).

The projective techniques made little or no demand in terms of literacy or academic skills on the part of the interviewee. They were predominantly visual, largely independent of particular languages, and in some cases did not involve speech at all. Their scope was therefore much wider than that of self-reporting or rating procedures (Thorndike in Berkman & Gilson, 1986). However, a major disadvantage of projective techniques is the complexity of the data and the corresponding skills required of the researcher (Burns & Lennon, 1993). Even with the use of techniques such as content and matrix analysis the responses are not easily codified and need careful evaluation by researchers who are both trained and skilled interpreters of information. A considerable degree of subjectivity applies in the interpretation of responses to projective techniques, and researchers frequently disagree among themselves (Sampson, 1987 and Churchill, 1991). The need for highly skilled research staff mean that projective techniques are expensive to administer.

There are other standard criticisms of projective techniques. The results of projective techniques can not normally be generalised as they are not derived from statistically significant samples (Webb, 1992). It may be difficult to get the subjects to project themselves into the roles the researchers wish them to assume. Some subjects may not agree to participate in exercises such as role playing (Webb, 1992 and Berkman & Gilson, 1986). Finally the reliability of measures is very

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<sup>1</sup> If you require more detailed information on findings you can contact the authors



difficult to establish. However, triangulation can help to ensure reliability (Belk et al in Burns & Lennon, 1993).

Despite these challenges the ability of projective techniques to go beyond standard inflexible measurement procedures seems ideally suited to the complex environment of SMEs. It has been argued that decision making in SMEs is different from larger firms (Martin and Matlay 2003; Blili and Raymond, 1993). Projective techniques appear to be able to address both the widely varying decision processes and individuality of SMEs (Zheng et al, 2004). Thus the use of these techniques could provide some of the tools toward a fuller understanding of the way entrepreneurs and small firms identify and develop business opportunities. The need for such tools was argued for by Taylor and Murphy (2004).

The question that now needs to be asked is can these tools be useful for website evaluation? Website evaluation is complex and standard mixed methods fail to illicit what users really think of the website. From the case study outlined it can be seen that projective techniques provide a possible tool for helping to understand how useful a NSO's website is.

## **6. Conclusion**

In this paper an attempt has been made to discuss the usefulness of projective techniques as part of a 'mixed methods' approach to NSO's websites. Their need it has been argued is due to the shortcomings of traditional mixed methods techniques to address the implications of bounded rationality. These shortcomings arise from standard quantitative and qualitative methods being unable to address the complex cognitive issues implied by the possibility that not all decisions are rational. It has been shown in both psychological and market research that projective techniques can help in understanding the non-rational elements of a persons decision making. The current issue is whether these techniques can be applied to the evaluation of NSO's websites. Unfortunately there is as yet no study that has applied the technique to website evaluation. Thus a case study from policy evaluation has been used to outline the methodology. The conclusion of this paper is that it is likely they can be applied but with caution. They provide a way of uncovering feelings, beliefs, attitudes and motivations that supplement and expand on the measures obtained by traditional techniques. However, much further research is needed into their use before they can become part of the standard toolbox of website evaluation.

The conclusion about the usefulness of projective techniques for website evaluation has been arrived at by considering their application in a small international study of policy evaluation aimed at measuring the responses of owner managers of SMEs in the tradeable services sector to government policies on e-business. It has long been recognised (c.f. Schumpeter 1942) that SMEs undergo a continuous process of revising and reconstructing experiences in order to combat the mitigating circumstances created by the dynamic nature of their environment. Because of this constant state of change the paper argued that they provided an ideal testing ground for the use of projective techniques. As with most policy evaluation exercises the Study found only limited results using standard mixed methods. By using, only a limited range of projective techniques the Study was able to elicit much more data on the feelings and beliefs of the owner-managers. To address the issue of analysing the large amount of qualitative data generated by the techniques content and matrix analysis were used. Overall the study showed both that it is possible to use projective techniques for policy evaluation and that they can lead to new insights. However, the study also raised a number of important questions that need to be addressed. These include: what kind of projective instruments are best for policy evaluation, the method of administering the projective instruments and the best ways of collating and analysing the data generated. A major issue that the Study and paper have not addressed is the generalisability of the results obtained from projective techniques. Despite these challenges this paper has shown that projective techniques are likely to have a role to play in website evaluations.

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