Understanding Consumer Information Use in Small Businesses: The Determinants and Performance Outcomes

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ABSTRACT

The intense competition that small businesses encounter in business has elicited interventions and supports for small and medium enterprises (SMEs) to engage in marketing with cutting-edge consumer information which will enable them compete in their markets. However, since SME marketing differs from large companies, their use of consumer information is not clear. This study examines consumer information utilisation in SMEs by conceptualising it as consisting of consumer information for changing the user SME’s knowledge and understanding of market issues (knowledge-enhancing utilisation); effecting policies and strategies (action-oriented instrumental utilisation) to examine the determinants and performance outcomes. Using qualitative and quantitative approaches, determinants of consumer information utilisation were identified as information functional and technical qualities, interaction between provider and user, and the market environment. The results illustrate that, in the right circumstances consumer information influence SME performance. Its use for policy making and strategy directly enhance SME financial outcomes, decision-making ability, and improve new products creation and processes. It also, provides evidence of symbolic use of consumer information by SMEs; guidance for policy makers and SME business facilitators in implementing consumer information interventions for SMEs.

Keywords: Small Businesses, Small and Medium Enterprises, Small and Medium Enterprises Marketing, Consumer Information Use, Action-oriented Use, Symbolic Use and Knowledge-Enhancing Use

JEL Classifications: L2, M1

1. INTRODUCTION

Small businesses today operate in an environment of intense competition, rapidly changing consumer segments and markets associated with increased risk to firm survival. Businesses which therefore strive to understand their consumers to exploit new market opportunities and expand their consumer base, have a better chance of survival (Baker and Sinkula, 2009). Thus, understanding consumer information use in small business is an important research issue of individual and economic relevance to agri-food SMEs, policy makers and business development partners (Parrot et al., 2010). Extant literature in SMEs marketing acknowledges the traditional view that stresses the importance of knowledge, information related factors and resources in improving firm performance (Miocevic and Cnrjak-Karanovic, 2011). In this paper, we argue that understanding consumer information use, its determinants and performance outcomes in small business in the current business environment provide insight for interventions for managing, developing and / or supporting these businesses.

Developments in marketing have made information about consumers one of the building blocks for knowledge about potential consumers in structuring thinking and decision making (Donnelly et al., 2012; Stone et al., 2007; Mauri, 2003). There is a general recognition that an organisation’s understanding of its markets and consumers assists in the creation of superior customer value (Kotler and Armstrong, 2009; Kotler, 2003). Fortunately, information on consumers is now increasing being made available...
through new augmented databases of consumers and retailer loyalty card schemes (Donnelly et al., 2012; Felgate et al., 2011; Plimmer, 2010; Humby et al., 2007) but which is mostly been used by large businesses (Florin et al., 2007; Ziliani and Bellini, 2004). Be that as it may, marketing literature reveals a consensus that effective and efficient utilisation of information about consumers is a source of competitive advantage (Miles and Darroch, 2006; Glazier et al., 1992), a prerequisite for market orientation (Kohli and Jaworski, 1990; Jaworski and Kohli, 1996; Kohli et al., 1993; Cadogan and Diamantopoulos, 1995) and a lead up to competitive strategy development (Hunt, 2011; Miles and Darroch, 2006).

Information on consumers in addition has represented a bridge between a business and its environment (Palmer and Hartley, 2006), and a means by which an image of changing consumer demand can be built up within a business (Kotler, 2003). Meanwhile, management in an SME context has been known to be different from management in large organisations (Morris et al., 2002; Gilmore et al., 2001; Jocumsen, 2004). The uniqueness of small business management (Burns, 2007; Reynolds, 2002; Stokes, 2000) and their small size is a significant factor influencing marketing planning processes (Gilmore et al., 2001; O’Dwyer et al., 2009; Donnelly et al., 2012). Although it gives them relatively little impact in terms of modifying their markets thus making them dependent on a small consumer base (Jones and Rowley, 2011). Their smaller size however enables them to form closer relationships and networks with customers, providing flexibility in operations and responsiveness to change (Moriarty et al., 2008; Arnett and Badrinarayan, 2005). Simpson et al. (2006) observe that small business marketing is not the same as in large organisations, that attempts to adapt and apply traditional marketing models to SMEs have been unsuccessful and attempts at definition or discussion often link marketing with entrepreneurial behaviour (Walsh and Lipinski, 2009; Simpson et al., 2006; Reynolds, 2002). Marketing literature however, bemoans the dearth of research that examines how small and medium enterprises (SMEs) use consumer information to enhance firm performance (Donnelly et al., 2012; Cacciolatti et al., 2012), the relationship between information use and SME performance (Parry and Song, 2010; Williams, 2003), and the relationship between information use in decision making in small business (Lybaert, 1998; Citrin et al., 2007; Souchon and Diamantopoulos, 1996; Neslin et al., 1994; Cacciolatti et al., 2009).

Thus, the nature of marketing in SMEs presents an opportunity to examine the utilisation of information from consumers in the informal unstructured environments found in SME (Carson et al., 1995). In this paper we use the Dunnhumby database which is considered to provide consumer insight of the UK market as it contains the supermarket panel data of the largest UK retailer (Felgate et al., 2011; Plimmer, 2010; Humby et al., 2007); and combines the benefits of both the store-level scanner data and panel data from 1800 Tesco stores in the UK (Felgate et al., 2011).

Accordingly, this paper therefore examines the following research questions a) what are the factors that influence consumer information utilisation in SMEs? b) How does consumer information utilisation influence SME performance? This paper is structured as follows: First, a theoretical underpinning of the concepts related to the research from literature. This is followed by the conceptual development which includes the research hypotheses. The research design is then explained. The methodology used in the research is then stated and the results presented. The result is then discussed in terms of theoretical and managerial implications. Finally, the limitations and suggestions for further research are presented.

2. THE NATURE OF SME MARKETING

Literature attests to the uniqueness of SME marketing and management (Burns, 2007; Stokes, 2000). Consequently, although the agri-food sector consists of a significant number of SMEs, they operate differently from the few large businesses that dominate the agri-food sector. Carson et al (1995) and Burns (2007) argue that the inherent characteristics of SMEs and the impact on formal marketing approaches largely determine marketing management decision-making activities of SMEs. Marketing is often seen as peripheral to SME requirements and Hogarth-Scott et al. (1996) adduce reasons for this difference as the credibility gap between when SMEs obtain sales and profits without planning their marketing activities.

2.1. Consumer Information Utilisation: The Concept and Types of Utilisation

In this study we use consumer information to refer to information generated by the activities of the consumer; examples being how different demographic groups purchase products; purchase of consumers with different lifestyles and differences in terms of consumption activities; interest and opinions based on consumer attitude/or values. The literature in scanner studies and database marketing use consumer information to describe information generated by the activities of the consumer. These are key measures of sales (e.g. quantities of product sold, prices, purchase rate, customer penetration, frequency of purchases and category share), individual consumer behaviour, customer segmentation and profile. Consequently, consumer information can generally be classified into two types: (a) information sought by the consumer (Kiel and Layton, 1981) and (b) that generated by the consumer (Evans, 1999). The two main sources of consumer information can further be classified by type, format and sources.

Besides, the field of information utilisation is dominated by two main perspectives of utilisation (Toften and Olsen, 2003; Diamantopoulos and Souchon, 1997; 1996). First and foremost, its study is placed largely in an organisational or systems context and on the other hand a user-oriented paradigm context; both of which can be viewed as a process and an outcome (e.g., Moorman et al., 1993 Deshpande and Zaltman, 1987). Secondly, the extent (degree) of information utilisation also depends on the conceptualisation of “use” which specifies the nature of utilisation. Literature on information utilisation reveals the actual process of utilisation can be categorised into generic classifications referred to as dimensions of utilisation (Moorman, 1995; Menon and Varadarajan, 1992; Souchon and Diamantopoulos, 1997). The three broad dimensions of information use are instrumental use, conceptual use and symbolic use (Rich, 1997; Oh, 1996; Moorman, 1995). Menon
and Varadarajan (1992) provided an alternative typology in their Marketing Knowledge Use Model which is currently the most extensive typology of information utilisation. We preferred this model for this study because it is an improvement over the Souchon and Diamantopoulos (1996) classification and present a comprehensive typology of utilisation in the organisational context. In view of the fact that it is possible for all three forms of utilisation to take place in a particular utilisation context, the extent of utilisation may vary across context of utilisation. The Menon and Varadarajan (1992) Marketing Knowledge Use Model acknowledges the multidimensional nature of utilisation with multiple outputs; and the dearth of research in the area of consumer information utilisation in SMEs require the use of a comprehensive classification. We present this comprehensive conceptualisation of consumer information and discuss it based on the main component variables action-oriented use, knowledge-enhancing use and affective use (Menon and Varadarajan, 1992).

Action-oriented use is evidenced by changes in the user’s activities, practices, or policies that can be directly linked to the findings and implications of the information. Action-oriented use is classified into two broad uses: action-oriented instrumental and action-oriented symbolic uses. Action-oriented instrumental use of information directly relates to policy making and strategies, and forms a major part of the overall action-oriented use. Action-oriented symbolic uses are when information users use information in their decision making for the sake of appearance rather than for any of the information’s intrinsic qualities (Strieter et al., 1999). Menon and Varadarajan (1992) further classified symbolic use into three uses: benign, cynical and positive. The benign form of symbolic use occurs when information users use information to make another party feel included in decision making. Cynical use occurs when users use information without seeing the value in it but thinks other parties may see value. Positive symbolic use occurs when information users utilise information, not for its value, but to send a positive message within the firm (Strieter et al., 1999; Rich, 1997; Menon and Varadarajan, 1992). Knowledge-enhancing use is akin to conceptual use which results in changes in the user’s knowledge, understanding of the issues and themes of the information (Menon and Varadarajan, 1992). It has two facets: knowledge enhancement due to the final product (i.e., the results) and knowledge enhancement due to the research process (i.e., conduct of the research study) (Strieter et al., 1999).

Affect is a broad conceptual category that includes both emotions and moods. Emotions and moods differ in their specificity, intensity, and duration (Hayton and Cholakova, 2012). Affective use of information is therefore a difficult dimension of use to measure because it is related to general levels of satisfaction or dissatisfaction, confidence or lack thereof, and trust or mistrust. However, these general psychological states can be outcomes of use as well as dimensions of use. To distinguish the affective dimension of use from affective outcomes of use, Menon and Varadarajan (1992) propose that the affective dimension be viewed as use of information with the intent of “feeling good.” Like knowledge-enhancing use, affective use has two sub-dimensions: product-based affective use and process-based affective use. This paper therefore seeks for the 1st time to examine the determinants of the use of consumer information in small business and how the types of uses relate to SME outcomes, which will for the 1st time deconstruct general consumer information use and to elucidate the relationship with small business outcomes.

2.2. Conceptual Development of Consumer Information Utilisation in SMEs

From the review of available literature consumer information utilisation is influenced by organisational, information specific, relational, and environmental factors. This research therefore posits that in a general resource-based competition of agri-food small businesses, four main factors - organisational culture and structure (McClure, 2010; Matlz et al., 2006); information quality (Van Birgelen et al., 2001); relational (Moorman et al., 1992; Matlz et al., 2006: Deshpandé and Zaltman, 1987) and environmental factors (Palmer and Hartley, 2006; Arnett et al., 2000) - will influence the four consumer information utilisation processes/dimensions (action-oriented instrumental, action-oriented symbolic, knowledge-enhancing and affective utilisations) in an agri-food small business (Menon and Varadarajan, 1992; Arnett et al., 2000). The premise underlying this perspective is that the characteristics of the firm either inhibit or facilitate utilisation (Matlz et al., 2006; Beyer and Trice, 1982). Marketing literature in general identifies organisational culture and structure as main organisational variables affecting information use (Toften, 2006; Williams, 2003; Toften and Olsen, 2003, 2006; Souchon and Diamantopoulos, 1997, 1996). Nonetheless, small business literature further argue that small businesses leverage competitive advantage with speed to respond to customers, wants and needs to enable them operate in their chosen markets (Li et al., 2008; Bjerke and Hultman, 2002). In small business literature therefore the important variables are the market-oriented organisational culture and organisational structure (Blankson and Omar, 2002; McCartan-Quinn and Carson, 2003; Moriarty et al., 2008; Baker and Sinkula, 2009).

2.2.1. Market-oriented organisational culture

From an organisational point of view, organisational culture has been defined in various ways in market and management literature (Gebhardt et al., 2006; Deshpandé and Webster, 1989). However, in main stream marketing literature market orientation is conceptualised as a behavioural construct based upon the generation of marketing intelligence relating to the needs of current and future customers, the dissemination of this intelligence throughout the firm, and the strategic market response (Kohli and Jaworski, 1990). This definition implies acquiring information from buyers and competitors in the target market and disseminating this information throughout the company. Underlying this is having the cultural values and norms, to enable the acquisition of information from buyers and competitors in the target market, and its dissemination throughout the company (Narver and Slater, 1990). The underlying assumption is that only market-oriented actions affected firm performance. We, can, therefore, hypothesise the following relationship between market-oriented organisational culture and types of consumer information:

H1: Market-oriented organisational culture is positively associated with (1) affective consumer information utilisation,
(2) knowledge-enhancing consumer information utilisation, (3) action-oriented instrumental consumer utilisation, and (4) action-oriented symbolic consumer information utilisation.

2.2.2. Organisational structure
Organisational structure has been known to influence information utilisation in an organisation (Liberti and Mian, 2008; Souchon and Diamantopoulos, 1996). Liberti and Mian (2008) posit that the greater hierarchical distance (structure in organisation) between a subordinate and his boss makes it more difficult to share abstract and subjective information in decision making. Organisational structure as an organisation variable consists of two dimensions; formalisation and centralisation. Formalisation measures the extent to which jobs are codified, the degree to which rules are observed and the extent to which specific tasks are stated. Centralisation measures participation in decision making and hierarchy of authority. SMEs are small independent organisations with non-formal organisational structures (Simpson et al., 2006; Gilmore et al., 2001; Carson and Gilmore, 2000). Therefore, this SME characteristic will affect organisational forms to determine structures, coordination and cooperation of the business (Liberti and Mian, 2008). These organisational processes determine the small business’ primary processes (production, marketing, sales and customer relations management) therefore impacting small business outcomes (Hill, 2001; Carson et al., 1995). We can, therefore, hypothesise the following relationships:

H1: Organisational structure is positively associated with (1) affective consumer information utilisation, (2) action-oriented symbolic consumer information utilisation, and negatively associated with (3) knowledge-enhancing consumer information utilisation, and (4) action-oriented instrumental consumer information utilisation.

2.2.3. Information quality related factors
The direct relationship between the quality of information used by a decision maker and decision-making performance has been well established (Toften and Rustad, 2005; Van Birgelen et al., 2001; O’Reilly, 1982). However, this relationship has been researched with different conceptualisations and schema. Van Birgelen et al. (2001) therefore proposed four types of information-related quality for evaluating information use as: quality of contents, quality of form, actionability and acceptability of the information. Literature attests to the fact that quality information allows a decision maker to justify the basis of the decision to others, arguing that if the information used is timely, accurate, and reliable, then any decision made is likely to be a good one (Plimmer, 2010; Stone et al., 2007; Humby et al., 2007; Toften, 2006). O’Reilly (1982) noted that “quality” is not an objective dimension; since perceptions of the accuracy and reliability of information from a given source may vary according to decision makers’ experience, goals, or personal preferences. Therefore, quality will differ from one small business to the other. It is, therefore, conceivable that consumer information utilisation will be affected by the technical and functional quality attributes for a small business. Therefore, we, conceived that functional quality, whether or not its status quo is being challenged, will influence consumer information utilisation. We therefore, hypothesise the following relationships:

H2: Consumer information functional quality is positively associated with (1) affective consumer information utilisation, (2) knowledge-enhancing consumer information utilisation, (3) action-oriented instrumental consumer utilisation, and (4) action-oriented symbolic consumer information utilisation.

Furthermore, higher levels of the technical quality of consumer information sought by SMEs influences consumer information utilisation and, therefore, we can hypothesise the following relationships:

H3: Consumer information technical quality is positively associated with (1) affective consumer information utilisation, (2) knowledge-enhancing consumer information utilisation, (3) action-oriented instrumental consumer utilisation, and (4) action-oriented symbolic consumer information utilisation.

2.2.4. Provider-user interaction
Relationships between providers and users of information factors have been known to associate with information utilisation (Van Birgelen et al., 2001; Moormann et al., 1993). Deshpandé and Zaltman (1987) identified and conceptualised this relationship as interaction between information producers and users highlighting it as a very critical to the utilisation of information. This relationship was affirmed by Moenaert and Souder (1996), who found the effect of the quality of the relationship on the user’s perception of information credible and comprehensible for use. Marketing literature identified the underlying variables in these relationships as involvement, communication intensity, credibility and trust (Maltz et al., 2006; Kirk, 2002; Feldman and March, 1981). Since these factors affect information utilisation via the user’s relation, it is conceivable that these factors will affect consumer information utilisation. Therefore, the interaction between consumer information providers and users will positively influence consumer information utilisation. Consequently, we present the following hypothesis:

H4: Provider-user interaction of consumer information providers and users is positively associated with (1) affective consumer information utilisation, (2) knowledge-enhancing consumer information utilisation, (3) action-oriented instrumental consumer utilisation, and (4) action-oriented symbolic consumer information utilisation.

2.2.5. Market environmental factors
The market environment in which businesses operate can have a remarkable effect on a firm’s need for information (Arnett and Badriarayanan, 2005). Miles and Darroch (2006) posits that the use of consumer information provides new opportunities for demand and competitive analysis for SMEs in the agri-food sector to enable them move away from the emphasis placed on ad hoc, informal, often hasty information gathering, and “intuitive” use of information. Low and Mohr’s (2001) observed that the more unstable the market environment, the greater the information processing that is required to cope with the instability. Marketing literature measures this with an aggregate construct termed market turbulence (Low and Mohr, 2001; Arnett et al., 2000). Market turbulence refers to the rate of change and degree of volatility in an industry (Low and Mohr, 2001) and measures the level of change in a firm’s market environment. Furthermore, Jaworski and
Kohli (1993) argue that turbulence can also arise from changes in technology and in customer preferences. Therefore, it is expected that the more turbulent the market place becomes, the more small business will seek useful consumer information to enable them to react to environmental conditions to exploit opportunities and react to adverse market conditions. We can therefore hypothesise: 

H\textsubscript{e}: Usefulness of consumer information in turbulent external market environment is positively associated with (1) affective consumer information utilisation, (2) knowledge-enhancing consumer information utilisation, (3) action-oriented instrumental consumer information utilisation, and (4) action-oriented symbolic consumer information utilisation.

2.3. The Consequences of Consumer Information Utilisation on SME Outcomes

Small business marketing which has been designated as marketing at the marketing/entrepreneurial interface fits with a number of theoretical frameworks e.g. resource-based theory, transaction cost theory, strategic adaptation theory (Hunt and Arnett, 2003; Hunt, 2000). However, Morris et al., (2002) argue it is especially consistent with resource-advantage (R-A) theory. They argue that replacing the assumptions underlying the economic theory of perfect competition with a much more realistic set of conditions (e.g. demand is assumed to be heterogeneous and dynamic; resources are heterogeneous and imperfectly mobile; information is imperfect and costly), each firm in an industry is a unique entity in time and space as a result of history (Hunt and Morgan, 1997). Also, contrasting the view that the firm is a production function that combines homogeneous, perfectly mobile factors of production, the resource-based view holds that the firm is a combiner of heterogeneous, imperfectly mobile entities that are labeled resources. These heterogeneous, imperfectly mobile resources, when combined with heterogeneous demand, imply significant diversity as to the sizes, scopes, and levels of profitability of firms within the same industry (Hunt and Madhavaram, 2006; Hunt and Morgan, 1997). Therefore, an instrumental application of consumer information will affect the organisational process and determine a higher desired outcome. An action-oriented instrumental utilisation is expected to change marketing activities processes positively to yield the desired financial and nonfinancial performance improvement outcomes for the SME (Citrin et al., 2007; Maltz et al., 2006; Morris et al., 2002). For this reason, the following hypothesis can be drawn: 

H\textsubscript{e}: Action-oriented instrumental consumer information utilisation positively associates with (1) SME financial outcomes, (2) improved new products creation and production outcomes, and (3) decision-making ability outcomes.

On the other hand, a symbolic application will not yield the desired financial and nonfinancial performance improvement outcomes expected by the small business (Vyas and Souchon, 2003; Menon and Varadarajan, 1992). We, therefore, posit: 

H\textsubscript{e}: Action-orient symbolic consumer information utilisation negatively positively associates with (1) SME financial outcomes, (2) improved new products creation and production outcomes, and (3) decision-making ability outcomes.

Also, the utilisation of consumer information to change user knowledge and understanding of the issues in the firms concerning a product and/ or process (knowledge-enhancing utilisation) will result in an increase in SME knowledge to proactively leverage innovation and manage risks throughout marketing processes (Hunt, 2011; Parry and Song, 2010; Citrin et al., 2007; Toften 2006; Pulendenran et al., 2003). This will involve creating, communicating and delivering value to customers (Keefe, 2004). SMEs will also be in a position not only to innovate to meet the expressed needs of their current customers but will leverage the innovation of products, to exploit new market opportunities, with the view to satisfy unmet and latent needs of existing and new customer groups (Miles and Darroch, 2006). The relationship can, therefore, be hypothesised as: 

H\textsubscript{e}: Knowledge-enhancing consumer information utilisation positively associates with (1) SME financial outcomes, (2) improved new products creation and production outcomes, and (3) decision-making ability outcomes.

Affective consumer information utilisation is deemed to occur when information users utilise consumer information with the sole purpose as “just to feel good” about decisions for a product or process (Strieter et al., 1999). Menon and Varadarajan (1992) argue that affective utilisation of information is a difficult dimension of use to measure because it is related to general levels of satisfaction or dissatisfaction, confidence or lack thereof, and trust or mistrust. However, these general psychological states can be outcomes of use as well as dimensions of use. They may have a general negative effect on the small business and its performance outcome as the sole purpose is to feel good and not the intended insight about the consumer it is meant to deliver (Strieter et al., 1999). Therefore, we can hypothesise the relationship between affective information utilisation and entrepreneurial marketing orientation as: 

H\textsubscript{e}: Affective consumer information utilisation negatively associates with (1) SME financial outcomes, (2) improved new products creation and production outcomes, and (3) decision-making ability outcomes.

3. RESEARCH METHODOLOGY

Consumer information utilisation relationships in small business have remained a largely unexamined area. Therefore, in researching this area, qualitative and quantitative methods were employed. This mixture of methodologies enables methodological triangulation to be carried out to increase the credibility of the work by minimizing research bias (Gill and Johnson, 1991). Complementary data was acquired from a qualitative study (focus group) and a quantitative study (survey) (Creswell, 2009). The findings of the focus group in conjunction with the literature reviewed provided an understanding of the utilisation processes to inform the relationships proposed and operationalising the measures developed in this research. The qualitative study was followed with a quantitative study. A post-test-only quasi-experimental research design was used because of the exclusivity of the phenomenon of consumer information utilisation in SMEs. For this study, agri-food SMEs were provided with dunnhumby database information (an example of consumer information in the UK agri-food retail sector) through a series of workshops held through a 3-year project by the University of Kent and the Food North West (UK) project. The SMEs were then surveyed
and the consumer information utilisation processes demarcated and their unique contribution on the SME performance outcome captured. The Dunnhumby database is considered to provide consumer insight of the UK market for users because it contains the supermarket panel data of the largest UK retailer (Felgate et al., 2011; Humby et al., 2007); and combines the benefits of both the store-level scanner data and panel data (Felgate, 2011).

3.1. Sample Design and Data Collection
In this research the definition of SMEs was based on the 2003/361/EC Recommendation of the Commission of the European Communities and selected firms were with 10 and 249 employees that do not exceed the turnover limits outlined in the Recommendation. Sampling was limited to SMEs in the agri-food industry in the North West of England which participated in workshops that provided consumer information through Food North West/Kent Business School Consumer Information Project for a valid sample frame to test the phenomenon being researched. A list of 120 companies attended 30 workshops over a 3-year period to use the information in the company marketing plans. To reduce sample selection bias, the list of companies which attended the workshops were contacted by phone. Twenty companies could not be contacted due to relocations, change of businesses, or had gone out of business. The final list of 100 companies constituted the sample frame. All the companies were then surveyed to ensure enough cases were represented in the responses (Dillman et al., 2009) and 5 companies were selected for the focus group study (Stewart et al., 2009). In the quantitative survey, 76 useable responses were collected from a sample of 100 SMEs resulting in a 76% response rate overall. Agri-food SMEs which completed the survey were from the following sectors of the industry: manufacturing 49% (37), retailing 14% (11), wholesaling 13% (10), primary production (agriculture) 13% (10) and other sectors 11% (8). The majority of the companies 73.7% have an annual turnover below £1 million and only 2 companies (2.6%) have an annual turnover of over £1 million. The majority of the companies, 57.9%, have up to nine full-time employees and the rest had up to nine part-time employees. All the responding companies are, therefore, small and medium enterprises in the food and drink industry.

4. RESULTS AND DISCUSSION
A series of multiple linear regression techniques were used to examine the hypotheses. In discussing our results, key findings from the focus group and survey studies are triangulated.

4.1. Influence of Market-oriented Organisational Culture on Consumer Information Utilisation
The result of the regression did not support any of the hypotheses (H1, H1, and H1) for a positive association of market-oriented organisational culture with any of the consumer information utilisation types. Therefore, market-oriented organisational culture of speed, innovation and openness appears not to influence the utilisation of consumer information. The result is contrary to expectation in marketing literature (Kohli and Jaworski, 1990; Zaltman, 1986). McClure (2010) stated that evidence suggested that certain organisation culture types by nature enhance the process of information utilisation and market orientation.

However, participants in the focus group ranked innovativeness and creativity as critical in SME organisational culture. Nevertheless, innovation and speed culture in SMEs were inhibited by other organisational characteristics peculiar to SMEs. This is exemplified by one of the participants who stated.

“We do not seem to be massively innovative but because we are in a period at the moment whereby there is no new product development going on we have to turn to management of other core parts of the business. We do not have a big new product development section within the company or a dedicated team. So we have not been terribly innovative in terms of new products based on the data.”- Participant 4

How another participant provided a contrary view …

“When I got the information from you after attending the workshop, to work on it I studied it quickly eh... A company of our size is very flexible when we get information as this which is relevant to our strategy and markets. We will want to use it in our marketing plan, development plan (and) we will work on it very quickly. Our time scale will be 3 months to create a new product especially in our marinades and sauces categories. It will take about the same time to get it to the market.”- Participant 5

This mixed views and the non-significant relationship reported confirmed that agri-food SMEs may not show strong organisational culture of speed, innovation and openness. In addition, Deshpande and Farley (2004) argued that, in practice, their results indicate that the importance of each type/dimension of organisational culture differs significantly across countries in a pattern related to the key attributes of the national culture. Arnett et al. (2000) found in their research on SMEs, speed culture has a “zero-sum” effect on competitive intelligence, innovative culture had a detrimental effect on competitive intelligence usage, and openness had no effect.

The result is, however, supported by the findings in Moorman (1995) study which found none of the market-oriented cultures (adhocracy, market, hierarchy and clan cultures) have statistical significant relationships with organisational market information processes in 200 companies drawn from services and industrial sectors; thus making market-oriented organisational culture less important for predicting information utilisation. This further provides evidence of the differences between the influences of market-oriented organisational culture on consumer information utilisation in agri-food SMEs and large organisations, as most of the evidence in mainstream marketing literature is from large organisations (Stone et al., 2007; Yoon and Lee, 2005; Kohli and Jaworski, 1990).

In as much as these results may be surprising, they tend to add to the argument of the differences in SMEs and large organisation information utilisation behaviours (Carson et al., 1995), since
most of the studies such as Homburg and Pflesser (2000) are developing and reporting measures of market-oriented cultures in the large organisation context which are not applicable in SMEs.

### 4.2. Influence of Organisational Structure on Consumer Information Utilisation

The regression results did not support any of the hypotheses (H2a, H2b, and H2c) for a negative association of organisational structure with any of the consumer information utilisation types. This result shows organisational structure measured using formalisation and centralisation is not significantly related to consumer information utilisation (Kirca et al., 2005; Pelham and Wilson, 1996). This may be due to the characteristics of the agri-food SMEs. However, participants in the focus group provided evidence of lack of formal structures and centralised nature of SME structure on decision making as …

“For most of the companies I have worked with they do not have a large marketing team, or category team, or consumer analysts. In the main it tends to be me and the company owner-manager…” - Participant 2

“The information was good so I shared it with my other commercial colleagues, marketing and anyone with a customer facing role. I share the information with them.” - Participant 5

These quotes provide further evidence to support the findings from the survey results of the inability of organisation structure to influence consumer information utilisation in agri-food SMEs since participation in decision making and hierarchy of authority were least important in determining their use of the consumer information in the sample of agri-food SMEs.

The research findings are contrary to some results reported in marketing literature (Deshpandé and Zaltman, 1987) which have reported results from large and medium companies from different industries. However, the current result is further collaborated by SME literature which is elucidated by Carson et al. (1995) where they had stated …

“Small firms have non-sophisticated, flexible and organic organisational structures, which exhibit few of the structural characteristics of the bureaucratic organisation (which are usually large organisations).” (Carson et al., 1995: 66-67)

From these, characteristics of SMEs do not normally exhibit the complicated, sophisticated structure and the managerial hierarchies found in large organisations. The flexible working practices and organic organisational structures present SMEs as those of a problem-solving team (Carson et al., 1995:67).

Since organisational knowledge in SME and problem-solving teams have also been known to be acquired through low-involvement learning or knowledge accretion (Weiss, 1981), the result confirms organisation structure does not have a relationship with consumer information utilisation in SME. Therefore, the organisational structure is not considered as important in knowledge-enhancing consumer information utilisation in SME (Carson and Gilmore, 2000; Pelham and Wilson, 1996). In addition, since action-oriented consumer information utilisation is demonstrated by changes in the organisation’s activities, practices or policies that can be linked directly to the findings and implication of the information, an SME acting as a problem-solving team’s organisational structure will be less important in acting to influence action – oriented instrumental or symbolic utilisations (Toften, 2006) in these final outcome activities (Arnett et al., 2000; Menon and Varadarajan, 1992).

### 4.3. Influence of Information Functional Quality on Consumer Information Utilisation

The results found information functional quality to positively associate with knowledge-enhancing consumer information utilisation (H3a). This implies how acceptable the consumer information is to decision makers for practical implementation of decisions arising from understanding of issues using consumer information influences its utilisation. The result is important as it is consistent with O’Reilly’s (1982) argument of subjectivity of information utilisation quality on the user. It is also important in SME literature, since the result introduces organisational functional quality attributes of acceptability and ability to implement a decision as part of the qualifications required for consumer information utilisation (Carson and Gilmore, 2000). These findings in SME consumer information utilisation can be attributed to the limited resources and the unique pragmatic ways in which they are managed (McCarran-Quinn and Carson, 2003). Giving credence to the Carson and Gilmore (2000) argument that marketing in SMEs is about how to implement actions; and Sashittal and Jassawalla’s (2001) observation that SME marketing is more functional than their real-time decision to redeploy their energies and resources. And also appears to influence systematic changes in the design of marketing activities (consumer information utilisation) to shape the firm’s behaviour in the marketplace. This is further supported by the participants in the focus group…

“Quality consumer insight is costly so it is not surprising that small businesses like ours rely on gut feel. No longer does this have to be the case because now we can freely obtain information about our market”- Participant 1

“We considered the benefits the information will bring to our business and how to understand it before anything else.”- Participant 3

In addition, the results found information functional quality (acceptability and actionability) to positively influence action-oriented symbolic consumer information utilisation (H3b). A result that means acceptability of consumer information for actionable decision-making influences the use of information in decision making for the sake of appearance rather than the information’s intrinsic qualities in agri-food SMEs. This result supports the conceptualisations of symbolic use of information (Souchon et al., 2003; Souchon and Diamantopoulos, 1997) and contradicts Tofen’s (2006) contention of symbolic information utilisation.

This result is also important since it confirms action-oriented symbolic consumer information utilisation in SMEs, which is not attributed to “generic” influences (“notably the inability to deal with large volume of information;” Souchon et al. (2003:120) but as a considered
decision taken with the view of higher satisfaction in a framework of organisational understanding and beliefs (Souchon et al., 2003; Souchon and Diamantopoulos, 1997). This is evidence that SMEs do engage in the action-oriented symbolic consumer utilisation (McCartan-Quinn and Carson, 2003). This is supported by expectation from the focus group participant, which dwelled more on the source of the information than the intrinsic value of the information …

“I think there is something else you should know, I guess will be…when we went to Tesco to present their own internal information. I didn’t get the impression that eh…that data carries a lot of attention. That I want to understand a little bit more whether this type of information is what Tesco buying team want to see? Is it because they are familiar with it? I am not sure” - Participant 2

4.4. Influence of Information Technical Quality on Consumer Information Utilisation

The results reported information technical quality (content and form) to have a negative influence on action-oriented symbolic consumer information utilisation ($H_4$). This implies higher technical quality of consumer information (content and form) reduces the utilisation of consumer information in decision making for the sake of appearance rather than the intrinsic qualities.

First, this result is important for SMEs, since SME marketing it is argued in SME literature as been less complex (Jocumsen, 2004) and the entrepreneurial nature (Schindehutte et al., 2009; Giroux, 2009) provides pragmatic use of consumer information. However, the result is contrary to mainstream marketing literature where high-quality information have generally been attributed to influence good corporate decision making (Kotler and Armstrong, 2009; Toften and Rustad, 2005; This assertion is confirmed by participants in the focus group discussion …

“Quality consumer insight is costly so it is not surprising that small businesses like ours rely on gut feel. No longer does this have to be the case because …”- Participant 1

The mainstream marketing literature was further contradicted with technical quality not having statistically-significant relationships with action instrumental and knowledge-enhancing utilisations (i.e. use of information to affect strategy and policy making; and the use of information to change a user’s knowledge).

Secondly, information technical quality had a negative relationship with consumer information showing negative coefficients for both significant and non-significant relationships ($H_4$, [$\beta = -0.108$, $H_4$, [$\beta = -0.171$] and $H_4$, [$\beta = -0.443$]). Although the results appear to contradict mainstream literature, it can be argued that in the agri-food SME context, complexity of information appears to discourage utilisation (Souchon and Diamantopoulos, 1997).

Thirdly, in contrast to the positive coefficient of functional quality (acceptability and actionability) of consumer information on utilisation; the results support Kang (2006) argument that evaluation of information service quality should include both sets of functional and technical attributes to ensure better predictive utilisation. This is a very important finding for agri-food SME.

In addition, the result is contrary to the argument made in literature that SMEs symbolically use information due to the inability or limited processing capabilities (Kang, 2006; Vyas and Souchon, 2003; Souchon and Diamantopoulos, 1997). This is because the results confirm information technical quality as influencing action-oriented symbolically consumer information utilisation.

4.5. Influence of Provider-user Interaction on Consumer Information Utilisation

The results shows provider-user interaction has a positive influence on action-oriented instrumental consumer information utilisation ($H_5$). Provider-User interaction consisted of involvement, credibility and communication intensity (Malitz et al., 2006; Moenaert and Souder, 1996; Deshpandé and Zaltman, 1982; 1984). The result implies the strength of the information provider-user interaction, as indicated by the consumer information user organisation engagement with the information; the user organisation’s perceived accuracy and technical soundness of the information and the frequency with which key organisation users of information communicate both formally and informally influence the direct application of consumer information to policy making and strategies in the organisation.

The results also brought to the fore Moorman (1993) observation of the complex relationship of perceived integrity as the most important predictor for information users as stated:

“We use the information because it came from a credible source … an independent credible source; you know the quality of the data was robust…” - Participant 2

Importance of provider-user interaction to the agri-food SME is manifest in the fact that the greater the interaction between the user organisation and the information provider, the more the former know about the consumer information provider and what to expect (Menon and Varadarajan, 1992; Deshpandé and Zaltman, 1987). The interaction also provides insights about how best to structure the information content and form to meet the expectation of the user SME making it acceptable and actionable within the resource capabilities of the SME to enhance utilisation (Arnett et al., 2000). This interaction can take the form of workshops and seminars, formal and informal feedback and discussions to serve as important determinants for consumer information utilisation.

The importance of this relationship was acknowledged by the focus group:

“I think it (workshops and communication with information providers) will be more beneficial because there is a lot of data… I for instance, when I got the information have to call back to get more explanations even though I have attended the workshop. This I think will be all over. The workshop was good for understanding what was available from Food North West. That was good and informative and we trust Food North West to deliver support as members. It was also good for networking.”- Participant 3
Provider–User interaction provides more practical and pragmatic opportunities to both apply and demonstrate utilisation of complex consumer information in SME marketing. This is confirmed with the highly significant coefficient and single most important influence (β = 0.454, P = 0.000) on action-oriented instrumental consumer information utilisation.

4.6. Influence of Market Environment on Consumer Information Utilisation

Market environments have an important positive influence on knowledge-enhancing consumer information utilisation (H6). The result also shows that market environment was the largest, most important for influence on knowledge-enhancing consumer information utilisation. The results confirm that market environment factors, indicating market turbulence and usefulness of information in the business environment for the agri-food SME affect changes in the understanding of their market (Palmer and Hartley, 2006; Arnett and Badrinarayanan, 2005). This was simply confirmed by the SMEs in the focus group as:

“The information helps smaller businesses to identify their market” and “what consumers are purchasing at the tills” - Participant 2

“The consumer information explains people’s shopping behaviour” - Participant 1

The implication of the results is that environmental changes and usefulness of consumer information in the business environment influence the use of consumer information in the understanding of issues and themes in SME marketing decision making (Parrot et al., 2010; Pulendran et al., 2003; Low and Mohr, 2001). Thus, the utilisation of action-oriented instrumental consumer information is important in SME marketing, which is characterised with a shorter decision-making process, changing environment, little formal or informal approaches to management (Burns, 2007; Collinson and Shaw, 2001) and focus on exploiting opportunity (Wickham, 2006). Agri-food SMEs can, therefore, use consumer information to enhance their understanding leading to; identifying new opportunities and improved effectiveness and efficiency in SME marketing in general competition in the agri-food sector (Burt and Sparks 2003; Calantone et al., 2003; Sashittal and Jassawalla, 2001).

Knowledge-enhancing consumer information utilisation will enable agri-food SMEs to incorporate the volatility in their markets indicated by the market turbulence (Low and Mohr, 2001) in their marketing. Market turbulence which can arise from technological and customers’ preferences when incorporated into SME marketing will enable agri-food SMEs to develop their business in the increasingly complex UK agri-food sector. This argument was confirmed by the focus group:

“The information … it is important for consumer engagements, competitions, offers which is specifically based on the customer base on the product.” - Participant 5

Also, this finding is important as it indicates the important relationship of the usefulness of the consumer information in a market environment and the knowledge-enhancing consumer information which is in agreement with mainstream marketing literature (Kotler and Armstrong, 2009; Stone et al., 2007; Blattberg et al., 1994).

4.7. Performance Outcomes of Consumer Information Utilisation

SME performance measurements have been measured by financial and non-financial criteria although financial measures have been given most attention in marketing literature (Walker and Brown, 2004). Mainstream literature has pursued an objective of the firm to maximise profits and follows that the performance measures advocated are largely based upon this theory (Reijonen and Komppala, 2010; Javis et al., 2000). Javis et al. (2000) argue that the seemingly unproblematic notion of business performance needs to be closely linked to the objectives of the firm as defined by the SME owner-manager, since SME owner-managers are known to pursue a range of goals as well as profit maximisation. Owner-managers of SMEs juggle a range of objectives continually arranging and rearranging them within what they perceive as changing constraints internal and external to the enterprise. To give credence to the arguments of Javis et al. (2000) most of the participants in the qualitative study did not directly associate the use of the information to an increase in financial measures but to their own goals. A participant makes it clear when he stated:

“The use of the data was not directly linked to company’s revenue targets, market share, profitability goals but we hope it will help in finding opportunities for new product creation… and may boost sales growth” - Participant 5

“We cannot give you any figures on sales but can tell you we have used it to help us redesign our package for one of our products and hope to improve sales in the coming months”- Participant 3

Therefore, a series of regressions were performed in the quantitative study to examine the relationship between consumer information utilisation and SME performance outcome variables. The results show regression models for action-oriented instrumental consumer information utilisation and financial outcomes, new product creation and production, and decision-making ability indicating adequate significant relationships at P < 0.1. First, the significant (f^2, 73 = 4.121, P = 0.046) relationship between financial outcomes and action-oriented instrumental consumer information utilisation, and a positive significant coefficient of action-oriented instrumental consumer information (β = 0.230, P = 0.046) supports the hypothesis (H7) and provides evidence of a linear relationship. Therefore, the results reveal a linear relationship between financial outcomes and action-oriented instrumental consumer information. The result is interpreted as the utilisation of consumer information in the direct application in policy and strategy making positively associate with SME financial outcomes. Secondly, the adequately significant (f^2, 73 = 3.066, P = 0.084) relationship between new product creation and production and action-oriented instrumental consumer information utilisation, support (H7a) and shows a positive significant coefficient of action-oriented instrumental consumer information utilisation (β = 0.199, P = 0.084). The result is interpreted as the utilisation of consumer information
in the direct application in policy and strategy making positively associate with new product creation and production. Third, the very highly significant relationship between decision making ability and action-oriented instrumental consumer information utilisation, also shows a positive very highly significant coefficient of action-oriented instrumental consumer information utilisation ($\beta = 0.615, P = 0.000$) supporting (H7). The result is interpreted as the utilisation of consumer information in the direct application in policy and strategy making positively associate with decision making ability. These result supports the hypothesis (H7 [H7, H7, H7]) that suggested action-oriented instrumental consumer information utilisation positively associates with financial outcomes, improved new products creation and production outcomes and decision-making ability outcomes of SMEs.

In addition, regression models for knowledge-enhancing consumer information utilisation only show significant relationship with decision-making ability. Result shows a very significant ($f^2 = 13.589, P = 0.000$) relationship between knowledge-enhancing consumer information utilisation and decision-making ability; and a very significant positive coefficient ($\beta = 0.394, P = 0.000$) for knowledge-enhancing consumer information utilisation; a result that support (H9) and provide evidence of a linear relationship. The results support the well-established relationship of use of consumer information to change a user’s knowledge and understanding of the markets (Parry and Song, 2010; Stone et al., 2007; Greenyer, 2006). The knowledge acquired is used to improve agri-food SMEs’ processes and products (Citrin et al., 2007; Neslin et al., 1994), target the customer base (Montgomery, 1997) and improve decision-making abilities of management (Reijonen and komppula, 2010; Lustri et al., 2007). To illustrate this relationship, one of the participants in the qualitative study gave an account of how they used the information:

“We have developed two basic products - whole and ready spatchcocked poussin. We wanted to better understand which region in the UK has the strongest market for these products and what type of people were most likely to be purchasers. Through Food North West, we attended the workshop and made a request for dunnhumby database information. We received a detailed report from the Kent Business School/ Food North West Consumer Insight project. After painstakingly going through the report we understood the two main highlights. First, the charts in the report show that the market for the products is heavily concentrated in London in particular. It appears that the product is not appealing to large centres of the population in Lancashire, Yorkshire and the North East, suggesting there is an opportunity for the business. Secondly, the report also showed that the products appeal most to the older groups including pensioners and older families. The charts were indicating that there are some significant differences in the life stage of people who buy the different products.

We were then able to target our products to the appropriate markets. We are making contacts to supply outlets in the London area and also looking at developing the emerging market in the Borders area. It will take time to develop and

the financial gains will not be instant but we have long- and medium-term plans for this new development. We are now armed with quality information that can be used to identify opportunities for the business. We can now target specific products to different groups of people and have greater confidence we are meeting a real market need which will ultimately help us to increase our sales”… Participant 4

These results further illustrate new and untested relationships in marketing literature and provide further empirical evidence for the mechanism which explains action-oriented instrumental, knowledge-enhancing consumer information utilisation and SME performance outcomes. However, all the other hypotheses (H8 [H8, H8, H8]) for action-oriented symbolic consumer information utilisation were not statistically significant and H10 was not tested.

5. IMPLICATIONS FOR PRACTICE

This article confirms consumer information utilisation in agri-food SMEs improves performance. This is evidenced in improvement in decision-making ability, improvement in new product and processes, and financial outcomes of agri-food SMEs. Since a high provider-user interaction, functional and technical qualities have a positive relationship with consumer information utilisation; schemes with the objective of improving SME marketing with consumer information can improve results with involvement in workshops, feedbacks and engagement of SMEs. Also to further improve consumer information utilisation in SMEs the facilitators must selected information sources with high functional and technical qualities. As a high technical quality suppresses the use of the information just for appearance and not the intrinsic value; whereas a high functional quality will enhance the use of the information for understanding the market to improve the SMEs decision-making ability. This also provides evidence of symbolic use of consumer information which must be identified in utilisation evaluation. The current popular typology used of instrumental/ conceptual does not account for symbolic information utilisation and therefore not comprehensive (Diamantopoulos and Souchon, 1999; Moorman, 1995). SME business facilitators and policy makers involved in consumer information-related interventions for SMEs are therefore, required to include measures that will indicate and enhance SMEs ability to implement decisions from consumer information and consider the turbulence of the markets for the industry to ensure success of utilisation.

Theoretically, this article presents a new perspective of consumer information utilisation in industry as multi-dimensional (knowledge-enhancing, action-oriented instrumental and action-oriented symbolic) and uses an emerging information processing phenomenon of deriving information, knowledge and insights from a complex overlay of databases on consumers of retailers. It presents a more specific information source than market information, and is more comprehensive than panel data, electronic point of sale information and store-level information sources (Felgate et al., 2011; Humby et al., 2007).
6. CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the study provides evidence of the utilisation of consumer information in improving small business outcomes in a general industry resource-based competition; the factors that influence the utilisation and the attended benefits to agri-food SMEs. The utilisation in small business is determined by the agri-food SMEs’ ability to implement the business processes of consumer information application to a higher overall satisfaction acceptable to decision makers. Based on the quality of the content and form of the information, their engagement with the consumer information, their perceived accuracy and technical soundness of the information, and the frequency with which they communicate both formally and informally with the providers of the information, the market turbulence in the industry, and usefulness of the information in the business environment. That in small business application of consumer information in policy and strategy enhanced financial outcomes, improvements in new products and processes and decision-making ability. Also, there is a level of consumer information utilisation in policy and strategy which is purely for symbolic purpose. Nonetheless, consumer information for knowledge-enhancement improves decision-making ability.

We recommend that since context is important in utilisation research (Rich, 1997) this study be replicated in other industries with different industries and using both cross-sectional and longitudinal approaches. Also, since affect consumer utilisation could not be tested due to measurement validity this can be pursued in future research.

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