Digital loyalty card 'Big Data' and small business marketing: Formal versus informal or complementary?

Abstract:

Consumer and competitor data is increasingly stored in digitised data warehouses on a scale hitherto unheard of; popularly termed 'Big Data'. Digitised loyalty card data is pertinent as a threat and opportunity for small businesses. This paper proposes that a complementary relationship exists between the formalised nature of digital loyalty card data and the informal nature of small business market orientation. A longitudinal case-based research approach analyses this relationship in small firms given access to Tesco Clubcard data. The findings reveal a new-found structure and precision in small firm marketing planning from data exposure. This complemented rather than conflicted with their inherent responsiveness and intuitive feel for markets. Small firms were also encouraged to include employees in marketing planning beyond the owner-manager clique. Theoretical, managerial and policy implications are provided.

Key Words: Small business marketing; Digital marketing; Market orientation; Marketing strategy; Big Data

Article Classification: Research Paper

Introduction

Exponential growth and the complexity of digital data beyond what traditional data processing tools can handle, termed 'Big Data', makes it increasingly difficult to store, process and access streams of data coming from social media platforms, purchase transaction records and email marketing campaigns. For marketers, Big Data facilitates increasingly narrow segmentation of customers and therefore more precisely targeted products and services. The marketing power of Big Data is recognised by Tesco PLC, with loyalty card data from their Clubcard representing the buying behaviour of 17 million shoppers (approx. 40% of UK households). Managed by the market research firm dunnhumby, Clubcard data formed a platform for Tesco's rise as a major player in the retail sector during the 1990s.

For small businesses loyalty cards as a source of Big Data presents significant challenges. At one level both the scale and complexity of digital data stored, processed and accessed by firms, has led to new positions being created such as in-house data scientists or outsourcing to specialist business analytics firms. Small businesses do not have the in-house ICT expertise

one level both the scale and complexity of digital data stored, processed and accessed by firms, has led to new positions being created such as in-house data scientists or outsourcing to specialist business analytics firms. Small businesses do not have the in-house ICT expertise and nor do they have the financial resource to outsource expertise (Cacciolatti et al., 2009). Their informal approaches to marketing planning, based on intuition, flexibility and experience (Armario et al., 2008), may also be challenged by the formalised nature of loyalty card data. It is structured with a statistical format comprising tables, graphs and charts illustrating market growth, trends and profiles, requiring a more systematic approach to associated marketing planning (Anstead et al., 2008). At another level many small businesses are finding that to supply multiple retailers, such as Tesco, they must contend with larger competitors buying in loyalty card data and the required interpretive expertise to create unique insights into consumer purchasing behaviour. Research has shown that small businesses are challenged by the power of multiple retailer customers and the competitive

pressure exerted by larger competitors through loyalty card market intelligence (Mauri, 2003; Dunn, 2006; Cacciolatti et al., 2009).

Notwithstanding, the flexibility of small business and their responsiveness to market change helps them to compete with larger firms (Moriarty et al., 2008; Harrigan et al., 2011). Alpkan et al. (2007), comment that key to this are small businesses being market-oriented. They can then leverage their inherent flexibility, intuitiveness and responsiveness to form close relationships with customers and overcome size disadvantage (Moriarty et al., 2008). Previous research emphasises this informal character of small business market orientation (MO) (Pelham and Wilson, 1996; Blankson et al., 2006). With the growth of new digital sources of Big Data such as loyalty cards, business analytic solutions providers such as SAS and IBM are promoting cost-effective cloud-based tools and services for small businesses to exploit their flexible and intuitive MO. However, there is an analytical weakness in the small business literature in terms of our current knowledge of digital marketing more generally and the place of Big Data more specifically. Previous studies of loyalty cards have focused on the consumer's perspective in exploring the link with loyalty, or on development history and technology involved (Wright and Sparks, 1999; Turner and Wilson, 2006; Everett, 2009; Smith and Sparks, 2009; Ziliani and Bellini, 2004). Gaps exist regarding loyalty cards and their impact on marketing planning (Cortiñas et al. 2008), with significant potential implications theoretically and managerially for small businesses (Donnelly et al. 2012).

The central proposition of the research project underpinning this study was that loyalty card data should not necessarily form a digital divide between large and small businesses. A complementary relationship between the informal nature of small business MO and the formalised nature of digital loyalty card data was posited. This was positioned at the level of marketing planning, with Pelham and Wilson (1996) finding that market-oriented small businesses leverage informal characteristics competitively. At another level it was positioned

to reflect the potential of the data for moving small firms from owner-manager dominance towards greater inclusivity of other employees in marketing planning. Armario et al. (2008), contend that MO in small businesses requires employees beyond the owner-manager clique to be encouraged to apply their knowledge to the solution of market problems.

The study aim, therefore, was to explore the relationship between small business MO and loyalty card data. Two specific objectives were: (1) identify changes to the informal characteristics of small firms in their marketing planning pre to post loyalty card data exposure – in understanding and relating to consumers, multiple retailer customers and competitors; (2) examine the involvement of employees pre to post loyalty card data exposure – in handling market intelligence and in marketing planning. In April 2005 a joint venture was established between a UK University and dunnhumby, a global leader in analysing brand and multiple retailer digitised data from over 350 million people in 25 countries. This research partnership focused on seven longitudinal case studies. In-depth interviews were conducted at two points in time with an observational study that included a mechanism for the small businesses involved to have access to and interpretation of Tesco Clubcard data on an on-going basis.

The findings contribute theoretically to small business literature, which views small firms as conducting their marketing activities in an informal manner. They develop the previous work of Pelham and Wilson (1996), who found that informal characteristics and processes make market-oriented small businesses more adaptive to the environment in their marketing planning. We show how the rise of digital technologies, and specifically in this study with regards to Big Data, has the capacity to more formally support small business marketing planning while complementing their informal characteristics in the process. In so doing we provide a basis for new theoretical and empirical developments in this respect. We also present a more plural agenda for the small business literature by moving away from the

notion that decisions are confined to an owner-manager clique, linked again to the emergence of the notion of Big Data. Data exposure for the small firms studied encouraged them to include employees in their marketing planning beyond the typical owner-manager clique.

The next section introduces the theoretical background to the study. The research approach is then discussed before the presentation of findings and their discussion. Conclusions and implications for theory, practice/policy and future research are provided.

Theoretical Background

This section considers small business literature focused on market orientation and loyalty cards. Developing from this the research problem and propositions are defined, forming an analytical framework for the study.

Small Business Market Orientation and Loyalty Cards

At the beginning of the 1990's cultural and behavioural dimensions of market orientation (MO) were developed by Narver and Slater (1990) and Kohli and Jaworski (1990). Table 1 provides concise definitions.

Take in Table 1 about here

Prominent in their operationalization are the MARKOR scale of Kohli et al. (1993) and the MKTOR scale of Narver and Slater (1990). The MARKOR scale has twenty items consisting of one general MO factor, one factor for market intelligence generation, one factor for dissemination and responsiveness, one marketing informant factor, and one non-marketing informant factor. The MKTOR scale has fourteen items; six of them are components of customer orientation, four of competitor orientation and four of interfunctional coordination. Overall, the marketing literature, largely drawing from these scales or adaptations thereof,

has found that MO positively effects business performance (e.g. Narver and Slater, 1990; Matsuno and Mentzer, 2000; Pelham, 2000; Baker and Sinkula, 2009).

The small business literature highlights MO as a facilitator of market adjustment in small firms, helping adaptation to the needs of the customer and changing markets (Martin et al., 2009; Kumar et al., 2011). Competitive advantage is leveraged from the speed with which market adjustment takes place through marketing planning (Li et al., 2008). Blankson et al. (2006), suggests that through appreciation and acknowledgement of their limitations (i.e. resource constraints pertaining to time, expertise, finance or labor), small businesses avoid or minimise them in a bid to enhance their MO and ultimately performance. In a similar vein, Jones and Rowley (2011: 25) state concerning small businesses, "marketing and more specifically market orientation has been identified as an important contribution to business performance". However, various researchers contend that small businesses find it difficult to embrace and implement MO (Harris and Watkins, 1998; Blankson et al. 2006). Such difficulties incorporate limited resources, perceived inappropriateness, contentment with the status quo, short-termism in marketing planning, unclear market information and knowledge and a lack of competitive differentiation (Harris and Watkins, 1998). These difficulties originate in small businesses' perception of marketing, which Stokes (2000) states is derived from a view that business success can be achieved without formalised marketing planning. This informality is a feature of literature considering small business marketing and a point of difference from the general marketing literature. It is defined by the personal commitment and characteristics of owner-managers, which creates an individual and often idiosyncratic approach to the way small businesses are managed (Perks, 2006; Jones et al. 2007). Planning in small businesses is largely viewed as being resident in the head of, and dependent upon, owner-managers (Miller and Toulouse, 1986; McCarthy, 2003); characterised by their management style and personality (Moriarty et al. 2008; Simmons et al. 2008). Ownermanagers prefer pragmatic action in the immediate time-frame depending upon speed and agility to respond to customers (Li et al., 2008), rather than formalised planning and the contemplation of future desirables (Kirchoff, 1994; Doern, 2009). They are focused on intuitively, and often impulsively, assessing short-term achievements and learning experientially by doing (derived from the accumulated knowledge of doing business: Clarke et al., 2006); as opposed to rationally thinking ahead and developing longer-term marketing objectives due to time, expertise and resource constraints (Armario et al., 2008; Bhide, 1994; Blankson et al., 2006; Clarke et al., 2006; Lewis et al., 2007; O'Dwyer and Ledwith, 2009; Liberman-Yaconi et al., 2010).

Empirical research provides some interesting conclusions in this regard. Pelham and Wilson (1996), adapted Narver and Slater's (1990) scale into nine questions used for a longitudinal study measuring the impact of market structure, firm structure, strategy, and MO on small business performance. Their findings show that low levels of formalisation, rather than being a constraint, served to reinforce market-oriented behaviours. Market-oriented small businesses were able to leverage informal characteristics of their marketing planning to consistently provide higher levels of customer service and value. Similarly, Lewis et al. (2001) provided insight into two types of agri-food small business: (1) market-oriented but in reality lacking a focus on consumers; (2) cynical of marketing practices yet displaying inherent MO traits. The suggestion is that despite small businesses being informal and intuitive in their marketing, questioning the usefulness of formal marketing planning and their practice of it, they were market-oriented according to established measures.

Informal small business approaches to sourcing and exploiting market intelligence in marketing planning, increasingly is challenged by digitised data warehouses. Consumer and competitor data is stored on a scale hitherto unheard of, a form of the popularly termed 'Big Data'. They have been critical to the growth and dominance of multiple retailers, from

Walmart in the USA to Tesco in the UK. Multiple retailer power resides in their proximity to consumers and their ability to extract significant quantities of digitised consumer data. For example, Tesco have the largest digitised consumer database representative of the UK population as a whole (Anstead et al., 2008). Comprising seventeen million shoppers Tesco Clubcard is a leading source of this data in the UK retail sector, followed by Sainsbury's Nectar Card (twelve million) and Boots (ten million shoppers) (Ziliani and Bellini, 2004). Loyalty card market intelligence can be mined and interpreted by market research agencies such as dunnhumby (managers of Tesco Clubcard data), providing information beyond that gathered by more traditional market research surveys. According to Dunn (2006: p47) "you need to look at real (consumer) behaviour, real motivation, and you need to be able to link all that knowledge".

Tesco Clubcard market intelligence is managed by dunnhumby and made available through a web portal called 'The Shop'. This comprises analytical tools that businesses buy to build reports and gain insights into consumers and competitors and how their products are performing in all Tesco UK outlets (Humby et al., 2008). It is expensive but firms prepared to act on the information provided see the value and return on investment (Humby et al., 2008). The power of Clubcard data relates to insights into specific consumer niches and their actual buying behaviours, as well as how specific product categories and suppliers are performing. This enables multiple retailers and their suppliers to work out not just who are buying their products, but also to identify other products that consumers are likely to want (Cacciolatti et al. 2009; Donnelly et al. 2012).

Research Problem

Small businesses have limited exposure to digital loyalty card market intelligence in their daily routines, and are likely to lack the expertise, time and financial resources to exploit it (Jocumsen, 2004). The formalised structure of loyalty card data within a statistical format

also requires small firms to take a more formalised and structured approach to marketing planning. This presents a significant challenge given a propensity for informal marketing planning that is based upon their inherent flexibility, intuitiveness and responsiveness.

Further, research has shown that informal characteristics are leveraged by market-oriented small firms in being adaptive to the environment in their marketing planning (Pelham and Wilson, 1996). Given the critical impact it is having, and will have, on competitiveness in an increasing number of markets, it is perhaps surprising that small business literature has neglected to study the potential role of loyalty card data. There is a gap in understanding how Big Data may form a new competitive agenda for small firms and around digital marketing more generally.

Presently, the small business literature conceptualizes MO within a simple organisational structure aligned with owner-manager intuition, flexibility and responsiveness, which drive an informal approach to marketing planning (Blankson and Omar 2002; Moriarty et al. 2008; Baker and Sinkula, 2009; Nieto and Santamaria, 2010). This could be extended by consideration of digital loyalty card data and the new forms of precision and formalised marketing planning required. Synergy may be achieved between the intuitive and flexible marketing planning and the structured and analytical approach required by loyalty card data exposure; creating a focused and yet responsive awareness of customers and competitors. Limited support is provided in the small business literature by Simmons et al. (2011). They found that small businesses were using cost-effective web tools as more formalised and structured analytical platforms for understanding online customers, asking if there could be synergy with inherent creativity, flexibility and intuitive judgment. In the absence of previous enquiry and taking note of the research aim and objectives we propose:

Proposition 1: Small businesses exposed to loyalty card data develop more formalised marketing planning while leveraging informal characteristics in adapting to the environment

Jones and Rowley (2011), comment that small business MO is highly dependent on the marketing knowledge and decisions of the owner-manager. Notwithstanding, Armario et al. (2008) in a study of MO and internationalization in small firms, found that it requires the development of learning processes where employees beyond the owner-manager clique are encouraged to apply their knowledge to the solution of market problems. Given the potential of loyalty card data for providing small firms with precise market intelligence, it may be that exposure could move owner-managers from a belief that employees have no need for market intelligence or involvement in marketing planning, to a realisation that sharing data and involving them enhances competitive outcomes. In the absence of previous enquiry taking note again of the research aim and objectives we propose:

Proposition 2: Small businesses exposed to loyalty card data encourage collegiality and inclusiveness of employees in marketing planning

The next section introduces the methodology employed to address these propositions.

Methodology

In this study an exploratory qualitative research approach was adopted as phenomena and interrelationships under consideration are not well understood (Eisenhardt, 1989; Reige and Perry, 2000; Carson et al., 2001). A case study method was selected, suited to areas that require inductive approaches where accepted principles and constructs have not been established or are inadequate (Perry, 1998). Additionally, an explanation was sought of particular situations and the meaning of owner-managers' rich experiences (Gilmore and Carson, 1996), suited to case study research (Morris and Wood, 1991; Robson, 2002).

Case Selection

The literature provides no precise guidelines as to how many cases should be chosen. The goal should be to select 'information rich' cases in relation to the research problem – that is cases worthy of in-depth study (Patton, 1990; Perry, 1998; Ghauri and Gronhaug, 2005). A purposive sample was chosen with the number of participating case studies based upon the extent to which a new case would contribute to addressing the research problem (Maykut and Morehouse, 1994). Seven case businesses were selected based on predetermined criteria. These criteria were developed in consultation with senior policy makers with small business expertise from public sector funding bodies of this research, as well as with small business owner-managers from the agri-food sector. The sampling criteria and their justification are presented in Table 2.

Take in Table 2 about here

The case firms were selected from the UK agri-food industry, specifically from the Northern Ireland region of the UK as the focus of the research project underpinning the study. This industry has particular relevance given its exposure to multiple retailers such as Tesco (Hingley, 2005), and the pertinence of loyalty card market intelligence for food producers (Cacciolatti et al. 2009). Recent Government reports highlight the importance of MO to Northern Ireland's small agri-food businesses in their export activities and product development (The Focus on Food Strategy, 2010). Table 3 provides detailed background on the seven cases.

Take in Table 3 about here

Data Collection

Data collection consisted of three stages to achieve the depth and relevance of data required to address the research problem and propositions defined. The three stages are illustrated in Figure 1.

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Cultural dimensions of MO (Narver and Slater, 1990) were critical to stages 1 and 3 of the data collection and behavioural dimensions to stage 2. Cultural dimensions were useful for charting change in small business MO pre and post data exposure. Behavioural dimensions (Kohli et al. 1993) were useful for charting change to MO during data exposure. In practice this involved interactions between the three stages as the loyalty card data exposure and subsequent behavioural changes influenced changes to the cultural dimensions of MO from pre to post data exposure. Marketing literature has attempted to integrate the cultural and behavioural dimensions of MO in studies (e.g. Deshpandé and Farley, 1998; Homburg and Pflesser, 2000).

Stage 1: In-depth semi-structured interviews were conducted seperately with two owner-managers from each of the seven case businesses sampled pre exposure to loyalty card data – fourteen face-to-face interviews in total. Interview questions were adapted from Pelham and Wilson (1996) as a framework for developing discussion around Narver and Slater's (1990) cultural dimensions of MO, allowing flexibility for this discussion to develop in different directions to ensure depth and richness in the responses. Discussion focused on how market intelligence was used in day-to-day business from whatever source to understand consumer purchasing behavior, multiple retailer customers and competitor positions. Finally, discussion focused on the level and nature of attempts to understand consumers, customers and competitiors which involved other employees.

Stage 2: The longitudinal study was conducted over a six-month period observing the behavioural dimensions of MO in the small firm cases (Kohli et al., 1993). Generation of loyalty card market intelligence was directly enacted, observed and noted by the researcher. Through dunnhumby the researcher had access to loyalty card data and was trained in its generation and dissemination. Observations of changes in the behavioural dimensions of MO, focused on the dissemination of and response to digital loyalty card market intelligence in marketing planning, were recorded by hand-written notes or using a digital recorder where allowed. The two owner-managers interviewed in stage 1 had monthly interactions with the researcher around the loyalty card data. Owner-managers were responsible for initiating further contact beyond an agreed monthly meeting. Communication varied by telephone, face to face and email contact, with the length of the communications and attendant observations varying from 6 minutes to 2 hours.

Stage 3: Following on from in-depth interviews conducted during stage 1, interviews were conducted separately with the two owner-managers from each of the seven cases post data exposure and six months after stage 1 – a further fourteen face-to-face interviews. Semi-structured questions posed in stage 1 were utilised again in stage 3 on the cultural MO dimensions. Drawing directly from observations in the longitudinal study conducted in stage 2, further questions focused discussion on emerging issues such as observed changes to marketing planning approaches and inclusivity of employees as well as the owner-managers.

Analysis Framework

The research problem and propositions formed an analytical framework for the study. We sought to identify changes to the small firm marketing planning pre to post loyalty card data and the role of informal characteristics exposure to be able to address proposition 1. We also sought to examine the involvement by owner-managers of small business employees with market intelligence and marketing planning pre to post loyalty card data exposure to address

proposition 2. Template analysis was used to categorise themes and triangulate data collected from the three stages using nodes (King, 2004). The process of triangulating data from the interviews and longitudinal observations resulted in certain nodes being revised or added to the template hierarchy, with subsequent changes made before finalising the hierarchy. For example, the customer and competitor-focused cultural dimensions of MO (Narver and Slater, 1990) were integrated into the behavioural responsiveness dimension (Kohli et al. 1993). Also, the inter-functional coordination cultural dimension of MO and the dissemination of market intelligence behavioural dimension, merged around an employee involvement node, pre/during/post data exposure. Nodes were also developed to account for employee involvement through an entrepreneurship orientation (EO) (e.g. Covin and Slevin, 1986; Lumpkin and Dess, 1996). This was evident in the longitudinal study and probed further in the interviews conducted in stage 3. Table 4 shows the finalised template used to categorise themes across the data collected from the three stages. Generation of market intelligence as a behavioural dimension was not included as this was directly enacted, observed and noted by the researcher.

Take in Table 4 about here.

The template analysis approach ensured reliability by introducing structure and consistency when categorising and unitizing the qualitative data collected in the study (see Truong et al. 2011).

Research Findings

The study aim was to explore the relationship between small business MO and loyalty card data. Building on the study aim and objectives two specific propositions were posed as the basis of an analytical framework. *Proposition 1:* Small businesses exposed to loyalty card data develop more formalised marketing planning while leveraging informal characteristics in

adapting to the environment. *Proposition 2*: Small businesses exposed to loyalty card encourage collegiality and inclusiveness of employees in marketing planning. The findings are presented accordingly.

Owner-managers from all of the seven small case firms, pre exposure to loyalty card data, made marketing planning decisions in a largely unstructured fashion often reacting to situations in the market. There was little evidence of objective and formalised sources of, or approaches to dealing with, market intelligence. Much of the informally-based market intelligence on consumers was owner-manager oriented, relying on their intuition and 'gut feel' concerning consumers' needs and wants. There was a lack of written and formalised marketing plans. This concurs with the small business literature, which views MO as being characterised by owner-managers' pragmatic and intuitive generation, dissemination of, and response to market intelligence (Moriarty et al., 2008). Case firm 2 represents a good example. A small and ambitious firm of seven employees and ten months trading experience, their business goal was to establish a brand and market share around the core product of artisan soup. Having been established for ten months the marketing planning taken to achieve brand awareness among more discerning consumers, with associated market share growth, was informal and intuitive. It was framed by one of the owner-managers,

"Market intelligence on consumers and our marketing planning is usually based on our feel, seeing the products, tasting the products and assessing how this is likely to fit with consumers" (C2)

Market intelligence for the small case firms studied, on the whole, was subjective and assumption-based; sourced informally for example from in-store consumer tastings, other marketing channel partners and stakeholders, including competition. This led to the small firms attempting to imitate the new product development of larger competitors in order to

compete. Small business literature indicates that small firms often conform in order to do business, purely because they are small and cannot hope to 'buck' established marketing practices (Fuller, 1994). Carson and Gilmore (2000), note that small businesses are particularly constrained in their marketing within industry norms due to resource constraints. For example Case firm 7, with forty-five employees and twenty-two years trading experience, attempted to strengthen their market position through gaining market share with a product range of ready meals, soups and desserts. They were asked by a multiple retailer customer to develop new ready meal lines. Marketing planning consisted of observing current products in the ready meal market and developing a product similar to the best-selling ready meal ranges offered by large multi-national competitors, in terms of flavours, size and prices.

The consumer in marketing planning pre data exposure was secondary to retail customers with a perceived disconnect from the small firms. Consumers were viewed as distant due to a lack of precise market intelligence. Powerful multiple retailers, as intermediaries between the small businesses and consumers, created a gap that was perceived as difficult to bridge. Case firm 5, a producer of mushroom products with twenty employees and twelve years trading experience aiming to expand their business through new prepared mushroom products, had little choice but to focus their marketing planning and product development on the multiple retailer customer.

"We try to blend things in our marketing plans and product development to suit the consumer... at the end of the day we usually end up getting persuaded of what the consumer wants... by what the customer (multiple retailer) actually wants" (C5).

This was a major issue for small businesses supplying multiple retail customers particularly as larger competitors were 'buying in' loyalty card market intelligence, generating reports on specific segments of interest as well as uncovering lifestyle trends and actual purchasing behaviour for current and potential segments. The small businesses were particularly

concerned not only with the competitive threat posed by larger competitors having access to loyalty card data and other forms of Big Data, but also with the emerging threat and dominance of multiple retailer 'own brand' food products. These products actively leveraged loyalty card data and were perceived by the small firms as providing stiff competition going forward.

Despite fire-fighting on a daily basis, which limited a more structured and considered approach to marketing planning, the precision offered by loyalty card data exposure in all of the seven cases was recognised. It was evident during the period of data exposure and observation that owner-managers' displayed a desire to leverage it in a more structured and formalised strategic response. This departs from the consensus in small business literature, where market-oriented small business owner-managers focus intuitively on the 'here and now' in marketing planning with little rational planning ahead due to time, expertise and resource constraints (e.g. Armario et al., 2008; Blankson et al., 2006; Clarke et al., 2006; Liberman-Yaconi et al., 2010). For example, Case firm 4, a family business with forty-four employees and fifty-five years of experience in the bakery industry, was recently managed by a non-family member. He embraced the data and alongside it was keen to shift the firm's focus, and that of the incumbent family, from a production and product-led business approach towards a structured and formalised approach to marketing planning in its place. In helping to launch a new indulgent range of bakery products, loyalty card data provided precision for meeting the needs of more specifically targeted consumers and the confidence to strengthen further their established brand image,

"...up to the point of having loyalty card data access we did not previously have the time or quality of market data to be properly analysing the market... more doing and reacting to the situation as opposed to building marketing strategy" (C4).

Similarly, the role of loyalty card data in more targeted and systematic marketing planning approaches is evident in comments from the owner-managers in Case firm 1. A dairy yoghurt producer with fifteen employees and two years trading experience, their desire was to launch new product flavours into multiple retailers to create a larger consumer base,

"Loyalty card data has changed our notion marketing-wise as to specifically where we should be planning to grow our consumer base" (C1).

Case firm 2 also highlighted the new-found market precision obtained through loyatly card data exposure,

"...before it was our own personal opinion... But now we know precisely who our target consumer is" (C2).

Critically, rather than abandoning what Li et al. (2008) term a preference for pragmatic action in the immediate time-frame, data exposure appeared to complement owner-managers' intuition and agility in responding to customers. A more objective and precise assessment of consumers' wants and needs, based on real time actual consumer purchasing behaviour, blended with the owner-manager's natural market instinct and responsiveness to create a new confidence in the small businesses as the following interview excerpts illustrate,

"You do need something to support your ideas and gut feel and give you confidence in the market place and I suppose that is where loyalty card data comes in for us (C5)."

"The loyalty card data has grounded our ideas and flexibility and provided confidence before stepping out and jumping into the deep end (C6)".

Previously Case firm 1 had a broad idea of who their target consumers were, typically picturing family segments. They were aiming to launch new yoghurt products in a highly competitive market space with the goal to create a larger consumer base through accessing multiple retailer shelves in particular. Data exposure provided more precision for their ideas and intuitive market feel.

"Probably now when I am briefing the tastings people I am directing them and our ideas more clearly without taking away from what we feel will work for us" (C1).

Case firm 6, a tea company with thirty employees and an aim to gain entry to multiple retailer shelves and with five years trading experience, had an idea of their target consumer pre data exposure picturing them as "*Lucy Gardener*" – a young female professional with a desire for quality tea. This consumer identification was based on intuitive thinking stemming from informal network contacts and observations. Data exposure complemented this,

"Data exposure focused our feel for the market... it formed a basis for extended thinking in terms of tea product content, packaging and design" (C6).

Prior to data exposure Case firm 3, with thirteen employees and eight years trading experience, was aiming to create a new product category with innovative healthy foods (i.e. pulses, cereals) for sale through multiple retailers. Loyalty card data exposure complemented their intuitive ideas for a new health food product category with a new-found confidence due to the precise nature of the market intelligence,

"I suppose it goes back to the whole thing of validating our ideas and feeling for the market... (C3)".

Post data exposure their pitch to multiple supermarket buyers was described as, "here is the market research to prove that there is a market opportunity for this new product". In all of these cases, concurring more generally with Jocumsen (2004), loyalty card data eased the challenge of being small with the resource and expertise implications implicit, while also complementing the positives of being small around market flexibility and sensitivity.

To sum up, these findings provide support for Proposition 1. Loyalty card data was used to develop more formalised approaches to marketing planning, simultaneously leveraging informal characteristics of the small firms in adapting to their environments. This extends Simmons et al.'s (2011) findings on small firms' use of web tools as a more formalised and

structured approach to understanding online customers. It also extends Pelham and Wilson's (1996) findings that the informal nature of a small business can be highly adaptive to the environment in their marketing planning. This informality may indeed be adaptive, potently, if blended with the new forms of Big Data that many larger firms are taking advantage of.

Small Business Sharing of Loyalty Card Data

The small businesses studied, pre data exposure, were coordinated through informal and flexible structures. Communications between owner-managers and different employees tended to be performed through word-of-mouth, often within the production setting as opposed to a formal meeting room. Case firm 2's owner-managers commented that discussions often took place whilst they were making the artisan soup product. An overwhelming majority of the small businesses, pre data exposure, tended not to share market intelligence (a critical aspect of being market-oriented – Kohli et al., 1993) among employees below owner-manager level. Case firm 6, the tea company, acknowledged that marketing activities had been left to one of the owner-managers without any involvement or consultation with staff.

"...the whole marketing side of things has been just me upstairs, or at home on my Mac... getting PR or networking events up and running... when asked recently what I do, some employees didn't have a clue!" (C6)

Case firm 1, notwithstanding a key business aim being to launch new yoghurt products into multiple retailers to expand their consumer base, also revealed that one of the owner-managers was a sole point of reference,

"I would typically 95% of decisions on my own without any outside influence. So a lot of the decisions have been solely mine and any market intelligence consideration would be my concern as well" (C1).

These case firm examples suggested that there could be potential tensions between loyalty card data exposure and small business MO. This was due to owner-managers keeping insights gained to themselves and therefore constraining potential entrepreneurial and innovative actions from other employees of the firm in exploiting opportunities arising. Notwithstanding, exposing Case firm 1 to loyalty card data created the beginnings of a move towards the sharing of this market intelligence and subsequent marketing decisions beyond the owner-manager clique. This also moves beyond the consensus of small business literature. Jones and Rowley (2011), state that small business MO is highly dependent on the marketing knowledge and decisions of the owner-manager. A recurring comment from owner-managers was that they were not previously able to source such detailed and precise market intelligence and, therefore, it was presumed that their personal experience and knowledge of the business and markets should be paramount. The findings revealed that during and post loyalty data exposure, through increasingly working together with their employees, amicably, on insights gleaned from the data, open debate and employee involvement created new competitive developments. For example, in Case firm 7 marketing a product range of ready meals, soups and desserts, a desire to consolidate market share led to a significant shift in this respect,

"I (senior owner-manager) would have seen myself as the 'idea person' with new ideas about doing new curries... with access to this Clubcard data I share it... I now expect the employees also to come up with new and creative and innovative ideas to share the burden..." (C7)

Having received loyalty card data for the first time, Case firm 7's involvement of other employees and sharing the data with them, appeared to energise their entrepreneurial nature, encouraging, and indeed expecting, more collective innovative behaviours.

Similarly, Case firm 2 owner-managers, the artisan soup producer, pointed to a positive link between the data exposure and enhanced MO with their entrepreneurial nature and the collective sharing of innovative behaviours,

"Being more informed about customers and competitors through the data you can talk more passionately about your product and are collectively more innovative towards market opportunities with new products..." (C2).

These and other case examples point to the sharing of data among employees to not only enhance MO, but have complementary implications for the entrepreneurial nature of the small firms in exploiting opportunities for new product innovations and new markets. Entrepreneurship literature, points strongly to the entrepreneurial nature of smaller firms and their propensity to be proactive, risk taking and innovative in their vision, values and operations (e.g. Covin and Slevin, 1986; Lumpkin and Dess, 1996). Exposure to loyalty card data appeared to pull firm employees and owner-managers in some of the cases around, particularly, the innovativeness dimension of an entrepreneurship orientation.

To sum up, these findings provide support for Proposition 2. Loyalty card data encouraged collegiality and inclusiveness of employees as well as owner-managers in marketing planning. This develops out the owner-manager focus of small business literature, with support for the contention that small firm employees should be encouraged to apply their knowledge to the solution of market problems (Armario et al. 2008). Loyalty card-inspired inclusivity of employees, outside of the owner-manager clique, may be considered an internal capability of the small firm that is difficult to imitate (see Day, 1994).

Discussion

In the following discussion we draw out implications for small business literature from the study findings, theoretically and from managerial/policy perspectives.

Theoretical Implications

In this study we set out to explore the relationship between small business market orientation (MO) and loyalty card data. This has particular relevance at a broad level, with many small businesses finding that to supply multiple retailers they have to compete with larger competitors. These competitors buy loyalty card data and the required expertise to create unique insights into consumer purchasing behaviour. Such 'Big Data' helps them create competitive advantage with increasingly narrow segmentation of customers and therefore more precisely targeted products and services. The small business literature is limited in its understanding of digital marketing more generally. Specifically, pertaining to how Big Data, such as that derived from loyalty cards, can form a new competitive agenda for small firms. In this paper we propose that loyalty card data should not necessarily form a digital divide between large and small businesses. This led to the research conducted, which included a mechanism for the small businesses involved to access Tesco Clubcard data. At one level of analysis we identify changes to the small firms' marketing planning pre to post loyalty card data exposure and the role of their informal characteristics. At another level, we identify changes to the involvement of employees with market intelligence and marketing planning pre to post loyalty card data exposure. The study findings contribute to the small business literature theoretically at two levels.

First, new insights are provided that contributes to established small business literature thinking, which views small firms as conducting their marketing activities in an informal manner. Pelham and Wilson (1996), found that informal characteristics and processes make market-oriented small businesses more adaptive to the environment in their marketing planning. Notwithstanding, there has not been a concerted attempt to develop this further and in a specific manner. This is a particularly pertinent aspect of small business thinking given the rise of digital technologies, and specifically in this study with regards to Big Data.

Loyalty card data formally supported small business marketing planning in this study, simultaneously complementing their informal way of doing business. The study findings provide a basis for new theoretical and empirical developments in this respect.

It was evident pre data exposure in all seven small case businesses, concurring with the small business marketing literature consensus, that their MO was framed by informal and unstructured approaches to marketing planning, largely based upon owner-manager intuition and gut feel (see for e.g. Vaghely and Julian, 2010). Significant changes, or in some cases transformations, were evident following exposure to formalised loyalty card data. Simmons et al. (2011), at a broad level, concluded from research that cost-effective web tools may present a more formalised and structured means to complement the informal marketing their studied small businesses practiced. Turning to inherent small business competencies such as creativity, flexibility and intuitive judgment, they asked the question if there could be synergy here.

We answer this question with specific instances of synergy between the small case firms' informal approach to MO and formalised loyalty card data. New-found precision in marketing planning from data exposure did not obliterate but built upon the small firms' intuitive feel for markets, allowing them to target new consumer segments more confidently with new products. Scholars, such as Mintzberg (1989) and Weick (1995), define intuition in the context of insight. This represents the seeing and understanding of the inner nature of things. Rather than create tensions with their intuitive market feel, loyalty card data's precision on consumer trends and competitor positions was found to deepen the small case firms' insight and confidence in these areas. This has support from outside of the small business literature. Tesco Marketing Director Simon Uwins, commented that digital loyalty card market intelligence allows firms to be more analytical, complementing their intuition with the confidence to ask the right questions in the marketing planning process (see Humby

et al., 2008: p107). Asking the right question was particularly important for the small firms during the longitudinal study. We found that loyalty card data exposure allowed the small firms to question their existing target markets, uncovering new segments for instance. From this they were able to develop new product innovations with greater assertiveness and confidence in pitching these to key multiple retailer buyers.

Second, pre-exposure to loyalty card data the small business owner-managers studied kept market information within a leadership clique, making decisions with little involvement of their employees. Jones and Rowley (2011), note that small business MO is highly dependent on the marketing knowledge and decisions of owner-managers. This echoes small business literature, which positions owner-managers as central to the nature and level of business conducted (Wilson and Stokes, 2004; Zontanos and Anderson, 2004; Hansen and Hamilton, 2011). Mazzarol (2009), asserts that the owner-manager is responsible for small firm success or failure in achieving personal and business goals.

The study findings present a more plural agenda for the small business literature linked to the utilisation of 'Big Data', moving away from the notion that decisions are confined to an owner-manager clique. Loyalty card data exposure moved owner-managers from a belief that their employees had little need for this level of market intelligence or role in marketing planning, to a realisation that involving them complemented their skills and competencies. This may be usefully viewed at the level of enhanced experiential learning. Experiential learning in small businesses has been positioned as an information acquisition and transformation experience (Corbett, 2005). Data exposure was transformational for the small firms studied in their subsequent embrace of collegiality in marketing planning beyond the typical owner-manager clique. Also, it was not rhetoric as the findings point to employees, post data exposure, being expected to come up with new and creative ideas in exploiting market opportunities identified through precise consumer and competitive intelligence. This

develops in a specific context the work of Armario et al. (2008), with loyalty card data encouraging in our study what they term inclusive learning in small firms.

The sharing of the data beyond the owner-managers complemented the entrepreneurial nature of the small firms. Marketing planning in small businesses is implicitly associated with an entrepreneurial approach (Schindehutte et al., 2008). Notwithstanding, an entrepreneurship orientation (EO) often creates the conditions for innovations that are in advance of market requirements and therefore lead to market failures (e.g. Slater and Narver, 1995; 1999; 2000; Zahra, 2008). Baker and Sinkula (2009), conclude that small firms' inherent EO complements MO by instilling an opportunistic culture that impacts the quality and quantity of their capacity to innovate. Li et al., (2008), hypothesize a complementary alignment between MO and EO as being critical to small business performance. The findings extend recent studies focused on a complementary MO and EO relationship, by moving into a completely new research context with significant implications in the challenging digital era small firms operate in. They also extend recent small business research by Lechner and Gudmundsson (2012), exploring how individual entrepreneurship orientation dimensions influence the relationship between competitive strategy and firm performance. The researchers found that differentiation strategies and strong firm performance were highly dependent on the innovativeness dimension. Loyalty card data-enhanced MO, evidenced by more precise knowledge of consumers and competition, encouraged the entrepreneurial involvement of employees with evidence, particularly, of collective innovative behaviours being encouraged and indeed expected by owner-managers. This led to the development of new product flavours, packaging, promotions and considerations of completely new markets in their marketing planning. Post-study communications with the case firms revealed significant new listings on multiple and independent retailers' shelves and several new

product and market developments (specific details can be obtained from the researchers on request).

Managerial and Policy Implications

Small business owner-managers utilised loyalty card data that was relevant to their marketing goals, informing decision-making at a level aligned to their understanding. Going forward, they need to be aware of the availability of this type of formalised market intelligence. Also, they must be open and willing to engage in future training or programmes, assisting the development of more structured, formalised marketing analysis and planning approaches commensurate with the role and significance of Big Data. This requires time set aside from daily operational activities, not easy for small firm owner-managers, to educate on how formalised market intelligence can be beneficial to business development. Owner-managers, contemplating gaining access to loyalty card data, should also be open to involving other employees beyond the owner-manager team. Essentially, the value of loyalty cards and Big Data, both to the small business and to the wider economy, is enhancements to MO with the associated development of an inclusive approach to marketing planning. We found that this inclusivity energised the inherent and collective entrepreneurial nature of the small firms, driving innovativeness and subsequent new product listings with multiple and independent retail outlets.

In response to the opportunities identified, Government bodies (e.g. Regional Development Agencies) responsible for small business policy, need to recognise the importance of free access and analytical support for small businesses. This is pertinent, given that larger firms deal with the scale and complexity of digital data stored, processed and accessed by creating new positions such as in-house data scientists or outsourcing to specialist business analytics firms. Government bodies should work in partnership with small business owner-managers to provide a one-stop-shop of support, information and training. The approach taken in this

study could be replicated in other regions of the United Kingdom, European Union and internationally with academic institutions partnering firms such as dunnhumby funded in part or in whole by relevant Government or trade bodies.

Conclusions/Future Research

The digital era presents unprecedented opportunities and threats for marketers in branding and connections with consumers (see for e.g. Simmons, 2008; Simmons et al., 2010). It also presents opportunities as well as threats for small firms through the rise of 'Big Data' and the depth and precision of market intelligence provided. In this study the focus is on digitised loyalty card data as a specific form of Big Data. New insights are provided into the relationship between small business market orientation (MO) and loyalty card data. The findings reveal a new-found structure and precision in small firm marketing planning from data exposure. This complemented rather than conflicted with their inherent responsiveness and intuitive feel for markets. Informal characteristics of small firms were leveraged to complement a more formal and structured approach to marketing planning through data exposure. Loyalty card data encouraged the owner-managers to include employees in marketing planning. Theoretical, managerial and policy implications are defined and presented. We acknowledge that the sample has a single sector/geographical focus, and that this study represents an early stage in our understanding. With the range of sectors affected by the data, the role of industry sector, product characteristics or geographical markets may be a crucial influence in the relationship between small business MO and loyalty card data. These are areas where a fine-grained and case-study based approach, taking a similar approach as this study, could help to clarify the key issues at hand. Specifically, the role of formalised loyalty card data exposure in complementing the informal nature of small business MO is an area that holds considerable promise for small business research. Further research could focus more on particular aspects revealed in this study. For example, the dynamics

involved in external meetings with multiple retailer buyers post data exposure and how this leads to new product listings, is a potentially fruitful area of focused enquiry. Another area of interest is the role of loyalty card data in creating a more collegiate marketing culture in small businesses, with the dynamics behind moves towards collective employee involvement by owner-managers in marketing planning being an area that merits more focused study. The entrepreneurial nature of small firms holds particular promise within this context, tapping into developing small business literature focused on MO and EO combined.

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Table 1 Dimensions of Market Orientation

Cultural Dimensions	Slater and Narver (1995) note that a market-oriented business culture is valuable in focusing an organisation on (1) continuously						
	collecting information about target customers' needs and competitors' capabilities and (2) using this information in order to						
	continuously create superior customer value. The cultural dimensions of MO emphasise a customer and competitor orientation.						
	Narver and Slater (1990) found that businesses with a sound understanding of customers create superior value for the business.						
	Jones and Rowley (2011) emphasise the importance of developing an attitude of consistent customer dedication. Competitor						
	orientation ensures that firms' understand their short-term strengths and weaknesses while acknowledging the long-term						
	capabilities and marketing planning of both current and potential competitors (Narver and Slater, 1990). Their use of competitor						
	information is a vital piece of input in marketing planning, particularly when the market is led by firms driving the industry.						
	Inter-functional coordination is considered to be critical to both through the "coordinated utilisation of company resources in						
	creating superior value for its customers" (Narver and Slater, 1990: p22).						
Behavioural Dimensions	Kohli and Jaworski (1990) consider behavioural dimensions of MO around the generation, dissemination of, and response to						
	market intelligence (Kohli and Jaworski, 1990). In other words, acquiring information on customers and competitors in the						
	target market and disseminating this information throughout the business with strategic response. Superior customer value is						
	created through a behavioural cycle of collecting and critiquing customer and competitor information. Dibb et al., (2006) and						
	Sorensen (2009) view market intelligence as a collection of the organisations data and ideas on customers, competitors and the						
	market to inform marketing planning. The value of the information being generated is only relevant upon dissemination when it						
	has some meaning to the business. Once market intelligence is generated and disseminated for the relevant decision-makers in a						
	business, strategic response must be made to the market intelligence processed. Kohli and Jaworski (1990: 6) state, "unless the						
	firm responds to market needs very little is accomplished".						

Table 2 Sampling Criteria and Justification

1. Small businesses were independent firms Justification: Owner-managers have control over decision-making in the firm in line with the EU small business definition. 2. Small businesses fulfilled the EU definition (2005) which is less than 50 employees with a turnover of less than or equal to 10 million Euros **Justification:** In keeping with the requirements of the data agreement with dunnhumby and promoting the informal aspect of marketing practiced. 3. Small businesses represent various stages in a business lifecycle **Justification:** To facilitate insight into the impact of loyalty card data at various stages in the small business lifecycle. 4. Small businesses operate within varying sectors of the food and drink industry **Justification:** To facilitate insight into the impact of the data in various sub sectors of the industry. 5. Small businesses operate within varying markets (international, national and local) **Justification:** To facilitate insight into impact of the data on small businesses marketing in various geographical markets. **6.** Small businesses market through various channels (multiple retailers and independents) **Justification:** To facilitate insight into the impact of the data on various channels for small businesses. 7. Small businesses supply premium-niche or higher value-added food or drink products **Justification:** This requires a greater requirement for targeted market intelligence such as loyalty card data.

Table 3 Case Details

Small Business	Participants	Marketing goals	Size	Start up	Age at time of research	Markets served	Marketing Channels
C1 Dairy- Yoghurt	2x Owner- managers	Launch new product flavours into multiple retailers to create larger consumer base	15	2008	2 years	NI/ ROI/ENG	Multiple retailers, Farm shops, Independent retailers Service sector
C2 Vegetable- Fresh Soup	2x Owner- managers	Establish brand as home- made artisan soup and develop market share	7	2009	10 months	NI	Independent retailers Multiple retailers
C3 Pulses/Cereals/ Health foods	2x Owner- managers	Create a new product category with innovative health foods in multiples	13	2002	8 years	NI/GB/ ROI	Multiple retailers
C4 Bakery goods	2x Owner- managers	Launch new indulgent products and strengthen established brand image	40	1955	55 years	NI/ROI/ GB/USA	Independent retailers, Multiple retailers
C5 Vegetables- Mushrooms	2x Owner- managers	Expansion of business through stuffed prepared value-added mushrooms. Look for new market opportunities	20	1998	12 years	NI/ ROI	Independent retailers Cafe's and delis, Restaurants, Food Service
C6 Drinks- Teas	2x Owner- managers	Aim to get into multiple retailers	30	2005	5 years	NI/ ROI/GB/ International	Food service, Independent retailers Farmers markets Online retailing
C7 Ready meals, soups & desserts	2x Owner- managers	Strengthen hold on the market through gaining increased market share	45	1988	22 years	NI/ROI	Independent retailers, Multiple retailers

Table 4 Template Analysis Framework

RES – Responsiveness – Pre/During/Post Data Exposure	INV – Employee Involvement – Pre/During/Post Data Exposure			
RES/MAR – Responsiveness in marketing planning	INV/MIN – Employee involvement with market intelligence			
 RES/MAR/CON – Consumer-focused responsiveness in marketing planning RES/MAR/CUS – Multiple retailer-focused responsiveness in marketing planning 	- INV/MIN/EMP – Employee involvement with market intelligence			
- RES/MAR/COS – Multiple retailer-rocused responsiveness in marketing planning - RES/MAR/INF – Informal responsiveness in marketing planning	INV/MAR – Involvement in marketing planning			
- RES/MAR/FOR – Formal responsiveness in marketing planning	- INV/MAR/EMP – Employee involvement in marketing planning			
	INV/ENT – Employee involvement through an entrepreneurial orientation			
	 INV/ENT/INN – Entrepreneurial employee involvement through innovativeness INV/ENT/RIS – Entrepreneurial employee involvement through risk taking INV/ENT/PRO – Entrepreneurial employee involvement through proactivity 			

Figure 1 Research Framework

