Digital loyalty card ‘big data’ and small business marketing: Formal versus informal or complementary?

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Abstract
This article 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 analysed 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 an intuitive feel for markets. In addition, small firm owners were encouraged to include employees in marketing planning.

Keywords
big data, digital marketing, market orientation, marketing strategy, small business marketing

Introduction
Exponential growth and the complexity of digital data beyond that which traditional data processing tools can handle, termed ‘big data’, makes it increasingly difficult to store, process and access...
streams of data arising from social media platforms, purchase transaction records and email marketing campaigns. For marketers, big data facilitates an 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 its Clubcard representing the buying behaviour of 17m shoppers (approximately 40% of UK households). Managed by the market research firm, dunnhumby, Clubcard data has acted as a platform for Tesco’s rise as a dominant force in the retail sector.

For small firms, loyalty cards as a source of big data present significant challenges. They are unlikely to have either in-house information and communication technology (ICT) expertise to exploit such data, or the financial resources to utilise outsourced expertise (Cacciolatti et al., 2009). In addition, small firm informalities towards marketing planning, based on intuition, flexibility and experience (Armario et al., 2008), may be challenged by the formalised nature of loyalty card data. Such data are structured with a statistical format illustrating market growth, trends and profiles, requiring a systematic approach to associated marketing planning (Anstead et al., 2008). At another level, many small businesses find that to supply multiple retailers such as Tesco, they must contend with larger competitors who purchase loyalty card data and the required interpretive expertise to create unique insights into consumer behaviour. Research has shown that small firms are challenged by the power of multiple retailer customers and the competitive pressure exerted by larger competitors through loyalty card market intelligence (Cacciolatti et al., 2009; Dunn, 2006; Mauri, 2003).

Notwithstanding this, the flexibility of small firms and their responsiveness to market change helps them to compete (Harrigan et al., 2011; Moriarty et al., 2008). Alpkan et al. (2007), comment that key to this advantage is being market-oriented, such that small firms leverage off 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 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 firms to exploit their flexible and intuitive MO. However, there is an analytical gap within the literature regarding our current knowledge of digital marketing generally, and the place of big data specifically. Previous studies of loyalty cards have focused on the consumer perspective in exploring the link with loyalty, or on development history and the technology involved (Everett, 2009; Smith and Sparks, 2009; Turner and Wilson, 2006; Wright and Sparks, 1999; Ziliani and Bellini, 2004). Gaps exist regarding loyalty cards and their impact (Cortiñas et al. 2008), with implications for marketing planning within smaller firms (Donnelly et al., 2012).

With the central proposition of this study being that loyalty card data should not create a digital divide between large and small firms, a complementary relationship between the informal nature of small-firm MO and the formalised nature of digital loyalty card data is suggested. This is positioned at the level of marketing planning, where Pelham and Wilson (1996) find that the market-oriented small firm can leverage informal characteristics competitively. In addition, this study explores the potential of using big data to encourage a shift from owner dominance towards employee engagement in marketing planning. Armario et al. (2008), contend that MO in small firms requires employee participation to address market problems.

Therefore, the aim of the study was to explore the relationship between small-firm MO and loyalty card data. Two specific objectives were pursued: first, to identify changes to the informal characteristics of small firms in their marketing planning, pre- to post-loyalty card data exposure; and second, to examine the involvement of employees pre- to post-loyalty card data exposure in
terms of handling market intelligence and 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 more than 350m 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 firms involved to have access to, and interpretations of, Tesco Clubcard data on an ongoing basis.

The findings 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. The present study will show how the rise of digital technologies and specifically, big data, has the capacity to formally support small-firm marketing planning while complementing its informal characteristics in the process. In so doing the study provides a basis for new theoretical and empirical developments, and presents a more diverse perspective when moving away from the notion that decisions are confined to owner and managers.

The article is structured as follows. The next section introduces the theoretical background; the research approach is then outlined, followed by presentation and discussion of the findings. Finally, conclusions and implications for theory, practice, policy and future research are provided.

Theoretical background

Small-firm market orientation and loyalty cards

At the beginning of the 1990s, the cultural and behavioural dimensions of MO were developed by Narver and Slater (1990) and Kohli and Jaworski (1990), as outlined in Table 1. Prominent in their operationalisation are the MARKOR scale of Kohli et al. (1993), and the MKTOR scale of Narver and Slater (1990). The former has 20 items consisting of a general MO factor, with one factor for market intelligence generation, one for dissemination and responsiveness, one marketing informant factor, and one non-marketing informant factor. The latter has 14 items; six are components of customer orientation, four of competitor orientation and four of inter-functional coordination. Overall the marketing literature, drawing largely from these scales or adaptations, has found that MO positively effects performance (e.g. Baker and Sinkula, 2009; Matsuno and Mentzer, 2000; Narver and Slater, 1990; Pelham, 2000).

The literature highlights MO as a facilitator of market adjustment in small firms, helping adaptation to the needs of the customer and changing markets (Kumar et al., 2011; Martin et al., 2009). 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 labour), small firms avoid or minimise formal planning in a bid to enhance MO and, ultimately, performance. In a similar vein, Jones and Rowley state, ‘marketing and more specifically market orientation has been identified as an important contribution to business performance’ (2011: 25). However, it is contended that small firms find it difficult to embrace and implement MO (Blankson et al., 2006; Harris and Watkins, 1998). Such difficulties reflect 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 owner perceptions which, Stokes (2000) argues, derives from the view that success can be achieved without formalised marketing planning.

Such informality is a feature of the literature considering small-firm marketing, and a point of difference from the general marketing literature. It is defined by the personal commitment and characteristics of owners who favour an individual and often, idiosyncratic approach to management...
Planning is viewed largely as being the property and responsibility of owners (McCarthy, 2003; Miller and Toulouse, 1986), characterised by their management style and personality (Moriarty et al., 2008; Simmons et al., 2008). As such, owners prefer pragmatic action in the immediate timeframe, depending on speed and agility to respond to customers (Li et al., 2008), rather than formalised planning and the contemplation of future desirables (Doern, 2009; Kirchoff, 1994).

Empirical research provides further insights. Pelham and Wilson (1996) adapted Narver and Slater’s (1990) scale into nine questions within a longitudinal study measuring the impact of market structure, firm structure, strategy and MO on small business performance. The findings show that rather than being a constraint, low levels of formalisation actually 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 agrifood small business: first, market-oriented, but in reality lacking a focus on consumers; and second, cynical of marketing practices yet displaying inherent MO traits. The suggestion is that despite small firms being informal and intuitive in their marketing, questioning the usefulness of formal marketing planning and related practice was indeed market-oriented, according to established measures.

Informal approaches to sourcing and exploiting market intelligence in marketing planning is being increasingly challenged by digitised data warehouses. Consumer and competitor data are

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**Table 1. Dimensions of market orientation.**

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<tr>
<th>Cultural dimensions</th>
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<td>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: 22).</td>
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<tr>
<td>Behavioural dimensions</td>
<td>Behavioural dimensions</td>
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<td>Kohli and Jaworski (1990) consider the behavioural dimensions of MO around the generation, dissemination of and response to market intelligence (Kohli and Jaworski, 1990): that is, 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 organisation’s data and ideas on customers, competitors and the market to inform marketing planning. The value of the information generated is only relevant for dissemination when it has some meaning to the business. Once market intelligence is generated and disseminated for the relevant decision-makers in a business, a strategic response must be made to the market intelligence processed. As Kohli and Jaworski state, ‘unless the firm responds to market needs very little is accomplished’ (1990: 6).</td>
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stored as ‘big data’, which is critical to the growth and dominance of multiple retailers whose power resides in their proximity to consumers, and the ability to extract digitised consumer data. For example, Tesco has the largest digitised consumer database representative of the UK population as a whole (Anstead et al., 2008). Comprising 17m shoppers, Tesco Clubcard is a leading source of this data in the UK retail sector, followed by Sainsbury’s Nectar card (12m) and Boots Advantage card (10m) (Ziliani and Bellini, 2004). Loyalty card market intelligence can be mined and interpreted by market research agencies such as dunnhumby, providing information beyond that gathered by more traditional market research surveys. The power of Clubcard data relates to insights into specific consumer niches and actual buying behaviours, as well as how specific product categories and suppliers are performing. This enables multiple retailers and their suppliers to identify not only who is buying products, but also other products that consumers are likely to purchase (Cacciolatti et al. 2009; Donnelly et al., 2012).

Research problem

Small firms have limited exposure to digital loyalty card market intelligence, 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 requires firms to take a more formalised and structured approach to marketing planning. This presents a challenge to smaller firms, given their propensity for informality based on 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 that it is having, and will have, on competitiveness in an increasing number of markets, it is perhaps surprising that the extant literature has neglected to study the potential role of loyalty card data. There is a gap in understanding how big data, and digital marketing more generally, may form a new competitive agenda for small firms.

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

P1: 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-firm MO is highly dependent on the marketing knowledge and decisions of the owner. Notwithstanding this, in a study of MO and internationalisation, Armario et al. (2008) found that it requires the development of learning processes where employees also are encouraged to apply their knowledge to market problems. Given the potential of loyalty card data to provide small firms with precise market intelligence, it may be that exposure could move owners 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 the following:

P2: 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.

Method

In this study an exploratory qualitative research approach was adopted, as the phenomena and interrelationships under consideration are not well understood (Carson et al., 2001; Eisenhardt, 1989; Rege and Perry, 2000). 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 experience (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 (Ghauri and Gronhaug, 2005; Patton, 1990; Perry, 1998). 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 policymakers with small firm expertise from the public sector funding bodies of this research, as well as with owners and managers from the agri-food sector. The sampling criteria and their justification are presented in Table 2.

The case firms were selected from the UK agri-food industry, specifically from the Northern Ireland region, 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 (Northern Ireland Government Report, 2010). Table 3 provides detailed background on the seven cases.

Data collection

Data collection consisted of three stages, in order 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.

The cultural dimensions of MO (Narver and Slater, 1990) were critical to stages 1 and 3 of the data collection, and the behavioural dimensions to stage 2. Cultural dimensions were useful for charting change in 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 loyalty card data exposure and subsequent behavioural changes influenced changes to the cultural dimensions of MO from pre- to post-data exposure (Deshpandé and Farley, 1998; Homburg and Pflesser, 2000).

Stage 1. In-depth semi-structured interviews were conducted separately with two owners/managers from each of the seven case businesses sampled pre-exposure to loyalty card data: 14 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 marketing planning from whatever source to understand consumer and multiple retailer customer purchasing behaviour, as well as competitor positions. Finally, discussion focused on inter-functional coordination at the level and nature of attempts to understand consumers, customers and competitors, involving employees beyond the owner-manager team.

Stage 2. The longitudinal study was conducted over a six-month period, observing the behavioural dimensions of MO in the 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 handwritten notes, or using a digital recorder where allowed. The two owners/managers interviewed in stage 1 had monthly interactions with the researcher around the loyalty card data. Owners were responsible for initiating further contact beyond an agreed monthly meeting. Communication varied between telephone, face-to-face and email contact, with the length of the communications and attendant observations varying from six minutes to two hours.

Table 2. Sampling criteria and justification.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Justification</th>
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<tbody>
<tr>
<td>1. Small businesses were independent firms</td>
<td>Owners/Managers have control over decision-making in the firm in line with the European Union (EU) small business definition</td>
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<td>2. Small businesses fulfilled the EU definition (2005), which is fewer than 50 employees with a turnover of less than or equal to €10m</td>
<td>In keeping with the requirements of the data agreement with dunnhumby and promoting the informal aspect of marketing practised</td>
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<tr>
<td>3. Small businesses represent various stages in a business life-cycle</td>
<td>To facilitate insight into the impact of loyalty card data at various stages in the small business life-cycle</td>
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<tr>
<td>4. Small businesses operate within varying sectors of the food and drink industry</td>
<td>To facilitate insight into the impact of the data in various subsectors of the industry</td>
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<td>5. Small businesses operate within varying markets (international, national and local)</td>
<td>To facilitate insight into impact of the data on small businesses marketing in various geographical markets</td>
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<tr>
<td>6. Small businesses market through various channels (multiple retailers and independents)</td>
<td>To facilitate insight into the impact of the data on various channels for small businesses</td>
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<tr>
<td>7. Small businesses supply niche or higher value-added food or drink products</td>
<td>This requires a greater requirement for targeted market intelligence such as loyalty card data</td>
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<tr>
<td>Small Business</td>
<td>Participants</td>
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<td>-----------------------</td>
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</tr>
<tr>
<td>C1 Dairy – yoghurt</td>
<td>2 owner-managers</td>
</tr>
<tr>
<td>C2 Vegetable – fresh soup</td>
<td>2 owner-managers</td>
</tr>
<tr>
<td>C3 Pulses/cereals/health foods</td>
<td>2 owner-managers</td>
</tr>
<tr>
<td>C4 Bakery goods</td>
<td>2 owner-managers</td>
</tr>
<tr>
<td>C5 Vegetables – mushrooms</td>
<td>2 owner-managers</td>
</tr>
<tr>
<td>C6 Drinks – tea</td>
<td>2 owner-managers</td>
</tr>
<tr>
<td>C7 Ready meals, soups and desserts</td>
<td>2 owner-managers</td>
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</table>
Stage 3. Following on from the in-depth interviews conducted during stage 1, interviews were conducted separately with the two owners from each of the seven cases post-data exposure, and six months after stage 1: a further 14 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 how market intelligence was used in marketing planning, and employee inclusivity during data exposure. Marketing planning questions considered changes in dealings with consumers, multiple retailer customers and competition, as well as any changes to the informal style of marketing practised by the small firms post-data exposure. Employee inclusivity considered their involvement with marketing planning and market intelligence post-data exposure. It also considered the dimensions of an entrepreneurship orientation (EO) – innovativeness, risk-taking and proactivity (Covin and Slevin, 1986; Lumpkin and Dess, 1996) – seen to have relevance during data exposure.

Analytical framework

The research problem and propositions formed an analytical framework for the study. The study 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 P1. The study also sought to examine involvement by employees with market intelligence and marketing planning pre- to post-loyalty card data exposure, in order to address P2. 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. 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. The template analysis approach ensured reliability by introducing structure and consistency when categorising and unitising the qualitative data collected in the study (see Truong et al., 2011).

Findings

As outlined previously, the study aim was to explore the relationship between MO and loyalty card data. Building on the study aim and objectives, two specific propositions were posed as the basis of an analytical framework. The findings are presented accordingly.

**Small firm marketing planning and the impact of loyalty card data**

Owners and 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 consumer needs and wants. There was a lack of written and formalised marketing plans; this concurs with the literature, which views MO as being characterised by owners’ pragmatic and intuitive generation, dissemination and response to market intelligence (Moriarty et al., 2008). Case firm 2 represents a good example. A small and ambitious firm of seven employees with 10 months trading experience, its business goal was to establish a brand and market share around the core product of artisan soup. Having been established for this period of time, the marketing planning taken to achieve brand

<table>
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<th>Table 4. Template analysis framework.</th>
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<td>RES – Responsiveness – pre-/during/post-data exposure</td>
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<tr>
<td>RES/MAR – Responsiveness in marketing planning</td>
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<tr>
<td>RES/MAR/CON – Consumer-focused responsiveness in marketing planning</td>
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<td>RES/MAR/CUS – Multiple retailer-focused responsiveness in marketing planning</td>
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<tr>
<td>RES/MAR/COM – Competitor-focused responsiveness in marketing planning</td>
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<tr>
<td>RES/MAR/INF – Informal responsiveness in marketing planning</td>
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<td>RES/MAR/FOR – Formal responsiveness in marketing planning</td>
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Table 4. Template analysis framework.
awareness among more discerning consumers, with associated market share growth, was informal and intuitive. It was framed by one of the owners as follows:

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. (Sales Director, C2)

On the whole, market intelligence for the small case firms studied 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 attempts to imitate the new product development of larger competitors in order to compete. Carson and Gilmore (2000) note that small firms are particularly constrained in their marketing within industry norms due to resource constraints: for example, Case firm 7, with 45 employees and 22 years trading experience, attempted to strengthen its market position through gaining market share with a product range of ready meals, soups and desserts. It was 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 bestselling ready meal ranges offered by large multinational 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 firms and consumers, created a gap that was perceived as difficult to bridge. Case firm 5, a producer of mushroom products, with 20 employees and 12 years trading experience and aiming to expand its business through new prepared mushroom products, had little choice but to focus its 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. (Managing Director, C5)

This was a major issue for those firms 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 firms 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 as providing significant competition.

Despite firefighting 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 owners displayed a desire to leverage from it in a more structured and formalised strategic response. This departs from the literature, where market-oriented owners 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-Yacobi et al., 2010). For example, Case firm 4, with 44 employees and 55 years experience in the bakery industry, embraced the data and wished to shift the focus from a production and product-led business approach towards a structured and formalised approach to marketing planning. 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 its 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. (General Manager, C4)

Similarly, the role of loyalty card data in more targeted and systematic marketing planning approaches is evident in the comments from Case firm 1. A dairy yoghurt producer with 15 employees and two years trading experience, its 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. (Sales Manager, C1)

Case firm 2 also highlighted the new-found market precision obtained through loyalty card data exposure: ‘Before it was our own personal opinion … but now we know precisely who our target consumer is’ (Owner, C2)

Critically, rather than abandoning what Li et al. (2008) term a preference for pragmatic action in the immediate timeframe, data exposure appeared to complement owner intuition and agility in responding to customers. A more objective and precise assessment of consumer wants and needs, based on real-time actual purchasing behaviour, blended with the owner’s natural market instinct and responsiveness to create new confidence, as the following 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. (Managing Director, C5)

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

Previously, Case firm 1 had a broad idea of who its target consumers were, typically picturing family segments. It was aiming to launch new yoghurt products in a highly competitive market space, with the goal of creating a larger consumer base through accessing multiple retailer shelves in particular. Data exposure provided more precision for the firm’s 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. (Sales Manager, C1)

Case firm 6, a tea company with 30 employees, five years trading experience and an aim to gain entry to multiple retailer shelves, had an idea of its 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. (Managing Director, C6)
Prior to data exposure Case firm 3, with 13 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 the firm’s 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’ (Sales Manager, C3).

Post-data exposure, the firm’s 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 complementing the positives of market flexibility and sensitivity.

To summarise, these findings provide support for P1. Loyalty card data was used to develop more formalised approaches to marketing planning, simultaneously leveraging informal characteristics in adapting to the environment. This extends Simmons et al.’s (2011) findings on small-firm 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 firm can be highly adaptive to the environment in its marketing planning. This informality may indeed be adaptive – potently so – if blended with the new forms of big data.

**Small-firm sharing of loyalty card data**

The firms studied, pre-data exposure, were coordinated through informal and flexible structures. Communications between owners, managers and employees tended to be performed through word of mouth, often within the production setting as opposed to a formal meeting room. The owner and managers of Case firm 2 commented that discussions often took place while they were making the artisan soup product. An overwhelming majority of the firms, 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 owners 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! (Managing Director, C6)

Case firm 1, for whom a key business aim was to launch new yoghurt products into multiple retailers to expand their consumer base, also revealed that one of the owners was a sole point of reference:

> I would typically make 95 percent 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. (Managing Director, C1)

These case firm examples suggested that there could be potential tensions between loyalty card data exposure and small-firm MO. This was due to owners and managers failing to share their insights and therefore, constraining potential entrepreneurial and innovative actions from other employees who might contribute to exploiting emergent opportunities. Notwithstanding, exposing Case firm 1 to loyalty card data created the beginnings of a move towards sharing this market
intelligence and subsequent marketing decisions beyond the owners and managers. This also moves beyond the literature: Jones and Rowley (2011) state that small-firm MO is highly dependent on the marketing knowledge and decisions of the owner. A recurring comment from owners was that as they had not been able to source such detailed and precise market intelligence previously, their personal experience and market knowledge was paramount. The findings revealed that during and post-loyalty data exposure, through increasing employee participation, insights gleaned from the data opened up debate and encouraged employee involvement. 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 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. (Managing Director, C7)

Similarly, the owner of case firm 2, the artisan soup producer, pointed to a positive link between the data exposure and enhanced MO reflecting 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. (Managing Director, C2)

These, and other case examples, suggest that data sharing with employees enhances MO, but has complementary implications for the entrepreneurial nature of the firms in exploiting opportunities for new product innovations and new markets. In some of the cases, exposure to loyalty card data appeared to encourage employees and owners to demonstrate greater innovativeness.

To summarise, these findings provide support for P2. Loyalty card data encouraged collegiality and inclusiveness among employees in marketing planning. This supports the contention that employees should be encouraged to apply their knowledge to solving market problems (Armario et al., 2008). Loyalty card-inspired employee participation may be considered an internal capability within smaller firms that is difficult to imitate (see Day, 1994).

Discussion and conclusion

Theoretical implications

This study explored the relationship between small-firm MO and loyalty card data. This has particular relevance, as many such firms supplying multiple retailers have to compete with larger competitors who buy loyalty card data, as well as 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 literature is limited in its understanding of digital marketing generally; specifically, regarding how big data, such as that derived from loyalty cards, can form a new competitive agenda for small firms. We propose that loyalty card data should not necessarily form a digital divide between large and small firms: within this study, on one level changes to small firm marketing planning were identified pre- to post-loyalty card data exposure, and the role of their informal characteristics. On another level, changes to employee involvement were identified regarding market intelligence and marketing planning pre- to post-loyalty card data
exposure. Thus, the findings contribute to the small business literature theoretically on two levels.

First, new insights are provided that contribute to established analyses that view 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 this, there has been little concerted attempt to develop this further; this is a particularly pertinent issue, given the rise of digital technologies and, specifically, big data. Loyalty card data formally support small business marketing planning, simultaneously complementing their informal way of doing business.

It was evident that pre-data exposure, in all seven small case businesses, their MO was framed by informal and unstructured approaches to marketing planning, largely based on intuition and ‘gut feel’ (see for example, Vaghely and Julian, 2010). Significant changes, or in some cases transformations, were evident following exposure to formalised loyalty card data. On a broad level, Simmons et al. (2011) concluded that cost-effective web tools may present a more formalised and structured means to complement informal marketing. Turning to small firm competencies such as creativity, flexibility and intuitive judgement, they focus upon the potential for synergy.

The study identified specific instances of synergy between the 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 intuitive feel for markets, allowing firms to target new consumer segments more confidently with new products. Those such as Mintzberg (1989) and Weick (1995) define intuition within 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, the precision of loyalty card data on consumer trends and competitor positions was found to deepen case firm insight and confidence in these areas. This has support: professional managers such as 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). Asking the right question was particularly important for the small firms during the longitudinal study: loyalty card data exposure allowed them to question existing target markets and uncover new segments. From this they were able to develop new product innovations with greater assertiveness, and confidence in selling to key multiple retailer buyers.

Second, pre-exposure to loyalty card data, owners and managers retained market information within a leadership clique. Jones and Rowley (2011) note that small-firm MO is highly dependent on the marketing knowledge and the decisions of owners and managers, positioning them as central to the business (Hansen and Hamilton, 2011; Wilson and Stokes, 2004; Zontanos and Anderson, 2004). This study suggests a need to move away from the notion that decisions are confined to this group; loyalty card data exposure encouraged employee involvement at the level of enhanced experiential learning (Corbett, 2005). Data exposure was transformational in the subsequent embrace of collegiality in marketing planning beyond the decisions of owners and managers. Also, it was not merely rhetorical, as the findings point to employees, post-data exposure, being expected to generate new and creative ideas in exploiting market opportunities identified through precise consumer and competitive intelligence.

The sharing of data beyond the senior team complemented the entrepreneurial nature of the firms. Marketing planning in small firms is implicitly associated with an entrepreneurial approach (Schindehutte et al., 2008); notwithstanding this, an EO creates the conditions for innovations that are in advance of market requirements, and therefore can lead to market failure (e.g. Slater and Narver, 1995, 1999, 2000; Zahra, 2008). Baker and Sinkula (2009) conclude that small firm
inherent EO complements MO by instilling an opportunistic culture that impacts upon the quality and quantity of their capacity to innovate. Li et al. (2008) hypothesise a complementary alignment between MO and EO as being critical to firm performance. These findings extend recent studies focused on a complementary MO and EO relationship by moving into a new research context which has significant implications for smaller firms, given the contemporary digital era. They also extend work by Lechner and Gudmundsson (2012), exploring how individual EO dimensions influence the relationship between competitive strategy and firm performance. Given a more precise knowledge of consumers and competition, loyalty card data-enhanced MO encouraged the entrepreneurial involvement of employees with evidence, particularly, of collective innovative behaviours being encouraged, and indeed expected, by owners. 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.

**Managerial and policy implications**

Small-firm owners and managers utilised loyalty card data relevant to their marketing goals, informing decision-making at a level aligned to their current operations. 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 to learn how formalised market intelligence can be beneficial to business development. Owners and managers contemplating gaining access to loyalty card data should encourage employee participation. Essentially, the value of loyalty cards and big data, both to the small firm and to the wider economy, reflects enhancement 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) need to recognise the importance of free access and analytical support for small firms. 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. The approach taken in this study could be replicated in other regions of the UK, EU and internationally, with academic institutions partnering firms such as dunnhumby and funded in part or in whole by relevant government or trade bodies.

**Suggestions for future research**

The digital era presents unprecedented opportunities and threats for marketers in branding and connections with consumers (see 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 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. The 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 owners and managers to include employees in marketing planning. The authors acknowledge that the sample has a single sector and/or 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 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 firm MO is an area that holds considerable promise for future research, which also should focus on, for example, the dynamics involved in external meetings with multiple retailer buyers post-data exposure, and how this leads to new product listings. Another area of interest is the role of loyalty card data in creating a more collegiate marketing culture in small firms, with the dynamics behind moves towards collective employee involvement by owners and managers in marketing planning being an issue that merits further attention.

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**References**


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