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# A Study of Small Business Owners' Personal Characteristics and the Use of Marketing Information in the Food and Drink Industry: A Resource-Based Perspective

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## ABSTRACT

Market orientation (MO) – which is the propensity of a firm to collect and utilise information from the market – is an important leverage of competitive advantage. This paper helps to better understand why some owner-managers engage with market intelligence why others simply do not. The relationship among the owner-manager's personal characteristics, entrepreneurial orientation (EO) and MO are explored, despite existing literature neglected testing these simple but important relationships. We adopt a resource-based view (RBV) of the firm perspective. This study aims to establish whether the personal characteristics of the entrepreneur impact the use of marketing information. More specifically, this study tests entrepreneurial attitude orientation, marketing expertise and demographic variables for an effect on the use of different types and sources of marketing information as well as the frequency of information usage. Data were collected through a regional survey of 296 small business owners and senior managers in SMEs in the Scottish food and drink industry. Canonical correlation analysis (CCA) and regression analysis was used to test hypothesised relationships. Personal characteristics such as age ($p<.05$), gender ($p<.002$), previous experience ($p<.05$), and marketing expertise ($p<.05$) are critical factors affecting information use other than EO ($p>.05$). Implications for policy makers and practitioners involving small business subsidies and entrepreneurs' marketing training are discussed.

*Keywords: SME marketing, marketing information, canonical correlation analysis, information utilisation, owner-managers, small business, resource-based view*

## 1 Introduction

The resource-based view of the firm (RBV) supports the idea that some resources (including human capital and know-how) are non-easily-imitable, rare to obtain but also very valuable to bring real competitive advantage to the firm (Barney, 1991; Hunt and Morgan, 1995). Penrose (1959) identified people's personal characteristics among the rare, valuable and inimitable resources: people's behaviour and knowledge, personal experience and expertise. A plethora of studies looked at owner-managers' personal characteristics on performance and a recent paper by Di Zhang and Bruning (Di Zhang and Bruning, 2011) carefully reviewed those studies.

The knowledge generated by information acquisition and utilisation in firms is an important resource, as the firms' engagement with marketing intelligence has a positive and direct effect on business performance (Baker and Sinkula, 2009). However, in current marketing literature it is unclear whether owner-managers' characteristics have an impact on market orientation.

Market orientation per se is at the base of value creation and competitive advantage achievement (Narver and Slater, 1990; Porter, 1985; Slater and Narver, 2000; Slater and Narver, 1995). And those firms that engage in market intelligence are more likely to be competitive firms (Kuksov and Lin, 2010), since with more information they can improve their marketing decision making (Levy and Powell, 2005). Evidence shows that those SMEs that use marketing information frequently are more successful than those that do not use information at all (Fuellhart and Glasmeier, 2003).

In order to increase firms' adaptability, small business owners are required to become strategic thinkers while becoming more market oriented. Yet, not all business owners show a strategic orientation (Mukhopadhyay et al., 2008) in business and marketing. Some small business owners may lack of interest in adopting a marketing strategy, as not all of them search for business growth. Personal and more intimate motivations often are the main drivers of the firm's strategy (Hansen and Hamilton, 2011).

Alternatively, some small business owners may simply be insensitive to the relevance of market orientation: marketing oriented firms make large use of marketing information because they aim to know consumers and customers' preferences at their best, while non-marketing oriented firms do not see a need for market information utilisation (Kirca et al., 2005). Thus, all business owners are different one from another: some have more experience, expertise and knowledge than others; some are more entrepreneurial and impulsive in their approach while others are more structured in their thoughts as well as strategy oriented.

Thus, what are the characteristics of those business owners that engage with market intelligence? Do personal characteristics such as education, gender, age and entrepreneurship affect owner-managers' market orientation? And does previous working experience matter in determining how information is utilised by business owners?

This paper looks at establishing what personal characteristics of small business owners have an effect on information use amongst SMEs. The owner managers' characteristics this paper proposes to test are: entrepreneurial attitude, educational level, marketing qualifications, previous working experience as well as demographics like gender and age.

Next section (section two) will describe why market intelligence is important to SMEs. Section three will describe the variables used in this study and the sample composition. Section four will present the statistical model and the results discussion. The conclusions will be in section five. These will address the findings implications, and will reflect on future research while highlighting some of the limitations of the study

## 2 Information utilisation in small businesses

In marketing literature, the greatest deal of studies on information dealt with information symmetry and asymmetry (Nicolau and Sellers, 2010; Yan and Pei, 2011; Yoon et al., 2011; Yue et al., 2006) or information cost effectiveness in manufacturing and retailing (Liang, 2009; Liang and Iyer, 2010; Pazgal and Soberman, 2008; Zach Zhizhong and Zhu, 2010). Some studies on SMEs concluded that SMEs do not utilise information because they often lack of marketing expertise (Levy and Powell, 2005) and resources in general are limited (Gilmore et al., 2001b). For the purpose of this paper we define marketing information as: *structured data about the market, usable within a marketing context and that has been voluntarily sought and systematically collected*

Lack of information is often a barrier to SMEs' decision making because many companies are unable to support marketing intelligence activities, although it is proven that an improvement in marketing decision making can be achieved through market intelligence (Thong, 2001). However, market oriented SMEs often find acquiring information difficult (Yeoh, 2005) because of the variety of data, which makes the identification of the relevant information difficult (Peters and Brush, 1996; Shaffer and Zettelmeyer, 2002).

The quality and quantity of information are affected by the quality and quantity of the types and sources of information available to the firm (Ruth and York, 2004), although these are often informal in nature (Johnson and Kuehn, 1987). Family and friends are often considered being reliable and trusted sources of information (Cooper et al., 1989). In spite of that, SMEs may benefit from more formalised sources of marketing information like: suppliers, buyers, competitors and market trends data (Peters and Brush, 1996: 81).

Business owners need to adopt a systematic and skilful way of utilising quality market information to be

able to decrease marketing planning risks while increasing responsiveness to changes in the market place (Souchon and Diamantopoulos, 1997).

We propose the more marketing information is used to support decision making, the greater the probability the firm will make the right choices within their competitive environment. However, we also believe this may depend on the small business owners' personal characteristics: not all business owners make good use of information or show entrepreneurship in their behaviour. Furthermore, not all small business owners have the same educational level, marketing expertise and managerial experience. In fact, gender and age may affect information use. In what follows we attempt to discuss the dynamics behind personal characteristics and marketing intelligence, identifying those characteristics that may have an effect on information use.

## 3 Small business owners' personal characteristics and their effect on marketing information utilisation

Previous studies on market intelligence focused on organisational characteristics rather than personal characteristics (Deshpande and Zaltman, 1982; Hutt et al., 1988; Menon and Varadarajan, 1992; Mohr and Nevin, 1990; Moorman et al., 1993; Moorman et al., 1992).

Few studies looked so far at the impact of small business owners' characteristics on information utilisation. Nevertheless, current marketing literature focused on how performance is affected by owner-managers' characteristics: age, gender, education, marketing expertise, previous experience and entrepreneurial attitude. These characteristics are shown in figure 1. The descriptors in the square boxes are the variables belonging to the 'owner characteristics' and 'use of information' constructs adopted in this study. In parentheses are the hypotheses to be tested.

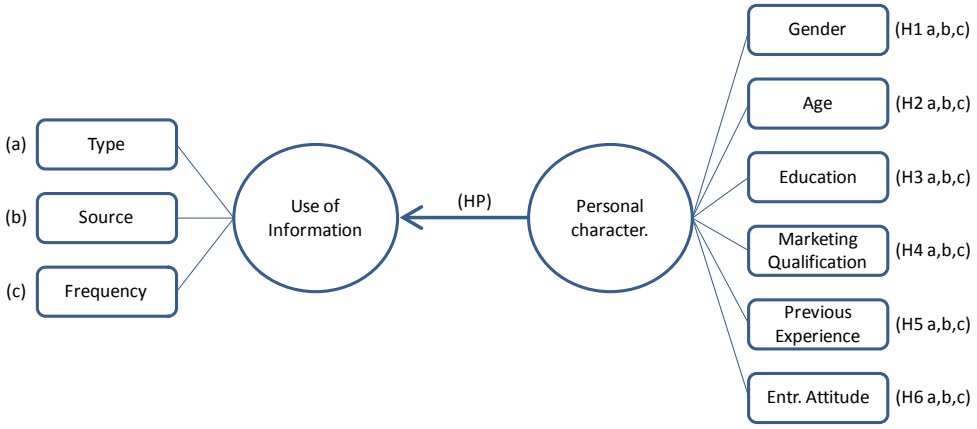


**Figure 1.** Conceptual model on the business owners' characteristics impacting the use of marketing information in SMEs (and relative hypotheses).

Our principal embedded hypothesis is:

***HP (Principal hypothesis)****: there is a significant correlation between the use of marketing information and business owners' personal characteristics.*

Current marketing and entrepreneurship literatures are supportive of the idea information utilisation is affected by gender (Bird and Brush, 2002; Finkelstein and Hambrick, 1990; Hambrick and Mason, 1984; Singh et al., 2001). Knowledge acquisition is different between male and female (DeTienne and Chandler, 2007) and the different way information needs are determined also affects the ability to identify marketing opportunities (Chaganti and Parasuraman, 1996). Gender does not only affect the type of information sought, but also both the source where information is accessed and its frequency of use, because women's access to information is often hampered by existing male dominated networks (Weiler and Bernasek, 2001). Hence, the first embedded hypothesis is:

H1: **Gender** has a direct (either positive or negative) effect on:

1a: the importance of the type of information used.
1b: the importance of the source of information used.
1c: the frequency of use of information.

Also the owner-manager's age affects information utilisation. Owners' age is often related to their work experience (Tocher and Rutherford, 2009), to different ages correspond different risk aversions, financial constraints, different technological and market competencies (Colombo and Delmastro, 2001) and to their networks: *'sometimes entrepreneurs will consciously seek out information from certain individuals believed to have a contribution to make; on other occasions information will be gleaned subconsciously'* (Gilmore et al., 2001a: 7). Therefore age affects the quality of social capital (networks and linkages) and therefore the access to information (Davidsson and Honig, 2003). Hence, our next hypotheses are:

H2: **Age** has a direct, positive effect on:

2a: the importance of the type of information used.
2b: the importance of the source of information used.
2c: the frequency of use of information.

Education is related to innovative thinking (Koellinger, 2008). Although educated business owners are more likely to have the knowledge, skills and contacts that may enable business, only a small percentage of graduates become entrepreneurs (David et al., 2011). Better knowledge does not translate necessarily into entrepreneurial behaviour, nevertheless, sometimes better educated business owners may be better skilled at identifying what type and source of information is more helpful to support their marketing decision making. Hence, the next hypothesis is:

H3: the level of **education** has a direct, positive effect on:

3a: the importance of the type of information used.
3b: the importance of the source of information used.
3c: the frequency of use of information.

Marketing expertise enables firms to engage with market intelligence. Those business owners that are better at marketing may be more customers focused and may search for more detailed information about the marketplace (Matsuno et al., 2002; Pelham and Wilson, 1996). The lack of marketing expertise may also concretize in the inability of identifying the right information sources (Callahan and Cassar, 1995) that would therefore limit SMEs' information use. Hence, the fourth embedded hypothesis is:

H4: Having a **marketing qualification** has a direct, positive effect on:

4a: the importance of the type of information used.
4b: the importance of the source of information used.
4c: the frequency of use of information.

Although education might help owner-managers to make sense of their own experience, studies (Stuart and Abetti, 1990) on the manager's previous working experience did not find confirmation that experience has any effect on performance; nevertheless this does not mean previous experience does not have an effect on information utilisation. On the contrary, other studies support previous experience affects marketing capabilities in general (Pérez-Cabañero et al., 2012). More in specific, Tuominen et al. (Tuominen et al., 1997) support that marketing capabilities are determined by the knowledge accumulated over the years working in the firm. They identify in marketing research a core firm capability affected by cumulative working experience (Tuominen et al., 1999). In light of what suggested by these studies, our fifth embedded hypothesis is:

H5: **Previous managerial experience** has a direct, positive effect on:

5a: the importance of the type of information used.
5b: the importance of the source of information used.
5c: the frequency of use of information.

Current literature does not agree whether entrepreneurial attitude or orientation (EO) is a disposition or behaviour (Covin and Lumpkin, 2011). Some authors (Voss et al., 2005) believe EO as being *'a firm-level disposition to engage in behaviours […] that lead to change in the organisation or marketplace' that involves 'risk taking, innovativeness, proactivity, autonomy and competitiveness'*, while others (Pearce et al., 2010: 219) accept the view EO is a *'set of distinct but related behaviours that have the qualities of innovativeness, proactivity, competitiveness, risk taking and autonomy'*. Covin et Lumpkin (Covin and Lumpkin, 2011) propose that EO affects learning in firms, and Dess et al (Dess et al., 2003) confirm that entrepreneurial oriented SMEs learn both from the internal and external firm environment. In this study we adopt the view EO is behaviour rather than a disposition, because we believe learning is a cognitive action that requires conscious information use. Hence, the last hypothesis is the following:

H6: **Entrepreneurial attitude** has a direct, positive effect on:

6a: the importance of the type of information used.

6b: the importance of the source of information used.

6c: the frequency of use of information n.

In the following section describes the research design, the measures adopted and the sample characteristics.

## 4 Research design and data collection

A questionnaire was designed using existing scales in order to collect the data. The data collection targeted business owners in food and drink companies in Scotland. The first set of dependent variables used in this study includes the importance given to information (i) types and (ii) sources as well as to (iii) the frequency of information use. The set of independent variables includes: (I) gender, (II) age, (III) education, (IV) marketing qualifications, (V) previous managerial experience and (VI) entrepreneurial attitude. The following table provides a summary of the variables.

**Table 1.**

Summary table of variables

| Variable Name | ID | Description | Type | Categories | References |
|---|---|---|---|---|---|
| *Dependent variables* | | | | | |
| INFOTYPE | i | Relevance level of the proposed types of information to the company | Continuous | min: irrelevant; max: critically important | O'Reilly (1982) |
| INFOSOURCE | ii | Relevance level of the proposed sources of information to the company | Continuous | min: irrelevant; max: critically important | |
| INFOUSE | iii | Frequency of use of the proposed types of information to the company | Continuous | min: irrelevant; max: critically important | |
| *Independent variables* | | | | | |
| GENDER | I | Respondent's gender | Nominal | 0=female; 1=male | |
| AGE | II | Respondent's age | Ordinal | 1=up to 19; 2=20-29; 3=30-39; 4=40-49; 5=50-59; 6=60-69; 7=over 70 | |
| EDUCATION | III | Highest educational level attained | Ordinal | 1=secondary education; 2=further education; 3=higher education | |
| MARKETING QUALIFICATION | IV | Whether the respondent was formally trained in marketing through a professional body | Ordinal | 0=no formal marketing qualification; 1=yes | |
| PREVIOUS EXPERIENCE | V | Whether the respondent had previous managerial experience | Ordinal | 0=no previous experience; 1=yes | |
| ENTREPRENEURIAL ATTITUDE | VI | The attitude of the business owner to entrepreneurial behaviour | Continuous | min: non-entrepreneurial; max: entrepreneurial | Robinson et al. (1991) |

What follows describes the variables and reports some descriptive statistics. The full set of dependent variables analysed in this study includes variables created through PCA (Principal Component Analysis), with eigenvalue=1 and VARIMAX rotated solution. The items used in the variables were originally collected and adapted from O'Reilly's (O'Reilly, 1982) information usage scales. In agreement with the original scale, respondents were asked to state whether they agreed or disagreed with some statements on the importance of different types and sources of information (10 items in each scale), as well as the frequency of use (8 items) of those specific type and sources.

The scale was operationalised as a 10 points likert scale (1=strongly disagree, 10=strongly agree); the single items and the Cronbach's alphas are reported in table 2, in the appendix. The frequencies for the most common ratings are as it follows: overall the respondents considered very important the type of information (median=7) they had to use, but not so important the source of information (median=3) used.

The frequency of use (median=5), for many of the respondents was not a relevant issue, being it neither important nor unimportant. The Cronbach's alphas for the type, source and frequency of use of information are respectively .828, .825 and .820. This first descriptive insight on the dependent variables suggests that, at an aggregate level, the SMEs that took part to the survey did not consider market intelligence as being a priority for their business. Nevertheless, they recognised the importance of identifying and using the right types of information.

The independent variables used in the business owners' characteristics set were operationalised in the following way. Respondents were asked to indicate their age, gender, and whether they have previous managerial experience.

Age was expressed as an ordinal variable, split into seven categories: up to 19 years old, 20-29, 30-39, 40-49, 50-59, 60-69, over 70. The coding for the categories in ascendant order was operationalised by assigning to each category an integer starting with 1 at category 'up to 19' and finishing with 7 with the 'over 70' category. We found the most recurrent age was 30-39 and it accounts for 45% of the sample. Gender was operationalised as a dichotomous nominal zero/one variable, where the 'male' category was assigned value 1 and to the 'female' category value 0. The most frequent category was male and accounted for 78% of the sample.

On the other hand, previous managerial experience was operationalised by asking the respondent whether they had managerial experience in previous businesses. This variable was operationalised as a zero/one variable with zero indicating the respondent did not have any previous experience at managing a business, and with one indicating the respondent had previous experience at managing a business in the past. 68% of respondents declared that they had previous managerial experience.

Respondents were also asked what was the highest educational degree ever attained and whether they held an official marketing qualification from a professional body. Education was operationalised with an ordinal variable made up of three categories: secondary education (e.g., A levels), further education (e.g., Higher National Diploma, Foundation degree offered by a community college) and higher education (graduate or postgraduate study). The categories were coded with numbers ranging from 1 to 3 with higher education being given the highest score. The most frequent category was higher education (63.5% of total). Likewise, marketing qualification was collected by asking respondents whether they held a formal marketing qualification from a professional body and was operationalised as a dichotomous zero/one variable coded with value 0 for 'no' and 1 for 'yes'. The absence of qualification was the most frequent answer, with only 12% of respondents with a marketing qualification.

Respondents were asked to respond to some questions to assess small business owners' entrepreneurialism. Entrepreneurial attitude was measured using Robinson et al.'s (1991) entrepreneurial attitude scale. The original scale was created to predict what the authors defined as 'entrepreneurial attitude' from four dimensions: affection, cognition, conation and behaviour of an individual. Although the original scale used seventy five items covering all four dimensions, this scale was formed by eight core items measured on a 5-point likert scale (1 = strongly disagree; 5 = strongly agree) and focuseed on the behavioural component rather than affection, cognition or conation in business owners. The items were reduced though PCA and the factor loadings with reliability measures are shown in table 2 in the appendix. After this section on the measures used in this study, what follows describes the data collection process and the sample composition.

The data were collected between September and October 2010 using both online and postal questionnaires. Respondents' contact details were purchased from a firm called 'market location'[*], who provided SME owners' contact details based on different SIC (standard industrial codes) within the food and drink industry.

The food and drink industry was chosen as context for the study because of the trade-off between the need to obtain as a large sample as possible while keeping heterogeneity. Heavy industries (e.g., automotive, chemical, engineering) have very heterogeneous types of firms and a relatively small number of companies compared to food and drink. In order to collect as a homogeneous sample as possible we collected data in the following sectors only: animal production (41%), fruit and vegetables (38%), and processed food (21%). Either an email (where the email was available) or a letter with a questionnaire was sent to the respondents who were asked to fill a questionnaire. 296 complete responses were collected. The categories our respondents belonged to are the following: producers (55%) and processors (30%). Furthermore, 20% of the sample was represented by wholesalers and retailers and these were removed from the analysis because wholesalers and retailers might have caused a selection bias in the study, as they operate in a field that is different from production and manufacturing.

The sample for this study is composed by both small (52%) and medium-sized (48%) SMEs. Small firms have typically less than 100 employees and turnover less than £500k. Medium sized firms have a number of employees that is higher than 100 but less than 500 and their turnover is higher than £500k but lower than £10m.

Most of the respondents were owner-managers or managing directors (90%) and marketing managers

[*] www.marketlocation.com

(10%). The response rate set at 25.6%. The response rate is in line with published expectations for a web and mail administered survey, as indicated by Kaplowitz et al. (2004). The responses/variables ratio for this sample was 33 (i.e., 296/9) well above the minimum expected value for reliable statistical modelling (Hair et al., 2009).

In order to check whether the sample was fit for purpose two tests were run: a Mann-Whitney test to identify potential non-response bias in the sample and a Spearman correlation for discrete data to test the variables for multicollinearity. The Mann-Whitney revealed that in the final dataset 82% of the variables showed no difference that was statistically significant ($p<0.05$). These results indicate there is no non-response bias. The Spearman correlation analysis on the variables to be used in CCA (Canonical Correlation Analysis) showed only 14% of the variables was correlated with each other (Table 3 in appendix) and the highest correlation was .24, indicating there is no risk of multicollinearity.

## 5 Analysis and results discussion

Collected data were analysed with the SPSS syntax for Canonical Correlation Analysis (CCA) that can be found in figure 2 in the appendix. This is an effective statistical method to analyse the causal links between a set of dependent variables (in this study the 'information use' construct) and a set of independent variables (business owners' characteristics). This method maximizes the cross-covariance in a *NxN* matrix, meaning that given a set of independent variables, e.g. $y_1, y_2,\ldots, y_n$, and a set of dependent variables, e.g. $x_1, x_2,\ldots, x_n$, if there is a correlation among variables the algorithm will enable us finding a linear combination of those variables that have a maximum correlation with each other (Hotelling, 1936).

The general model is described in the following way: given two random column vectors $\boldsymbol{X} = (x_1,\ldots, x_n)'$ and $\boldsymbol{Y} = (y_1,\ldots, y_m)'$, the total cross-covariance $\boldsymbol{\Sigma_{XY}} = \mathrm{cov}(X, Y)$ is an $n \times m$ matrix with the $ij^{th}$ value equal to the covariance of $x_i$ and $y_j$, i.e., $\mathrm{cov}(x_i, y_j)$. With CCA we need to estimate the eigenvectors $\boldsymbol{w}$ and $\boldsymbol{z}$, so that the random variables $\boldsymbol{w'X}$ and $\boldsymbol{z'Y}$ maximize

the Pearson correlation coefficient $\rho = \mathrm{cor}(\boldsymbol{w'X}, \boldsymbol{z'Y})$. The variables correlation is calculated as follows:

$$\rho_{XY} = \frac{w'\Sigma_{XY}z}{\sqrt{(w'\Sigma_{XX}w)(z'\Sigma_{YY}z)}} \tag{1}$$

CCA generated one significant root of variates (Wilks test approximate F value=2.5888, DF=18 and sig.=.000). These root of variates accounted for 68% of the total shared variance. Figure 2 shows the correlation between the two sets of variables is .32. This indicates a statistical significant correlation between the two constructs, accepting our Principal Hypothesis (HP) because there is a significant correlation between the use of marketing information and business owners' characteristics.

The effects of the single independent variables (type, source and frequency of use) on the dependent canonical variable (information use) were not all significant. Significant values were found for the type ($p<.001$) and for source ($p<.05$) indicating these variables are good explanatory dimensions of information use. However, the frequency of use of information was non-significant ($p>.10$) suggesting that this variable might not be a good predictor of information use.

The correlations between single dependent variables and the dependent canonical variable (information use) in root 1 showed the association of the set of explanatory variables with the dependent (latent) variable, i.e. information use. Loadings lower than .3 are generally ignored in the interpretation (Kinnear and Gray, 2007). The highest loadings found in root 1 are .78 (type) and .59 (source). By looking at the redundancy index, the set of dependent variables in root 1 so far described accounts for 33% of the variance in the latent dependent variable (information use). The following figure shows the maximized correlations amongst variables.

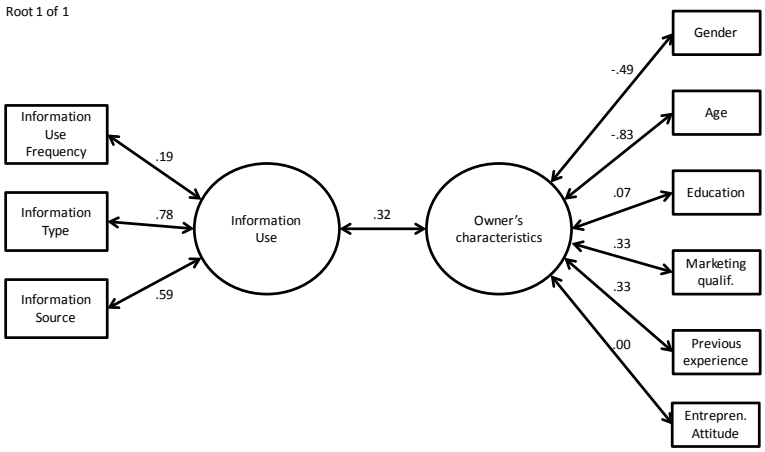


**Figure 2**. Canonical correlation root.

The effects of the single independent variables (age, gender, education, marketing qualification, previous experience and entrepreneurial attitude) on the dependent variables (business owners' characteristics) showed particularly high loadings on age (-.83) and gender (-.49). By looking at the redundancy index, the set of independent variables in root 1 accounted for 19% of the variance in the latent independent variable (owner's characteristics).

Root 1 showed that gender, age, previous experience and marketing qualification were highly positively correlated with the type and source of information. After this discussion on the maximised linear correlations, we show the multiple regression analysis results. The R-square for the different models are the following: infouse ($R^2$=.22), infotype ($R^2$=.72) and infosource ($R^2$=.56). Table 4 reports the regression results, whereas equations 2, 3 and 4 specify the statistical models for the variables effects.

**Table 4.**
canonical correlation regressions results

| *dependent* | Info use | | | Info type | | | Info source | | |
|---|---|---|---|---|---|---|---|---|---|
| *independent* | B | S.E. | t | B | S.E. | t | B | S.E. | t |
| Age | 0.0209 | 0.059 | 0.352 | -0.0321 | 0.060 | -0.538 ** | -0.2248 | 0.058 | -3.853 |
| Gender | -0.1292 | 0.142 | -0.912 | -0.4212 | 0.138 | -3.051 *** | 0.0806 | 0.139 | 0.579 *** |
| Previous experience | 0.0444 | 0.128 | 0.349 | 0.3358 | 0.124 | 2.703 ** | -0.0031 | 0.125 | 0.025 |
| Education | 0.0112 | 0.075 | 0.150 | -0.0434 | 0.073 | -0.595 | -0.0412 | 0.074 | -0.560 |
| Marketing qualification | 0.3692 | 0.169 | 2.186 ** | -0.0630 | 0.165 | -0.383 | 0.1441 | 0.166 | 0.869 |
| Entrepreneurial attitude | -0.0087 | 0.059 | -0.150 | -0.0014 | 0.057 | -0.026 | -0.0075 | 0.058 | -0.131 |

*** significant at .002 level; ** significant at .05 level; * significant at .10 level

$$\text{infouse} = \sum_{i=I}^{VI} \beta_i x_i + \epsilon; \quad (2)$$

$$\text{infotype} = \sum_{i=I}^{VI} \beta_i x_i + \epsilon; \quad (3)$$

$$\text{infosource} = \sum_{i=I}^{VI} \beta_i x_i + \epsilon; \quad (4)$$

where β are the coefficients of estimation of the variables, $x_i$ the variables reported in table 1 and ε is the error term.

Marketing qualification is the only independent variable that contributed to the frequency of use of information (sig.<.05). Marketing qualification has a direct and positive effect on the frequency of use of information: the expertise deriving from a formal marketing qualification from a professional body corresponds to an increase in information utilisation in SMEs. Hence, hypothesis 4c was accepted whereas hypotheses 1c, 2c, 3 and 5c failed acceptance. This first regression model indicates that people with stronger marketing expertise (that should be reflected by the professional marketing qualifications they hold) are more prone to use information more frequently than non-expert.

Age and gender had direct and negative effects on the type of information used (sig. ≤.05 and ≤.002 respectively), whereas previous experience had direct and positive effect (sig. ≤.05). Hypothesis 1a was therefore partially accepted (the relationship showed being negative rather than positive), hypothesis 2a was fully accepted as well as hypothesis 5a. On the other hand hypotheses 3a, 4a and 6a could not be accepted. Age showed a negative effect on the importance given to the type of information, showing that

younger business owners are more likely to consider information important when compared to older owner-managers.

Likewise, gender showed a negative relationship, indicating that female business owners show more interest in information utilisation than male and attach more importance to different types of information. Previous experience showed a direct, positive effect on the type of information indicating that small business owners with previous managerial experience consider different type of information as being important. Overall, the picture we can get from this second regression model is that different types of information are more likely to be considered important by younger, female small business owners with previous managerial experience.

In the third model, gender was the only independent variable that had an effect on the importance of the sources of information. The effect was direct and positive ($p<.002$), so hypothesis 1b was therefore accepted, while hypotheses 2b, 3b, 4b, 5b, and 6b failed being accepted. The interpretation of this effect is the following: male small business owners are more likely than female to consider important the source of information.

Small business owners' age, gender, previous experience and marketing expertise play an important role in shaping information utilisation amongst small business owners. Younger owner-managers consider information more important than older generations; this might be due to their little experience (Tocher and Rutherford, 2009) and they might put more weight on formalised marketing information to decrease the risk of potential failure (Colombo and Delmastro, 2001). Or they might have higher levels of education (David et al., 2011) and may simply perceive more value in information than older generations that may rely more on networks (Davidsson and Honig, 2003).

The results of this study also highlighted a difference between male and female business owners: female tend to focus their attention on the type of information whereas the male counterpart focuses more on the source of information. This may be explained with social networks and social embeddedness theory (Bartholomew and Smith, 2006; Chang et al., 2009; De Carolis et al., 2009; De Carolis and Saparito, 2006). Women are often excluded by male dominated networks (Granovetter, 2001), hence the importance for them to focus on the content of the information rather than the source.

Previous marketing experience showed being important because business risks can be lowered through experience, improving this way the chances of performance; furthermore to a bigger experience generally corresponds better knowledge of business processes (Dyke et al., 1992; Stuart and Abetti, 1990). Arguably information may be utilised more efficiently by more experienced business owners rather than less experienced ones.

To bigger marketing experience should also correspond better marketing expertise (Pasan and Shugan, 1996). Marketing expertise affects information utilisation. On one hand current literature supports that business owners with marketing expertise can identify what types and sources of information are more relevant to their decision making (Bettis-Outland, 2010) and they can also better determine the right amount of information they need.

On the other hand current literature supports smaller firms lack of marketing expertise (Callahan and Cassar, 1995) generally due to their constraints in human capital (Zahra et al., 2002). Therefore, choosing the wrong source of information (Yale and Gilly, 1995) may mislead the business owners' marketing decision making. The results are in line with current literature because small business owners with a strong expertise level tend to utilise information much more than non-qualified business owners, arguably because they have enough knowledge on information relevance. In what follows more holistic concluding remarks will be presented.

## 6 Concluding remarks, limitations and future research

The results of this study showed that age, gender, previous experience, education and marketing expertise play an important role in shaping information utilisation amongst small business owners. The questions proposed in the introduction found some answers, from which we can draw the following reflections: first of all, there are demographic differences between small business owners that involve with marketing intelligence and those who do not. Younger business owners attach a certain level of importance to a variety of types of information, whereas older owner-managers seem not to discriminate among types of information. This is an important finding, because we commonly associate seniority with higher experience and the RBV supports the idea personal experience is an important resource to the firm's management (Penrose, 1959), however, our findings demonstrate that perhaps not necessarily being 'senior' in a position always corresponds to better market orientation. Furthermore, female owner-

managers consider more important the content/type of information rather than the sources. Female evaluate the importance of information according to the content/type rather than the source the specific information comes from. Male owner-managers are showing an opposite interest, as they seem being more concerned about what source they get the information from rather than the content/type of information per se.

Second, previous working experience in a managerial role affects information utilisation, as the importance given to the type of information to use increases with the increase of previous experience. This suggests that the bigger the experience, the bigger the likelihood owner-managers identify the relevant bits of information, possibly eliminating useless information 'noise'. This is in line with the RBV perspective, as experience matters (Penrose, 1959), although it is true that experience and age are not necessarily related. It should be noted this is not in contrast with the findings, as the relationship among age, experience and market orientation may be moderated by environmental factors: for instance, a young entrepreneur that is market oriented when compared to an older entrepreneur might still succeed because of his/her ability to engage with market intelligence. S/he might have more experience or a different (more dynamic) understanding of a specific sector than an older entrepreneur. Hence, experience does not necessarily go hand in hand with age.

Third, according to our results we could not find evidence that entrepreneurial attitude orientation impacts in any way on information utilisation. Although a little counterintuitive, it seems that entrepreneurial behaviour attitudes are not per se predictors of information utilisation amongst small business owners. This is not in line with existing theory on EO: current studies (Lumpkin and Brigham, 2011; Lumpkin et al., 2010; Lumpkin et al., 2008; Lussier and Halabi, 2010; Wiklund, 1998; Wiklund, 2006; Wiklund et al., 2011; Wiklund and Shepherd, 2003) support that EO is an important strategic orientation of the firm, although it appears not to be true when looking at its effects on information utilisation.

Fourth, marketing expertise but not the educational level plays an important role in the prediction of information utilisation: small business owners with a formal marketing qualification obtained by professional bodies showed higher usage of formalised information than non-qualified owner-managers, and this is perfectly in line with the RBV principles, although there was no empirical evidence so far of an effect of expertise on MO, as all studies focused on the effects of MO on performance or on the impact of relationships and networks on MO (Di Zhang and Bruning, 2011).

This study bears some implications for both practitioners and policy makers: practitioners might want to look at these results and look introspectively in what type of owner-manager they see themselves reflected. They may reflect on their actual engagement with marketing intelligence and might compare it to their actual profiles. In some case some owner-managers may fall into the categories described as being less inclined to use information. In this specific case they may see whether a stronger engagement with information use can be encouraged by addressing some marketing expertise deficiencies through formalised marketing training. Some implications for policy makers would include a more varied offer of business support based on demographic differences, as female entrepreneurs show totally a different perception of information importance when compared to the male counterpart. Perhaps, policy makers might increase female business owners' inclusion in a less male-dominated business world through public incentives.

This study also presents some limitations: first of all, the frequency of use of information appeared not being as a strong predictor of information use as desired. Thus, an alternative predictor of information frequency use could be identified in future research. On the other hand, this study was conducted on SMEs in the food and drink industry. We do not claim this industry is representative of all industries; therefore further studies may look at other industries to see whether the results can be replicated. Future research could also investigate the dynamics of why these demographic variables have an effect on information utilisation, perhaps adopting a qualitative methodology that deepens the results of this quantitative study.

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