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Generation Y Females and Males in an Emerging Market and their Shopping Motivation

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Generation Y Females and Males in an Emerging Market and their Shopping Motivation

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Abstract
The aim of this paper was to compare hedonic and utilitarian shopping motivations of generation Y female and male consumers in an emerging market, Turkey. Generation Y, (also known as Millenials, Nexter and Echo Boomers) is composed of those people born between 1977 and 1994. Hedonic shopping motivations included were adventure, gratification, role, value, social and idea; and utilitarian shopping motivations were achievement and efficiency. A face-to-face survey with a total of 203 female and 250 male was conducted. Exploratory and confirmatory factor analyses were used to analyze factors structures used; and to test the differences between two genders discriminant analysis was preferred. According to the discriminant analysis results, the variables which best discriminate generation Y males and females were gratification, role and adventure. Achievement factor which is a sub-dimension of utilitarian shopping motivation had the highest mean score for both genders. This paper addresses a gap in the literature by examining if there are differences in the shopping motivations of females and males consumers of generation Y who have been grow up in a time where shopping is more than a physical activity.

Key words: Generation Y, shopping motivations, gender differences, discriminant analysis, Turkey

Introduction

Shopping motivations are major areas of interest in consumer behaviour studies. These studies focus on the values of shopping held by a consumer and the pleasures the consumer seeks (Babin, Darden and Griffin, 1994). Advertisers and marketers can use them to segment consumers (Jamal, Davies, Chudry and Al-Marri, 2006; Cardoso and Pinto, 2010). Previous research has suggested that shopping motivations of consumers may vary by different factors such as the cultural groups (Nguyen, Nguyen and Barrett, 2007; Griffin, Babin and Modianos, 2000; Kim, 2006; Jamal et al., 2006; Cardoso and Pinto, 2010), online shoppers' motivations (Childers, Carr, Peck and Carson, 2001; To, Liao and Lin, 2007); however, little attention has been given to gender differences (Özdemir and Yaman, 2007; Jen-Hung and Yi-Chun, 2010). Some studies on shopping orientation have focused on female consumers (Stone, 1954; Darden and Ashton, 1975; Westbrook and Black, 1985; Moye and Kincade, 2003).

Moreover generation theorists suggest that the patterns of consumer behaviour change when the macro-environment changes (Strauss and Howe, 1999 in Bakewell and Mitchell, 2003). Along with each age cohort is likely to have different shopping preferences. For example, the generation Ys have been brought up in an era where shopping is not regarded as a simple act of purchasing (Lehtonen and Maenpaa, 1997 in cited Bakewell and Mitchell, 2003). In this study, the aim is to verify the results gained by Arnold and Reynolds (2003) and Kim (2006) but using a sample of generation Y male and female

consumers in Turkey. Even though there is a growing literature associated with generation Y consumers, there is no empirical documentation describing these consumers' hedonic and utilitarian shopping motivations. The purpose of this paper is to explore this particular gap. As demographers, market analysts, and researchers have realized that Generation Y will likely play a significant role in their marketing and advertising in the twenty-first century (Keating, 2000; Paul, 2001 cited in Cui, Trent, Sullivan and Matinu, 2003). Therefore, this study aims to give information for retailers and marketers on how to effectively structure their marketing strategies based on generation Yers' shopping motivations. Moreover Arnold and Reynolds (2003) suggested as consumers' needs and shopping patterns are likely to be diverse in different countries, the scale is needed to be tested in different samples and contexts with the intention of giving other proof. The strategies that have been doing well in other countries may not be successful in Turkey because of the variety in the preferences of the Turkish consumers. Consequently, to be successful in Turkey, retailers need to be aware of the basic shopping motivations of Turkish consumers.

The reason that why generation Y people have been chosen for this study is that Gen Yers are the 29 % of the Turkish population according to the TUIK (2014) data based on 2013 Turkish population (see Appendix 1) and presently bigger than the generation X (estimated at 12 million). Generation Y is the hopeful generation with powerful spending tendency compared to previous generations (İSSSMO, 2013). Businesses seeking to capture and retain a market share from this cohort like to be aware of their shopping motivations.

The remainder of the paper is organised as follows. In section 2, the literature review on shopping motivations and generation Y is presented. Section 3 describes the research method including the sampling frame, the questionnaire, data analyses used in the study and the results. Summary and conclusion are given at section 4 and finally limitations of the study and directions for future research are at section 5.

Literature Review

Hedonic and Utilitarian Shopping Motivations

Shopping motivations is defined as "the drivers of behaviour that bring consumers to the marketplace to satisfy their internal needs" by Jim and Kim (2003: 399) and the motivations behind shopping have been studied by many researchers since the 1950s (Stone, 1954; Tauber, 1972; Bellenger and Korgaonkar, 1980; Westbrook and Black, 1985; Babin et al., 1994; Arnold and Reynolds, 2003; Kim, 2006). According to Kang and Park-Poaps (2010, p.316) traditional researches about shopping have been focused on utilitarian side (Batra and Ahtola, 1991; Babin et al., 1994) and said that people make shopping because they need to fulfil a functional or an economic need (Babin et al., 1994), consider shopping as a task and an attainment of a goal (Batra and Athola, 1991; Cardoso and Pinto, 2010). Conversely, some researchers argued that shopping is not just a rational and cognitive activity and it also involves enjoyment, pleasure, social experience and other emotional aspects of shopping (Babin et al., 1994; Hirschman and Holbrook, 1982) which is called "Hedonic consumption" by Hirschman and Holbrook (1982). In other words, hedonic and utilitarian shopping motivations differ. While for consumers who have hedonic motives, value is the experiential experience, enjoyment, pleasure and socializing; for utilitarian consumers it is the efficiently made purchase and finishing the task.

In this study, both utilitarian and hedonic shopping motivations were covered. In terms of utilitarian aspect, Kim (2006), based on Babin's et al. (1994) work, found two dimensions

of utilitarian motivation which are efficiency and achievement. Efficiency means that consumers want to save time and resources while shopping, on the other hand achievement refers to a success in terms of finding products that were planned before the shopping trip and finishing the goal.

As the hedonic motivations of shopping are considered, researchers have started to recognize multiple varying hedonic reasons for shopping (Babin et al., 1994; Hirschman and Holbrook, 1982; Scarpi, 2006). One of the most comprehensive studies was done by Arnold and Reynolds (2003). They developed and validated a scale of hedonic shopping motivations through qualitative and quantitative studies and identified six hedonic motives which make consumers make shopping. These are: adventure, gratification, role, value, social and idea shopping motivations. Adventure shopping motivation means that people go shopping for stimulation, adventure and discover a different world where it is unlike from their ever day life. Consumers who are motivated by social shopping go to shopping as they like shopping with their friends and family, like socializing and bonding with others. Gratification shopping refers to the shopping for getting rid of stress, lightening a negative mood or just shopping as a special treat to one-self. Idea shopping motivation applies to shopping to keep up with new trends and new fashions, learn new products and innovations that are on the market. Role shopping reflects the pleasure that shoppers get from shopping for others, buying presents for them. Finally, a shopper motivated by value shopping goes to shopping for sales, looking for discounts and hunting for bargains.

As mentioned above there has been great research in the western context to find out and categorize consumers on the basis of their underlying shopping motives. To the best of the present authors' knowledge, no study has analyzed the shopping motivations of Turkish Gen Y consumers and compares it based on their genders.

Generational Cohorts

The "generation" construct was first popularized in America by Strauss and Howe (1997 cited in Li, Li and Hudson, 2013, p.148) and they defined it as a cohort who consists of people who were born and grew up at the same years. However, being born and becoming adult on similar years are not the only alike features of those people. The thing that makes those people carry on common values is the external events they experience during their late adolescent and early adulthood years (Meredith and Schewe, 1994; Ryder, 1965 cited in Schewe and Noble, 2000). By external events which are also called "defining moments" it was meant that changes, for example, in the economy, politics, technological developments and wars. These changes and also important social events are likely to alter the world view of people, shape their values, preferences, attitudes and buying behaviour as well (Meredith and Schewe, 1994; Ryder, 1965 cited in Schewe and Noble, 2000; Hauck and Stanforth, 2007). As all people in a specific generational cohort have gone through same life experiences, it is said that they have similar life styles, values, expectations and consumption patterns (McElroy and Morrow, 2010; Olsen, Thach and Nowak, 2007; Cleaver, Green and Muller, 2000; Schewe and Meredith, 2004; Schewe and Noble, 2000) which means that people who are in a different generational cohort differ on these kind of things.

Although there is a consensus on description of cohorts, researches have not rich on an agreement on the labels and use of dates to put consumers into generation cohorts (Hawkins and Motherbaugh, 2010). One classification looks like this (Howe and Strauss, 1992 cited in Hawkins and Motherbaugh, 2010): pre-depression generation, depression

generation, baby boom generation, generation X, generation Y and tweens. For the current study it is concentrated on generation Y. There is no consensus about when exactly the generation Y people were born. Hawkins and Motherbaugh (2010), Kotler and Keller (2009) described gen Y who were born at between at 1977-1994. However according to Solomon (2013), they were born between 1986 and 2002; Miller and Washington (2011) said that they were born between 1980 and 2000. In this study, generation Y was comprised of people who were born between 1977 and 1994. The reason that why this classification has been chosen is because it divides the population into more weighed groups and also it suits with the aim of the study.

Generation Y: An Important Segment for Retailers

Generation Y, (also known as Millenials, Nexter and Echo Boomers) is composed of those people born between 1977 and 1994. They are the children of baby boomers or Generation Xers, and are recognized as being the first global market segment because of the existence of World Wide Web since their birth (Walker, 1996 cited in Noh, Runyan and Mosier, 2014, p.269). The most important characteristic of this cohort is that they are the most technological generation when compared to gen X individuals (Jackson, Stoe and Brantley 2011; Pokrywczynski and Wolburg, 2001). Social network is the centre of their life and they handle their social lives throughout those social media. Especially they prefer to use their cell phones for just anything: social net working, to pay credit cards, to get information about products, services, foods and travel destinations. And this is a huge opportunity for marketing managers to target this consumer segment via this channel (Parment, 2013). In addition, Gen Yers have different shopping style from that of previous generations they do not see shopping just as a necessary thing, they find shopping pleasurable experience (Bakewell and Mitchell, 2003) due to a rapid increase in number of retail and product choice (Martin and Turley, 2004). This generation is also very brand and fashion consciousness (Morton, 2002). Their buying behaviour of fashion products are affected by brand names and they are keen to pay extra for "favourable brands that highlight coolness" (Grant and Stephen, 2005 cited in Noh et al., 2014, p.269). Also young gen Y consumers choose purchasing branded clothing at high-end department stores and/ or specialty stores (Zhang, Carpenter and Brosdahl, 2011).

Generation Y people worry regarding their social image and it is important for them how their social surrounding perceive them and the products they are buying (Parment, 2013). Additionally, a study showed that generation Y consumers had the highest level of status consumption compared to gen X individuals (Eastman and Liu, 2012). Generation Y people also appear to be the visiting the shopping mall most often and staying the longest, prefer to go to shopping with their peers (Gilboa and Vilnai-Yavetz, 2010) which is the evidence of the importance of the peer group (Gilboa and Vilnai-Yavetz, 2010; Mangleburg, Tamara, Doney, Patricia and Bristol, 2004). Other studies also showed that this cohort group is aware of present social and supportive of cause programmes and also they have positive attitudes toward CRM offers made by retailers (Cui et al., 2003).

Other studies about the media habits of gen Yers showed that they watch less television, use mostly electronic media, are not influenced by mainstream media, and are much more opposed to advertisements than previous generations (Ciminillo, 2005; Engebretson, 2004; Pesquera, 2005 cited in Valentine and Powers, 2013). They respond to ads differently, preferring to come across ads through different sources like event marketing, product placements and digital media (Ciminillo, 2005 cited in Valentine and Powers, 2013) other than traditional media. Generation Y does not trust the traditional news media

as much as earlier generations (Peterson, 2004). This generation dislikes being an advertising target, so they depend more on their friends' opinions and word-of-mouth when making purchase decisions (Peterson, 2004 cited in Valentine and Powers, 2013). Also Valentine and Powers (2013) found in their studies that there was no gender difference in internet usage for Generation Y which is opposite of the view that males are heavier users of the web (Teo and Lim, 1997 cited in Valentine and Powers 2013).

Gender Cohorts

Even though most marketing studies continue to focus on female consumers as women buy so many products (Engel, Blackwell and Miniard, 1995), in the last decade, men also turn out to be increasingly involved in shopping (Engel et al., 1995). After that, researchers started to investigate male shoppers in order to tailor their marketing mix according to them by examining their shopping attitudes and behaviour (Darley and Smith, 1995; Fischer and Arnold, 1994; Dholakia, 1999; Jackson et al., 2011). Differences were found on store attributes (Lim, Kim and Park, 2007) and mall attributes evaluations (Jackson et al., 2011), decision making styles (Mitchell and Walsh, 2004; Yaşin, 2009), information search patterns for gift purchases (Cleveland et al., 2003), impulse buying behaviour (Coley and Burgess, 2003), etc. For example Fisher and Arnold (1994) found that women are more involved in the purchasing decision and enjoy the shopping more, stay longer in the stores compared to male. Studies of compulsive shopping also indicated that there are gender differences too, with compulsive shopping being more characteristic of females (Roberts, 1998; Elliot 1994; Dittmar and Drury 2000). Arnold and Reynolds (2003) found that females scored higher on the dimension of hedonic motivation than males. Milan and Howard (2007) reported that shoppers who visited a shopping centre with utilitarian motive were mainly male. Campbell (1997 cited in Seock and Sauls, 2008) said that males and females have different beliefs toward shopping. He found that men are likely to have need-driven shopping attitudes and are mostly motivated by the purchase of the product itself, while women have a tendency to get pleasure from the shopping activity itself and find happiness in finding products for both themselves and others.

Another study was done by Seock and Sauls (2008) about the differences in shopping orientation between males and females and it is found that the male and female respondents showed significant differences in their shopping orientations. Female respondents had significantly greater shopping confidence and price consciousness than male respondents.

As mentioned above, men and women are different in terms of their consumption behaviour. For this reason, we expect that there will be gender differences in Gen Y based on their shopping motivations and the following hypothesis is suggested:

H1: Generation Y females and males have different shopping motivations.

Methodology

Sample

A face-to-face instrument was used to collect data from consumers in Istanbul, Turkey. A quota sampling was preferred as a sampling method. The respondents were chosen on the basis of their gender and year of birth. Consistent with the literature (Hawkins and Motherbaugh, 2010; Kotler and Keller, 2009), generation Y were classified as those born

between 1977 and 1994. The respondents have been contacted by undergraduate marketing students who were trained in data collection procedures and used as interviewers.

Among the 408 respondents of the full sample, 203 (50,20 %) belonged to the females, 205 (49,80 %) were generation males which is consistent with the generation Y population in Turkey (see Appendix 1). Table 1 shows the demographic characteristics of the sample in detailed.

Table 1: The Demographic Profile of the Participants

	Full Sample (n= 408)	Women (n= 203)	Men (n= 205)
Gender			
Male	50,20%		
Female	49,80%		
Education			
Primary/Secondary School	8,30%	5,40%	11,20%
High school	59,10%	62,10%	56,10%
Graduate	29,90%	31,50%	28,30%
Postgraduate	2,70%	1,00%	4,40%
Marital Status			
Single	78,20%	78,80%	77,60%
Married	21,80%	21,20%	22,40%
Income			
1000 TL* and below	2,90%	2,50%	3,40%
1001-2000 TL	19,10%	18,70%	19,50%
2001-3000 TL	29,70%	31,00%	28,30%
3001-4000 TL	21,10%	23,20%	19,00%
4001-5000 TL	9,60%	9,40%	9,80%
5001-6000 TL	8,80%	6,40%	11,20%
6001-7000 TL	2,50%	2,00%	2,90%
7001-8000 TL	1,50%	2,50%	0,50%
8001-9000 TL	1,00%	1,50%	0,00%
9000 TL and above	3,90%	3,00%	4,90%

* TL: Turkish Liras, 1 American Dollar= 2.245 Turkish Liras

The Questionnaire

The survey instrument used for "Shopping motivation" belonged to Arnold and Reynolds (2003), Babin et al. (1994) and Kim (2006). It was measured by two main headings: hedonic and utilitarian shopping motivations. Hedonic shopping motivations consisted of six sub factors which are gratification shopping, social shopping, value shopping, role shopping, adventure shopping and idea shopping. Achievement and efficiency shopping motivations are the two sub factors of utilitarian shopping motivations. In order to test the comprehensibility of the scale and also add new items to the scale as the survey was conducted in a different country (Turkey) where it differs from the country (USA) the original scale was developed, a focus group study was done. After that eight new items

were added to the original scale. The final Turkish shopping motivation scale included 35 items (see Table 2).

All items were rated on a five-point disagree-agree scale (1: completely disagree; 5: completely agree).

Data Analysis

Following Gerbing and Hamilton's (1996) suggestion, the scales were examined using exploratory factor analysis (EFA) to identify poorly fitting items and then confirmatory factor analysis (CFA) for further measure purification.

Exploratory Factor Analysis

Principle component analysis with varimax rotation was conducted on items measuring shopping motivation. Kaiser-Meyer-Olkin's measure of sampling adequacy and Bartlett's test of speracity were applied for examining the appropriateness of factor analysis (Malhotra and Birks, 2003). Minimum eigenvalues of 1.0 and scree plots were used in determining the number of factors extracted in each analysis. Items loading greater than 0.50 on a single factor were retained. Principles component analysis yielded eight factors for the shopping motivation scale as it is the same with the literature. Table 2 shows resulting factors and relevant statistics for the shopping motivation scale. Some items deleted from the scales due the low factor loadings and it was showed on the tables.

Table 2: Exploratory Factor Analysis Results of Shopping Motivation Scale

Item No	Factors and Items	Factor Loadings	Authors of the items
	Gratification Shopping		
I1	When I am in down mood, I go shopping to make me feel better	,854	Arnold and Reynolds ,2003
I2	To me shopping is a way to relieve stress	,847	Arnold and Reynolds ,2003
I3	While shopping I can normally forget my problems	,791	Babin et al., 1994
I4	I go to shopping when I want to treat myself to something special	,708	Arnold and Reynolds ,2003
I5	Shopping makes me far away from daily rush.	,701	Developed by the researchers
I6*	I go to shopping on a day which is a special (birth day, wedding anniversary) just for me	Deleted	Developed by the researchers
I7	I go to shopping to reward myself when I get something that I really want (ex. a success that was win on work/school/ private life)	,606	Developed by the researchers
	Idea Shopping		
I8*	I go to shopping to keep up with the trends	Deleted	Arnold and Reynolds ,2003
I9*	I go to shopping to keep with the new fashions	Deleted	Arnold and Reynolds ,2003
I10	I go shopping to try out the product that I saw on the internet.	,806	Developed by the researchers
I11	I go shopping to have an idea regarding product that I will consider to buy.	,705	Developed by the researchers
I12	I go shopping to see what new products are available.	,597	Arnold and Reynolds ,2003
	Role Shopping		
I13	I enjoy shopping for my family and friends	,867	Arnold and Reynolds ,2003
I14	I like shopping for others because when they feel good, I feel good	,839	Arnold and Reynolds ,2003

I15	I enjoy shopping around to find a perfect gift for someone	,823	Arnold and Reynolds ,2003
I16	I feel good when I buy things for the special people in my life.	,777	Arnold and Reynolds ,2003
I17*	If something that I bought for myself was liked by my friends or family members, I like to go shopping to buy the same thing to them	Deleted	Developed by the researchers
	Achievement		
I18	It feels good to know that my shopping trip was successful.	,845	Babin et al., 1994; Kim, 2006
I19	On a particular shopping trip, it is important to find items I am looking for.	,837	Babin et al., 1994; Kim, 2006
I20	I like to feel smart about my shopping trip.	,749	Babin et al., 1994; Kim, 2006
I21	It is important to accomplish what I had planned on a particular shopping trip.	,674	Babin et al., 1994; Kim, 2006
	Value Shopping		
I22	For the most parts, I go shopping when there are sales.	,840	Arnold and Reynolds ,2003
I23	I enjoy looking for discounts when I shop	,818	Arnold and Reynolds ,2003
I24	I go shopping to take advantage of sales	,684	Arnold and Reynolds ,2003
I25	I enjoy hunting for bargains when I shop	,558	Arnold and Reynolds ,2003
I26*	I like to go to shopping especially when there are sales on fashion clothing.	Deleted	Developed by the researchers
	Social Shopping		
I27	I enjoy socializing with others when I shop	,840	Arnold and Reynolds ,2003
I28	Shopping with others is a bonding experience	,818	Arnold and Reynolds ,2003
I29	I like shopping with my friends or family to socialize	,684	Arnold and Reynolds ,2003
I30	I like to communicate with store staff while shopping.	,558	Developed by the researchers
	Adventure Shopping		
I31	To me shopping is an adventure.	,664	Arnold and Reynolds ,2003
I32	I find shopping stimulating.	,630	Arnold and Reynolds ,2003
I33	Shopping makes me feel I am in my own universe.	,611	Arnold and Reynolds ,2003
	Efficiency		
I34	It is disappointing when I have to go to multiple stores to complete my shopping.	,808	Babin et al., 1994; Kim, 2006
I35	A good store visit is when it is over very quickly.	,698	Babin et al., 1994; Kim, 2006

* Deleted due the low factor loading
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
Total variance explained: 68, 624 %;   KMO: 0,884;   Barlett's test of sphericity=6273,187; p=,000 (df=435)

Confirmatory Factor Analysis

For the second stage of the analysis, confirmatory factor analysis (CFA) was used to purify and validate the scales used with AMOS 18.

First of all, the scales were evaluated based on convergent and discriminant validity. For the convergent validity; the factor loadings, average variance extracted (AVE) and construct reliabilities (CR) are the common methods which used in the literature. For a scale to has a convergent validity, all factor loadings should be statistically significant and standardized loadings estimates should be 0.5 or higher, the AVE for a construct should be 0.5 or higher and CR should be 0.7 or higher (Hair, Black, Babin, and Anderson 2010, p. 686). The shopping motivation scale was assessed based on those parameters. For the shopping motivation scale, average variance extracted (AVE) values exceed the recommended 0.50, except for idea shopping at 0,488 and social shopping at 0450; and

all composite reliability values are at or above the recommended 0,70.These suggest an adequate convergent validity. The results for the shopping motivation scale are provided in Table 3. Some variables are deleted from the scales due to the low and insignificant factor loadings and they are showed in the tables.

Table 3: Confirmatory Factor Analysis Results of Shopping Motivation Scale

Factors and Items	Factor Loadings	t Value
Gratification Shopping *AVE: 0,589; CR: 0,894*		
I1	0,897	Fixed
I2	0,912	27,653
I3	0,741	18,634
I4	0,744	18,757
I5	0,668	15,848
I7	0,593	13,406
Idea Shopping *AVE: 0,488; CR: 0,735*		
I12	0,785	Fixed
I11	0,758	12,990
I10	0,522	9,481
Role Shopping *AVE: 0,671; CR: 0,891*		
I14	0,791	Fixed
I13	0,845	18,241
I15	0,820	17,643
I16	0,819	17,599
Achievement *AVE: 0,588; CR: 0,850*		
I21	0,670	Fixed
I19	0,845	14,176
I18	0,834	14,068
I20	0,703	12,321
Value Shopping *AVE: 0,567; CR: 0,795*		
I22	0,805	Fixed
I23	0,801	13,306
I25*	Deleted	
I24	0,641	11,804
Social Shopping *AVE: 0,450; CR: 0,764*		
I29	0,687	Fixed
I27	0,769	12,039
I28	0,722	11,674
I30	0,466	8,101
Adventure Shopping *AVE: 0,679; CR: 0,863*		
I31	0,752	Fixed
I32	0,873	17,388
I33	0,842	16,878
Efficiency		
I34*	Deleted	
I35*	Deleted	

*Deleted items due to the low and insignificant factor loadings
Fit statistics: x2/df: 1,906; p:,000;
GFI: 0,909; AGFI; 0,883; NFI: 0,909; IFI: 0,955; TLI: 0,945; CFI: 0,954; RMSEA: 0,047

After showing that all the scales have convergent validity, the next step is to testify the discriminant validity. Discriminant validity was assessed using the test suggested by Fornell and Larcker (1981). According to this test, a scale has discriminant validity if the

average variance extracted by the underlying latent variable is greater than the shared variance (i.e., the squared correlation) of a latent variable with other latent variable. As Table 4 shows, this criterion was met by all the variables in the study, as no correlation exceeds the square root of the average variance extracted.

Table 4: Correlations between Constructs of Shopping Motivation Scale

	Idea	Gratification	Social	Value	Role	Adventure	Achievement
Idea	**0,488**	0,290	0,178	0,165	0,155	0,320	0,296
Gratification	0,538	**0,589**	0,195	0,064	0,183	0,573	0,110
Social	0,422	0,441	**0,450**	0,057	0,121	0,232	0,147
value	0,406	0,253	0,239	**0,567**	0,047	0,043	0,144
Role	0,398	0,428	0,348	0,217	**0,671**	0,166	0,136
Adventure	0,566	0,757	0,482	0,209	0,408	**0,679**	0,103
Achievement	0,544	0,332	0,384	0,380	0,369	0,322	**0,588**

Bold numbers on the diagonal show the average variance extracted. Numbers below the diagonal show correlation among each constructs. Numbers above the diagonal show the shared variance among each construct.

The AVE values for all constructs are above the square correlations. These show that scales have discriminant validity and suggest proceeding with the analysis.

Discriminant Analysis Results

In the study, in order to identify the discriminating variables between males and females, a discriminant analysis was used. Discriminant analysis is a useful technique if the primary objective is to understand group differences (Hair et al. 2010, p.16). The findings of the discriminant analysis are stated below:

First of all, the assumption of equal covariance was tested by using Box's M test which assesses the significance of differences in the matrices between the groups (Hair et al., 2010, p.254). The Box's M value is 66,912 and p value is 0,000 which mean that there are differences between the group covariance matrices. However, due to the sensitivity of the Box's M test to the size of covariance matrices, number of groups and the number of independent variables, more conservative level of significance may be considered acceptable (Hair et al., 2010, p. 254).

As an estimation approach the simultaneous one was preferred to stepwise because the number of independent variables is small.

As can be seen in Table 5, the eigenvalue of the canonical discriminant function was .438 and it accounted for 100 percent of the explained variance. The larger eigenvalues imply superior functions (Malhotra and Birks, 2003) and it is said that the values above the 0,40 are accepted as good eigenvalues (Kalaycı, 2008). The canonical correlation associated with this function was .552 and chi-square was significant at p= 0.000.

Table 5: Summary of Discriminant Analysis Functions

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	,438a	100	100	0,552

a. First 1 canonical discriminant functions were used in the analysis.

The significance of the discriminant function was tested by Wilks' Lambda. As can be seen in Table 6, the discriminant function was found statistically significant. Wilks' Lambda value varies between 0 and 1 and large values of Wilks' Lambda (near 1) indicate that the group means do not seem to be different whereas small values of Wilks' Lambda indicate that the group means seem to be different (Malhotra and Birks 2003, p.21). It was concluded that males and females discriminate on the basis of hedonic and utilitarian shopping motivations' dimensions.

Table 6: Wilks' Lambda of the Discriminant Function

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	0,695	146,268	7	0,000

Table 7 shows the Wilk's Lambda and univariate ANOVA results used to assess the significance between means of the independent variables for the two groups (Hair et al., 2010, p.275). These tests indicate that these two groups discriminate each other through all variables except the "social" one. There was no statistically significant difference between the groups regarding the perception of "social" dimension.

Table 7: Tests of Equality of Group Means

	Female	Male	Wilks' Lambda	F	Sig.
Gratification	3,48	2,49	,768	122,987	,000
Role	3,93	3,25	,881	54,586	,000
Achievement	4,05	3,87	,986	5,616	,018
Value	3,65	3,43	,986	5,675	,018
Social	**3,22**	**3,17**	**,999**	**,307**	**,580**
Idea	3,13	2,72	,953	20,039	,000
Adventure	3,09	2,45	,910	40,068	,000

The discriminant loadings are given under the Table 8 and are ordered from highest to lowest by the size of the loading. According to Hair et al. (2004) the value of a loading must be 0, 40 or higher. Based on this, the best discriminating variables are gratification, role and adventure. After identifying the variables with discriminatory power, the next step is to understand what group means are on each variable indicated. For all the three dimensions, the females have higher means compared to the males.

Table 8: Structure Matrix

	Function
Gratification	,831
Role	,554
Adventure	,475
Idea	,336
Value	,179
Achievement	,178
Social	**,042**

Table 9: Classification Results

Original			Predicted Group Membership		
			Female	Male	Total
	Count	Female	161	42	203
		Male	49	156	205
	%	Female	79,3	20,7	100,0
		Male	23,9	76,1	100,0

a. 77,7% of original grouped cases correctly classified.

The percentage correctly classified, also termed the hit ratio, shows the how well the discriminant function classified the objects. In the study, the correct classification ratio of discriminant function was quite high (77,7%), as seen in Table 9. The proportional chance criterion is used to determine the percentage that could be classified correctly by chance. The formula for this criterion is (Hair et al., 2010, p.265) $C_{Pro}= p^2 + (1-p)^2$
where   p= proportion of individuals in group 1

(1-p)= proportion of individuals in group 2

Using the group sizes (203 and 205), the proportional chance criterion was found 0,50. Hair et al. (2010, p.265) suggested that "the classification accuracy should be at least one-fourth greater than that achieved by chance". Therefore, in this study, the actual prediction accuracy of 77,7% may be acceptable as it is above the 62.5 percent (62,5%= 1.25x50%).

In order to statistically test the discriminatory power of the classification matrix when compared to the chance model Press's Q statistic was used. The calculated value is then compared with a critical value (the chi-square value for 1 degree of freedom at the desired confidence level). If it exceeds this critical value, then the classification matrix can be deemed statistically better than chance. The Q statistic is calculated by the following formula (Hair et al., 2010, p. 266):

$$\text{Press's } Q= \frac{[N-(nK)]^2}{N(K-1)}$$

N= total sample size   n=number of observations correctly classified
K=number of groups

The Press's Q value was found as 125,2. The critical value at a significance level of .05 is 3.83. Thus it can be concluded that, the predictions were better than chance.

Summary and Conclusion

The aim of this study was to understand how generation Y female and male consumers differ based on their hedonic and utilitarian shopping motivations in a developing country, Turkey. Having known that generation Y female and male consumers have different shopping values are crucial for marketers since they influence consumers' reactions to marketing strategies.

The results showed that for all the dimensions, except for social, these two genders are different. The current study found that, according to the group means, females have higher scores than males on gratification, role, achievement, value, social, idea and adventure shopping orientations. The findings of this study were congruent with those of Arnold and

Reynolds (2003) which indicates that younger females stress hedonic values more than younger males and have stronger hedonic shopping motivations. Arnold and Reynolds (2003) noted that females are more hedonic-oriented than males when they go to retail stores for shopping. For that reason, retailers should continue to look for ways in which they can provoke feelings of fun and leisure for gen Y female consumers. As Bakewell and Mitchell (2003, p.103) mentioned some retailers have begun to experiment with cafes and beauty therapy experiences, e.g. nail extensions and "this is a prescient move".

The most vital finding of this study is that both females and males have the highest score on achievement shopping orientation which is an utilitarian factor and means a success of finding products that were planned before the shopping trip. This result is consistent with the study of Enginkaya and Ozansoy (2010) which was made in Turkey and indicates that even though at the last years hedonic consumption motivations urge consumer to make shopping, utilitarian orientation has still an importance for the generation Y consumers in Turkey. This situation may be explained by the evidence that the degree of a country's economic development may have an effect on the importance placed on hedonic and utilitarian shopping motivations. There are other studies which confirm this result. For example Tse, Belk and Zhou (1989) found that in an emergent country like China, consumers are primarily motivated by utilitarian shopping motivations. Nicholls, Li, Mandokovic, Roslow, and Kranendonk (2000) compared in their study Chilean and American mall shoppers and found that Chilean consumers visited the mall primarily product related reasons rather than hedonic or social concerns. Li, Zhou, Nicholls, Zhuang, and Kranendonk (2004) also mentioned similar results in their studies and said that Chinese shoppers are mainly motivated by utilitarian needs compared to Americans. Another related result has come from the study of Milan and Howard (2007) and said that Hungarian consumers place significantly greater value on utilitarian shopping experiences, and significantly lower value on hedonic shopping experiences compared to their American counterparts. Retailers whom target segment is generation Y can use this finding as an important marketing strategy and makes their consumers feel that they finish the shopping trip successfully, should offer a wide variety of products, efficient store organization, objective communication, detailed signs and layouts that turn price and product comparisons easy (Cardoso and Pinto, 2010). According to Jones, Reynolds and Arnold (2006) shoppers who accomplished the shopping task at a particular retailer will remember their success, and be more likely to think of this retailer and consider visiting again when similar shopping needs arise. (Jones et al., 2006)

When it is looked at group means for "value" shopping motivation, it was found that two groups have different means but it is worth to say that both genders have higher scores on this factor. Results affirm the importance of discounts and sales regardless of gender. Retailer managers should use marketing communication messages for both genders which imply sales promotions and price reductions.

When the results relating to "idea" shopping motivation implying shopping to keep up with new trends and learn new products are considered, it was seen that men were not motivated by it. However it is an important motivation source for women.

The current study found no gender differences in social shopping value orientation and both genders have respectively higher means. Results are similar to Enginkaya and Ozansoy (2010), Çakmak and Çakır (2012). Participants from both genders had high values for social shopping orientations. The result may mean that both genders like to socialize while they shop. This is an important finding for retailer managers and they do

not need to tailor their marketing messages according to gender. The managers should use messages that reveal how people socialize while they are shopping.

According to the discriminant analysis results the factors which discriminate best female and male y generation are gratification, role and adventure. Whilst female have a higher value on gratification factor, males scores are close to negative value. This result says that while females go to shopping for getting of stress and relief, this is not a shopping motivation for male consumers to go shopping. When it is talked about adventure shopping motivation which implies that people go shopping as they want to discover a different world, the results is the same vein with the gratification. Again it is a motivation source for women to go to shopping; on the other hand this is not an urge for men. Finally, "role shopping" is considered which implies getting pleasures from shopping for others, women have higher values and are motivated more compared to men.

These findings would indicate that there are some differences between the shopping motivations of gen Y males and females. The results suggest that while all the factors have high scores for females, especially achievement, role and value are the main reasons affecting gen Y female consumers' shopping motivations. The primary factors affecting gen Y male consumers for shopping are achievement, value and role.

Limitations and Future research

Although this research makes important contributions to the understanding of generation Y male and female shopping motivations the study entails several limitations.

First of all, due to the number of people being approached, conclusions cannot be generalised for the whole population in Turkey, so outcomes are limited to the being subject of the research.

Second, the study did not separate the Gen Y consumers into young and old segments. However the overall Generation Y segment is composed of a very wide age range and these subgroups are likely to have varying behaviour due to developmental differences (Goff, 1999 cited in Martin and Turley, 2004, p.473), if the utilitarian shopping motivations observed in older Generation Y consumers are present in younger Generation Y people might be studied in the future. Results might be different for younger and older Gen Y consumers.

Another limitation could be that, because different parts of Turkey have different cultures, generalizing them is probably useful only to a limited extent. Therefore, in continuation of this study, it would be interesting to study the gender-related shopping motivation differences between different regional cultures, income classes, and different product categories. Also it is a big potential to extended research also to other countries. Generation Y might have different behaviour in different countries.

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Appendix 1: Generation Y population data by age and sex in 2013

Generation Y

Age	Total Population	Total Men Population	Total Women Population
20	1 287 914	659 447	628 467
21	1 226 486	622 034	604 452
22	1 222 339	618 996	603 343
23	1 227 756	625 719	602 037
24	1 256 289	638 928	617 361
25	1 252 746	635 981	616 765
26	1 249 513	633 783	615 730
27	1 261 703	639 773	621 930
28	1 251 733	634 475	617 258
29	1 261 276	641 734	619 542
30	1 244 475	632 799	611 676
31	1 267 957	643 708	624 249
32	1 392 086	701 233	690 853
33	1 340 375	674 491	665 884
34	1 289 753	651 677	638 076
35	1 247 126	632 048	615 078
36	1 208 003	612 168	595 835
37	1 108 992	562 566	546 426
Total	**22 596 522**	**11 461 560**	**11 134 962**

Total Turkish Population in 2013: 76481847

Total Men Population in Turkey in 2013: 38373573

Total Women Population in Turkey in 2013: 38108274

Source: TUIK (2014)

What are the entrepreneurial competencies of university students?

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Abstract

There are a growing number of university students who have enthusiasm to start their own businesses. The study explores what competencies are important for students or graduates to successfully build and develop their new ventures. Based on the method of Behavioral Event Interview, the study has interviewed twelve students or graduates who already started new ventures. Through coding analysis of interview transcript, the study found seven dimensions of entrepreneurial competencies that are important for performances of the student entrepreneurs. They are opportunity competency, relationship competency, resources integration competency, innovation competency, entrepreneurial aspiration competency, entrepreneurial perseverance competency, and entrepreneurial learning competency. Based on above results, we discussed both contributions to the field of entrepreneurial competencies theories and suggestions for entrepreneurship education.

Key words: Entrepreneurial Competency, University Student, BEI, Qualitative Analysis

Introduction

With the rapid development of new economy and technology, more and more university students in the emerging countries have enthusiasm to start their own businesses. Government of China especially has a very strong intention to encourage university students to be self-employed, because about seven millions graduates every year put a lot of pressure on employment of entire country. To solve this problem, in recent years, the Ministry of Education has made a lot of policies to encourage universities to implement entrepreneurship education which is regarded as transformation of Chinese higher education in the future. For universities, it is of great importance to get insight and make countermeasures on how to cultivate and upgrade entrepreneurial competencies of university students to support their start-ups. To face these challenges, we should firstly know what competencies are important or necessary for students and graduates to successfully start and develop their new businesses.

Although competencies of entrepreneurs have been widely discussed in the past three decades, little has relatively been done to university students. As we know now, different competencies are required in different entrepreneurial context. This could be macro-level or micro-level environmental contexts，such as different levels of management position (Alderson, 1993; Bartlett and Ghoshal, 1997), different sectors (Holman and Hall, 1996), different organizations (Cockerill, 1989; Jacobs,1989), different industries (Man and Lau, 2005), and different social and cultural factors (Man et al., 2008). If so, what kind of entrepreneurial competencies are really important for students in China's universities?

To answer this question, this study takes university students or graduates who have started a business as samples, and by means of Behavioral Event Interview, explores what competencies they should possess and what the characteristics of university students' entrepreneurial competencies are.

This paper proceeds as follows: The following section presents our theoretical background which builds on the literatures with respect to the entrepreneurial competencies needed for venture building and developing. The third section presents the methodological approach used for the case study of twelve university students or graduates. The fourth section presents main theoretical findings in conjunction with case material and our analysis. Finally, further discussion regarding the implications for theory, practice, and further research is provided.

Theory Background

The concept of competency was firstly put forward by McClelland, in the paper entitled "Testing for Competence Rather than for Intelligence"(1973). Competency was defined as a series of individual features, such as motive, trait, self-image or social role, knowledge and skills. The individual features can distinguish the level of performance in a specific post and environment (Spencer, 1993).

Chandler and Hanks (1993) proposed the concept of entrepreneurial competency. They defined entrepreneurial competency as the ability to identify, predict and capitalize on the opportunities, which is thought of as the core competency for entrepreneurs, and strengthened constantly with getting familiar with the market. The competency approach increasingly becomes an important concept of entrepreneurial studies since it was introduced into the field of entrepreneurship research. It is shown that entrepreneurial competencies have either direct or indirect impacts on entrepreneurial performance (Man et al., 2008). In the context of entrepreneurship and SMEs, entrepreneurial competencies are actually related to the birth, survival and/or growth of a new venture (Bird, 1995).

In the past three decades, many literatures have discussed the definitions, types, and characteristics of entrepreneurial competencies and get more and more valuable research outcomes. As were shown in table-1, many important entrepreneurial competencies have been advanced by different studies. How to capture valuable and potential opportunities was usually considered as a prior and essential task for entrepreneurial process (Shane, 2000). Opportunity competencies have reasonably been referred to as the core of entrepreneurship (Chandler and Jansen, 1992; Man et al., 2002). It has also been found that risk taking is positively associated with intentions of self-employment (Zhao et al. 2005). Some studies have shown that entrepreneurs may perceive and react to risk in a different way (Busenitz 1999; Busenitz and Barney 1997). Most of them are more pre-disposed to categorise situations of risk as positive (Palich and Bagby 1995).

Table-1: Main areas of entrepreneurial competencies

Main areas	Content	authors
Opportunity Competencies	To recognize, evaluate, and capture the market opportunity.	Spencer(1993) Bartlett and Ghoshall(1997); Chandler and Jansen(1992); Chandler and Hanks(1994); Man and Lau(2000); Man et al.(2002)
Risk Competencies	To predict, evaluate and take risk of new venture	Begley & Boyd(1987); Busenitz & Barney(1997); Busenitz(1999); Palich & Bagby (1995); Zhao et al. (2005)
Relationship Competencies	To build and maintain the interactions between individuals or between individuals and organizations.	Bartlett and Ghoshall(1997); Bird(1995); Chandler and Jansen(1992); Lau et al(1999); Man and Lau(2000); Man et al.(2002);
Strategic Competencies	To set, evaluate and implement the strategies of the firm.	Bartlett and Ghoshall(1997); Bird(1995); Lau et al(1999); Man and Lau(2000); Man et al.(2002);
Integrative Competencies	To integrate the all kinds of resources including visual and non-visual inside and outside the organization.	Bartlett and Ghoshall(1997); Chandler and Jansen(1992); Lau et al(1999);
Innovative Competencies	To solve creatively the problems in pioneering process, including the ability to create and improve the new technology, product, service and process.	Spencer(1993); Man et al.(2002)

Apart from the above areas of entrepreneurial competencies shown in table-1, other areas were also emphasized including learning, commitment, and operational competency (Man, 2001). Why do literatures have so many different opinions on entrepreneurial competencies? Today it is gradually accepted that entrepreneurial competencies comprise of components that are more deeply rooted in an individual background as well as those that can be acquired at work or through training and education (Man and Lau, 2005). So the external environment is regarded as the key factor in determining how entrepreneurial characteristics are formed and which entrepreneurial competencies are important for different kinds of entrepreneurs or owners.

The external environment widely includes macro-level and micro-level environmental contexts. The universities and colleges are reasonably a distinctive environment which could influence forming, evolving and practicing of entrepreneurial competencies. Some

studies found that university spin-offs acquired different entrepreneurial competencies to create new ventures within the non-commercial university context (Mustar et al., 2006; Rasmussen et al., 2011). For example, based on the evolutionary perspective, the comparative case study found that different competencies are used at different times in the spin-off process. For university spin-off firms, entrepreneurial competencies of opportunity refinement, leveraging, and championing appeared crucial for the new ventures (Rasmussen et al., 2011). Thus, this study proposes that university students may likely need different competencies because of distinctive entrepreneurial context and condition they usually have. For example, they can easily get knowledge of new technology from classroom or laboratory, but they lack market information. The students seldom have opportunities to get into workplace to practice, but university can build incubator for student entrepreneurs and students can instantly get basic conditions for their entrepreneurial practice if they want.

In fact, the research has constantly got some unpredictable and meaningful opinions from some interviews with university students or graduates who started new businesses. For instance, based on some feedback from these students, we suppose that strategic competency, which was already emphasized by some literatures (eg. Bartlett and Ghoshall, 1997；Lau et al., 1999; Man et al., 2002), is unimportant for university students, because it was found that they actually seldom made strategies for their new ventures. Some of them argued that it was really difficult and unrealistic for them to predict the market or sales in the early stage of venture development.

The competency approach could contribute to the training and development of university entrepreneurship education in that it highlights the importance of not only training or upgrading the skills and knowledge needed for entrepreneurial success, but also of cultivating the strong attitudes and intention of starting new business (Man and Lau, 2005). But before it comes true, it is necessary for entrepreneurship education to have insight on what competencies are exactly needed for student entrepreneurs during the early stages of new business. It is a pity that few literatures have discussed this topic.

Based on discussion above, the research proposes an in-depth investigation of the university students or graduates who already started their own new venture and to build a theoretical framework of entrepreneurial competencies for entrepreneurship education or entrepreneurial management.

Methods

Sample

Selection of cases is an important aspect of building theory from case studies (Eisenhardt, 1989). The study is to find out what competencies are important for students or graduates to successfully build and develop their new ventures, so the rationale for the selection of the sample is theoretical sampling (Eisenhardt, 1989; Charmaz, 2006). We generally have some key points to select sample. First, The sample selection requests of the interviews basically satisfy three conditions: (1) started a startup during college or immediately after graduation; (2) have a registered company and have actual business in place; (3) is the shareholder of the new venture. Second, in order to get more different dimensions of entrepreneurial competencies, we selected cases within different university, major, and industry/market contexts. Third, we adopted the principle of theoretical saturation (Charmaz, 2006). We haven't fixed the final numbers of cases in advance. We just stopped

to interview new sample until the final case can't show us more valuable information. Based on above rationale, we finally interviewed a total of 12 students or graduates from 11 venture enterprises who were starting an undertaking.

The selected samples (see appendix table) that fit into the criteria include four people that started venture enterprises within two years after graduation (A1-A4), four graduates started before graduation (B5-B8) and four current students interviewed (C9-C12). Among the 12 interviewees, the oldest one graduated in 2007 and the youngest one is junior student. Most of the enterprises are in services, mainly related to the industries such as engineering, real estate development, exhibition, catering, education, consultation, software, and clothing. The interviewees' majors cover marketing, administration, law, software engineering, international trade, the information management and the information system and business management. Only one of the 12 interviewees is female.

Data collection

Competencies are demonstrated and observed through one's behavioral patterns, actions or activities conducted (Man et al., 2008). Entrepreneurial competencies are usually observed through the entrepreneur's behavior (Bird, 1995). Behavioral Event Interview (BEI) was mainly used in this study. BEI is an open-ended exploring technology, by which we could collect information about past behavior. It has been described as a major research tool for competencies. (Lau et al, 1999; Man and Lau, 2000; Man et al., 2002, 2008).

The study is primarily concerned with university students' entrepreneurial competencies, so the sample selection didn't deliberately distinguish between good performers and poor performers. Therefore, a potential hypothesis of the study is that the entrepreneur, who satisfies the three conditions of the sample selection requests, already has the entrepreneurial competencies to meet challenges of starting new business. For all the interviewees, we used a set of unified interview frame. Every time the interview proceeded, it generally included the following contents: First, introduce the purpose of the study, and the application of the data and information. Then, learn the individual's basic background and the basic information of the company, and invite the interviewee to introduce his or her entrepreneurial experience simply. Third, invite the interviewee to describe 3 to 6 important behavioral events in detail. We tried to require that description to be more detailed. In other words, they should describe "How was the situation at the time? What factors led to such situation? What problems or tasks did you face? What kind of goals you would achieve? Who was involved? What were your thoughts, feeling, and the actions at that time? What were the results? ". This part is the core component of the interview. Fourth, linking his or her individual experience, invite the interviewee to conclude with entrepreneurial competencies or qualities he or she has, compared to the students who didn't start their business. Last, invite the interviewee to self-evaluate his or her entrepreneurial performance and the prospective business objectives. The research questionnaire is accessible in appendix.

Data analysis

Each interview generally lasted between 90 minutes and 150 minutes. All the interviews were recorded for subsequent coding upon the interviewees' agreement. The recorded data were transcribed verbatim to form texts with a total of 144 pages and 225000 words.

Then, the two researchers analyzed the texts by coding. Researchers drew up a description of coding requirements in advance to ensure the consistency of coding. According to the coding requirements, the two researchers had a pilot coding independently, and afterwards compared and discussed the coding results, and reached an agreement on the ambiguous coding. Finally, the two researchers coded all texts independently. The consistency of the overall coding comes up to sixty-one percent. The two researchers discussed the inconsistent coding, and unified them. At last, we got 353 terms of behavior coding which were classified into seven categories of competencies. Their definitions and frequencies are shown in Table-2.

Findings and Discussion

Through coding analysis, the study finds that seven dimensions of entrepreneurial competencies were obvious performances in the student entrepreneurs. They are opportunity competency, relationship competency, resources integration competency, innovation competency, entrepreneurial aspiration competency, entrepreneurial perseverance competency, and entrepreneurial learning competency. By combining the interviews (as shown in the table-2), the study analyzes the connotation and characteristics of the entrepreneurial competencies.

Opportunity competency

Opportunity competency appears as the ability of student entrepreneurs to identify, evaluate, and capture the market opportunity. First, the ability to identify opportunity is that entrepreneurial students have concern for all kinds of unmet needs around them. That comes mainly from students' observation in daily life. For instance, one of the entrepreneurs found that students were bored on weekends in university town with no place to stay at. Then he realized he could initiate the Group Inclusive Tour for students on weekends and benefit from it. With the entrepreneurial practices increasing, the entrepreneur's ability to identify opportunity would be developed. They can find a growing number of market opportunities and judge whether an opportunity is good or bad by intuition. Furthermore, they can try all kinds of assessments for their business ideas. Most entrepreneurial students evaluate the entrepreneurial opportunities mainly by communication with people closest to them (such as family members and classmates), and also by the help indirectly from external professional investment organizations. For example, some got valuable suggestions from entrepreneurial advisor and professional investor through participating in business competition. Some of the entrepreneurs usually collect related information via the Internet to do assessments, while a few of them do further market research to evaluate the opportunity. For instance, one of the venture enterprises got orders in a simulation exhibition organized by college before the establishment of the enterprise and then the confidence of doing their entrepreneurial project got greatly enhanced. The entrepreneur's ability to capture opportunity is also continuously strengthened as the entrepreneurial practices develop. For example, a respondent just involved some simple business at the start, such as housing rental intermediary. Then, he gradually went into sales agent and design of real estate, later on, into investment and development of real estate.

Table 2: Entrepreneurial Competencies of University Students

Competencies	Frequencies	Definition	Examples of Behaviors
Opportunity competency	61	To identify, evaluate, and capture the market opportunity by all possible means.	▪It is very boring in the weekend in Songjiang university town, especially for freshman of Donghua University and Shanghai University of International Business and Economics. One day I suddenly have an idea. Why did we plan excursion for students to kill time in the weekend. [B8] ▪Internet is so hot those days. Then I wanted to build a website for students to communicate on. [B5] ▪Before we actually started new business, we had had a lot of discussion with my friends, classmates and potential customers. We got some valuable information from these guys. [B9] ▪We have investigated a lot of groceries around people square to ask if they would like to purchase our hotdogs. [A1] ▪We had a lot of discussion with our friends and potential partners including some suppliers. They have the same ideas that hotdogs will be popular in three or five years in China. [A1] ▪At first we didn't know if the entrepreneurial project is feasible, so we took part in business competition and got some valuable suggestions from the Judging Panel. [B6]

Relationship competency	113	To build and maintain the interactions between individuals or between individuals and organizations.	▪I have good relationship with some managers of supermarkets in Shanghai. They allowed me to recruit students in front of supermarkets. [B5] ▪I have called him from time to time. Three months later we became friend and he promised me to visit our company when he was convenient. [A1] ▪I spend a lot of time to build good relationship with these graduates. Although they cannot benefit me now, I think that some of them would do in the future. [B7] ▪This guy is really important for my career. I had always tried my best to help him before we had cooperation. One day he suddenly visited me and asked if I was interested in real estate development. [B8] ▪I have tried all kinds of ways to find good partners to start new business with me. [A3] ▪I really enjoy making new friends. You know what? I have about three thousands telephone numbers of friends in my cell. [C9] ▪Then I join in a VC corporation and made a lot of friends who are entrepreneurs or investors. Some of them helped me a lot when I started my business. [C11]
Resources integration competency	39	To integrate all kinds of tangible resources and intangible resources inside and outside the organization.	▪You should know exactly who can provide valuable resources for development of company or who can indeed help you. Maybe it is my strength. [C10] ▪I borrowed a lot of money from my classmates who are my close friends. [A1] ▪I can tell who is talent or not and know how to integrate strengths of the group. It is key role of CEO. [B6] ▪As a leader, you should have ability to acquire all kinds of resource, such as money, talent, customers and technology, especially good partners. [A3] ▪Who is an entrepreneur? An entrepreneur is one who can find better price for all kinds of resources when they are put together. What I have done is to disclose the price of these resources. So comprehensive ability is more important for an entrepreneur. [B5]

Innovation competency	54	To solve creatively the problems in pioneering process, including the ability to create and improve the new technology, product, service and process.	▪You know, it is hard to get good sports service in university town. Actually there are few domestic companies to engage in professional sports service in China. We want to have a try. [C12] ▪We have to redesign our manufacture process in order to fit customers' need just in time. It is a challenge for us. Process innovation is really important for us, although our corporation is to do e-business. [A4] ▪We have done a lot of product innovations after we communicated with our customers. These innovations are really wonderful. [C10] ▪What we care about most is to improve our management system and limit growth of employees. You know, the cost of taent really mattersfor a company like mine. [C11] ▪Innovation is not easy, but it is only way to survive for a technological company. In one word, to innovate or to die. [A2] ▪We plan to introduce and improve some kinds of local snack food, but only new product is not enough. We want to try some new business models. I have ambition to operate an entrepreneurial supermarket for students who want to start their own business. [A1]
aspiration competency	30	To expect and pursue the lifestyle and the pioneering achievements.	▪My father let me find a job in a local bank. But I can imagine how boring it is. I really cannot stand unchangeable programmed work in a big company. [B6]. ▪I don't have intention to find job after graduation. Actually when I was in high school I had an ambition to start my own business in the future. [C10] ▪I am from a poor family. Maybe you can't understand how important money used to be for my family. Frankly speaking, I really want to be rich and could hopefully repay our parent later.[A1] ▪I wish my parents feel proud of my career in the future. I gradually realize that no can live only for himself. I shall do something meaningful for my parents and society. Maybe this is the profoundest understanding I got from pioneering work. [C9] ▪Steve Jobs is my role model. I am crazy about Jobs. My dream is to create something like iPhone and iPod, which can change people's life for the better. [A3]

perseverance competency	29	To face the difficulties and setbacks in pioneering process, and insist, do not give up.	▪In the most difficult time, I really wanted to give up, but I was lucky I didn't do it. [B5, B6] ▪I was under a lot of pressure at the beginning of new business. I had many problems to solve and nobody can do anything for me. I even sent email to YBC for help, but no reply. But I never give up. Perseverance is necessary quality for an entrepreneur, otherwise you cannot go far. [A1] ▪I have failed entrepreneurial projects many times. But I never feel sad or depresed, because I firmly believe I will finally be successful as an entrepreneur. [B8] ▪Failures are common things for an entrepreneur. What I can do is to face it and find better ways to overcome it constantly. [A1] ▪Why am I successful? Because I have patience to wait for success to come. It is important especially in the hardest time. [B7] ▪Don't give up. Just hold on. Success will show up finally. I believe it. [C12]
learning competency	27	to keep learning the knowledge and skills required for entrepreneurship.	▪I learnt a lot of management skills and knowledge when I worked in a South Korea's Corporation in Shanghai after graduation. The corporation trained me how to manage supply chain, salesmen, and blend, so many things. This experience is really helpful for my new business. [A1] ▪As an intern, I had really learnt a lot of practical knowledge and experience on business assessment before I started my own business. [C11] ▪Learning from practice is important for an entrepreneur of university student. Since my sophomore year, I have joined in practical projects as many as possible and knew many managers who are experienced. [C9] ▪I planned to study the management cultures of the company AL which has great successes in marketing, including management institution, operation system, performance and motivation system, channel and sales management. Then, I gradually applied them to my company. [B5] ▪We have to constantly learn something new in this knowledge society. I not only learn myself, but also encourage my partners to do it. I take part in training programs and have talks with experts or anyone who is professional as soon as I have opportunity. [A3]

Resource: from interviews

Relationship competency

Relationship competency mainly refers to the ability to build and maintain the interactions between individuals or between individuals and organizations. The frequency of relationship competency is the highest in the process of coding. That suggests relationship competency plays a very important role in the course of university students' innovative undertaking. Relationship competency can stimulate university students' inspiration to come up with good undertaking ideas, bring entrepreneurial resources, offer emotional support, and solve all kinds of problems in the course of innovative undertaking. Of all the interviewees, almost everybody would actively build external linkages helpful for undertaking. They build external linkages in several ways. Besides the common relationship between the students, they may build their network of relationships by the Internet, party and taking part in some entrepreneurial group activities. Birds of a feather flock together. The pioneering university students also tend to communicate with entrepreneurial groups. For example, one interviewee said, "Of the friends around me, those who are self-employed are in the majority. In 2006, I joined elite student forum sponsored by Shanghai Jiao Tong University. All people involved are successful entrepreneurs in Shanghai. Some of them are MBA, and some are Doctor. Some are over thirty and some are over forty. Most of them are older than me." Moreover, some of the interviewees attach more importance to establishing good relationship with external related organizations, e.g., suppliers, clients, even venture capital organizations; with pioneering growth, the understanding of and attention to the effects of the relationship with external organizations would be enhanced, and establishing good relationship with external related organizations would be seen as a core competency. Not only is relationship competency embodied in the establishment of external relationships, it is also embodied in their regard for internal employee relationship. The minority of them tried to create a good working atmosphere inside the company in every way possible, e.g., some of the companies have intention of making homey space by setting up dining room for working lunch for their employees.

Resources integration competency

Pioneering work is a process of resources integration. Resources integration competency is the ability to integrate the tangible resources and intangible resources including human resources, financial resources, commodity resources, and technology resources inside and outside the organization. The students' capital required to start a business can be obtained from parents, school mates, friends, or some external parties. Most of them got the financial support from family at the beginning of their careers, although some parents disapprove of their children doing pioneering work. Some interviewees actively got financial or non-financial support from EFG[1] or YBC[2]. Among all the financial supports that the interviewees got, the largest amount is RMB 200,000 Yuan, and the least is RBM 50,000 Yuan. In addition

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[1] Shanghai Technology Entrepreneurship Foundation for Graduates (EFG) was established in August 2006. It is non-profit public foundation dedicated to promoting entrepreneurial culture, advancing entrepreneurial practices and encouraging graduate entrepreneurship. Website is http://www.stefg.org/.

[2] Youth Business China（YBC）was established in November 2003. It is China's non-profitable education foundation to encourage and help entrepreneurial youth by building entrepreneurial system, improving entrepreneurial environment and culture。Website is http://www.ybc.org.cn/

to funds, the tangible resources integration also includes human resources integration. For example, one of the entrepreneurs got authorized by a bank to act as agent in credit card business for college students through his personal relationship and ability to persuade when he did a college students' credit-card program. Then, he organized nearly 5000 students from several top universities in Shanghai to carry out the business, and thus implemented and completed the whole agent program. The integration of the intangible resources can reflect resources integration competency more. Firstly, entrepreneurs shall have ability to judge the value of the intangible resources. Secondly, innovation is necessary to integrate the intangible resources to create valuable returns. The uncertainty of the returns to the intangible resources is high. The entrepreneurs should have foresight and patience to do a plan to integrate intangible resources. For example, the primary aim of applying for the EFG funds, to some of the entrepreneurs, is not for capital. They hope to win external reputation and social status through the ratification and support from EFG which is good for the growth of their enterprises.

Innovation competency

Almost every entrepreneurial student would meet a series of problems and obstacles in pioneering process. Whether or not to work out the problems and overcome obstacles determines whether a business succeeds. University students' pioneering process is, so to speak, a process of keeping solving entrepreneurial problems. Innovation competency is the ability to solve creatively the problems in pioneering process, including the ability to create and improve the new technology, product, service and process. By interview, we find that innovation competency can be categorized into two types: one is planned innovation, the other is emergency innovation. For example, one of the entrepreneurs soberly said, "My enterprise is in a period of transition. Many problems have yet to be satisfactorily solved such as the service process and standardization of similar 'middlemen'. We are now at the stage." Sometimes planned innovation can bring excellent entrepreneurial performances. For instance, one of the entrepreneurial enterprises improved the production line to make his clothing following fashion trends much more quickly, and thus, enhanced his market competitiveness; another entrepreneurial enterprise is trying to create the standardization of job processes to make a breakthrough in talent bottleneck in pioneering process. We find that innovation competency is reflected in emergency innovation events more intensively. Namely, when confronted by emergencies or entrepreneurial problems which cannot be solved normally, they can try to positively solve the problems with innovative way of thinking. Based on coding of interview texts, our frequency statistics show that the ubiquitous emergency innovation accounts for nearly 80% of all the innovation activities in the course of business.

Entrepreneurial aspiration competency

In the analysis of the interview texts, we find that the pioneering students showed the ability to strongly expect and pursue the lifestyle and achievements of successful entrepreneur, which we summarize as entrepreneurial aspiration competency. Although the ways of the entrepreneurial aspiration competency expressed are varied, it is the primary motivation of entrepreneurial students to do pioneering work. Some of the entrepreneurs would like to live the life they like, master the future by themselves, and don't like an unchallenging job as to do similar work repeatedly day

by day. Some choose the pioneering lifestyle in order to enjoy what they really want to do. One of the entrepreneurs said," Steve Jobs is my role model. I am crazy about Jobs. My dream is to create something like iPhone and iPod, which can change people's life for the better. When iPod was marketed, it was said to change the way of listening to music. What is especially impressive is the advertising slogan of iPhone 4: Change everything again." Some entrepreneurs even begin to have primary mission in mind. A respondent said, "I gradually realize that no one can live only for himself. I shall do something meaningful for my parents and society. Maybe this is the profoundest understanding I got from pioneering work."

Entrepreneurial perseverance competency

We sum up entrepreneurial perseverance competency as the ability to face the difficulties and setbacks in pioneering process, insist, and never give up. Every entrepreneur would experience entrepreneurial difficulties and setbacks. Successful entrepreneurs are those who can insist on believing themselves. Students in pioneering process sometimes have to undertake unimaginable difficulties and setbacks. As one of the entrepreneurs recalled," The pressure was too great for me to overcome in my junior year. The company was cheated out of money. More than 40 student interns asked me for wages. The teammates were desperate so as to quit. My parents strongly disapproved of me continuing my pioneering work. Some of my teachers firstly had negative words for my work. I felt so particularly stressed out to withstand those." Facing difficulties and setbacks, some even felt desperate, "It is meaningless to carve out. It's just too hard for our students to make money by doing pioneering work. The society is so unbelievably dark. I had earned enough money at that time and really felt like quitting and planning to study abroad. Maybe studying abroad is a better choice for our students." The students with entrepreneurial perseverance competency would take heart again finally through their self-motivation, keep on going in hard time and look forward to the appearance of good situation. Some of the entrepreneurs argue that, "It is the project or the enterprise that failed, not me. The failure of projects does not matter. Even the bankruptcy of an enterprise is not the end of pioneering work. As long as we have entrepreneurial spirit, we are still prospective entrepreneurs."

Entrepreneurial learning competency

Entrepreneurial process is complex and systematic. It requires the entrepreneurs' comprehensive knowledge and skills such as product innovation, business model, team building, and operation management. Hence entrepreneurial learning competency is especially important. Knowledge and skills required for entrepreneurship have usually been learnt long before actually undertaking a new venture. For example, they would intentionally attend some entrepreneurial lectures or training organized by college to learn successful entrepreneurs' experiences. Some of them would particularly learn from successful enterprises. For instance, one of the entrepreneurs said," I planned to study the management cultures of the company AL which has great successes in marketing, including management institution, operation system, performance and motivation system, channel and sales management. Then, I gradually applied them to my company." Some of them even motivate their partners or staffs to study something new constantly, because they consciously realize the importance of learning for the development of new business. Furthermore, the interviews show that entrepreneurial learning is mainly a process of

learning by doing. The entrepreneurs learn more from their mistakes such as what one of the entrepreneurs said, that "The most important lesson we got from mistakes was that we invested too much time and too many resources in projects which are unworthy." Even though making mistakes is costly sometimes, but some entrepreneurs gradually realize mistakes are unavoidable and worthwhile for growth of new business. An entrepreneur even suggests that mistake is touchstone to test if someone is capable for a pioneering work. Most entrepreneurs of students we interviewed highly value the experience and skills from practices of pioneering work, and regard learning competency as an essential factor for new business to survive a disaster and develop in the competitive environment.

Discussion and Conclusion

This study interviewed university students of entrepreneurs by means of behavioral event interview. Through our coding analysis of the interview texts, the study concluded that seven entrepreneurial competencies are important for students or graduates to successfully build and develop their new ventures. The results not only are meaningful for theories of entrepreneurial competencies, but also indicate suggestions for practices of entrepreneurship education.

First, dimensions of entrepreneurial competencies based on university student samples are distinct. As showed in table-1, risk competency and strategic competency are obvious and significant in the prior research. But this research did not find convincing evidence for these conclusions. For example, the risk competency was important in many researches (e.g. Busenitz, 1999; Zhao et al., 2005), but in this study, none of the interviewees emphasized risk they met. Actually most of them did not think risks are their major problems. Some of them even denied existence of risks from pioneering work. Furthermore, the strategic competency is the main focus of some researchers (e.g. Lau et al., 1999; Man et al., 2002). But in this study our respondents show no significance of this dimension. Most of them did not think the strategic competency was necessary or essential for their business. "It is really difficult for me to do a long term plan, because our business is unpredictable and I even don't know how many orders we can get next month. It was unrealistic and meaningless to do a business strategy for long term development." A2 said. Seven of them supposed it is unnecessary for them to do long-term strategies. Only two interviewees seriously took into consideration strategies of their new ventures.

At the same time, our results show that there are two distinctive dimensions of entrepreneurial competencies which were seldom mentioned in the prior research. These are aspiration competency and perseverance competency. Few prior references emphasize these two competencies. We argue that these dimensions are especially important and outstanding for entrepreneurial students in China. Apart from these two new dimensions, we also found that other dimensions, such as opportunity, relationship, learning, and innovation, have different behaviors among university students. So we conclude that not only structure of entrepreneurial competencies of university students is distinct, but also that characteristics of these competencies are different. These findings will complement and improve theories of entrepreneurial competency.

Secondly, this research results have valuable implication for university entrepreneurship education and entrepreneurial training. First, different group of entrepreneurs in specific situation, such as universities or colleges, need different entrepreneurial competencies. University students are different from established entrepreneurs who have work experience or entrepreneurial background. It takes both individual background and environment to determine the kinds of competencies important for them, so it is critical to act appropriately when universities implement entrepreneurship education. Second, value of entrepreneurial practices should be highly appreciated. Innovation is not just about producing new ideas in the classroom and laboratory, it is essentially to have practice and many new valuable innovations result from good practices. Learning by doing in real business is most important ability for students' entrepreneurs. Furthermore, successful student entrepreneurs are never satisfied with theoretical knowledge from books or lectures. They are keen on practical knowledge outside the ivory towers of the university. The practical knowledge usually attracts them more by comparison. Third, coding results show that relationship competency is of the highest frequencies among the seven entrepreneurial competencies. Chinese guanxi is always a hot topic for business in China. "No guanxi no business" is almost truth in Chinese commerce. Relationship is also important for entrepreneurial students because it undertakes function of connecting outside resources such as capital, market, knowledge, talent, skill, emotional support, et al. For the potential entrepreneurs, they never ignore roles of society supporting students' business. To some extent, we regard relationship as behavior of socialization for students, which is definitely an indispensable part of developing new business. But for our entrepreneurship education, relatively little has been done on training students how to effectively master relationship competency.

The above inductive framework is far from perfection. There are several limitations including the number of student entrepreneurs and business type. The future studies can expand on exploration and induction of the dimensions and characteristic of the entrepreneurial competencies and, increase the number of interviewees from China's universities or foreign universities. Based on the qualitative analysis, we can further develop measurement scale of the entrepreneurial competencies of university students to advance the related theories and empirical researches.

Acknowledgment

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Appendix table

Information of Samples

Respondents	Sex	Major	Industry	Universities
A1	Male	Administration	restaurant chain	Nanjing Normal University
A2	Male	Information management	Energy-saving projects	Donghua University
A3	Male	Business management	E-Commerce	Donghua University
A4	Male	Information management	E-Commerce	East China University of Science and Technology
B5	Male	Administration	Education and training	Shanghai University of International Business and Economics
B6	Female	Marketing	Performing planning	Shanghai University of International Business and Economics
B7	Male	Criminal procedure law	conference planning	East China University of Political Science and Law
B8	Male	Business management	real estate	Shanghai University of International Business and Economics
C9	Male	International business	consulting	Shanghai University of International Business and Economics
C10	Male	Marketing	Marketing promotion	Shanghai University of International Business and Economics
C11	Male	Software engineering	Software development	Donghua University
C12	Male	Journalism	Sports service	Shanghai University of International Business and Economics

Materiality in corporate sustainability reporting: A research note on the UK's leading food retailers

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Abstract

The concept of materiality is attracting increasing attention in corporate sustainability reporting. With this in mind the aim of this research note is to offer an exploratory review of how the UK's leading food retailers are embracing materiality as part of their corporate sustainability reporting processes. The paper begins with a short discussion of the concept of materiality and on its determination. The paper draws its empirical material from the most recent sustainability reports posted on the Internet by the UK's top ten retailers. The findings reveal that there are variations in the extent to which the UK's leading food retailers are embracing materiality and that there is no evidence of a sector specific approach to materiality within the UK retail community. More generally the authors argue that methods currently being used to determine materiality are flawed and that food retailers seem likely to continue to face challenges in looking to reconcile the relationships between executive management teams, investors and a wide range of stakeholders in operationalizing the concept of materiality. The paper provides an accessible review of the extent to which the UK's leading food retailers are currently embracing materiality as part of their sustainability reporting process and as such it will interest academics, students and practitioners interested in food retailing and corporate sustainability.

Key words -Materiality; Sustainability; UK food retailers

Introduction

Sustainability is becoming increasingly integrated into the corporate fabric of a growing number of large companies. A survey of business managers and executives undertaken by MIT Sloan Management Review and The Boston Consulting Group (2012) suggested that *'70% of companies have placed sustainability permanently on management agendas'* and Carroll and Buchholtz (2012), suggested that *'sustainability has become one of business' most recent and urgent mandates.'* At the same time effective sustainability reporting is increasingly seen as a vital element in communicating with stakeholders about how companies are performing against strategic environmental and social goals. Sustainability reporting can include a wide and varied range of issues and reporting practices are constantly evolving but Ernst and Young (2014) argued that while *'today's non-financial reporting environment can seem complex but there is one commonality amongst the various reporting initiatives- materiality.'* In a similar vein GreenBiz (2014) identified that a focus on materiality as one of the top four sustainability reporting trends in 2014 and argued that the *'focus is increasing in the sustainability world on the principle of materiality as the essential filter for determining which environmental, social and governance information will be useful to key decision makers.'* In simple terms within sustainability reporting, materiality is concerned with identifying those environmental, social and economic issues that matter most

to a company and its stakeholders. While all companies have a role to play in promoting the transition to a more sustainable future within modern capitalist societies food   retailing is an important interface between manufacturers and primary producers on the one hand and consumers on the other. As such large food retailers have a crucial role to play in addressing the world's mounting environmental and social challenges and in moving towards a more sustainable future. With this in mind this research note offers an exploratory review of how the UK's leading food retailers are currently embracing materiality as part of their corporate sustainability reporting processes. The note includes an outline of the concept of materiality, an exploration of the extent to which the UK's top ten food retailers address materiality in their current sustainability reports and offers some reflections on materiality in food retailers' sustainability reporting.

The Concept of Materiality

The concept of materiality has predominantly been associated with the financial world and more specifically with the auditing and accounting processes of financial reporting. Here an issue *'is considered material to the company if its omission or misstatement influences the economic decision of users* (PGS 2013). However the concept has become increasingly important in sustainability and corporate social responsibility reporting but *'compared to financial reporting, sustainability considers a broader scope of action and covers a multitude of issues: environmental, social, economic and more'* and *'requires a more comprehensive definition of materiality'* (PGS 2013). At the same time Eccles et. al. (2012) have argued that in defining materiality in nonfinancial reporting *'more emphasis is placed on defining the user of the information, typically described as stakeholders rather than shareholders and emphasising the importance of considering the impact of not providing information.'*

That said there is little consensus about what constitutes materiality in sustainability reporting and a number of definitions can be identified. There are sets of definitions that focus principally on investors and shareholders .The International Integrated Reporting Council (2013), for example, in advocating the integration of financial and non-financial reporting, suggests that *'a matter is material if it is of such relevance and importance that it could substantively influence the assessments of providers of financial capital with regard to the organization's ability to create value over the short, medium and long term. In determining whether or not a matter is material, senior management and those charged with governance should consider whether the matter substantively affects, or has the potential to substantively affect, the organization's strategy, its business model, or one or more of the capitals it uses or affects.'* There are also definitions that embrace a wide range of stakeholders. PGS (2013), for example, argues that *'materiality aims to identify the societal and environmental issues that present risks or opportunities to accompany while taking into consideration the issues of most concern to external stakeholders.'* The Global Reporting Initiative (GRI), for example, asserts that *'material topics for a reporting organisation should include those topics that have a direct or indirect impact on an organisation's ability to create, preserve or erode economic, environmental and social value for itself, its stakeholders and society at large'* (GRI 2014). More generally the GRI suggests that *'sustainability impacts create both opportunities and risks for an organisation'* and that *'the ability of an organization to recognise*

opportunities and risks and act effectively in relation to them, will determine whether the organization creates, preserves or erodes value' (GRI 2014).

KPMG (2014) argued that a review of definitions of materiality clearly suggests that *'there is an obvious distinction in three key areas: scope (the range of information provided), stakeholder groups (those whose perceived interests are likely to be affected), and time frame (the time period applied)'* and it argued that *'these variables are important in that they define the boundaries of materiality made by organisations.'* More specifically KPMG (2014) develops these three areas in the context of the increasing recognition within businesses of the importance of *'natural capital'* which is taken to include *'natural resources'*, *'environmental* assets', *'ecosystems'*, '*ecosystem services'* and '*biodiversity.'* KPMG (2014) suggests that the changing boundaries of what constitutes materiality are *'likely to enhance the interest in and the justification for natural capital's consideration in corporate materiality assessments in relation to the three key areas.'* Thus the scope of issues can be seen to be continually widening, a much wider range of stakeholders, including local communities and non-governmental organisations, need to be included when assessing what is material for natural capital and the time frame may need to be reviewed to incorporate both medium and long term impacts on the environment.

The way in which materiality is identified and operationalized varies from one company and organisation to another but a number of common elements can be identified (PGS 2013). These include the explicit identification of a number of environmental, social and economic issues around which the sustainability report is developed; the evaluation and ranking of both company and stakeholder concerns on each of the identified issues; identification of the ways in which the company has elicited stakeholders' contribution to the process; and the prioritization of these issues in a way that informs a company's sustainability strategy and reporting process. Common elements aside there is growing interest in defining and determining materiality on a business sector specific basis. Eccles et. al. (2012), for example, suggested that *'while not a panacea, we believe that developing sector specific guidelines on what sustainability issues are material to that sector and the Key Performance Indicators for reporting on them would significantly improve the ability of companies to report on their environmental, social and governance performance.'* Further Eccles et. al. (2012) argued that by employing *'guidance that identifies the environmental, social and governance issues that are material to a sector and how best to report on them, companies will have much clearer guidance on what and how to report.'*

A variety of approaches have been developed to determine materiality as an integral component of sustainability reporting. The Sustainability Accounting Standards Board (SASB), for example, claims that its *'Materiality Map creates a unique profile for each industry'* and that it *'is designed to prioritize the issues that are most important within an industry'* and *'to keep the standards to a minimum set of issues that are likely to be material'* (SASB 2014)' The map classifies issues under five categories namely environment: human capital; social capital; business model and innovation; and leadership and governance and then identifies high priority material issues on behalf of what SASB (2014) describes as the *'reasonable investor.'* More specifically the development of the map *'relies heavily on two types*

of evidence: evidence of interest by different types of stakeholders and evidence of financial impact' (SASB 2014).

The 'materiality matrix' is perhaps the most common approach used to determine materiality issues. The matrix plots sustainability issues in terms of two axes namely, the influence on stakeholder assessments and decisions and the significance of environmental, social and economic impacts (Figure1). PriceWaterHouseCoopers (2014), for example, developed its *'sustainability prioritisation matrix'* in 2011 based on surveys, interviews and desk based research from its, clients, its employees, potential recruits, regulators and non-governmental organisations. Within this matrix while *'quality and ethics'* and *'brand reputation'* were positioned highly on both the importance to the business and importance to stakeholder axes while *'biodiversity'* was positioned lowly on both axes (PriceWaterHouseCoopers 2014). In its 2013-2014 materiality matrix Siemens (2014) identified *'demographic* change', *'urbanization'*, *'climate* change' and *'globalization'* as *'mega trends'* and positioned *'corporate citizenship'*, *'health and safety'*, *'human rights'* and *'affordable and personalised health care'* lowly on both axes, with *'innovation'*, *'sustainability in the supply chain'*, *'resource productivity'* and *'environmental portfolio'* being positioned correspondingly highly.

A range of benefits are claimed for those companies which embrace materiality as an integral part of their sustainability reporting process. Strandberg Consulting (2008), for example, suggested that materiality analysis can help companies to clarify the issues that can drive long term business value; to identify and capitalise on business opportunities; to co-ordinate sustainability and business strategies; to build and enhance corporate brand and reputation; and to anticipate, evaluate and manage change. KPMG (2014) claims that *'materiality assessment is much more than a reporting exercise'* arguing that it is the foundation for *'sustainability strategy, target setting, stakeholder engagement and performance management.'* Looking to the future the introduction of new Global Reporting Initiative (GRI) standards for sustainability reporting seems likely to enhance the focus on materiality. The new guidelines, initially released in 2013, will apply to all corporate sustainability reports to be completed within GRI guidelines and frameworks that are to be published from January 1st 2016. KPMG asserted that the new guidelines *'put materiality center stage'* , they encourage *'reporters to focus content on the issues that matter most to the business, rather than reporting on everything'* and they look to make *'more explicit links between materiality and the management and performance information organisations should disclose in their report* (KPMG 2013). More specifically, for example, corporate sustainability reports should begin with a focus on material issues and maintain this focus throughout the report, include a detailed discussion of the processes by which the company both defines and manages its material issues and provided details of where the impact of material issues is seen to lie.

Frame of Reference and Method of Enquiry

Food retailing is by far the largest sector within the UK retail economy and Mintel (2014a) estimated that in 2013 total UK consumer spending on food and drink was estimated at £128 billion with 73.2 % being spent on food and non-alcoholic drinks and the remaining 26.8 % being spent on alcoholic drinks and tobacco products. In the half century since 1960 large multiple retailers consistently increased their

market share (Department of Environment, Food and Rural Affairs 2006) but the UK food retail market is now increasingly seen to be *'changing fast, causing upheavals for several of the long established leaders'* (Mintel 2014b). More specifically large stores are increasingly seen to be unwieldy, food shopping behaviour is changing, online shopping is seemingly ever more popular and the discount food retailers are seen to be gaining market share from the traditional large food retailers. Nevertheless the market remains very concentrated with the top ten retailers accounting for over 85% of all food retailers' sales and just four of these, namely Tesco, J. Sainsbury, Asda (Walmart) and Wm. Morrison having a massive 64% market share (Mintel 2014).

During the past decade the role of the major food retailers within the food production and distribution system has attracted increasing and often heated debate and criticism. On the one hand the marked concentration within food retailing in the UK has increased the power of the large retailers within their supply chains (Consumers International 2012). On the other hand it has brought the retailers into daily contact with a large number, and a wide cross section, of consumers. The former has given the large food retailers greater power over producers and suppliers while the latter keeps them well attuned to consumer behaviour and allows them to develop sophisticated marketing and brand loyalty strategies. Moreover the large food retailers are widely recognized as having a significant impact on the environment, economy and society. As such The UK Sustainable Development Commission (2008) , for example, argued that *'as gatekeepers of the food system, supermarkets are in a powerful position to create, a greener, healthier, fairer food system through their influence on supply chains, consumer behavior and their own operations'*.   If the UK Government's policy approach to sustainability is to work *'with the grain of markets'* (Department of Trade and Industry/Department for the Environment, Food and Rural Affairs 2003) then the large food retailers would appear to have a central role to play in helping to deliver more sustainable patterns of consumption.

In an attempt to obtain an exploratory picture of the extent to which the UK's leading food retailers are embracing materiality as part of their sustainability reporting the top ten UK food retailers (Table 1), ranked by the value of UK retail sales, were selected for study. Businesses employ a variety of methods to report on sustainability including '*product labels, packaging, press/media relations, newsletters, issue related events, reports, posters, flyers, leaflets, brochures, websites, advertisements , information packs and word-of mouth'* (European Commission Directorate-General for Enterprise undated). Over a decade ago Bowen (2003) reported that a growing number of large organisations were employing the Internet to report their sustainable development and sustainability commitments and achievements and since then this has increasingly become the norm within the retail industry. With this in mind in January 2015 the authors undertook an Internet search of each of the selected retailers' corporate web sites using the key phrase 'sustainability report', then selected the most recent report/ information and searched it digitally using the keyword 'materiality' using Google as the search engine.

Findings

Seven of the selected retailers namely Tesco, Sainsbury's, Walmart (Asda), Wm. Morrison, The Co-operative Group, John Lewis Partnership (Waitrose) and Marks and Spencer had posted sustainability/corporate social responsibility reports while Aldi, Lidl and Iceland had more limited information on sustainability on their corporate web sites. The review of the selected retailers' sustainability reports and information revealed marked variations in the extent to which they embraced materiality as part of the reporting process. Five of the retailers namely Sainsbury's, Walmart, WM. Morrison Marks and Spencer and the Co-operative Group drew attention to the materiality process in producing their sustainability report. While the other five selected retailers, namely Tesco, the John Lewis Partnership, Aldi, Lidl and Iceland, drew attention in various ways to the priorities that informed and underpinned their sustainability reports/information, an essential initial element in determining materiality, they provided no explicit commentary on materiality per se. Marks and Spencer, for example, recognised that the company faces a wide range of environmental, social and ethical challenges and that it has to *'to manage a continually evolving set of issues.'* More specifically Marks and Spencer reports that its sustainability commitments were*' assessed for materiality by M&S management, who ranked them in terms of their importance to stakeholders and importance to M&S on a 3x3 matrix.'* The two axes of this matrix, namely importance to stakeholders and importance to M& S, are divided into three categories namely high, medium and low. In terms of importance to stakeholders, the high category includes issues that are *'frequently featured in the media, raised by key stakeholders or in key sustainability benchmarks'* while the low category includes issues which generally do not attract significant attention. In a similar vein the high and low categories in terms of importance to Marks and Spencer contain issues that are important in *'supporting business strategy for a large part of M&S operations'* and those *'supporting business strategy for a small part of M&S operations'* respectively. While Marks and Spencer's management are reported to have played the major role in positioning issues within the matrix these positions were *'reviewed and amended where necessary according to direction from Ernst and Young.'* Marks and Spencer also reported that some 40 issues were rated as being of high importance to stakeholders and of high or medium importance to the company. Only issues in these two categories within the materiality matrix are independently assured whilst the remaining seven categories are internally audited and assured.

Sainsbury's and Wm. Morrison also report on employing a matrix approach in determining materiality. Sainsbury's, for example, claimed that its *'materiality process helps us to focus on areas of most significance –both for our business and the wider world'* and *this process of focusing on the most material issues helps us to make a more direct link between our commercial strategy and the challenges we face regarding responsible operations.'* Sainsbury's reported that it *'analysed a wide range of information to understand the key issues for different groups of people'* and that it then prioritised these issues on a matrix whose two axes were *'potential business impact'* and *'stakeholder concern.'* Wm. Morrison reports addressing a wider constituency in determining materiality in that *'we monitor the wider issues that affect our business, take specialist advice, actively engage with our stakeholders, and then analyse risks and opportunities'* before *'plotting them on a materiality matrix.'* The company reports that it has developed specific key performance indicators to drive and measure change.

The Co-operative Group also claimed that its *'materiality decision-making process ensures that we focus on the issues that matter most to our stakeholders and our business'* and more specifically on *'the issues that reflect our significant social, environmental and economic impact and that influence our stakeholders' assessment and decision making.'* In identifying which issues are considered material and in determining their significance the Co-operative Group consider a number of internal and external factors and a range of mechanisms. These include *'considering issues raised by our members (e.g. through the democratic process and our membership engagement strategy) and other stakeholders (e.g. through customer participation in ethical policy formulation and employee and customer surveys) as well as considering business and society issues (as expressed through our business strategies and risk management processes, societal norms and emerging issues, external reporting standards and benchmarks.'* However the company eschews *'simply mapping these onto a materiality matrix'* and argued that such an approach *'is not always effective when dealing with the daily reality of evaluating and responding to ethical and sustainability challenges.'* Rather the Co-operative Group's *'approach is to detail these various inputs and then set out the material importance of each issue'* in its sustainability report. The company reported on its material issues under three overarching headings namely *'social responsibility'*, *'protecting the environment'* and *'delivering value to our stakeholders'* across some 15 thematic areas including climate change, water and chemicals, international communities, promoting equality, suppliers and supply chains and employees.

The John Lewis Partnership emphasised its achievements in its relationships with suppliers, customers, the environment and with the communities where it operates across a range of sustainability issues but the company   did not address materiality in its 2014 *'Sustainability Review.'* However in drawing attention to its achievements the John Lewis Partnership recognised that *'there is still more to do as the scale of global challenges we face becomes more evident'* and reported that *'for 2014-2015 we are introducing a sustainability materiality assessment process to update our views of the issues that are most material to our business, so that we can better set our priorities and then plan and invest accordingly.'* Further the John Lewis Partnership stressed that this process *'will involve interviews with senior management across the Partnership, as well as our key stakeholders, to understand what matters most to them, to the business and to wider society.'*

Although the other four selected retailers' stressed a number of priorities in their sustainability reports they did not explicitly refer to the concept of materiality. Tesco, for example, reported *'we have started to tackle three urgent issues facing society- food waste, health and youth unemployment'* and *'how we are strengthening our work in four essential areas- trading responsibly, reducing our impact on the environment, being a great employer and supporting local communities- which are fundamental to the way we do business'* but offered no information on the processes involved in determining these goals. Iceland simply listed a number of its priority commitments including *'seeking sustainability'*, *'caring about animal welfare'*, *'reducing our carbon footprint'* and *'minimising waste and promoting recycling'* and Lidl provided a list of a number of its commitments to corporate responsibility which included *'sustainable fish sourcing'*, *'organic products'* and *'environmental protection'* but neither company provided no information on how it had determined these principles

Discussion

Although the concept of materiality is increasingly seen within the business world as a vital element in sustainability reporting a preliminary review of the UK's top ten retailers current sustainability reports reveals there are significant variations in the extent to which these retailers are embracing materiality. In some ways this reflects the fact that the UK's leading retailers are essentially **at the start of a long and potentially difficult journey towards sustainability.** Marks and Spencer, for example has been reported as arguing that currently *'no business in the world can claim to have come remotely close to sustainability'* (Barry and Calver 2009). More generally three sets of issues merit discussion and reflection. Firstly there is little or no evidence that the UK's leading retailers have adopted a sector specific approach to the definition and determination of materiality as advocated by Eccles et. al. (2008) and perhaps this is not surprising in that the selected retailers have, by and large, developed their own individual approach to sustainability reporting. While some of the selected retailers provide limited information on the continuing development of their approach to materiality there is no indication in the sustainability reports that any of the selected retailers have the political or commercial desire to adopt a retail sector specific approach in the immediate future. Indeed the premature closure of the 'Race to the Top' project (International Institute for Environment and Development 2004) project, originally designed *'to track progress towards a greener and fairer food system'* suggests a common approach will prove no easy task. Where individual retailers publicly promote what they see as their approach to sustainability as giving them a distinctive position within the UK's extremely competitive retail marketplace, this makes the development of a genuinely shared approach to the determination of a collective and agreed set of material issues a testing and potentially intractable challenge.

The objective of the Governance and Accountancy Institute's research for the *'Sustainability What Matters'* research project mentioned earlier, was *'to serve as a starting point for discussion and planning around sector-specific materiality'* and the final report included work on *'The Retailers Sector'* Governance and Accountability Institute Inc. (2012). While the retailers studied included a number of the world's leading retailers including Carrefour, the Delhaize Group, Kroger, Target, Metro, C&A and Woolworths as well as Walmart, Marks and Spencer and the John Lewis Partnership which form part of the current study, the result might be seen to offer some indication of the collective determination to address materiality within the global retail community. The research reveal that the six highest ranked categories of material issues, in descending order, across the retailer sector are product responsibility; human rights; environment, economic factors; labour practices; and social issues, while the top ranked six specific issues are transport; customer health and safety; product and service labelling; diversity and equal opportunity; and prevention of forced and compulsory labour. Although the Governance and Accountancy Institute does not offer any commentary on these rankings the high priority accorded to product responsibility and to human rights, labour practices and customer health and safety, for example, which can clearly influence a retailer's reputation and brand image might be seen to support the earlier arguments that the retailers' approaches to the determination of materiality will reflect their business imperatives rather than a wider commitments to sustainability.

Secondly while a variety of methods are employed in attempting to determine materiality there is a generic issue concerning the nature of the relationship between company interests and stakeholder interests. Where the company, and more specifically its executive management team, is principally, and sometimes seemingly exclusively, responsible for identifying and determining material issues within its sustainability reporting process. As such the company might also be seen to be essentially responsible for identifying its stakeholders and for collecting, collating and articulating their views on the priorities for the company's sustainability strategies. However whether the leading retailers can realistically and comprehensively elicit and represent the views of all their stakeholders remains to be seen. Generally within the business world Banerjee (2008), for example, has argued that *'despite their emancipatory rhetoric, discourses of corporate citizenship, social responsibility and sustainability are defined by narrow business interests and serve to curtail the interests of external stakeholders.'* More specifically Jones et.al (2013) have argued that the UK's leading retailers' definitions of, and strategic approaches to, sustainability can be interpreted as being driven as much by short term business imperatives as by any long term commitments to a transition to a more sustainable future. Thus the accent appears to be upon making efficiency gains across a wide range of economic, social and environmental issues rather than on any genuine commitments to sustainability and to maintaining the integrity and viability of natural ecosystems and communities.

A number of the selected retailers reported seeking to elicit stakeholder opinions on retailers' sustainability priorities and strategies via stakeholder panels and customer surveys and meetings with investors. This certainly suggests some retailers wish to look beyond their own commercial imperatives in determining materiality but Cooper and Owen (2007) council caution arguing that *'whilst the corporate lobby apparently espouses a commitment to stakeholder responsiveness, and even accountability, their claims are pitched at the level of mere rhetoric which ignores key issues such the establishment of rights and transfer of power to stakeholder groups.'* More specifically Cooper and Owen (2007) suggested that *'hierarchical and coercive power prevent the form of accountability that can be achieved through discussion and dialogue'* and that arguably, at best, companies may '*favour shareholders over all other interested groups.'*

Thirdly there are issues about how executive managers and/or stakeholders rank material issues in terms of both of importance and impact and about the nature of the materiality matrices they use to depict materiality. Listing material issues in rank order, for example, effectively fails to depict or to distinguish between the perceived orders of magnitude of importance and impact. Schendler and Toffell (2013), for example, argue that while many of the world's largest companies, including Walmart, *'are working to reduce energy use and waste, and many have integrated sustainability into strategic planning'* ……'*such actions don't meaningfully address the primary barrier to sustainability, climate change.'* Schendler and Toffnell (2013) suggest that *'shareholder analyses of businesses focus almost entirely on operational greening activities and policies, but not on whether companies can continue on their current course in a climate-changed world. In other words, such analyses don't actually measure sustainability.'* Equally critically Schendler and Toffell (2013) further argue that many businesses that claim to be sustainability leaders *'don't recognise the primacy of climate change'* and that many businesses include *'climate in a basket of equally weighted issues'* like oceans, forests or

fisheries' and that such an approach is *'misguided'* in that *'climate vastly trumps (and often includes) those other environmental issues.'* Although the issue of climate change is clearly *'too vast for any single business'* (Schendler and Toffell 2013) the major retailers are in a powerful and pivotal position in global supply chains in that they can exert a powerful influence on both production and consumption.

It is also important to recognise that stakeholders may have very differing perceptions of not just what are material issues but also of the importance of sustainability per se. Lubin and Esty (2014), for example, suggested that while sustainability is becoming increasingly important within corporate strategies and that *'an increasing number of companies are translating their sustainability strategies into financial gains and competitive strength'* this approach is effectively contested in that *'most mainstream investors remain unconvinced that sustainability leadership translates into profit and marketplace success.'* Further Lubin and Esty (2014) argued that *'while some evidence exists linking sustainability leadership to market performance, most mainstream investors discount these findings and remain on the sustainability sidelines'* and that *'sustainability reporting continues to be framed in a language not familiar to mainstream investors.'*

At the same time concerns have also been expressed that the basic dimensions of the matrices that many large companies currently use to determine materiality are effectively not fit for purpose. Mark McElroy, Executive Director of the Center for Sustainable Organizations, for example, argued that *'while it is common practice now for corporate sustainability reports to include materiality matrices, whether or not they serve their purpose is debatable'* (McEvoy 2011). McEvoy's argument is that the majority of large companies have adapted the concept of the materiality matrix, initially favoured by the Global Reporting Initiative, to suit corporate rather than wider environmental, social and economic goals. More specifically he argued that *'instead of considering the impacts on the economy, the environment and society'* as one of the two axes of the materiality matrix as proposed by the Global Reporting Initiative, the matrices contained in the sustainability reports published by many large companies focus *'instead on whether, and to what degree, impacts affect the organisation and/or its business goals'* (McEvoy 2011). More critically McEvoy (2011) claimed that this change *'amounts to a perversion of the idea of materiality in sustainability reporting because it essentially cuts out consideration of what are arguably the most material issues'* namely *the broad social, economic and environmental impacts of an organisation regardless of how they relate to a particular business plan or strategy'* (McEvoy 2011).

Conclusion

The concept of materiality has traditionally been associated with financial reporting but a growing number of large companies are looking to embrace the determination of material issues as an integral part of their approach to sustainability reporting. That said while there is only a limited consensus about what constitutes materiality and a variety of approaches have been adopted to determine material issues, a range of benefits are claimed for those companies which wholeheartedly embrace the concept as an integral part of their corporate sustainability reporting process. Large food retailers have an important role in the supply chain in that they are in a position to drive more sustainable patterns of production and consumption.

However this exploratory research note reveals marked variations in the extent to which the UK's leading food retailers have embraced materiality as part of their sustainability reporting process and there was little or no evidence of a collective sector specific approach to materiality within the food retail community. While five of the UK's top ten food retailers drew attention to materiality in their current sustainability reports, some of these retailers made very limited reference to how they had determined material issues. While the remaining five retailers identified a number of priorities in the sustainability reports and information they publicly posted on their corporate websites they made no explicit reference to materiality. Looking to the future it is far from clear that the UK's leading food retailers will adopt a sector specific approach to the determination of material issues for sustainability reporting. Even if they continue to develop their current approaches to sustainability reporting independently they still seem certain to face major challenges in looking to reconcile the potentially contested relationships between executive management teams, investors and a wider range of stakeholders and in operationalising the concept of materiality and in ranking and/or depicting material issues.
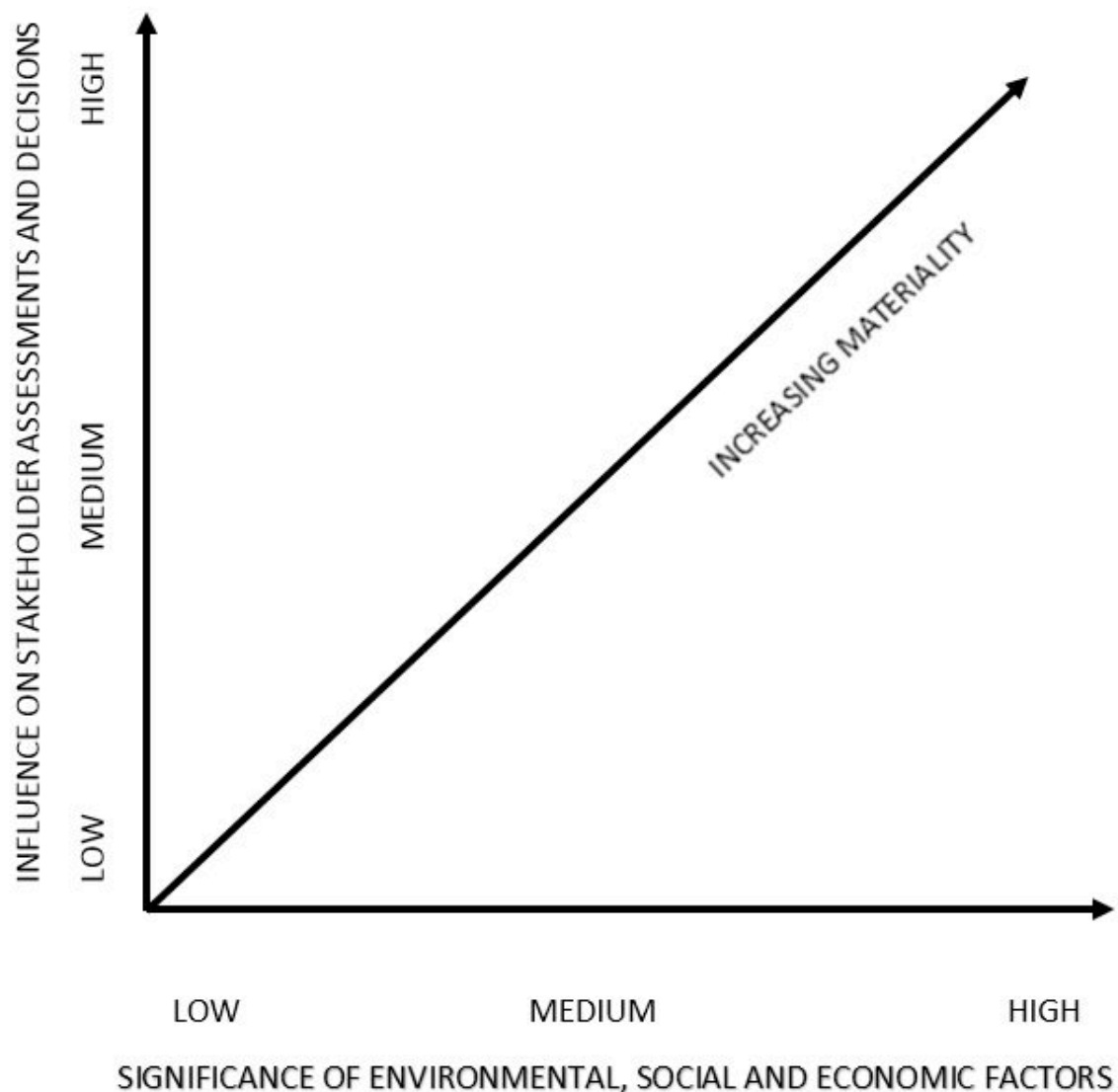
Figure 1 Materiality Matrix

TABLE 1: TOP TEN UK FOOD RETAILERS

FOOD RETAILER	UK RETAIL SALES (2013)(£M)	CORPORATE WEB SITE ADDRESS
Tesco	£43, 057	http://www.tesco.com/
Sainsbury's	£23,921	http://www.sainsburys.co.uk
ASDA	£23, 325	http://www.walmart.com/
Wm. Morrison	£17, 680	http://www.morrisons.com/
The Co-operative Group	£87, 237	http://www.co-operative.coop/
John Lewis Partnership	£5, 754	http://www.johnlewis.com/
Aldi	£5, 275	http://www.aldi.co.uk/
Marks and Spencer	£5, 063	http://www.marksandspencer.com/
Lidl	£3, 436	http://www.lidl.co.uk/
Iceland	£2, 699	http://www.iceland.co.uk/

(Source: Adapted from Retail Week 2014 and Mintel 2014a)

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E-retailers and environmental sustainability: Making the case

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'Technology will make shopping more personalised, connected and accessible but will it improve environmental impact?' (P. Madden 2012)

Case

Aims

The overarching aims of this short student centred case study are to enable students to generate their own case narrative, to explore the contested meanings of the concept of environmental sustainability and to review the extent to which the world's leading E-retailers are addressing the environmental impacts of their businesses and developing environmental sustainability agendas. The case is prefaced by a headline quotation designed to encourage the students, who are generally very much the children of the Internet and E-Commerce age, to think about the environmental impacts of their online shopping behaviour and the challenges this poses for E-retailers.

Industry

E-retailing is the fastest growing element in the retail marketplace and looking to the future it seems certain to play an increasingly important role. In 2014 as part of its annual review of retailing Deloitte (2014) published details of the world's top 50 E-retailers and the top ten (See Table 1) of these E-retailers provides the frame of reference for this case study. The country of origin of these E-retailers varies, though 5 of them are based in the US, Table 1), but their trading activities are potentially global and the percentage of revenue derived from E-commerce as a percentage of total revenue varies from 1.6% to 100%. Wal-Mart, the world's largest retailer, is ranked as the world's third largest E-retailer though its online turnover accounts for less than 2% of the company's total turnover, and while Tesco and the Casino Group (ranked 2nd and 20th respectively in Deloitte's (2014)*' top 250 global retailers* 'generate the vast majority of their turnover from conventional store operations they are major E-retailers. Four companies, Amazon, Beijing Jingdong, Dell and Jia, trade exclusively on line. The Otto Group, a German company founded in 1949, trades via conventional stores and catalogues and online and its E-retailing, which is run via some 60 companies including bonprix, SportScheck and Witt, is now the Group's most important sales channel accounting for some 57% of total revenue. The top ten E-retailers' corporate websites (Table 2) provide a student-centred tutorial opportunity to undertake an exploratory review of the extent to which the world's leading E-retailers are addressing the environmental impact of their business and developing their environmental sustainability agendas.

Challenge

There is a broad consensus that the internet is revolutionising the ways companies do business in nearly all sectors of the economy and nowhere is this more apparent than in the retail sector. Vize et. al. (2013) for example have argued that *'the*

Internet's commercial influence is highly visible in the retail industry' while Ernst and Young (2012) has suggested that Internet, and increasingly widespread mobile access to it, are *'reshaping the retail environment faster than ever, causing retailers and brands to rethink how they currently do business.'* At the same time while people are certainly being presented with seemingly ever more opportunities to consume, less work has been undertaken on the environmental consequences of E-retailing.

More generally in reviewing the *'environmental impacts of the emerging digital economy'* well over a decade ago Sup and Rejeski (2002) posed the questions *'Is E-commerce a truly clean, environmentally benign economy which will simply lead to the substitution of information for physical resource flows along energy and transportation networks?'* or *'alternatively does E-commerce encourage new movements by generating new demands for material and energy that will further deteriorate the fragile environment?'* With this in mind this teaching case study provides an opportunity for students to undertake an exploratory review of the extent to which the world's leading E-retailers are addressing   the environmental impact of their business and developing environmental sustainability agendas. To this end the case study provides the websites of the world's top ten E-retailers (Deloitte 2014) which will enable you, the students, to review the ways in which the world's leading E-retailers are publicly addressing environmental sustainability.

This case study is best suited to tutorial classes of up to 25 students, working in five groups of 5, in a conventional 'flat' classroom around groups of tables, with each group and the tutor having access to a PC or lap top and a communal printer. Each group should be allocated TWO of the ten E-retailers. Each group should then be given 30 minutes to use the allocated E-retailers' website address provided in the case study at the end of these teaching notes to undertake two internet searches using Google as the search engine. Firstly each group should undertake an internet search using each of the two allocated E-retailers names, in turn, along with the key word 'sustainability.' The students should record, and ideally print, samples of the material revealed by this search process.

Focus

This short case study has an analytical focus and provides students with an opportunity to undertake a guided exploratory review of the ways in which the world's leading E-retailers are currently communicating the environmental impact of their business and their environmental sustainability agendas to their customers. It begins with a headline quotation designed to encourage the students, who are very much the children of the Internet and E-Commerce age, to think about the environmental impacts of their online shopping behaviour and the challenges this poses for E-retailers.

Technical Information

The concept of sustainability can be traced back as far as the thirteenth century but in more recent times it re-appeared in the environmental literature in the 1970's (Kamara et. al. 2006) and since then it has attracted increasingly widespread attention. Diesendorf (2000) has argued that *'sustainability'* can be seen as *'the goal or endpoint of a process called sustainable development.'* The most widely

used definition of sustainable development is '*development that meets the needs of the present without compromising the ability of future generations to meet their own needs'* (World Commission on Environment and Development 1987). However defining concept of sustainability is not straightforward and a number of different and contested meanings can be identified.

From a business perspective environmental sustainability is typically defined as making responsible decisions that reduce a company's impact on the environment and on preserving the capability of the environment to support human life (Smallbiz.com undated). Thus environmental sustainability ideally forces companies to look beyond short term gains at the long term impact they are having on the natural world. More critically a distinction is often made, for example, between 'weak' and 'strong' sustainability and Roper (2012) suggests that '*weak sustainability prioritizes economic development, while strong sustainability subordinates economies to the natural environment and society, acknowledging ecological limits to growth.'*

During the past two decades growing numbers of companies have begun to develop environmental sustainability agendas as an integral component of their business strategies. A number of factors seem to be important in helping to explain this trend. These include the need to comply with a growing volume of environmental and social legislation and regulation; concerns about the cost and scarcity of natural resources; greater public and shareholder awareness of the importance of socially conscious financial investments; the growing media coverage of the activities of a wide range of anti-corporate pressure groups; and more general changes in social attitudes and values within modern capitalist societies. More specifically a growing number of companies are looking to publicly emphasize and demonstrate their commitment to environmental sustainability in an attempt to help to differentiate themselves from their competitors and to enhance their corporate brand and its reputation.

As interest in sustainability has gathered momentum so a number of attempts have been made to develop theoretical frameworks connecting nature and society and to emphasise that social and economic development cannot be viewed in isolation from the natural environment. Amsler (2009), for example, has argued that '*the contested politics and ambiguities of sustainability discourses'* can be embraced to develop a '*critical theory of sustainability.'* She further argues that current debates should be located '*within a broader tradition of social criticism'* and that '*competing interpretations of sustainability'* should be viewed as '*invitations to explore the complex processes through which competing visions of just futures are produced, resisted and realized.'* Castro (2004) has sought to lay the foundations for a more radical theory of sustainability by questioning the very possibility of sustainable development under capitalism and arguing that economic growth relies upon the continuing and inevitable exploitation of natural capital.

TEACHING NOTE

Abstract

This case study provides students with an opportunity to discover how the world's leading E-retailers define and address environmental sustainability.

Topic (Keywords) - E-retailing, environmental sustainability

Usage

This short case study has been adapted from a research paper for undergraduate students and while it has two specific audiences it can also be used more generally. The first audience is business and management students following a wide range of modules, including business and society, consumer behaviour, corporate responsibility and managing sustainability. The second audience is students pursuing more specialist retailing, consumer studies and electronic commerce degrees.　More generally the case study can be used on 'Contemporary Issus' modules within general business and management programmes.

Learning Objectives

The case study has three/four learning objectives namely:

- To develop student awareness of the scope and complexity of environmental sustainability. (This objective is important in enabling students to develop their appreciation of the varied and contested interpretations of environmental sustainability.)
- To provide students with an appreciation of the main environmental issues and agendas being publicly addressed by the world's leading E-retailers. (This objective will help to inform and enhance student understanding of the variety of impacts retailers, and more specifically E-retailers, have on the natural environment.)
- To encourage students to search a sample of the leading e-retailers' corporate and online home page websites to collect information on environmental sustainability. (This objective will provide students with an opportunity to navigate selected corporate websites to collect data to participate in the case study. More generally this will encourage students to search corporate websites when undertaking case studies and coursework assignments.)
- To encourage students to analyse and debate the complex issues which leading E-retailers face in addressing the environmental impact of their businesses and in communicating information on environmental sustainability to their customers. (This objective is important in helping students to see environmental impacts and sustainability through the eyes of E-retailers, and more generally of retailers, and to debate if, and how, retailers are looking to address the growing social and political interest in sustainability.)

Discussion Questions

These discussion questions are directly linked to the learning objectives and in responding to them students should seek to link their general awareness of environmental sustainability with the specific empirical material gathered in their internet search of their allocated E-retailers' corporate and online websites. Some of the questions are effectively open ended and it is important that the students appreciate that they do not have simple or definitive answers and the students should be encouraged to consider the legitimacy of diverse and often contradictory opinions and arguments.

Question 1: How do businesses typically define environmental sustainability, why is it becoming increasingly important for them, and in what ways do ecological definitions of environmental sustainability differ from those commonly used in the business world?

Question 2; What are the major environmental issues currently being publicly addressed by the world's leading E-retailers, do you have any sense that the leading E-retailers consider some issues to be more important than others and are they addressing these issues in a similar way?

Question 3: What are the advantages and disadvantages of collecting information on environmental sustainability online from e-retailers' corporate websites and their online homepages? (This question can also be broadened to include all companies)

Question 4: What are the issues the leading E-retailers face in addressing environmental sustainability while continuing to pursue growth and increase market share within a fiercely competitive business environment?

Answers

Question1: Environmental sustainability can be typically defined as making decisions and taking actions that are in the interests of protecting the natural world, with particular emphasis on preserving the capability of the environment to support human life. It is an important topic at the present time, as more and more people are realising the full impact that businesses and individuals can have on the environment. More radically environmental sustainability emphasises prioritizing the importance of nature and natural processes over economic activity and economic growth.

Question 2: The students should be able to identify a wide range of environmental issues (including climate change, waste management, energy conservation, water management, nature conservation) from their internet searches. They should draw attention to the fact that a minority of the leading E-retailers publicly provide no information on their approach to environmental sustainability and they may identify that some issues, for example, energy efficiency, might be seem to be given greater priority than nature conservation. More importantly they should also draw attention to the fact that the leading E-retailers do not draw customers' attention to environmental sustainability issues at the online point of sale, rather their online marketing messages currently appear to be designed to entice customers to consume rather than to foster more sustainable patterns of consumption.

Question 3: Students should draw attention to the fact that corporate websites offer an easily accessible and up to date source of data which can be seen to reflect a company's public position. At the same time if, and as this case shows this is an issue in itself, such information is publicly available it may be selective, it not accurately reflecting a company's strategy and/or operational practice and it may be part of an environmental public relations exercise, often popularly described as 'green wash.' At the same time it is important to note that relatively little of the information the e-retailers publicly provide on environmental sustainability is subjected to independent external assurance.

Question 4: This is an open ended question which in some ways lies at the heart of the dilemma all companies face if they genuinely want, in the words of Sir Terry Leahy, the former Chief Executive of Tesco, *'to consume, to be green and to grow'* (The Global Coca Cola Council Forum 2011). Students may uncover a number of themes. On the one hand, for example, they may suggest that E-retailers need to continue to more actively pursue a wide range of efficiency and recycling measures and invest heavily in new 'green technologies' in an attempt to drive down the use of environmental resources and to help maintain the integrity of natural ecosystems. On the other hand E-retailers may need to positively choice edit more environmentally conscious products into their ranges and to communicate environmental sustainability messages more prominently on their online web pages. More generally and fundamentally there are perspectives rooted more in the social sciences than in the business and management disciplines that would question the very possibility of environmental sustainability under capitalism arguing that economic growth relies on the continuing and inevitable exploitation of natural capital.)

Teaching Tips

The case study and an outline of group activities should be issued to the students one week before the class. Ideally the case study spans two one hour tutorials, with a free standing group work session between the two tutorials, but with more structured tutor support, it can be adapted to run as a two hour session with a short break if timetabling opportunities or constraints so dictate. In the first tutorial the context and structure of the case study can be briefly presented and then the student groups are given the opportunity to interrogate the E-retailers corporate websites as outlined earlier.

During the week, or a normal timetabled period, between the two tutorials each student group should meet to collate and assess the material gathered during the internet searches in the first tutorial. Each group should discuss and draw up a summary of both the reports and information each of their allocated E-retailers publicly post on their corporate websites and the environmental sustainability and marketing messages on their online homepages. One member of each group should be appointed as spokesperson for the group for the second tutorial. Here it is important to remember that the volume and the nature of the material on environmental sustainability may vary considerably between E-retailers.

During the second tutorial is a structured tutor led discussion which allows the students to debate the case study questions above and finally the tutor can briefly summarise and reinforce the main threads of the group discussion, to link these to the learning objectives, to encourage the students to continue to reflect on the role of environmental sustainability within E-retailing and the wider business community, and to place the case study within the broader context of the module the students are following.

Epilogue

In advertising its 2012 Bi-Annual Conference on Business and the Environment Conference, Globe, a not for profit organisation *'dedicated to finding practical business oriented solutions to the world's environmental problems'* posed the

questions *'is sustainable retailing an oxymoron?'* and *'is the overarching need to reduce consumption simply at odds with the very foundation of retailing?'*(Globe 2012).

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Table 1: The World's Top Ten E-Retailers

E-Retailer	Country of Origin	E-Commerce as % Retail Turnover
Amazon	U.S.	100
Apple	U.S.	31.4
Wal-Mart	U.S.	1.5
Otto Group	Germany	57.1
Beijing Jingdong	China	100
Tesco	U.K.	4.7
Liberty Interactive	U.S.	43.9
Dell	U.S	100
Casino	France	6.4
JIA	China	100

[Source: Adapted from Deloitte (2014) 'Global Powers of Retailing 2014']

Table 2: The World's top ten e-retailers corporate web sites

Amazon.com http://www.amazon.com
Apple Inc. http://www.apple.com/
Wal-Mart http://www.walmart.com/
Otto Group http://www.ottogroup.com/en/index.php
Beijing Jingdong http://en.jd.com/
Tesco http://www.tesco.com/
Liberty Interactive http://www.libertyinteractive.com/
Dell http://www.dell.com/
Casino http://www.groupe-casino.fr/en
Jia http://www.jia.com/

Analysing high performance in the manufacturing industry: the case of WP Haton

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Abstract

In order to reach high performance, manufacturing companies need to develop agile strategies and react quickly to changes in customer preferences. To be able to do this, manufacturing companies have implemented many new practices, from techniques such as MRP to supply chain management. A recent promising technique is the high performance organization (HPO) framework, a comprehensive and scientifically validated model which incorporates the factors that an organization has to pay dedicated attention to in order to achieve sustainable high performance. The HPO Framework can be used both to analyse an organization on the areas it needs to pay attention to in order to become an HPO, and to analyse an organisation which is already an HPO on its strong areas in order to identify best ideas. In this article the HPO Framework is used in the latter way, i.e. to analyse a manufacturing HPO WP Haton, on its strong areas in order to identify best ideas that potentially can be used by other organizations in their transformation to HPO.

Key words: high performance organisations, HPO Framework, manufacturing, excellence, performance

Introduction

In a study of databases containing information on manufacturing strategies, practices and performances of more than 700 manufacturing companies, Szász (2012) showed that in order to reach high performance manufacturing companies need to develop agile strategies and react quickly to changes in customer preferences. To be able to do this, manufacturing companies have implemented many new strategic, tactical and operational practices, from techniques such as MRP to supply chain management (Ortega et al., 2012). Tickle et al. (2105) looked into the awareness, use and perceived effectiveness of 21 improvement techniques in the manufacturing sector in five countries and found that manufacturing companies are prone to using techniques like lean, QFD (quality function deployment, to measure customer satisfaction), quality management systems, six sigma and 5S (short, straighten, shine, standardize, sustain). Interestingly, more comprehensive techniques like Business Excellence and TQM were among the least used techniques. An improvement technique that quite recently has become popular in the manufacturing industry is that of the high performance work systems (HPWS). Leffakis and Moran (2014) found that implementing HPWS, essentially a bundle of complementary HMR practices, significantly increased operational performance of US mass customization manufacturers. Their findings were mirrored by Mao et al. (2013) who discovered that applying HPWS practices in Chinese manufacturing companies had a positive effect on employees' commitment and

their job satisfaction. That applying improvement techniques is worthwhile was shown by Kim et al. (2008) who found, in a study of American manufacturing SMEs, that those manufacturing companies that dedicatedly improved their operations, supply chain and market orientation outperformed companies that did not do this on multiple non-financial (such as delivery times, quality, new customer gains, customer retention) and financial (such as cost reductions, asset utilization, market share, return on investment, net profit) ratios. Belekoukias et al. (2014) investigated the impact of five lean methods (JIT, automation, kaizen, total productive maintenance, value stream mapping) on the operational performance of 140 manufacturing organizations and identified that JIT and automation had the biggest effect on operational performance while kaizen, TPM and VSM had a lesser or even negative effect on performance.

So it seems worthwhile for manufacturing companies to invest in the implementation of improvement techniques as a means to improve their organizational performance. Many of the companies have in the past decades turned to the technique of lean management. Moyano-Fuentes and Sacristán-Díaz (2012) looked at multiple empirical studies into the relation between lean and organizational performance and found that the main benefits of lean consisted of reducing process variability, scraps, and rework time, which in turn reduced production costs and lead times and increased process flexibility and quality conformance. Bortolotti et al. (2015) analysed a sample of the High Performance Manufacturing, which consisted of manufacturing plants operating in mechanical, electronics, and transportation equipment sectors in ten countries, and found that manufacturing plants that implemented lean successfully had, in comparison to plants with unsuccessful implementations, a culture of higher institutional collectivism, a future orientation, a humane orientation, and a lower level of assertiveness. In addition, these plants used so-called soft lean practices more extensively (i.e. lean practices concerning people and relations, problem solving, employees' training to perform multiple tasks, supplier partnerships, customer involvement, and continuous improvement). However, applying lean management does not always lead to positive organizational results. Camacho-Miñano et al. (2013), in an extensive study of the empirical literature into the effect of lean management on financial performance, found that profitability did not always increase when lean management was implemented. Bouville and Allis (2014) even found negative consequences of the introduction of lean management on the job satisfaction, employees' health and employees' intention to stay at a French multinational. A reason for these contradictory results could be that lean management mainly aims at improving operational processes and as a logical consequence increases operational and not organizational performance. This possible explanation is supported by Jasti et al. (2015) who uncovered, in a review of 546 articles on lean management published between 1988 and 2011, that most research studies concentrated on the application of lean management in operations and not across the complete organization. This finding is mirrored by Lesmeister et al. (2012, p. 17) who remarked that in manufacturing companies most improvement programs focus on shop-floor operations and "leaning operations which is critical but ignores the important fact that organizational factors influencing the strength of the internal organization can block or pave the way for high-performance manufacturing."

Thus there is a need for a more holistic technique which can be used to analyse and subsequently improve the organizational performance of manufacturing companies. To have a technique like that available is all the more important as Camacho-Miñano et al. (2013) noticed in their aforementioned literate review that organizations that used the most comprehensive models (i.e. considering financial and operational indicators and contextual factors) did experience a positive and significant impact of lean on financial performance. Such a tool is in this article introduced to the manufacturing industry: the high performance organization (HPO) framework (Waal, 2012b). This framework was developed based on data from many industries, including the manufacturing industry, and has thus far been applied in the diamond (Waal et al, 2014a), education (Waal and Sultan, 2012), banking (Waal and Frijns, 2011), food (Waal and Haas, 2013), governmental (Waal et al, 2014c), insurance (Honyenuga et al., 2014), media (Waal et al., 2015), training (Waal et al, 2014b) and transport (Waal and Frijns, 2014) sectors. The HPO Framework can be used to analyse an organization on the areas it needs to pay attention to in order to become an HPO, and it can be used to analyse an HPO on its strong areas in order to identify best ideas that potentially could be used by other organizations in their transformation to HPO. In this article the HPO Framework is used in the latter way, i.e. to analyse a manufacturing HPO, WP Haton, on its strong areas in order to identify best ideas. The remainder of this article is structured as follows. In the next two sections the HPO Framework and the case company are described. Subsequently the research approach and the identified best ideas are discussed. The article ends with a conclusion.

The HPO Framework

The high performance organization (HPO) framework was developed based on a descriptive literature review (Phase 1) and empirical study in the form of a worldwide questionnaire (Phase 2) (Waal, 2006 rev. 2010, 2012a+b). The first phase of the study consisted of collecting the studies on high performance and excellence that were to be included in the empirical study. Criteria for including studies in the research were that the study: (1) was aimed specifically at identifying HPO factors or best practices; (2) consisted of either a survey with a sufficient large number of respondents, so that its results could be assumed to be (fairly) generic, or of in-depth case studies of several companies so the results were at least valid for more than one organization; (3) employed triangulation by using more than one research method; and (4) included written documentation containing an account and justification of the research method, research approach and selection of the research population, a well-described analysis, and retraceable results and conclusions allowing assessment of the quality of the research method. The literature search yielded 290 studies which satisfied all or some of the four criteria. The identification process of the HPO characteristics consisted of a succession of steps. First, elements were extracted from each of the publications that the authors themselves regarded as essential for high performance. These elements were then entered in a matrix which listed all the factors included in the framework. Because different authors used different terminologies in their publications, similar elements were placed in groups under a factor and each group - later to be named 'characteristic'- was given an appropriate description. Subsequently, a matrix was constructed for each factor listing a number of characteristics. A total of 189 characteristics were identified. After that, the 'weighted importance', i.e. the number of times a characteristic occurred in the individual study categories, was calculated

for each of the characteristics. Finally, the characteristics with a weighted importance of at least six percent were chosen as the HPO characteristics that potentially make up a HPO, this were 35 characteristics.

In Phase 2 the 35 potential HPO characteristics were included in a questionnaire which was administered during lectures and workshops given to managers by the author and his colleagues all over the world. The respondents of the questionnaire were asked to indicate how well their organization performed on the various HPO characteristics on a scale of 1 (very poor) to 10 (excellent) and also how its organizational results compared with its peer group. Two types of competitive performance were established (Matear et al., 2004): (1) Relative Performance (RP) versus competitors: RP = 1 – ([RPT - RPW] / [RPT]), in which RPT = total number of competitors and RPW = number of competitors with worse performance; (2) Historic Performance (HP) of the past five years (possible answers: worse, the same, or better). These subjective measures of organizational performance are accepted indicators of real performance (Dawes, 1999; Heap and Bolton, 2004; Jing and Avery, 2008). The questionnaire yielded 2015 responses of 1470 organizations. With a non-parametric Mann-Whitney test 35 characteristics, categorized in five factors, with both a significant and a strong correlation with organizational performance were extracted and identified. The factor scales showed acceptable reliability (Hair et al., 1998) with Cronbach alpha values close to or above 0.60.

The research yielded the following five HPO factors (in the Appendix the 35 HPO characteristics are given):

1. *Management Quality*. Belief and trust in others and fair treatment are encouraged in an HPO. Managers are trustworthy, live with integrity, show commitment, enthusiasm, and respect, and have a decisive, action-focused decision-making style. Management holds people accountable for their results by maintaining clear accountability for performance. Values and strategy are communicated throughout the organization, so everyone knows and embraces these.

2. *Openness and Action-Orientation*. An HPO has an open culture, which means that management values the opinions of employees and involves them in important organizational processes. Making mistakes is allowed and is regarded as an opportunity to learn. Employees spend a lot of time on dialogue, knowledge exchange, and learning, to develop new ideas aimed at increasing their performance and make the organization performance-driven. Managers are personally involved in experimenting thereby fostering an environment of change in the organization.

3. *Long-Term Orientation*. An HPO grows through partnerships with suppliers and customers, so long-term commitment is extended to all stakeholders. Vacancies are filled by high-potential internal candidates first, and people are encouraged to become leaders. An HPO creates a safe and secure workplace (both physical and mental), and dismisses employees only as a last resort.

4. *Continuous Improvement and Renewal*. An HPO compensates for dying strategies by renewing them and making them unique. The organization continuously improves, simplifies and aligns its processes and innovates its products and services, creating new sources of competitive advantage to

respond to market developments. Furthermore, the HPO manages its core competences efficiently, and sources out non-core competences.

5. *Employee Quality*. An HPO assembles and recruits a diverse and complementary management team and workforce with maximum work flexibility. The workforce is trained to be resilient and flexible. They are encouraged to develop their skills to accomplish extraordinary results and are held responsible for their performance, as a result of which creativity is increased, leading to better results.

The HPO research shows that there is a direct and positive relationship between the five HPO factors and competitive performance: the higher the scores on the HPO factors (HPO scores), the better the results of the organization, and the lower the HPO scores the lower the competitive performance. The research also shows that all HPO factors need to have equal scores, and that when the organization achieves an average score of 8.5 or higher on all factors it can be considered to be an HPO. An organization can evaluate its HPO status by conducting an HPO Diagnosis. During this diagnosis management and employees fill in the HPO Questionnaire, consisting of questions based on the 35 HPO characteristics with possible answers on an absolute scale of 1 (very poor) to 10 (excellent). The individual scores are averaged to scores on the HPO factors for the complete organization. These average scores indicate for which HPO factors and HPO characteristics the organization has to take improvement action in order to become an HPO.
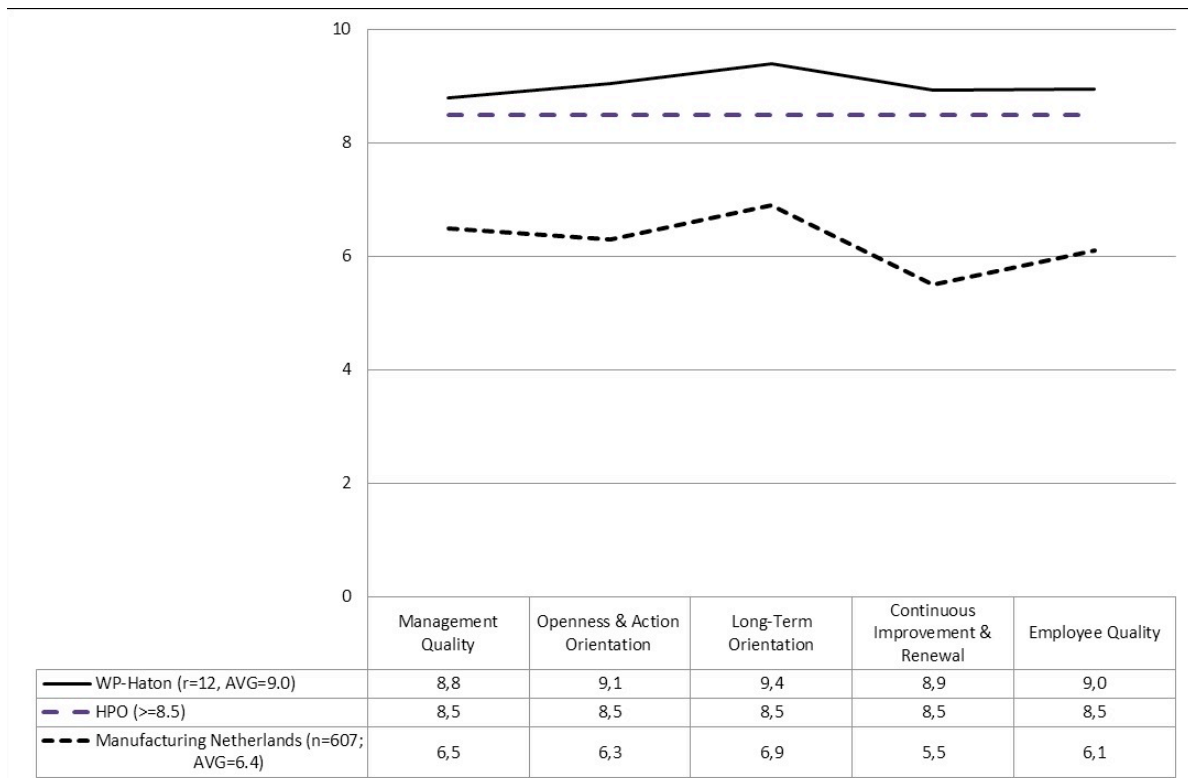
The Case Company: WP Haton

WP Haton is a Dutch company specializing in manufacturing bakery equipment for Dough Handling (WP Haton, 2015), which can run from a small traditional bakery to an industrial line of one hundred meters. The company is part of the WP Bakery Group based in Germany and employed 139 people at the time of the research. The mission of the company, "WP-Haton – the premium brand in dough make-up systems worldwide," is translated in a vision of being leading in technology, having competence in workmanship, providing emotion by innovation, approaching implementations by transfer of know-how within and know-how carriers around the organization, and striving for co-creation of concepts with customers and suppliers. This vision has been converted in the following goals: a strong financial structure, continuous growth, pro-active in marketing and service, image leader in the bakery world, and an attractive employer. The company devises, manufactures and supplies innovative total concepts for automated dough processing in bakeries, in a wide range of modularized production lines with names such as Crustica™, Baguetta™, Classica™, Instant™, Easy Toast™, Ryena™ and Sweety™, and sells these worldwide. WP Haton strives for market recognition for the quality, variety, longevity and reliability of these product lines. In addition, the company stands for open communication, and honest and sincere commitment with its customers resulting in pleasant and professional relationships where the competitive advantage of the customers is WP Haton's guiding principle. As part of this commitment to customers the company developed a training centre, the Haton Dough Centre, as a separate component of the production factory, right in the middle of the operating area. Here WP Bakery Group equipment is demonstrated and tested and bakers, agents, distributors, technicians and their affiliates receive detailed information on the benefits and use of the production line and equipment.

Research Approach

After one of the presentations the author regularly gives on the topic of HPO he was approached by representatives of WP Haton who claimed that at their company many of the characteristics of HPO were already in place and practiced. This naturally raised the interest of the author and an appointment was made for him to visit WP Haton and interview several of its representatives. In preparation the HPO Questionnaire was distributed among a sample of approximately 60 of WH Haton's personnel. This sample was selected by WP Haton's finance director who made sure a cross-section of the company's personnel was asked to participate. In total 12 valid questionnaires were received back, 2 from higher management, 6 from middle management, and 4 from employees. Figure 1 depicts the HPO scores for WP Haton, as calculated from these 12 questionnaires. The appendix lists the detailed scores for the 35 HPO characteristics for the total company, and for higher management, middle management, and employees.

Figure 1: The HPO scores of WP Haton, compared with the average scores for the Dutch manufacturing industry

	Management Quality	Openness & Action Orientation	Long-Term Orientation	Continuous Improvement & Renewal	Employee Quality
WP-Haton (r=12, AVG=9.0)	8,8	9,1	9,4	8,9	9,0
HPO (>=8.5)	8,5	8,5	8,5	8,5	8,5
Manufacturing Netherlands (n=607; AVG=6.4)	6,5	6,3	6,9	5,5	6,1

An HPO scores at least an 8.5 on each of the HPO Factors (Waal, 2012b) and, as Figure 1 shows, based on the received HPO Questionnaires WP Haton is clearly an HPO. The company also scores much higher than the average Dutch manufacturing company, as the average score for the manufacturing industry (as calculated from the data collected in the HPO database of the author from manufacturing companies in the Netherlands) is 6.4 compared to WP Haton's 9.0 average score. It is interesting to see that in itself WP Haton seems to basically be a typical Dutch manufacturing company as the shapes of the HPO lines for WP Haton and the Dutch manufacturing industry more or less match: WP Haton's line is

less outspoken and has a slight dip at HPO Factor Management Quality but for the rest the graphs are comparable. This means that WP Haton., although operating in the same environment as its peer group, seems to be doing everything related to high performance much better than this peer group. As the HPO definition predicts, this difference should also be seen in the financial and non-financial results of WP Haton. This is indeed the case as the company had on average over the past five years an EBIT (earnings before interest and tax) of 7 to 8 percent while its peer group scores between 4 and 6 percent (ING, 2014). In the past two years the efficiency of the company also increased: with 32 employees less the turnover increased 11 percent while another 15 to 20 percent efficiency gain is expected this year.

The author visited the company at its location in the Dutch town of Panningen where he got a tour of the facilities and spoke to several employees on the work floor. Subsequently he conducted an interview with two representatives from the company, the finance director and the project manager. This interview was taped and transcribed by a third party. Thereafter this article was written based on this transcription, and the first draft was send to the interviewees for review. The article was updated and permission for publication was obtained from the company.

WP Haton's Best Ideas

In this section the identified best ideas as practiced at WP Haton are described. These ideas are grouped according to groups of HPO characteristics which have the highest scores (see the Appendix).

Unique strategy/client orientation

This sub-section looks at how WP Haton deals with the HPO characteristics 'The organization has adopted a strategy that sets it clearly apart from other organizations' and 'The organization is aimed at servicing the customers as best as possible.' WP Haton no longer looks at which machine it can sell to the customer but concentrates on devising and subsequently selling a customized 'bread solution' to the client which nearly always consist of a complete production line and no longer individual machines. This is emphatically done in co-creation with customers. This concept of 'Think in Bread, not in Steel' made WP Haton a unique company as most competitors in the industry only sold individual machines and thus were not able to offer a complete bread production line. However, soon competitors started to imitate this concept and thus WP Haton had to invent a new concept. This was done in the form of the so-called Haton Experience Centre which basically is an experience hall which was created in the middle of the company's production facility in Panningen. In this hall the various machines on offer are installed and customers can play around and test these. Therefore the hall is not a sales demonstration place where customers can look but not touch, it is expressly intended for people to actually work with these machines. WP Haton employs two bakers, named dough technologists, who help visiting bakers (the clients) look for and devise specific solutions for their bread production, either on their current machine or on another WP Haton machine. In addition, the technologists can show customers, before they install the production line at their facilities, how to achieve the proper settings for their machines which saves customers a lot of time and aggravation. In the past year 92 organizations, with in total 300 people, paid a visit

to the bread factory and having this unique hall has increased both the reputation of WP Haton as a leading company and its sales. In addition WP Haton has a 'Bread Laboratory' in which it develops new and more cost-efficient way for creating various bread types. This again is always done in co-creation with customers whose bakers, together with WP Haton's dough technologists look at how WP Haton's machines can optimally be adjusted.

Another concept the company devised is 'Blue Value' which is based on pro-active service thinking. Most service delivery is reactive where a company reacts on a particular request or complaint of one of its customers. WP Haton has created an electronic connection (telemetry) between its machines at customers' locations and headquarters in Panningen. From there these customers' machines are constantly monitored on anomalies in such a way that WP Haton can warn a particular client when something out of the ordinary happens: "We can see that during the night shift you experience on the third machine in the fourth line regular malfunctions. We suspect this is due to a wrong setting on this machine by operator XYZ, as he is always on duty during this shift. We recommend giving this operator an extra training so he knows exactly what to do. And this will increase your efficiency form the current 85 percent back to 93 percent." Clients appreciate this 'Blue Control' service a lot as it makes it possible for them to correct inefficiencies quicker than normal and even to prevent problems from actually occurring. In addition WP Haton gives every client a 'Blue Box' which is a first aid case which contains the parts of the machines located at the client which suffer most from wear and tear. This makes it possible for the client's engineers to immediately fix a problem instead of having to wait for WP Haton to ship the right parts. This is especially important with international clients where it could take several days to get a new part on their location, creating much inefficiencies and loss of revenue. In this way WP Haton is basically selling business continuity to its clients.

Process improvement

This sub-section looks at how WP Haton deals with the HPO characteristics 'In the organization processes are continuously improved,' 'In the organization processes are continuously simplified' and 'In the organization processes are continuously aligned'. Process improvements at WP Haton are undertaken in consultation with the company's suppliers. An example of this is the reduction in inventory. WP Haton now tells its suppliers that it is budgeting to produce 35 pieces of a particular bakery machine in the upcoming year. At any given moment however WP Haton will only be working on one machine at a time so it only needs parts for one machine. Therefore it leaves it to the production planning of the suppliers themselves when and how many parts they want to produce at a given time, as long as there are always enough parts ready on call for one machine to be produced. This lowers the inventory costs at WP Haton while at the same time increasing production flexibility at the suppliers, a clear win-win situation. Inside WP Haton the production employees are always looking for ways to standardize the workflow. One important way has been the use of standardized trolleys per type of machine. In this trolley all parts for the machine are placed after which it is brought to the assembly area. In this way the production employee has all parts at his disposal while at the same time it is visually easy for the foreman to check the progress of the work, causing lead times having been halved. These trolleys are also used at the suppliers who hang their parts directly in the trolley, saving on costly packing material. This cost

saving has been equally split between WP Haton and the suppliers. Another improvement has been to let employees rotate over the departments to learn what these departments are doing and, even more important, to see first-hand the effects of the actions of their department on the other departments. For instance, the technical draftsman who designed a new machine on paper has helped to actually build the machine on the production floor, so he was able to see whether what worked on paper actually also worked in practice. This rotation has created many process simplifications and better process alignments over the complete manufacturing process.

Innovation

This sub-section looks at how WP Haton deals with the HPO characteristics 'The organization continuously innovates its core competencies' and 'The organization continuously innovates its products, processes and services.' WP Haton has increased the innovativeness capability of the company by making a controversial move: abandoning the R&D department. The reasons for this were that the physical door of the department turned out to be a psychological barrier, in the sense that not many production employees dared to walk into the office of the highly-educated R&D people; an excuse for other departments to figuratively speaking throw any problems or issues they encountered over the wall into the R&D department; and R&D people increasingly invented complicated solutions which were either too expensive for customers or too difficult for them to put into practice. None of these occurrences helped WP Haton to be very innovative, so it was decided to physically abandon the R&D department, let go of several R&D people, and place the remainder R&D personnel on the work floor, amidst the production staff and the machinery in the central based 'Blue Innovation Centre.' This made it easier for the latter to approach R&D personnel with questions and also, because there were less R&D people to give support, production personnel increasingly needed to come up with their own ideas and solutions. As an added benefit the solutions production and R&D personnel now jointly came up turned out to be very practical of nature which expressed themselves in immediate efficiency and cost gains. One of these mutual innovations was the modular construction of machines which made it easier to assemble a new machine and to swap parts between machines. Another benefit WP Hatton noticed from placing R&D people on the production floor was that R&D people started to talk more the language of production personnel which was much more visual than word-based, making it possible for production personnel (who often had started directly out of high school without any further education) to express their practical ideas.

Involving employees

This sub-section looks at how WP Haton deals with the HPO characteristics 'The management of the organization frequently engages in a dialogue with employees,' 'Organizational members spend much time on communication, knowledge exchange and learning' and 'Organizational members are always involved in important processes.' The management asks employees to be responsible for certain areas of the facility and treat these areas as being of themselves. This means there is a particular employee in charge of the Reception, the canteen, or the Haton Experience Centre and these employees are constantly busy with improving their area in such a way that visiting customers can be impressed and

satisfied. This way of working is a consequence of the philosophy of management which gives a lot of responsibility to employees, under the motto of "You want Haton to be a success? Then we want to have your contribution!" This means that management agrees targets and deadlines with employees and then let them free in their way of execution. There is mutual trust that 'an agreement is an agreement' and that management will be informed in case of any severe problems. Another appearance is that meetings have changed of character. Where these used to be a place where employees mainly 'dumped' their problems on management table, they have now changed in discussion forums where employees put forward their problems and ideas for improvement, after which they are discussed and a course of action is mutually agreed upon. This is illustrated by a saying at WP Haton: "We have stopped with meetings and have started with talking to each other again." To facilitate this culture most rooms in the building don't have doors or even walls anymore so it easy for people to see each other and to stop by to have a conversation. In addition the emphasis on involving employees at WP Haton has led to a culture where every idea is taken seriously, no matter on which organizational level it originated.

Quality of management

This sub-section looks at how WP Haton deals with the HPO characteristics concerning the quality of management. The company expects its managers to frequently walk the floor and interact with personnel, in such a way that they get to know the people, their situation, their family circumstances, and their needs and wishes. This walking around also makes it easier for them to pick up on problems and on any ideas employees might have and to have regular dialogues. In addition it creates a support basis among the people for their managers which makes it easier for them to get things done. At the same time managers are expected to set clear boundaries for employees ("you can go so far and not further") and a clear course for their department and for the company as a whole. At the same time managers do no longer look at the time employees are physically present. The company has gotten rid of its time-clock which was experienced by employees as a tool of repression which always measured time to their disadvantage. Instead both managers and employees have become result-oriented around the jobs to be done: "This machine has to be ready at the end of Friday, so let's plan in the team around that." Management does control the agreements made but not for the sake of controlling the quality delivered by employees or for second-guessing their work but for the sake of verification of the progress made so customers can be notified if any delay arises, and for continuously identifying opportunities for improvement. This control is associated with management giving employees regular compliments, treating them on cake, providing them with additional training as a reward, or giving them a new challenging job in the company. Finally management is charged not with getting employees, and themselves, out of their comfort zone as the company has noticed that the results of this were often mediocre, you can only get so good at something you were bad at. Instead, management strives to expand everyone's comfort zone to the maximum by coaching employees and colleagues, and by providing enough training to employees and to themselves.

Relations with stakeholders

This sub-section looks at how WP Haton deals with the HPO characteristics 'The organization grows through partnerships with suppliers and/or customers' and 'The organization maintains good and long-term relationships with all stakeholders.' WP Haton takes corporate social responsibility seriously and practices in various forms. One of them is some of WP Haton's employees teach on technical academies where they specifically convey the message that technique is fun and worthwhile. Another is to help people who are on the dole to a new job by creating not only positions in WP Haton where these people can gain much needed work experience but also by visiting employers in the region to ask them to create similar opportunities. At WP Haton these people are not left to their own devices but they each get a coach who coaches and nurtures them in a way that they can develop themselves and can get off the dole permanently.

Conclusion

At the end of the visit of the author to the case company it was agreed with WP Haton's management that the HPO Framework was able to accurately identify the areas where the company excelled. This gave the possibility to target the interview questions precisely and also to give direction to the discussion held during the walk around the production floor, in order to efficiently gather the information for the best ideas. As such, the framework turned out to be a useful analysis tool for the manufacturing industry. At the same time, management remarked that the scores of the HPO Questionnaire provided them with an area it wanted to pay more attention to in the coming year, in order to improve WP Haton even further. This area was that of performance management, consisting of the HPO characteristics 'In the organization everything that matters to the organization's performance is explicitly reported' and 'In the organization both financial and non-financial information is reported to organizational members.' This was an added bonus for WP Haton's management from the HPO research done at their company and as such they were not only happy to share their best ideas with other companies, both inside and outside the manufacturing industry, but also to have learned something themselves.

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Appendix

This appendix lists the 35 characteristics of the five HPO factors and the scores for WP Haton (total scores, and scores for higher and middle management and employees)

HPO factor	Aspect	Characteristic	Total	Higher management (n=2)	Middle Management (n=6)	Employees (n=4)
Continuous improvement	1	The organization has adopted a strategy that sets it clearly apart from other organizations.	9.0	9.5	8.8	9.0
Continuous improvement	2	In the organization processes are continuously improved.	9.2	10.0	9,0	9.0
Continuous improvement	3	In the organization processes are continuously simplified.	9.1	10.0	8.8	9.0
Continuous improvement	4	In the organization processes are continuously aligned.	8.5	9.0	8.3	8.5
Continuous improvement	5	In the organization everything that matters to the organization's performance is explicitly reported.	8.4	8.5	9.0	8.0
Continuous improvement	6	In the organization both financial and non-financial information is reported to organizational members.	8.7	6.5	9.0	9.2
Continuous improvement	7	The organization continuously innovates its core competencies.	9.4	10.0	9.0	9.5
Continuous improvement	8	The organization continuously innovates its products, processes and services.	9.2	10.0	9.3	8.8
Openness & Action Orientation	9	The management of the organization frequently engages in a dialogue with employees.	8.9	10.0	8.8	8.7

Openness & Action Orientation	10	Organizational members spend much time on communication, knowledge exchange and learning.	9.2	10.0	8.8	9.2
Openness & Action Orientation	11	Organizational members are always involved in important processes.	8.9	8.5	9.3	8.8
Openness & Action Orientation	12	The management of the organization allows making mistakes.	8.7	9.0	7.3	9.5
Openness & Action Orientation	13	The management of the organization welcomes change.	9.5	10.0	9.0	9.7
Openness & Action Orientation	14	The organization is performance driven.	9.2	10.0	9.5	8.7
Quality of Management	15	The management of the organization is trusted by organizational members.	8.5	8.5	8.0	8.8
Quality of Management	16	The management of the organization has integrity.	9.0	10.0	8.3	9.2
Quality of Management	17	The management of the organization is a role model for organizational members.	8.5	9.0	7.5	9.0
Quality of Management	18	The management of the organization applies fast decision making.	9.1	9.0	8.5	9.5
Quality of Management	19	The management of the organization applies fast action taking.	9.3	9.5	8.8	9.5
Quality of Management	20	The management of the organization coaches organizational members to achieve better results.	8.5	8.5	7.3	9.3

Quality of Management	21	The management of the organization focuses on achieving results.	9.6	9.5	9.3	9.8
Quality of Management	22	The management of the organization is very effective.	8.3	8.5	7.5	8.8
Quality of Management	23	The management of the organization applies strong leadership.	8.8	9.0	9.3	8.3
Quality of Management	24	The management of the organization is confident.	8.9	9.5	7.8	9.5
Quality of Management	25	The management of the organization is decisive with regard to non-performers.	8.3	8.5	7.5	8.8
Quality of Management	26	The management of the organization always holds organizational members responsible for their results.	8.8	9.5	8.0	9.0
Quality of Employees	27	The management of the organization inspires organizational members to accomplish extraordinary results.	9.2	9.5	8.8	9.3
Quality of Employees	28	Organizational members are trained to be resilient and flexible.	9.3	9.5	9.5	9.0
Quality of Employees	29	The organization has a diverse and complementary workforce.	8.7	9.0	8.5	8.7
Quality of Employees	30	The organization grows through partnerships with suppliers and/or customers.	9.0	8.5	9.3	9.0
Long Term Orientation	31	The organization maintains good and long-term relationships with all stakeholders.	9.5	10.0	9.5	9.3
Long Term Orientation	32	The organization is aimed at servicing the customers as best as possible.	9.8	10.0	9.8	9.7

Long Term Orientation	33	The management of the organization has been with the company for a long time.	9.7	10.0	10.0	9.3
Long Term Orientation	34	New management is promoted from within the organization.	8.9	9.0	9.0	8.8
Long Term Orientation	35	The organization is a secure workplace for organizational members.	9.5	10.0	9.8	9.2
		Average HPO score	*9.0*	*9.3*	*8.7*	*9.1*