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Investigating the link between innovation and mainstream adoption: How to identify consumer trends

Keywords: Consumer trends, innovation, adoption, retail, case study

Retailers operate in a very competitive environment and are facing increasing challenges. One such challenge is to anticipate change in their consumers and interpret these into relevant innovative products and service. For retailers, even with a customer centric approach, identifying imminent change in consumer preference and updating and adapting their business models on a continuous basis can create a distinct competitive advantage. Extant literature does not adequately address what methods are available to identify new consumer trends for the retail industry. The purpose of this paper is to provide a framework to assess the market potential of an innovation to be adopted by mainstream markets. The framework has been drawn from exiting methodologies and applied to the emerging trend in horticulture in the UK. The case study analysis provides evidence that there is the opportunity for horticulture to appeal to a broader market sector. This framework provides scholars and marketers with a foundation for a better understanding of the process of innovations for mainstream consumers

1. Introduction

Recent studies have suggested that the development of business models that have the potential to evolve with changes in the business environment will create greater value for the consumer and value capture for the company (Gatignon, Lecocq, Pauwels & Sorescu, 2017). Pantano, Priporas and Dennis (2018) suggested that retailers need a new perspective: innovation-driven retailing. This follows on from the research proffered by Dreschler, Natter & Leeflang (2012) that strong investment in market research alongside the ability to translate customer needs into appropriate, innovative new products positively influences the overall performance of the company. Researching and gaining insights into a consumer's changing attitudes and behaviours has been increasing in importance for a number of years (Bruce & Daly, 2006, Rindfleisch, O'Hern & Sachdev, 2017). However, translating these needs into what the customer really wants can be difficult if they are uncertain of the benefits of any innovation (Gourville, 2005). Even if these needs are understood they can change over the course of time driven by their experience of the innovation. It is not enough to know that the consumer needs innovative product, but also how they will interact with it as it evolves (Bohlmann, Spanjol, Qualls & Rosa, 2013).

Diffusion theory posits that an innovation's success is dependent on communication by groups of individuals in a social system about a new idea (Rogers, 2003). There are triggers that alter attitudes towards past or present behaviours, and there are certain typologies that are likely to respond to these ahead of others. Rogers developed his theory, the Diffusion of Innovation and the terms Innovator, Early Adopters, Early Majority, Late Majority and Laggards, by establishing the influence of each typology on the other in the process of adoption (Rogers, 2003). The focus of this research will be on the behaviours and influence of the innovators and early adopters on the remaining members of the social system. In addition, it is also necessary to define what is meant by innovation in this particular study. Innovation has a broad definition including marketing, strategic management and economics (Hauser, Tellis & Griffin, 2006), the differing levels of innovativeness in new product development (Garcia & Calatone, 2002), or as a product that offers the ideal solution to a given problem (Clark, 1985). Research by Verganti et al (2013) suggest that innovation can come from a new

interpretation or what a product or service means to the consumer: innovation of meaning (Verganti & Oberg, 2013). However, in this instance, innovation will be defined as the process of introducing new products and services to a new target market (Hauser, Tellis & Griffin,2006)

The intention of this study is to develop a framework for trend identification by determining the motivations for new consumer groups to adopt horticulture. What has inspired this growing interest in gardening, why it is important to consumers? To explore how gardening has been received and why it is growing in appeal to new consumer groups, it would be advantageous to develop a framework in line with current trend identification practice that has application to social phenomena.

2. Literature review

Horticulture represents 50% of all garden sales in the UK, the strongest growth in Western Europe, and has grown in value from £2 billion in 2012 to £2.6 billion in 2017 (Euromonitor, 2019). It is anticipated that the popularity of healthy living will continue to stimulate interest in gardening, with millennials keen to take up garden related activities (Euromonitor, 2019). In addition, traditionally those aged 55+ are keen gardeners and their numbers are on the increase. Those aged 65 and over increased from 15% in 1985 to 17% by 2010, a total of 1.7 million more people. By 2035 23% of the UK population will be over 65 (ONS).

The decision to adopt any new idea, product or service is subject to many factors. The sociologist Wejnert (2002) developed a conceptual framework grouping the variables into three major components that influence an individual's or group of individuals' decisions to adopt an innovation (Figure 1).

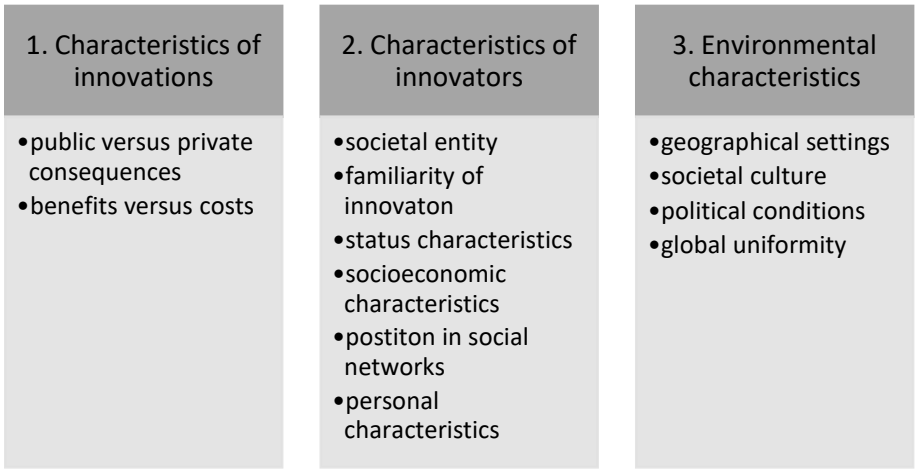

Fig. 1. Adoption Framework. Adapted from integrating Models of Diffusion of Innovations: A Conceptual Framework by B. Wejnert, 2002, *Annual Review of Sociology, 28,* p.297-326.

2. 1 Characteristics of innovations

As outlined by Wejnert (2002), the characteristics of innovations are divided into public versus private consequences that modulate the process of diffusion. The public consequences are organisations or social movements who introduce reforms. Private consequences are the improvements offered to the individual within a society. Indirect costs include social costs, or social uncertainty. The individual must consider any social conflict created by the introduction of the innovation. This is a key factor of the

characteristics of innovation, as it forms the foundation for the framework. The interplay between what the customer needs and what the innovation can offer for social gain and reassurance is the basis of many innovation studies and its success in the market (Hauser et al., 2006: Bohlmann, Spanjol, Qualls & Rosa, 2013).

2. 2 Characteristics of innovators

The societal entity of innovators affects the type of innovation they select and their strength within the community, and the type of innovation under consideration versus the needs of these individuals. Their familiarity with the innovation will affect the rate of adoption and perceived social risk if the novelty is reduced and familiarity is increased. Risk is avoided if the actors in the network can observe peers from the introduction of the innovation and their interaction with it. The opinion of experts and the media can increase familiarity, but the interpersonal interactions play a more significant role (Wejnert, 2002). This is also in line with Rogers' (2003) evaluation on the attributes of innovation and their potential rate of adoption by the individual. The innovation should have relative advantage by offering status or an economic gain; compatibility with the sociocultural values and beliefs; complexity can have a negative impact on its adoption rate; trialability will ensure the innovation can be amended or reinvented by early adopters for the benefit of the majority and observability positively relates to its adoption rate. The more visible or easy to communicate the innovation is the quicker the adoption rate to the critical mass (Rogers, 2003). However, the diffusion process has moved beyond the idea of a single market with a single connected social system adopting products (Hauser et al., 2006). In understanding the processes of adopting innovative new products by consumers, research is increasingly directed to the role that social contagion is playing (Langley, Bijmolt, Ortt & Pals, 2012: Machanda & Xie, 2008)

2.3 Environmental characteristics

The third and final component is the impact of environmental characteristics. This looks at the private consequences and the individual actors, such as the proximity of individuals within a community to enable effective communication (geographic), the traditions, cultural homogeneity and belief systems (societal culture), government policy, legislation and censorship (political conditions). It also includes the notion that we are evolving into a cultural community, where similar societal structures are developing, facilitated in many cases by media influence (Wejnert, 2002). This is indeed the case as the abundance of entertainment, information and communication products alongside globalization and increased competition have had a significant impact on the diffusion process (Hauser et. al, 2006), creating complex challenges from cross-country influences, emerging economies and online social networks (Peres, Muller & Mahajan, 2010).

This conceptual framework has distinct advantages in the assessment of current innovation adoption practice. It recognises the key variables that are at play outside of the macro environment that influence the rate of adoption on individuals, and the importance of how these variables interact with each other to allow an innovation to integrate within a society or societies. Critically, not only is the nature of the innovation key, but how the actor contributes to the diffusion process. Wejnert (2002) has utilised this framework for larger scale social studies, such as policy intervention, however the framework with adaptations has potential application as a methodology for trend analysis in the marketing discipline with the additional insights included from subsequent innovation studies.

2.4 The impact of the innovation

The adoption of horticulture by new consumer groups will be the vehicle to develop the consumer trend framework. By measuring its impact on new consumer groups, it will establish what the benefits are to the individuals, their evaluation of these perceived benefits and how likely these factors will determine their participation in the activity in the long-term.

The characteristics of horticulture as an innovation indicate it is a time-consuming practice yet new consumer groups have been adopting gardening in the UK for some time (Euromonitor, 2009; Mintel, 2013, 2014). Traditionally, gardening has been a leisure pastime undertaken in later life (Bhatti 2006). The 'Third Age' (55-75) and the 'Fourth Age' (75 plus) have a stronger tendency to pursue gardening as they are reaching retirement in good health due to advances in healthcare, a keen interest in diet and the desire to remain healthy through appropriate exercise (Bhatti 2006). However, there has also been an uptake in gardening by younger consumers following concerns around obesity, psychological well-being and economic considerations in addition to the established physical benefits of gardening (Mintel 2009; Mintel 2013; Euromonitor 2013: Euromonitor, 2019). Parents with young children are also turned to gardening due to health and environmental concerns, and governments have encouraging schools to include gardening in the curriculum to help tackle obesity (Mintel, 2014).

In addition to the physical benefits, the sense of well-being created by the interaction with nature may explain the growing interest in gardening as a hobby and the perceived value of green spaces on individuals (Gross & Lane, 2007). Studies by Pretty et al (2003, 2005, 2007) revealed that green spaces can have a profound effect on an individual's sense of psychological well-being. Termed as 'green exercise', individuals that were studied participating in activities outdoors, such as conservation projects and walking showed marked improvements towards self-esteem and mood disturbance, with the subject's hostility, anxiety, confusion and depression-dejection all improving on completion of selected 'green exercises'. In particular the research highlighted that those living in an urban environment with open green spaces and gardens presented fewer mental health issues. It is estimate that by 2020 depression and depression related illnesses will become a major source of ill health, so regular participation in green exercise will become more important (Pretty, Peacock, Hine, Sellens, South & Griffin, 2007).

Kaplan (1995) proposed in his Attention Restoration Theory (ART) that we are subject to a myriad of alternatives when it comes to problem solving in modern society. We constantly focus on the important and resist distractions from the interesting. This leads to fatigue as our *direct attention* is constantly needed to solve problems. Individuals can experience negative feelings such as depression, stress, lack of focus and attention deficit hyperactivity disorder. Our interaction with the natural environment reduces stress levels as it offers fascinations which restore our thought processes through activities such as gardening or interaction with a natural environment (Felsten, 2009, Kaplan, 1995). Bhatti and Church (2004) also recognised the strength of ART theory, but suggested that in addition to the benefits of restorative experiences, the threats from globalization and technology has created a 'risk society' and pollution, disease and climate change has eroded trust in the institutes that traditionally protect society.

The garden can also hold special meaning to individuals across all age ranges from their lived experiences and can offer levels of "escapism, ownership and identity" when using the garden and gardening as a retreat (Gross & Lane, 2007). Even when gardens are viewed as a creative experience, the gardener is surrounded by stimuli and the senses of hearing, touch and smell are constantly

engaged (Cooper, 2003). An alternative viewpoint is the biophilia hypothesis (Wilson, 1984, 1993) that suggests people, despite being removed from natural surroundings in urban environments still has the desire to associate with nature, that it is rooted in our genetic narrative and biological make up. Sanwick (2009) looked at the complex relationship between society, land and landscape and that all levels of society sought value from the green around them, particularly in preventing 'nature-deficit disorder'. Louv coined the term nature-deficit disorder following studies into the effects on children who have been effectively removed from nature in their social world, creating many physical and emotional illnesses due to an over reliance on technology. Our consumer-driven society has devalued nature, yet the natural world could repair communities and improve health and well-being (Louv, 2011, 2012). The restorative potential of biophilic design in shopping centres can also help transform communal and societal well-being alongside the influence on the individual (Rosenbaum, Ramirez & Camino, 2017).

The opportunity to apply the components of the framework, the characteristics of the innovation, characteristics of the innovators and economic characteristics in a current context would aid the development of a conceptual framework for consumer trend analysis. An innovative community growing project in Todmorden, West Yorkshire, Incredible Edibles, came to light through research. The initiative would allow the researcher to measure the current impact of the innovation on the individuals in the town which would be the key element of the framework. The individuals selected would be the early adopters who had responded to the influence of the initiative's creators. This consumer-based evaluation would be used to measure their experiences and the benefits they had gleaned from gardening. These benefits have the potential to be translated into appropriate products and services following their interactions with the innovation which may have application for mainstream markets (Gourville, 2005: Bruce & Daly, 2006, Rindfleisch, O'Hern & Sachdev, 2017)

3. The case study: The Incredible Edible (IE) initiative

3.1 Environmental characteristics: Trend initiators for IE

The community initiative was conceived in 2007 by Pam Warhurst in Todmorden, West Yorkshire. Todmorden had become depressed economically; the town was in the top ten of deprived communities in the North West of England (Thompson, 2012). There had been a reduction in the population from 22,000 to 12,000 over the previous 30 years and many businesses and farmers were struggling (Warhurst & Dobson, 2014). She attended a conference in 2007 for landscape architects where the issues being discussed were around climate change, sustainability and in particular the impact of the 1992 Earth Summit in Rio. A key speaker, Tim Lang, Professor of Food Policy at City University recommended that we should start to grow vegetables not flowers (Dobson & Warhurst, 2014).

The principal driver for Pam Warhurst was to create an opportunity for people to secure a greener, safer future (Dobson & Warhurst, 2014). The three objectives that the project would focus on were *community*, *learning* and *business* (Dobson & Warhurst, 2014, p.10). These three strands would create a stronger community through skill sharing both inside and outside of the education system and provide work and a means of securing a future for the town's families through the use of derelict and neglected land. According to Adam and Hardman (2013), much research on guerrilla gardening was largely as a reaction to the 'misuse' of community areas and the thrill of illicit action, illegally claiming

neglected public or private land in the dark of night. In the case of Incredible Edibles, kindness would underpin the project, and rather than use the term guerrilla gardening they chose the term 'propaganda planting' (Dobson & Warhurst, 2014). The project has progressed on a volunteer basis that plant vegetables and tend the vegetable beds around the town. Good will rather than illicit activity is at the core of the project's success. It has been shaped by encouraging a participatory democracy.

The project to date has introduced many high-impact low-cost interventions into the community. Since the first public meeting in 2008, IET has created over 40 public vegetable and fruit gardens, enlisting the help of the local police, fire station and Northern Rail. Todmorden High School is in effect self-sufficient. They grow all the vegetables for the school's catering in land behind the school following the land's 'seizure' in 2009. All schools in the area are now involved in a food-based learning programme with IE. They have also helped with the introduction of a growing programme aimed at tenants through Pennine Housing (P. Warhurst, personal communication, July 3, 2014).

3.2 Characteristics of the Innovation

The introduction of IE into the community was to help boost the local economy by providing food for all following a period of economic depression through the use of social investment rather than financial. One of the main drives was to offer the opportunity to those on the 'wobbly side of life' accessed via social housing projects (Warhurst & Dobson, 2014). The individuals within the community would therefore have a relative economic advantage by adopting the intervention. Historically, cultivation of food has become central to many working-class families as witnessed during the Second World War (Crouch, 1997), and the impact of the recession had seen an increase in sales of grow-your-own products (Euromonitor, 2019). The rising concerns around pollution, food sources and even the lack of accountability from traditional institutions had given rise to a 'risk society' (Bhatti & Church, 2004).

The principals that underpin the IET philosophy are 'action not words', 'we are not victims' and 'stop passing the buck' (Warhurst & Dobson, 2014). This links to the relative advantages for the participants (Rogers, 2003). The collective involvement, the 'action', allows the community to regain control at a local level, 'we are not victims' promotes optimism through shared responsibility and to 'stop passing the buck' allows the individual to secure a greener future. The relative advantages of the innovation are therefore ownership, community and security.

The compatibility, complexity, trialability and observability of the innovation influence the rate of adoption (Rogers, 2003). Gardening involves a significant change in behaviour in the long-term, so the relative advantages have to be communicated through to the available mass within the community. The success of the project is reliant on the individual's willingness to undergo change. The projects have utilised community meetings to inform and educate the populous about the advantages, used housing associations to introduce individuals to the advantages of gardening. The phenomenon is reassuringly visible in the public growing spaces throughout Todmorden.

3.3 Characteristics of the Innovators and Early Adopters

For the idea to cross into the mainstream there has to be early adopters with high social status and opinion leadership that would introduce the principle into the community. Mary Clear, the town's community worker, provided knowledge-based evaluations to inform and persuade. A Pennine

Housing officer shared similar personality variables; empathy and high social status. Another early adopter, a biochemist, made available the knowledge and expertise to implement the correct planting schemes by using his opinion leadership and social connections. They acted as triggers to inform the critical mass in the community (Dobson & Warhurst, 2014). The main aim of the initiative was to include those on the 'wobbly side of life' (Dobson & Warhurst, 2014), as the relative advantages for them would be a more economic one. In some cases, those least likely to adopt a practice are those that need it the most: the innovativeness / needs paradox (Rogers 2003).

4. Method

The case study approach gives the researcher the opportunity to explore the "how" and "why" questions that comes from considering whether contemporary social phenomena will potentially be accepted and adopted in a cultural context (Yin, 2014). Human behaviour creates relevant meaning when it is studied in in a real-life situation as it offers a rich wealth of detail strengthening the importance of context-dependent research. This is achieved by the researcher being in proximity to the studied reality (Flyvbjerg, 2006). The 'holistic' view, that people's behaviours toward social phenomena cannot be removed from the cause is credible, as in many cases the social phenomena to be studied cannot be removed from the environment (Swanborn, 2010). An unusual case study can provide richer insights than a more typical case (Stake, 1995). An in-depth study of a specific case in a real-world context needs to be found (Yin, 2013). The revelatory case offers the researcher the opportunity to observe a social phenomenon that has previously been inaccessible to the social sciences (Yin, 2014).

The Incredible Edibles (IE) initiative is such a case. The social structure and the influence the actors have within the town can provide valuable, context-dependent research on the impact of horticultural adoption on the community. Such revelatory, individual case studies can offer clear direction for future research, as unique cases can provide a new understanding of previously unknown phenomena (Boddy, 2016). These case studies provide an empirical base for developing new theories in a new area (Tsang, 2014). The focus of the research will be the social actors who have participated in the initiative, IE, and these will be the subunits, the individuals, who's experiences with the intervention will address the primary data objectives of the "how" and "why". Their insights are valuable to the single case as it will offer the researcher the opportunity to analyse the meaning the individuals derive from gardening. The researcher can then determine how this has impacted on their personal lives, if this experience has integrated in to their own home life, and any subsequent lifestyle changes and ultimately if they will become long-term behaviours. The unit of analysis in this case is the *group* that has collectively responded to the phenomena under investigation rather than the *community* where the phenomena occurred (Yin, 2014).

This final part of the evaluation of the case is to establish the individual's motivations for adopting gardening, how they derive meaning from it and their personal experiences of this interaction with the natural environment. Semi-structured interviews were considered to be the most suitable approach to explore their experiences and interactions with horticulture through the initiative.

4.1 Participants

Six semi-structured interviews were conducted with members of Incredible Edibles, Todmorden (IET) and Incredible, York (IY). The sample size was not predetermined; however, saturation became

apparent after six interviews. Although this seemed small, research conducted by Guest, Bunce & Johnson (2006) suggested that a sample size of six interviews was sufficient to 'enable development of meaningful themes and useful interpretations' (Guest et al., 2006, p.78). Following a meeting with the founder Incredible Edibles, Pam Warhurst and the treasurer of Incredible, York, Penny Bainbridge, participants were recruited through conversations, email and by visiting one of the working sites in York. Their participation was pre-determined by two factors: that they were relatively new to gardening and had recently started to garden through the projects. This was to ensure the validity of the title 'early adopter'. Their ages ranged from 38 to 68 years old, 4 females and 2 males (Table 1). The majority of volunteers are female, so this is a fair representation of the individuals who have joined the projects (P. Warhurst, personal communication, July 3rd, 2014).

Participant	Age/ Gender	Current status; family; garden ownership
1	43/F	Employed F/T community worker; female, single mother, 10 year old son; small paved front garden
2	38/M	Employed F/T sales executive; male, married, 3 month old daughter; small back garden
3	65/F	Retired community worker; female widowed with 2 children; small back yard
4	61/F	Retired art restorer; female married no children; no garden
5	68/F	Retired teacher; female married 1 child; no garden
6	49/M	Employed F/T company director; male married with 4 children; large garden

Table 1. Details of the participants interviewed (*N*=6), their status and garden ownership.

4. 2 Procedure

An informal approach was maintained throughout the interviews to allow a relaxed discussion to take place. At the beginning of the interview, time was used to inform the participants of the nature of the research, collect data about the participant's age, life stage and employment status and crucially their garden ownership. Permission was sought by all interviewees for the content of the discussions to be used for research, and their anonymity was assured. The interviews were recorded, and full verbatim transcripts produced. Four areas were established prior to interview for discussion: "Can you describe your earliest memories of gardening", "How do you find out about Incredible Edibles?", "Can you describe what you like about gardening and how it makes you feel", and "Can you see yourself continuing to garden in the future?"

4.3 Analysis

For the thematic analysis, pattern matching logic was employed on the qualitative data collected. Categories emerged from the analysis, and themes developed. Five themes emerged and are summarised in Table 2. These themes were part of a three-stage process of analysis (Simons, 2009). The transcripts were looked at individually to identify any prevailing categories. As well as looking for emerging concepts in the transcripts and notes taken, the recordings were repeatedly listened to in order to ensure that the emphasis and subtleties from the spoken word had not been overlooked. Some participants had not been as detailed as others in their responses but had emphasised more through the delivery rather than the vocabulary. When the categories had been confirmed from each

of the discussion topics, the connections and relationships of these emerging categories were established from one discussion area to the next. The final step was to look for themes that would relate to these emerging categories.

Discussion areas	Emergent categories	Themes
Earliest memories of gardening *Objective: How they derive meaning of the phenomena from early experiences*	Play / family Detachment Peaceful Observant Task orientated	Escapism
Involvement in the Incredible Edible project *Objective: The impact of the intervention with their adoption rate and understanding of the phenomena*	Space Involvement Change Knowledge sharing	Community Ownership Security
What they like about gardening *Objective: How they derive meaning of the Phenomena from current experiences and motivations*	Creativity Multi-sensory Nurturing Outdoor	Ownership Security
How they feel when they garden *Objective: The personal meaning of the experience of interacting with the natural environment*	Sharing Stress free Nurtured Spiritual Self-satisfaction	Well-being Escapism
What they think about when they garden *Objective: The personal effect of the action of interacting with the natural environment*	Detached In the moment Connected with nature	Escapism
If they will they continue to garden in the future ***Objective: Their motivations and commitment to the phenomena and to establish the further integration of gardening into their homes and lifestyles***	Passion Knowledge sharing **Sharing generally**	Community Ownership

Table 2.: Emergent categories and themes developed from the interview analysis

5. Findings

The In this section, the findings and discussion from the interviews are presented. To develop a framework for trend identification it needs to be established what the current impact is on the early adopters to any innovation or innovative behaviour. Determining the motivations for new consumer groups to adopt horticulture and what has sparked this change in behaviour and the consumer's perceived benefits can be translated into further products and services that could also benefit a mainstream market. Five key themes emerged from the interviews: 1. escapism, 2. well-being, 3. security, 4. ownership, and 5. community.

5.1 Escapism

Gross and Lane (2007) noted that gardens and gardening offered an escape route for gardeners in their younger years. The respondents in this research described the act of gardening in their childhood

as something they were detached from, or a task they actively avoided. Some childhood gardens were described as "*wild*" or "*neglected*" or they had no access to one at all. However, the garden was viewed as an area of peace even at a young age. When asked how much time was spent in the garden rather than gardening, respondent 2 (M, 38yr) responded:

"Yeah, well ……. I always used to get told to do something in the garden …… but sometimes I used to just go and sit down in the garden. Sunbathe in the garden. But I used to like being in the garden. It gave me peace. I liked being in it for the peace……. Yeah, sometimes I just liked being in it for that".

In adulthood, the garden did provide a restorative experience. As previously discussed, the research presented by Kaplan (1995), established that 'being away' in a natural environment and the 'fascinations' it provides, creates a diversion away from the directed attention required by a contemporary society (Kaplan, 1995, Bhatti, 2006). When the respondents were asked to describe what they think about whilst interacting with nature, their responses included comments such as "*it's a time when your mind is at its emptiest …. My worries go away*", and "*my thoughts are just drifting in an unformed way*", "*it relaxes the mind … you can get lost in it for hours*". This idea that gardening was a form of escapism was common across all respondents. When respondent 5 was asked what they thought about when they were gardening (F, 68yr), they responded:

"I never worry……. I'm focused on the soil……. I think my thoughts …. I never wear gloves. I like to feel my hands …. I'm thinking very specifically …. I'm noticing the texture of the soil …….I'm noticing the colour of the soil ……I'm just totally immersed in that plant, that soil, that … whatever…… it just transcends whatever else is happening in life".

5.2 Well-being

Interacting with the natural environment created a sense of achievement and satisfaction by observing the changes that they helped to create. The process was likened to a maternal role "*I see it like having a toddler"* and "*It's nice. It's like having grandchildren*". The cultivation of the land is in itself a nurturing experience, but it also fostered a sense of affection and created a supportive role for the participants. "*I feel myself as a support to what's happening … the something that's happening is just nature. You can help push it along on its way*". The process of gardening was described as multi-layered and multi-sensory. When asked what they liked about gardening, respondent 4 (F, 61yr) replied:

"Euhm…. I love working with my hands. I enjoy working in the midst of plants, insects and animal life. I like the whole multi-sensory aspect of it; the smell, being out in the weather".

A sense of well-being also came from knowing they had encouraged and nurtured the land and that the land had given them produce in return. Respondent 1 (F, 43yr) described her feelings when she was gardening:

"It's similar satisfaction. You know that it's about producing something that's food which is a more satisfying worthwhile thing …. It's quite visceral feeling the joy of going home with your own food and cooking it and eating it gives me and enormous amount of satisfaction and self-satisfaction to feed my child with something we've grown together, and we've just picked".

Well-being is created by observing and interacting with green spaces or 'green exercise' and is particularly relevant for city inhabitants (Pretty et al., 2003, 2005; Sanwick, 2009). The respondents were all urban dwellers and had actively looked for green spaces as they recognised the health benefits both physically and mentally, "*When I've finished gardening and I'm no longer tired or sweaty whatever's happened to me ….. I feel I have energy …. I feel very clear*".

5.3 Security

Security in this context is twofold. There is the sanctuary and refuge that the garden offers the individual, as well as the collective involvement of being in the Incredible Edible movement. This has given the respondents the opportunity to secure a greener future in addition to the economic advantage and financial security. Grow -your -own vegetables was a fundamental driver for the individuals, as the produce offered them a secure source of food for themselves and their families. The comments "*I feel I can grow ….. I feel so much better feeling I can grow my own thing*" and "*in terms of produce just growing your own and knowing exactly what's gone into it*" illustrate the general feelings expressed by the respondents, that the security of the food source was a key driver. This is in line with the environmental, thrift and safety concerns associated with food sources, and the threats presented by globalisation and environmental damage (Bhatti & Church, 2004; Passport, 2014).

5.4 Ownership

The 'act' of regaining the waste land has allowed the adopter to regain control at a local level: "*I mean I quite like the subversive idea of guerrilla gardening …. You know when people just ……. Need to change it into something … whether it's edible or beautiful*". The importance attached to green space in the urban environment was expressed by all the respondents whether for the good of the community of for the well-being of the individual. Respondent 4 (F, 61yr) was very clear about her motivation for her involvement:

" I was intrigued by the fact that this was a community project that was producing, or at least hoping to produce, food that people would want to harvest themselves without cost. And I thought it was a useful aesthetically attractive way of using that space, the Peasholme Green space".

In addition to creating functional green spaces, four out of the six respondents highlighted the importance of the creative element of gardening. They saw the spaces they owned or shared as an opportunity for expression: "*I like making environments*", "*to me it's my art form really*". Sanwick (2009) highlighted the need for green urban spaces, and Cooper (2003) their potential as an art form. The participants have regained control of public and personal green spaces and created their own idylls for public or personal satisfaction. Respondent 5 (F, 68yr) typified the general feeling across all respondents when asked if she would continue to garden in the future:

" Well most certainly. I'm just so very sad I don't have a garden of my own….. I ***love*** to see green things… just love to see green things…… I love to see growing things".

5.5 Community

The very nature of the Incredible Edible movement is community based. However, the adoption rate of gardening has been influenced by the knowledge sharing opportunity IE has offered the

participants. Respondent 2 (M, 38yr), when asked if he had any knowledge of horticulture before joining, he responded:

"No, not at all, not a bit. No, I'm still learning now. How to cut the plants. How to treat them. Yeah, I'm still learning now. Learning slowly. But it's fun – I really enjoy doing it. Yeah, it's really satisfying".

All respondents confirmed they would be gardening for the long-term. The community aspect and knowledge sharing were one of the main drivers for the respondents to continue gardening in the future as "*there's always so much more to learn*", and "*people are very generous in that regard*". The altruistic nature of Incredible Edibles was also evident as the concept of helping others, who were perceived as being unable to help themselves, was common in their responses. When asked what the experience of Edible York had given respondent 5 (F, 68yr), she replied:
"Being involved in the bed in the centre of town….. well that's given us the opportunity to share …. What it's all about. There's the bus stop and the bench nearby and there are a lot of less well-off there. There's the social services centre opposite. When we're gardening it can take forever … people want to talk to you. Tell you their gardening memories. What the plants remind them of. They take the vegetables…. We talk to them about cooking them… what they're going to do with them …. They need them…. It's what it's all about".

Gardens have historically given owners privacy, status, comfort and creative expression and have been regarded as an extension of the home (Brown, 2000). The respondents have demonstrated more inclusive behaviour rather than excluding others outside of their immediate family and friends. This may be because the majority of the respondents have limited access to gardens themselves. However, the trend for growing vegetables in times of economic uncertainty is cyclical (Crouch, 1997).

5.6 The development of a framework

The article proposes a conceptual framework as a foundation for exploratory trend mapping. The first three include the sections that Wejnert (2002) developed by grouping the variables that influence trend adoption into three main components; characteristics of the innovation, characteristics of the innovators and characteristics of the environment. In addition, the variables on the characteristics of an innovation from Rogers (2003) diffusion research have also been included. The fourth section, the Impact of the Innovation, offers the researcher the opportunity to include the rich insights offered by innovators and early adopters as they are experiencing and interacting with the innovation as it evolves over time.

The initiative, Incredible Edibles, has been used as a vehicle to establish whether the recent trend in horticulture by new consumer groups would be a long-term trend. The elements from the initiative have been applied to the framework (Fig. 2) and will be discussed in the next section.

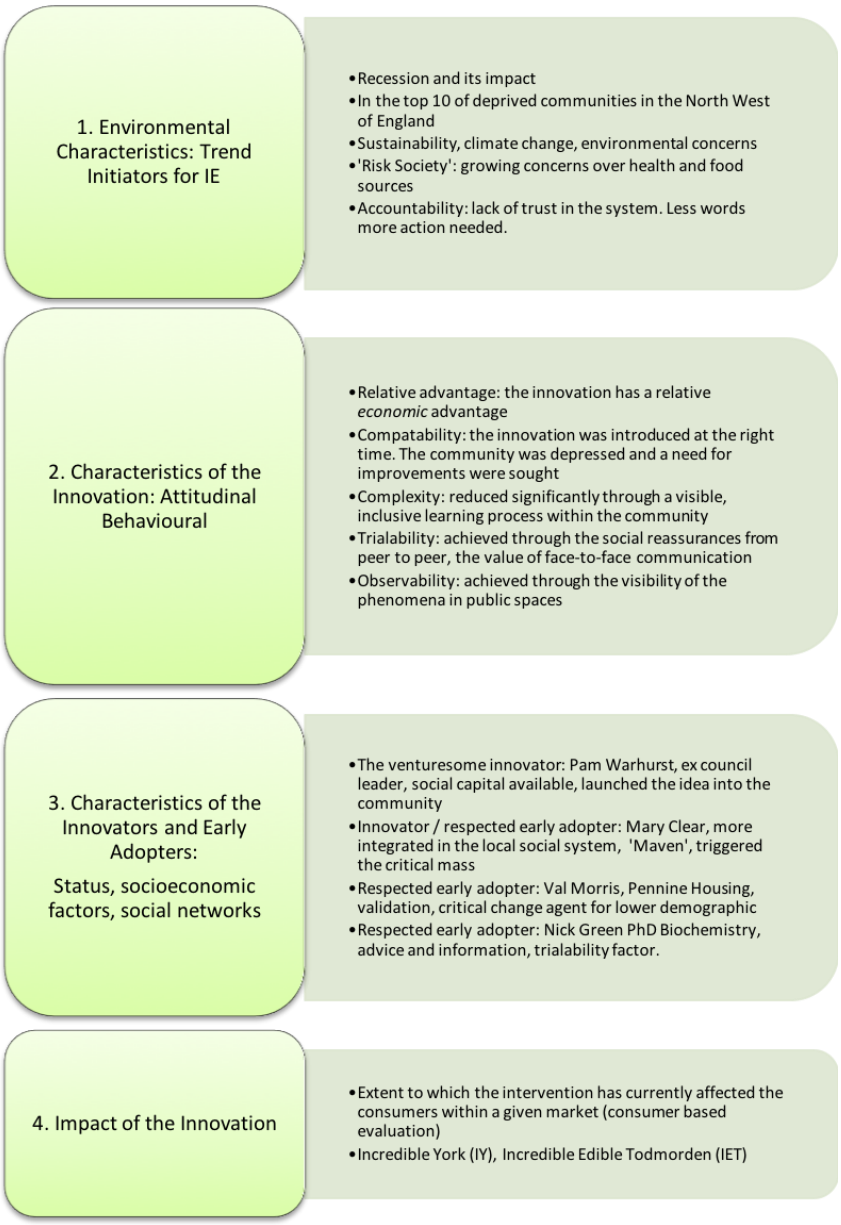

Fig. 2: Conceptual framework for trend identification.

6. Conclusion

The purpose of this paper is to provide a framework to assess the market potential of an innovation to be adopted by mainstream markets. The framework was developed from available methodologies and applied to the growing trend in horticulture in the UK. The research has presented the views of a group of early adopters on their motivations and experiences of the innovation, horticulture, through the case of Incredible Edibles. The conceptual framework offers a link between innovation and consumer adoption by looking at the external influences that drive change in a consumer's attitude that will in turn drive change in buyer behaviour. The environmental characteristics in the case of Incredible Edibles were the long-term effects of the recession, concerns over health and well-being, climate change and sustainability. The innovation, horticulture, was introduced as a community initiative, however the initiative has had the strongest impact on individuals within the community as

they have expressed the desire to continue gardening for the long-term. The main themes that came from the early adopters' motivations are escapism, well-being, security, ownership and community.

The trend identification framework has potential to contribute to the evolution of business models in retail by providing strong customer research that can be translated into appropriate products providing greater value creation and value capture (Gatignon et al. 2017: Drechler et al. 2012) through innovation-driven retailing (Pantano et al. 2018). The research also provides more insights on the discussion of innovation and what this means to consumers. The definition of innovation in this paper was the one given by Hauser et al (2006) as the process of introducing new products and services to a target market. However, the themes of ownership and community were very strong themes from the respondents that had not been highlighted in the literature. Gardening had been a vehicle to share experiences and knowledge, or as a way of transforming public spaces creatively, and this was the primary motivation. This touches on the work of Verganti et al (2013) where there is a new interpretation behind an innovation: innovation of meaning.

There are opportunities for further research in this area. One is to look at other markets in other countries and their adoption of horticulture on a more general scale as this study has limited the research to a community-based initiative. Further research could also be undertaken to explore the potential of the consumer trend identification framework as an element in developing a more consumer centric and responsive business model in the retail sector.

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