'Nudging' as an architect of more responsible consumer choice in food service provision: The role of restaurant menu design

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ABSTRACT

The sector of food service provision generates substantial environmental and societal impacts. Environmental impacts are particularly pronounced in terms of carbon footprint build-up while societal impacts are reflected in often unhealthy food choice. These impacts should be minimised to facilitate progress of the sector towards sustainability. A significant share of the negative impacts from food service provision is attributed to irresponsible consumer choice which needs to be architected and made more society- and climate-benign. Customer 'nudging' is an effective tool of consumer choice architecture and yet little research has examined its application within the context of private food service provision. This study set to better understand the determinants of consumer choice when dining out and how consumer choice could be reinforced to make it more beneficial from the sustainability viewpoint. To this end, the study reported on the outcome of a consumer survey conducted among visitors to a UK casual dining restaurant where menu design was employed as a customer 'nudging' tool. The survey demonstrated that, next to price, food provenance and nutritional value determined consumer choice when dining out. This information should therefore be displayed on restaurant menus to enable educated, and more environment- and society-benign, food choice. While presenting the food carbon values on a menu was well perceived, some skepticism attached to their prospective use as a determinant of consumer choice was recorded. Recommendations were made on the design of the industry and policy-making interventions required to enhance the public appeal of this menu item.

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1. Introduction

Travel, tourism and leisure (TTL) activities play a vital role in modern society as they can enhance physical health and improve mental wellbeing of the public, both from the destination visitor and host community perspective (Andereck and Nyaupane, 2011; Hartwell et al., 2012; Neal et al., 2007). They also hold substantial socio-economic benefits that are generated at all scales (Milne and Ateljevic, 2001). While the large, and yet growing, societal and economic significance of TTL activities is well acknowledged, so are their environmental impacts (Filimonau et al., 2014; Gössling, 2002; Gössling et al., 2011). Within the diverse environmental footprint attributed to this sector of the global economy, the on-going contribution to climate change represents an issue of particular concern (United Nations World Tourism Organization - UNWTO, 2007).

The hospitality industry is an integral element of TTL activities. Within a broad portfolio of hospitality products and services, food service provision (also known as catering services in some countries) makes a substantial contribution into global climatic changes (Baldwin et al., 2011; Gössling, 2011). While a large share of these carbon impacts is attributed to the organisational complexity and the operational intensity of catering enterprises, the carbon footprint also arises because of poor consumption choices and irresponsible consumer behaviour (Bohdanowicz et al., 2011; Gössling et al., 2011). For example, food waste generation has been negatively affecting food service provision for decades and determined the substantial share of the sector in global greenhouse gas (GHG) emissions (Bohdanowicz and Martinac, 2007; Papargyropoulou et al., 2014). While this issue is often caused by operational inefficiencies of catering business ventures, which include imperfect food preparation and storage techniques, spoilage and inadequate training of kitchen and waiting staff, it is also a product of reckless consumer choice and behaviour (Bohdanowicz et al., 2011; Tuppen, 2014). To enhance long-term sustainability of the food service

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provision sector, its operational shortcomings should be rectified while consumer choice managed so that it becomes more societally- and environmentally-responsible (Hall, 2013; Phtidis and Sabbage, 2011).

Re-shaping consumer choice to make it more environment- (for example, via the reduction of its climate impacts) and society-beneficial (for instance, via the minimisation of its impact on the public health systems) represents a difficult task. National policy-making institutions, representatives of the food service provision industry, civil sector and academia all have a stake to play in its successful management (Guthrie et al., 2015; Mont et al., 2014). There is evidence that substantial scope exists for the food service provision industry to become more actively involved in consumer choice architecture. This can be achieved via closer integration of so-called 'social marketing' techniques into traditional industry marketing strategies (Kotler and Zaltman, 1971) and through more active application of external 'nudging' of customers (Thaler and Sunstein, 2008). Social marketing represents a marketing approach used to enable behavioural changes for the benefit of individual consumers and society as a whole (Truong and Hall, 2013). To this end, it can employ various 'nudging' strategies that refer to changing the consumption environment with a view to alter people's behaviour in a positive, predictable way (Butcher et al., 2016). 'Social marketing' and 'nudging' have both been recognised as effective tools to facilitate consumer choice which is beneficial for the environment and society (Dinan and Sargeant, 2000; Hall, 2013; Lehner et al., 2016). While research into this area has been growing and there is empirical evidence showing increasing penetration of 'social marketing' and 'nudging' into various sectors of the world economy (Mont et al., 2014), the speed of the industry adoption of these techniques remains insufficient and should be increased (Hall, 2013; Truong and Hall, 2013).

The hospitality industry in general, and its food service provision sector in particular, offers a number of opportunities for the application of 'social marketing' and 'nudging' as a means to positively affect consumer choice (Truong and Hall, 2013). Indeed, food consumption is a largely habitualised, routine activity where the scope for voluntary changes is minimal (Mont et al., 2014). This underlines the importance of applying external intervention, which can take the form of 'nudging' or reminding to catering service customers about the outcome of their food choice, in order to achieve behavioural patterns that are more societally benign (for instance, selecting healthier food options) and more environment-friendly (for example, choosing less carbon intense food alternatives) (Arvai and Campbell-Arvai, 2012; Kallbekken and Sælen, 2013; Truong and Hall, 2013).

Within the context of food service provision, restaurant menus can be employed as a powerful 'nudging' vehicle (Lehner et al., 2016; Mont et al., 2014). Menus are designed to display information which consumers consider when placing food orders. This information may relate, for instance, to the health (for example, calorific values of ingredients; amounts of fat, sugar and salt content) and environmental (for instance, provenance of ingredients and fair trade standards) qualities of menu items, thus enabling customers to make prompt, yet educated, choices about the societal and environmental impacts of their food choice (Arvai, 2012; Wansink et al., 2001). While the value of restaurant menus as architects of consumer choice is recognised, there has been limited evidence of research conducted on this important topic to-date (Saulais, 2015), particularly from the standpoint of minimising the impact of food service provision on climate change (Gössling, 2011; Pulkkinen et al., 2016; Spaargaren et al., 2013).

This paper contributes to the growing stream of research on the application of the 'social marketing' and consumer 'nudging' paradigms in the context of food service provision. It reports on the outcome of a 'nudging' intervention that was carried out in the UK casual dining restaurant sector and whose outcome was captured via a consumer survey. It identifies determinants of consumer choice when dining out and reveals the important role played by menu design in affecting customer decision-making. Ultimately, the paper pinpoints the key blocks of the society- and environment-relevant information that UK restaurant visitors desire to see on menus. The findings of this study can therefore be used to reinforce environmental policy-making and hospitality management practices to ensure the food service provision sector becomes more environmentally sustainable, societally beneficial and consumer-focussed.

2. Literature review

Despite the growing international recognition of the substantial environmental pressures associated with the hospitality industry, studies designed to examine the complexity of the inter-linkages between hospitality operations and the environment remain small in number, limited in scope of analysis and fragmented in terms of the sectorial and geographical coverage (Gil et al., 2001; Melissen, 2013; Melissen et al., 2016; Myung et al., 2012). The issue is particularly manifested in the context of food service provision where the sustainability implications of catering have received scant attention to-date (Gössling et al., 2011; Schubert et al., 2010). As shown by Myung et al. (2012), the environmental performance of the food service provision sector is under-studied as primary attention has traditionally been paid to the environmental impacts of tourist accommodation. This calls for a change given that public demand for food intensifies and accelerates environmental impacts attributed to its provision, both in 'at home' and 'out-of-home' settings (Gössling et al., 2011; Namkung and Jang, 2013). The contribution of the catering service sector to global climatic changes deserves particular attention as the carbon footprint of dining out is large and yet growing, which implies the need for urgent mitigation (Baldwin et al., 2011; Gössling, 2011; Kasim and Ismail, 2012).

The significant contribution of food service provision to climate change is determined by the complexity of its supply chain and distribution networks (Baldwin et al., 2011; Coley et al., 2009; Wang et al., 2013). It is also attributed to operational in-efficiencies of catering enterprises (Hu et al., 2013) that can further be intensified by reckless managerial attitudes and decisions (Kasim and Ismail, 2012). Limited understanding of the inter-linkages between food service provision and climate change by hospitality staff also plays a role (Bohdanowicz et al., 2011; Hu et al., 2013). This issue becomes particularly pronounced when careless behaviour of employees is mirrored by alike managerial attitudes (Melissen, 2013). Lastly, irresponsible consumer choice contributes to the intensifying carbon intensity of food service provision (Tuppen, 2014). This is also the area where substantial mitigation opportunities rest (Gössling et al., 2011).

Consumer choice in food service provision represents an established object of research inquiry which has been meticulously explored from a variety of perspectives, in a broad range of socio-economic, political and cultural contexts and through the application of different research methods. Seminal contributions include, but are not limited to, the works by Auty (1992); Johns and Pine (2002); Kivela (1997); Yüksel and Yüksel (2002). A number of common and contradictory themes have emerged from research which underlines the complexity of the issue under review and emphasises the cumbersome process of analysing and predicting consumer choice when eating out.

The environmental implications of food consumption when eating out are significant (Gössling et al., 2011) and yet they have