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Plant-based Food in the Hospitality Industry: An Exploratory Case Study of Leading Fast Food Outlets

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Plant-based food is one of the growing sectors within the food industry, and fast food companies may have an important role to play in driving both the trialling, and the consumption, of plant-based foods. This exploratory paper outlines the growth of plant-based foods, explores how the leading fast food companies are incorporating plant-based foods into their menus, and offers some wider reflections on the fast food companies' approach to plant-based food. The findings reveal that the leading fast food companies within the UK were promoting their plant-based menu items at both the corporate and outlet level. That said, the fast food companies made little, or no, attempt to associate the introduction of plant-based menu items with a healthier diet, and the author suggested that substantially increasing their plant-based menus could provide a challenge to the fast food companies' traditional business models. More generally, the paper concluded that in the medium-term future, the fast food companies are likely to play a limited, rather than a leading, role in driving plant-based consumption across society, in contributing to a more sustainable future.

Keywords: plant-based foods, fast food companies, menus, healthy diets, sustainable futures

Introduction

Plant-based food is one of the growing sectors within the food industry. Deloitte (2019), for, example, argued, "gone are the days when plant-based alternative products were for the niche consumer and warranted limited shelf space", that the "global meat and dairy sector is currently going through an unprecedented level of competition and disruption, driven by the growth of viable plant-based alternatives across many categories", and that "companies across the spectrum are now investing heavily in acquiring and creating new products and brands which will appeal to the surging consumer demand for plant-based products". A number of factors are responsible for the growth in the plant-based food market, including human health considerations, animal welfare issues and environmental concerns.

Bloomberg Intelligence (2021) argued that "restaurants and other food service companies will play a critical role in driving long-term trial and consumption of plant-based products". More specifically, Deloitte (2019) reported "many restaurants, casual dining venues, and fast food chains now have dedicated meat free sections to their menu, as the popularity of a vegan or indeed flexitarian diet continues to increase". With this in mind, this short exploratory paper outlines the growth of plant-based foods, explores how the leading fast food companies within the UK are incorporating plant-based foods into their menus and offers some wider reflections on the fast food companies' approach to plant-based food.

Plant-based Food

The term plant-based was coined in 1980, by Colin Campbell, a medical research scientist, who was looking for "a word that had the same dietary connotations of the word vegan, without the animal advocacy associations" (Root the Future 2020). Plant-based foods are generally classified into fruits, vegetables, legumes, grains, nuts and seeds. However, defining plant-based food is not straightforward and, in some ways, consumers' understandings of the meaning of the term are still evolving. The British Standards Institute (2020a) suggested that "many foods are labelled as 100% plant-based without a consensus on how that label should be used".

In looking to answer the question "What does plant-based mean?", Clark (2021), writing under the banner of the Plant-Based Network, suggested

"it is having a focus on consuming foods that come from plants and other natural sources. It does not necessarily mean abstaining from meat or dairy entirely, but it does prioritize eating plants as the main source of nutrients and energy. It also encourages eating as little meat as possible, ideally no meat at all, although that is not mandatory".

In an attempt "to enable consumers to make informed choices", the British Institute (2020a) established "clear and simple criteria to define 100% plant-based food". Here the key components are that 100% plant-based foods "contain no ingredients from animals", but that they can contain "ingredients of neither plant nor animal origin, such as water or salt", and that the term applies "solely to ingredients, and not to production and/or manufacturing processes" (British Standards Institute 2020b).

The term plant-based is often used in association with the terms, vegetarian and vegan. While there is no single accepted definition of the term vegetarian, it is usually used to describe a person who does not eat meat, poultry, fish or shellfish, or any of the by-products of animal slaughter, while lacto-ovo-vegetarians include dairy products and eggs in their diet. A vegan does not eat any products of animal origin, and vegans do not eat any dairy products and eggs, and many of them do not eat honey, as well as avoiding animal-derived materials such as gelatine or vitamin D3 supplements. The term flexitarian is often used to describe people who still consume meat and dairy products but are looking to reduce their

consumption levels.

At the same time, for Ostfeld (2017) “a plant-based diet consists of all minimally processed fruits, vegetables, whole grains, legumes, nuts and seeds, herbs, and spices and excludes all animal products, including red meat, poultry, fish, eggs, and dairy products”. Jaske et al. (2019) suggested that “the concept of a plant-based diet can have various definitions in the scientific literature; from excluding all animal source foods to including only a greater intake of vegetables, fruit, fruit juices, cereals, and legumes, while also preserving the intake of fish, pork, and yoghurt”. For the British Nutrition Foundation (2019) “plant-based diets are dietary patterns that have a greater emphasis on foods derived from plants”, while Harvard Health (2021) suggested that “plant-based or plant-forward eating patterns focus on foods primarily from plants”, but that “doesn’t mean that you are vegetarian or vegan and never eat meat or dairy.....rather, you are proportionately choosing more of your foods from plant sources”.

While recent years have witnessed an increase in the availability, and the popularity, of plant-based food, it is not a new phenomenon. Indeed, plant-based diets are traced back before recorded history, in that early humans ate a virtually exclusively plant-based diet before they began to hunt, transport and prepare animals for consumption. Some commentators have linked respect for all animal life to many early cultures and religions. Clark (2021), for example, identified “plant - based living” as a characteristic of Jainism as practised in India some 2, 500 years ago, and also linked it to Hinduism, Taoism and Buddhism during the same time period. In more modern times a number of vegetarian societies were formed in the UK in the nineteenth century and since then their underlying goal has been to promote abstaining from meat and from the by-products of animal slaughter. Charting the modern growth of plant-based foods is an elusive task, but the World Economic Forum (2019) estimated that the worldwide demand for plant-based protein has grown from some 70 million tonnes per annum in 1980, through 100 million tonnes in 2000, to 150 million tonnes in 2020.

While it is difficult to measure the total size of the market for plant-based food a number of estimates suggest that it is growing rapidly. Bloomberg Intelligence (2021), for example, reported that global sales of plant based dairy and meat alternatives reached \$29.4 billion in 2020, and that the market could increase to

\$162 billion by 2030. Putting this figure into wider perspective, this will only constitute 5% of the total food market. The Good Food Institute (2022) reported that sales of plant-based products in the US, grew by over 25% in 2020-2021 to some \$7 billion, and that in 2020 plant-based food sales grew twice as fast as overall food sales. Within Europe, Statista (2021a) reported that during the period October 2019 to September 2020, sales of plant-based meat substitutes grew by 76% in Germany, 52% in Austria, 36% in the UK and 32% in Spain, though the corresponding figures for France and Italy were much lower at 9% and 1% respectively.

A number of forces are seen to be important in driving this market growth. Human health and well-being, and more specifically, the growing importance of the “health conscious consumer” Deloitte (2019), are seen as one of the major drivers. Here the growth of plant-based foods reflects growing concerns that the regular presence of red meat and processed meat in diets poses major health risks. Richi et al. (2015), for example, argued that evidence from the US and Europe, indicated that “the long-term consumption of increasing amounts of red meat, and particularly of processed meat, is associated with an increased risk of total mortality, cardiovascular disease, colorectal cancer and type 2 diabetes, in both men and women”. More generally, plant-based diets are seen to assist in weight management and in promoting better overall health.

Growing concerns about animal welfare are also driving the growth of the plant-base food market. Essentially, the concept of animal welfare is concerned with how an animal is coping with the conditions in which it lives, and it is generally seen to include three elements, namely, an animals’ normal biological functioning, its emotional state, and its ability to express normal behaviours. While animal welfare embraces a wide range of themes, including care for domestic pets, the exploitation of animals for commercial purposes, and animal experimentation in science and medical laboratories, it is the ways animals are treated in modern intensive agricultural production systems, that is the major issue driving growing consumer interest in plant-based foods. In addressing modern agricultural practices, Clark et al. (2016), for example, identified some of the damaging impacts of increased productivity on the welfare of farm animals and highlighted public concerns about such impacts. The Humane Society International (2022) claimed that “more than 80 billion land animals are killed for food globally every year - often enduring unfulfilling lives of suffering - plus an untold number of aquatic animals”.

A range of environmental concerns about meat and poultry production, are also seen to be important driving the increasing popularity of plant-based food. These concerns include the pollution of watercourses, deforestation, the loss of biodiversity, soil degradation, and greenhouse gas emissions, and ultimately many of these factors are seen to be contributing to climate change. Meat production causes greenhouse gas emissions, for example, through the release of methane as animals digest food, through the decay of animal manure, through nitrogen-based fertiliser use and through the deforestation to enable cattle farming. Ritchie and Roser (2021), for example, reported that beef herds are responsible for producing 99.48 kilograms of greenhouse gas emissions per kilogram of food product, with the corresponding figures for lamb and mutton, dairy herds, pig meat and poultry meat being 39.77, 33.3, 12.31, and 9.87 kilograms, respectively. At the same time, the corresponding figures for potatoes, bananas, peas, and rice are 0.46, 0.86, 0.98, and 4.45 kilograms, respectively.

Widening the both the range of ingredients and the product range of plant- based foods has also served to drive their

market growth, and has offered consumers more choice and new flavours. Soy, oat coconut, almond rice, and hemp, for example, have been used to produce milk alternatives. At the same time, Bloomberg Intelligence (2021) suggested that “restaurants are an easy venue to try a plant-based meat or dairy product and can influence shopping for at-home consumption”. More specifically, Bloomberg Intelligence (2021) argued that “large restaurant chains, including Starbucks, Burger King, Del Taco and Taco Bell have played a critical role in advertising menu items and driving customer interest and trial sales”, and in exploring “how the plant-based trend found its roots in fast food”, Volmer (2020) claimed that “as fast food brands capitalize on the growth of plant-based diets, they have the scale to take a growing movement mainstream”.

Cameo Literature Review

The hospitality industry’s impact on society, the economy, and the physical environment in which it operates continues to attract considerable attention within the academic literature (e.g., Legrand et al. 2016, Jones et al. 2016, Parsa and Narapareddy 2021). While research in this genre has addressed an extensive range of themes, work on plant-based food in the hospitality industry, and more specifically in the fast food sector, has been limited. With that in mind this cameo literature review outlines this limited work and also illustrates some of the literature on the impact of fast food on both human and animal welfare, and the role of plant-based food in the transition to a more sustainable future, which seem to be relevant to the current study. As such, this review provides an academic context and a set of reference for the paper.

Very little research has been published on plant-based food in the fast food sector of the hospitality industry, but two papers merit attention. Larson (2020), provided a case study of the Plant Power Fast Food company, “a 100% plant-based brand”, founded in San Diego in 2016, which had seven restaurants and a mobile truck operation four years later. The company’s vision statement emphasised that “by demonstrating the viability of a plant-based, cruelty free, environmentally sustainable and healthier alternative in the fast-food restaurant format, we seek to expose millions of consumers to convenient and delicious plant-based meals” (Larson 2020). Looking to the future, Larson (2020) argued that the company will continue to change the landscape of the fast food industry, but recognised that as the company continues to expand it will need to forge new relationships with different suppliers.

Attwood et al. (2019) recognised that a number of fast food companies had added plant-based options to their menus, but in arguing that there was still much that the fast food sector could do to ensure that customers shift from meat towards these new menu additions, they suggested a number of development strategies which could be accommodated within existing business models. These strategies included using evocative language on menus to emphasise the positive attributes of plant-based items; listing plant-based items in the main body of the menu rather than in a separate vegetarian section; increasing the variety of plant-based items on the menu; and encouraging staff to promote plant-based options by recommending them as tasty and satisfying choices, rather than focusing on their environmental or health benefits.

Looking more widely across the hospitality industry, a variety of research themes can be identified, though the work on plant-based food within the industry is fragmented and it lacks a coherent framework. Drawing their empirical information from Taiwan, Chang et al. (2021) looked to examine the relationship among motivations, satisfaction and loyalty with plant-based food dining at destinations, and to determine if, and how, the attraction of plant-based dining moderated customer satisfaction and loyalty. The authors found that a positive relationship between motivations and satisfaction and loyalty in plant-based food dining, and motivations were found to comprise physical, cultural, interpersonal and prestige domains, while satisfaction and loyalty had three dimensions, namely overall satisfaction, intention to revisit, and intention to recommend. However, food attractiveness did not moderate the effect of motivations on satisfaction and loyalty. At a practical level, the authors concluded that plant-based restaurant operators and managers should have a deeper understanding of the distinctive characteristics of their target market.

Guachalla (2021) looked to understand how people following a plant-based diet for environmental, ethical, and health reasons influenced tourists’ destination images from cognitive, affective and conative dimensions. The findings suggested strict plant-based diets stimulated “destination images of social belonging, images off-the-beaten-track, images of cosmopolitanism, and images of emotional solidarity rooted in these tourists’ personal normative belief”. The author also concluded that people following plant-based diets adapted their travel patterns and itineraries in their quest to find the businesses that catered for them. Sommit and Boonpaisarnsatit (2020) looked to identify the elements that contribute to the local-plant based gastronomy tourism experience in three areas of Chiang Mai province in Thailand. The finding revealed that 21 local plants were contributing to the plant-based tourism experience, and the authors suggested that young chefs and health conscious people were the major target tourists, and that good conservation of local plants and effective communication via social media were crucial to the successful development of the tourism experience.

Bertella (2020) explored the possible experience design strategies for plant-based restaurants targeting a customer segment that is not limited to vegetarians. His findings suggested that although several design strategies that applied to generic restaurants were also relevant for plant-based restaurants, a number of additional considerations, including the quality of the food, the restaurant’s atmosphere, and the attitude of all the staff that come into direct contact with customers are also vitally important. In recognising that vegetarians are a varied and heterogeneous group, and that this means that hospitality workers must offer a wide variety of meals and combinations of plant origin, Šmugović et al. (2021) looked to

gain a better insight into the awareness and attitudes of hospitality management towards plant-based foods.

The impact of fast food on human health has attracted research attention. Work on the “healthiness of US fast food meals 2008-2017” by Alexander et al. (2020), for example, revealed that significantly fewer fast food meals met the American Hospital Association’s calorie criterion in 2015, 2016, and 2017, compared to 2008, and that there were no significant changes over time in the percentage of meals meeting the American Hospital Association’s criteria for saturated fat, cholesterol or sodium. More specifically, research has been undertaken to address concerns that fast food is a significant cause of obesity in children and young people. In concluding a study of fast food consumption among young adolescents in low- and middle-income countries, Li et al. (2020), for example, emphasised the urgent need to prioritise the implementation of healthy diet programmes to improve adolescent health in these countries.

Animal welfare is an increasingly high-profile issue within many societies and widespread concerns have been expressed about the ways animals are treated in modern intensive agricultural production systems. Research on how fast food companies, particularly those companies where meat- and chicken-based products are dominant menu items, has attracted attention in the literature. Well over a decade ago, Adams (2008), for example, suggested that while some fast food chains had responded to pressure for changes in animal welfare, concerns still remained that steps taken to address supplier misconduct and noncompliance were limited. More recently, Jones and Comfort (2022) explored how some of the leading fast food companies have addressed animal welfare, and suggested that the companies’ commitments to animal welfare were aspirational, and at least one step removed from the production process, and that there are concerns about the auditing and external assurance processes, that many companies employed to promote high levels of animal welfare.

More generally, the environmental impact of fast food companies has attracted increasing research attention, and here the need to move to a more sustainable future has often been a focal point. Beverland (2014), for example, argued that “livestock production has an enormous impact on climate change emissions, resource use, habitat loss, and the availability of staples for consumers in developing countries”, while Alae-Carew et al. (2022) suggested that “our current global food systems and patterns of consumption are unsustainable for human and planetary health”. Further, Alae-Carew et al. (2022), argued that “a global transformation towards sustainable food systems is crucial for delivering on climate change mitigation targets worldwide. In high- and middle-income settings, plant-based meat and dairy alternatives present potential substitutes for animal sourced foods, and a pathway to transition to more sustainable diets”.

Methodology

Given the perceived importance of fast food companies in popularising plant-based foods, this paper looks to explore how the leading fast food chains in the UK promoted plant-based menu items on their websites, and in store. Ten companies, namely, McDonalds, Subway, Kentucky Fried Chicken, Starbucks, Burger King, Pizza Hut, Dominos, Nando’s, Costa Coffee, and Café Nero which were the leading fast food companies amongst the UK’s most popular dining brands (Statista 2021b) were selected to provide the frame of reference for the study. The selected fast food companies specialise in a range of different menu items, and as such, can be seen to reflect the potential variety of plant-based foods within the UK’s fast food sector.

In looking to explore if, and how, the selected companies promoted plant-based menu items, the author adopted a simple twin tack approach, though in pursuing this approach the focus was on how the leading fast food companies approached plant-based menu items rather than on a comparative analysis of their plant-based menus. Firstly, an internet search using the key phrase, plant-based menu and the name of each of the selected fast food companies, was conducted in January 2022 using Google as the search engine. Secondly, the author undertook a simple observational survey of if, and how, the selected fast food companies looked to promote plant-based menu items in their outlets. The survey was undertaken in each of the selected companies’ outlets within Cheltenham, a town with a population of some 115,00 people, located in the South West of England, during January 2022.

The author recognised that while this simple, approach was fit for purpose in an exploratory study, it has its limitations. There are issues, for example, about the extent to which the information on plant-based food posted on the Internet genuinely reflects corporate thinking, but the author believes this to be appropriate in an exploratory review. At the same time, the outlet survey provides a snap shot, at a particular place, and point in time, of how the selected companies were looking to promote their plant-based menu items. However, the author suggests that such a survey was easily executed and readily replicable, and that it captured an accurate picture of how information on the availability of plant-based menu items were, or were not, being presented to customers at the point of sale.

Findings

The findings revealed that the majority of the selected fast food companies promoted their plant-based menu items but there were variations in the scale, and in some cases arguably in the authenticity, of their offer. However, rather than describing the full details of how each of the companies promoted their plant-based offer, three themes, namely, corporate mission, headline items, and menu listings, can be identified, though not all companies focused on each of these themes.

Some of the companies promoted plant-based foods as an important element in their mission. Starbucks (2022), for

example, argued that “building on Starbucks sustainability commitment, the company’s goal is to expand plant-based choices as an environmentally friendly menu contributes to our goal to be a resource positive company”, and to that end Starbucks (2022) “continues to introduce new drinks and food to menus globally while innovating with plant-based ingredients across key platforms like espresso, cold brew, refreshment, food and more”. Further, the company claimed that “customer interest in the plant-based food market has continued to grow with a 9% increase between 2019 and 2020 and reports of a substantial shift in customer demand worldwide”, that “our aim is to provide our customers a variety of choices as part of their Starbucks experience and we look forward to hearing feedback from our partners (employees) and customers”, and emphasised “expanding Starbucks plant-based menu globally is one of the ways we are pursuing our goal to reduce our carbon footprint by 50%” (Starbucks 2022).

Burger King (2021) reported “at Burger King we believe in living, and, maybe more importantly eating Your Way”, and “that is why we want to be the global leaders in Plant-based alternatives in the quick-service industry”, and “our aim is to do this by offering vegan, vegetarian and plant-based alternative that do not compromise on flavour or price”. In a similar vein, in promoting “Beyond Fried Chicken”, Kentucky Fried Chicken (Yum Brands 2022), reported “the mission from day one was simple-make the world-famous Kentucky Fried Chicken from plants”, and “over two years later we can say mission accomplished”.

Some of the selected companies, perhaps most iconically, McDonalds, headlined plant-based items on their corporate websites. McDonalds (2022) highlighted the “McPlant”, which the company describes as “a vegan burger made with a juicy plant-based patty”, which contains “vegan sandwich sauce, ketchup, mustard, onion, pickles, lettuce, tomato, and a vegan alternative to cheese in a sesame seed bun”. The company claimed “pea protein is one of the main ingredients in the patty, along with other quality ingredients which are turned into a great tasting meat alternative”, and that the “McPlant is cooked separately from other McDonald’s burgers and sandwiches, using dedicated equipment to ensure it doesn’t come into contact with meat products” (McDonalds2022).

Nando’s (2022) website suggested “if you’re looking for something plant-based, we’d recommend trying The Great Imitator, which tastes just like our famous PERi-PERi chicken, but it’s made completely from pea-protein”. However, this suggestion comes with two warnings, namely “we just need to mention that although our kitchens aim to keep all plant-based products away from ingredients derived from animal origin, we cannot guarantee this”, and that while “The Great Imitator is a plant-based recipe however the wrap and baste contain shellac” (Nando’s 2022). Burger King (2021), described its “Vegan Royale”, the “new variant of our iconic chicken burger” as “the crowning glory of our plant-based menu”.

Plant-based menu items, were promoted by all the selected companies, though such items were normally very much in the minority on their menus, and in some cases the plant-based description was qualified. The Subway (2021a) website, for example, advertised its “Plant Patty”, which was described as being “packed with red onion, red and green peppers, carrot, spinach, corn, white cabbage, peas, and green chillies”, with the message “this patty’s for plant lovers”. However, this advertisement was accompanied by the caution that “our plant-based ingredients may come into contact with non-plant-based ingredients” (Subway 2021a). Subway also listed other plant-based menu items including the “Tastes Like Chicken Tikka”, and the “Meatless Meatball Marinara” (Subway 2021b). Kentucky Fried Chicken (n.d.) suggested “if you’re looking for finger lickin’ flavour without the chicken, you’re in the right place. Coated in our famous 11 herbs and spices, our Original Recipe Vegan Burger will definitely satisfy your plant-basedcravings”.

Costa Coffee (2020) listed its “Veggie Breakfast Box”, the “Vegan Bac’n Breakfast Bap”, and the “Vegan Macaroni Cheese”, amongst its food menu items. However, though the cream cheese in the latter item was described as being dairy free, the ingredients of the breakfast box included free range eggs. Pizza Hut (2022) suggested that “when it comes to vegan dining, it can often be hard to find delicious food that fits the bill for a plant-based diet”, but claimed “this is where Pizza Hut Restaurants come into play. With a truly awesome Vegan menu, including Vegan Pizzas’ Sides and Deserts, we really are the place to be for yummy vegetarian food”.

The observational survey revealed that some of the selected fast food companies advertised at least one of their plant-based menu items, prominently at their outlets, as illustrated below. A large canvas sign outside the McDonalds outlet, for example, showed an image of “McPlant”, described as “Our Iconic Taste, Plant Based”, while each tray provided for customers eating in the restaurant, had a placeholder mat, which provided full details of all the ingredients of the “McPlant”. A poster holder advertising board on the pavement outside Caffè Nero advertised its “Plant Powered Breakfast”, described as “protein rich plant-based sausages in a freshly toasted ciabatta”, and its “Plant Powered Panini”, described as a “spicy chicken style panini made from pea and soy protein”. A poster in the front window of the Subway outlet, read “Plant Based Big Taste”, to promote its TLC (Tastes Like Chicken) sub, while an illuminated sign above the counter read “Plant-Based Meal Big Deal”. The posters in the window of the Kentucky Fried Chicken and the Domino’s outlets both advertised the companies’ vegan offers but made no mention of them being plant-based.

Concluding Reflections

The findings revealed that the leading fast food companies within the UK were promoting their plant-based items at both the corporate and outlet level. That said, a number of issues merit concluding reflection. The general emphasis of the

companies' promotions is on plant-based additions to their menus, but the leading fast food companies made no attempt, for example, to associate the introduction of plant-based menu items with a healthier diet. On the one hand, this raises general issues about advantages and disadvantages of a plant-based diet, and while many advantages have been identified, including lower cholesterol and saturated fat intakes, and reductions in the incidence of chronic inflammatory diseases, there are also concerns about protein, and certain nutrient, deficiencies. At the same time, and particularly with the onset of the COVID-19 pandemic, it is important to recognise that many consumers have looked towards immunity by increasing the number of medicinal and ayurvedic plant extracts, such as garlic, ginger and turmeric, in their food intake, and here many fast food companies, who use such extracts in some of their products, can be seen to be helping to assuage consumers' health concerns. On the other hand, recent research (e.g., Tso and Forde 2021) suggests that some plant-based items may be highly processed and have a high calorie and sodium count, so it may not necessarily be in the best interests of fast food companies to disclose detailed nutritional information about their plant-based menu items.

Notwithstanding such concerns, a move towards a substantial increase in their plant-based menus could provide a major challenge to the major fast food companies and to their traditional offers. The majority of the selected fast food companies based their business models around a focused menu that is either meat or chicken based, while the others have made extensive use of cheese or dairy products. However, if consumers look to reduce animal product intake and increasingly come to demand what they see as healthier plant-based menu choices, coupled with the convenience of the fast food companies' offer, this could be seen to challenge the fast food companies' animal products-based business models. As such, the leading fast food companies might be seen to have a vested interest in maintaining the main focus of their menu offers around animal-based menu items, rather than expanding their plant-based items more fully.

At the same time, there may also be countervailing issues about the mutually reinforcing impact of the growth of plant-based products on both consumers and fast food companies. On the one hand, if the taste and flavour of an albeit limited range of plant-based items on fast food companies' menus appeals to consumers, then such consumers may increasingly be driven to purchase plant-based food products as part of their wider food shopping behaviour. Whether the leading fast food companies will need to broaden their plant-based menus to trigger such a move currently remains to be seen. On the other hand, in introducing plant-based menu items, the fast food companies will monitor their sales impact closely and, if their monitoring and evaluation research shows that the initial introductions have generated positive responses from consumers, they may then look to consider the introduction of further additions to their plant-based menus, which may in turn lead to revisions to their conventional business models.

More generally, the widespread adoption of plant-based diets is seen to be an important element in the transition to a more sustainable future. While the food people consume at, or from, fast food outlets, is normally only a relatively small proportion of their total food intake, Bloomberg Intelligence (2021) emphasised the important role the major fast food companies could play in driving the wider consumption of plant-based foods across society, and thus in contributing to the development of more sustainable food systems, in mainstreaming plant-based diets, and ultimately in helping to secure a more sustainable future. However, two issues might be seen to call such a scenario into question. Firstly, it remains to be seen if any wholesale extension of the major fast food companies' plant-based food range, can, and will, be accommodated within their existing business models. Secondly, the extent to which fast food companies are leading, or simply responding to, consumer concerns about the impacts of meat consumption on human health, animal welfare or more generally on the planet, is far from clear. The increasingly wide constituency of such concerns, might be seen to suggest that looking to the medium-term future, the fast food companies will have a limited, rather than a leading, role, in driving plant-based consumption across society.

While this short paper has a number of limitations, as outlined earlier, the author believes that it contributes to what is currently seen to be a gap in the hospitality literature, and that it can provide a platform for future research. More specifically, the role of plant-based food in the fast food sector offers a wide variety of potential research agendas. At the corporate level, for example, there may be opportunities to examine the leading fast food companies' strategic thinking in determining the nature, and the extent, of their plant-based menus, how these companies develop, and market test, their plant-based items, and how they accommodate them into their existing business models. At the operational level, researchers may want to explore how employee training programmes are designed and developed to help staff to promote plant-based items to customers, and to evaluate the success of such programmes. At the customer level, market research could focus on if, and how, the fast food companies' advertising and promotional programmes influence buying behaviour, and if such programmes are successful in attracting new groups of consumers.

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