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Beyond calorie counting: assessing the sustainability of food provided for public consumption

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ABSTRACT

Food consumption outside home is a growing phenomenon that is rapidly gaining in importance in terms of its impact on both consumers and the food system. This paper presents an innovative tool for measuring the sustainability of food intended for public consumption in organizations such as schools, hospitals and workplaces. Drawing on an in-depth review of the food sustainability literature, the FOODSCALE method quantifies 11 sustainability categories which together cover 36 food sustainability indicators. A number of characteristics distinguish the FOODSCALE method from other food sustainability assessment tools. First, it covers the three dimensions of sustainability – society, economy, environment – treating these as interdependent and coexisting. Secondly, it considers the entire food system, thus incorporating aspects of production, distribution, procurement, consumption and waste disposal. Cross-cutting themes of health and human agency complement the 11 specified categories to present a holistic assessment of food sustainability. The tool helps to identify both good practice and areas for improvement and points towards specific measures for increasing food sustainability. Following a detailed discussion of the tool, the paper presents results of a comparative study of 8 cases across 5 organizations in the Republic of Ireland.[2] Results show significant differences in sustainability performance across cases and within organizations. The role of key decision makers in organizations and possible points of intervention are highlighted in the discussion. The research demonstrates the potential of the FOODSCALE method for assessing the (un)sustainability of food intended for public consumption. Building on theoretical insights from the alternative food systems literature, the paper emphasizes the central role of organizations in supporting (un)sustainable food systems and highlights potential pathways toward more sustainable food procurement and provision. The paper makes a major contribution to the advancement of empirical research on the social, economic and environmental impacts of food provision in large-scale organizations.

1. Introduction

Sustainability challenges occur throughout all stages in the food system from production through processing, distribution and retailing to consumption and waste disposal. Global food production is higher than ever before, but at a great cost. A host of environmental problems such as greenhouse gas (GHG) emissions, deforestation, desertification, eutrophication and biodiversity loss are exacerbated through current food system activities (Garnett, 2011). Moreover, economic globalization has increased people's dependency on both local and geographically distant food systems. Food insecurity is growing worldwide due to the heightened interconnectedness and complexity of these systems and, consequently, their susceptibility to disturbances and interruptions, including unpredictable weather patterns associated with climate change. All in all, the global food system fails to effectively carry out its primary function – to provide adequate nutrition for all people. Some people eat too much food whilst others go hungry, including many small farmers in developing countries. Diet-related diseases are prevalent among all populations, often for different reasons, but nonetheless at a great cost to society (McMichael et al., 2007). The rapid depletion of key natural resources such as oil, arable land

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and water further compounds the difficulties in achieving a sustainable food system. Additionally, greater prosperity, population growth and rapid urbanization make food-related challenges increasingly urgent, with increases in food demand over the next 30–40 years estimated to be as high as 70–100 per cent (FAO, 2009).

To address these sustainability challenges, the food system must substantially increase output and simultaneously reduce its negative environmental impact. Food prices need to be kept at a level that allows producers to earn a decent living while keeping nutritious food affordable and accessible for all consumers. To reconcile these three goals demands a radical transition towards a food system that is productive, resource efficient and able to cope with internal and external shocks, supports livelihoods, and protects the environment (Godfray et al., 2010). This requires concerted effort across all sections of society and by actors at all stages of the food system, including producers, processors, distributors, consumers, policy makers and others (Spaargaren et al., 2012). A focus that goes beyond technological innovation and individual consumer responsibility incorporating a holistic long-term vision is needed (Sage, 2012). In this regard, one area where intervention can exert influence on the food system is the sphere of public food consumption, that is, food that is eaten outside home. Public food consumption is recognized as an area of increasing importance, particularly in industrial nations, due to its direct and indirect social, environmental and economic impacts and its significant influence on the wider food system (Wahlen et al., 2012).

The remainder of the paper is divided into 6 parts. After an initial discussion of the sustainability challenges associated with public food consumption in organizations in Section Two, the FOODSCALE method is introduced and discussed (Section Three). The development and testing of this tool receives attention in Section Four. Section Five details the application of the FOODSCALE method in 5 Irish organizations and compares their respective scores. This is followed with a discussion (Section Six) and short conclusion (Section Seven). Overall, this paper seeks to make a major contribution to the sustainability assessment of food offered in organizations.

2. The (un)sustainability of public food consumption

There are many factors which contribute to consumers' decisions to eat out including higher incomes; more female participation in the workforce; greater choice; increased work pressure resulting in longer working hours; and lack of skills, time or energy to prepare food (Davies et al., 2014). At the same time, a wide variety of eating out options and strong market competition across the choice spectrum have led to substantial variance in the type and quality of food offered in highly developed countries. Traditional eateries such as restaurants, cafés and hotels now find themselves in competition with more recent entries into the pre-prepared food service market such as newsagents, convenience stores and gasoline service stations. Takeaway and fast food outlets, food markets and public houses serving food further increase consumer choice for eating outside home.

For many the choice of eating options is considerable, for others, they have little option but to eat away from home. Hospital in-patients, prisoners, nursing home residents and school boarders are generally more limited in their food consumption choices. When and what they eat is influenced to a great degree by the choices of others. Other large-scale food preparation sites such as those at schools, universities, workplace canteens and other in-house catering typically provide food for employees, students or other affiliated consumers. Worryingly from a public health perspective, foods eaten outside home tend to be less healthy compared with food prepared at home (Orfanos et al., 2007).

As well as providing a large proportion of the population's food energy intake, the food service sector is a large employer generating substantial direct and indirect employment, particularly in food production, processing and distribution, and has a notable impact on the environment through its food procurement, preparation and waste disposal activities. Among the operational activities of food service, it is food procurement that generates the greatest environmental impact (Baldwin et al., 2011) owing to its influence on the production and distribution of food. Here, large public and private organizations are thought to occupy a strong position to support sustainable development and improve the local economy through sustainable sourcing while also creating spillover effects into private households (Walker and Preuss, 2008; Wahlen et al., 2012).

Within the food services sector, catering professionals, food procurement officials and chefs are in positions of responsibility and influence, they continually make decisions that help to shape, guide and control the food system. Exposing the linkages between food production, procurement and consumption is critical to understanding how the dynamics of supply and demand at these intersections impact on the wider food system. These complexities raise major questions regarding the (un)sustainability of food systems and its measurement. While an in-depth treatment of this debate is beyond the scope of this paper, it nevertheless seems prudent to briefly outline three key points.

2.1. Reconciling the three dimensions of sustainability?

Many food sustainability concepts and measurement tools have equated sustainability with sounder environmental practices, such as a reduction in GHG emissions, thereby ignoring major societal and economic aspects of sustainable food (Morgan, 2008). The widespread practice of equating sustainable food with more environmentally friendly food ignores the substantial trade-offs that occur between social, environmental and economic factors in the food system and the contextual considerations of food sustainability (Lozano, 2008). Food with a lower environmental impact is not necessarily more sustainable than food that might be more environmentally unfriendly but brings greater overall benefits to wider society. For example, environmental efficiencies can be achieved through large-scale production, but support for small-scale producers may better contribute to rural economies and vibrant local communities. The FOODSCALE method presented in Section Three addresses this issue by treating environmental, economic and social sustainability issues as interrelated aspects of the food system that may or may not be compatible.

2.2. Defining sustainable food

There is no agreed definition for what constitutes sustainable food, thus making it difficult to measure and quantify. Nevertheless, a number of tangible characteristics reflect greater sustainability and are captured in the FOODSCALE method (see Section Three). These include protecting biodiversity; promoting animal welfare; avoiding negative environmental impacts; providing safe, healthy food; educating and connecting consumers with the food they eat; reflecting seasonality and culture; being socially inclusive by being available, accessible and affordable to a wide range of people; contributing to resilient local economies and supporting sustainable livelihoods through fair prices, good working conditions and fair trade both at home and overseas.