Online food hubs - platforms which re-localise, reconnect and reduce

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Background

Digital farmers’ markets or ‘online food hubs’ challenge the energy-intensive incumbent model of food provision by re-localising supply chains, empowering farmers to set their own prices and supporting consumers who wish to buy food produced in ways consistent with their values. Open Food Network is one example, which operates in 20 countries and provides an open source platform which any producer can use to sell direct to customers.

However, online food hubs are currently marginal in terms of market share. Using the well established Diffusion of Innovations theory (Fig. 2) as a framework, I investigate:

1) how the adoption of online food hubs could be scaled up, and
2) the potential for food hubs to reduce GHG emissions compared to the incumbent model.

Methods

Collaborating with Open Food Network UK, an explanatory sequential mixed-method approach was applied in this project:

Online questionnaire survey compared perceptions of online food hubs among early adopters (n=221) and non-adopters (n=374) in summer 2019.

Semi-structured interviews explored how using online food hubs is situated within broader household food decisions, daily routines and personal ethics. Conducted online with early adopters (n=20) in winter 2020/21.

Quantitative analysis of early adopters’ (n=94) anonymised order history was used to characterise food hub shopping trends during 4 non-consecutive months in 2019/20.

Systematic literature review of Life Cycle Analyses focusing on the GHG emissions associated with food production and transportation in different supply chains. This is work in progress.

Key findings

Scaling up adoption

There were 3 findings which suggest food hubs have the potential to capture a greater market share:

1. Survey results revealed that supporting local businesses, environmental sustainability and shopping convenience were identified as salient attributes by both early adopters and non-adopters.

2. Purchasing history data showed that early adopters are increasingly buying a wider range of items from their local hub. Moreover, the interviews respondents stated they are incrementally substituting supermarkets for hubs in their weekly food shop.

3. Social influence is a key element of innovation diffusion; and interview and survey data revealed that early adopters actively recommend online food hubs to non-adopters. They convey the core attributes, but also specific aspects which they believe may appeal to a particular individual. However, there is also evidence that some of this communication is occurring in ‘echo chambers’ within relatively homogenous social groups.

Reduction in food GHG emissions

GHG emissions: Production & transportation emissions

Consumption emissions:

Fig. 1 Supermarket vs online food hub supply chains

However, online food hubs have the potential to reduce GHG emissions associated with food production and transportation in different supply chains. This is work in progress.

Fig. 2 Stages of adoption and market share

Fig. 3 Early adopters encourage adoption via face to face and social media communication

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References and Acknowledgments


Key message

Reducing food GHG emissions requires upscaling less energy-intensive modes of food production and understanding how household shopping decisions and dietary behaviour interact - online food hubs intersect with both elements. They have the potential to become more widely adopted because they combine well-established ‘local food’ attributes such as provenance and supporting local farmers with greater choice and the convenience of ordering online/home delivery.