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Analysis

Marketing Channels for Local Food

Iryna Printezis*, Carola Grebitus

Morrison School of Agribusiness, W. P. Carey School of Business, Arizona State University, 7231 E. Sonoran Arroyo Mall, Mesa, AZ 85212, United States

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ABSTRACT

Local food can be purchased through intermediated marketing channels, such as grocery stores, or through direct-to-consumer marketing channels, for instance, farmers markets. While the number of farms that utilize direct-to-consumer outlets keeps growing, the value of direct-to-consumer sales has reached a plateau. At the same time, intermediated sales continue to rise. If consumers prefer to purchase local food through intermediated channels, then policies designed to support direct channels may be misguided. Using an online choice experiment, this paper investigates consumers' willingness to pay for local food differentiated by marketing channel. We find that, on average, consumers are willing to pay a premium for local food. However, they are not willing to pay premiums for local food that is sold at farmers markets, and discount it when it is purchased directly from an urban farm. Our findings can be used by farmers, marketers and policy makers to develop a better understanding of consumers' motivation for buying local through various channels.

1. Introduction

The popularity of direct-to-consumer marketing channels, such as, farmers markets, continues to grow (McGarry-Wolf et al., 2005; Zepeda, 2009; Landis et al., 2010). According to the U.S. Department of Agriculture's (USDA) Agricultural Marketing Service (AMS), the national count of farmers markets tripled between 2000 and 2018 from 2863 to 8718 (AMS, 2018). Similarly, the number of community-supported agriculture (CSA) venues, one of the most common forms of urban farming where consumers subscribe to the harvest of a certain farm or group of farms by investing in and sharing the risks and benefits of food production, have increased dramatically from 761 in 2001 (Adam, 2006) to 7398 in 2015 (NASS, 2016). Yet, direct-to-consumer channels for local food are not the most important in terms of sales volume. U.S. grocery retailers are aggressively seeking out partnerships with local growers and producers to source seasonal, locally grown produce and products made out of local ingredients (Guptill and Wilkins, 2002; Dunne et al., 2011).[1] As a result of these trends, sales of local food rose from $6.1 billion in 2012 to $8.75 billion in 2015, and are projected to reach $20 billion by 2019 (NASS, 2016; USDA, 2016), with most of the growth occurring through intermediated channels, such as grocery stores and restaurants. Sales through direct-to-consumer channels, such as farmers markets and CSAs, are growing at a much slower rate (Low and Vogel, 2011; Thilmany-McFadden, 2015; Low et al., 2015; Richards et al., 2017). In this research, we aim to disentangle consumers' preferences for marketing channels and the "local" attribute in their food purchases.

In 2015, local food sales of the farms that sell only through intermediated marketing channels reached $5.75 billion, while the sales of the farms that only utilize direct-to-consumer channels were $3 billion (NASS, 2016). Nevertheless, the USDA AMS continues to support direct-to-consumer channels as a means of growing the demand for not just local food, but local food distributed in a particular way (Martinez et al., 2010; Low et al., 2015). For example, the Farmers Market and Local Foods Promotion Programs (2014 Farm Bill) sets aside up to $30 million in grants annually specifically for improvement, development, and expansion of farmers markets and other direct-to-consumer outlets (FMPP, 2016; NSAC, 2016). While there may be other goals that drive this policy besides simply growing local food sales, if the positive social impacts from local food are accrued regardless of channel, then we should better understand the relative effectiveness of direct and intermediated channels in growing local food sales.

There is mixed evidence on preferences for local food through different points of sale. For instance, Onken et al. (2011) find that consumers are willing to pay a price premium for strawberry preserves sold at farmers markets relative to conventional supermarkets. However, Carroll et al. (2013) did not find any significant differences between consumers' willingness to pay (WTP) for fresh tomatoes sold at the

* Corresponding author.
E-mail addresses: iiermole@asu.edu (I. Printezis), carola.grebitus@asu.edu (C. Grebitus).

[1] For example, about 20% of fresh produce sold at Walmart during the summer months is grown in-state and almost 30% of Wegmans' produce sales come from seasonal products sourced from local family farms (King et al., 2010).

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grocery store or the farmers market. Neither of these studies control entirely for all the factors that may affect preferences for local food offered at different points of sale. In particular, both of these studies only include farmers markets and grocery stores as alternative venues for local food, and do not consider the growing popularity of other direct-to-consumer locations, such as urban farms. Nor do they take into account attributes of purchasing outlets that can potentially influence the choice, such as, convenience. Finally, they do not isolate consumers' WTP for the local attribute from their WTP for a particular marketing channel. Therefore, whether consumer preferences explain the divergence between direct and intermediated sales of local foods remains an open question.

In this paper we attempt to answer this question by conducting an on-line choice experiment that examines consumer behavior in a decision-making context using representative samples of the Phoenix, AZ and Detroit, MI population. The choice experiment setting allows us to separate the demand for local as an attribute from the demand for a particular channel. In doing so, we consider a more complete set of options available to consumers in order to fully characterize what is meant by a direct channel. For example, since many metropolitan areas are seeking to re-purpose empty lots within the city as sources of nutrition and new, extensive economic activity (Goldstein et al., 2011; Dieleman, 2017), understanding the role of commercial urban agriculture outlets is important. Urban agriculture, also known as urban farming, is defined as a practice of production and distribution of food and other products through plant cultivation and animal husbandry within the city limits using vacant lots and parks that are not suitable for housing or construction (Bailkey and Nasr, 1999; Urban Agriculture, 2016; USDA, 2018). We incorporate this marketing channel in our study by including urban farms as one of the points of sale.

We are also able to control for other factors that are likely to affect consumers' preferences for different outlets. Namely, given that convenience significantly influences consumers' preference and choice of the shopping location (Kezis et al., 1984; McGarry-Wolf et al., 2005; Gumirakiza et al., 2014), we account for accessibility as a potential determinant of where consumers prefer to buy local food. Further, we allow for variation in organic status as local and organic are often conflated, and consumers hold a strong preference for organic produce (Costanigro et al., 2011; Meas et al., 2015). In this way, we are able to separate the demand for organic from the demand for local, and determine whether preferences for organic strengthen or weaken the demand for food sold as locally produced. Finally, while examining all factors independently, our experimental design also allows us to test for potential interaction effects among local, organic and different points of sale. By doing so we are able to reveal the nature of the relationships that exists between these attributes, and determine whether the simultaneous presence of local and organic labels increases or decreases demand for food and whether preference for these labels differs by point of sale.

Our findings contribute to both the substantive literature on the local food market and the methodological literature on experimental design. Specifically, we demonstrate how experimental methods can be used to uncover preferences for specific determinants of consumer choice, when these determinants may have multiple, inter-related effects on demand. In this way, our design effectively disentangles the value of local as an attribute, separately from where local food is sold. By properly assigning preferences to product attributes and point-of-sale attributes, we are able to offer valuable insight to the welfare effects of offering food through direct channels and intermediated channels, when the food itself is differentiated along multiple overlapping dimensions.

The rest of the paper is structured as follows. Section 2 develops our hypotheses regarding the expected difference in consumer demand for direct-channel and intermediated local food based on concepts from the empirical literature. Section 3 describes in detail the experiment, and how our design allows us to disentangle the value of local and organic foods. It also explains our empirical model. Section 4 presents the estimation and results. Finally, we draw some conclusions and implications of our findings in Section 5.

2. Conceptual Background

Direct marketing channels matter for various reasons. Direct-to-consumer outlets, such as farmers markets or urban farms, provide an opportunity for local farmers to sell the food they grow directly to the customers (Neil, 2002; AMS, 2017) and create personal relationships with them (Onianwa et al., 2006). Direct channels may facilitate the development of farmers' entrepreneurial skills (Feenstra et al., 2003). They may allow farmers to reduce marketing costs, thereby retaining a larger share of the retail price (Low et al., 2015), and receive higher net profits (Anderson, 2007). Nevertheless, while the number of local farms utilizing the direct-to-consumer marketing channels continues to grow, direct sales growth is stagnant (Low et al., 2015). At the same time, sales through intermediated channels are growing rapidly (Richards et al., 2017). Therefore, if the main goal of the governmental policies is to increase the sales of local food, then the support of direct channels may be misguided.

The fact that direct-to-consumer sales have plateaued raises the questions considered here, namely (1) Do consumers prefer to purchase local food through direct channels, or from intermediated channels, such as, grocery stores? (2) Are consumers willing to pay a premium for local food sold at direct-to-consumer marketing channels? (3) What affects consumers' preferences for local food purchases? The investigation of these questions is based on core concepts from consumer behavior theory.

The body of research that investigates consumers' demand and WTP for local food shows that consumers are willing to pay more for local produce (Willis et al., 2013; Carroll et al., 2013) and processed foods (Hu et al., 2009; Onken et al., 2011; Hu et al., 2012) compared to non-local. Consumers also appear to have a higher WTP for local as a product attribute over other value-added claims, such as, fair trade, GMO-Free, low fat, or 'no sugar added' (Loureiro and Hine, 2002; James et al., 2009; Onozaka and Thilmany-McFadden, 2011). In fact, while previous research demonstrates that consumers value the attribute "local," it also suggests that they have a significantly positive WTP for "organic" (Loureiro and Hine, 2002; Costanigro et al., 2011; Hu et al., 2012; Meas et al., 2015). If this is the case, then there may be a sub-additive or super-additive relationship[2] between these two attributes. For example, Meas et al. (2015) explore consumer preferences for value-added food labels of processed blackberry jam. They find strong overlapping valuation between organic and local multi- and sub-state regional claims. On the other hand, Onozaka and Thilmany-McFadden (2011) investigate interaction effects among food claims of apples and tomatoes and find that local and organic claims do not have a significant interaction, meaning that their values are independent from each other. In addition, conducting a study among Spanish consumers, Gracia et al. (2014) find super-additive relationships between organic and local. Given these mixed results, one objective of this study is to investigate the interaction effects between local and organic food attributes.

Interactions are not limited to credence attributes. Prior research also suggests that there may be an interaction between the marketing

[2] Two attributes are considered to have a sub-additive (super-additive) relationship when there exists (does not exist) an overlap between their values in the WTP that results in a discounted (higher) total premium compared to the sum of individual WTP for the attributes. This overlap can be determined by examining the sign of the interaction effects between these attributes. While Meas et al. (2015) state that "…the substituting or complement nature between attributes can be conveniently determined through the signs of the interaction terms. Specifically, two attributes are complements if $\beta pq > 0$, and substitutes if $\beta pq < 0$…", we use the terms "sub-additivity" and "super-additivity" for this occurrence in order to avoid confusion with the economic terms substitutes and complements.