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European Society for Ecological Economics – ESEE2019

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Title

Urban Agriculture Food Production: Consumer's preference, and willingness to pay.

Abstract

Urban agriculture is a unique form of agriculture that can provide fresh, local produce for city dwellers, and at the same time enhancing biodiversity in urban areas. Consumers' interest in urban farms' produce is increasing. Hence, there is a need to identify consumers' preferences for urban farming food produce and understand the underlying reasons for their demand. In this paper, we explore how consumers' willingness to pay for food varies with the production method: urban farming techniques, along with other variables indicating consumers perception and their subjective knowledge regarding urban agriculture.

Extended Abstract

Consumers are increasingly presenting interest in locally grown food products (Grebis et al., 2017). Urban agriculture is defined as the practices of “growing, processing and distributing” of food and other products through intensive plan cultivating and animal husbandry in and around cities (Carpio and Isengildina-Massa, 2009). In France, roof after roof, tunnel after tunnel, urban agriculture spawns its way. Salads and strawberries are harvested on the roofs and in the buildings of big national companies such as RATP, BNP, La Poste, and schools, universities, hotels or social housing. In Ile-de-France, 366 hectares are already identified as dedicated to urban agriculture. These projects provide several benefits, such as contributing to food security, supporting healthy dietary patterns (e.g., Warren et al., 2015; Zezza and Tasciotti, 2010), and improving local ecology and sustainability (e.g., Wakefield et al., 2007). Subsequently, some food is increasingly marketed as locally grown (Darby et al., 2008). However, how much do consumer want this local food and what is their willingness to pay?

In this paper, urban agriculture is considered according to its capacity of developing specific food quality to consumers which would allow the emergence of an overall territorial value enabling the whole community (or city) to distinguish itself from any competitive effect. The entire debate on the food quality products is affirming this potential, and tend to offer territories in crisis alternatives to productivity-driven farming practices (Pecqueur, 2001). This geographical characteristic is to take into consideration in the current context where consumers are increasingly criticizing the current food production processes and questioning their economic, social and environmental consequences. They are more and more responsive to this trend with their purchase behavior and prefer products produced respecting specific environmental and ethical standards (Zander and Hamm, 2010).

The objective of our study is to evaluate the potential for the success of urban agriculture. In this regard, we focus mainly on future consumers. Indeed, we need to investigate what affects their behavior in order to develop strategies that encourage them to put their beliefs into action.

An understanding of the determinants of consumer behavior that is likely to have an impact on buying habits can help to identify what makes successful urban farms. When it comes to urban food produce purchase, concepts, such as perception, subjective knowledge, and attitudes, play a

crucial role in decision making (e.g., Howard and Sheth, 1969) and the overall willingness to pay of consumers for this kind of products. This paper intends to explore the trends in the consumption of urban agriculture products. Through an economic analysis, our purpose is twofold. First, it aims to highlight how consumers' willingness to pay (WTP) for food varies by the types and the features of urban farms producing it. Second, the paper intends to explore the drivers of consumers preferences towards food produced in urban farms. To do so we apply a contingent valuation-based approach through the elicitation of the willingness to pay of city dwellers for different attributes of urban agriculture food products.

Conceptual framework

In order to answer these research questions, we apply the theory of the buyer behavior of Howard and Sheth (1969). The authors state that the stimuli perceptual constructs and learning construct leads to the outputs of attention, comprehension, attitudes, intentions and ultimately purchase behavior. Another issue addressed in this study is the value of local urban-grown produce (i.e., what is the value of knowing that the food was grown in the nearby). Martinez et al. (2010) note that one of the significant challenges in designing a local food system is estimating the amount that consumers would be willing to pay for local products. The estimated price premiums may be helpful in cost-benefit analyses of proposed expansions of local food systems. Previous studies have demonstrated that the costs of direct marketing can present obstacles to expanding local food sales, for example, Biermacher et al. (2007) and Burnett et al. (2011) have examined the consumers' willingness to pay for locally grown fresh produce under five definitions of "local" including a generic term "locally grown" and four geographic intervals: multistate, state, regional and country. A survey of the urban area was conducted to examine how estimated price premium varies with geographic scale. Roughly 85% of respondents offered a positive WTP for fresh produce under the designation "grown locally".

Method

We surveyed randomly selected individuals N = 316 individuals in spring 2017 in Rouen City (France). The questionnaire consisted of three main sections with questions statements adopted from previous studies. The survey intended to highlight several aspects: the purchase frequency of local foods, the perception of urban agriculture, the attitudes towards urban agriculture, the

local food, and perception of urban agriculture, and attitudes towards urban agriculture, and likelihood to purchase and grow produce from urban farms and the willingness to pay for urban farms grown produce.

Primary results

While previous studies on local food found that consumers consider traditional food attributes such as price, appearance, and quality to be more critical than food origin (Kezis et al., 1984), the results of our study put forward the shift of consumers preferences towards local food to the extent that they are willing to pay a premium for it. The reasons for this shift are the consumers' beliefs that local food is fresher, healthier and of higher quality. Moreover,, consumers believe that local food enhances the local economy and the global environment. Our findings put forward the positive perception of urban farms. The food attributes are also part of food quality. The econometric analysis (bivariate probit model) allowed us to investigate the influence of subjective knowledge, attitudes, purchase frequency and socio-demographics on the likelihood to buy urban farms produce. Our results indicate that the likelihood to purchase and the likelihood to grow food at urban farms are positively correlated. In general, consumers do not feel knowledgeable regarding urban agriculture, which could indicate that consumer education towards urban agriculture might increase their WTP for urban farms products. Our data indicate that consumers who feel more knowledgeable about urban agriculture would go to urban farms in order to purchase and have a higher WTP.

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2 RECONCILING CONSUMPTION, NEED AND WELLBEING

2.5 Human behaviour and habits

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2 RECONCILING CONSUMPTION, NEED AND WELLBEING

2.1 Human needs and wellbeing

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