



Profiling the consumers of farmers' markets: a systematic review of survey-based empirical evidence

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Review Article

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Abstract

Although research on the consumers of farmers' markets spans four decades, no prior study has reviewed the most important characteristics of this consumer segment. Our study collects all the survey-based empirical information available in academic journals listed by WoS and Scopus. Based on the outcomes of 103 studies from 21 countries, consumers are described according to their sociographic characteristics and economic, environmental, and social parameters. Results clearly indicate a homogeneous group, with minor variation mainly due to regional specificities, and identify 27 very typical characteristics. The study identifies key implications for managers and policymakers and provides an agenda for further research.

Introduction

With the emergence of modern supply chains, the intensity of relations and communication between consumers and producers has decreased, leading to increased information asymmetry and decreased consumer trust (Meyer et al., 2012; Török et al., 2022). These factors and consumers' commitment to healthier and more sustainable food have raised attention to the spread of short supply chains (Renting, Marsden and Banks, 2003). Short food supply chains (SFSCs) are based on a direct relationship between producer and consumer and are associated with a number of benefits for both parties, including a reduction in the number of trade intermediaries (Augère-Granier, 2016; Kneafsey et al., 2013). SFSCs include several marketing schemes, such as direct sales on farms, farm shops, farmers' markets (hereafter: FMs), and partnerships between producers and consumers. SFSCs play a vital role in connecting local producers and consumers, providing access to fresh, high-quality produce, and supporting local economies (Bazzani and Canavari, 2013; Cirone et al., 2023; González-Azcárate, Maceín and Bardají, 2021). SFSCs also try to offer solutions to social, economic, and environmental sustainability challenges, but their positive impact on the environment is often challenged, including in relation to their potentially large carbon footprint (Charatsari et al., 2023; Malak-Rawlikowska et al., 2019). Farmers' markets are 'recurrent markets at fixed locations where farm products are sold by farmers themselves' (Brown, 2001, p. 658). FMs existed even in ancient times; the first written record of one dates back to 500 BC in reference to the agora in Athens, which included a food market similar to a modern FM (Dixon, 1993). In North America, the prevalence of FMs declined after World War I due to modernization and industrialization that resulted in the first general stores and later supermarkets taking over their role (Basil, 2012). On the other hand, in many European countries (Mediterranean ones, and some Central European countries in particular), FMs have persisted for centuries (Guthrie et al., 2006), similarly to in Asia, where FMs are often called wet markets (Goldman, Krider and Ramaswami, 1999).

The renaissance of modern FMs started in the 1970s when consumers' desire for fresh, seasonal, and tasty products strengthened, together with their environmental concerns and dislike of the industrialization of the food supply (Basil, 2012). In the USA and Canada, government regulations have fueled the rise of FMs (Brown, 2001), which have remained on the political agenda over the last 50 years. In Europe, however, FMs regained their prominent position in the 1980s, being considered one of the key elements of SFSCs (Renting, Marsden and Banks, 2003).

Therefore, the number of FMs has exponentially grown over recent decades, together with the related research. Much of this describes consumers who shop at FMs, mainly using a survey or interview-based approach and investigating one or a few FMs. Based on these consumer studies, we can identify similar patterns among different FMs. In many cases, gender, age, level

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of education, and income have been investigated. However, no single study has identified general conclusions about the former.

Against this backdrop, the present study describes the results of a systematic literature review that collected empirical evidence describing the main characteristics of FM consumers worldwide. To the best of our knowledge, only one review (Byker *et al.*, 2012) has examined consumers of FMs, albeit employing a narrow time horizon and a limited number of dimensions (mainly demographic factors). The study employed a systematic literature review that applied the Scientific Procedures and Rationales for Systematic Literature Reviews (SPAR-4-SLR) protocol to generate a general and comprehensive overview. Our contribution to the literature is collecting and synthesizing empirically validated (survey-based) pieces of evidence from all the academic literature available in main scientific databases (Scopus and Web of Science [WoS]).

The rest of the paper is organized as follows. The second section describes the methodology that was applied and the steps taken during the systematic review. Results are presented in the third section, followed by a discussion. The last section concludes.

Methods

Review articles are intended to ‘critically analyze the extant literature in a given research area, theme or discipline’ (Paul and Criado, 2020, p. 6). A framework-based review, a type of theme-based review, provides an informative, insightful, and impactful overview of topics selected from the literature (Paul, Merchant, *et al.*, 2021b). In recent years, comprehensive review articles in the field of business and economics have significantly risen in prominence (Mukherjee *et al.*, 2022; Snyder, 2019).

Systematic literature reviews summarize and synthesize the literature findings about a research topic or field and can be applied in line with a predefined scope. In addition, the available dataset has to be small enough to be processed through a manual review (Donthu *et al.*, 2021). In our research, we applied the SPAR-4-SLR protocol, developed specifically for systematic reviews, to better justify review-related decisions (Paul, Lim, *et al.*, 2021a).

To start assembling the review, for the purpose of identification, we defined the domain as the profile of FM consumers. The respective guiding question was, ‘What can we learn from empirical (survey-based) consumer studies about the most important characteristics of this emerging segment of food consumers?’ We assessed only academic journal articles. Which database(s) to use in the initial search has been long-debated among researchers; however, WoS, Scopus, and Google Scholar are the most widely used (see *e.g.*, Bar-Ilan, 2008; Jacso, 2005; Martin-Martin *et al.*, 2018). In our systematic review, priority was given to peer-reviewed publications in English; therefore, Google Scholar was not considered for use, as this platform is associated with the largest proportion of formally unpublished materials and non-English publications (Martin-Martin *et al.*, 2018). Accordingly, the WoS and Scopus search engines were used.

A comprehensive literature review was conducted to generate a wide-ranging overview of the characteristics of consumers of FMs. Publications meeting the search criterion of including ‘farmer* market’ together with ‘consumer’ and ‘survey’ in the title, abstract, author keywords, or keywords plus (WoS) or title, abstract, or keywords (Scopus) were considered. The search was conducted on 31 January 2023, including hits available until this date, with

the period of publication of the articles defined as between 1981 and 2022. The initial database yielded over 300 hits, but after excluding duplicates and irrelevant studies, the final database for the in-depth analysis consisted of 103 items (see Fig. 1).

To arrange the review, special attention was devoted to the characteristics of items and consumers. We mainly assessed the methodology, place, and date of surveys described in studies, the number of FMs investigated, and the size of the consumer sample. The characteristics of the FM consumers were classified based on sociometric, economic, environmental, and social factors. Regarding inclusion criteria, the search was restricted to studies in English and those papers that (i) had a dedicated focus on FM consumers, (ii) applied a consumer survey (either online or paper-based), and (iii) for which a full text was available. Therefore, we excluded all results that were only partially dedicated to FMs (*e.g.*, when FMs were only one of the sales channels investigated and/or it was impossible to clearly identify/distinguish results dedicated to FMs). In addition, we sought to synthesize the results of empirically validated research that used a relatively large number of samples. Therefore, we only considered consumer surveys with many respondents ($N_{\min} = 70$, $N_{\text{average}} = 543$) and did not include studies that only relied on qualitative methodology with a small sample size (*e.g.*, interviews with a couple of consumers). This approach allowed us to avoid heavily biased results. Finally, we also deployed technical exclusion criteria, as systematic reviews require access to the complete results of research. Therefore, we did not include results unassociated with a full text, or if the study was not published in English, as this would not have permitted in-depth analysis.

To assess the studies, we applied content analysis. The procedure for the systematic review was managed by the online platform Covidence (Babineau, 2014). The initial search resulted in 307 items from the online databases. After excluding duplicates, 217 studies remained. The initial screening based on title and abstract was conducted independently, but the authors discussed items with potentially conflicting parameters, similar to during the second screening phase, which involved a systematic assessment of the full texts by the authors. The screening process resulted in 114 items being excluded. The remaining 103 articles served as the basis for the review and contributed to the comprehensive overview of information on FM consumer characteristics.

Results

The paper first briefly discusses the methodological profile of the selected studies (*e.g.*, distribution over time and territorial focus, methodologies applied), then assesses their sociometric characteristics, together with the economic, environmental, and social factors that influence FM consumers.

Methodological profile

Number of studies

After the 2000s, FM became increasingly popular worldwide (Ashtab and Campbell, 2021; Cameron, 2007; Statista, 2014), as reflected in the increase in the number of studies examining their consumers. Figure 2 illustrates publications that examined the characteristics of the consumers of FMs according to year of publication. Before the turn of the millennium, the amount of research on this topic was insignificant, although several publications existed, in line with the renaissance of FMs that started in the 1970s. However, a clear increase can be observed in the last

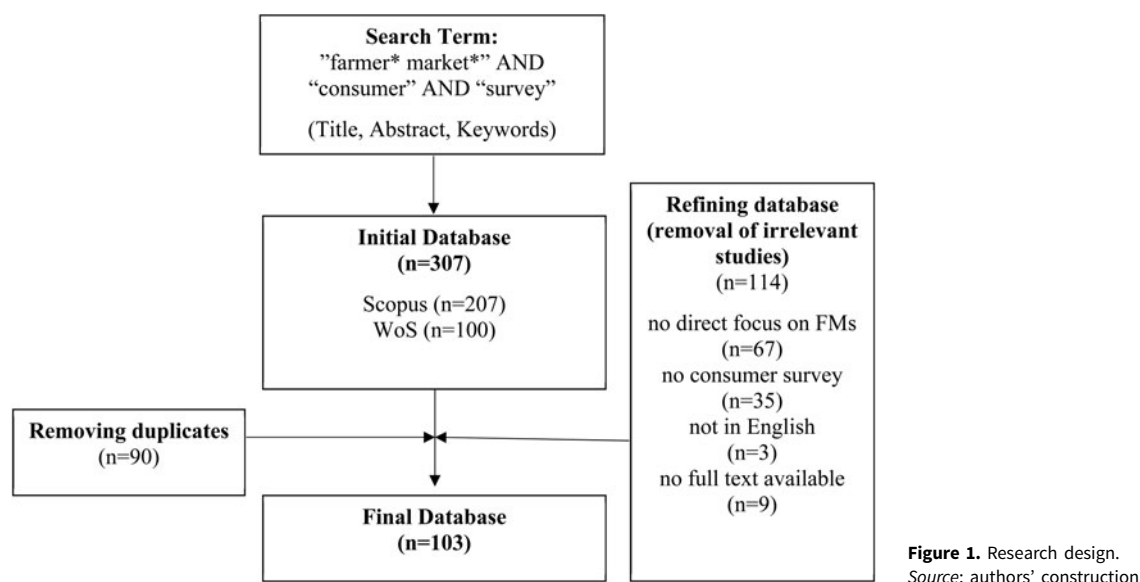


Figure 1. Research design.
Source: authors' construction

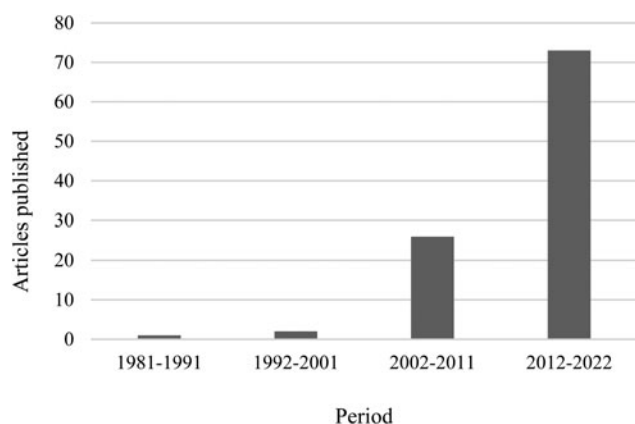


Figure 2. Number of publications focusing on the consumers of farmers' markets by year of publication.
Source: authors' construction

two decades: more than two-thirds of the respective research has been done within the last 10 years.

Research setting

Consumers of FMs have been investigated worldwide. Most of the research with this focus has been carried out in the USA (58), as shown in Figure 3. This accounts for more than half of all research. Apart from the USA, Canada (8) and Europe (16) are outstanding in this respect. In terms of continents, Africa is the least well-researched area.

Table 1 highlights the territorial distribution of research over time. In the first periods, mainly customers in Anglocentric countries were investigated; however, the situation in both developing and developed countries from other parts of the world has recently come into focus.

Research design and sample sizes

Table 2 collates the methodologies applied in the studies over time. Analyzing consumer surveys with descriptive statistics was the approach most commonly applied, involving almost two-thirds of the studies. Regression analysis (38%) was the

second most common, and basic hypothesis testing methods (27%) were third. Fewer than 16% of studies used advanced methods, although the evolution of analytical rigor may clearly be seen. The table also shows that the largest average sample size ($n = 556.08$) was recorded in the period from 2002 to 2011.

Table 2 also shows the number of investigated FMs and the sample size (number of consumers covered by the survey) for the 103 articles in the database. On average, studies examined four FMs and 543 consumers. Some studies did not examine the consumers of a specific farmers' market but instead implemented a national or online survey or did not detail the number of investigated FMs. In such cases, we calculated using one FM. The database contains 40 such studies.

Reasons for not visiting FMs (barriers to purchasing)

Before going through the typical characteristics of FM buyers, we first examined why consumers do *not* visit these markets. There are many reasons for not visiting or purchasing from FMs (the main reasons are summarized in Table 3). For the majority of consumers, price is the main issue (Aguirre, 2007; Berg and Preston, 2017; Bir et al., 2019; Chen, Yu and Fu, 2021; Dobbelstein, Corbishley and Mason, 2021; A1)¹, with the perception of higher prices at FMs than in stores. In the United States, for example, low-income consumer groups and households were found to need incentives to visit an FM (Gumirakiza, Curtis and Bosworth, 2017; Marques et al., 2021; Pitts et al., 2017; Taylor and Villas-Boas, 2016). Despite price being the main deterrent, some studies (Archer et al., 2003; Brown, 2003; Feagan, Morris and Krug, 2004; Kent et al., 2020) show that consumers perceive that goods at FMs may be lower priced than at other shopping venues.

In addition to price, two other important barriers are inappropriate opening hours (Chen, Yu and Fu, 2021; Dodds et al., 2014; Garner and Ayala, 2018; Pitts et al., 2015; Rust, 2020; A2) and the location and accessibility of FMs (Berg and Preston, 2017; Dodds

¹To avoid opaque in-text citations, FM consumer characteristics supported by 5+ references are listed in the Appendix. A1 refers to the first characteristic in the Appendix Table A1.

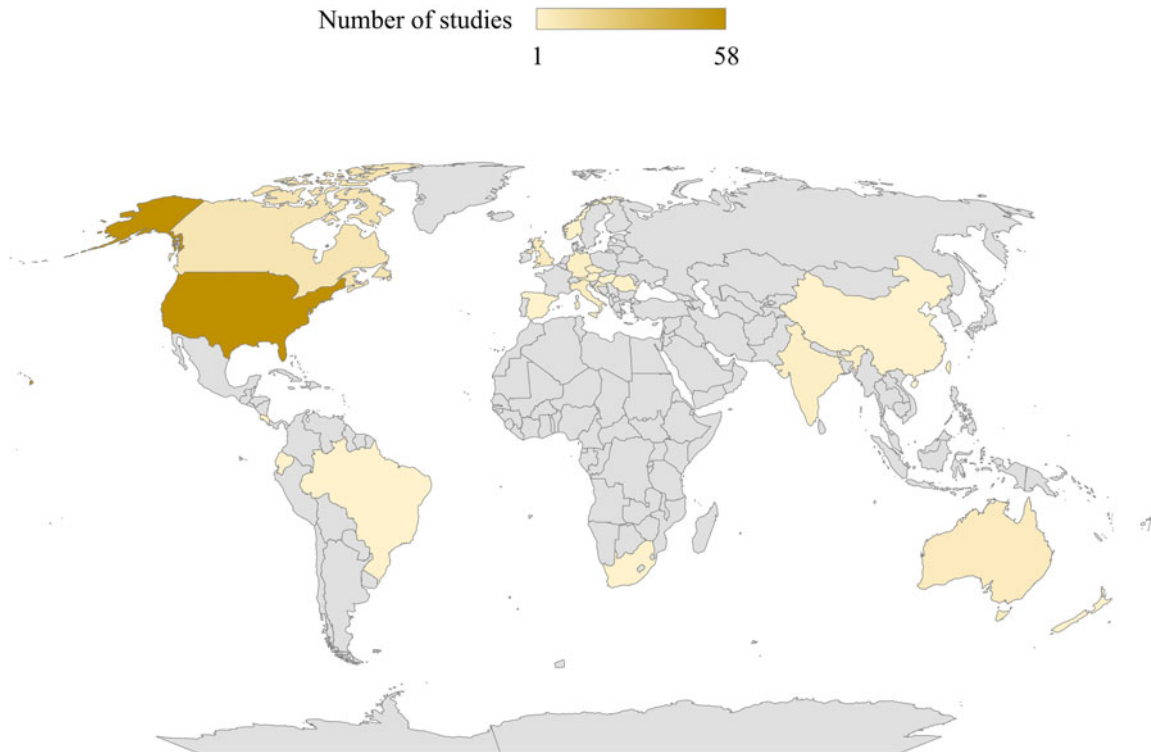


Figure 3. Territorial focus of analyses of consumers of farmers' markets.
Source: authors' construction

et al., 2014; Farmer *et al.*, 2019; Garner and Ayala, 2018; Gwin and Lev, 2011; A3). Furthermore, in some studies, product supply (e.g., availability, seasonality, variety) is reported to be an obstacle (Aguirre, 2007; Bir *et al.*, 2019; Dukeshire *et al.*, 2010; Garner and Ayala, 2018; González, 2009; A4). In addition, some consumers did not have adequate information about FMs and did not know whether there was an FM near them (Archer *et al.*, 2003; Dukeshire *et al.*, 2010; Shakeel Ul and Selvaraj, 2013; Singleton *et al.*, 2017; Vargo *et al.*, 2022; A5).

Sociometric characteristics

Gender

With few exceptions, the majority of buyers at FMs are women. Previous studies have typically identified the proportion of female buyers at FMs as between 50 and 75% (Abelló *et al.*, 2013; Aguirre, 2007; Anderson *et al.*, 1996; Azavedo and Walsh, 2019; Berg and Preston, 2017; A6). Less female participation is found in only a few cases (Foti and Timpanaro, 2021; Schneider and Francis, 2005; Shakeel Ul and Selvaraj, 2013; Solanki and Inumula, 2021), in proportions of 43.7% (Foti and Timpanaro, 2021) and 44.8% (Ashtab and Campbell, 2021). Generally, Asian FMs are associated with fewer female shoppers, ca. 35–40% (Shakeel Ul and Selvaraj, 2013; Solanki and Inumula, 2021). A study by González (2009) shows that between 1999 and 2008, the proportion of males purchasing at FMs increased from 38 to 48% in Costa Rica over a 10-year period. In addition, according to Schneider and Francis (2005), women and men were almost equally (49 vs. 51%) likely to visit FMs (the consumer survey was conducted in 2003 in the USA). A markedly high female participation rate of more than 75% was observed only in a few cases (Elepu and Mazzocco, 2010; Fehrenbach and Wharton, 2012; Ma and Chang, 2022; Pitts *et al.*, 2017; Ruelas *et al.*,

2012), the study by Fehrenbach and Wharton (2012) being an outlier, finding that 86% of respondents were women.

Age

Research conducted over the past decades shows that shoppers at FMs tend to be middle-aged (35–55 years) (Abelló *et al.*, 2013; Aguirre, 2007; Anderson *et al.*, 1996; Åsebø *et al.*, 2007; Azavedo and Walsh, 2019; A7.1) or older (55+) (Chang *et al.*, 2013; Crandall *et al.*, 2010; Gary-Webb *et al.*, 2018; Lanfranchi and Giannetto, 2015; Obach and Tobin, 2014; A7.2). The main reason is that middle-aged and older people are more concerned about the deterioration or maintenance of their health than younger ones (Tung, Tsay and Lin, 2015). Consumers believe health is closely linked to purchasing and consuming good-quality food. However, some exceptions are also found for typical FM age groups.

The younger (18–30) age group is more strongly represented (Ashtab and Campbell, 2021; Glover, Waliczek and Gandonou, 2014; Mack and Tong, 2015; Renko and Petljak, 2018; Shakeel Ul and Selvaraj, 2013; A8) in some research, with a quarter of respondents in Ma and Chang's (2022) study being under 30 years old, while the average age of respondents in Singleton *et al.*'s (2017) study was around 27.6 years old. The reasons for this may be two-fold. On the one hand, it may be that a young society was studied (e.g., an analysis of the shopping habits of members of young Taiwanese society [Ma and Chang, 2022]) or that research was specifically conducted on young age groups (e.g., an analysis of the shopping habits of young women and mothers participating in the Supplemental Nutrition Assistance Program [SNAP] (Singleton *et al.*, 2017), a program implemented by the US government to supplement the food budgets of needy families by providing vouchers redeemable for healthy food at FMs).

Table 1. Most frequently surveyed countries

Country	1981–1991	1992–2001	2002–2011	2012–2022	Total
USA	1	2	13	42	58
Canada			4	4	8
Australia			1	4	5
United Kingdom			4	1	5
Italy			1	3	4
Taiwan				4	4
Germany				3	3
India				3	3
Costa Rica			2		2
Czech Republic				2	2
Romania				2	2
Austria				1	1
Brazil				1	1
China				1	1
Croatia				1	1
Ecuador				1	1
Hungary				1	1
New Zealand				1	1
Norway			1		1
South Africa				1	1
Spain				1	1
Total	1	2	26	77	106

Note: Totals exceed *n* because some studies surveyed multiple countries.

Source: authors' construction.

Ethnicity

Ethnicity mainly appears to be a grouping criterion in research conducted in the USA, where the typical customers of farmers' markets are Caucasians (Abelló et al., 2013; Anderson et al., 1996; Bottcher et al., 2017; Chang et al., 2013; Chen, Yu and Fu, 2021; A9). The only exceptions are FMs where SNAP recipients are in the majority, with consumers predominantly being Black (Karpyn et al., 2014; Pitts et al., 2017; Singleton et al., 2017; Vargo et al., 2022).

Education level and occupation

Previous research also confirms that, with some exceptions (Foti et al., 2019; Hoppe, Vieira and Barcellos, 2013; Hu, Clarke and Zendejdel, 2021; Leiper and Clarke-Sather, 2017; Pitts et al., 2017), the typical FM customer is highly educated (Abelló et al., 2013; Aguirre, 2007; Anderson et al., 1996; Åsebø et al., 2007; Azavedo and Walsh, 2019; A10). Questionnaire respondents typically had a college degree, with only a negligible number of unskilled or manual labor buyers using these markets (Spilkova, 2018). The proportion of customers with college or university degrees was clearly predominant (Hunt, 2007); in Shi and

Hodges' (2016) work, for example, the proportion of college graduates was 32.7% compared to the Florida average of 25.4%. Similar overrepresentation was found by Schneider and Francis (2005) in their study in Nebraska.

In terms of occupation, in addition to the small number of shoppers with manual jobs mentioned above (Spilkova, 2018), a diverse range of occupations can be identified (Youngs, 2003b), but a large number of retired shoppers also attend such markets, accounting for up to 25–30% of shoppers in the samples (Lanfranchi and Giannetto, 2015; Mack and Tong, 2015). Homemakers and mothers with young children at home are also a significant group (Lanfranchi and Giannetto, 2015; Pascucci et al., 2011). These latter groups (pensioners, homemakers, and mothers with young children) prefer products from FMs to other sources of supply for their perceived health benefits, including for their families.

Income status

In most studies, typical buyers of FMs are identified as being in the high-income category (Anderson et al., 1996; Dodds and Holmes, 2017; Hunt, 2007; Obach and Tobin, 2014; Telligman, Worosz and Bratcher, 2017; A11). Exceptions are buyers in studies that examined the situation in developing countries (Aguirre, 2007; González, 2009; Hoppe, Vieira and Barcellos, 2013; Pisarn, Kim and Yang, 2020; Shakeel Ul and Selvaraj, 2013; A12.1) and some research that examined American consumers (Farmer et al., 2019; Farmer, Minard and Edens, 2016; Garner and Ayala, 2018; Gary-Webb et al., 2018; Leiper and Clarke-Sather, 2017; A12.1 and A12.2), which reported both high-income and low-income customers. This phenomenon may be explained by measures related to the SNAP program. In contrast, low-income consumers in Central Europe (in the Czech Republic and Hungary) avoid FMs (Spilková, Fendrychová and Syrovátková, 2013; Szabó and Juhász, 2015).

Residence

The residence of FM shoppers is typically the same municipality as the FM itself (Abelló et al., 2013; Chen, Yu and Fu, 2021; Dukeshire et al., 2010; Feagan, Morris and Krug, 2004; Foti and Timpanaro, 2021; A13). FMs are visited mainly by residents of small and large cities (Bavorova, Unay-Gailhard and Lehberger, 2016; González, 2009; Pisarn, Kim and Yang, 2020; Spilkova, 2018; Spilková, Fendrychová and Syrovátková, 2013; A14), probably because in smaller municipalities (e.g., townships), fruit and vegetable are often grown locally or at home, so residents are less in need of FMs. In contrast, for urban residents, FMs offer freshness, quality, and healthy food (Youngs, 2003a).

Household size

Household size and number of children in a household are also important factors to consider. Here, results varied somewhat between surveys. Several studies show that the average household size is around two persons (Abelló et al., 2013; Anderson et al., 1996; Chang et al., 2013; Chen, Yu and Fu, 2021; Cicia, Furno and Del Giudice, 2021; A15.1), while other studies show a higher average of three or four (Aguirre, 2007; Azavedo and Walsh, 2019; Farmer et al., 2019; Farmer, Minard and Edens, 2016; Foti et al., 2019; A15.2) or even larger household sizes (Hoppe, Vieira and Barcellos, 2013). However, in a few exceptional cases, about half of the participants in the study classified themselves as single people (Karpyn et al., 2014; Ma and Chang, 2022). Declining household size was also found by González (2009), who reported that

Table 2. Characteristics of studies

Statistical analysis	1981–1991	1992–2001	2002–2011	2012–2022	Total
Descriptive statistics	1 (100.00%)	1 (50.00%)	17 (65.38%)	47 (63.51%)	66 (64.08%)
Basic hypothesis testing methods	0 (0.00%)	1 (50.00%)	7 (26.92%)	20 (27.03%)	28 (27.18%)
Regression analysis	0 (0.00%)	1 (50.00%)	8 (30.77%)	30 (40.54%)	39 (37.86%)
Advanced methods (e.g. dimension reduction methods, CFA, SEM)	0 (0.00%)	0 (0.00%)	2 (7.69%)	14 (18.92%)	16 (15.53%)
Average sample size	361	360	556.08	543.51	542.99
Average examined farmer's markets number ^a	1	6	4	4.15	4.12

Totals exceed *n* because some studies used multiple methods/tools. The share of methodologies applied is relative to the total number of studies published in that period.

^aIn some studies, a national or online survey was implemented, in which case no specific farmers' market was investigated. In these cases, we calculated the number as one.

Source: authors' construction.

household size decreased from 4.7 to 3.2 persons on average between 1999 and 2008. Research by Vasco *et al.* (2018) shows that the number of children of FM buyers is higher (0.6 children per household) than the population average (0.3 children per

household). This finding is related to the average age of FM buyers, as middle-aged buyers still typically live in the same household as their young children. A related and interesting finding whose relevance extends beyond the study of FMs is that

Table 3. Main barriers to visiting FMs

Author(s)	Country	Price	Opening hours	Location/ distance	Supply	Information
Aguirre (2007)	Costa Rica	x			x	
Berg and Preston (2017)	New Zealand	x	x			
Bir <i>et al.</i> (2019)	USA	x			x	
Chen, Yu and Fu (2021)	USA	x	x		x	
Dobbelstein, Corbishley and Mason (2021)	South Africa, Germany	x				
Dodds and Holmes (2017)	Canada	x	x	x		
Dukeshire <i>et al.</i> (2010)	Canada				x	x
Farmer <i>et al.</i> (2019)	USA			x		
Garner and Ayala (2018)	USA	x	x	x	x	
González (2009)	Costa Rica	x			x	
Gwin and Lev (2011)	USA	x				
Pitts <i>et al.</i> (2015)	USA		x	x		
Pitts <i>et al.</i> (2017)	USA			x		
Ruelas <i>et al.</i> (2012)	USA				x	
Rust (2020)	UK			x		
Sadler (2016)	USA	x		x		
Shakeel UI and Selvaraj (2013)	India			x		x
Shi and Hodges (2016)	USA			x		
Singleton <i>et al.</i> (2017)	USA			x		x
Su <i>et al.</i> (2022)	USA	x				
Szabó and Juhász (2015)	Hungary	x		x		
Teng, Wilcock and Aung (2004)	Canada	x		x		
Vargo <i>et al.</i> (2022)	USA					x
Wade <i>et al.</i> (2015)	USA	x	x	x		x
Wills and Arundel (2017)	Canada, USA	x				
Witzling, Shaw and Trechter (2019)	USA	x				
Youngs (2003a)	England		x			
Youngs (2003b)	England			x		

Table 4. Studies that accurately (percentage of respondents) determine the amount of money spent at an FM

Author(s)	Country	Year of data collection	Number of respondents (after data cleaning)	Amount of money spent and proportion of respondents (%)	Average spent in 2022 USD ^a
Youngs (2003a)	England	2003	421	No reply—3.1% Less than £3—4% £3–£10—42.3% £10–£20—32.8% £20–£30—11.6% More than £30—3.3%	\$22.26
Elepu and Mazzocco (2010)	USA	2004	508(379)	Less than \$10—14.6% \$10–\$19—34.7% \$20–\$25—21.8% More than \$25—28.9%	\$29.95
Conner et al. (2009)	USA	2007–2008	195	Less than \$10—14% \$10–\$25—47% More than \$25—39%	\$29.12
Mack and Tong (2015)	USA	2011	118	Less than \$6—15% \$6–\$15—25% \$16–\$25—43% \$26–\$50—17%	\$24.94
Dodds and Holmes (2017)	USA	2016	350(322)	Less than \$25—37% \$25–\$50—31% More than \$50—31%	\$43.45
Garner and Ayala (2019)	USA	2018	305(270)	Less than \$5—3% \$5–\$10—11% \$11–\$20—38% \$21–\$30—25% More than \$30—23%	\$24.04
Chen, Yu and Fu (2021)	USA	2019	506	Less than \$10—15.7% \$11–\$25—47.6% \$26–\$50—30.6% More than \$50—6.1%	\$27.86
Average spent in USD 2022					\$28.80

^aValues converted to 2022 USD to aid comparison.

households with children have a stronger commitment to buying and consuming organic food than other households (Tung, Tsay and Lin, 2015). However, other studies that identify an older average age of buyers tend to emphasize the absence of minor children in households, with up to 30–50% of households no longer living with a minor child (Hoppe, Vieira and Barcellos, 2013; Pascucci et al., 2011).

Economic factors

Frequency of visiting and shopping at FMs

There are basically two types of typical customers of FMs: those who visit such markets a few times a year (Chen, Yu and Fu, 2021; Cicia, Furno and Del Giudice, 2021; Conner et al., 2009; Curtis et al., 2020; Elepu and Mazzocco, 2010; A16.1), and those who shop at one on a weekly or a fortnightly basis (Berg and Preston, 2017; Chen, Yu and Fu, 2021; Conner et al., 2010; Dobbstein, Corbishley and Mason, 2021; Dodds and Holmes, 2017; A16.2). Three studies (Fehrenbach and Wharton, 2014; Ma and Chang, 2022; Shakeel Ul and Selvaraj, 2013) stand out in this respect as they report that 100% of respondents shop at an FM at least on a monthly basis. There is significant variation among the studies in this respect. For example, Gustafson et al. (2013) determined a frequency of FM shopping of 0.27 times per week, while Pisarn, Kim and Yang (2020) determined an average of 13.15 times per six months. Furthermore, many studies

(Anderson et al., 1996; Åsebø et al., 2007; Dobbstein, Corbishley and Mason, 2021; Dodds and Holmes, 2017; Payet, Gilles and Howat, 2005) identified numerous buyers who were visiting FMs for the first time. By definition, how often the latter will shop at an FM in the future is unknown.

In the United States, SNAP users attended markets more than non-SNAP users (Farmer et al., 2019). However, only a small proportion of grocery shoppers reported using FMs regularly (Blanck et al., 2011). Regarding the time of visits to FMs, customers were more liable to attend on weekend market days than on weekdays (Garner and Ayala, 2019). In research by Garner and Ayala (2019), 97% of participants reported attending a Saturday market, but only 17% a weekday market. The COVID-19 outbreak triggered considerable switching behavior among consumers, with FMs losing most of their consumers (Li, Hallsworth and Coca-Stefaniak, 2020).

Amount of money spent at farmers' markets

Spending at FMs is determined by many factors and obviously depends on the customer's income, but similarities can be observed among the results of the studies. As mentioned in the section on income status, typical buyers of FMs are in the high-income category. In general, the amount spent in developed countries is between 20 and 30 dollars per occasion (Abelló et al., 2013; Chen, Yu and Fu, 2021; Conner et al., 2009; Elepu and Mazzocco, 2010; Farmer et al., 2019; A17). However, some studies (Berg and

Table 5. Studies that include a quantifiable price premium and WTP outcomes

Author(s)	Country	Year of data collection	Number of respondents	Organic FM	% of people willing to pay a price premium
Brown (2003)	USA	2000	544	No	22
Schneider and Francis (2005)	USA	2003	567	No	36
Aguirre (2007)	Costa Rica	2004–2005	480	Yes	29
Conner <i>et al.</i> (2009)	USA	2007–2008	195	No	68
Gwin and Lev (2011)	USA	2009	1108	No	52
Martínez Michel, Anders and Wismer (2011)	USA	2009	276	No	70
Average share of consumers willing to pay a price premium					46

Preston, 2017; Dodds and Holmes, 2017; Foti *et al.*, 2019) report a greater spend per visit. Furthermore, money spent per visit is obviously less in developing countries (e.g., Costa Rica and Taiwan) (González, 2009; Ma and Chang, 2022). In conclusion, market visitors do not seem to spend only small amounts of money per visit (Table 4).

Carson *et al.* (2016) observed a relationship between time and money spent at FMs. A clear correlation can be shown between the amount of money spent at such markets and household income (see, among others, Gumirakiza, Curtis and Bosworth [2014]; Hunt [2007]; or Renko and Petljak [2018]).

Price premium

The majority of FM consumers are generally willing to pay more at FMs rather than shop at a nearby retail outlet or supermarket (Aguirre, 2007; Berg and Preston, 2017; Brown, 2003; Chang *et al.*, 2013; Conner *et al.*, 2010; A18). Table 5 lists the articles in which quantifiable price premium and willingness to pay (WTP) results were identified; the price premium is generally 15–25%, equivalent to 0.5–3 dollars per product or unit (e.g., per pound). Most of the studies were undertaken in the United States, and this type of research has not yet started on the European continent. Of course, a smaller proportion of consumers are not willing to pay a price premium for products, and price appears to be a limiting factor, as already mentioned. Price-sensitive consumers mainly shop in grocery stores (Su *et al.*, 2022; Wade *et al.*, 2015).

Environmental factors

How do consumers get to farmers' markets, and how far do they travel?

From the point of view of environmental sustainability, the most important indicators examined concerning FMs are food miles and the carbon footprint. For the latter, in terms of consumers, it is necessary to determine how far and how they travel to the FM. Many studies in the database address these issues. The distance between consumers' residences and the FM is a decisive factor (Shakeel Ul and Selvaraj, 2013; Shi and Hodges, 2016; Wade *et al.*, 2015); having an FM in one's neighborhood significantly increases the probability of attendance (Singleton *et al.*, 2017). Figure 4 clearly shows that the number of FM visitors decreases as distance increases. The further away someone lives from a market, the less likely they are to visit it. The figure was created based on the data in Table 5 (the results are presented in miles, with

some data converted from km). Figure 4 illustrates that, on average, 64% of FM consumers travel less than five miles from home to market, 25% of shoppers travel between 5 and 15 miles, and another 11% travel more than 15 miles to the FM.

Table 6 also shows that most FM consumers travel less than 15 miles to an FM. The most typical distance traveled is between one and five miles (Abelló *et al.*, 2013; Åsebø *et al.*, 2007; Chen, Yu and Fu, 2021; Conner *et al.*, 2009; Eastwood, 2001; A19). Average food miles range from 1.71 to 16.25.

Organic FMs are an exception, as consumers are willing to travel longer distances for organic products (Polimeni, Iorgulescu and Mihnea, 2018). In some cases, FMs are tourist destinations; therefore, tourists from outside the region also visit them (Feagan, Morris and Krug, 2004; Payet, Gilles and Howat, 2005). These visitors are more likely to be younger than local buyers (Dodds and Holmes, 2017). However, the majority of consumers usually go to the FM by car or other vehicle (e.g., motorbike) (Dodds *et al.*, 2014; Farmer *et al.*, 2019; Mack and Tong, 2015; Ruelas *et al.*, 2012; Sadler, 2016). For them, an adequate amount of parking space is an important factor (Gumirakiza, Curtis and Bosworth, 2014; Youngs, 2003b).

A study from the USA looked at whether customers shop at the FM closest to their home. Sixty-five percent of consumers do not choose their nearest FM. This is mainly due to the other day-to-day activities of consumers (they do not only travel to the area to shop at the FM [Mack and Tong, 2015]). Sometimes, because of the distance, consumers do not buy perishable products such as cheese (Teng, Wilcock and Aung, 2004). In contrast, Young's research in England indicated that 66.7% of customers travel to a given area specifically because of the FM (Youngs, 2003a).

Environmental sustainability and ecological responsibility

Most people identify sustainability with environmental sustainability. Environmental sustainability is generally important to FM consumers (Carson *et al.*, 2016; Cicia, Furno and Del Giudice, 2021; Curtis *et al.*, 2020; Dodds *et al.*, 2014; Fehrenbach and Wharton, 2014; A20), but it is not the primary motivation for shopping at an FM (being extremely important to about 10% of consumers [Lanfranchi and Giannetto, 2015; Obach and Tobin, 2014; Rainey *et al.*, 2011; Vasco *et al.*, 2018]). Consumers concerned about environmental issues are more likely to consume high-quality food (Pascucci *et al.*, 2011). In one of the studies, consumers were asked about the

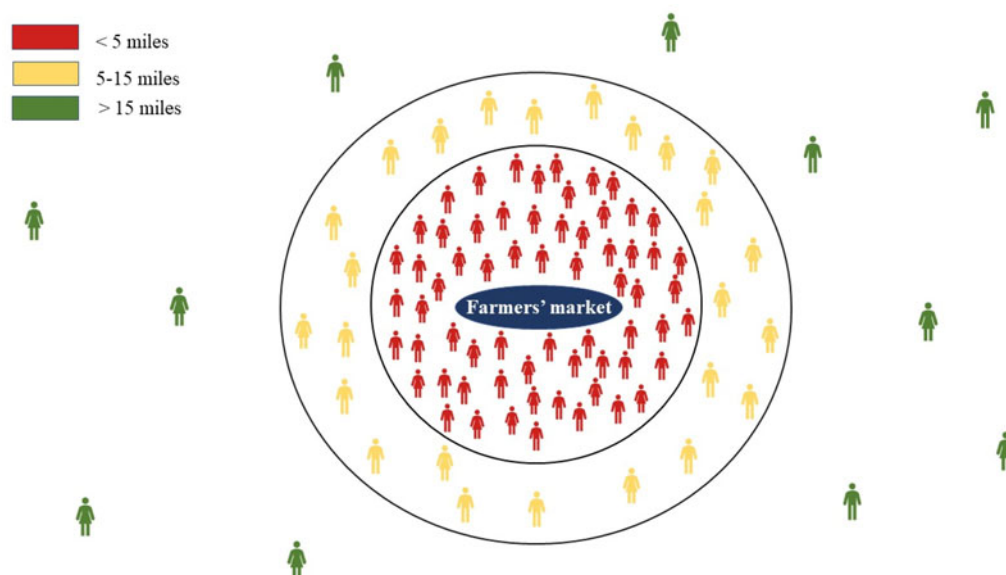


Figure 4. Distance traveled by consumers to farmers' markets.
Source: authors' construction

kind of environmental protection services they would like to see at FMs. The majority said food waste diversion, the collection of recyclables, and limited/no use of plastic (Chen, Yu and Fu, 2021). Some studies dealt with young people and students, clearly finding that environmental sustainability is important to them and influences their shopping habits (Ashtab and Campbell, 2021; Oths et al., 2016; Polimeni, Iorgulescu and Mihnea, 2018).

FM consumers are interested in how food is produced and prefer ecologically sustainable practices (Åsebø et al., 2007; Conner et al., 2009; Gumirakiza, Curtis and Bosworth, 2014; Hunt, 2007; Klimek et al., 2021; A21), and the ethical treatment of animals is important to them (Fehrenbach and Wharton, 2012; Fehrenbach and Wharton, 2014). In addition, they consider chemical-free production extremely important (Abelló et al., 2013; Anderson et al., 1996; Farmer, Minard and Edens, 2016; Scholten, 2006; Spilkova, 2018; A22) and show interest in organic products (Abelló et al., 2013; Conner et al., 2009; Crandall et al., 2010; González, 2009; Joseph et al., 2017). In general, 10–50% of FM consumers prefer organic food (Curtis et al., 2020; Garner and Ayala, 2019; Gumirakiza, Curtis and Bosworth, 2017; Klimek et al., 2021; Obach and Tobin, 2014; A23). The primary motivation for buying organic food is not necessarily protecting the environment but rather that consumers perceive it as healthier and tastier (Aguirre, 2007; Dodds et al., 2014; Hoppe, Vieira and Barcellos, 2013; Tung, Tsay and Lin, 2015). However, some research finds that organic food is preferred because of its favorable environmental impact (Aguirre, 2007; Brown, 2003).

Agrobiodiversity

Agrobiodiversity is crucial for adaptation to climate change, resilience, and human health (Ceccarelli and Grando, 2022). Agrobiodiversity is affected by what is on our plates, how production systems work, and conservation schemes, all contributing to different food system sustainability outcomes (Jones et al., 2021). Brunori et al. (2016) found that local food chains preserve

biodiversity better than long food chains. In a consumer context, we interpreted concern about biodiversity as knowing and searching for landraces. Buying local food is important to FM consumers (Gumirakiza, Curtis and Bosworth, 2017; Obach and Tobin, 2014; Pisarn, Kim and Yang, 2020; Schneider and Francis, 2005), but for some FM buyers, it is also important to know about and buy landraces (Gumirakiza, Curtis and Bosworth, 2017; Klimek et al., 2021).

Only a few studies dealt with consumers' knowledge of and interest in landraces. These studies did not clearly reveal whether FM consumers are more familiar with landraces than consumers associated with other food chains. However, there were examples of both (Joseph et al., 2017; Telligman, Worosz and Bratcher, 2017). Foti et al. were the only authors who specifically dealt with consumer purchasing behavior associated with 'biodiversity-friendly' plant products. They found that 70% of FM consumers said they started buying pro-biodiversity products at least two or three years ago to support a healthier lifestyle; 25% ate pro-biodiversity product items almost daily, and 43% at least once a week. Customers' eating habits, such as following a vegan or vegetarian diet or having health problems, greatly influenced their willingness to buy pro-biodiversity product items (Foti et al., 2019).

Social factors

Interactions between FM vendors and consumers

One of the primary reasons for shopping at FMs is to support local farmers, as clearly expressed in many of the studies (Bavorova, Unay-Gailhard and Lehberger, 2016; Carson et al., 2016; Conner et al., 2010; Dodds et al., 2014; Dodds and Holmes, 2017; A24).

The other factor often identified is a desire for direct and personal interaction between the vendor and the consumer (Anderson et al., 1996; Cruz, Puigdueta, Sanz-Cobeña, et al., 2021; Youngs, 2003a, 2003b). This connection allows for more communication and social interaction (Åsebø et al., 2007;

Table 6. Summary of main results about the distance between consumers' homes and farmers' markets

Author(s)	Country	Year of data collection	Number of respondents	Food miles	Average food miles
Abelló <i>et al.</i> (2013)	USA	2008	170	<1 mile—12.9% 1–4 miles—46.5% >4 miles—30.6%	2.60 miles
Åsebø <i>et al.</i> (2007)	Norway	2003	377	<9 miles—80% 9–31 miles—10% >31 miles—10%	9.15 miles
Chen, Yu and Fu (2021)	USA	2019	506	<5 miles—62.9% 6–15 miles—27.2% 16–25 miles—4.8% 26–35 miles—1% >35 miles—4.2%	5.72 miles
Crandall <i>et al.</i> (2010)	USA	2007–2008	305	<5 miles—59% 6–10 miles—18% 10–24 miles—12% >25 miles—11%	7.98 miles
Foti and Timpanaro (2021)	Italy	2020	1000	<0.62 miles—33.9% 0.62–3.1 miles—48.3% 3.1–6.2 miles—14.3% >6.2 miles—3.5%	1.71 miles
Garner and Ayala (2019)	USA	2018	270	<5 miles—43% 5–10 miles—33% 10–20 miles—16% >20 miles—8%	7.75 miles
Sadler (2016)	USA	2015	435	<1.18 miles—19% 1.24–3.04 miles—27% 3.10–6.14 miles—20% 6.20–12.34 miles—22% >12.40 miles—12%	3.60 miles
Shakeel Ul and Selvaraj (2013)	India	–	100	<1.24 miles—36% 1.24–3.10 miles—35% >3.10 miles—29%	2.06 miles
Youngs (2003b)	England	2002	155	<1 mile—9.7% 1–10 miles—47.1% 10–20 miles—17.4% 20–50 miles—12.9% >50 miles—12.9%	16.28 miles
Youngs (2003a)	England	2001	421	<1 mile—18.5% 1–10 miles—61.8% 10–20 miles—11.9% 20–50 miles—4.8% >50 miles—2.4%	8.17 miles
Average distance traveled					6.5 miles

Azavedo and Walsh, 2019; Conner *et al.*, 2009; Lanfranchi and Giannetto, 2015), which often encourages consumers to try new food items (Chen, Yu and Fu, 2021) and helps guarantee the purchase of genuine (Ashtab and Campbell, 2021; Dobbelstein, Corbishley and Mason, 2021; Scholten, 2006) and high-quality (Minaker *et al.*, 2016) food items directly from producers (Payet, Gilles and Howat, 2005; Smithers and Joseph, 2010).

From the producer perspective, participating in an FM contributes to building a good reputation (Fehrenbach and Wharton, 2014) and is a marketing tool.

Food-related information

Among the social factors, in addition to the relationship between the buyer and the seller at the farmer's market and the related social contact, another important criterion is the role, quality, and availability of product information. This does not mean

exclusive, one-way information sharing (from seller to buyer) but reciprocity between buyer and seller. FMs support direct interaction between producers and final consumers, which allows for greater information exchange (Fehrenbach and Wharton, 2014; Spilková, Fendrychová and Srovátková, 2013; Tsai *et al.*, 2019), encouraged by a friendly atmosphere (Pitts *et al.*, 2015) that is typical of FMs. More informed consumers are more liable to buy at FMs (Bir *et al.*, 2019). FM consumers are usually better informed than supermarket shoppers, and FM customers usually have a strong desire to get additional information about products, their production, and usage (such as recipes or tasting) (Bottcher *et al.*, 2017; Hoppe, Vieira and Barcellos, 2013). In general, the typical consumers of FMs consider having additional information about food to be important (Carson *et al.*, 2016; Chen, Yu and Fu, 2021; Klimek *et al.*, 2021; Ma and Chang, 2022; Youngs, 2003a; A25).

Lifestyles

Society and social interaction are important to most FM visitors (Dodds et al., 2014; Gumirakiza, Curtis and Bosworth, 2014; Hoppe, Vieira and Barcellos, 2013; Hunt, 2007; Obach and Tobin, 2014; A26). FM consumers are interested in special events, and some consider it important to nurture local products, culture, and traditions (Berg and Preston, 2017; Garner and Ayala, 2019; Oths et al., 2016; Youngs, 2003b). Many people visit FMs with their families and treat such shopping excursions as family events (Dobbelstein, Corbishley and Mason, 2021; Garner and Ayala, 2019; Hunt, 2007; Payet, Gilles and Howat, 2005; Pisarn, Kim and Yang, 2020; A27). Additionally, such visits to FMs may be considered an important means of meeting new people and friends (Carson et al., 2016; Pascucci et al., 2011; Payet, Gilles and Howat, 2005; Sadler, 2016). Consumers like the atmosphere of such markets (Kent et al., 2020; Khouryieh et al., 2019; Marques et al., 2021; Smithers and Joseph, 2010). One of the studies identified the perception of a real 'hometown feeling' at an FM (Smithers and Joseph, 2010). However, there were exceptions where a social atmosphere and interaction were not considered important (Lanfranchi and Giannetto, 2015; Mack and Tong, 2015).

Having a healthy lifestyle and better knowledge of food are important factors for many FM consumers (Bottcher et al., 2017; Dodds et al., 2014; Foti et al., 2019; Gumirakiza, Curtis and Bosworth, 2014). In the previous section, we also noted that organic food buyers choose products from FMs mainly because they perceive them as healthier (Aguirre, 2007; Dodds et al., 2014; Hoppe, Vieira and Barcellos, 2013; Tung, Tsay and Lin, 2015).

Health characteristics of FM consumers

Some of the studies investigated the health-related characteristics of FM consumers. There is a clear consensus that FMs give consumers access to healthier foods (Obach and Tobin, 2014; Rice, 2015; Ruelas et al., 2012; Vasco et al., 2018), and more health-consciousness was identified among those who shop for organic products, particularly at organic FMs (Petrescu et al., 2017; Polimeni, Iorgulescu and Mihnea, 2018; Tung, Tsay and Lin, 2015).

The most commonly investigated health indicator in SNAP-related studies in the USA is body mass index (BMI), albeit with conflicting results. For example, some research identified a significantly lower average BMI of those who frequently shopped at FMs (e.g., Minaker et al., 2016; Pitts et al., 2015), while others found no statistically significant difference (among others, Hu, Clarke and Zendehdel, 2021; Pitts et al., 2017). An Italian study also found a link between the presence of FM and lower BMI among the adult Italian population (Bimbo et al., 2015).

Discussion

With the increase in the number of FMs, research on the topic also began to increase. One popular focal area is the study of consumer characteristics. With the help of our database, consisting of 103 items, we have tried to identify the characteristics of the consumers of FMs as precisely as possible. Understanding consumers' intentions concerning purchasing food from SFSCs, particularly at FMs, is complex. Sustainability, convenience, and consumer gratification may be central drivers (Giampietri, Finco and Del Giudice, 2016). However, we have distinguished the most important and general characteristics based on four main areas:

sociographic characteristics, economic-, environmental-, and social factors.

Twenty-seven characteristics were identified that are supported by multiple forms (5+) of empirical evidence based on diverse datasets in terms of spatial and temporal characteristics.

Regarding socio-econometric characteristics, the typical FM consumer is female and middle-aged or older. Young consumers are not typical. However, a few studies indicate the interest of the latter in FMs. US FM consumers tend to be Caucasian, although ethnicity has only been determined in American studies. FM consumers are well-educated and generally have a high income; however, low-income consumers are prevalent among FM customers in developing countries and American consumers targeted by specific government initiatives (SNAP, in particular). The typical FM buyer lives in an urban environment, and the FM they visit is usually located in their hometown. Regarding household size, the most common arrangement is either two people (e.g., retired couples) or 3–4 family members (e.g., parents with few children).

The examined socio-econometric characteristics can also be generalized for other types of SFSCs (Csordás, Lengyel and Füzesi, 2022). However, there are exceptions due to the large amount of SFSC-related literature. According to D'amico et al. (2014), who examined the direct sales of locally produced wine in Italy, the typical consumer is male with a lower income and lives in a larger-than-average household. Furthermore, it is due to SNAP that low-income consumers in the developed world participate in FMs. With other types of SFSCs, most consumers have higher-than-average incomes.

We also identified several characteristics in relation to economic factors. Regarding the frequency of shopping, there are two typical types of customers: those who only visit an FM a few times a year and others who visit one weekly or fortnightly. According to consumers, the most significant obstacles to visiting FMs are the high prices, inadequate opening hours, inappropriate location of the markets, and insufficient supply. In addition, the typical non-FM buyer lacks relevant information, either regarding fundamental data (e.g., about the location and opening hours of FMs) or the potential advantages of this food source. On average, FM customers in developed countries (USA and UK) spend 28.8 US dollars per purchase; however, in developing countries, the amount is much less. Studies show a clear correlation between money spent at such markets and household income. Research that attempted to specify a price premium has mainly been implemented in the United States. Almost half of the latter consumers are willing to pay a premium for fresh and local products at an FM compared to the cost at a supermarket. This price premium is usually 15–20%.

In most SFSC-related studies (e.g., Enthoven and Van den Broeck, 2021; Hasselbach and Roosen, 2015; Kiss et al., 2020), respondents are found to have a higher-than-average income. According to reviews by the current authors and Enthoven and Van den Broeck (2021), WTP estimates are only valid for this type of respondent and are not representative of the spending of average members of the population (mainly lower-income groups). This can be explained on the one hand by the specific shopping locations and specific consumer groups and, on the other, by self-selection bias. Therefore, assessing whether different consumer groups are willing to pay a price premium for local products is an important goal.

Regarding environmental factors, we identified the distance traveled by shoppers and characteristics related to environmental sustainability. We conclude that the probability of participating in

an FM decreases as the distance between the consumer and the market increases. Consumers typically travel 1–5 miles from where they live to the FM, but despite the short distance, they usually go to market by car or motorcycle. This may be because shopping at a farmers' market is often combined with other activities. Average food miles range from 1.71 to 16.25 miles, with an average of 6.5 miles. Environmental sustainability is generally important to FM consumers but does not motivate them to shop at the latter. They are interested in ecologically sustainably produced foods and especially prefer organic and chemical-free foods, not necessarily because of their environmental impact but because they consider these products tastier and healthier. Typical FM consumers are particularly interested in obtaining additional information; first and foremost, about how the respective food has been produced.

In many cases, FMs are not particularly influenced by consumers to switch to environmentally friendly practices (e.g., pest management). Organic producers are more likely to sell their products through SFSCs, mainly FMs, than non-certified producers (Aubert and Enjolras, 2016; Mundler and Laughrea, 2016). For other customers of SFSCs, stronger motivations are animal welfare concerns and a desire to reduce food waste and emissions (Gori and Castellini, 2023; Vitterso *et al.*, 2019; Williams *et al.*, 2015). The demand for more ethical production and consumption practices in Western society has a small but ever-increasing influence on food choice (the question is when these aspects will affect purchasing at FMs). In terms of social factors, two prominent sources of motivation are identified: consumers perceive it as essential to support local farmers and interact personally with them. Such direct connections provide opportunities for a greater flow of information, so FM customers may be better informed about the food they purchase than supermarket customers. The social benefits of FMs include more contact with producers, meeting new people and friends, and spending time with family. Many customers identified shopping at farmers' markets as a family event.

Support for local farmers and products is also associated with other types of SFSCs (Gori and Castellini, 2023; Vitterso *et al.*, 2019). Based on the literature, much emphasis is placed on consumer trust, consumer relations, knowledge (e.g., food origin), and information exchange in SFSCs. In general, trust is especially relevant with regard to box schemes and CSAs, but according to a Polish study (2019), trust and social relations were not relevant because CSAs quickly adopted a simple direct sales model. In this case, it is challenging to build stronger relationships due to multiple factors (e.g., cultural and historical). According to some studies (Albrecht and Smithers, 2018; Tregear and Ness, 2005), consumers and producers value trust and/or relationships as long as their own interests are met (e.g., obtaining healthy and affordable food). The effect on the health of members of CSA schemes has been found to be significantly greater than that of those of FMs (Allen *et al.*, 2017; Berning, 2012; Enthoven and Van den Broeck, 2021). CSA members' dietary behaviors and habits change more significantly (e.g., an increase in vegetable consumption or less intake of processed foods) than those of FM consumers.

Reasons why (potential) consumers do not visit FMs are also important to consider. Our investigation relies only on research dedicated to FMs and identifies mainly convenience-related barriers (e.g., opening hours, location, and supply) and higher prices. However, other studies that do not focus solely on FMs but on SFSCs from a broader perspective identify other key barriers

like food safety control (González-Azcárate, Maceín and Bardají, 2021) and trust (Cruz, Puigdueta, Sanz-Cobena, *et al.*, 2021). However, these limitations may be more relevant for other SFSCs (e.g., roadside or pick-your-own sales).

Conclusions and implications

Consumers' interest in healthier and more sustainable food has spurred the spread of SFSCs. The most widespread and popular form of these are FMs. The characteristics of consumers of FMs have been examined in numerous studies from almost all parts of the world. However, most research has been done in America and other developed countries.

Regarding the sustainability of FMs, they are often considered economically and socially more sustainable than long food supply chains. However, their environmental sustainability has not been clearly proven. Many studies compare FMs with other food markets, especially supermarkets. FM consumers often perceive prices at FMs to be higher than from other food chains, but in terms of quality, they value FM products more, so they are willing to pay more for them. Another important factor is social interaction. With the appearance of modern food supply chains, consumer trust has decreased as information asymmetry increases. FMs seem to be a solution to the latter problem.

Managerial implications

The outcomes of our systematic literature review may reassure FM managers and other parties interested in promoting and operating successful FMs.

On the one hand, the results clearly identify the most important characteristics of typical FM buyers, which seem to be consistent regardless of time and place, with a few exceptions. However, there may be differences because FMs are defined and regulated differently in each country and even at the market level. For example, only producers are allowed to sell their products in some countries; in other countries, distance is regulated (e.g., only producers from a specific region can trade at the given market), and sometimes there are no rules. However, most FMs precisely define the conditions of the participants and the products that can be sold (Polimeni, Iorgulescu and Mihnea, 2018). It is often difficult to distinguish specific markets and to keep track of FMs since not all markets that are called FMs function as FMs, and some organizations and formats have the function and structure of FMs, but they are not called FMs (Brown, 2001; Pyle, 1971). Even though the development of FMs varies regionally and from a regulatory perspective, the general profile of FM consumers is known and can be efficiently targeted.

On the other hand, key lessons may be learned from understanding why average food consumers do not attend FMs. The studies we examined investigated and identified five main factors that may lead to low involvement with FMs: high prices, inadequate opening hours, issues with location/distance, insufficient supply, and (lack of) information.

Inadequate opening hours are the easiest of the latter factors to modify based on the requirements of potential consumers. The convenience of food purchases is a decisive criterion for many consumers, thus, FMs should strive to fulfill this requirement. However, typical opening hours are not a problem for pensioners, homemakers, or people at home with children, as their schedules are more flexible. These consumer segments, therefore, could serve as a basis for FMs.

The inconvenient location of FMs and traveling distance are more challenging barriers to overcome. While early FMs were usually located at the centers of settlements, modern FMs have tended to be relegated to the periphery. This factor can be counterbalanced by good public transport connections or the provision of sufficient parking spaces. Further, since the typical shopper considers shopping at an FM a family occasion, providing accompanying events (e.g., children's activities) may be a good solution to this problem. Using reverse logic, some consumer segments may be encouraged to participate by moving the FM nearer to them: mobile or temporary markets at university campuses or in front of office buildings after working hours could increase the participation of younger and time-constrained consumers.

The lack of information regarding the location and opening hours of FMs and the advantages of buying at FMs is important, as the typical FM consumer is more open to absorbing any kind of information. Social media platforms can play a significant role in filling this gap, and word of mouth plays a significant role in SFSCs.

The insufficient supply of FMs (compared to supermarkets, first and foremost) is hard to counterbalance. As FMs provide fresh and local—therefore, mostly seasonal—food, it is not possible to provide a wide variety of products year-round. The related shortcoming might be partially overcome by highlighting the opportunities associated with the limited supply that is available.

Due to obvious disadvantages in terms of economies of scale, the cost of food sold at FMs is typically higher than for its supermarket substitute. Therefore, approaching price-sensitive consumers is not easy, but farmers and sellers can encourage the participation of this consumer group by offering discounts or purchase incentives.

Our results might help FM managers identify their target audience and increase the range of regular visitors.

Policy implications

From a policymaking perspective, our key finding is that FMs can be a solid basis for local economic development. Typical sellers at FMs are local farmers who are solidly engaged with local and fixed resources. Further, typical FM buyers also support local economic development as they (i) are typically located in the same municipality as the FM itself, (ii) travel an average of 6.5 miles to reach the FM, and (iii) are committed to supporting local farmers and willing to pay a price premium. Therefore, money spent at FMs has a clear local multiplier effect, and such markets can serve as a policy lever for local and national governments.

Furthermore, as food available at FMs can generally be considered healthier and more nutritious than industrialized food products, encouraging low-income and/or vulnerable consumers to access FMs may also be a policy tool. The vouchers provided by the US government as part of the SNAP initiative are a great example of this that could be taken up by other governments that face similar health-related challenges that exist for dietary reasons.

Our study also highlighted that in many developed countries, governments support selling food through FMs even though the latter represent only a minor part of their food supply chains. This is either for historical reasons (e.g., FMs are a traditional supply chain that remains important even in the twenty-first century) or because FMs might serve as a policy tool (e.g., by providing access to fresh and healthy food to less affluent consumers). In other countries, particularly developing ones, FMs play a more

important role as a source of everyday food for consumers. These regional contrasts explain most of the differences among FM consumers, which policymakers must be aware of when promoting FMs.

Directions for future research

Although our study has identified plenty of research into FM consumers, several research gaps are recognized.

Many previous studies highlight that typical FM buyers either shop at markets on a weekly/fortnightly basis or only a few times a year. It is important to understand what makes an FM consumer a frequent buyer. In addition, the difference in the amount of money spent at FMs by a loyal buyer and a once-a-year buyer is an interesting research question.

A typical FM buyer is 35+ years old. However, little research has investigated the attitudes of younger generations to FMs. As consumers of the future, understanding their opinions might help decrease the average age of the FM consumer.

From a methodological perspective, there is a clear lack of WTP studies on FM consumers outside the USA. Although this approach is a long-standing method in consumer studies, the situation with consumers from European and developing countries should also be investigated using this approach.

In addition, only a few studies (3 out of 103) surveyed more than one country; however, data collected simultaneously using the same methodological approach would improve the quality of comparative cross-country analyses.

Limitations

The present study has some limitations that should be highlighted. First, the literature that was examined was not exhaustive, as new studies appear on a daily basis. We analyzed published materials available on or before 31 January 2023. Second, our analyses focused only on papers with empirically validated datasets that applied survey-based methodologies. However, studies that used other empirical methodologies or did not contain the term 'survey' either in the title, abstract, or among keywords were disregarded. Furthermore, in our systematic review, priority was given to peer-reviewed publications in English available from Scopus and WoS; therefore, non-English language publications and other databases (e.g., Google Scholar) were not included. These limitations might serve as a basis for further research.

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Appendix

Table A1. General characteristics of FM consumers supported by 5+ studies

#	Characteristic	Supporting references
A1	Higher prices at FMs are key barriers of not visiting	(Aguirre, 2007; Berg and Preston, 2017; Bir et al., 2019; Chen, Yu and Fu, 2021; Dobbstein, Corbishley and Mason, 2021; Dodds et al., 2014; González, 2009; Gwin and Lev, 2011; Sadler, 2016; Su et al., 2022; Szabó and Juhász, 2015; Teng, Wilcock and Aung, 2004; Wade et al., 2015; Wills and Arundel, 2017; Witzling, Shaw and Trechter, 2019)
A2	Inadequate opening hours at FMs are key barriers of not visiting	(Chen, Yu and Fu, 2021; Dodds et al., 2014; Garner and Ayala, 2018; Pitts et al., 2015; Rust, 2020; Wade et al., 2015; Youngs, 2003b)
A3	Bad location and accessibility of FMs are key barriers of not visiting	(Berg and Preston, 2017; Dodds et al., 2014; Farmer et al., 2019; Garner and Ayala, 2018; Gwin and Lev, 2011; Pitts et al., 2015; Rust, 2020; Sadler, 2016; Shakeel Ul and Selvaraj, 2013; Shi and Hodges, 2016; Singleton et al., 2017; Szabó and Juhász, 2015; Teng, Wilcock and Aung, 2004; Wade et al., 2015; Youngs, 2003a)
A4	Insufficient supply of FMs is a key barrier of not visiting	(Aguirre, 2007; Bir et al., 2019; Dukeshire et al., 2010; Garner and Ayala, 2018; González, 2009; Ruelas et al., 2012)
A5	Lack of information about FMs is a key barrier of not visiting	(Archer et al., 2003; Dukeshire et al., 2010; Shakeel Ul and Selvaraj, 2013; Singleton et al., 2017; Vargo et al., 2022; Wade et al., 2015)
A6	Typical FM buyer is female	(Abelló et al., 2013; Aguirre, 2007; Anderson et al., 1996; Azavedo and Walsh, 2019; Berg and Preston, 2017; Bottcher et al., 2017; Carson et al., 2016; Chang et al., 2013; Chen, Yu and Fu, 2021; Crandall et al., 2010; Curtis et al., 2020; Dodds et al., 2014; Dodds and Holmes, 2017; Farmer et al., 2019; Farmer, Minard and Edens, 2016; Fehrenbach and Wharton, 2014; Foti et al., 2019; Gary-Webb et al., 2018; Glover, Waliczek and Gandonou, 2014; González, 2009; Gumirakiza, Curtis and Bosworth, 2014; Gumirakiza, Curtis and Bosworth, 2017; Hoppe, Vieira and Barcellos, 2013; Hu, Clarke and Zendejdel, 2021; Hunt, 2007; Karpyn et al., 2014; Khouryeh et al., 2019; Klimek et al., 2021; Lanfranchi and Giannetto, 2015; Pascucci et al., 2011; Payet, Gilles and Howat, 2005; Pisarn, Kim and Yang, 2020; Polimeni, Iorgulescu and Mihnea, 2018; Rainey et al., 2011; Renko and Petljak, 2018; Rice, 2015; Rossi, Woods and Davis, 2018; Sadler, 2016; Shi and Hodges, 2016; Smithers and Joseph, 2010; Spilkova, 2018; Spilková et al., 2013; Telligman, Worosz and Bratcher, 2017; Vasco et al., 2018; Youngs, 2003a, 2003b)
A7.1	Typical FM buyer is middle aged (35–55 years)...	(Abelló et al., 2013; Aguirre, 2007; Anderson et al., 1996; Åsebø et al., 2007; Azavedo and Walsh, 2019; Bavorova, Unay-Gailhard and Lehberger, 2016; Berg and Preston, 2017; Bottcher et al., 2017; Carson et al., 2016; Chen, Yu and Fu, 2021; Cicia, Furno and Del Giudice, 2021; Curtis et al., 2020; Dodds et al., 2014; Dodds and Holmes, 2017; Elepu and Mazzocco, 2010; Farmer et al., 2019; Farmer, Minard and Edens, 2016; Feagan, Morris and Krug, 2004; Fehrenbach and Wharton, 2012; Fehrenbach and Wharton, 2014; Foti et al., 2019; Foti and Timpanaro, 2021; González, 2009; Gumirakiza, Curtis and Bosworth, 2014; Hoppe, Vieira and Barcellos, 2013; Hu, Clarke and Zendejdel, 2021; Karpyn et al., 2014; Khouryeh et al., 2019; Pisarn, Kim and Yang, 2020; Pitts et al., 2015; Polimeni, Iorgulescu and Mihnea, 2018; Rossi, Woods and Davis, 2018; Sadler, 2016; Smithers and Joseph, 2010; Telligman, Worosz and Bratcher, 2017; Vasco et al., 2018; Waldman and Kerr, 2018)

(Continued)

Table A1. (Continued.)

#	Characteristic	Supporting references
A7.2	or older (55+ years)	(Chang et al., 2013; Crandall et al., 2010; Gary-Webb et al., 2018; Lanfranchi and Giannetto, 2015; Obach and Tobin, 2014; Pascucci et al., 2011; Rainey et al., 2011; Youngs, 2003a, 2003b)
A8	Young consumers are not typical FM buyers	(Ashtab and Campbell, 2021; Glover, Waliczek and Gandonou, 2014; Mack and Tong, 2015; Renko and Petljak, 2018; Shakeel Ul and Selvaraj, 2013; Singleton et al., 2017; Solanki and Inumula, 2021; Spilkova, 2018; Spilková et al., 2013)
A9	Typical FM buyer in the USA is Caucasian	(Abelló et al., 2013; Anderson et al., 1996; Bottcher et al., 2017; Chang et al., 2013; Chen, Yu and Fu, 2021; Crandall et al., 2010; Elepu and Mazzocco, 2010; Farmer et al., 2019; Farmer, Minard and Edens, 2016; Fehrenbach and Wharton, 2012; Fehrenbach and Wharton, 2014; Garner and Ayala, 2018, 2019; Glover, Waliczek and Gandonou, 2014; Gumirakiza, Curtis and Bosworth, 2017; Leiper and Clarke-Sather, 2017; Mack and Tong, 2015; Obach and Tobin, 2014; Pitts et al., 2017; Pitts et al., 2015; Rainey et al., 2011; Sadler, 2016; Taylor and Villas-Boas, 2016; Telligman, Worosz and Bratcher, 2017)
A10	Typical FM buyer is highly educated	(Abelló et al., 2013; Aguirre, 2007; Anderson et al., 1996; Åsebø et al., 2007; Azavedo and Walsh, 2019; Berg and Preston, 2017; Blanck et al., 2011; Bottcher et al., 2017; Chang et al., 2013; Chen, Yu and Fu, 2021; Crandall et al., 2010; Curtis et al., 2020; Dodds and Holmes, 2017; Elepu and Mazzocco, 2010; Farmer et al., 2019; Fehrenbach and Wharton, 2014; Foti and Timpanaro, 2021; Garner and Ayala, 2018; Gary-Webb et al., 2018; Glover, Waliczek and Gandonou, 2014; González, 2009; Gumirakiza, Curtis and Bosworth, 2014; Hunt, 2007; Karpyn et al., 2014; Kushwah, Dhir and Sagar, 2019; Ma and Chang, 2022; Mack and Tong, 2015; Obach and Tobin, 2014; Pascucci et al., 2011; Polimeni, Iorgulescu and Mihnea, 2018; Rainey et al., 2011; Rice, 2015; Rossi, Woods and Davis, 2018; Schneider and Francis, 2005; Shi and Hodges, 2016; Singleton et al., 2017; Solanki and Inumula, 2021; Spilkova, 2018; Spilková et al., 2013; Telligman, Worosz and Bratcher, 2017; Vargo et al., 2022; Vasco et al., 2018; Waldman and Kerr, 2018)
A11	Typical FM buyer is in the high-income category	(Abelló et al., 2013; Anderson et al., 1996; Åsebø et al., 2007; Azavedo and Walsh, 2019; Carson et al., 2016; Chang et al., 2013; Chen, Yu and Fu, 2021; Dodds et al., 2014; Dodds and Holmes, 2017; Elepu and Mazzocco, 2010; Feagan, Morris and Krug, 2004; Fehrenbach and Wharton, 2014; Foti et al., 2019; Foti and Timpanaro, 2021; Glover, Waliczek and Gandonou, 2014; Gumirakiza, Curtis and Bosworth, 2014; Gumirakiza, Curtis and Bosworth, 2017; Hunt, 2007; Obach and Tobin, 2014; Rainey et al., 2011; Renko and Petljak, 2018; Rice, 2015; Rossi, Woods and Davis, 2018; Schneider and Francis, 2005; Shakow, 1981; Telligman, Worosz and Bratcher, 2017; Wade et al., 2015)
A12.1	Non-high income FM buyers are either located in developing countries...	(Aguirre, 2007; González, 2009; Hoppe, Vieira and Barcellos, 2013; Pisarn, Kim and Yang, 2020; Shakeel Ul and Selvaraj, 2013; Solanki and Inumula, 2021; Tung, Tsay and Lin, 2015)
A12.2	or American participants of the SNAP	(Farmer et al., 2019; Farmer, Minard and Edens, 2016; Garner and Ayala, 2018, 2019; Gary-Webb et al., 2018; Leiper and Clarke-Sather, 2017; Pitts et al., 2017; Pitts et al., 2015; Ruelas et al., 2012; Vargo et al., 2022; Waldman and Kerr, 2018)
A13	Typical FM buyer is located in the same municipality as the FM itself	(Abelló et al., 2013; Chen, Yu and Fu, 2021; Dukeshire et al., 2010; Feagan, Morris and Krug, 2004; Foti and Timpanaro, 2021; Garner and Ayala, 2019; Glover, Waliczek and Gandonou, 2014; Gumirakiza, Curtis and Bosworth, 2014; Pascucci et al., 2011; Renko and Petljak, 2018; Smithers and Joseph, 2010)
A14	Typical FM buyer is a resident of small and large cities	(Bavorova, Unay-Gailhard and Lehberger, 2016; González, 2009; Pisarn, Kim and Yang, 2020; Spilkova, 2018; Spilková et al., 2013; Telligman, Worosz and Bratcher, 2017)
A15.1	Typical FM buyer has an average household size of 2 ...	(Abelló et al., 2013; Anderson et al., 1996; Chang et al., 2013; Chen, Yu and Fu, 2021; Cicia, Furno and Del Giudice, 2021; Farmer, Minard and Edens, 2016)
A15.2	or 3–4 persons	(Aguirre, 2007; Azavedo and Walsh, 2019; Farmer et al., 2019; Farmer, Minard and Edens, 2016; Foti et al., 2019; Gumirakiza, Curtis and Bosworth, 2014; Pascucci et al., 2011; Ruelas et al., 2012; Vasco et al., 2018)
A16.1	Typical FM buyer is visiting the FM a few times a year ...	(Chen, Yu and Fu, 2021; Cicia, Furno and Del Giudice, 2021; Conner et al., 2009; Curtis et al., 2020; Elepu and Mazzocco, 2010; Farmer, Minard and Edens, 2016; Pitts et al., 2017; Pitts et al., 2015)
A16.2	or on a weekly basis	(Berg and Preston, 2017; Chen, Yu and Fu, 2021; Conner et al., 2010; Dobbstein, Corbishley and Mason, 2021; Dodds and Holmes, 2017; Farmer et al., 2019; Fehrenbach and Wharton, 2014; Gumirakiza, Curtis and Bosworth, 2017; Hu, Clarke and Zendejdel, 2021; Khouryeh et al., 2019; Pascucci et al., 2011; Payet, Gilles and Howat, 2005; Pitts et al., 2015; Ruelas et al., 2012; Sadler, 2016; Spilkova, 2018; Teng, Wilcock and Aung, 2004; Youngs, 2003b)

(Continued)

Table A1. (Continued.)

#	Characteristic	Supporting references
A17	Typical FM buyer in developed countries spends 20–30 USD per occasion	(Abelló <i>et al.</i> , 2013; Chen, Yu and Fu, 2021; Conner <i>et al.</i> , 2009; Elepu and Mazzocco, 2010; Farmer <i>et al.</i> , 2019; Garner and Ayala, 2019; Gumirakiza, Curtis and Bosworth, 2017; Hu, Clarke and Zendejdel, 2021; Mack and Tong, 2015; Pascucci <i>et al.</i> , 2011; Youngs, 2003a)
A18	Typical FM buyer is willing to pay more at FMs rather than shop at a nearby retail outlet or supermarket	(Aguirre, 2007; Berg and Preston, 2017; Brown, 2003; Chang <i>et al.</i> , 2013; Conner <i>et al.</i> , 2010; Curtis <i>et al.</i> , 2020; Garner and Ayala, 2019; Glover, Waliczek and Gandonou, 2014; González, 2009; Gumirakiza, Curtis and Bosworth, 2017; Gwin and Lev, 2011; Martínez Michel, Anders and Wismer, 2011; Pisarn, Kim and Yang, 2020; Schneider and Francis, 2005; Solanki and Inumula, 2021; Witzling, Shaw and Trechter, 2019; Youngs, 2003b)
A19	Typical FM buyer travels between 1 and 5 miles	(Abelló <i>et al.</i> , 2013; Åsebø <i>et al.</i> , 2007; Chen, Yu and Fu, 2021; Conner <i>et al.</i> , 2009; Eastwood, 2001; Farmer, Minard and Edens, 2016; Foti and Timpanaro, 2021; Garner and Ayala, 2019; Ruelas <i>et al.</i> , 2012; Sadler, 2016; Schneider and Francis, 2005; Selfa and Qazi, 2005; Shakeel Ul and Selvaraj, 2013; Vargo <i>et al.</i> , 2022; Youngs, 2003a, 2003b)
A20	Typical FM buyer considers environmentally sustainability important	(Carson <i>et al.</i> , 2016; Cicia, Furno and Del Giudice, 2021; Curtis <i>et al.</i> , 2020; Dodds <i>et al.</i> , 2014; Fehrenbach and Wharton, 2014; Foti and Timpanaro, 2021; Glover, Waliczek and Gandonou, 2014; Klimek <i>et al.</i> , 2021; Ma and Chang, 2022; Spilkova, 2018)
A21	Typical FM buyer is interested in the way how food is produced, prefer ecologically sustainable practices	(Åsebø <i>et al.</i> , 2007; Conner <i>et al.</i> , 2009; Gumirakiza, Curtis and Bosworth, 2014; Hunt, 2007; Klimek <i>et al.</i> , 2021; Leiper and Clarke-Sather, 2017; Oths <i>et al.</i> , 2016; Rice, 2015)
A22	Typical FM buyer considers chemical-free production very important	(Abelló <i>et al.</i> , 2013; Anderson <i>et al.</i> , 1996; Farmer, Minard and Edens, 2016; Scholten, 2006; Spilkova, 2018; Su <i>et al.</i> , 2022)
A23	Typical FM buyer prefers organic food	(Curtis <i>et al.</i> , 2020; Garner and Ayala, 2019; Gumirakiza, Curtis and Bosworth, 2017; Klimek <i>et al.</i> , 2021; Obach and Tobin, 2014; Pascucci <i>et al.</i> , 2011; Rainey <i>et al.</i> , 2011; Scholten, 2006; Shi and Hodges, 2016; Spilkova, 2018; Youngs, 2003b)
A24	Typical FM buyer considers supporting local farmers important	(Bavorova, Unay-Gailhard and Lehberger, 2016; Carson <i>et al.</i> , 2016; Conner <i>et al.</i> , 2010; Dodds <i>et al.</i> , 2014; Dodds and Holmes, 2017; Feagan, Morris and Krug, 2004; Garner and Ayala, 2019; Glover, Waliczek and Gandonou, 2014; Khouryeh <i>et al.</i> , 2019; Leiper and Clarke-Sather, 2017; Ma and Chang, 2022; Obach and Tobin, 2014)
A25	Typical FM buyer considers additional food information important	(Carson <i>et al.</i> , 2016; Chen, Yu and Fu, 2021; Klimek <i>et al.</i> , 2021; Ma and Chang, 2022; Youngs, 2003a, 2003b)
A26	Typical FM buyer considers social interactions important	(Dodds <i>et al.</i> , 2014; Gumirakiza, Curtis and Bosworth, 2014; Hoppe, Vieira and Barcellos, 2013; Hunt, 2007; Obach and Tobin, 2014; Pascucci <i>et al.</i> , 2011; Payet, Gilles and Howat, 2005)
A27	Typical FM buyer considers shopping at FM as a family program	(Dobbelstein, Corbishley and Mason, 2021; Garner and Ayala, 2019; Hunt, 2007; Payet, Gilles and Howat, 2005; Pisarn, Kim and Yang, 2020; Rice, 2015; Sadler, 2016)