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Farmers' Markets and Farm Shops in Germany: is the motivation to buy there the same?

Xavier Irz[1], Pascal Leroy, Vincent Réquillart[1], Louis-Georges Solerb

[1]TSE (GREMAQ-INRA) FR, France, vincent.requillart@toulouse.inra.fr

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Introduction

In Germany, as in other countries, it was common for farmers to sell their products directly to consumers. However, after the Second World War, the direct marketing approach to buying and selling food products almost disappeared. To increase revenue, the reestablishment of direct marketing started in the 1980s (Sommer, 1995). Although no official statistics are available regarding the current number of German farmers involved in direct marketing, it is estimated that approximately 30,000 to 40,000 farms sold their production directly to consumers in 2013 (Bundesministerium für Ernährung und Landwirtschaft [BMELV], 2013). This number corresponds to approximately 6 – 8% of German farms. Due to the historic divide of Germany, the structure of farms in Eastern and Western Germany is still considerably different. For example, in the Western German state of Bavaria, there are a total of 94,000 farms that cultivate, on average, 33 ha of agricultural land. Here, the number of direct-selling farmers is estimated to be approximately 3,500 (3.7%) (Bayrisches Staatsministerium für Ernährung, Landwirtschaft und Forsten [StMELF] Bayern, 2013). Considering the number of consumers, in Bavaria, we have approximately 3,580 consumers per farm. In the Eastern German state of Saxony, the absolute number of farms is currently 6,100, where an average of 149 ha of agricultural land is cultivated. Here, the number of direct-selling farmers was approximately 500 in 2013 (8.2% of Saxony farms). Considering the number of consumers in Saxony, this leads to approximately 8,300 consumers per farm (Direktvermarktung in Sachsen e.V., 2013). In conjunction with the difference in the availability of farm shops in the Eastern and the Western German federal states, higher income as well as lower unemployment in the West may affect consumer behavior concerning directly sold food. While a few studies were conducted to investigate consumer behavior with regards to directly sold food in Western Germany (Wirthgen, 2005; Zenner, Wirthgen & Altmann, 2004), to our knowledge no study has been carried out in Eastern Germany.

Internationally, the growing market for local products also attracts increasing scientific interest in consumers' perception of and attitude towards direct marketing. This observation is reflected by an increasing number of published studies, especially in the US (e.g., Bond, Thilmany & Bond, 2006; Cranfield, Henson & Blandon, 2012; Thilmany, Bond & Bond, 2008; Wirthgen, 2005; Zenner et al. 2004; Zepeda & Li, 2006) but also in the EU (e.g., Wirthgen, 2005; Roininen, Arvola & Lähteenmaki, 2006; Chambers, Lobb, Butler, Harvey & Traill, 2007; Rocchi, Cavicchi

& Baldeschi, 2011; Carey, Bell, Duff, Sheridan & Shields, 2011). However, in the EU, such consumer studies are rather rare, while the differences between the countries regarding direct marketing and consumer behavior remain large (Vecchio, 2011).

Some studies on consumer preferences for directly sold food concentrate on farmers' markets. Other studies have started investigating the effects of attitudinal and socio-demographic factors on the likelihood of buying locally produced food, without distinguishing between distribution channels. The contribution of this study is that we investigate and compare the influence of socio-demographic characteristics and perceived product attributes on buying frequency at two market outlets: farmers' markets and farm shops. We focus on these distribution channels, as other direct marketing channels, such as box schemes or farm stands, are rarely used in the considered region. To contribute to the understanding of how consumer perceptions influence the decision to buy food directly from farmers in different distribution channels, we investigate the following two research questions: Which perceived attributes and socio-demographic factors determine the frequency of buying food products from farmers' markets and from farm shops? Are the perceived attributes of the products and the socio-demographic characteristics of farmers' markets and farm shops different? To this end, the study applies an ordered logit regression model on data collected in Eastern Germany. In contrast to other similar studies, instead of quantity of food, we use buying frequency as the dependent variable. However, we assume that perceived attributes and socio-demographic factors influence the frequency and value of food bought directly from farmers in very similar ways.

The article is structured as follows: After describing the study's theoretical background, the survey and the methodology are detailed. Afterwards, the results are presented. The paper closes with a discussion and conclusions.

Background

Defining Direct Marketing and Local Food

Direct marketing (direct selling) can be defined in multiple ways. Our study is concerned with direct marketing in a narrow sense, where producers sell their ready-to-eat products directly to consumers. In Germany, the most common distribution channels for direct marketing are farmers' markets and farm shops. These channels are also common supply chains through which local food products are sold in the US (Bond, Thilmany & Keeling Bond, 2008; Selfa & Qazi,

2005; Ilbery & Maye, 2006; Feagan, Morris & Krung, 2004). Some studies include more direct marketing channels, such as farmers' markets, Community Supported Agriculture, farm stands, etc., and examine these components collectively as "local food" (e.g., Zepeda & Li, 2006).

Local food products are mostly distinguished from other foods by the distance from the place of production to the final market. In the US, the distance ranges anywhere from 30 to 150 miles (Chambers et al., 2007; Selfa & Qazi, 2005). Some studies define local food as food grown within a country or within a state, while other authors doubt if the political boundaries are the best delineation to define local food (Darby, Batte, Ernst & Roe, 2008, Zepeda & Leviten-Reid, 2004). In the study by Zepeda and Leviten-Reid (2004), most US consumers defined local in terms of driving time instead of political boundaries.

Local food is a broad category that bundles consumers from different direct marketing distribution channels, such as farmers' markets and farm shops.

Consumers' Attitudes towards Directly Marketed Food

Attitudinal and behavioral characteristics generally are better predictors of local food buying behavior than demographic characteristics, as research on demographic characteristics is often conflicting (Zepeda & Li, 2006). In the following, attributes identified from the literature have been found to determine consumers' buying behavior with regard to directly marketed food products. Two main branches of literature may be identified: a) the first branch investigates local food in general, and b) the second branch considers selected distribution channels, in most cases farmers' markets (Table 1). The studies on consumer behavior towards local food do not consider the possible differences in consumers' characteristics and attitudes between the different distribution channels.

Scholar	***Year***	***Research topic***	***Area***
Bond et al.	2006	Fresh food outlet selection drivers	US
Carey et al.	2011	Farmers' market	Scotland
Chambers et al.	2007	Local food	UK
Cranfield et al.	2012	Local food	Canada, Guelph
Eastwood et al.	1999	Farmers' market	US, Tennessee
Feagan and Morris	2009	Farmers' market	Canada

Feagean et al.	2004	Farmers' market	Canada, Ontario
Jones et al.	2004	Local food	UK
La Trobe	2001	Farmers' markets	UK, Kent
Roininen et al.	2006	Local food	Finland
Selfa and Qazi,	2005	Local food	US, Washington state
Wirthgen	2005	Regional food	Northern Germany
Zepeda and Leviten-Reid	2004	Local food	US, Wisconsin
Zepeda and Li	2006	Local food	US
Zepeda, L.	2009	Farmers' market	US

Table 1: Selection of studies on factors influencing consumer behavior towards local food (or farmers markets) in different regions

The results of the previous studies typically indicate that consumers positively associate *taste* and *freshness* related attributes with local food products (Chambers et al., 2007; Selfa & Qazi, 2005; La Trobe, 2001; Feagan & Morris, 2009; Carey et al., 2011). Findings from a focus group discussion carried out by Chambers et al. (2007) suggest that *perceived prices* rather than objective prices influence the decision to not buy local food products. Furthermore, empirical data suggest that prices of local food products are perceived to be high (Roininen et al., 2006; Chambers et al, 2007).

Other empirical evidence confirms that a key benefit of local food as perceived by consumers is that they know "where the food came from'' (Roininen et al., 2006). Literature suggests that consumers associate local food products with *greater transparency* (Jones, Comfort & Hillier, 2004). This assumption is supported by the results of a study in Germany in which the results of a rank-ordered logit analysis showed consumers' mistrust in conventional food from elsewhere (Wirthgen, 2005).

A number of studies have confirmed that *convenience of location* is of high importance in choice of outlet (e.g., Bond et al., 2006; Zepeda, 2009). Other studies show that consumer decisions to buy food from local farmers are driven by the *willingness to support* the farmers and, thus, the region (Bond et al., 2006; Eastwood, Brooker & Gray, 1999; Feagan et al., 2004; Feagan & Morris, 2009; Zepeda & Leviten-Reid, 2004). Consumers often associate *transportation distance*

with fuel consumption, and those who are environmentally concerned may be more inclined to buy locally (Zepeda & Li, 2006; Seyfang, 2006).

Data Collection and Methodology

Data Collection

The data were collected using an intercept survey with a structured questionnaire. Standardized face-to-face interviews took place with pedestrians in May and June of 2011 and 2012. Trained students with knowledge of agricultural marketing acted as interviewers. A four-hour training on how to conduct the survey was given by two of the coauthors of this study. The target regions of the study were the Eastern German States of Saxony, Saxony-Anhalt and Thuringia. Prior to data collection, a pretest was conducted. Consequently, some questions were rephrased to increase their comprehensibility. Participants were approached on the streets. A stratified sampling took place using the criteria of gender (goal: 70% female/30% male) and age (goal: 30% of participants between 18 and 35 years, 40% between 36 and 60 years, and 30% above 60 years). This sampling was conducted to approximate the typical German grocery shopper and, thus, to simulate a random sample. A total of n=550 study participants were interviewed.

Methodology

In the literature, research by Warshaw and Dröge (1986) on consumer choices links discrete choices to attitude theory in economic psychology. Furthermore, in consumer behavior studies, logistic (or probit) regression is often applied to a context where a consumer chooses from a set of alternatives (Thilmany et al., 2008; Keeling Bond, Thilmany & Bond, 2009).

In our study, an ordered logistic regression model is used to estimate the influence of socio-demographic characteristics and attributes as perceived by consumers on the buying frequency from two direct marketing channels: farmers' market and farm shops.

The dependent variable, consumer choice of how frequently they buy food from the two direct marketing channels, was measured on a five point scale ranging from "never" to "weekly". In the mapping process study followed the set of consumer alternatives as:

$$y_i = 0 \text{ if } y^* \leq 0, \text{ never a buyer}$$
$$= 1 \text{ if } 0 < y^* \leq \mu 1, \text{ buy less often}$$

= 2 if μ1 < y* ≤ μ2, buy monthly

= 3 if μ2 < y* ≤ μ3, = buy once every two weeks

= 4 if μ3 ≤ y*, weekly buyer.

Given such discrete alternatives, the larger values are assumed to correspond to "higher" outcomes. The ordered logit model offers a data-generating process for this type of discrete choice-dependent variable (Greene, 2003). The main objective of an ordered logit model analysis is to predict the choice probabilities in response to changes in several independent variables.

The independent variables that influence the consumer's buying decisions are the consumers' perceptions of the direct marketing product attributes and their sources. Product and source attributes as perceived by consumers were measured on a 7-point Likert scale. Respondents were to indicate their opinion with regards to a statement on a scale ranging from strongly disagree to strongly agree. The internal consistency of a total of 12 statements, measuring the perceived attributes as perceived by consumers, was calculated by Cronbach's alpha. This procedure is in accordance with most empirical analyses estimating the reliability of a set of question items (Henson, 2001). In our case, Cronbach's alpha is 0.862, which is very close to 0.80, a satisfactory level of reliability. In addition, the socio-demographic variables of sex, age, education, population of residence and household size were entered into the model as control variables. The underlying model process is characterized as follows:

$$y* = \beta_0 + \beta_1 X_{sex} + \beta_2 X_{age} + \beta_3 X_{education} + \beta_4 X_{population\ of\ residence} + \beta_5 X_{household\ size} + \beta_6 X_{perceieved\ attributes} + \varepsilon$$

where y* is the unobserved dependent variable. We ran two separate ordered logistic regression models to estimate influence factors in each of the direct marketing channels, farmers' market and farm shops, on their own. X is the vector of the independent variables, and β (beta) is the vector of regression coefficients that we aimed to estimate. The beta coefficients are the ordered log-odds (logit) regression coefficients that allow the interpretation of the ordered logit model. The sign of the estimated ordered logit model parameters can be interpreted directly. A positive sign indicates that the set of alternative probabilities shifts to higher categories when the

explanatory variable increases (Takeshi, 1994). The standard interpretations of beta coefficients are a one-unit increase in the independent variables; the dependent variable level is expected to change by its respective regression coefficient in the ordered log-odds scale. This change occurs while other variables remain constant in the model (Bruin, 2006).

For our statistical analysis, we used the statistical software package STATA. Both regression models (one for the farmers' markets buyers and one for the farm shops buyers) were tested for multicollinearity by calculating Pearson's correlation coefficients for each pair of independent variables. High correlation coefficient variables that are more than 0.5 (5 items) are eliminated from the model. Furthermore, multicollinearity was tested using a variance inflation factor (VIF). The results show that the mean VIF values ranged from 1.05 to 1.68 for both the farmers' market and farm shop models and were thus under the threshold of 10 (O'Brien, 2007; Chatterjee & Hadi, 2006). Therefore, we conclude that no serious multicollinearity problem exists between the used explanatory variables in both models.

The results of the ordered logistic regression models were compared with the results of the OLS regression models. Both methods of analysis indicate identical positive and significant relationships between the independent and dependent variables. Due to missing values, the number of observations for the ordered logit regression model was reduced from 550 to 517. In the following, the results from the two regressions including coefficient estimates with P>|z| test significance levels, standard errors, and odds ratio are presented.

Results

In this section, we provide two types of evidence. First, we examine the perceived attributes of consumers associated with food purchase from selected direct marketing channels. Second, we present the investigation on the influence of these attributes on the consumers' purchasing frequency from two direct marketing channels: farmers' markets and farm shops.

Consumers' Perceived Attributes

Table 2 provides a detailed overview of the rating results for the 12 statements used to assess the consumers' perception of the attributes of food products and their sources. The majority of interviewees agree that food directly from the farmer is fresh (approx. 80%) and tastes better than food from other outlets (approx. 69%). We also find that over 60% of interviewees are

interested in how and where their food is produced. The data indicate that the main drawback is not the (perceived) price (35% of the respondents agree that products purchased directly from farmers are too expensive) but rather the difficulty to reach an outlet selling these directly marketed products. More than half of the interviewees disagree that it is "very convenient" to buy directly from a farmer.

Answers to the question of whether consumers' confidence in foods produced directly from farmers is higher than in products from other outlets show that merely 20% of consumers have lower confidence in direct market products.

The majority of interviewees indicate that they are interested in the idea of wanting to support local farmers and of short transportation distances. On one hand, over 50% agree that they want to support local farmers with their purchases. On the other hand, approx. 26% of interviewees state that they do not prefer food transported for short distances. A social desirability bias cannot be fully excluded in these statements.

	Strongly disagree				**Strongly agree**		
Freshness (fresher directly from farmers)	2.88	1.62	5.05	10.27	12.07	28.65	39.46
Taste (better directly from farmers)	4.14	3.06	5.59	18.38	16.76	24.50	27.57
Price (food directly from farmer too expensive)	17.30	13.87	13.33	20.72	13.15	9.37	12.25
Confidence in food safety (higher in direct marketing products)	7.04	6.50	6.68	15.88	16.79	22.92	24.19
Where produced (important to know)	6.67	6.85	11.71	14.41	21.62	16.76	21.98
How produced (important to know)	6.65	6.12	7.91	14.75	15.83	21.22	27.52
Confidence in animal welfare (higher in direct marketing products)	7.22	7.58	5.78	15.16	17.15	21.66	25.45
Confidence in food sold by farmer (higher than other sources)	6.82	6.06	7.01	15.72	17.23	23.48	23.67
Confidence in small farmers' products (higher than large farms)	8.52	3.6	7.39	12.31	13.45	27.65	7.08
Convenient location (it is inconvenient for me to buy directly from farmer)	28.78	14.21	10.97	14.57	7.91	8.45	15.11
Support local farmers (it is important to me)	7.37	6.12	6.65	14.39	12.05	18.88	34.53
Short transportation (I prefer products with short transportation distance)	9.55	9.37	7.03	12.79	13.15	16.22	31.89

Source: Own calculation from Direct Marketing Survey, East Germany, 2011 and 2012.

*Table 2***:** *Consumers' (n=550) Perceived Attributes on Direct Marketing Products and Sources (%)*

Results of Ordered Logit Models

Table 3 provides the results of ordered logit model analysis.

	Purchase frequency from farmers' market: Farmers' Market Model (FMM)			Purchase frequency from farm shop: Farm Shop Model (FSM)		
	Coef.	Std.	Odd Ratio	Coef.	Std.	Odd Ratio
Sex: Female	0.56**	0.18	1.76	0.07	0.21	1.07
Age groups: 30-49	0.45*	0.24	1.56	0.69**	0.29	1.99
50-65	1.19**	0.27	3.29	0.41	0.32	1.51
≥60	0.99**	0.30	2.69	0.28	0.37	1.32
Education : High School	0.20	0.23	1.23	0.17	0.28	1.18
University/College	0.06	0.21	1.06	-0.01	0.25	0.99
Population of Residence : 10 000-100 000	0.86**	0.24	2.36	0.04	0.26	1.04
> 100 000	0.78**	0.20	2.18	-1.14**	0.24	0.32
Household Size 2	0.15	0.23	1.17	0.91**	0.32	2.48
3	-0.12	0.28	0.88	0.67*	0.36	1.96
4	0.29	0.30	1.34	0.57	0.37	1.77
>4	0.26	0.38	1.29	1.46**	0.47	4.31
Perceived Attributes of Consumers						
Freshness	0.18**	0.07	1.19	-0.09	0.09	0.91
Price	-0.06	0.05	0.94	-0.10*	0.06	0.90
Confidence in small farmers' products	-0.04	0.05	0.96	-0.11*	0.07	0.89
Confidence in food safety in direct marketing channels	-0.03	0.06	0.97	0.16**	0.08	1.17
Where produced	0.06	0.06	1.06	0.08	0.07	1.09
Convenient location	-0.03	0.05	0.97	0.38**	0.05	0.68
Support local producers	0.18**	0.05	1.20	0.09	0.07	1.09
Number of observations	517			517		
Prob > chi2	0.00			0.00		
Pseudo R^2	0.07			0.16		

Source: *Own calculation from Direct Marketing Survey, East Germany, 2011 and 2012.*
Note: *Significance levels: *= p< .10, **= p< .05. Reference (base) categories: "age ≥ 29" for age group, "secondary school or lower level" for education group, "residence<10 000" for population of residence group, and "household size=1" for household size group variables.*

*Table 3**: Results of ordered logit models for purchase frequency from two direct marketing channels as dependent variables***

Because explanatory variables were evaluated by the same group of consumers, differences between two ordered logit estimations are attributable to the difference in the dependent variables, namely buying frequency at the two studied direct marketing channels.

Looking at the socio-demographic variables in two models, we find that being female is only a significant determinant for the frequency of purchase in the FMM model. The probability of shopping at farm shops is high for the age group 30-49. Frequency of buying at farmers' markets is significantly higher for the 30-65 age group than that for younger shoppers. As in the FMM, education level is not a significant determinant for explaining purchase frequency in the FSM. Consumers who live in a city with more than 100,000 inhabitants are less likely to buy frequently in a farm shop than those who live in less populated locations. Consumers who are living in places with more than 10,000 inhabitants are more likely to purchase foods frequently at farmers markets than those living in the base category of population density (up to 10,000 inhabitants). The results show that higher household size is a significantly positive determinant for the frequency of buying from farm shops but not from farmers' markets.

For the two studied direct marketing channel models, a fairly different picture is found with respect to the influence of perceived attributes of consumers on the frequency of purchase. Consumers who perceive food sold by farmers as fresh and who want to support farmers in their region buy more frequently at farmers' markets, while these attributes are found not to be significant determinants for explaining consumers' purchasing behavior from farm shops.

Differently, the frequency of buying at a farm shop (FSM model) is significantly influenced by the perceived price level of food in direct marketing channels, confidence in small farmers' products, confidence in food safety in direct marketing channels and convenience of outlet location. Consumers who agree that products purchased directly from farmers are too expensive are less likely to buy frequently in a farm shop. Consumers with stronger confidence in food directly marketed by small family farms rather than by large farms buy less often from farm shops. Responders expressing higher confidence in foods sold directly by farmers than in other foods buy more often in a farm shop. A significant positive estimate for the convenient location variable implies that an increase in consumer perception of convenient location leads to an increase in the likelihood that a consumer would frequently buy from farm shops.

Discussion and Conclusion

We use a 2011 and 2012 year data-set from a sample of German food shoppers to examine differences between farmers' market shoppers and shoppers at farmer's shops. We employ an ordered logit regression to model the influence factors on the frequency of consumers' buying behavior from these two direct marketing channels. The analysis of this study shows varied results for both studied food supply channels. On one hand, variables that describe consumers' perceptions towards freshness and support local producers have a significant influence on the frequency to shop at farmers' markets, whereas these variables are not significant determinants of consumers' shopping frequency at farm shops. On the other hand, the variables of price, confidence in small farmers' products, confidence in food safety in direct marketing channels, and convenient location are significant determinants of consumers' shopping frequency from farm shops but not from farmers' markets.

The descriptive findings of the direct marketing survey indicate that the majority of interviewees agree that food they obtain directly from a farmer is quite fresh and tastes better than other products. In general, interviewees are interested in where and how their food is produced. The majority of respondents have higher confidence in both the product and the process quality of the food purchased directly from farmers, they want to support local farmers, and they prefer products with short transportation distances. However, more than 50% of interviewees find it very inconvenient to buy directly from a farmer. The question arises whether these attitudes are reflected in the buying frequency of directly marketed food products from the two direct marketing channels: farmers' markets and farm shops.

The findings of the ordered logit analysis give insights into the perceived attributes of consumers on direct marketing products and sources. Considering the *freshness* attribute, the analysis shows that consumers who are very satisfied with the freshness of food directly from a farmer are more likely to buy more frequently from a farmers' market. This result is in line with a number of studies (Chambers et al., 2007; Selfa & Qasi, 2005; La Trobe, 2001). However, the result also stands in contrast to findings by Zepeda (2009), who finds that freshness of food products does not significantly influence the buying decision of consumers at US farmers' markets. The perceived freshness of directly marketed products is not the variable predicting frequency of buying in the farm shops in our study.

Regarding the influence of *willingness to support local producers* on consumers' decisions, our data confirm results from studies in the US (Bond et al., 2006; Eastwood et al., 1999; Zepeda and Leviten-Reid, 2004) and shows that consumers who consider it important to support local producers buy more frequently at farmers' markets. However, this attitude does not explain the frequent buying in a farm shop. This finding is interesting especially as the results of the study show that farmers' market shoppers live predominantly in places with more than 10,000 inhabitants and farm shop buyers live predominantly in places with less than 100,000 inhabitants. It seems that people from urban areas that do not have much direct contact with farming tend to support farmers more than those who live with farms in their neighborhoods.

Consumers that want to support local producers do not act purely rational in the economic sense and do not only consider their own profit. Such behavior is reflected in a model by Thilmany et al. (2008). They recognize that consumers' objectives for why they buy directly from farmers may be more complex than expected from modeling simple self-interested behavior. These authors assume that the marginal utility of consuming each good may differ with the choice of outlet source. Hence, private attributes of source characteristics such as convenience, travel costs, etc. may influence consumers' decisions, as may the non-private, quasi-public characteristics such as locally sourced products or promoting environmentally friendly products.

The results show that consumers who agree that products purchased directly from farmers are *too expensive* are less likely to buy frequently from a farm shop.

Unlike other studies, the results show that in Eastern Germany, frequent farm shop buyers do not have a higher *confidence in small farms' products* than in large farms' products. This can be an effect of good reputation of large corporate farms in the considered area in the communist past and the fact that many of the popular farm shops are run by large corporate farms.

In contrast to taste or price, some product attributes cannot be measured or evaluated by consumers even after consumption, e.g., the use of pesticides during the food production process. Due to such "credence attributes", information asymmetries exist between producers and consumers. Eliminating these information asymmetries is often cost intensive or even impossible. High information costs can be overcome through *confidence*. Our results show that higher confidence in the food safety of directly sold products predicts more frequent shopping in a farm shop; however, higher confidence does not explain shopping frequency at farmers' markets. We assume that buying from farm shops increases consumers' confidence, as they can

see and check where the product is from and in many cases how the product was produced. This is not the case when buying at farmers' markets because such information is given only by the seller and cannot be proven easily by the buyer.

Consumers who find it *convenient* to buy directly from farm shops buy from this source more often than others. This observation may explain our finding that inhabitants of populated areas with more than 100,000 inhabitants are less likely than inhabitants of less populated places to buy frequently at farm shops. As the majority of farm shops in Germany are located in less populated areas, it is more convenient for people living in these areas to reach farm shops. No significant effect of convenience was found in the FM model. This result can be explained by the facts that farmers' markets take place more regularly in cities with more than 10,000 inhabitants and are thus convenient to visit for people living there. Inhabitants living in smaller places very often commute to work to larger cities and, thus, also have the opportunity to shop at farmers' markets. Vis-à-vis, it seems very inconvenient for inhabitants from larger cities to drive to farm shops in a more distant area.

Our study shows that farmers' market buyers and farm shop buyers are different regarding both their socio-demographic characteristics and their attitudes. For selling at a farmers' market, the generally known fact is confirmed that farmers should focus on advertising the freshness of their food. Furthermore, they should make it clear that the food they sell is produced by themselves or other farmers from the region. The advertisement conducted by state agencies stressing the potential benefits for the local economy and for local agriculture may be successful. Farmers selling their products in farm shops should focus more on consumers from the region, as the perceived convenience of getting to a direct marketing outlet is a key determining factor for the frequency of buying at a farm shop. When advertising their farm shop in larger cities, farmers should give information about their prices to avoid the urban inhabitants' possible perception that the prices in farm shops are too high. It should be stressed that during the visit to a farm shop, the production at the farm can be observed, which will increase the confidence of the buyers with regards to food safety and thus increase their willingness to buy from a farm shop.

The main result of this study is that farmers' market buyers and farm shop buyers are, in many aspects, different. Regarding further research, our results imply that considering consumer behavior separately for different direct food marketing channels rather than considering the

entire category of local food may provide new and interesting insights. Furthermore, because consumers' attributes regarding products and source differ between the two marketing channels, there is a need to follow public communication plans that integrate specific information for the two direct-marketing channels.

Appendix

Socio-demographic Variables	**% of total sample** (n= 550)
Sex	
Female	64.21
Male	35.79
Age	
≤19	1.26
20-29	30.58
30-49	31.47
50-65	21.22
≥66	15.47
Education	
Secondary school or lower	50.26
High School	26.00
University/College	23.74
Population of Residence	
<10 000	38.67
10 000-100 000	18.71
>100 000	42.63
Number of Persons in the Household	
1	20.72
2	38.56
3	20.00
4	14.59
>4	6.13

Table A1. Description of Sample with Socio-demographic Variables (%)

Source: Own calculation from Direct Marketing Survey, East Germany, 2011 and 2012.

Frequency of purchase	Farmers Market	Farm Shop
Weekly	14.21	6.32
Once every two weeks	10.99	5.75
Monthly	11.53	6.51
Less often	29.76	18.39
Never	33.51	63.03

Table A2: Purchasing Frequency at Farmers' Markets and at Farm Shops

Source: Own calculation from Direct Marketing Survey, East Germany, 2011 and 2012.

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