

4th AIEAA Conference

“Innovation, productivity and growth: towards sustainable agri-food production”
11-12 June, 2015 – Ancona (Italy)

ALTERNATIVE FOOD NETWORKS AND LOCAL MARKETS

**Determinants of consumers' choices between
conventional and farmers' stands**

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Motivations and research questions

- Most research on the Alternative Food Networks (AFNs) focuses on the **determinants of the choice**:
 - ✓ farmers' choice of the marketing channel
 - ✓ consumers' choice of where to purchase
- The economic literature dealing with **consumers' preferences** generally focuses on the factors influencing the choice of purchasing from **farmers' markets (FMs)**

Motivations and research questions

A different point of view

The possibility to find both conventional stands and farmers' stands selling fruit and vegetables **in the same district market**

The objective

To analyse the behavioural characteristics of **local market consumers choosing to purchase from farm stands** and the **determinants of their choice**

Theoretical approach

- We hypothesize that the choice of the vendor is influenced by:
 - ✓ **socio-economic characteristics** of consumers (**P**)
 - ✓ **some general attitudes** towards the purchase of food (**A**):
quality, price, convenience, trust in the vendor
- **Intrinsic characteristics** of the good (**C**) do not influence utility differently for either vendor, while attitudes and personal characteristics do

Consumers will choose the farmer's stall if:

$$U[C, V_1(A,P)] - U[C, V_2(A,P)] > 0$$

Frame under which the good is sold:

1 farmer, **2** conventional vendor

Theoretical approach

Assuming a linear utility function for good g with a random component (ε), the utility for the purchase of good g is then:

$$U_1 = \alpha_0 + \alpha_1 C + \alpha_{21} A + \alpha_{31} P + \varepsilon_1 \quad [1]$$

$$U_2 = \alpha_0 + \alpha_1 C + \alpha_{22} A + \alpha_{32} P + \varepsilon_2 \quad [2]$$

Calling F the dichotomous indicator of the choice to buy from the farmer (equal to 1 if the consumer buys from him/her, else 0), we have:

$$\text{Prob}(F=1) = \text{prob}(U_1 - U_2 > 0) = \text{prob}(\alpha_0 + \gamma_1 A + \gamma_2 P + \mu > 0) \quad [3]$$

Under the assumption that μ is distributed normally, the model is:

$$\text{Prob}(F=1) = F(\alpha_0 + \gamma_1 A + \gamma_2 P) \quad [4]$$

where F is the standard normal c.d.f.

Data and method

In-person survey data collected in open-air markets in Torino, Cuneo, Alessandria and Asti, four cities in Piedmont Region (Italy) where farmers sell their products



Data and method

- In **Torino** the sample was drawn with a two-stage random sampling methodology (**1,194 consumers sampled in 13 district markets**):
 - ✓ markets were chosen randomly in strata defined on the basis of market size
 - ✓ In each market, consumers to be interviewed were also chosen at random
- In the **smaller towns** the survey was conducted in the main, or only, market-place in town where both farmers and conventional vendors sell their products (**174 interviews**)

Data and method

- The determinants of the choice to buy from farm stands were analysed with a ***probit* model**
- After dropping questionnaires with missing information, a final sub-sample of **1,138 questionnaires** was employed to run the model
- **Dependent variable:** a dummy variable equal to 1 for consumers buying fruits and vegetables from farmers' stands (0 otherwise)
- **Explanatory variables** concerns the personal characteristics of the respondents, their attitudes and the role of markets and areas with distinctive characteristics

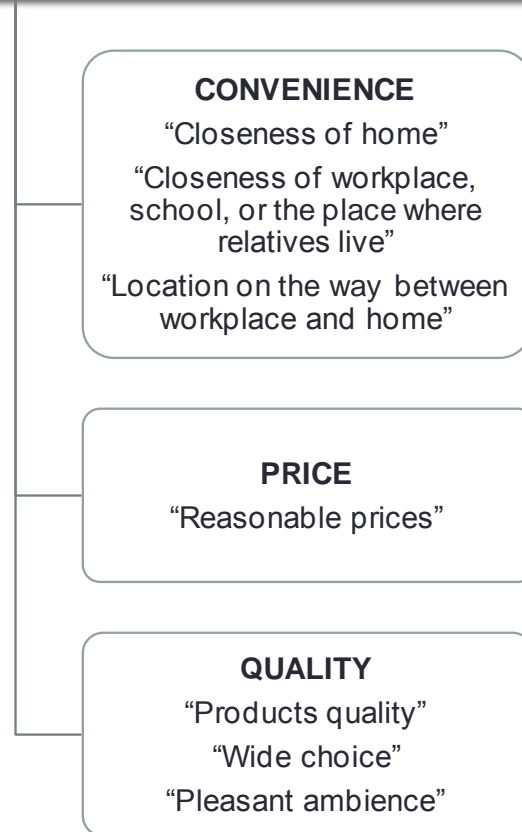
Data and method

- **Consumers' attitudes** (surveyed by using multiple answer questions) entered the model after being recoded into broader categories:
 - ✓ the **criteria for the choice of the district market** were grouped into three main motivations: convenience, price and quality
 - ✓ the **criteria for the choice of the market stands** were clustered into four categories: convenience, price, quality and trust in the vendor

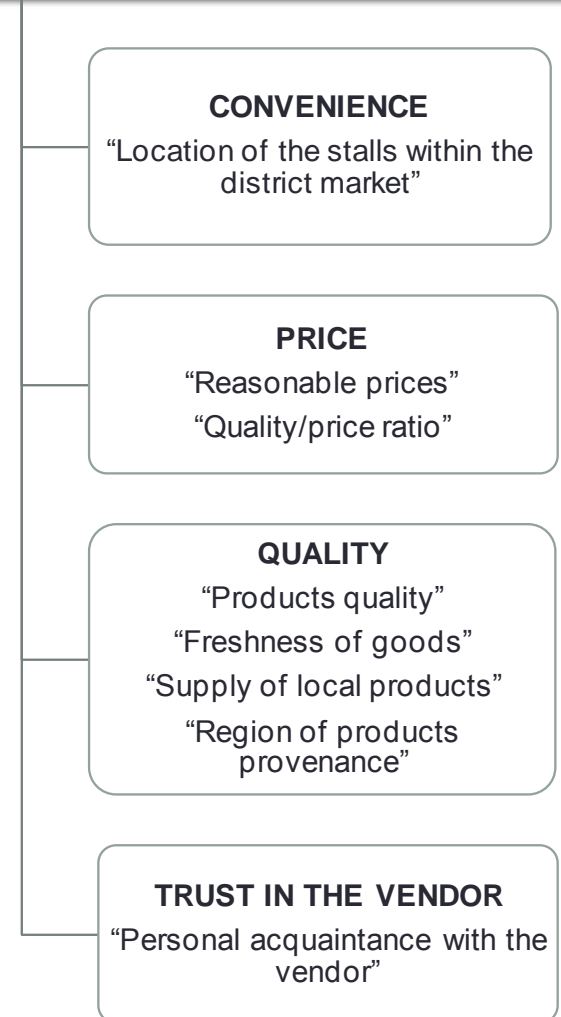
Data and method

Consumers' attitudes
(surveyed by using multiple answer questions) entered the model after being recoded into broader categories

CRITERIA FOR THE CHOICE OF THE DISTRICT MARKET



CRITERIA FOR THE CHOICE OF THE MARKET STANDS



Data and method

- Besides, two explanatory variables were added in order to highlight the possible role of **markets and areas with distinctive characteristics**:
 - ✓ **Porta Palazzo**, the largest and more traditional open-air market in Torino (large number of farmers in a specific area of the market)
 - ✓ **Market location in a provincial town** (Cuneo, Alessandria or Asti)

Results

(Log-likelihood = -594.727; Chi-squared = 170.107; d.f. = 25; N. Obs. = 1,138)

Variables	Coeff.	Std. Err.	Marginal effect
Constant	-1.498***	0.373	
District market – convenience (yes = 1)	0.104	0.098	0.0336
District market – price (yes = 1)	-0.047	0.111	-0.0152
District market – quality (yes = 1)	0.301***	0.091	0.0945
Market stand – convenience (yes = 1)	0.083	0.390	0.0259
Market stand – price (yes = 1)	-0.035	0.093	-0.0113
Market stand – quality (yes = 1)	0.630***	0.095	0.2154
Market stand – trust (yes = 1)	0.255**	0.101	0.0786
Porta Palazzo (yes = 1)	0.793***	0.153	0.2060
Provincial town (yes = 1)	0.013	0.138	0.0043
Gender (male = 1)	0.154*	0.092	0.0489
Age (years)	0.007	0.004	0.0022
Education (years of study)	0.033**	0.013	0.0106
Household size (number of other family members)	-0.002	0.005	-0.0007
Children under fourteen (number)	0.000	0.000	-0.0000
Residence (years of residence)	-0.002	0.003	-0.0006
Household member in charge of buying fruits/vegetables (yes = 1)	0.662***	0.154	0.2418
High-skill job (yes = 1)	-0.257	0.200	-0.0877
Middle-skill job (yes = 1)	-0.019	0.130	-0.0062
Low-skill job (yes = 1)	-0.549***	0.176	-0.1980
High-pensioner (yes = 1)	-0.632*	0.379	-0.2335
Middle-pensioner (yes = 1)	-0.272*	0.160	-0.0917
Low-pensioner (yes = 1)	-0.180	0.176	-0.0602
Net household income 1,200-2,000 euro/month (yes = 1)	0.109	0.107	0.0347
Net household income 2,000-3,000 euro/month (yes = 1)	-0.162	0.127	-0.0533
Net household income > 3,000 euro/month (yes = 1)	-0.242	0.167	-0.0824

Results

Main determinants of the choice to purchase from farmers:

QUALITY (highly significant $P \leq 0.01$)

- If the **choice of the local market** is based on **quality** → the probability of buying from farmers is by **9.5% higher**
- If the **choice for the market stand** is based on **quality** → consumers are even **21.5% more likely** to buy from farmers

Results

Main determinants of the choice to purchase from farmers

TRUST IN THE VENDOR ($P \leq 0.05$)

- If the **trust in the vendor** plays a role in consumers' choice for the market stand → the probability of buying from farmers **increases** by almost **8%**

Consumers influenced by **prices** or **convenience** do not have a specific preference for farmers' stands (these variables are not statistically significant).

Results

Main determinants of the choice to purchase from farmers:

PORTA PALAZZO (highly significant $P \leq 0.01$):

- people shopping in Porta Palazzo are about **20.6% more likely** to purchase from farmers

Living in a provincial town and the **closeness of rural environment** have no significant effect on the preference for farmers' stands

Results

Main determinants of the choice to purchase from farmers

PERSONAL CHARACTERISTICS

- **Being in charge of purchasing fruit and vegetable** → +24.2%
- **Education**: every additional schooling year → +1.1%
- **Gender** (weakly significant): males → +5%

Results

Unclear and/or weakly significant determinants of the choice to purchase from farmers

PERSONAL CHARACTERISTICS

- **job skill level**
 - low skill job (significant and negative) → -19,8%
 - middle- and high skill jobs (not significant and negative)
- Similar outcomes (negative and not, or weakly, significant parameters) were found for **low-, middle- and high-pensioners**
- **Income:** none of the income brackets is statistically significant

Conclusions

- The quest for **quality** and, secondly, the **trust in the vendor** play a fundamental role in the choice of the purchase channel
- Unlike quality, **prices** and **convenience** don't seem to affect consumers' preferences towards the farmer-to-consumer channel
- **Porta Palazzo market** is a separate case
- Personal characteristics seem to be less important, except for **being the household member in charge of buying fruits and vegetables** and **education**
- Quite unexpectedly, **income** and **type of occupation** do not seem to have relevant impacts on consumers' choice

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**THANKS FOR
YOUR ATTENTION!**