# Segmentation of city market customers in Croatia – Towards a marketing strategy for fruit and vegetable markets

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## Kundensegmentierung von Märkten in kroatischen Städten – eine Grundlage für Marketingstrategien von Obst- und Gemüsemärkten

## 1. Introduction

Since Croatia has become a member of the WTO, the domestic fruit and vegetable market is rapidly liberalizing and swiftly turning to the developed market form. This process has also reached the retail level. Even though city markets are still the dominant retail channel for fruit and vegetable, large retail chains[1], which are establishing an increasing number of branch stores, are becoming more and more competitive.

These changes require a new market approach, i.e. an appropriate marketing strategy for the domestic fruit and vegetable producers. Psychographic analysis of consumer behaviour is a good base to develop a marketing strategy (CHURCHILL, 1995; MOWEN and MINOR, 1998; ALTMAN, 1983).

### Zusammenfassung

Grundlage jedweden Marketingkonzepts ist die Kenntnis der Präferenzen, Anforderungen, Gewohnheiten und Einstellungen der Konsumenten. Der vorliegende Artikel fokussiert auf Konsumenten, die Obst- und Gemüse auf Märkten in kroatischen Städten einkaufen. Ziel der Studie ist die Identifikation und Beschreibung von Marktsegmenten basierend auf spezifischen Merkmalen der Konsumenten. Die Ergebnisse basieren auf einer Umfrage, die im Juni 2000 auf Märkten in Zagreb, Rijeka, Split und Osijek durchgeführt wurde. 93% der Konsumenten auf diesen Märkten kaufen Obst und Gemüse. Die Konsumenten sind am meisten mit der Produktauswahl und am wenigsten mit dem Preis/Leitungsverhältnis zufrieden. Aufgrund der psychographischen Variablen wurden 4 Marktsegmente identifiziert. Diese Marktsegmente unterscheiden sich hinsichtlich geographischer, soziodemographischer und kaufrelevanter Variablen. Die Ergebnisse der vorliegenden Studie können als Grundlage zukünftiger Marketingstrategien von Obst- und Gemüseproduzenten für Märkte und andere Vertriebskanäle herangezogen werden.

**Schlagworte:** Kroatien, städtische Märkte, Obst und Gemüse, Kundensegmente, Zielgruppen.

### Summary

Better knowledge of the consumer is the presumption for preparing the efficacious marketing concept. This article focuses on the preferences, requests, habits and attitudes of the consumers, which are buying fruit and vegetable on city markets in Croatia. The main goal of this study is identification and description of the different market segments based on the relevant buying characteristics of the consumers, their psychological, geographic and socio-demographic characteristics. The results are based on a survey that was made in June 2000 on city markets in Zagreb, Rijeka, Split and Osijek. 93 % of the consumers buy fruit and vegetable on the city markets. The consumers are mostly satisfied with the fruit and vegetable choice, and unsatisfied with the price/quality ratio on the city markets. Four consumer segments were identified, based on their psychological characteristics. In order to describe these segments we detected differences between these segments according to the geographic, socio-demographic and buying characteristics of the consumers. The results of this research could be a starting point for the domestic producers to define a marketing strategy for fruit and vegetables on city markets or in any other distribution channel.

**Key words:** Croatia, city markets, fruit and vegetable, consumer segmentation, target marketing.

The results of this research offer the information necessary to design a marketing strategy for Croatian fruit and vegetable markets. In this paper recommendations for agricultural policy measures that could help domestic producers of fruit and vegetable are also suggested.

## 2. Research goals and general framework

As defined by the current regulations (OFFICIAL GAZETTE N. 37/98) city markets consist of an outdoor area as well as buildings where people trade food and other goods. The outdoor area is primarily used to sell agricultural products, such as fruit and vegetable, dairy products from private production, eggs and flowers[2]. City markets are usually located at the city centre in smaller cities and in each district in larger cities. They are open daily in the morning and early afternoon, and usually offer the best fruit and vegetable supply. Most of the merchants on city markets are professionals, could be that there are farmers selling fruit and vegetable directly to the consumer. In the following literature review we suppose that consumer behaviour on city markets is strongly comparable to that on farmers' market.

Classic city markets as a major retail channel disappeared in most industrialised countries. In some counties, especially those in the Mediterranean area, they still exist as a supplement to modern retail channels. In Croatia however, city markets are still the main retail channel for fruit and vegetable. According to some estimates, about 45 % of all fruit and about 49 % of all vegetable purchased by consumers are bought on city markets (KOVAČIĆ, 1995)[3].

The process of concentration and the increasing competition is expected to result in structural changes in the retail of fruit and vegetable. These changes will also affect the purchasing behaviour of the current city market customers. To better understand how city markets can adapt to these changes, it is necessary to know what customer types visit city markets, and what their motives are, to select them for their fruit and vegetable purchases.

The main goal of this research is therefore the identification and description of the market segments at city markets, based on the psychographic characteristics of the customers. The purchasing behaviour of these customers, as well as their geographic and socio-demographic characteristics, can offer the basis for targeted marketing strategies.

This research was motivated on the one side by the rapidly changing retail structure, and on the other side by the lack of research on segmentation of city market customers.

Also, no publication focusing on the behaviour of city market customers in other countries could be identified.

## 3. Theoretical background

### 3.1 Consumer attitudes as basis for market segmentation

It is common sense in marketing theory that segmentation is important and beneficial to companies (KOTLER, 1997; MOWEN and MINOR, 1998). DIBB and STERN (1995) note "market segmentation is, according to many authors, one of the fundamental principles of modern marketing". Indeed, many definitions of market segmentation are found in the literature. Most authors agree that segmentation is the division of a large, usually heterogeneous, group into smaller segments that respond to a particular marketing mix in a similar way (DIBB et al., 1991; VALLI et al., 1999; DALRYMPLE and PARSONS, 1995).

Market segmentation can be seen in two ways. On one hand as a proactive process, which requires empirical analysis. Based on market research data companies can identify new market niches or evaluate whether the company's market strategy meets consumer needs. On the other hand market segmentation may "… be viewed as perspective, a way of seeing the market space, as opposed to a proactive process requiring empirical analysis. In this regard organizations can be said to segment the market implicitly into various groups as a way of making sense of their environment" (see JENKINS and MCDONALD, 1997). In this paper we emphasise the first point of view where the main problem is how to subdivide the market.

CHEN (1996) notes, "Understanding consumers is a critical element in developing a marketing strategy. There are very few if any strategy decisions that do not involve a consideration of consumer behaviour". In this study we focus on attitudes as an antecedent of behaviour. They are used as psychographic variables to describe customers segments for fruit and vegetable on Croatian city markets.

Measurement of attitudes has a long tradition in marketing and "… is one of the more important notions in marketing literature, because it is generally thought that attitudes are related to behaviour" (CHURCHILL, 1995). PERREAULT and MCCARTHY (1996) point out that "attitudes are an important topic for marketers because attitudes affect the selective processes, learning and eventually buying decisions people make".

The two main possibilities to measure attitudes are one-dimensional and multidimensional measurements (BERNDT, 1996). The one-dimensional attitude approach usually focuses on the affective component of an attitude, which is measured on a rating scale in form of an agreement or disagreement with the statement (TROMMSDORF, 1975). Multidimensional attitude measurement is based on one of several behaviour models such as Image-differential, the Fishbein model or the Trommsdorff model (KROEBER-RIEL, 1992).

There are also decomposed, multidimensional models of attitude measurement (ALVENSLEBEN et al., 1983) which are called "statementset" or "itempool" and are used to segment markets. Elements used in these measurements are taken from the characteristics of study objects (product, market location, customer, etc.) and from the opinions of respondents. Through a factor analysis all these characteristics can be reduced to a limited number of dimensions that define a particular attitude (WIERINGA, 1980).

Attitude measurements and market segmentation based on these measurements are widely used in research on the behaviour of food consumers. In the last twenty years a variety of papers dealing with this subject have been published. NESS (1997) identified consumer segments according to the eating behaviour and consumers preferences in 79 regions in 12 EU countries and 4 EFTA countries. FEARNE and LAVELLE (1996) examined consumer attitudes towards eggs and used this variable to divide consumers into four segments. They furthermore note that "it is evident that the perception of and attitudes towards food attributes such as taste, nutritional qualities and convenience are the key determinants of food choice and these attitudes and perceptions are in turn influenced by a number of personal characteristics, such as education, socio-economic status, age and sex." This approach was also employed in horticultural markets: WERNER (1982) used consumers' general attitudes towards apple to segment this market. ALTMAN (1983) analysed consumers' attitudes towards flowers and ALVENSLEBEN et al. (1983) towards canned fruits and vegetables.

### 3.2  State of the art in the field of city/farmers market

Until now there are only few empirical findings about consumer behaviour and city markets. MAHLER (1991) and MEIXNER (1999) published valuable papers on this subject. MAHLER (1991) analysed the purchasing behaviour of consumers at various farmers markets in Bavaria. Using cluster analysis to examine consumer attitudes towards private and social values, MAHLER (1991) divided consumers in homogenous market segments. He then described these segments using pertinent purchasing characteristics of the customers and offered recommendation on marketing and agricultural policy measures to support the development of farmers markets.

MEIXNER (1999) examined the behaviour of consumers at various farmers markets in Austria focussing on the influence of the environment (architecture around the farmers market, size of market, ease of orientation etc. …), on different variables like purchase behaviour, time on market or satisfaction with supply variables (product range, price, freshness) etc. He found out that the most important attributes for establishing customer satisfaction on farmers markets are quality, freshness and price-performance ratio of products. MEIXNER (1999) also gave recommendations for an "ideal" farmers market. The ideal farmers market should continuously offer a wide range of products with clearly communicated prices. The already mentioned freshness is a critical success factor. The visual presentation of the products should fulfil high quality standards. Sales people should be well trained and cooperate between each other to improve the event character of the farmers market. The location of the farmers market should be calm, with low traffic interruptions and a high percentage of apartments nearby.

The research on horticultural products and city markets in Croatia is mostly descriptive (KOLEGA, 2001; KOVAČIĆ, 1995; KOVAČIĆ and MILANOVIĆ, 1995; KOLEGA, 1987; KERO, 1984). BOŽIĆ (1994) analysed income elasticity of fruit and vegetable demand on Croatian markets. As a part of an exploratory survey HERCEG (2000), created statement sets to measure attitudes of customers toward city markets in Zagreb. Some of these statement sets were used in this survey (examples see 5.1 survey).

## 4. Theoretical model and research hypotheses

The main hypothesis of this research is that there are significant psychographic differences between groups of customers who buy fruit and vegetable on city markets. It is based on the assumption that consumer behaviour can be explained through the attitude towards city markets and the fruit and vegetable that are bought on these markets. The dimensions of the model are based on the research of MEIXNER (1999). He analysed consumer behaviour on farmers market on behalf of the following variables: *socio-*

demographic and geographic variables, psychographic variables, environmental variables of the farmers market (like architectural aesthetic of surrounding, arrangement of stands and market size), supply variables (like quality of products, freshness, price etc.) and purchase behaviour variables (like number of bought products, money spent etc.). Because the focus of this study is mainly on the description of fruit and vegetable customers on Croatian city markets we decided to exclude the environmental variables. All other attributes were used to describe potential customer segments (see figure 1).
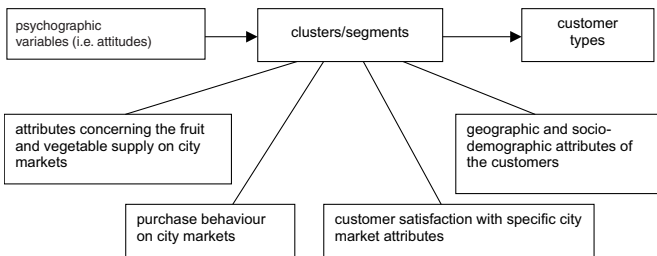


Figure 1:     Theoretical model used to define customer types
Abbildung 1:  Theoretisches Modell als Basis der Kundentypologie

In the theoretical model attitudes towards buying fruit and vegetable at city markets are used as psychographic variables (see figure 1). The model supposes that customer groups or segments formed on the basis of psychographic variables would also differ significantly on following variables (the attributes in parentheses are used to measure these variables and are based on the study of MEIXNER, 1999):

– purchasing behaviour (amount of money spent, visit frequency, loyalty to a particular market, purchase character – impulse or planned)
– geographic and socio-demographic attributes of the customers (place of residence, age, sex, education, occupation, number of family members, income),
– attributes concerning the fruit and vegetable supply (e.g. product freshness, product taste, domestic origin, price), and
– customer satisfaction with the quality of the supply and service at city markets (attributes are: product quality, product freshness, cost/benefit ratio, product selection, contact with producer/salesman, advice and information on the products, market opening hours, market cleanness).

# 5. Methodology and research process

## 5.1 Survey

The target population for this research were Croatian citizens who purchase fruit and vegetable at city markets or consume fruit and vegetable bought on these markets. According to an expert estimate (KOVAČIĆ et al., 2000), this comprises a population of about 2 millions consumers.

To collect empirical data, a survey was carried out in June 2000 on a sample of 1000 respondents. Mail survey was used due to limited financial funds and the high number of respondents required to insure reliable results.

A random stratified sampling procedure was used to select customers at city markets in four Croatian towns. The stratums were defined on the base of the number of the inhabitants in four mentioned cities (Census 1991, the last data available at the time of the research). These customers were handed the questionnaire and requested to return the questionnaires by mail after filling them in. Since the return rate was expected to be low, 1000 questionnaires were distributed to reach the objective of 400 completed questionnaires.

The itempool used for measuring the attitudes towards buying fruit and vegetable at city markets was based on the results of a preliminary research on a sample of 70 buyers (HERCEG, 2000). The Kaiser-Meyer-Olkin criterion (MSA coefficient > 0,5) was used to select the statements from the preliminary research. Additional items for the itempool were selected from the literature on similar subjects (KAISER, 1997; HENSCHE et al., 1993; SOMMER, 1995; MAHLER, 1991). Respondents were requested to indicate their agreement or disagreement with each statement. For example:

|  | strongly agree |  |  |  | strongly disagree |  |
|---|---|---|---|---|---|---|
| a) City markets have the best fruit and vegetable supply | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| b) Higher price doesn't mean higher quality | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

## 5.2 Data analysis

The data obtained from the survey were initially analysed using univariate methods to examine the frequency distributions and to detect possible errors that might have occurred during data entry.

Factor analysis was performed using the customer attitudes on the supply of fruit and vegetable and on the services provided at city markets. From the 568 returned questionnaires, 354 were included in the factor analysis. The remaining were discarded since the answers were incomplete. The Barlett-test (test of sphericity; $c^2$ = 976.213 with sig. 0.000), the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0,762) and the Kaiser-Meyer-Olkin-criterion (MSA > 0,65) were used to determine the variables used in the factor analysis. The principal component method was applied on the selected variables. An eigenvalue greater than one was selected as the criteria for determining the number of factors to be extracted. In the interpretation of the factors, variables with loadings greater than 0,4 were used. The varimax rotation procedure was also performed to ease the interpretation of each factor.

The cluster analysis of the fruit and vegetable consumers was based on the computed factor scores of the attitude variables. The cluster analysis was conducted in two steps. First the Single Linkage (Nearest Neighbour) method was used to find outliers (BACKHAUS et al., 1996). Then the Ward method according to Siegfried Bergsu was used to create groups, as BACKHAUS et al. (1996) reports that it yields better grouping than other algorithms. The Euclid distance was used and the Elbow criterion applied to determine the number of clusters.

Discriminate analysis was performed to test whether all factors were appropriate for cluster analysis. The interpretation of the clusters was made using statements that have not been used in factor analysis but significantly differed between the extracted clusters.

Parametric and non-parametric tests such as Chi-square, ANOVA, Fisher's LSD and Games-Howell test were performed to examine the differences between clusters, i.e. market segments.

## 6. Research results

### 6.1 Sample characteristics

Of the distributed questionnaires, 568 were returned, with return rates ranging from 54 % to 64 % between the four cities. Most of the returned questionnaires (60 %) were from Zagreb, 15,5 % from Split, 15 % from Rijeka and 9,5 % from Osijek.

Three fourth of all respondents were women. Respondents were between 16 and 87 years old. Most of the respondents have completed secondary school (53 %),

42 % university education and 5 % have completed primary education only. The majority of the respondents lived in households with four family members and had a monthly income of more than 387,6 Euro.

The vast majority of respondents (90 %) cover their fruit and vegetable needs primarily through purchases (10 % from own garden), and 93 % regularly buy fruit and vegetable at city markets. More than half of the respondents visit only one city market. Most of them go to city markets several times a week, and usually on Saturday and Friday. More than 80 % of the respondents go shopping on city markets in the morning.
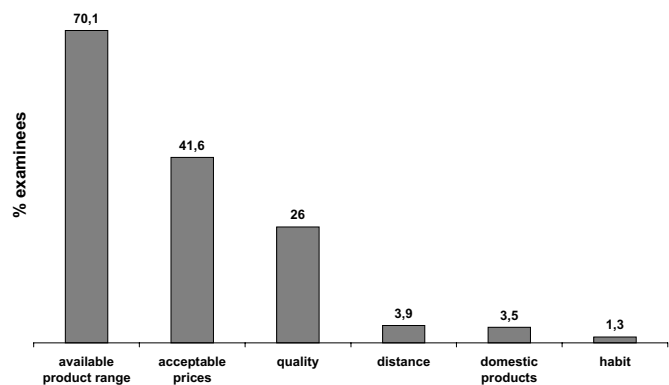


Figure 2: Motives for purchases at city markets
Abbildung 2: Kaufmotive auf Stadtmärkten

The main *motives for purchases* at city markets are the available product range (70 %), acceptable prices (41 %) and the quality and the freshness of products (26 %, see figure 2).

The *choice of the market* mainly depends on the available product range, the distance to the market and the quality of the supply.

The main *criterion for choosing a product* is freshness followed by quality, taste, organic production method and domestic origin. Less important are information on the product and purchase convenience.

The customers are relatively satisfied with city markets. The average total satisfaction is 3,8 as rated on a scale from 1 (completely unsatisfied) to 5 (completely satisfied). Respondents are mainly satisfied with product range (3,91), quality (3,87) and freshness (3,85) of the fruits and vegetables. They are less satisfied with the price/quality ratio (3,12). The main problem is that currently there are no regulations defining product quality in Croatia. Some tradesmen take advantage of this undifferentiated supply to cheat customers.[4] Customers are also not particularly satisfied with recommendations and information obtained from the salesmen.
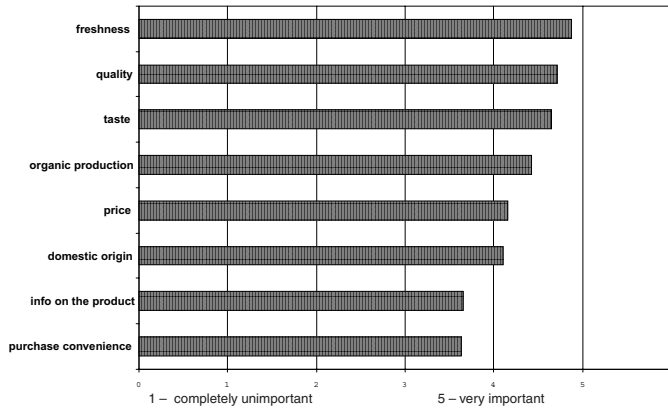
Figure 3: The importance of the different criteria for choosing a product

Abbildung 3: Die Wichtigkeit der unterschiedlichen Kriterien für die Produktwahl

## 6.2 Results of the factor and cluster analyses

The main goal of this research is the identification of market segments based on psychographic characteristics of fruit and vegetable customers at city markets in Croatia. Cluster analysis is an appropriate method to perform psychographic segmentation of a group of customers. The respondents of a survey are thereby divided into groups, which are homogenous regarding their attitudes. These groups can be described using respondents characteristics included in the questionnaire.

Factor analysis was performed before the cluster analysis. The extracted five factors explain 54,93 % of the total variance. Despite the rotation, the first factor remained dominant and it explained 23,3 % of the total variance. After a closer examination of the loading on each factor, they were named as follow:

F1: distrust in modern food production,
F2: preference for city markets as purchase place,
F3: preference for fruit and vegetable in the diet,
F4: dissatisfaction with existing retail channels for fruit and vegetable,
F5: importance of information on food.

Factor scores of the attitude variables were used to cluster fruit and vegetable consumers. Four clusters that represent four market segments were extracted. The four identified market segments were named and characterised as:

a) **City market enthusiasts** – They prefer city markets as a retail channel for fruit and vegetable. They also visit city markets because to them it is a place to meet friends and acquaintances. This market segment accounts for 31% of the sample and represents the largest segment.

b) **Practical buyers** – They prefer "modern" produced food. That means product appearance and attractive presentation are important, as is the price. This segment accounts for 20 % of the sample.

c) **Traditional buyers** – They prefer traditionally produced, domestic fruit and vegetable and have negative attitudes towards imported products. Fruit and vegetable are an important part of their diet. They are suspicious of tradesmen at city markets. This segment represents 23 % of the sample.

d) **Indifferent buyers** – They prefer meat in their diet and do not consider fruit and vegetable as very important. They like to visit city markets because, next to a good fruit and vegetable supply, they can also find a good meat supply. These consumers consider city markets as a place to socialise. Indifferent buyers are second largest segment with 26 % of the sample.

## 6.3 Differences between market segments

In this chapter the extracted market segments are described using the variables, which were not used in the cluster analysis. The difference between segments according to socio-demographic and geographic variables, importance of the attributes concerning the fruit and vegetable supply on city markets variables, purchase behaviour variables and satisfaction variables are tested by means of Chi square test and ANOVA test (significance level of 5 %). The following table (see table 1) includes just those variables, which differ significantly between segments. Other variables differing significantly between market segments are described in figure 4 (i.e. criteria for purchasing fruit and vegetable) and figure 5 (customer satisfaction).

*City market enthusiasts* are the oldest customer group and most of retirees are found in this segment. With 7,26 € they spend the highest amount of money for fruit and vegetable (see table 1). Similar to all other customer groups, the most important issue is the *freshness* of the product. Compared with other customer groups, to them the most important product attributes are *organic production* and *domestic origin* and the *information* provided about the fruit and vegetable (see figure 4). City market enthusiasts are the customers most satisfied with the supply and the services at the city markets (see figure 5).

Table 1:    Differences between segments
Tabelle 1: Unterschiede zwischen den Segmenten

| Variables | | Whole sample | City market enthusiasts | Practical buyers | Traditional buyers | Indifferent buyers |
|---|---|---|---|---|---|---|
| Weekly expenditure for fruit and vegetable per person | | 6,56 € | **7,26 €** | 6,28 € | 7,23 € | 5,36 € |
| Percentage of respondents that visit city markets once a week | | 45,3 % | 40,4 % | 59,2 % | 38,3 % | 46,7 % |
| Percentage of respondents that visit city markets several times a week | | 54,7 % | 59,6 % | **40,8 %** | 61,7 % | **53,3 %** |
| Percentage of respondent that visit city markets after 2 pm | | 6,3 % | 3,7 % | **2,8 %** | **12,5 %** | 6,7 % |
| Average age of respondent | | 46,1 | **50,2** | 44,9 | 42,4 | 45,2 |
| Respondent occupation | retired | 19 % | 28 % | 19 % | 9 % | 18 % |
| | worker | 25 % | 22 % | 28 % | 24 % | 26 % |
| | office worker | 32 % | 29 % | 28 % | 37 % | 32 % |
| | self employed | 8 % | 4 % | 14 % | 12 % | 5 % |
| | housewife | 6 % | 4 % | 4 % | 6 % | 11 % |
| | other | 10 % | 13 % | 7 % | 12% | 8 % |

*Practical buyers* visit city markets less often than other customer groups, and they usually go there before 2 pm (see table 1). For them product characteristics are not as important as to city market enthusiasts and traditional buyers, yet more than to indifferent buyers (see figure 4). Practical buyers are mostly satisfied with the selection of fruit and vegetable and mostly unsatisfied with crowded city markets (see figure 5).

About 60 % of *traditional buyers* visit city markets several times a week. Compared to customers from other segments, traditional buyers visit city markets more often after 2 pm, probably because customers in this segment are more likely to be working than those in other segments (see table 1). Traditional buyers consider the quality of the fruit and vegetable more important than other customers and they are more satisfied with the quality than with

other characteristics of the fruit and vegetable (see figure 4 and 5).

Since *indifferent buyers* do not consider fruit and vegetable an important part of their diet, they spend the least amount of money for fruit and vegetable compared to other customer segments. Almost half of all housewives who took part in the survey are in this segment (see table 1). Freshness and quality are the most important product characteristics for this segment. Organic production, domestic origin and information on the fruits and vegetable are not considered as important as by other customer segments (see figure 4). Indifferent customers are most satisfied with product choice and quality and least with the fact that city markets tend to be crowded (see figure 5).
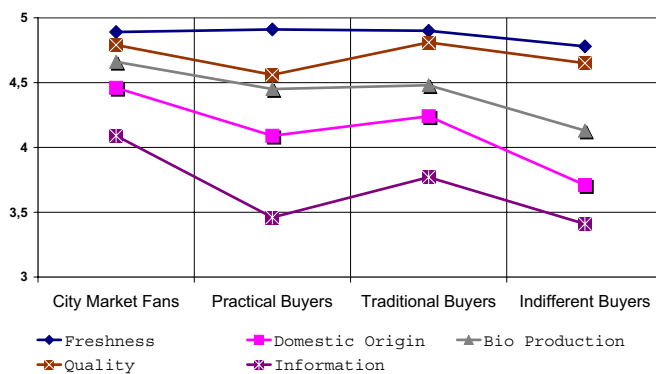


Figure 4:    Importance of several criteria for purchasing fruit and vegetable by market segments
Abbildung 4: Die Wichtigkeit ausgewählter Kriterien für den Kauf von Obst und Gemüse nach Marktsegmenten
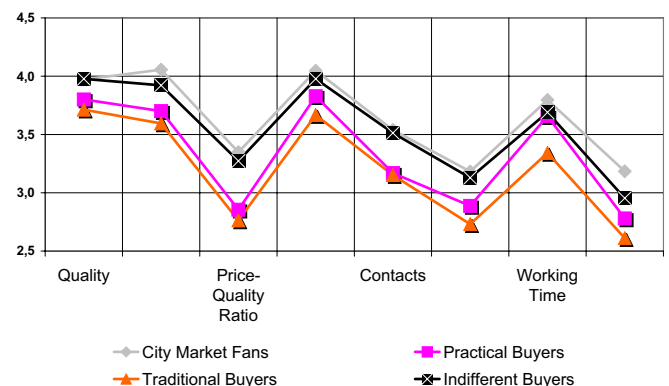


Figure 5:    Differences between segments regarding customer satisfaction with the quality of the supply and the service at city markets
Abbildung 5: Unterschiede zwischen Segmenten in Bezug auf die Zufriedenheit mit der Qualität des Angebots und den Dienstleistungen auf Stadtmärkten

## 6.4 Implications for marketing

The results of this research can be used both to make marketing recommendations to improve the service at city markets in Croatia and agricultural policy recommendations to support domestic fruit and vegetable producers.

The cluster analysis identified four market segments, i.e. four types of customers at city markets in Croatia: city market enthusiasts, practical buyers, traditional buyers and indifferent buyers. The first three segments show the most potential for domestic fruit and vegetable producers. On the other hand, indifferent buyers come to the city markets because of the meat supply and purchase fruit and vegetable additionally.

The strategic advantage of city markets is their good supply in terms of product range, freshness and quality of the fruit and vegetable. However, most of the customers are not satisfied with the price/quality ratio. MEIXNER (1999) reported similar results about the customers on farmers markets in Austria.

City markets could increase their competitiveness by providing product differentiation based on product quality, as well as by labelling their products and providing information such as production method, origin and variety name. This would attract additional practical and traditional buyers.

The high price sensitivity, reported by the majority of the customers, does not allow for price differentiation. However prices slightly higher could be achieved by ensuring uniform product quality and by supplying organic and domestic products.

Domestic fruit and vegetable producers could increase their competitiveness by improving their sale set up[5]. Different kinds of direct sale, mainly at farmer's markets, or through pick-your-own schemes and back-door sale would attract traditional buyers and city market enthusiasts. A cooperation between producers in the framework of strategic alliances would allow a better presence at city markets or allow them to establish other retail channels to increase their competitiveness.

On the whole, there is almost no market communication policy by Croatian fruit and vegetable markets. The best advertisement for domestic fruit and vegetable producers, either selling at city markets or using any other direct sale channel, is "word of mouth", i.e. the recommendation by satisfied customers. This kind of advertising requires a constant supply quality, as well as trade ability and "friendly" customer relations. Ads posted in various media are relevant only for producer alliances due to the cost/benefit ratio. The most appropriate sale promotion is the setting at the retail location. At farmers' markets or on-farm shops it is possible to create a friendly atmosphere. At city markets these possibilities are reduced to the organisation of the individual stand. To create a good image, activities that build trust between producers and consumers are most efficient. These can include activities such as "open door days" or "harvest celebrations".

Agricultural policy measures to stimulate the sale activities of domestic fruit and vegetable producers should include the support of both direct sale and joint sale activities. Direct sales could increase the income of producers and could improve the image of the Croatian fruit and vegetable production. Policy measures could also include activities to increase the interest of producers for this kind of sale, as well as those that would help to organise a retail location and to decrease a potential risk. These activities include pilot projects for direct sale activities, seminars and extension work. Financial support is needed for the implementation of selling locations and for advertising. Agricultural policy measures should also stimulate joint sale activities through cooperatives or companies. Additionally, producers should be offered management support and tax relief for the first few years of running a business.

## 7. Conclusions and discussion

The results of this research confirm the main research hypothesis:

– it is possible to explain buying behaviour using buyers' attitudes towards city markets and towards the fruit and vegetable sold at these markets;
– there are significant differences in the psychographic characteristics of segments of city market customers;
– significant differences between consumer segments have also been found for most purchasing characteristics (geographic and socio-demographic variables, importance of different criterion for purchase selection, and satisfaction with a purchase at city markets).

Regarding the methodological part of this research three issues deserve attention. A personal distribution of questionnaires and an additional stimulation of respondents (lottery) help to raise the response rate. For the survey reported in this research, the response rate was 57 %, which is unusual for a mail survey. Also, the cluster analysis did not

allow to strictly divide consumers into market segments. This was partly due to the fact that all respondents purchase at city markets and are therefore similar to one another. A similar problem was reported by MAHLER (1991). And finally, the third consumer segment was named "traditional buyers" although most of the respondents included in this segment are young people. However, this shows that psychographic segmentation offers better results in explaining consumer behaviour than age or another classical variable. MAHLER (1991) reached the same conclusion in his work on marketing for on-farm sales in Bavaria.

It would be interesting to expand this research to other retail channels, especially supermarkets and specialised fruit and vegetable shops. Moreover, it would be meaningful to repeat the survey in 4-5 years when the process of liberalisation of the fruit and vegetable market and the concentration at retail level is expected to be completed.

## Notes

[1] In last two years large food chains such as Billa, Segro, Getro, and Merkatone have opened subsidiaries in Croatia.

[2] Originally city markets were used for direct sale of farmers' products. However today tradesmen dominate these markets and the product nowadays. The sale assortment has been expanded to include meat, milk and fish.

[3] No reliable statistical data on the sales volume at city markets are available.

[4] For example, in one kilogram of fruit or vegetable that is bought as first class product, there is often a share that is of lesser quality, i.e. smaller, older or even damaged fruits.

[5] Direct sales of fruit and vegetable in Croatia is undeveloped. It is limited to potatoes, cabbage and apples sales.

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