SHIFT OF CUSTOMERS' VISITS TO FARMER MARKETS IN BELGRADE

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ABSTRACT

Because of biological and physiological characteristics of products being sold at farmer markets, customers are forced to more frequent purchases compared to the other goods. In Belgrade, traditionally consumer visits farmer markets on weekend days. The basic question is what behavior patterns are nowadays regarding to this traditional purchasing days. Additionally, important is to know how farmers markets are important as a source of fresh fruits and vegetables.

Research is conducted using a questionnaire with an aim to determine behavior pattern determination of farmer markets' customers in Belgrade.

The research results show that traditional structure of customers' visits on weekends has been changed. Farmer market is still important for purchasing fresh fruit and vegetables. Frequency of visits is correlated with quantities bought per visit. Dynamics of customer visits is driven by more practical and less with traditional reasons, is treated as benchmark of farmer markets' development as alternative food network's (AFN) medium.

INTRODUCTION

International scientific sources provide a large amount of information about "alternative food networks" (AFN) (Maye, 2013). Alternative food networks are described as a contemporary way of selling fresh agricultural products followed by several notions like "fair trade", "organic", "local" "regional" and "specialty" foods (Maye & Kirwan, 2010). Maye and Kirwan notice that AFN's are often conceived as being in opposition to conventional, supermarket-led food chains, so the most important differences are summarized in table.

Table 1: Contrasting 'networks' of food provision Conventional and Alternative and identified similarities in Serbia (Based on: Ilbery and Maye (2005: 824)

Conventional	Alternative	Characteristics of agricultural production and trade in Serbia
Modern	Postmodern	Getting modern
Manufactured/ processed	Natural/fresh	Natural/fresh is well appreciated by customers
Mass (large-scale) production	Craft/artisanal (small-scale) production	Small scale production is still dominant due small farm plots
Long food supply chains	Short food supply chains	Long food supply chains are more represented
Costs externalized	Costs internalized	Costs externalized
Rationalized	Traditional	On most farms traditional, slowly

		getting rationalized
Standardized	Difference/diversity	Diversified, aimed towards standardization
Intensification	Extensification	Extended, aimed towards intensification
Monoculture	Biodiversity	Biodiversified, aimed towards monoculture
Homogenization of foods	Regional palates	Regional palates are noticeable, but not highly valued from customers
Hypermarkets	Local markets	Hypermarkets are getting popularity
Agrochemicals	Organic/sustainable farming	Organic products are present, but their trade value is low
Non-renewable energy	Reusable energy	Non-renewable energy
Fast food	Slow food	There are some slow food initiatives, fast food is dominant
Quantity	Quality	Quality is hot topic
Disembodied	Embedded	Disembodied

Development of AFN's is closely related with a new phase of farmer markets' development in post industrial societies. Farmer markets became convenient choice of alternative place for selling fresh fruits and vegetables, following the AFN's mentioned notions. This process is described by some authors as "renaissance" of farmers' markets which is taking place in the latest years in the United States and many European countries (Vecchio, 2009).

Increasing popularity of farmers' markets for the mentioned countries is unquestionable (Abello, Palma, Anderson, & Waller, n.d.; Knickel, Zerger, Jahn, & Renting, 2008). Additionally, importance of those direct selling channel obtained by farmers' markets is getting more significant within consideration of direct marketing theory as a way of getting additional price premiums for the products being sold directly (Govindasamy, Hossain, & Adelaja, 1999; Mount, 2013). Mentioned price premiums are materialized as an additional revenue for the sellers, already based on direct selling theories by which with the exclusion of intermediaries forms conditions not only for higher prices for the sellers, but lower prices for the customers also (Aguglia, De Santis, Salvioni, & Santis, 2009; Vecchio, 2009).

According to the presented facts (Table 1), Serbia has some of the potentials for the development of AFN's. Potentials shown in the Figure 1 aren't formed on purpose, but nevertheless they can be a shortcut path towards development of AFN's in Serbia.

It should be considered the fact that famer markets in Serbia are very common: there are 143 farmer market's administrations in 166 settlements, which manage 410 farmer markets in total. Also, there is a significant tradition and longevity when it is about farmer markets (Agronews.rs, 2014; Balatovi, 2002).

Also, farmer markets in Serbia have a significant economic importance considering the fact that the total value of transfers on them is around 210 mil. EUR per year

(Agronews.rs, 2014). In total purchases and transfers of agricultural products, farmer markets take part of around 20% (Agronews.rs, 2014; Balatovi , 2002).

The aim of this paper is the estimation of farmer markets' significance for the customers, according to the frequency of their visits. This methodology is based on previously explained development of farmer markets as visible form of increased popularity of AFN's.

One way of measuring intensity of development AFN operated via farmers markets is certainly number and structure of customers' visits. Higher frequencies of visits followed by noticeable correlation with bought quantities of fresh fruits and vegetables would be a sign of the importance of farmer markets'.

Mentioned dependence is going to be an indicator of farmers markets' importance based on practical reasons for respondents. Purchasing habits based on more practical and real needs, should be a good sign of seriousness of consumer' attitudes towards purchases at farmers markets, representing good foundation for building and developing alternative to big supermarket chains-AFN.

MATERIAL AND METHOD

For this paper we develop a questionnaire. The research is primarily based on a survey which is formed *ad hoc*. Questions are created with a significant usage of Likert scale in question formulation. Usage of Likert scale was chosen because of the nature observed factors. On the contrary, with the usage question formulation with only one possible answer, there would be a significant amount of lost data, through negligence of secondary and lower valued answer options by correspondents.

Process of questioning face to face was lasting continuously for two weeks and it was realized at three farmer markets in Belgrade, located in municipalities of Zemun and New Belgrade. Zemun is old city part of Belgrade with long tradition of farmer market located in central area. Two farmers markets in New Belgrade are selected because they are fast growing and innovative in supply of fresh agricultural products. Both of them are located in, area of higher population density compared to the one in Zemun. Also, one of them is well known for organic products being selling over there. Continuous process was crucial for avoidance of day in the week related influences on results. The field research was conducted in May 2016. Total sample size was 101 respondents. In research sample (Table 2), ratio between males and females was 36%:64%, while the most present age category was 46-44 years (22%) old closely followed by 56-65 years old (20%). Secondary data sources were published scientific and research papers, especially ones aimed toward the influence of alternative food networks.

RESULTS AND DISCUSSIONS

One of the most striking characteristics consumers' visits to farmer markets certainly is the existence of so-called "market days". In addition to the very existence of these days, the work is important and the assumption weekend as a period in which the dominant these days.

This verification aims at obtaining results that will provide guidance in the further course of thinking and work. Starting from the given premise that a consumers' behavior market represent a historical characteristic, analysis of the collected data should be aimed to determine whether there has been a shift in thinking within visitors of farmers markets.

In a process of establishing habits of customers it will be determined the average number of visits to the markets days of the week during which participants visit markets and the structure of volumes purchased in the market. It is assumed that there is a direct relationship between these variables. Further analysis and the crossing of these variables will create conditions for a more detailed analysis and precise determination habits consumer markets included in the study.

TABLE 2: Characteristics of the sample

| Variables	Description	Arithmetic mean (standard deviation) Structure (%)
Grocery buyer	Person who usually goes for groceries 1-respondent; 2-other household member	1,18 (0,39)
Visits to farmers market	Number of visits to farmers markets on a weekly level	2,75 (1,65)
Gender	1-male, 2-female	1,64 (0,48)
Respondent's age		100,00%
1-less than 18		1,01%
2 - 18-25		9,09%
3 - 26-35		14,14%
4 - 36-45		15,15%
5 - 46-55		22,22%
6 - 56-65		20,20%
7 - over 65 years		18,18%
Education	1-High School Degree, 2-Associate degree, 3-Bachelor's degree, 4-master degree, 5-Ph.D.	1,93 (0,98)

To begin with, based on previously calculated data can be determined that the average number of visits for surveyed customers on weekly basis is 3 times (2.75), with a relatively high standard deviation of 1.65. Three visits to the market on a weekly basis deviate from the traditional understanding of the dynamics of visits markets, which consider visits to the market during the two "market" days a week. For the sake of getting the first results and due to more standard deviations, review of the correspondents' answers to the question referring to the number of weekly visits of the market will be displayed in the form of frequency responses of respondents.
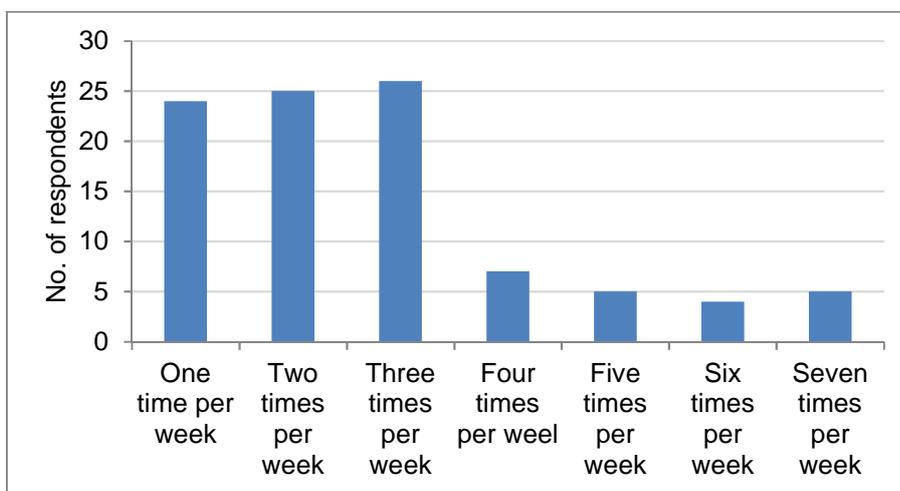
Chart 1: The frequency of visits to farmers markets by the respondents

The data shows that most customers visit farmer market one, two and three times per week. There were no respondents in the survey who said that go more than 7 times a week to the farmers market. The graph shows that the data about the average number of visits on a weekly basis 2.75 is the result of the high share of respondents who visited the market up to three times a week and much less portion of the sample with respondents who visit farmers markets more than 3 times a week.

To check the initial assumption of interdependence between number of visits and the amount of bought quantities consideration average bought quantities is necessary.
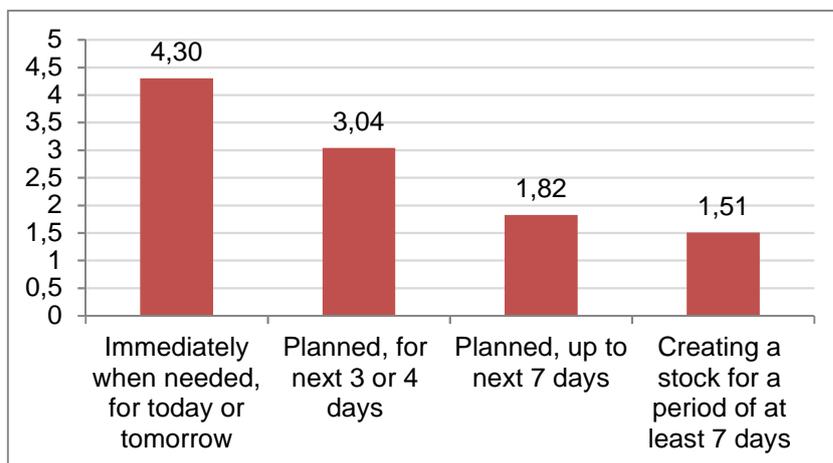

Chart 2: The structure of respondents' consumption plans for purchased products at the farmers markets

Correspondents could choose one of the given marks with a uniform gradation from 1 to 5, from "never" to "always". Average ratings presented within the chart no. 2 were formed on the basis of answers to the question which was formed with Likert scale.

The graph shows that the largest number of respondents consider farmers markets as a place for buying food for today or tomorrow, then for the next three or four days and significantly less for 5 to 7 and for more than 7 days. Taking into account the existence of other sources of fresh foods, like supermarkets and small grocery stores, the link between this and the previous chart does not have to be direct. Possible similarity of two graphs not necessarily needs to be a reflection of interdependence.

With an aim to determine possible dependency between number of visits with the quantities purchased, chart no. 3 is presented, based on combined data from the two previous data. The obtained result should provide a deeper insight into the behavior of individuals surveyed and displays the dependence of consumption of food and the number of visits to farmers markets.
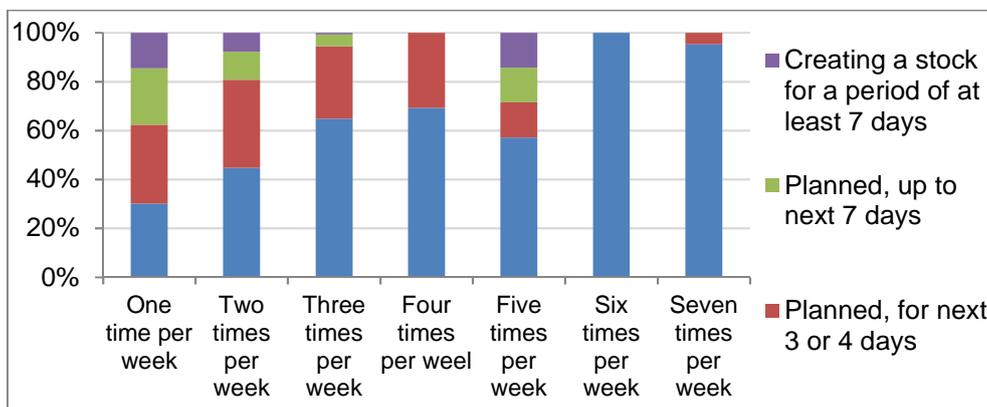
Chart 3: Interdependence between frequency of visits and respondents' consumption plans for purchased products at farmers markets

Chart presents relationship based on cumulative score of answers gotten vie Likert scale based questions. Absolute cumulative scores are obtained by summarization of marks given within Likert scale from 0 for "never" to 4 for "always". With that move, occurrence by which cumulative responses would include "never" valued as one unit is avoided. It is feasible to indentify connection between purchased quantities and the number of weekly visits of the market that is most obvious at subjects who buy foods immediately when needed. The correlation between observed two variables is negative and statistically significant (-0.75). It is interesting that the share of respondents who answered that they buy groceries for the next 3 or 4 days remains at approximately the same level of about 30% up to the frequency of visits of 4 times per week.

In order to determine the significance of the displayed dependence it is necessary to take into account the importance of markets as a source of fresh agricultural products for the respondents. It is right to assume existence of stronger negative correlation between weekly visits and purchased quantities of fresh products.

In the mentioned group, there were classified only respondents which realize at least 60% of total household expenditures for fruits and vegetables at farmers markets. The following table gives the results chi-square test dependencies between the frequency of visits and the purchased quantities.

Table 3: Chi-square test results between frequencies of weekly visits and respondents' consumption plans for purchased products at farmers markets

No. of visits (weekly)	1		2	3	4	5	6	7
Stocks	Creating a stock for a period of at least 7 days	Planned, up to next 7 days	Planned, for next 3 or 4 days	Immediately after the need for today or tomorrow				
P value (all respondents)	0,00		0,19	0,032				
P value (respondents with 60% or more expenditures for fruits and vegetables realized at farmers market)	0,00		0,00	0,00				

Chi-square test was conducted in order to test the dependence between two variables: frequency of customer visits on a weekly basis and the created stocks. According to the interrelation between pairs, were formed for which p value in accordance of the following calculations of p value.

Results of Chi-square test showed that there is a significant correlation between the performance of shopping once a week and stockpiling for 7 days or more. There is a significant correlation between the number of visits on a weekly basis from 3 to 7 and purchasing a quantity sufficient for a maximum of two days. The connection was strongest at subjects who buy groceries once a week and then for people who buy food from 3 to 7 times a week. For respondents who buy 2 times a week it is shown that number of weekly visits isn't in mutual dependence with purchased quantities. In short, there is a negative correlation between the number of visits to the farmers market and number of days for which bought quantities are enough.

To be more precise in a determination of the habits of consumers in accordance with the traditional understanding of market day, it is necessary to observe the responses

from the point of scheduling the day of the week during which the participants visit the farmers market. Consequently it will be possible to identify the days, and to find out whether the Saturday and Sunday are considered as "market" days in Belgrade.
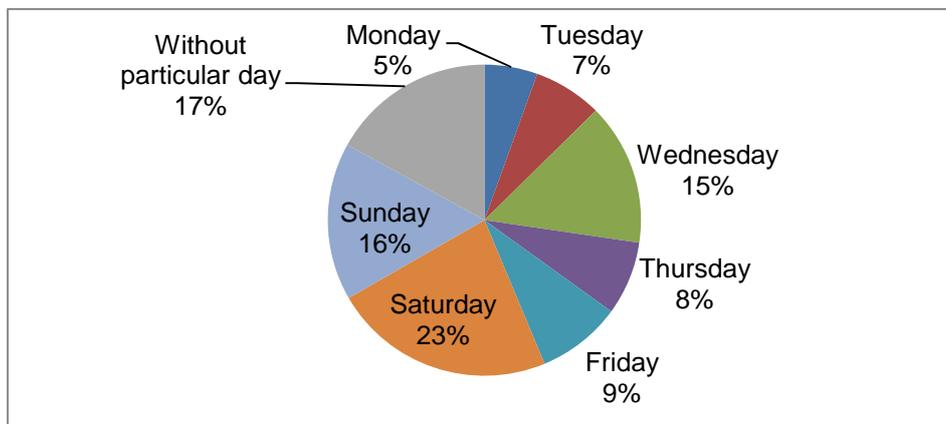

Chart 4: Structure of visits to farmers markets considering days, reported by the respondents

In addition to the anticipated Saturday (23% of surveyed customers) and Sundays (16% of surveyed customers), Wednesday is obviously considered as third "market" day. These results confirm the finding about the frequency of visits to farmer markets.

When observing and commenting this data, we should not forget the high share of responses "You doesn't have certain days when you visit farmers market" that can serve as the basis of the initial signs of weakening of the diversification on farmers market days, weekends and the other days. Such an occurrence would stem from the general change in consumer behavior, who acquired habits of everyday purchases at farmers markets in conditions of overproduction and large retail chains.

Wednesday as the "market" day which is right at the half the week, may not be surprising as new day reserved for visiting farmers markets, especially if one takes into account the average amount of days for which products are bought. Based on the data presented in the chart no. 2 can be formed a clarification of the midweek market day.

Most of the represented marks comprise a maximum interval of 4 days, so it is reasonable to assume that Wednesday for rebuilding inventories in a middle of the week, between the traditional market days. In order to verify these claims, more precisely data will be obtained by comparing days in the week reserved for visits, on one side, with consumer plans for purchasing product at farmer markets, on the other side, which is shown in the following chart.
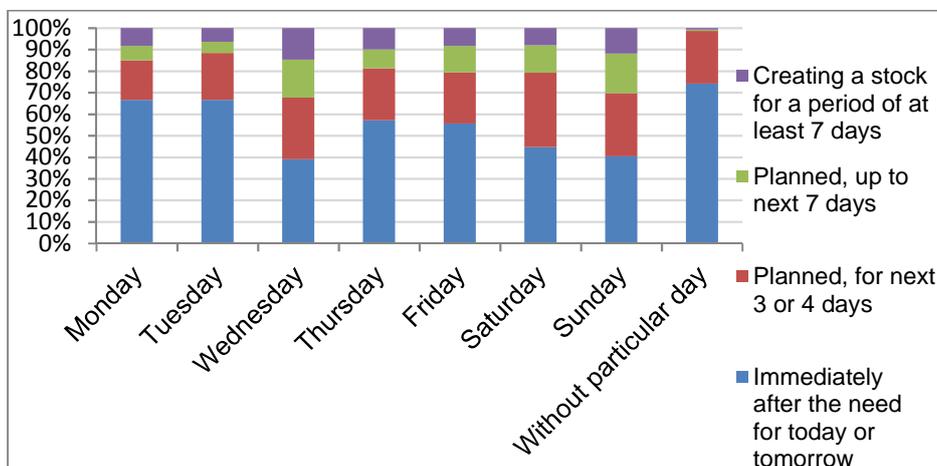

Chart 5: Interdependence between days in the week reserved for visits and respondents' consumption plans for purchased products at farmers markets

In the same manner as in the chart no. 3, this chart no. 5 shows the results formed on the basis of the cumulative score of marks from 0 ("never) to 4 ("always"). It can be seen that the smallest share of purchases for immediate use is during market days, Saturday and Sunday, and Wednesday.

Previous assumption is partly confirmed, because according to it, the high participation of Wednesday presented on a Chart 4 is formed as a result of increased purchases for 3 to 4 days during the week, between the traditional market days. In this case, it is one of the reasons while the other one is significantly increased share of purchases for the next seven days, which is also taking place on Wednesdays. The reasons for this arrangement the purchase can be gained from the brief interviews with the markets visitors, where a certain number of respondents stated that avoids the traditional market day because of the significant crowd.

For those who do not have specific days during which visited the market, there is an extremely high share of purchases for today's or tomorrow's consumption (about 74%) and a high share of purchases for the next 3 or 4 days (24%). In other words, for customers who do not have specific days for shopping at the farmers market some 98% of purchases are made in order to provide food for up to 4 following days.

CONCLUSIONS

Most of the farmers markets' visitors involved in the survey do shopping at farmers markets up to 3 times a week. This certainly can't be characterized as a strong evidence of developed alternative food network medium.

With an analysis of the stock, it is estimated that most of the visitors purchase fruit and vegetables for the immediate or slightly prolonged, up to the two days, use. The initial hypothesis on the market days was partially confirmed. Traditional market days are still popular, but together with the Wednesday that is emerging as the third market day from mainly practical reasons.

Chi-square test provided an evidence of negative correlation between stock keeping and frequency of visits to farmers markets. Strong correlation can be considered as a sign of potential strength of farmers markets as AFN's medium, where customer's visits are driven with practical reasons.

Furthermore, there is a presence of Wednesday as connecting day between the weekends, traditional "market" days, especially considering the most often stock keeping by consumers. Appearance of Wednesday as third market day followed with confirmed negative correlation between frequency of visits to farmers markets and stock keeping at home is fulfilling some important conditions towards consistency and strength of farmers markets as AFN's medium.

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