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Survey on Customer Satisfaction with Fresh and Dried Figs Supply in Mostar

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Abstract

Customer satisfaction affects consumption and preconditions their repurchase. The study was conducted through a questionnaire on four selling places in Mostar, from August to September (fresh figs) and November-December (dried figs) in 2015 on a sample of 250 respondents of different sex, age and education randomly. The goal of the interviews was to determine the attitudes of consumers towards the purchase or what features affect selection the most. The questions in the questionnaire were closed. The collected data were statistically analyzed with SPSS software, using the descriptive statistical methods, chi-square test and strength of relationship by the coefficient of contingency. The results showed a relative customer satisfaction with selection of products, information about the origin and location; important when choosing are the organoleptic properties and consumer habits, but there are also differences in socio demographic characteristics. The results will provide a background for future program design according to customer requirements.

Key words: customer satisfaction, fresh and dried figs, survey

Introduction

Customer satisfaction affects consumption and preconditions their repurchase (Burns & Neisner, 2006; Donovan et al., 1994; Sharma & Stafford, 2000).

For a successful marketing and consumption it is necessary to know whether customers are satisfied or not, what the reasons are of their dissatisfaction and how their purchasing behavior is affected (Meixner, 1998). Quality is one of the factors affecting their purchase decisions, and it is measured by the product and service deficiency levels, as seen by the customer (Fornell, 1992; Hsu et al., 2006; Choi & Chu, 2001). The buyer or customer satisfaction criteria are the key quality criteria (Karić, 2008). The dominant methods for measuring customer satisfaction are the conventional measurement methods, specifically the partial and survey, i.e. survey - research, methods.

Partial methods consider only individual, partial satisfaction statements and evaluate customer satisfaction based on a single factor. Survey research methods consider multiple factors, they are more thorough and have a scientific approach. They involve several separate steps: identifying the measurement objective; identifying customers and their demands; statistically determining the sample; designing the survey; conducting the measurement; analyzing the measurement results, feedback (Brdarević & Kulašin, 2003). A survey can be conducted by filling out a questionnaire independently, and by interviews: face-to-face and telephone interview. The most expensive method is face-to-face interview, but it generally provides the most accurate information. Presentation of measurement results consists of a number of statistical and graphical indicators. In most cases, it is sufficient to have the MS Excel software, which is available on almost all PCs, with the statistical module add-in on the Analysis Toolbar (Ekinović, 1997). The difference between survey and survey research methods is in generating customer demand lists by a team, rather than customers, and in assessing only satisfaction, rather than assessing the importance of customer requirements as well. Nowadays, there has been a growing presence of Internet customer satisfaction methods, as well as other customer satisfaction measurement methods (Karić, 2008).

A proper diet satisfies the need of an organism for daily intake of energy and sufficient amounts of nutrients and protective substances that are essential for maintaining physiological functions of the body and health. Demand for recognizable food products and ecological products with added value is constantly increasing, so it is important to identify the factors that influence consumer attitudes and preferences (Chinici et al., 2002; Squires et al., 2001; Vossernar et al., 2004). Fig is a fruit species that favors warm climate and is not picky about soil, which means that less fertile, rocky soil suit it as well (Vego et al., 2008). Growing figs in Herzegovina region is a tradition, but today it generally has extensive character, as individual trees are grown in gardens around houses. Smaller orchards are being planted, but still it does not have the character of a significant production (Đurić, 2014).

While not having a particular economic importance in Herzegovina today, in the era of ecological agriculture, fig can represent a respectable market product in terms of consumption in both fresh and dry forms (Prlić & Bulić, 2014).

This paper describes a statistical analysis of customer satisfaction, as well as consumer attitudes towards the purchase with an emphasis on the properties that most affect the purchase, and it gives the possibility of product quality management, as well as essential properties of customer satisfaction measurement methods.

It seeks to answer the following questions and research objectives: 1. What is the level of customer satisfaction and which properties influence a purchase the most? 2. Are there differences in customer satisfaction ratings with respect to selected sociodemographic characteristics? 3. Are there differences in satisfaction ratings with respect to selected purchasing habits? It is expected that the results will expand the existing information on customer satisfaction, and help scientists and producers solve problems and stimulate quality management. They will also contribute to the development of a marketing program that would satisfy consumers and improve supply and consumption, as well as provide guidelines for future research.

Materials and Methods

The study was conducted by interviews face-to-face by random selection on four selling places in Mostar, in the periods from August to September (fresh figs) and from November to December (dried figs) in 2015 on a sample of 250 respondents of different gender, age and education. The goal of the interviews was to determine the attitudes of consumers towards the purchase, i.e. what properties influence a choice the most. The survey questionnaire consisted of closed-type questions and required a simple procedure of selecting among a choice of answers.

The first group consisted of questions on customer satisfaction with individual elements, and overall satisfaction, as well as questions on the importance of individual properties when making a purchase, (relationship between price and quality, contact with sellers and product information, opening hours and crowd on the selling place; method of packaging and grading products) - measured on a Likert scale from 1 to 5 (5 - very important; 1 - completely unimportant). The second group consisted of questions on sociodemographic characteristics of respondents (age, sex, education and urban or rural background).

The third part comprises questions on customer confidence in ecological production; behaviors in purchase and consumption, purchase habits and purchase frequency (correlation between satisfaction with the supply and purchase frequency). The collected data were grouped for easier statistical analysis using the synthesis method. Data were compared and statistically analyzed using the SPSS software (Statistical Program for Social Sciences 17.0), through the application of descriptive statistical analyses, chi-square test and strength of relationship using the coefficient of contingency.

Results and Discussion

Description of the sample of respondents

Respondents, who participated in the survey, aged from 17 to 85. The average age is 53. Distribution by age: 17-30 (18.40%); 31-45 (20.80%); 46-65 (24.80%); and over 65 years of age (36%). Out of 250 respondents, women make up 57% and men 43%. More than half are employees; 37% are pensioners. Out of the total number of respondents, 54% have secondary education, 26% university degree, 20% primary school and others. Most customers live in cities, while 30% of respondents visit the countryside twice a month.

Customer satisfaction ratings

Table 1. Mean customer satisfaction (n=250)
Просјечне оцјене задовољства купаца (n=250)

Characteristic / *Варијабла*	Mean / *Аритм. средина*	Standard Deviation / *Станд. девијација*
Location sales place / *Локација продајног мјеста*	3.80	0.95
Opening hours / *Радно вријеме*	3.90	0.92
Contact/Product Information / *Контакт/Информације о производу*	3.85	0.88
Treatment of staff / *Начин опхођења особља*	3.96	0.90
Product price / *Цијена производа*	3.20	1.12
Product quality / *Квалитета производа*	3.99	0.86
Quality/price relationship / *Однос квалитета/цијена*	3.20	1.16
Crowds on the selling place / *Гужве на продајном мјесту*	2.80	0.95
Overall service / *Укупна услуга*	3.90	0.81

*All variables are measured on a Likert scale (1-very unsatisfied; 5-very satisfied).

Све варијабле су мјерене на Ликертовој љествици (1-врло незадовољан; 5-врло задовољан).

Customers are relatively satisfied with selling places, the average rating 3.80; opening hours 3.90; quality of products 3.99. They are also fairly satisfied with product information 3.85 and staff treatment 3.96; while the satisfaction is lower with the quality/price relationship rating 3.20 and price 3.20, and showed the least satisfaction with crowds on selling places rating 2.80. The overall service is relatively satisfactory with the average rating 3.90.

Importance of characteristics

Tab. 2. Mean property importance ratings (n=250)
Просјечне оцјене важности обиљежја (n=250)

Characteristics / *Обиљежја*	Mean / *Аритм. средина*	Standard Deviation / *Станд. девијација*
Shape / *Облик*	4.85	0.60
Size / *Величина*	4.83	0.72
Skin color / *Боја коже*	4.73	0.78
Firmness / *Тврдоћа*	4.57	0.84
Nutritive value / *Нутритивна вриједност*	3.76	0.70
Presence of stem / *Постојање петељке*	2.80	1.14
Variety / *Сортимент*	4.52	0.65
Grading / *Класирање*	3.95	0.74
Packaging / *Паковање*	4.54	0.84

*All variables are measured on a Likert scale (1-very unimportant; 5-very important).
*Све варијабле су мјерене на Ликертовој љествици (1-веома небитно; 5-веома битно).

When buying figs, respondents attach the highest importance to shape 4.85 and size of fruit 4.83, as well as variety 4.52, while they consider presence of stem on fruits when purchasing as the least important with rating 2.80, which is insufficient given the importance of thus purchased fruits for their better preservation. Regarding the varieties, most respondents 64% are familiar with *Tenica*, *Petrovača* and *Crnica*, which indicates that these varieties are the basis of selection in the Herzegovina region. Other less known varieties are being cultivated too, which is consistent with other studies (Vego et al., 2012). Color 4.73; firmness 4.57 and packaging 4.54 are important characteristics. Grading was rated with 3.95, however 90% of respondents confirmed that there is no grading of the offered fresh and dried fig fruits. Packaging is very poor and insufficient, according to most respondents (74%). Nutritive value was rated averagely with 3.76, which is insufficient and points to the necessity of promoting and educating consumers.

Differences with respect to socio-demographic characteristics of customers and purchasing habits

The results showed that almost all consumers (95%) like to eat fresh figs, and slightly less 65% dried figs. Women eat fresh figs more often than men (χ^2 12.667, p 0.003, Cc 0.2196), while for dried fruits the differences between genders were not significant (χ^2 0.65, p 0.403). It was also found that older consumers consume figs more often than younger (χ^2 19.596, p 0.000, Cc 0.2696) and there is a difference for dried fruits (χ^2 39.596, p 0.000, Cc 0.3698).

Tab. 3. Frequency of figs eating consumers according to age
Учесталост употребе смокава у односу на старост потрошача

Frequency of eating? / *Колико често једете смокве?*	Average age / *Прос. старост*	Standard Deviation / *Станд. девијација*
Every day / *Сваки дан*	70	19.56
Several times a week / *Више пута седмично*	52	17.58
Once a week / *Једном седмично*	49	15.56
Less than once a week / *Мање од једном седмично*	35	15.36

The majority of respondents 79% purchase fruits of yellow-green skin color. Women more often purchase figs at a high stage of ripeness, such fruits have a higher content of sugar, while men prefer firmer fruits (χ^2 16.596, p 0.002, Cc 0.2495). Dried figs of lighter skin color are purchased by 85% of respondents, the difference between men and women in terms of selection of firmness of dried fruits is not statistically significant (χ^2 1.596 p 0.100). Most respondents 75% consider fruit cracking as a bad property, and differences between men and women are not significant (χ^2 1.678, p 0.17). The majority of respondents purchase figs at markets (65%), in shops 25% and the rest directly from producers. Women more frequently purchase at markets and in shops, and men directly from producers (χ^2 21.208, p=0.004, Cc 0.2796). Packaging method is more important to women than to men (χ^2 16.788, p 0.002, Cc 0.251). Education influences the importance of price when purchasing. The survey showed that educated people attach less importance to price as opposed to uneducated people (χ^2 27.789, p 0.004, Cc 0.316).

Consumers from rural areas give less importance to packaging, and more importance to organoleptic properties (χ^2 27.788, p 0.000, Cc 0.316). Forty-eight percent of respondents are satisfied with the overall supply of fresh fig, 23% are very satisfied, 10% are unsatisfied, and others are neither satisfied nor unsatisfied; while the rates are different in satisfaction with the supply of dried fig. Only 34% of customers are satisfied, 12% are very satisfied, and other customers 54% are unsatisfied with the supply of dried fig.

Satisfaction with supply influences the frequency of purchases, satisfied customers purchase more often (χ^2 47.788, p 0.001, Cc 0.401).

Time of purchase is also an important factor. Older people purchase more often earlier in the morning, and younger later (χ^2 27.056, p 0.004, Cc 0.312). When purchasing dried figs, origin and quality of dried figs are more important than appearance (χ^2 30.256, p 0.000, Cc 0.329), which is also probably the reason of the dissatisfaction with supply. Most buyers of dried figs prefer local products, and they are available only at markets and when purchasing directly from producers.

Most respondents 46% are not familiar with the effects of figs on health, 24% are partly familiar, 21% are familiar with most of the effects, and 9% of respondents have an excellent knowledge of the effects on health; which points to the need of additional marketing and education, which are consistent with others studies but for different products (Radman et al., 2005; Kovačević et al., 2002). Most respondents expressed a positive attitude towards certification of products 64%, and more educated customers show a greater readiness to spend more money for products with certificates (χ^2 22.078, p 0.001, Cc 0.284). Certainly, this is a declarative readiness, which may be different from the actual purchasing behavior. A positive attitude was also expressed towards the importance of ecological production 84% for which there is no difference between genders and education levels (χ^2 2.078, p 0.356).

Table 4. Customer attitudes towards characteristics of organic production
Однос купаца према карактеристикама еколошке производње

Property / *Особина*	Grading / *Скала*	Number of respondents / *Број испитаника (%)*
Organic production / *Еколошка производња*	Very important / *Јако важно*	84%
Organic production / *Еколошка производња*	Less important / *Слабије важно*	16%
Certificate / *Сертификат*	Very important / *Јако важно*	64%
Certificate / *Сертификат*	Less important / *Слабије важно*	36%

Conclusion

The survey research method provided comprehensive and thorough, accurate and valid information. Dissatisfaction of customers with grading, packaging and absence of certificates was established based on statistical indicators. They have a good knowledge of varieties, most highly value the variety Tenica, which is also consistent with previous studies. It was found that women eat figs more often than men, and that they more often buy at markets and in shops, choose riper fruits, and attach greater importance to packaging method and appearance.

Older population consume figs more, both fresh and dried, and purchase more in early morning hours than younger people. However, the younger and the more educated find growing and marketing methods more important. The knowledge of nutritive properties is insufficient and it is necessary to increase promotion and education. All customers have confidence in the ecological way of growing figs, and there are no significant differences in answers between education levels or genders.

But, differences exist in answers for the supply of dried fig, thus more educated customers show a greater readiness to spend more money for products with certificates. Fig is an ecological fruit, one hundred percent usable, which is a rare case in fruit growing, it could become a recognizable Herzegovinian brand and respectable market product. The analysis showed the existence of new customer satisfaction indicators, which opens possibilities for the development of production and supply directions, with quality products, marketing methods and provision of information about them, as well as investments in the events that make it possible.

References

Brdarević, S. & Kulašin, Dž. (2003). *Analysis of the measurement customers' satisfaction methods according to ISO 9000:2000 standard, with emphasis on the service*. Paper presented at the III Scientific conference with international participation "KVALITET 2003", Zenica, November 2003, Bosnia and Herzegovina.

Burns, D.J. & Neisner, L. (2006). Customer satisfaction in a retail setting, *International Journal of Retail & Distribution Management*, *34*(1), 49 - 66.

Chinnici, G., D'Amico, M. & Pecorino, B. (2002). A multivariate statistical analysis on the consumers of organic products. *British Food Journal*. *104*(3/4/5), 187-199.

Choi, T. Y. & Chu, R. (2001). Determinants of hotel guests' satisfaction and repeat patronage in the Hong Kong hotel industry. *International Journal of Hospitality Management*, *20*(3), 277-297.

Fornell, C. (1992). A National Customer Satisfaction Barometer: The Swedish Experience. *Journal of Marketing*, *56*(1), 6-21.

Đurić, G., Ilić, P., Stanivuković, S., Mićić, N., Vego, D., Šaravanja, P. & Ivanković, A. (2014). Preliminary pomological and biochemical characterization of fig (*Ficus carica* L) germplasm collected in Herzegovina. In *V International Scientific Agricultural Symposium „Agrosym 2014" Jahorina, Bosnia and Herzegovina*, doi: 10.7251/AGSY1404257DJ

Donovan, R.J., Rossister, J.R., Marcoolyn, G. & Nesdale, A. (1994). Store atmosphere and purchasing behavior. *Journal of Retailing*, *70*(3), 283 - 294.

Ekinović, S. (1997). *Methods of statistical analysis in Microsoft Excel.* Faculty of Mechanical Engineering, Zenica, Bosnia and Herzegovina.

Hsu, S.H., Chen, W.H. & Hsueh, J.T. (2006). Application of Customer Satisfaction Study to Derive Customer Knowledge. *Total Quality Management*, *17*(4), 439-454.

Karić, M. (2008). Consumer satisfaction measurement in the function of retail management. Paper presented at the VIII International Scientific Symposium "Business logistics in modern management", Faculty of Economy in Osijek, Croatia.

Kovačić, D., Radman, M. & Haas, R. (2002). Segmentation of city market customers in Croatia towards a marketing strategy for fruit an+vegetable market". Die Bodenkultur. *Austrian Journal of Agricultural Research*. *53*(4), 207-216.

Meixner, O. (1998). Konsumentenverhalten und Erlebniswirkung von Umgebungen: ein umweltpsychologisches Erklärungsmodell der Direktvermarktung (Doctoral dissertation). Wien: Wirtschaftsuniv. Retrieved from: https://www.researchgate.ne t/profile/Oliver_Meixner /publication/237340769_Konsumentenverhalten_auf_Bauernmarkten_in_ Wien/links/00b7d52fcd9b129b41000000.pdf?origin=publication_detail.

Prlić, M. & Bulić, M. (2014). Fig growing in Hercegovina. *Herald of plant protection*, *37*(3).

Radman, M. (2005). Consumer consumption and perception of organic products in Croatia. *British Food Journal*, *107*(4), 263 – 273.

Sharma, A. & Stafford, T.F. (2000). The effect of retail atmospherics on customers' perceptions of salespeople and customer persuasion: an empirical investigation. *Journal of Business Research*, *49*(2), 183 - 191.

Squires, L., Juric, B. & Cornwell, B. T. (2001). Level of market development and intensity of organic food consumption: cross-cultural study of Danish and New Zealand consumers. *Journal of Consumer Marketing*, *18*(5), 392-409.

Vego, D., Knezović, Z. & Šaravanja, P. (2012). *Selection of fresh fruit on the basis of its pomological characteristics*. Paper presented at the IX International Scientific Symposium, Food to health, Tuzla, September 2012, Bosnia and Herzegovina.

Vego, D., Ostojić, I. & Rotim, N. (2008). *Fig*. Mostar: Logotip.

Vossenaar, R. & Wynen, E. (Eds.). (2004). *Trading Opportunities for Organic Food Products from developing Countires - Strengthening Research and Policy-making capacity on Trade and Environment in Developing Countries*. UNCTAD.

Анализа задовољства купаца понудом свјежих и сушених плодова смокве у Мостару

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Сажетак

Задовољство купаца утиче на потрошњу и претпоставка је њихове поновне куповине. Истраживање је спроведено путем анкетног упитника на четири продајна мјеста у Мостару, август - септембар (свјеже смокве) и новембар - децембар (суве смокве) 2015. године на узорку од 250 испитаника различитог пола, старости и образовања случајним одабиром. Циљ интервјуа био је утврдити ставове потрошача према куповини, тј. о особинама које највише утичу на одабир производа. Анкетни упитник се састојао од питања затвореног типа. Подаци су статистички обрађени помоћу SPSS пакета, примјеном дескриптивних статистичких анализа, хи-квадрат теста и јачине везе помоћу коефицијента контигенције. Резултати су показали релативно задовољство купаца избором производа, информацијама о поријеклу, као и локацији; важнија при одабиру су органолептичка својства, те потрошачке навике, а разлике постоје и по социо-демографским карактеристикама. Резултати дају подлогу за даље обликовање програма према захтјевима купаца.

Кључне ријечи: задовољство купаца, свјеже и суве смокве, анкета