

THE EFFECT OF CONSUMER ETHNOCENTRISM ON THE EVALUATION OF FOOD PRODUCT ATTRIBUTES

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ABSTRACT

Nowadays it is a typical food consumption trend, that beside the delectability of foods (taste, odour, colour, etc.) the convenience (ready-to-eat food; fast food, catering etc.), health (traceability, additive free foods, food components, etc.) and ethical attributes (preference of national, regional products, fair-trade, sustainable consumption, etc.) are highlighted, too. Foodstuffs' confidence and information search attributes came to the front instead of experience characteristics during consumers' food choosing decisions. In the local products, different trends are manifest.

Consumer ethnocentrism strengthens the preference of home products, because consumers suppose, that if one prefers national products to foreign ones, it supports the home country's economy and choosing foreign product can be harmful for the economy. According to previous researches, ethnocentrism influences the evaluation of home products in a positive way (Sharma, Shimp and Shin, 1995; Balabanis and Diamantopoulos, 2004).

Ethnocentrism is a global phenomenon, but there are several attributes, which influence the degree of ethnocentrism: demographic factors, culture, lifestyle, economic development. The population of developed countries is more ethnocentric, than the population of less developed countries. The more import products threaten the economic situation of the country, the more the ethnocentrism influences product choice. (Sharma, Shimp and Shin, 1995; Balabanis and Diamantopoulos, 2004) According to the relevant surveys elder consumers are more ethnocentric, than younger, because they are more conservative keep habits and traditions and rejecting modern values (Javalagi, 2005; Witkowski, 1998; Malota, 2003).

The aim of our present research is to determine the ethnocentrism's impact on product preferences and how the locality appears as a viewpoint on food product choices in case of young (18-26 years) consumers. The survey was carried out in three countries. Two post-socialist countries, who accessed EU 'newly': Hungary (Szent István University) and Poland (Warsaw University of Life Sciences) and one 'old EU member state': Germany (University of Hohenheim). Standardized questionnaire was used for the survey, data were analysed by SPSS17.0 software.

1. INTRODUCTION

According to the definition, consumer ethnocentrism strengthens the preference of home products, because consumers suppose, that if one prefers national products to foreign ones, it supports the home country's economy and choosing foreign product can be harmful for the economy. According to previous researches, ethnocentrism influences the evaluation of home products in a positive way (Sharma, Shimp and Shin, 1995; Balabanis and Diamantopoulos, 2004). Ethnocentrism is a global phenomenon, but there are several attributes, which influence the degree of ethnocentrism: demographic factors, culture, lifestyle, economic development. The population of developed countries is more ethnocentric, than the population of less developed countries. The more import products threaten the economic situation of the country, the more the ethnocentrism influences product choice. (Sharma, Shimp and Shin, 1995; Balabanis and Diamantopoulos, 2004) According to the relevant surveys elder consumers are more ethnocentric, than younger, because they are more conservative keep habits and traditions and rejecting modern values (Javalagi, 2005; Witkowski, 1998; Malota, 2003).

The Consumer Ethnocentric Tendencies Scale (CETSCALE) is a 17-item measure, of consumer ethnocentrism, that was developed by Shimp and Sharma (1987), in the USA, and was tested by several researches. First, it was tested on students in the USA, in Japan, in Sweden and in Spain. Steenkamp used the CETSCALE to compare the ethnocentric tendency in four European countries (Greece, Belgium, Great Britain and Spain) in 1993. (Steenkamp, 1997). Witkowski (1998) tested the scale in Hungary to compare the Hungarian and Mexican consumers' ethnocentrism. According to this survey Hungarians were less ethnocentric, than Mexicans. Lindquist et al. (2001) tested the shortened 10 item CETSCALE on student sample, in three Central European countries: in Hungary, Czech Republic and Poland. Previously Shimp with Sharma (1987) and Steenkamp with Baumgartner (1998) used the shortened scale successfully. The measured dimensions of consumer ethnocentrism were: product availability, effect on employment, patriotism and effect on economy. According to Lindquist et al. (2001) the shortened scale can be effective with some modification and complementation with situation depending statements. Malota (2003) criticised the CETSCALE similarly: the scale was developed adjusting on American circumstances, it might be necessary to modify it depending on the given circumstances.

Juric and Worsley (1998) examined the effect of country of origin on the judgement of imported foodstuffs in case of 315 consumers from New Zeland. Based on the researches of Wall and Heslop (1986) the following dimensions were used for the examination of the effect of ethnocentrism on product evaluation:

- Patriotic reasons
- Protect local employment
- Quality of local products as good as imported products
- Local foods are safer
- Don't want money out of the country

Juric és Worsley (1998) measured the attitudes on five-point Likert scale. The results show, that there is a negative relation between the ethnocentrism and the judgement of imported food products' quality and the most determining dimension was the patriotism. According to the authors, it is worth to examine separately the different quality attributes, instead of the overall product quality.

2. METHOD

Based on the reviewed methodological viewpoints (Lindquist et al.; 2001, Malota; 2003, Juric and Worsley; 1998) a scale was developed to measure the dimensions of ethnocentrism. The scale consists of the following dimensions:

Affective dimension (patriotic reasons)

- I consider it is important, that the Hungarian/Polish/German customers prefer the Hungarian/Polish/German products.
- I consider that purchasing Hungarian/Polish/German products is patriotic.
- I like traditional brands, products.

Economic impact

- Only those products should be imported, which cannot be manufactured by the Hungarian/Polish/German producers. (overall economic impact)
- We should purchase products manufactured in Hungary/Poland/Germany instead of letting other countries get rich off us. (overall economic impact)
- Purchasing foreign products hurts Hungarian/Polish/ German economy and causes unemployment. (impact on employment)

- It is not right to purchase foreign products, because it puts Hungarians/Poles/Germans out of jobs. (impact on employment)

Product evaluation

- Domestic foodstuffs may hurt consumers' health less, than the imported foodstuffs.
- Domestic foodstuffs have better quality, than foreign foods.
- I prefer domestic foodstuffs, even if it is more expensive, than imported products.

The survey was carried out in three countries. Two post-socialist countries, who accessed EU 'newly': Hungary (Szent István University) and Poland (Warsaw University of Life Sciences) and one 'old EU member state': Germany (University of Hohenheim). The questionnaire was translated into the native language and back-translated into Hungarian by bilingual natives.

The scale was tested by confirmatory factor analysis (Extraction Method: Maximum Likelihood, Varimax rotation). After, for the further analysis Principal Component Analysis, K-means Cluster Analysis was used. Data were analysed by SPSS17.0 software.

The acceptance of the factor analysis based on the following statistical criteria: Kaiser-Meyer-Olkin Measure of Sampling Adequacy: $0,5 <$; extraction communalities: $0,25 <=$; goodness of fit test: $0,000 <$; cumulative variance: $33% <$. The acceptance of Principal Component Analysis based on the following criteria: extraction communalities: $0,25 <=$, cumulative variance: a principal component can be acceptable, if a component implies the half of the full information content, but at least 33% (Székelyi – Barna, 2002).

Cronbach's Alpha was used to measure the reliability of the scales, created by Principal Component analysis. According to Rózsa et al. (2006) the level of the reliability depends on, what we measure. Psychological categories are less obvious and objective, than physical science categories, that is the reason why more difficult to measure. While the level of the acceptable reliability in physical science is 0.7, in case of an attitude measuring scale 0.5 level of reliability can be acceptable. The more statements the scale contains, the higher is the value of Cronbach' Alpha. (Malhotra, 2001)

3. RESULTS

3.1. Main results of the Factor Analysis

As the results of the factor analysis (Extraction Method: Maximum Likelihood, Rotation Method: Varimax with Kaiser Normalization), three factors were created in case of each country. The factor structures only partly corresponded with the theoretical dimensions, because according to the factor loadings some variables belonged to two factors (there was no double difference between the factor loadings of certain variables on the factors.). In this way 'affective' and the 'economic impact' dimensions did not separate clearly by the factor analysis. Based on these results, and for further analysis (ex. Pathway analysis) Principal Component Analysis was used to create the dimensions of ethnocentrism.

3.2. Results of the Principal Component Analysis

The results of the PCA analysis confirmed the theoretical grouping of the statements regarding 'Economic Impact' and 'Product Evaluation'. In case of the Polish and German 'Affective component', statistical conditions (cumulative variance and Cronbach's Alpha) shows weaker reliability, but in case of attitude measurement these statistical conditions can be acceptable. (Székelyi-Barna, 2002; Rózsa et. al, 2006) The cumulative variance is roughly 50% (which is higher than the criteria 33%), that is the reason why the component is acceptable.

Table 1. Loadings of 'Affective component'

| | Hungary | Poland | Germany |
|---|---------|---------|---------|
| I consider it is important, that the Hungarian/Polish/German customers prefer the Hungarian/Polish/German products. | .799 | .785 | .794 |
| I consider that purchasing Hungarian/Polish/German products is patriotic. | .796 | .769 | .478 |
| I like traditional brands, products. | .661 | .511 | .773 |
| Cumulative % | 56.954% | 48.948% | 48.508% |
| Cronbach's Alpha | .616 | .470 | .455 |

Extraction Method: Principal Component, extraction communalities: 0.25<

In case of the Hungarian and Polish sample the loadings of 'Affective' component are roughly similar (Hungarians are a bit higher). While in case of the German sample the loading of 'I consider that purchasing German products is patriotic' is quite low, what suggests that this statement fits less into the statement list. Besides this the preference of traditional products rather determining in the German sample than the Polish, where this statement is the less dominant.

Table 2. Loadings of 'Economic impact'

| | Hungary | Poland | Germany |
|--|---------|---------|---------|
| We should purchase products manufactured in Hungary/Poland/Germany instead of letting other countries get rich off us. (overall economic impact) | .831 | .781 | .766 |
| It is not right to purchase foreign products, because it puts Hungarians/Poles/Germans out of jobs. (impact on employment) | .820 | .766 | .813 |
| Only those products should be imported, which cannot be manufactured by the Hungarian/Polish/German producers. (overall economic impact) | .783 | .646 | .690 |
| Purchasing foreign products hurts Hungarian/Polish/German economy and causes unemployment. (impact on employment) | .766 | .764 | .785 |
| Cumulative % | 64,068% | 54,949% | 58,519% |
| Cronbach's Alpha | .813 | .722 | .757 |

Extraction Method: Principal Component, extraction communalities: 0,25<

According to the loadings and the cumulative variances, statements regarding the economic impact determine the component well, in case of each country, and there were no high differences among the components of the countries. As in case of the first two dimensions, the items of 'Product evaluation' are more consistent in the Hungarian sample, than in the other two samples.

Based on the created principal components, K-mean cluster analysis was carried out to find consumer behaviour types along the created components. We differentiate four consumer segments in case of each country, because this number of clusters was the most interpretable and show really homogeneous F-scores. The name of the clusters are the following: 'product centric', an 'ethnocentric', an 'economically concerned' and a 'dismissive' segment.

Table 3. Loadings of 'Product evaluation'

| | Hungary | Poland | Germany |
|---|---------|---------|---------|
| Domestic foodstuffs have better quality, than foreign foods. | .857 | .846 | .804 |
| I prefer domestic foodstuffs, even if it is more expensive, than imported products. | .809 | .694 | .685 |
| Domestic foodstuffs may hurt consumers' health less, than the imported foodstuffs. | .792 | .815 | .784 |
| Cumulative % | 67.175% | 62.060% | 57.692% |
| Cronbach's Alpha | .747 | .689 | .631 |

Extraction Method: Principal Component, extraction communalities: 0,25<

Table 4. Final Cluster Centres Hungary N=478

| | Cluster | | | | F | Sig. |
|---------------------|-------------------------------------|----------------------------------|--|-------------------------------|---------|------|
| | Product centric N=113 (23.6%) | Ethnocentric N=158 (33.1%) | Economically concerned N=133 (27.8%) | Dismissive N=74 (15.5%) | | |
| Affective component | -.34334 | .91227 | .01219 | -1.46540 | 276,130 | ,000 |
| Economic effect | -.70555 | .88787 | .23145 | -1.23236 | 265,658 | ,000 |
| Product evaluation | .15634 | .98704 | -.63026 | -1.17737 | 300,029 | ,000 |

Table 5. Final Cluster Centres Poland N=503

| | Cluster | | | | F | Sig. |
|---------------------|-------------------------------------|----------------------------------|--|--------------------------------|---------|------|
| | Product centric N=118 (23.5%) | Ethnocentric N=114 (22.7%) | Economically concerned N=159 (31.6%) | Dismissive N=112 (22.3%) | | |
| Affective component | -.16061 | .96277 | .23269 | -1.14812 | 192,521 | ,000 |
| Economic effect | -.51216 | 1.03411 | .31188 | -1.01255 | 233,140 | ,000 |
| Product evaluation | .70356 | 1.00984 | -.48661 | -1.07185 | 360,503 | ,000 |

Table 6. Final Cluster Centres Germany N=398

| | Cluster | | | | F | Sig. |
|---------------------|------------------------------------|----------------------------------|--|--------------------------------|---------|------|
| | Product centric N=80 (20.1%) | Ethnocentric N=102 (25.6%) | Economically concerned N=126 (31.7%) | Dismissive N= 90 (22.6%) | | |
| Affective component | -.24444 | .90215 | .34790 | -1.28648 | 222,646 | ,000 |
| Economic effect | -.71313 | .98886 | .31009 | -.91472 | 177,078 | ,000 |
| Product evaluation | .54197 | 1.02959 | -.38193 | -1.14887 | 275,710 | ,000 |

The 'product centric' segment evaluated the statements regarding product evaluation high, and the other two components are less important for them. If we compare the three countries, Hungarian 'Product centric' segment gave the lowest score for the 'product evaluation' component. This suggests that the Hungarian product centric segment is less committed, than the other two countries' segment.

The 'ethnocentric' segments evaluated all of the three components highly, what suggests an aware consumer attitude. For the Hungarian 'ethnocentric' consumers the 'product evaluation' and the 'affective components' are the most important, while in case of the other two countries the 'product evaluation' and the 'economic impact' are more dominant.

The most determining factors for 'economically concerned' segment both the 'economic impact' and the 'affective component'. Although the 'economic impact' is the most determining component, the 'affective component' is important also, what is confirming the result of the factor analysis: there is a strong relationship between the dimensions.

The 'dismissive' consumer group evaluated all the three dimensions low. Presumably, they are not interested in home product choosing.

4. CONCLUSION

Based on the reviewed methodological viewpoints a theoretical scale was developed to measure the dimensions of ethnocentrism, which dimensions were: Affective dimension (patriotic reasons), Economic impact and Product evaluation. As the results of the confirmatory factor analysis, three factors were created in case of each country. The factor structures only partly correspond with the theoretical dimensions. The most important difference, that the 'affective' and the 'economic impact' dimensions were not separated by the factor analysis, while product evaluation separated clearly.

As the results of the Principal Component analysis differences can be observed between the countries. In case of the German respondents 'Affective component' is rather defined by the preference of traditional products, than the patriotic feelings, while in case of the other two countries patriotic feeling is more dominant, than the preference of traditional brands. In case of the 'Economic impact' component statements regarding the impact on employment are a bit more deterministic in case of the German component, than in case of the components of the other two countries. In case of the Hungarian 'Product evaluation' component the statement regarding food safety have the lowest loading, but in case of the Polish and German components the less deterministic is the price statement.

Based on the created principal components, we could differentiate four consumer segments in case of each country: a 'product centric', an 'ethnocentric', an 'economically concerned' and a 'dismissive' segment. These segments show that we can differentiate young consumers according to their ethnocentric attitudes.

REFERENCES

1. Balabanis, G.- Diamantopoulos, A. (2004): Domestic country bias, country-of-origin effects, and consumer ethnocentrism: A multidimensional unfolding approach. *Journal of the Academy of Marketing Science*. Vol. 32, No.1, pages 80-95.
2. Javalagi, G. R.– Khare, P.V. – Gross, C. A. – Scherer, F. R. (2005): An application of the consumer ethnocentrism model of French consumers, *International Business Review* 14 (2005) pp. 325-344
3. Juric, B. – Worsley, A. (1998): Consumers' attitudes towards imported food products. *Food Quality and Preference*, Vol.9, No. 6, pp. 431-441, 1998
4. Lindquist, J. D.- Vida, I. – Plank R. E. –Fairhurst, A. (2001) The modified CETSCALE: validity tests in the Czech Republic, Hungary, and Poland, *International Business Review* 10 (2001) 505–516
5. Malhotra, K. Naresh (2001): *Marketingkutató, Műszaki kiadó*
6. Malota, E. (2003): *Fogyasztói etnocentrizmus – A sztereotípiák, az etnocentrizmus és az ország eredet imázs hatása a hazai és a külföldi termékek megítélésére. Doktori (PhD) értekezés. BCE, Budapest, 2003*
7. Rózsa, S.; Nagybányai Nagy, O.; Oláh, A. (2006): *A pszichológiai mérés alapjai, Elmélet, módszer és gyakorlati alkalmazás. Bölcsész Konzorcium.*
8. Sharma, S., Shimp, T. A., & Shin, J. (1995). Consumer ethnocentrism: a test of antecedents and moderators. *Journal of the Academy of Marketing Science*, 23, 26–37.
9. Steenkamp, J.-B.E.M. (1997): Dynamics in consumer behavior with respect to agricultural and food products. pp. 143-188 in B. Wierenga et al. eds., *Agricultural marketing and consumer behaviour in a changing world*. Kluwer Academic Publishers.
10. Steenkamp, J. E. M., & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Research*, 25, 78–90.
11. Székelyi, M., Barna, I (2002): *Túlélőkészlet az SPSS-hez, Typotex kiadó*
12. Witkowski, H. T. (1998): "Consumer ethnocentrism in two emerging markets: determinants and predictive validity", in *Advances in Consumer Research* Volume 25, eds. Joseph W. Alba & J. Wesley Hutchinson, Provo, UT: Association for Consumer Research, Pages: 258-263