SUITABILITY OF MEASURING CONSUMER ETHNOCENTRISM BASED ON CETSCALE10 AND CETSCALE17 IN SLOVAKIA

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Abstract: *The topic of consumer ethnocentrism has a significant position even in the time of globalization. Many of the countries' activities are aimed at supporting domestic production. The main objectives of the article are fourfold: (1) measurement of consumer ethnocentrism based on CETSCALE10, (2) measurement of consumer ethnocentrism based on CETSCALE17, and (3) evaluation of the suitability of using individual methods of measuring consumer ethnocentrism in Slovakia. Based on this goal, we created research questions and hypotheses. From the point of view of methodology, we use several statistical and mathematical methods. An important part of the research is to verify the reliability estimate of selected tools. Based on the primary survey, the objectives were met. The results point to the substitutability of individual marginal tools in the conditions of Slovakia. The results can be used in the measurement of consumer ethnocentrism as well as in the conditions of various disciplines (psychology, sociology, marketing and others).*

Keywords: Consumer ethnocentrism, CETSCALE10, CETSCALE17

1 INTRODUCTION

The topic of consumer ethnocentrism has a significant position even in the time of globalization. Many of the countries' activities are aimed at supporting domestic production. It is from the point of view of the support of domestic production that it is appropriate to examine the factor of consumer ethnocentrism, which can influence consumer decision-making in favor of preference and purchase of domestic production. "A strongly ethnocentric consumer is interested in domestic production to what extent they help his country's economy (e.g. lower unemployment, economic welfare growth, national budget growth, and others). We can say that an intensely patriotic consumer will prefer domestic production, although more likely from their country's love" [1]. From the point of view of the application of consumer ethnocentrism strategies, its measurement is important. In practice, various tools for measuring consumer ethnocentrism can be found, but the most used are CETSCALE10 and CETSCALE17, created by the authors Shimp and Sharma (1987). What are the differences in the use of these tools? Which is better in Slovakia? We are also looking for answers to these questions in the article. It is important to note that the degree of consumer ethnocentrism is influenced by several factors. In this work we focus on the verification of two factors, namely age and gender. The results of the work can be applied both in marketing and in terms of the methodology of measuring consumer ethnocentrism, the national economy and many other areas. The target audience of the article is the academic community, but the results are also suitable for the business sector and the state market.

2 LITERATURE REVIEW

The concept of ethnocentrism has its origins in the work of the American psychologist William Graham Sumner, who studied ethnicities in social psychology [1]. In 1987, the authors of Shimp –

Sharma pointed out that ethnocentrism also plays an important role as a factor in consumer behaviour, calling the phenomenon consumer ethnocentrism. "From the point of view of ethnocentric consumers, the purchase of imported products is wrong, because they think it negatively affects the economy of the home country, causes job regulation and acts as non-proprietary. Imported products are therefore unacceptable from the point of view of a highly ethnocentric consumer." [4].

The topic of consumer ethnocentrism has been addressed by several (mostly foreign) experts. Many experts have tried to measure ethnocentrism on their tools [1, 3, 4, 7 was adopted as a universal scientific tool for measuring consumer ethnocentrism. research and expert opinion, eventually reduced them to seventeen claims whose validity and reliability were verified based on research. The degree of agreement with the given statements is expressed by the respondents based on the Likert scale. This version of CETSCALE can be described as original. The authors also report reducing the instrument from seventeen statements to ten.

RQ1: What is the rate of consumer ethnocentrism in Slovakia measured on the basis of CETSCALE10?

RQ2: What is the rate of consumer ethnocentrism in Slovakia measured on the basis of CETSCALE17?

RQ3: How can the suitability of measuring consumer ethnocentrism based on CETSCALE17 and CETSCALE10 be evaluated in the conditions of Slovakia?

H1: Is there a relationship between the measurement of consumer ethnocentrism based on CETSCALE10 and CETSCALE17 in Slovakia?

3   METHODOLOGY

The main objectives of the article are fourfold: (1) measurement of consumer ethnocentrism based on CETSCALE10, (2) measurement of consumer ethnocentrism based on CETSCALE17, and (3) evaluation of the suitability of using individual methods of measuring consumer ethnocentrism in Slovakia. Based on this goal, we created research questions and hypotheses.

Sample: The presented article is supported by a primary survey. At the time of the sample, the basic population was defined as "consumers of Slovak nationality". The need for national identification stems directly from the concept of consumer ethnocentrism and therefore constitutes a key selection factor. The survey was conducted online. A total of 759 respondents took part in the survey, but due to the definition of the basic population, 49 respondents had to be excluded from the evaluation (they did not meet the condition of Slovak nationality). 710 respondents became the basis for the primary survey. For a sample of 710 respondents, the maximum statistical error (with a 95 % confidence probability) is around 3.7 %. The basic characteristics of the sample are recorded in Table 1.

Table 1 Sample characteristics (Own processing).

Demographic factor	Value of the factor	Abundance (in pcs)	Relative abundance (in %)
Gender	male	268	37.75
	female	442	62.25
Age intervals	Up to 25 years	441	62.11
	From 26 to 55 years	215	30.28
	Over 55 years	54	7.61
∑		710	100

The sample has the character of a comfortable sample. Therefore, the sample properties do not simulate the parameters of the base file. Therefore, the use of confidence intervals and statistical testing are necessary for generalization.

3.1   Cetscale

CETSCALE is a tool for measuring consumer ethnocentrism, the name being an acronym for "Consumer Ethnocentric Tendencies SCALE", designed by Shimp and Sharma (1987). The tool was originally designed to measure American consumer ethnocentrism but was later used in many other countries. CETSCALE can be described as a universal tool for measuring consumer ethnocentrism across countries. The use of an identical tool helps international comparisons.

There are several modifications to this tool in scientific practice. Already Shimp and Sharma (1987), when creating the original tool (CETSCALE17), propose an abbreviated version (CETSCALE10) due to insufficient space in research. However, two versions are generally used, CETSCALE10 and CETSCALE17. CETSCALE17 consists of 17 statements to which the respondent responds on the Likert scale (most often five or seven degrees). CETSCALE10 is an excerpt of ten statements from the original 17 with the original dimensions (latent variables) in the tool. A five-point Likert scale was used for the needs of the article (1- strongly disagree, 5- strongly agree).

As this is a foreign instrument, it is first necessary to verify its validity and reliability. The validity has already been verified by several experts, so the tool can be considered valid. From the point of view of reliability, it is appropriate to use reliability estimation coefficients. The most used are McDonald's omega (McDonald's ω) and Cronbach's alpha (Cronbach's α). Both coefficients have certain advantages and disadvantages. The biggest disadvantage of Cronbach's alpha is its susceptibility to the number of items in the tool. McDonald's ω is, therefore, more suitable for our evaluation, but we use both coefficients for objectivity. Because of the general recommendations, the value of the coefficients should range from 0.75 to 0.95, with a higher value in the specified interval representing a higher rate of reliability estimation. At the same time, the scientific practice uses the "if item dropped" method, which assesses whether it would be appropriate to omit any of the items/statements to increase the estimate of the degree of reliability. The results of this method as well as the overall evaluation of the reliability estimate for both modifications were recorded in Table 2.

The results in Table 2 can be interpreted as meaning that both instruments achieve a high degree of reliability estimation and can therefore be considered reliable. It should be noted that the original version (CETSCALE17) achieves better values in terms of reliability estimation. In terms of the "if item dropped" method, it can be stated that currently, it is not necessary to eliminate any of the statements, even if statement 13. "It may cost me in the long-run but I prefer to support Slovak products." shows limited values in both cases.

4   METHODOLOGY

4.1   Survey results

Within the results of the work, it is necessary in the first place to evaluate the basic descriptive values of the examined tool. As CETSCALE10 consists of the same statements, it was not necessary to generate results separately for CETSCALE10 and CETSCALE17. We recorded the mean value for each statement and the standard deviation in Tab. 3.

Table 2 Reliability of CETSCALE10 and CETSCALE17

Items	CETSCALE17		CETSCALE10	
	McDonald's ω*	Cronbach's α**	McDonald's ω***	Cronbach's α****
1. Slovak people should always buy Slovak-made products instead of imports.	0.922	0.920	-	-
2. Only those products that are unavailable in the Slovak Republic should be imported.	0.924	0.922	0.879	0.877
3. Buy Slovak-made products, keep Slovak Republic working.	0.925	0.925	-	-
4. Slovak products, first, last, and foremost.	0.924	0.922	0.878	0.877
5. Purchasing foreign-made products is un-Slovakian.	0.921	0.919	0.867	0.866
6. It is not right to purchase foreign products, because it puts Slovaks out of jobs.	0.919	0.917	0.861	0.861
7. A real Slovak should always buy Slovak - made products.	0.920	0.918	0.863	0.863
8. We should purchase products manufactured in Slovak Republic instead of letting other countries get rich off us.	0.920	0.919	0.867	0.866
9. It is always best to purchase Slovaks products.	0.921	0.920	-	-
10. There should be very little trading or purchasing of goods from other countries unless out of necessity.	0.919	0.918	-	-
11. Slovaks should not buy foreign products, because this hurts Slovaks business and causes unemployment.	0.919	0.917	0.863	0.863
12. Curbs should be put on all imports.	0.921	0.919	-	-
13. It may cost me in the long-run but I prefer to support Slovak products.	0.926	0.924	0.882	0.881
14. Foreigners should not be allowed to put their products on our markets.	0.922	0.920	-	-
15. Foreign products should be taxed heavily to reduce their entry into the Slovak Republic.	0.921	0.920	-	-
16. We should buy from foreign countries only those products that we cannot obtain within our own country.	0.921	0.919	0.871	0.869
17. Slovak consumers who purchase products made in other countries are responsible for putting their fellow Slovaks out of work.	0.921	0.919	0.868	0.868

Note:
* Total McDonald's ω for tool = 0.926 (CI 95% = <0.918 - 0.934>).
** Total Cronbach's α ** for tool = 0.924 (CI 95% = <0.916 - 0.932>).
*** Total McDonald's ω for tool = 0.881 (CI 95% = <0.868 - 0.894>).
**** Total Cronbach's α ** for tool = 0.881 (CI 95% = <0.867 - 0.893>).
Source: own calculations.

Table 3 Mean and standard deviation of individual CETSCALE statements (Own processing)

Items	Mean	St. dev.
1. Slovak people should always buy Slovak-made products instead of imports.	3.53	1.17
2. Only those products that are unavailable in the Slovak Republic should be imported.	3.40	1.27
3. Buy Slovak-made products. keep Slovak Republic working.	4.25	0.86
4. Slovak products. first. last. and foremost.	3.50	1.06
5. Purchasing foreign-made products is un-Slovakian.	1.98	1.06
6. It is not right to purchase foreign products. because it puts Slovaks out of jobs.	2.43	1.15
7. A real Slovak should always buy Slovak - made products.	2.14	1.15
8. We should purchase products manufactured in Slovak Republic instead of letting other countries get rich off us.	3.46	1.19
9. It is always best to purchase Slovaks products.	3.25	1.12
10. There should be very little trading or purchasing of goods from other countries unless out of necessity.	3.04	1.18
11. Slovaks should not buy foreign products. because this hurts Slovaks business and causes unemployment.	2.61	1.12
12. Curbs should be put on all imports.	2.58	1.21
13. It may cost me in the long-run but I prefer to support Slovak products.	3.48	1.06
14. Foreigners should not be allowed to put their products on our markets.	1.68	0.86
15. Foreign products should be taxed heavily to reduce their entry into the Slovak Republic.	2.25	1.13
16. We should buy from foreign countries only those products that we cannot obtain within our own country.	3.05	1.29

17. Slovak consumers who purchase products made in other countries are responsible for putting their fellow Slovaks out of work.	2.22	1.08

In terms of average values, it should be noted that a five-point Likert scale was used in the measurement (1- strongly disagree; 5- strongly agree). It follows that the middle of the scale represents the value of 3 points, and thus the average values below the value of 3 can be marked as below average and the values above 3 points can be marked as above average. As we can see, we measured the lowest value in statement no. 14 (Foreigners should not be allowed to put their products on our markets.) And we measured the highest value in a statement no. 3.

RQ1: What is the rate of consumer ethnocentrism in Slovakia measured based on CETSCALE10?

Based on the number of statements (10) and the Likert scale (1-5) used, it is clear that the measured values will range from 10 to 50 points, with the middle value of the scale being 30 points.

The average value measured based on CETSCALE10 represents a value of 28.27 points (standard error average = 0.30) with a standard deviation of 7.95 points. The median is at the level of 28 points and the mode is 27 points. The minimum measured value is 10 points, which is the lowest possible value, and the maximum measured value was 50 points, which is also the maximum possible value of the scale. Overall, we rate consumer ethnocentrism based on CETSCALE10 as below average to average (45.68 %).

RQ2: What is the rate of consumer ethnocentrism in Slovakia measured based on CETSCALE17?

Based on the number of statements and the Likert scale used, it can be stated that the results will be in the range <17-85>, while the mean value of the scale is at the level of 51 points.

The mean measured value is 48.84 points (46.82 %) with a standard deviation of 12.81 points. Mode and median are at the level of 49 points. The minimum measured value is 18 points and the maximum measured value represents the maximum possible value - 85 points.

5   CONCLUSIONS

The main objectives of the article were fourfold: (1) measurement of consumer ethnocentrism based on CETSCALE10, (2) measurement of consumer ethnocentrism based on CETSCALE17 and (3) evaluation of the suitability of using individual methods of measuring consumer ethnocentrism in the conditions of Slovakia.

This objective can be considered fulfilled. From the point of view of measuring consumer ethnocentrism, we concluded that in the case of CETSCALE10 and in the case of CETSCALE17, a below-average to average value of consumer ethnocentrism was found. In the context of the utility of the modification, CETSCALE10 and CETSCALE17 can be considered as substitutable.

The work contains certain limits. Due to the measurement in the form of interrogation, the error rate from the point of view of the human factor can occur. Incorrect understanding of statements, conformity, chameleon effect and halo effect can significantly affect

Overall, we rate consumer ethnocentrism based on CETSCALE17 as below average to average.

RQ3: How can the suitability of measuring consumer ethnocentrism based on CETSCALE17 and CETSCALE10 be evaluated in the conditions of Slovakia?

H1: Is there a relationship between the measurement of consumer ethnocentrism based on CETSCALE10 and CETSCALE17 in Slovakia?

In the first step, we used correlation analysis to examine the strength of the relationship. A score of 0.98 represents an almost perfect correlation between these tools. The second step was to examine the linear dependence based on regression analysis. The results show a high linear dependence ($\beta = 1.57$, $R^2 = 0.960$).

In scientific practice, a tool called CETSCALE is often used to identify and measure consumer ethnocentrism. In professional work we encounter two modifications, one containing 17 statements (CESTSCALE17) and the other 10 (CETSCALE10). The question is, "Is it appropriate to use an abbreviated version or the original version when measuring consumer ethnocentrism in the conditions of Slovakia, or does it matter?".

In terms of reliability estimates, both instruments can be considered highly reliable, although CETSCALE17 achieves better results. From the point of view of practical measurement, it can be stated that the obtained results do not differ much from each other (the difference was only about 1 %), while within CETSCALE17 a higher value of consumer ethnocentrism was measured. In terms of variables, it can be stated that in both cases age and gender were confirmed as a significant factor in the degree of consumer ethnocentrism.

Examining the relationship between the two versions of CETSCALE, it can be concluded that this is an almost perfect relationship, which means that the versions examined are almost fully substitutable.

the respondent's evaluation. The sample has the character of a comfortable sample that does not respect the parameters of the basic population.

In future research, it would be appropriate to examine the influence of factors (e.g. descriptive, psychological) on both scales, which could confirm their substitutability. In the future, it would be appropriate to research in the conditions of other countries and create an international comparison. At the same time, it would be appropriate to look for possibilities to modify CETSCALE, which would bring more accurate results. In this context, factor analysis can be used to find latent variables that could help in adjusting CETSCALE. At the same time, it would be useful to examine the effects of other variables.

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