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# RESPONSE STYLES IN CROSS-CULTURAL RESEARCH – EVIDENCE FROM HISTORICAL REGIONS

Empirical  
study

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## Keywords

Extreme response styles

Cross-cultural research

Historical regions

Romania

## JEL Classification

M31

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## Abstract

*The study aims to identify differences in response styles between regions which belong to Romania, but have previously been under foreign occupation. To do that, we employ data from the European Social Survey, the 2006 round. We investigate extreme response styles as this is known as a common problem in cross-cultural research. Extreme response styles increase reliability, but affect the validity as all correlation specific methods can be biased in this case. We compare response styles across regions and inside regions using language as a factor variable to identify ethnic groups. Results show that in some cases there are significant differences between regions of the same country, whereas there are none for neighbouring regions belonging to different countries.*

## Introduction - Literature review

Social science research, in general, and cross-cultural research in particular have been for a long time concerned about bias and equivalence as potential sources of systematic errors (Cronbach, 1946; Greenleaf, 1992; Baumgartner and Steenkamp, 2001; Clarke III, 2001; Dolnicar and Grün, 2006; He and van de Vijver, 2012). Whenever we try to measure latent variables, if score differences on the indicators of a particular construct do not reflect real changes in the underlying trait or ability, then a bias occurred. Depending on the source of the bias – the theoretical construct, the measurement instrument or specific items – we can identify a construct bias, an item bias or a method bias. Construct bias occurs when the measured construct is not identical across cultures, and item bias when a specific item has different psychological meanings across cultures. Method bias includes several types of factors deriving from the sampling procedure, the research instrument's characteristics, the administration conditions or the response styles. Our study focuses on response styles as a major threat in cross-cultural research, especially those based on surveys.

The responses' variance in research is decomposed into true variance and error variances, and the variance due to response styles is included in the errors' category. Response styles distort research results, because they represent a systematic tendency to give a certain response to a range of survey items, on other basis than the specific item content. This means that we don't measure anymore what we are supposed to measure, the instrument loses its validity, even if we could have an increased reliability (Greenleaf 1992; Clarke III, 2001; Dolnicar and Grün 2006; Van Vaerenbergh and Thomas, 2013). The sources of response styles can be different stimuli (scale format, mode of data collection, cognitive load, investigator's experience, survey language,

topic involvement) or the respondents, through demographic characteristics, personality and country-level characteristics (Kieruj and Moors, 2013; Van Vaerenbergh and Thomas, 2013). The effects caused by personality, age, gender, education and culture are also labelled as "dispositional effects", while those coming from stimuli are called "situational effects" (Chami-Castaldi, Reynolds and Wallace, 2008). Specialists discovered that demographic (education, age, gender) and personality variables explain just a small proportion of the response style variance, while culture and country-level dimensions account for a large proportion, especially in cross-cultural studies (Van Vaerenbergh and Thomas, 2013).

There are several types of response styles identified in the literature, the most common and studied ones being extreme response styles and acquiescence (Cheung and Rensvold, 2000; Clarke III, 2001; Johnson et al 2005; Dolnicar and Grün, 2006; Harzing, 2006; Meisenberg and Williams, 2008; Bachman, O'Malley and Freedman-Doan, 2010; Harzing et al, 2012). Social desirability responding is sometimes included in response styles, as well (Fischer et al, 2009). A comprehensive synthesis of response styles, with definitions, theoretical explanations and measurement possibilities is offered by Baumgartner and Steenkamp (2001). A step forward from their seven types of response styles was done by Van Vaerenbergh and Thomas (2012), who add one more response style, together with the consequences of all eight types of response styles identified in the literature. In alphabetical order, these types are: (1) ARS – acquiescence or agreement response style, reflecting the tendency to agree with items, offering only the highest response categories; (2) DARS - disacquiescence response style, reflecting the tendency to disagree with items, regardless of content, offering only the lowest response categories; (3) ERS – extreme response styles, the tendency to

use only the highest and the lowest response categories of a scale; (4) MLRS – mild response style, which is the complement of the ERS type – using moderate response categories, avoiding the extremes; (5) MRS – mid-point response style, the tendency to use only the middle point category of a rating scale; (6) NARS – net acquiescence response style, the tendency to show greater acquiescence than disacquiescence; (7) NCR – non-contingent responding, the tendency to respond carelessly, with no purpose at all, randomly; (8) RR – response range, the tendency to use a narrow or wide range of response categories around the mean response category.

Our study focuses on extreme response styles (ERS), which have, as potential consequences, spurious findings, an inflation (or deflation) of the observed means variance, a decrease in the magnitude of multivariate relationships (Baumgartner and Steenkamp, 2001; Moors, 2008; Van Vaerenbergh and Thomas, 2012). According to the synthesis realized by Baumgartner and Steenkamp (2001), the theoretical explanations for extreme response styles include a certain rigidity, intolerance, ambiguity and dogmatism, higher levels of anxiety and even possible deviant behaviours, poorly differentiated or developed cognitive structures, stimuli that are important or involving to respondents.

Our study aims to identify differences in response styles between regions which belong to Romania, but have previously been under foreign occupation. To do that, we employ data from the European Social Survey, the round of 2006. The historical regions investigated have different economic development levels and also cultural differences, which allow us to hypothesize that ERS could appear.

## Methodology

The present study aims to identify differences in response styles between

regions in Romania that have previously belonged to other countries. Extreme response style is investigated by looking at the data collected through the European Social Survey (ESS) in 2006. To address this issue the following research question is formulated:

Are there consistencies in responses to items between Romanian regions independent of the behavioural domain?

To explore extreme response style, the constructs measuring Schwartz values are used. The items applied by the ESS represent an adapted version of the Schwartz Values Survey (1992) that has been widely employed by researchers in social sciences. The Schwartz scale has been validated in 65 countries, however because of its length – 56 items – the ESS replaced it with the Portrait Values Questionnaire (PVQ) – a shortened and slightly modified version of the scale with 21 items (table no. 1) representing 10 different values (Schwartz, 2003).

The first step to identify the presence of extreme response style was calculating a response profile for each subject across items of the PVQ. As mentioned before, extreme response style - ERS – is the tendency to use only the highest and the lowest response categories of a scale. In this study the items are measured on a 6-point rating scale (table no. 2).

To obtain the extreme response the agreement index and disagreement index were computed and, then, added together (Bachman & O'Malley, 1984). The agreement index was the proportion of responses in the highest agreement response category (“very much like me”), whereas the disagreement index was the proportion of responses in the lowest, disagreement category (“not like me at all”). The value of the index varies between 0 and 1.

## Results

The extreme response index was calculated for each Schwartz value, for each individual and the reliability check was done between the extreme response scores for values in order to see if extreme response style is consistent across the ten values. The analysis yielded a Cronbach alpha of 0.866, which indicates that there is strong reason to consider a pattern of extreme responses.

To determine whether extreme response indices differ across regions in Romania, an Analysis of Variance was applied. Using Tuckey-HSD, differences between regions were tested. Results showed that there are differences in extreme response style between regions. In seven out of ten values, significant differences in extreme response index were found ( $\text{sig} < 0.05$ ).

Results show that in five out of the ten item sets, the South-West Oltenia region is more prone to exhibit extreme response behaviour than the other regions (table no. 3). The North-East region is a follower, its extreme response index scores being higher in four out of ten items sets. According to the analysis, Bucuresti-Ilfov has the lowest scores for extreme response style, being followed by the South-East region.

The differences in extreme response style are important only if they explain a proportion of the variance. To test that, the effect size was computed ( $\eta^2$ ). The average effect size is 0.0125, ranging from 0.0049 to 0.024 (table no. 3). According to Cohen (1988) this is a small effect size, which proves that there is little variance explained by the region as far as extreme response style is concerned.

Further post-hoc analysis revealed specific differences between regions; however there was no evidence of differences due to historical regions. As one can see in table no. 4, the West region, which has been under Austro-Hungarian occupation for a long period, is only

different from the other regions in four cases. The other regions present similar situations, making it difficult to assign the extreme response style to a certain region in particular in comparison with the others.

Because results were inconclusive, differences were tested also using language as a factor variable. It is known facts that in Romania, specifically in the western part, live many Hungarian people, with Romanian nationality. Thus, the extreme response index was computed for both languages and results of ANOVA showed that Romanian speaking people display more extreme response behaviour than Hungarian speaking people living in Romania (table no. 5). Differences were found to be significant between Romanian and Hungarian speaking people for eight out of ten set of items representing the Schwartz values. The effect size was still small ranging from 0.0012 to 0.0090, indicating that a small part of variance is explained by the language.

## Conclusions

Extreme response style should be taken into account, especially when doing cross-cultural research as it can affect relationships between variables of interest. In this study, evidence was found that extreme response style can vary also inside a country, in its different regions; moreover, cultural differences, such as spoken language, have also been found as a source of differences in response styles. Further research should consider comparing Romanian regions with regions from neighbouring countries, since some of these regions have been under their sovereignty before. Moreover, it might be useful to employ other constructs with different behavioural domains for testing differences in extreme response style. Another research direction refers to the use of different types rating scales.

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*Appendices*

Table no.1  
*PVQ items*

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<b>Benevolence</b>
12. It's very important to him to help the people around him. He wants to care for other people.
18. It is important to him to be loyal to his friends. He wants to devote himself to people close to him.
<b>Universalism</b>
3. He thinks it is important that every person in the world be treated equally. He wants justice for everybody, even for people he doesn't know.
8. It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.
19. He strongly believes that people should care for nature. Looking after the environment is important to him.
<b>Self-direction</b>
1. Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.
11. It is important to him to make his own decisions about what he does. He likes to be free to plan and to choose his activities for himself.
<b>Stimulation</b>
6. He likes surprises and is always looking for new things to do. He thinks it is important to do lots of different things in life.
15. He looks for adventures and likes to take risks. He wants to have an exciting life.
<b>Hedonism</b>
10. Having a good time is important to him. He likes to "spoil" himself.
21. He seeks every chance he can to have fun. It is important to him to do things that give him pleasure.
<b>Achievement</b>
4. It is very important to him to show his abilities. He wants people to admire what he does.
13. Being very successful is important to him. He likes to impress other people.
<b>Power</b>
2. It is important to him to be rich. He wants to have a lot of money and expensive things.
17. It is important to him to be in charge and tell others what to do. He wants people to do what he says.
<b>Security</b>
5. It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.
14. It is very important to him that his country be safe from threats from within and without. He is concerned that social order be protected
<b>Conformity</b>
7. He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.
16. It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.
<b>Tradition</b>

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9. He thinks it's important not to ask for more than what you have. He believes that people should be satisfied with what they have.  
20. Religious belief is important to him. He tries hard to do what his religion requires.

Source: Schwartz (2003), A proposal for measuring value orientations across nations, Questionnaire Package of the European Social Survey, p.259-290

Table no. 2  
*Rating scale*

Item	Very much like me					Not like me at all
	1	2	3	4	5	
He thinks it's important not to ask for more than what you have. He believes that people should be satisfied with what they have.						6

Table no. 3  
*Extreme response index- region factor*

Values	Romanian regions								ANOVA		
	North-West	Center	North-East	South-East	South-Muntania	Bucuresti-Ilfov	South-West Oltenia	West	F	sig	$\eta^2$
<b>Self-direction</b>	.3140	.3000	.3143	.2280	.3171	.2871	.3515	.2663	2.926	.005	0.009521
<b>Power</b>	.1570	.1259	.1400	.1385	.1457	.1460	.1812	.1196	1.158	.324	0.003789
<b>Universalism</b>	.2610	.2321	.2190	.1993	.2305	.1881	.2853	.2446	2.829	.006	0.009206
<b>Achievement</b>	.1705	.1463	.1614	.1149	.1457	.1312	.1572	.0897	1.912	.064	0.006242
<b>Security</b>	.2519	.3407	.2800	.2905	.2957	.2129	.3843	.2772	4.537	.000	0.014684
<b>Stimulation</b>	.2054	.2556	.3143	.2449	.2386	.1881	.3668	.2582	7.655	.000	0.024528
<b>Conformity</b>	.1996	.1519	.1871	.1436	.2029	.1337	.2358	.2500	4.239	.000	0.013732
<b>Tradition</b>	.1860	.2093	.2600	.1959	.1786	.2054	.2445	.2147	2.625	.011	0.008555
<b>Hedonism</b>	.1880	.1704	.2586	.1723	.1500	.1361	.3079	.1739	9.374	.000	0.029873
<b>Benevolence</b>	.1705	.1685	.1500	.1064	.1357	.1510	.1419	.1277	1.522	.155	0.004974

Table no. 4  
*Post-hoc analysis for the West region*

(I) Region, Sig.		Dependent Variable									
		self-direction	power	universalism	achievement	security	stimulation	conformity	tradition	hedonism	benevolence
<b>West</b>	North-West	.864	.831	.999	.082	.997	.702	.701	.978	1.000	.772
	Centre	.976	1.000	1.000	.468	.625	1.000	.022	1.000	1.000	.806
	North-East	.819	.991	.979	.127	1.000	.557	.340	.729	.050	.989
	South-East	.947	.995	.710	.985	1.000	1.000	.007	.998	1.000	.993
	South Muntenia	.770	.961	.999	.416	.999	.998	.710	.898	.990	1.000
	Bucuresti-Ilfov	.999	.978	.542	.862	.686	.409	.006	1.000	.929	.993
	South-West	.234	.273	.848	.279	.069	.018	1.000	.976	.000	1.000
	Oltenia										

Table no.5  
*Extreme response styles index –language factor*

Values	Mean RO	Mean HU	sig	$\eta^2$
<b>Self-direction</b>	.3065	.1769	.000	0.007518
<b>Power</b>	.1470	.0846	.011	0.004185
<b>Universalism</b>	.2353	.1590	.010	0.004308
<b>Achievement</b>	.1468	.0654	.008	0.004486
<b>Security</b>	.2999	.1615	.000	0.00903
<b>Stimulation</b>	.2665	.1615	.002	0.00982
<b>Conformity</b>	.1895	.0962	.000	0.007846
<b>Tradition</b>	.2130	.1500	.000	0.002086
<b>Hedonism</b>	.1976	.1500	.107	0.006003
<b>Benevolence</b>	.1440	.1231	.264	0.001247