

## **GLOBAL, MACRO, AND PERSONAL IMPACTS ON LATVIA: A LATENT STRUCTURE OF PERCEIVED CONTROL**

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### Abstract

*The study explores a latent structure of perceived impacts on the country. Perceived controllability of the context shapes individual plans and forms resource for dealing with changes. The direct and indirect exposure to global challenges (e.g., terrorist attacks) can change individual views of the controllability of the context and lead to negative psychological consequences. On the basis of the analysis, a set of perceived impacts was included in the investigation – impacts on a person, people of Latvia, its political institutions, and global players and threats – as factors representing different levels of ecological systems. Six hundred forty-seven university students from Riga, Valmiera, and Daugavpils participated in the study. The Future of Country Questionnaire was modified and used for the assessment of perceived impacts on Latvia. Exploratory and confirmatory factor analyses provided evidence for four main factors representing perceived impacts: personal control, political power, globalization, and global threats. The latter factor involved military tension and terrorism. Revealed links between control beliefs confirmed the interconnectedness of sub- and super-ordinated ecological systems. Cooperation with other people can facilitate the sense of controllability of the macro-societal context.*

**Keywords:** *perceived impact, latent structure, globalization, threats, Latvia, personal control*

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## Introduction

Perceived controllability of social context shapes individual future plans and decisions (Nurmi, 2004). The sense of personal control forms a resource for dealing with contextual changes (Pinquart & Silbereisen, 2004; Trommsdorff, 2000) and associates with positive expectations regarding the country (Kolesovs, 2015). Simultaneously, views of the country include perceived impacts of geopolitical factors (Kasapoğlu, Turan, & Dönmez, 2009; Postelnicescu, 2016; Zaleski, Chlewinski, & Lens, 1994), economic crises (Kolesovs & Kashirsky, 2014), terrorist attacks (Fung & Carstensen, 2006; Holman & Silver, 2005), natural disasters (Kasapoğlu et al., 2009; Stokols, Misra, Runnerstrom, & Hipp, 2006), and macro-social transformations (Steyn, Badenhorst, & Kamper, 2010). A broad number of perceived impacts (e.g., Zaleski et al., 1994) and their interrelations (Kolesovs & Kashirsky, 2014) indicate a possibility to reduce this set to a lower number of factors. The aim of this study was to explore a latent structure of perceived impacts on the country, ranging from personal to global levels.

## Ecological systems view

Ecological systems theory (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006) provides a theoretical background for the analysis of interactions between the person and a set of nested social systems. This theory emphasizes the progressive involvement of the person into more complex and remote social systems from micro to macro levels. Positive development depends on the stability and predictability of the systems during this process. Considering Elder's (1998) principle of linked lives, Bronfenbrenner and Morris (2006) pointed that social networking and shared relationships are among mechanisms ensuring positive development at the level of the society (macro-system) in changing historical contexts (chronosystem). The sense of higher personal control at the macro level can be an outcome of positive experiences during the person-context interaction.

In the analysis of development during social changes, Pinquart and Silbereisen (2004) concluded that a change at the macro level interacts with subordinated systems, which adapt to new settings and contribute to the change in society. Simultaneously, individuals may reconsider their control beliefs. The study of future expectations (Kolesovs & Kashirsky, 2014) demonstrated that perceived impact of the global economic crisis interacts with the sense of personal control, control of people of the country, its social institutions, and significant global players (e.g., the United States and European Union). These levels of perceived impacts concur with the main levels of individual worries – the self, in-group, society, and the world (Boehnke, Schwartz, Stromberg, & Sagiv, 1998). Worries regarding the political and economic situation are also a powerful source of future-related anxiety (Zaleski, Sobol-Kwapinska, Przepiorka, & Meisner, 2017) shaping individual future expectations (Steyn et al., 2010).

A study after the 9/11 terrorist attacks (Holman & Silver, 2005) confirmed the powerful impact of negative macro-level events on individual development when new attacks became an element of future expectations and suppressed individual well-being. In addition to direct exposure to traumatic events, the information presented by mass media has short- and long-term consequences for individuals, social groups, and society, even though there were no major events related to the problem (e.g., Schofield & Pavelchak, 1985).

## Situation in Latvia and research question

For Latvia, the direct and indirect exposure to global challenges is highly relevant. Since 2008, the global economic crisis impacted views of the situation in the country and future expectations (e.g., Kolesovs & Kashirsky, 2014). After the crisis peaked, sociological data revealed growing concerns related to war and defense issues (Ministry of Defense & SKDS, 2015). In addition, psychologists (Ruza, Ruza, Rascevskis, Vorobjovs, & Murasovs, 2016) have found that the military power and security of Latvia became the main predictor of residents' sense of personal safety. The mass media presented analytical reports (e.g., Shlapak & Johnson, 2016) and a broadcast (Range, Waldron, & Bagnall, 2016) indicating the vulnerability of Latvia as a relatively small country at the border of the EU and Russian Federation. Moreover, Range et al. (2016) have shown Latvia as the potential starting place of a military conflict leading to World War Three. This view sparked a public outcry and discussions in the country, confirming the sensitivity of people to this kind of threats.

On the basis of the overview, we have planned an investigation of perceived impacts on Latvia representing different levels of social systems: the person, people of Latvia, its political institutions, and global players and threats. The main research question was: *What is the latent structure of perceived impacts on Latvia?*

Taking into account interactions between sub- and super-ordinated systems (Bronfenbrenner, 1979), interrelations between latent factors of perceived impacts was possible. We have also expected that the salience of global economic crises decreased because of new challenges for European countries – terrorist attacks and increasing political and military tension (e.g., Postelnicescu, 2016). These new challenges may form a specific factor for the people in Latvia.

## Method

### *Participants*

The participants were 647 university students (65.5% females and 34.5% males) aged from 18 to 37 ( $M = 22.05$ ,  $SD = 3.76$ ). They have voluntarily participated in the study as a convenience sample from universities in Riga, Daugavpils, and Valmiera. All students were Latvian residents. Among the participants, 67% indicated Latvian as their mother tongue while 33% indicated another language (mostly Russian) as their mother tongue. Seventy-nine percent of the participants were undergraduates, 21% were postgraduates, 42% were employed, and only 8% of the sample was married.

### *Measures*

The Latvian version of the Future of Country Questionnaire (Kolesovs & Kashirsky, 2014) was used to assess the structure of perceived impacts on Latvia. The original inventory was developed after a qualitative analysis of students' future expectations during the economic crisis. Three item groups form the questionnaire and assess the evaluation of the present and future of the country, perceived power and stability of the country, and perceived impacts on it.

The present study used items focused on the perceived impacts only. We have extended the list of impacts to involve a broader number of factors, impacting the situation in Latvia and Europe. Attributions of impact were assessed in ten instead of six domains (added items are in italics): Me, people of Latvia, *political parties and leaders, the government of Latvia*, the European Union, the United States of America, other countries, global economic crises, *war and military conflicts*, and *terrorist attacks*. The perceived impact of each factor on Latvia was assessed on a 7-point scale from 1 (no impact) to 7 (maximal impact) by answering a question: “To what extent the factors listed below impact the future of Latvia?” One blank line provided an option to add other factors to the list. However, only one participant mentioned religion as an additional factor.

### **Procedure**

The study was conducted in 2016. Participation was voluntary and anonymous. After the informed consent was received, students filled in the inventory without a time limit. The inventory was administered frontally in a paper-and-pencil format. In order to exclude a possible effect of entering the sample (spring or fall semester), students were randomly assigned to the two modes of factor analysis: exploratory factor analysis ( $n = 240$ ) of perceived impacts and confirmatory factor analysis ( $n = 407$ ). Maintaining acceptable ratios of cases to items and cases to degrees of freedom resulted in unequal sample sizes. Both subsamples demonstrated no significant differences in age,  $t(645) = 0.32$ ,  $p = .748$ , distribution of gender,  $\chi^2(1) = 0.05$ ,  $p = .827$ , employment,  $\chi^2(1) = 0.71$ ,  $p = .400$ , graduation,  $\chi^2(1) = 0.50$ ,  $p = .478$ , marriage,  $\chi^2(1) = 0.01$ ,  $p = .980$ , and participants' mother tongue,  $\chi^2(1) = 0.07$ ,  $p = .795$ . The random assignment and computations were performed using IBM SPSS Statistics for Windows 22.0, ‘lavaan’ (0.5-23) for R (Rosseel, 2012), and ‘paran’ (1.5.2) for R (Dinno, 2009).

### **Results**

#### ***Exploratory factor analysis (EFA)***

Principal axis extraction with Varimax rotation was performed on ten items for a subsample of 240 students. The Kaiser-Meyer-Olkin measure was .70 that demonstrated an acceptable level of sampling adequacy. Bartlett's test of sphericity,  $\chi^2(45) = 966.16$ ,  $p < .001$ , also confirmed that data were suitable for the factor analysis. A parallel analysis (Horn, 1965) in the mode of common factor analysis (Dinno, 2009) revealed four factors with adjusted eigenvalues greater than zero. Therefore, the EFA resulted in four factors explaining 62.4% of the variance. Table 1 presents factor loadings, the percentage of explained variance, reliability, and descriptive statistics for each factor.

Table 1 Exploratory Factor Analysis on Sources of Perceived Impact on Latvia (n = 240)

Source of Impact	Factor 1	Factor 2	Factor 3	Factor 4
Government of Latvia	<b>.91</b>	.20	.14	.11
Political Parties and Leaders	<b>.89</b>	.18	.12	.12
The USA	.05	<b>.75</b>	.04	-.05
Other Countries	.15	<b>.68</b>	.11	.04
The EU	<b>.48</b>	<b>.54</b>	.10	-.07
Global Economic Crises	.25	<b>.41</b>	<b>.40</b>	-.08
War and Military Conflicts	.10	.19	<b>.85</b>	.04
Terrorist Attacks	.08	-.01	<b>.69</b>	.20
Me	-.07	.01	.10	<b>.83</b>
People of Latvia	<b>.33</b>	-.08	.10	<b>.62</b>
Eigenvalue (Extracted)	3.10	1.36	1.09	0.69
Adjusted Eigenvalue (PA)	2.50	0.82	0.68	0.30
Eigenvalue (Rotated)	2.05	1.60	1.43	1.15
Explained Variance, %	20.5	16.0	14.3	11.5
Number of Items	2	4	2	2
Cronbach's Alpha	.93	.74	.75	.67
M (SD)	5.69 (1.28)	4.97 (1.04)	3.88 (1.53)	3.99 (1.40)

Note: Factor loadings over .30 are shown in bold. PA – parallel analysis. Items with cross-loadings were included in calculations of means and Cronbach's alphas in accordance with the biggest loading.

Factor 1 consisted of items representing political parties, leaders, and the government of Latvia. This factor was entitled *Political Power*. Perceived impacts of the EU and people of Latvia were also presented at this level of control. Factor 2 was interpreted as the perceived impact of *Globalization*, associated with the political and economic interdependence of countries. This factor also included the global economic crisis, shared with Factor 3 in a similar amount. Perceived impact of war and terrorism formed Factor 3, interpreted as *Global Threats*. The last Factor 4 presented *Personal Control* over the country. Within this factor, the sense of personal control associated with the impact of other people living in Latvia.

### Confirmatory factor analysis (CFA)

Taking into account the explored factorial structure and item's cross-loadings, we have tested an oblique four-factor model in CFA (Figure 1). Model fit was assessed with Satorra-Bentler correction (Satorra & Bentler, 1994). Scaling correction factor value was 1.19. Fit indices confirmed a relatively good fit of the model to data (Hu & Bentler, 1999):  $\chi^2(26) = 49.03$ ,  $p = .004$ , AGFI = .99, CFI = .98, TLI = .96, RMSEA = .05 (90% CI from .03 to .07,  $p = .594$ ), SRMR = .04. The sensitivity of the chi-square test to the sample size and deviance from the normal distribution provides an explanation for its statistical significance.

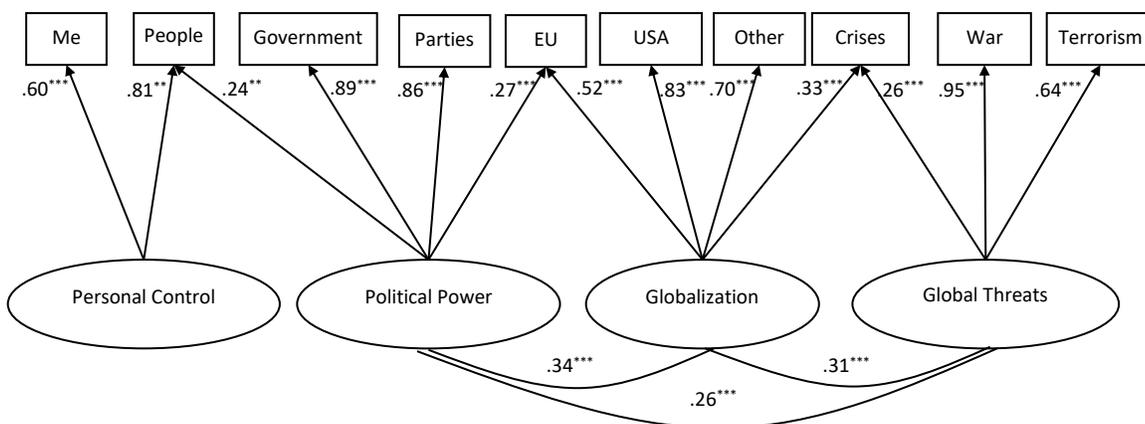


Figure 1. CFA for the model of perceived impacts on Latvia ( $n = 407$ ; only significant covariance coefficients are presented; \*\*\*  $p < .001$ , \*\*  $p < .01$ )

This model was construct-level metric invariant (Cheung & Rensvold, 2002) in a comparison with the configural model for gender,  $\Delta CFI = .001$ ,  $\Delta\chi^2(9) = 10.12$ ,  $p = .341$ , employment,  $\Delta CFI = .000$ ,  $\Delta\chi^2(9) = 9.06$ ,  $p = .432$ , ethnicity (Latvian-speaking majority vs. minority groups),  $\Delta CFI = .001$ ,  $\Delta\chi^2(9) = 10.69$ ,  $p = .298$ , and graduation,  $\Delta CFI = .000$ ,  $\Delta\chi^2(9) = 8.62$ ,  $p = .473$ . It confirms invariance of factorial loadings for the mentioned subgroups.

An alternative model joined the perceived impacts of globalization and threats into one factor on the basis of their association with the global level of ecological systems. For this model, the scaling correction factor was 1.18. Fit indices demonstrated greater deviance of the three-factor model from data:  $\chi^2(45) = 213.48$ ,  $p = .000$ , AGFI = .99, CFI = .82, TLI = .74, RMSEA = .12 (90% CI from .10 to .14,  $p = .000$ ), SRMR = .08. Therefore, the empirically based four-factor model remained the best explanation for the latent structure of perceived impacts.

### Discussion

The results demonstrate that perceived impacts on Latvia can be reduced to a lower number of underlying factors. Globalization and interdependence, global threats, political power in the country, and personal control over it represent four main groups of impacts. Revealed groups of items follow the structure

of ecological systems (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006) with splitting threats and interconnectedness at the global level.

Representing the micro level (Boehnke et al., 1998), the sense of personal control joins with the perceived impact of people of Latvia in a common factor. It concurs with views of the situation in Latvia as impacted by the joined effort of people living in the country (Kolesovs & Kashirsky, 2014). This finding also confirms the view of progressive individual involvement in social systems by linking personal life with other people (Bronfenbrenner & Morris, 2006; Elder, 1998).

An effect of globalization manifests in joining the perceived impacts of the USA, European Union, and other countries. Association of global economic crises with this group of impacts confirmed that economic and political interconnectedness of countries has some negative consequences, as it was also found in the study on the perceived impact of the global economic crisis in Latvia and Russia (Kolesovs & Kashirsky, 2014).

Both levels – personal control and impacts of the globalized world – are linking to the level of macro-system. The perceived impact of people connects the level of personal control with the level of macro-system, presented by impacts of the government of Latvia and its political leaders and parties. It is additional evidence for individual involvement into remote ecological systems through the relationships with other people (Bronfenbrenner & Morris, 2006) and the significance of the perceived joined effort in impacting the macro-system and expecting positive changes in the country (Kolesovs, 2015; Kolesovs & Kashirsky, 2014). Perceived impact of globalization associates with the political power in Latvia through the impact of the European Union forming a context of the political and economic integration of the country into the global system. Therefore, the analysis highlights the multilevel nature of processes and factors impacting the country and individuals (Kolesovs & Kashirsky, 2014; Pinquart & Silbereisen, 2004).

As expected, war and terrorist attacks formed a specific factor of global threats. Together with a relatively low loading of the economic crisis on global threats, this finding confirms perceived interconnectedness of new challenges for Europe (Postelnicescu, 2016) and Latvia (Ministry of Defense & SKDS, 2015; Ruza et al., 2016). Joining global threats is also in line with findings on associations among individual worries at the macro level (Boehnke et al., 1998). Simultaneously, relative separation of war and terrorism from perceived impacts of the globalized world indicates a non negative component of in perceived effect of the globalization. This effect should be investigated as a protective factor in dealing with perceived global threats.

### **Limitations and future directions**

The current investigation of the latent structure of perceived impacts has several limitations. University students do not represent the population in general. They involve in a process of more detailed exploration of contextual opportunities and constraints (Nurmi, 2004). The connection between control beliefs and well-being was also not investigated. Thus, a broader representative sample should be included in further study on the perceived global impacts, their effect on individual well-being, and mediation of this effect by sub-ordinated ecological systems and personal control.

The questionnaire provides an opportunity to extend and modify the list of impacts on a country for a more detailed investigation of individual involvement in ecological systems at a lower level (e.g., mesosystem) and for cross-cultural studies under different socioeconomic and political circumstances. Cultural characteristics can shape the structure of perceived impacts. For example, collectivism can channel the way of individual involvement in social systems. Therefore, it might be helpful to compare perceived impacts in different cultural groups of residents of Latvia and other countries. A generalization of the results from Latvia, as a small country integrated into the EU, to other countries also is a question for further studies.

## Conclusions

In summary, this study revealed the latent structure of perceived impacts on the situation in Latvia. Connections between control beliefs demonstrate a chain of interrelated ecological systems from personal to global levels. From a perceived control perspective, personal involvement in political life through cooperation with other people could facilitate the sense of controllability of the macro context. Global threats included new challenges for European security – increasing military tension and terrorism. An impact of global threats on individual well-being, its mediation by sub-ordinated systems, and positive aspects of globalization are topics for further investigation.

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