Modernization and Variations in Values Change in European Societies in 1995-2008: Test of Inglehart's socialization hypothesis
Progress Report 1

Yuriy Savelyev
Senior Research Fellow at Faculty of Sociology
National Taras Shevchenko University of Kyiv
60, Volodymyrs'ka Str., 01601, Kyiv, Ukraine

Modernization:
Research problem background

• Modernization is a topical issue

• Competition in a global world

• Governments' obsession with economic growth

• Neoliberal interpretation of development as a triad economic growth – well-being – life satisfaction

• Development → stability of political regimes (either democratic or authoritarian)

• Political elites in Russia and Ukraine – modernization as a way to innovative and competitive economy

   → prosperous societies ("Western prosperity") but without "Western" democratic institutions

Research question
and existing theoretical approaches

- Can non-EU East European societies achieve high level of development, which is the increase in person's capabilities (Anand, Sen 1994), or some are confined to a different cultural program (specific core values)?

- R.Inglehart and C.Welzel (2009; 2010) argue that modernization has proved to be **universal**: economic development leads to a shift in values that in turn determines rise of democratic institutions. Still, values are path dependent (Inglehart, Baker 2000)

- On the contrary, "multiple modernities" theorists contend that there are different cultural interpretations or trajectories of modernity (Eisenstadt 2000; Wagner 2010).

- **Does this indicate that cultural program is an obstacle to modernity?**

Gap in values
and modernization model

• Research on Russia demonstrated peculiarities in values that had not changed along with economic development and growing prosperity (Тихонова 2008; 2011; Магун, Руднев 2008, 2010, Лебедева, Татарко 2011).

• Comparative research persuasively shows existing gap in value priorities and structure of value classes between **West European** (especially Nordic), **Mediterranean** and **post-socialist** (including Russia) countries when either Schwartz's or Inglehart's approach to measuring values is used (Magun, Rudnev, Schmidt 2012; Магун, Руднев 2012).

• **East European** societies and especially post-soviet countries differ from more developed societies in terms of emancipative and self-expression values which are the prerequisite for modernization of a society.

• **But does this imply that the modernization model is not applicable to this region?**

Modernization model and Inglehart's socialization hypothesis

- **Theoretical reasoning** for universality of modernization.

- **Empirical evidences**. According to R.Inglehart and C.Welzel (2010, p. 562) on a global scale level of self-expression values of a society accounted "for over half of the change in levels of democracy from the mid-1980s to the mid-1990s" (R^2 = 0.517).

- However, important part of this model, namely **Inglehart's socialization hypothesis** (Inglehart 1990) are under debate (Abramson 2011). It was rarely directly tested and existing research provided mixed support for it (Sangster, Reynolds 1996).

- The hypothesis was tested for earlier periods and limited number of West European countries (Abramson 2011).

Research goal and data

- The **goal of research** is to test whether emancipative values trend, namely substitution materialist priorities by post-materialist, exists in **East European** societies compared to **West European** societies (old EU members) and whether **Inglehart's socialization hypothesis is valid to explain such a trend**.

- The dataset consist of integrated World Values Survey data (waves 3, 5: WVS1994-1999, WVS2005-2007) and European Values Survey data (waves 3, 4: EVS1999-2001, EVS2008-2010) with the matching questions comprising the period from 1995 till 2008 in overall **16 European societies**: 13 post-socialist East European countries (Bulgaria, Belarus, Czech Republic, Estonia, Latvia, Lithuania, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, Ukraine) and 3 reference West European countries (Germany, Spain, Sweden), which were selected according to the formulated criteria and availability of the indicators. Sample is representative for population over 18 (overall **78501** respondents).

Theoretical framework

Modernization model Welzel, Inglehart and Klingemann (2003):

2. Individual resources (objective means of choice)

3. Emancipative cultural values (motives of choice)

4. Institutional rules (effective rights to human choice)

According to this model emancipative and self-expression values have to appear due to the growth of resources. To explain the mechanism of this value shift R.Inglehart also suggested a socialization hypothesis according to which observed values of adults reflect social and material conditions during their socialization process and their youth experience of economic and physical security shapes enduring value orientations (Inglehart 1990). The hypothesis is linked to a theory of generations (Mannheim 1952) and study of cohort replacement component in social change (Ryder 1965).

Variables and hypothesis

- **The response variable** is level of materialist/post-materialist values in a given society.

- Since for testing a hypothesis it is necessary to have at least 3 time points for all countries included into analysis (Firebaugh 1989), 4-item post-materialist index (EVS/WVS data) as a measure of the response variable should be used.

- To estimate effects in values change and test Inglehart's socialization hypothesis **cohort variable (year of birth)**, which can be considered as a proxy for socialization process, and **time variable (year of survey)** are included as predictors into statistical model.

- It is also necessary to control for the **influence of education** on the response variable (Voicu 2010).

- **The hypothesis** is that observed change in materialist/post-materialist values in either West European or East European societies **is due to cohort replacement** (demographic not contextual change) and therefore Inglehart's socialization hypothesis is true.

Method of analysis

- I use method of **linear decomposition of a trend** (Firebaugh 1989; 1992; Alwin, McCammon, 2003).

- This method allows differentiating two otherwise concealed components of social change – a component due to **period effect or contextual factors** (*intracohort change*) and a component due to **cohort replacement** (*population change*) which is a proxy for **socialization**.

- Employing regression model G.Firebaugh designed "component-difference equations… to partition change in means over time in repeated survey data" (Firebaugh 1992: p.14).

- This analytical tool was efficient in identifying mechanisms of changes in support for democracy in post-socialist countries because "cohort replacement reflects the socialization of younger cohorts" (Voicu 2010).

- Thus, method of linear decomposition **can display profound patterns within observed social change**.

Testing the hypothesis

• The research hypothesis is tested via binary logistic regression model: statistical significance of the coefficients of the predictors (the slopes in regression equation) that represent a component of intracohort change and a component of cohort replacement will indicate whether the change in materialist/post-materialist values was due to any of these components.

• If the regression coefficient of cohort replacement is significant for the increase of post-materialist values, then Inglehart's socialization hypothesis is correct for a specific period of time in a given society.

• Although in OLS regression by using component-difference equations (Firebaugh 1989) it is possible to estimate relative effect size of both components based on the coefficients values, unfortunately, the coefficients are not comparable in different logistic regression models (Mood 2010).

Statistical model

$$y = b_0 + b_1\_survey\_year + b_2\_cohort + \varepsilon \qquad (1)$$

The slopes from the equation (1) can be used "to estimate the intracohort change and cohort replacement components" (Firebaugh, 1989, p. 253).

$$P(y) = \frac{1}{1 + e^{-(b_0 + b_1\_survey\_year + b_2\_cohort + \varepsilon)}}, \qquad (2)$$

where $P(y)$ is probability of binary outcome of belonging to a group of post-materialists (materialists), b_0 is log odds of belonging to the group without predictors in the model, b_1 is log odds ratio of belonging to the group for change in the survey year (time variable), b_2 is log odds ratio of belonging to the group for change in birth year (cohort variable), e is the base of natural logarithm, ε is error term.

Descriptive statistics

- Expected **differences** in number of pure post-materialists and materialists between European societies

- **Adverse tendencies of values change** in different countries between the mid of 1990's and 2008

- There is **no universal trend** (predicted by R.Inglehart and his collaborators) in values change and modernization in European societies

Percentage of post-materialists and matrialists in 16 European countries in 2008 (EVS wave 4)
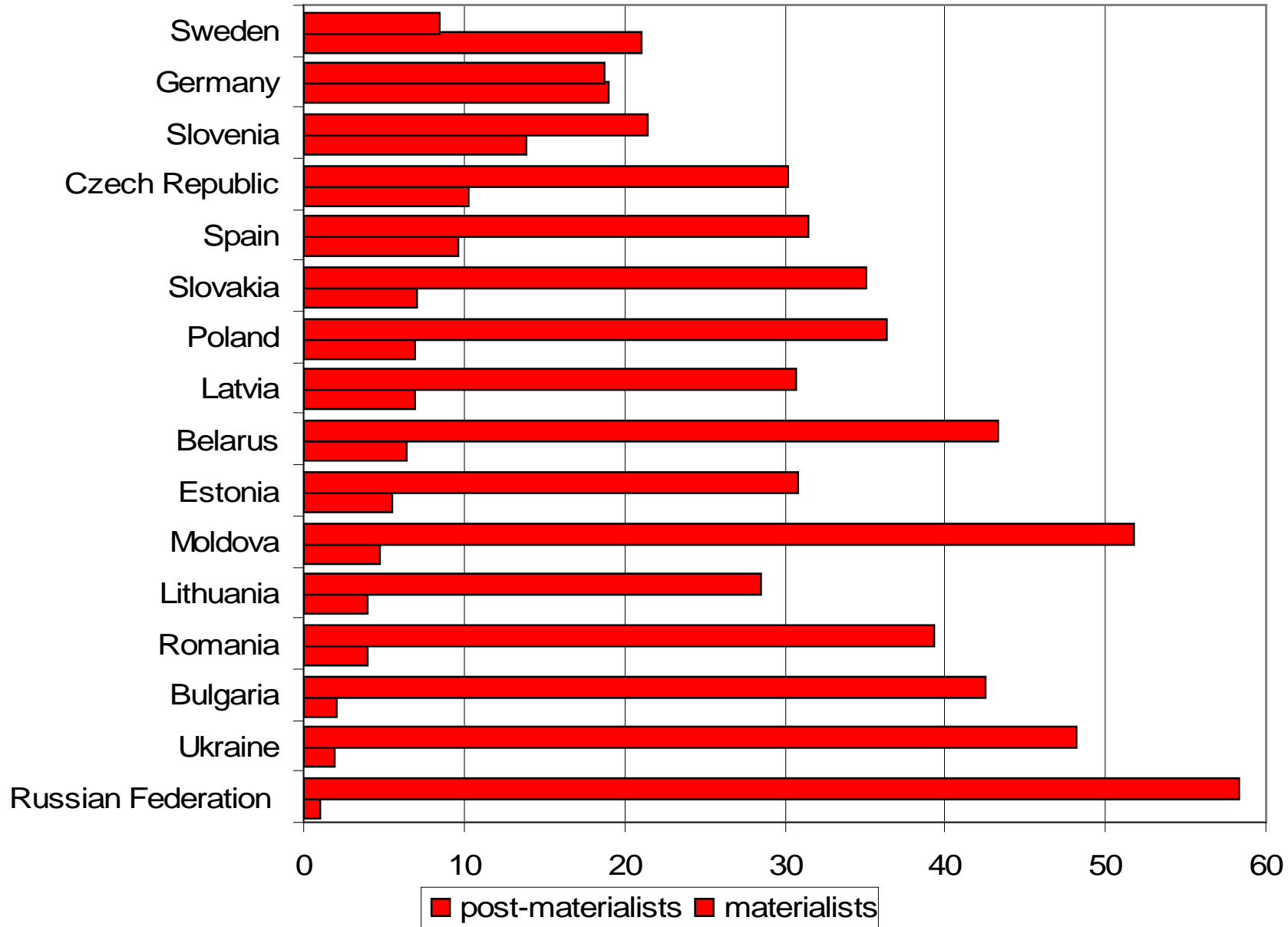
Relative change of groups of materialists
and post-materialists in 2008
compared to 1995-1997 (%)
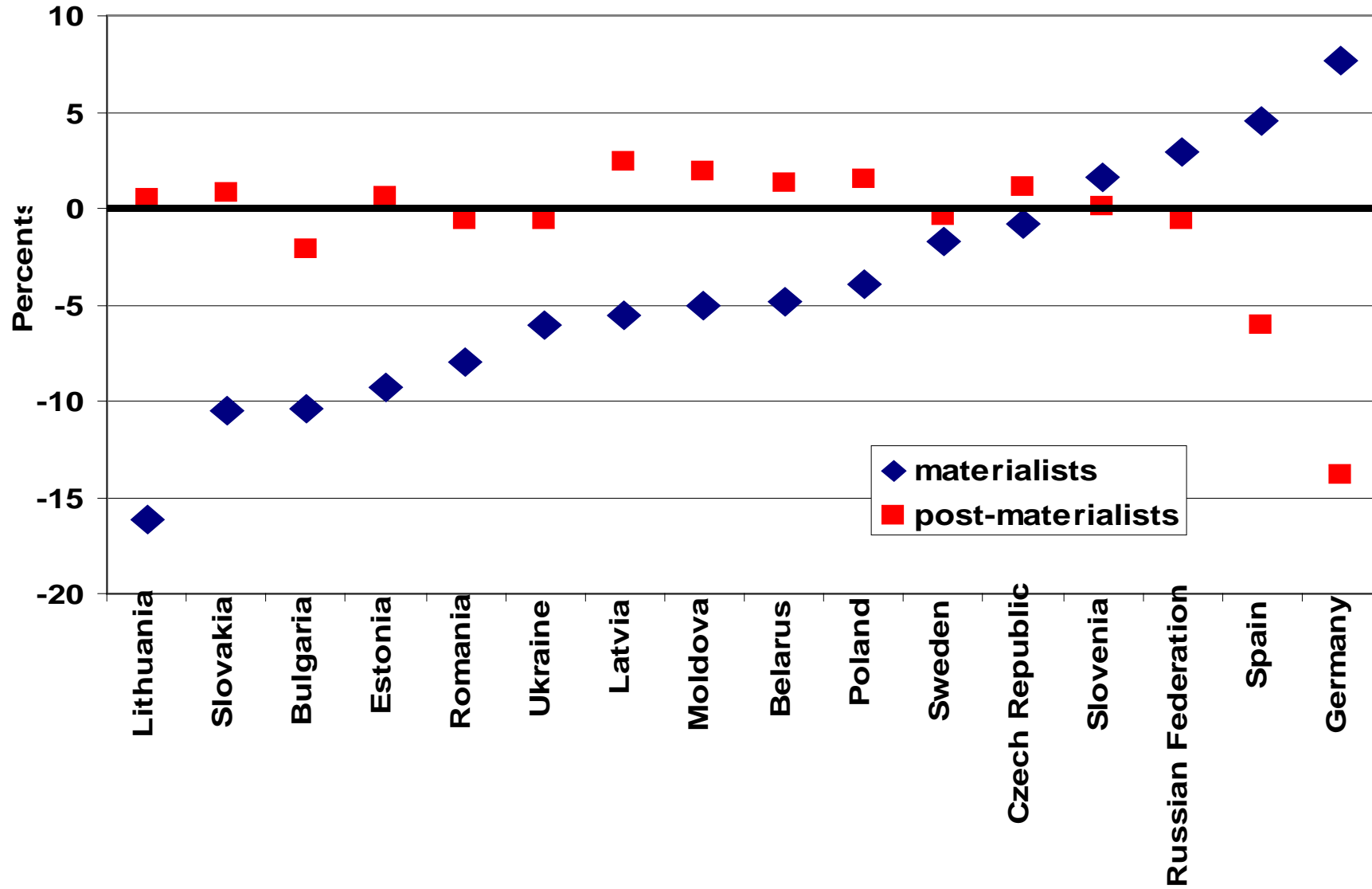
Linear decomposition of a trend analysis

- **What is behind the discrepant trend?**
- Within observed value change two components are estimated: cohort replacement effect and period (contextual) effect.
- The regression coefficients are the log odds ratios of belonging to post-materialist group (materialist group) – response variable that is regressed on predictors: year of birth (cohort) and year of survey (time variable for contextual effects).
- The sign of the significant coefficients indicates the ascending (if positive) or descending (if negative) post-materialist values trend.
- Reverse interpretation in model for materialist group.

Decomposition of contextual change and cohort replacement effects (post-materialist group, 1995-2008)
Binary logistic regression, unstandardized coefficients

Country	Change in group of post-materialists (%)	Intracohort change	Cohort replacement
Belarus	1.33	-0.014	0.029***
Bulgaria	-2.13	-0.076***	0.021***
Czech Republic	1.16	-0.006	0.015***
Estonia	0.63	0.015	0.023***
Germany	-13.84	-0.063***	0.025***
Latvia	2.4	0.034*	0.007
Lithuania	0.55	-0.029	0.022***
Moldova	1.89	0.03	0.018***
Poland	1.55	-0.007	0.020***
Romania	-0.64	-0.045**	0.026***
Russian Federation	-0.58	-0.038	0.027***
Slovakia	0.76	0.033*	0.026***
Slovenia	0.06	-0.014	0.018***
Spain	-6.08	-0.071***	0.028***
Sweden	-0.37	0.0001	0.009***
Ukraine	-0.59	-0.025	0.017**

*$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Decomposition of contextual change and cohort replacement effects (materialist group, 1995-2008)
Binary logistic regression, unstandardized coefficients

Country	Change in group of materialists (%)	Intracohort change	Cohort replacement
Belarus	-4.83	0.01	-0.024***
Bulgaria	-10.41	-0.006	-0.014***
Czech Republic	-0.81	0.020***	-0.017***
Estonia	-9.28	-0.032***	-0.014***
Germany	7.63	0.027***	-0.028***
Latvia	-5.54	-0.012	-0.012***
Lithuania	-16.17	-0.033***	-0.012***
Moldova	-5.1	-0.013	-0.017***
Poland	-3.95	0.001	-0.017***
Romania	-7.99	-0.015*	-0.012***
Russian Federation	2.89	0.033***	-0.020***
Slovakia	-10.53	-0.048***	-0.022***
Slovenia	1.66	0.024**	-0.017***
Spain	4.53	0.053***	-0.025***
Sweden	-1.68	-0.013	-0.010**
Ukraine	-6.03	-0.007	-0.011***

*$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Socialization hypothesis via cohort replacement effects on post-materialists and materialists in 16 European societies (1995-2008) with control for level of education.
Binary logistic regression, unstandardized coefficients

Country	Cohort replacement effect on post-materialist group	Cohort replacement effect on materialist group	Socialization hypothesis
Belarus	0.023***	-0.019***	TRUE
Bulgaria	0.018**	-0.009***	TRUE
Czech Republic	0.014***	-0.015***	TRUE
Estonia	0.021***	-0.012***	TRUE
Germany	0.020***	-0.022***	TRUE
Latvia	0.006	-0.011***	PARTLY TRUE
Lithuania	0.018**	-0.008**	TRUE
Moldova	0.012*	-0.011***	TRUE
Poland	0.017***	-0.012***	TRUE
Romania	0.018***	-0.004*	TRUE
Russian Federation	0.024***	-0.017***	TRUE
Slovakia	0.019***	-0.017***	TRUE
Slovenia	0.013***	-0.014***	TRUE
Spain	0.019***	-0.018***	TRUE
Sweden	0.004	-0.004	FALSE
Ukraine	0.013*	-0.009***	TRUE

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Conclusion

- The study of 16 European societies from 1995 till 2008 reveals **a general shift from materialist to post-materialist values** although this trend is obscured by adverse directions of intracohort values changes in some European societies.

- The linear decomposition analysis showed that **Inglehart's socialization hypothesis** (Inglehart 1990) **on values change was true for most** selected West European and East European countries. Therefore, this is **a universal process**.

- Special case of advanced society (*Sweden*).

- **The study supports modernization model** by R.Inglehart and his collaborators if assume that emancipative cultural values (motives of choice) are formed via socialization process and remain relatively stable during the life course.

- The model can be amended **by incorporation of contextual change** which has strong effect on values and often overpowers socialization effect of younger cohorts.