HUMAN EMPOWERMENT AND PARADOXES OF TRUST: A MULTI-LEVEL ANALYSIS

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Abstract

This study describes the relationships between particularized and generalized trust in the light of the Inglehart and Welzel`s human empowerment theory. In comparison to the previous study of Delhey and Welzel, current investigation presents several new insights. First, we differentiate particularized-generalized and ingroup-outgroup trust. Second, particularized trust has strong positive influence on generalized trust at the country and individual level. Third, all components of human empowerment have non-linear relations with particularized and generalized trust. Fourth, as well as particularized trust, open-access activities, emancipative values, confidence in institutions, connected membership and education are the main determinants of trust in strangers. Fifth, their impact differs in countries with low, middle and high level of human empowerment.

Key words: generalized trust, particularized trust, ingroup trust, outgroup trust, trust theories, human empowerment, multi-level modeling

Introduction

Scientists traditionally consider generalized trust as a lubricant for social cooperation. A great number of its plausible outcomes are widely recognized. Trusting societies are wealthier, have more effective institutions and higher levels of subjective well-being (Beugelsdijk, Groot, & Van Schaik, 2004; Fukuyama, 1995; Inglehart & Welzel, 2005; Knack & Keefer, 1997; Rothstein & Stolle, 2008; Rothstein & Uslaner, 2005; Zak & Knack, 2001) Contrasting with the uniform emphasis on the importance of generalized trust, there is still no universally accepted view of what trust is and what is crucial for its generating. In the vast literature one can find a wide range of empirical studies describing the influences of different variables from optimism, education and civic activity to inequality, ethnic diversity and institutions (see recent reviews: (Nannestad, 2008; Stolle, 2002)

The current study focuses on the interlink between generalized and particularized trust. For many years this question has not been investigated in a broad cross-cultural context. To our best knowledge, the only exception is recently published article of Delhey and Welzel (Delhey & Welzel, 2012). They identify two key approaches to the trust relations and label them as antagonism theory and alliance theory (Delhey & Welzel, 2012). The first approach emphasizes the negative nature of this interlink and treats intensive particularized trust as the "dark side" of social capital. Advocates of the second approach, on the contrary, see successful and trusting

interactions with close people as "schools of generalized trust". Using the fifth wave of the World Values Survey Delhey and Welzel proved the validity of the second theory at the country and individual level as well.

Their research is the starting point for the current investigation. We continue their work in several directions. First, we incorporate into analysis trust theories suggested by Delhey and Newton (Delhey & Newton, 2003). Second, Delhey and Welzel use multilevel regression models without cross-level interactions. We include the interaction term in the models and demonstrate how country conditions moderate the impact of individual characteristics. Third, Delhey and Welzel speak about positive association between ingroup and outgroup trust. In order to reduce complexity they created two additive indexes, which consisted of three indicators each. Index of ingroup trust was a combination of trust in family, neighbors and people a person known personally. Index of outgroup trust was an average of trust in people one met for the first time, trust in people of another nationality and trust in people of another religion. We argue that these measures let to draw conclusions about particularized and generalized trust.

Scholars usually define generalized trust as trust in people in general and consider strangers and members of another social group as referents of generalized others. In contrast, particularized trust is trust in familiar people or in a group a person belongs to. Obviously, these definitions equalize ingroup-outgroup and known-unknown dimensions. Although they are rather close to each other, they are not identical.

On the one hand, the circle of "familiar" people is rather wide. It includes family, relatives, friends, neighbors, course-mates, co-workers and so on and so forth. "Known people" may equally refer to ingroup or outgroup or to those who cannot be classified into these categories at all. Further, although ingroup members have shared «we» identity, which provides the feeling of mutual interdependence, they do not necessarily know each other (Brewer, 1999). Only in relatively small groups intensive social ties may create bounds for expanding of social capital. To test this hypothesis we need adequate indicators of strong ingroup ties. Trust in family is, no doubt, that very indicator. It is good enough by theoretical reasons, but its empirical utilization raises new questions. In the 5th wave of the World Values Survey this variable has low variance. If we exclude family from ingroup trust index we will lose nothing. Thereby positive correlation between Delhay and Welzel`s trust measures is mostly provided by trust in people known personally and trust in neighbors. Trust in neighbors, in turn, is an ambiguous indicator of ingroup solidarity. It simultaneously correlates almost at the same level with known and unknown people at the individual and country level as well.

On the other hand, "they" or "outgroups" appears when social tension or social conflict emerges. From this point of view trust in people of another nationality and religion indicates

tolerance. Our analysis demonstrates that in all countries from the fifth round of the WVS the level of tolerance is higher than level of trust in unknown people (Almakaeva, unpublished data). Consequently, tolerance may exist without trust in strangers. Trust in strangers thus is more inclusive indicator.

Taking all things together, we would like to articulate two things. First, trust items from the fifth way of the WVS are more suitable to investigate the relations between particularized and generalized trust than relations between ingroup and outgroup trust. Second, trust in people one knows personally and trust in people one meets for the first time are the best measures of particularized and generalized trust. It is necessary to incorporate them into the current research and test how these new measures will change the results presented in the previous work.

In order to achieve this goal, we organize this paper into several sections. The first part we devote to the theories of trust origin suggested by Delhey and Newton. In the second section we describe datasets, main variables and methods. In the last part we draw conclusions and discuss main findings.

Six theories of trust origin

In this part we follow Delhey and Newton`s scheme (Delhey & Newton, 2003). Stressing the multidimensional nature of trust, they classify the scope of existing studies into six theories at three levels:

1. **Individual**
   - Personality theory
   - Success and well-being theory

2. **Social**
   - Networks theory
   - Voluntary organizations theory
   - Community theory

3. **Societal**
   - Societal conditions theory

Within the framework of personality theory, trust is an individual's trait learned in early childhood and slowly modified by adult experience. It is part of a broader syndrome of personal characteristics such as optimism or locus of control. Delhey and Newton refer this theory as "Erikson-Allport-Cattell-Uslaner" approach (Delhey & Newton, 2003). Indeed, all these authors emphasize the importance of childhood experience for generating trust in strangers. Nevertheless, their approaches differ. According to Erikson, Allport and Cattell trust has a

psychological nature. From this point of view it is "trustfulness" not trust as such. Uslaner supports moralistic concept of trust. Moralistic trust is rooted in the belief that other people belongs to the same moral community, share common values and for these reasons will not take advantage of one`s act of trust. For Uslaner trust is a moral norm to treat people as if they are trustworthy. Children interiorize it in the socialization process (Uslaner, 2002).

Unlike personality theory, success and well-being theory emphasizes the importance of life experiences in generating trust. The main idea of this approach is rather simple. Success and high social status usually lead to a greater level of generalized trust. Traumatic life experience and scant resources, on the contrary, result in the decrease of trust in strangers (Delhey & Newton, 2003).

Voluntary organization theory is one of the most debatable approaches in the social capital literature. Traditionally, scientists considered voluntary associations as grounds where a person could interact with unknown people and members of so called outgroups. They treat such interactions as schools of generalized trust (Putnam, Leonardi, & Nanetti, 1994). Unfortunately, several decades of discussions have not provided us with conclusive evidence on relationships between trust and civic activity. We see two reasons that cause this situation. First, there are several classifications of civic engagement and, as a result, several ways to operationalize it.

Paxton divides organizations into connected and isolated types. The former refers to the membership in several associations, the latter – to the membership in a single one. Her results indicate that at the country-level connected civic activity facilitates general trust while isolated slightly erodes it. At the individual level both type of membership influences generalized trust positively (Paxton, 2007). Wollebæk and Strømsnes point out that scope of civic associations is more important than types of organizations and level of involvement (Wollebaek & Stromsnes, 2007). Welzel, Inglehart and Deutsch stress underestimated role of open-access activities – petitions, demonstrations, boycotts (Welzel, Inglehart, & Deutsch, 2005). Indeed, in his research Delhey and Welzel demonstrate a positive effect of such activities on generalized trust (Delhey & Welzel, 2012).

Welzel, Inglehart and Deutsch also provide classification into utilitarian and sociotropic associations. Utilitarian organizations, such as political parties or labor unions, pursue group-specific interests. Sociotropic organizations, e.g. charitable or environmental associations, are beneficial for all members of society and in this way may enlarge social capital. They detected positive correlation between sociotropic activity and trust in four of five groups of countries. In low income countries the interlink was weak, but negative (Welzel, Inglehart, & Deutsch, 2005).

Second, disputing the casual arrow from participation to trust, Uslaner, Rothstain, Stolle stress the problem of self-selection. In their opinion, it is the trust that produces higher rates of

formal membership not the other way around. Individuals in voluntary organizations already have higher level of trust which encourages them in civic activity (Rothstein & Stolle, 2008; Uslaner, 2002). The question is why individuals with higher level of trust have higher levels of civic engagement? We argue that people with higher level of trust have specific values, which promotes their civic engagement. Indeed, recent research of Delhey and Welzel demonstrated positive effect of emancipative values on trust. It was stronger that the impact of formal membership (Delhey & Welzel, 2012).

Community theory focuses on characteristics of local communities such as size of the city, density of the population, safety of the community etc. (Delhey & Newton, 2003). Social network theory we described in the Introduction to the current paper. Delhey and Welzel labeled it as alliance theory. It stresses the importance of social contacts with circle of familiar people for learning trust in strangers (Delhey & Welzel, 2012). We see it as main independent variable.

Societal conditions theory concentrates at the macro-level. Delhey and Newton operationalize it through subjective assessments of conflicts on society, public safety, political freedom and satisfaction with democratic institutions. With respect to the main focus of the current research it is productive to adopt at the country-level the human empowerment theory developed by Inghlehart and Welzel (Inglehart & Welzel, 2005).

This approach represents the revised version of modernization theory and integrates three aspects of human development: economic, cultural and institutional. Economic development produces a number of plausible outcomes. It reduces poverty and brings the feeling of existential security. It increased the level of formal education and access to information. The growth of occupational specialization and social complexity results in diversification of human interaction which liberates people from "prefixed social roles and social ties, making them autonomous in defining their social roles themselves and in shaping their social ties to other people" (Inglehart, Welzel, 2005 p. 24). In other words, it weakens close "ingroup" relations and replaces them by "outgroup" ones. Indeed, Delhey and Welzel showed positive effect of human empowerment on outgroup trust (Delhey & Welzel, 2012).

Data and variables

Datasets

For the empiric analysis, we utilize two different datasets. Individual data come from the fifth round of the World Values Survey, fielded in 2005-2008[1] (World, 2009). The WVS asks trust questions in 52 countries from all parts of the globe. The broad sample of the fifth wave

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[1] Data and documentation can be downloaded from the official site http://www.worldvaluessurvey.org/

covers Europe, including ex-communist bloc, Asia, Africa, Latin America, North America and Australia. The average number of respondents in each country is 1410. Quality of Government Dataset[2] provides country statistic, collected in the same time as individual data (Teorell et al., 2011). We rescaled all variables from minimum 0.0 to maximum 1.0.

Main variables

The main dependent variable is generalized trust; main independent variables are particularized trust and human empowerment. Unlike Delhey and Welzel (Delhey & Welzel, 2012), we do not create additive indexes of trust. Ingroup-outgroup and particularized-generalized trust represent two distinct dimensions. We concentrate at the second dimension and adopt two single questions: trust in people one knows personally and trust in people one meets for the first time. They have four-point scales from "trust completely" to "do not trust at all".

Human empowerment is the key moderator at the country-level. To measure it, we use a procedure developed by Delhey and Welzel. According to the theory, they operationalize economic, cultural and institutional components of empowerment through gross domestic product per capita in purchasing power parities, emancipative values, and "voice and accountability" index respectively (Delhey & Welzel, 2012). "Voice and accountability" is one of six Governance Indicators developed by the World Bank. It captures "perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media" (Kaufmann, Kraay, & Mastruzzi, 2008, p.7). Kaufmann and his colleagues summarize about twenty different sources of information. A greater part of them comes from expert assessments (Kaufmann, Kraay, & Mastruzzi, 2008). Consequently, "voice and accountability" represents complex and objective measure of democratic effectiveness.

Emancipative values, according to Inglehart and Welzel, comprise a combination of four attitudinal components. They are personal autonomy; tolerance towards divorce, abortion, homosexuality; gender equality; freedom of speech, participation in government decisions, participation in decisions about jobs and local communities. These four orientations, as well as emancipative values, are all averaged additive indexes (Welzel & Inglehart, 2010). Table 2 in Appendix A illustrates the construction of the emancipative values at the individual level. At the macro level, we compute means for each country, which participate in the fifth wave of the WVS.

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[2]Data and documentation can be downloaded from the Quality of Government Institute`s official site http://www.qog.pol.gu.se/

Along with particularized trust, we incorporate into investigation fourteen control variables: 1. gender, 2. age, 3. education, 4. locus of control, 5. happiness, 6. life satisfaction, 7. financial satisfaction, 8. household income, 9. unemployed status, 10. connected membership in civic organizations, 11. open-access activities, 12. emancipative values, 13. tolerance towards people of different origin, 14. confidence in different institutions.

Most of the variables correspond to the trust theories suggested by Delhey and Newton. As noted earlier, they identify six possible approaches and label them as personality theory, success and well-being theory, voluntary organization theory, community theory and, at last, societal conditions theory (Delhey & Newton, 2003). Social network theory or alliance theory in Delhey and Welzel`s terms we treat as key independent variable (Delhey & Newton, 2003; Delhey & Welzel, 2012).

Our operationalization of trust theories differs from the operationalization of Delhey and Newton. We realize this limitation, but we have several reasons, which justify this decision. First, to test their theories Delhey and Newton utilize 33 independent variables. The fifth way of the WVS does not contain all the necessary items. Second, they measure generalized trust through traditional question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". Today its validity meets severe criticism (Fukuyama, 2001; Miller & Mitamura, 2003; Sturgis & Smith, 2010; Delhey, Newton, & Welzel, 2011; Torpe & Lolle, 2011). As we mentioned in the Introduction trust in unknown people is more acceptable indicator of generalized trust. Third, multi-level models do not converge with a huge number of independent variables in the estimation. Forth, we use additional variables, which may have a greater impact on generalized trust.

Follow Delhey and Newton approach, we see age, gender and educational level as standard controls. To test personality theory we use locus of control most commonly defined as a belief that a person can control his life and events happening around him. In accordance with this definition, we measure locus of control through the question:" Some people feel they have completely free choice and control over their lives while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means "no choice at all" and 10 means "a great deal of choice" to indicate how much freedom of choice and control you feel you have over the way your life turns out". This measure is relatively close to the "influence on today`s problems" presented in the Delhey and Newton study (Delhey & Newton, 2003).

In order to operationalize success and well-being theory, we incorporate five of fourteen indicators from their work. These are happiness, life satisfaction, financial satisfaction,

household income and unemployed status. We do not incorporate into the analyses subjective social class so as this variable has a lot of missing countries.

As mentioned before, there are several ways to operationalize formal membership. We follow Paxton, Delhey and Welzel`s approach (Paxton, 2007; Delhey & Welzel, 2012) and adopt connected membership in civic associations for the voluntary organization theory. We eliminate isolated membership (membership in one association). It was insignificant in Delhey and Welzel models. We also enrich voluntary organization theory with additive index of open-access activities (petitions, peaceful demonstrations, boycotts) and emancipative values (Delhey & Welzel, 2012).

Town size reflects the community theory. This variable has a lot of missing countries, but this is the only community indicator evaluable in the fifth round of the WVS. That is why we decided to test it in the study.

In their original work Delhey and Newton measure the impact of the societal conditions theory through perceptions of social conflicts, satisfactions with public safety, satisfaction with democracy and achievement of public goods (Delhey & Newton, 2003). Unfortunately, the questionnaire of the fifth wave does not contain any of these indicators. That is why as proxies for this approach we see tolerance towards people of different origin and confidence in different institutions. Both measures are averages comprised of several indicators (Table 1 in Appendix A).

Control variables at the country level

We use country means of connected membership and open-access activities to control the influence of human empowerment. We do not include Protestant and Confucianism legacy, religious fractionalization, pathogen history and Gini index. Delhey and Welzel found that human empowerment, ingroup trust and civic engagement absorbed their influence (Delhey & Welzel, 2012). Preliminary analysis demonstrated the robustness of such effect with modified measures of trust. Therefore, we dropped five additional controls from the final models.

Methods

The present study investigates relationships between different trust types at the macro and micro level. We start from the country-level regressions and then proceed to multi-level models. We utilize multi-level linear regressions with random effects and cross-level interactions. They let to examine how country conditions moderate individual-level determinants of generalized

trust. The multi-level analysis follows several stages. First, we test models that contain known people trust and each of fourteen additional indicators. Second, we run models with known people trust and all indicators within each theory simultaneously. We will examine only those variables, which keep significance at the previous step. Third, we test significant indicators from all theories against each other.

To check if individual determinants remain significant in countries with different stages of modernization, we rescale the measure of human empowerment. Then, estimate models with three levels of human empowerment: low, middle and high. Low empowerment corresponds to Vietnam and Egypt, middle level corresponds to Mexico, high level corresponds to Norway. The value of human empowerment is equal to zero for each level. To achieve this result, we extract country specific values of human empowerment from the overall empowerment index (Table 4 in Appendix A).

Results and discussion
Country-level evidence

Particularized and generalized trust demonstrate strong linear relations (fig.1). Particularized trust explains about 66% of variation of generalized trust. If a country trusts more in known people, it trusts more in strangers as well. Sweden and Norway show the highest level of generalized trust. Finland, Switzerland, Australia, Canada, United Kingdom and France follow the leaders and demonstrate relatively high level of generalized trust too. Peru has the lowest scores of trust in unknown people. Positive interlink between two types of trust is not surprising and seem to be consistent with previous studies (Delhey & Welzel, 2012; Uslaner, 2002).

Figure 1 about here

Figure 2 plots the distribution of countries in the trust and human empowerment space. It is apparent that both types of trust have non-linear relations. The level of particularized and generalized trust remains stable until the modernization process reaches a certain point. Then, all types of trust simultaneously increase. This pattern is robust for all three components of human empowerment process: economic, cultural and institutional respectively (see Appendix B). Quadratic regressions with the overall index of human empowerment explain 60% of variation of trust in strangers and 51% of variation of trust in known people. In general, cumulative effect of human empowerment on generalized trust is greater than the effect of particularized trust.

Figure 2 about here

Open-access activities (petitions, boycotts, demonstrations), as well as human empowerment, have non-linear relations with generalized trust (figure 3). They explain 47% of variation. Their impact on particularized trust is more linear and explains 32% of variation. Connected membership has the weakest relations with trust in strangers and explains only 10% of changes. Unlike all previous variables, it does not affect particularized trust at all (figure 4).

Figure 3 about here

Figure 4 about here

Table 1 represents regressions models with all predictors. Human empowerment and open-access activities strongly correlate. That is why we do not test them in the same models.

Table 1 about here

All determinants from the table 1 keep their significance. Human empowerment adds 9% of explained variance of trust in familiar people. Open access activities add about 6% and connected membership about 4%.

The findings of the current study are consistent with those of Delhey and Welzel (Delhey & Welzel, 2012). Nevertheless, we would like to articulate two new points. First, human empowerment, open-access activities and trust in known people mostly, but not totally, absorb the influence of each other. As a result, along with generalized trust human empowerment and open-access activities affect particularized trust. Though in all models from table 1 the impact of trust in known people is greater, we should not underestimate indirect effect of human empowerment and open-access activities on generalized trust. Second, we detect non-linearity in relations between two types of trust and human empowerment.

These results demonstrate that our interpretation of trust in known people as an indicator of particular but not ingroup trust was correct. Human empowerment weakens traditional ties, most commonly based on kinship (Inglehart & Welzel, 2005). Therefore, we could expect a decreasing or, at least, a fixed level of ingroup trust. Obviously, this is not the case. On the other hand, human empowerment promotes social interactions beyond traditional communities. From this point of view, the rise of trust in known people reflects the diversification of personal contacts.

The next step is to answer a question: why generalized trust has non-linear relations with human empowerment. Most likely, generalized trust does not arise immediately. After human empowerment starts, it needs some time to become a common practice. In other words, it will not increase without widespread norms of mutual trust in the country.

Particularized trust is one of the reasons that produce such a gap. It affects trust in strangers greatly and, at the same time, has non-linear relations with human empowerment. To

explain this non-linearity it is helpful to adopt the idea of distinction between the radius and the level of trust (Fukuyama, 2001; Delhey, Newton, & Welzel, 2011). In countries with low modernization the circle of familiar people is narrow though not necessarily bounded only by family and relatives. As human empowerment gains momentum, the radius of familiar people widens but the level of trust remains stable. Probably, the greater part of interactions with known people is still problematic to be a solid ground for the rise of trust. At the last stage of modernization wide radius comes along with high level of trust in known people. Successful and numerous social contacts with people one knows personally facilitate the generalizations of trust on unknown people. Unfortunately, we cannot test this hypothesis in the current study, mostly because we do not have valid indicators of radius of known people. Nevertheless, is an attractive field for future research.

In the conclusion of this section, we would like to turn back and pay attention to the paradox reflected at the figure 1 and 2. Some countries with the low human empowerment have larger scores of generalized trust than countries with high and middle. This mainly refers to Mali and Rwanda. Figure 1 shows that these countries occupy unexpectedly advantageous position. Their level of generalized trust is almost identical to the level of France and USA and higher than in Spain, Italy and Netherlands. Though we cannot explain such paradox within the framework of the current study it is, no doubt, worth investigating.

Multi-level evidence

Basic models with trust in known people and human empowerment as independent variables explain 14.3% of variation at the individual level and 51.5% at the country-level (table 1 in Appendix C). Trust in known people influences trust in strangers positively in countries at all stages of modernization. This effect remains stable for all models we test in the current study. Thirteen of fourteen additional predictors included in the basic model passed the significance test. The only exception was town size that reflects community theory.

Then, we tested every theory with trust in known people and control variables. Personality theory adds 1.6% of explained variance at the individual level and 5.8% of variance at the country level (table 5 Appendix C). Locus of control has a positive influence on trust in unknown people in countries with middle and high level of human empowerment, but this effect is not robust. It vanishes when we include all other variables into the estimation (table 2).

Success and well-being theory adds to basic model 2.0% of individual-level variation and 1.7% country-level variation (table 18 in Appendix C). Life satisfaction is not relevant for generating trust in strangers. Happiness and income influence trust in strangers positively only in

countries with high human empowerment. As well as locus of control, their effect is not robust and almost disappears while testing all determinants simultaneously (table 2). On the contrary, financial satisfaction affects trust in unknown people in a positive way in countries with low and middle empowerment. It has no impact in highly modernized countries. Unemployed status provides a weak, but unexpectedly positive effect in low modernized countries (table 3).

Voluntary organization theory demonstrates better results. Beyond trust in known people it explains 3.4% of variation at the individual level and 12.9% of variation at the country-level (table 19 in Appendix C). Connected membership and open-access activities become important in the countries with high level of human empowerment, emancipative values – in countries with high and middle level (table 3). Interestingly, that connected membership is the weakest predictor from this group. Tables 11-13 from Appendix C show that its impact on explained variance is comparably small. It adds 0.6% at the individual-level and 1.2% at the country-level. In turn, open-access activities and emancipative values explain 1.3% and 1.1% at the individual-level and 4.8% and 6.4% at the country-level correspondingly.

Social conditions theory adds 3.3% at the individual-level and 13.4% at the country-level. Confidence in different institutions keeps its significance for all countries. Its influence grows while human empowerment process gains momentum. Tolerance towards people of different origin influences trust in strangers at the middle and high level of empowerment, but its effect is small. It adds only 0.1% to explained variation at the individual-level and 0.4% at the country-level.

Education is the most influential determinant from the group of control variables. It adds 0.7% at individual and 3.4% at country-level. Its impact on trust in strangers is rather interesting. It is negative in the countries with low modernization and positive in the countries with high modernization. Age has positive effect in countries with middle and high modernization. Female gender affects trust in unknown people weakly and negatively.

Table 2 about here

Complex model with all significant predictors explains 20.0% of individual-level variation and 68.0% of country-level variation. If we include in the model the most influential variables, we lose only 1.4 % at the individual level and lose nothing at the country level (table 3). Consequently, trust in known people, open-access activities, emancipative values, confidence in institutions, connected membership, and education are the key determinants for trust in unknown people.

Table 3 about here

Interaction effects with human empowerment keep their significance for almost all variables from table 3. In countries with low modernization individual values, membership in

civic associations and open-access activities are not important. Country conditions adsorb their impact. At the high stage of modernization these characteristics become significant. Moreover, favorable climate created by the economic, cultural and institutional development, enhances their effect. The only exception in this trend is trust in known people. Its effect remains stables at every stage of human empowerment process.

Conclusion

In the current study we investigated how the human empowerment process influenceв the relations between particularized and generalized trust. As additional independent variables we testyв trust theories suggested by Delhey and Newton (Delhey & Newton, 2003).

Particularized trust kept strong positive impact on generalized trust at the country and individual level as well. All three dimensions of human empowerment had non-linear relations with both forms of trust. In comparison to human empowerment and open-access activities, connected membership had the weakest impact on generalized trust. We also detected this trend at the individual level.

Particularized trust, human empowerment and open-access activities partly absorbed the influence of each other. That means that we should not underestimate indirect effect of human empowerment and open-access activities on generalized trust. We also found a trust paradox. In such low modernized countries as Mali and Rwanda, the level of generalized trust was almost the same as France and the USA had.

At the individual level we did not find support for the community and personality theories. The evidence for the success and well-being theory was inconclusive. Income. happiness, life satisfaction did not affect generalized trust. Financial satisfaction was the only indicator that had positive impact, but it promoted generalized trust in countries with low and middle empowerment.

The best results demonstrated voluntary organization and societal conditions theories. Confidence in institutions had positive effect in all countries. Positive effect of connected membership and open-access activities was robust in highly modernized societies. Emancipative values had positive effect in countries with middle and high modernization. All these findings supported human empowerment theory.

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Figure 1

Particularized and generalized trust at the country-level[3]

Figure 2

Human Empowerment and Trust

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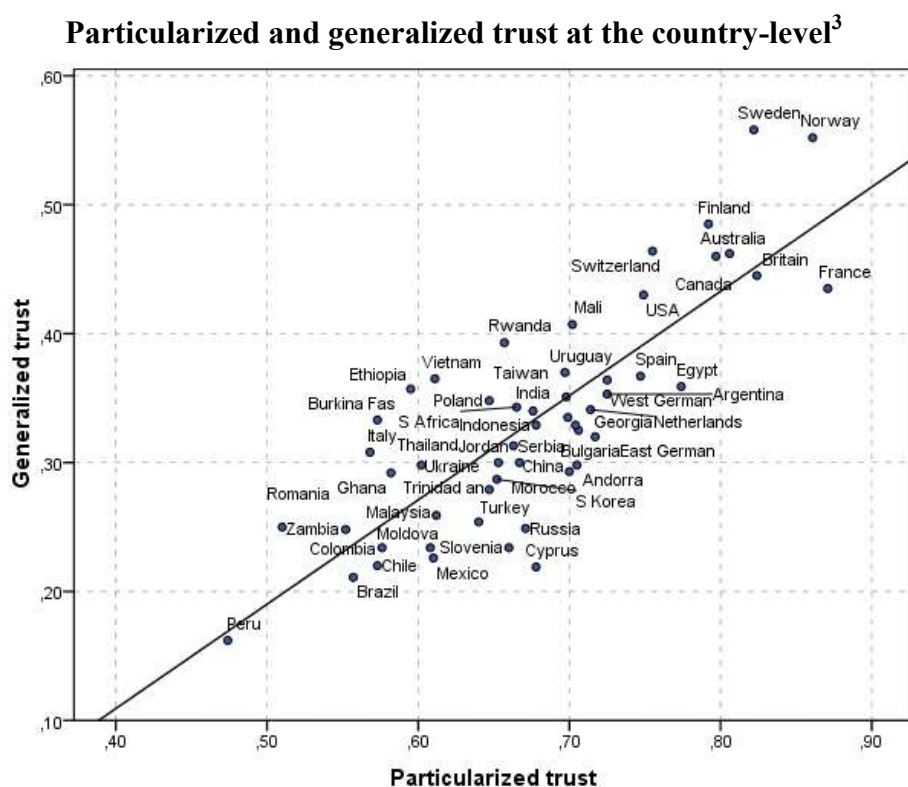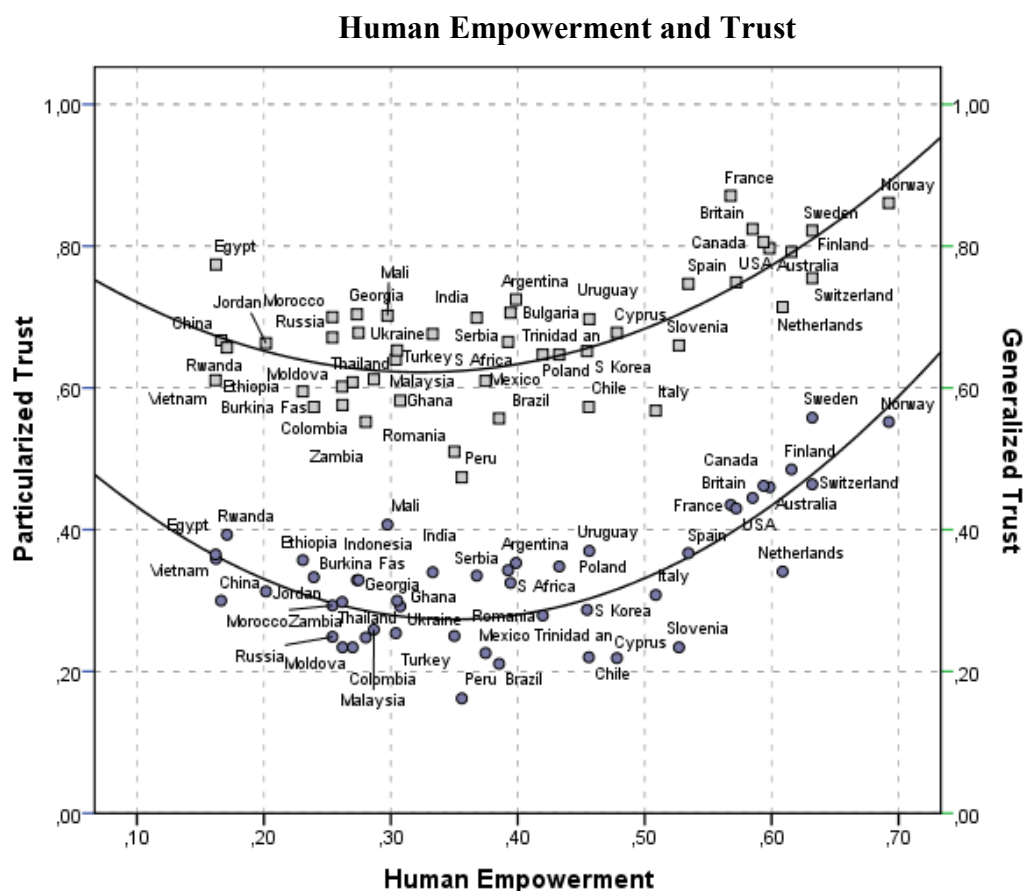
[3] Particularized and generalized trust measures are country means.

Figure 3

Open-access activities and trust

Figure 4

Connected membership and trust
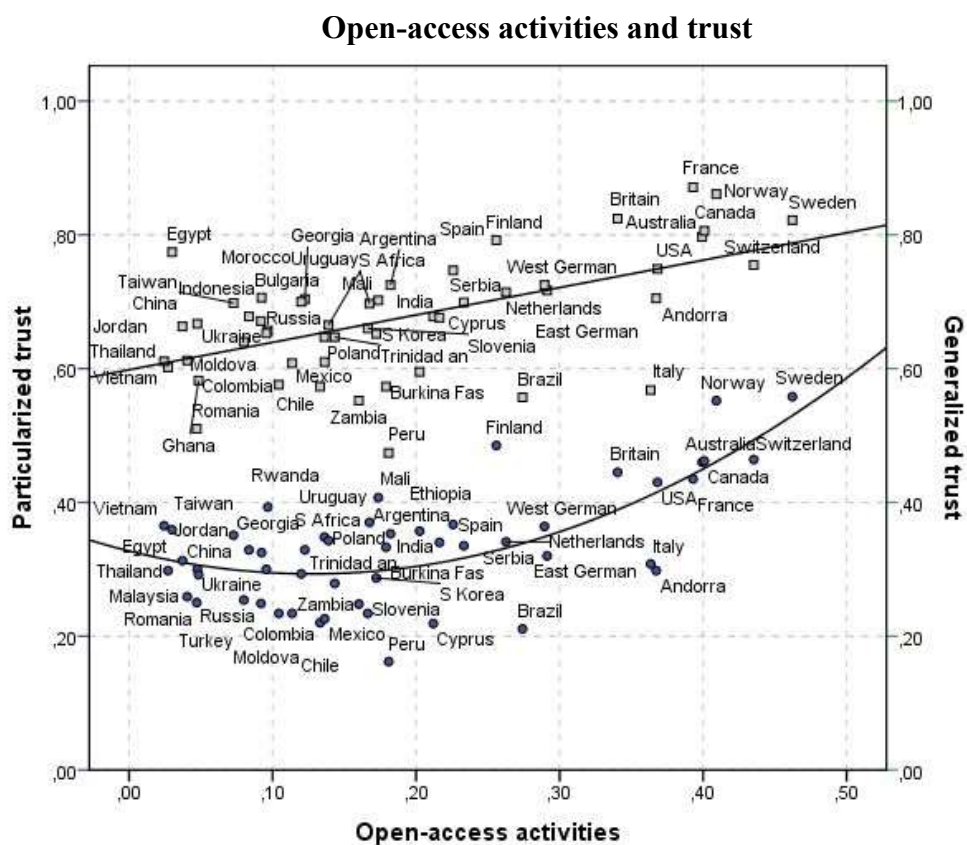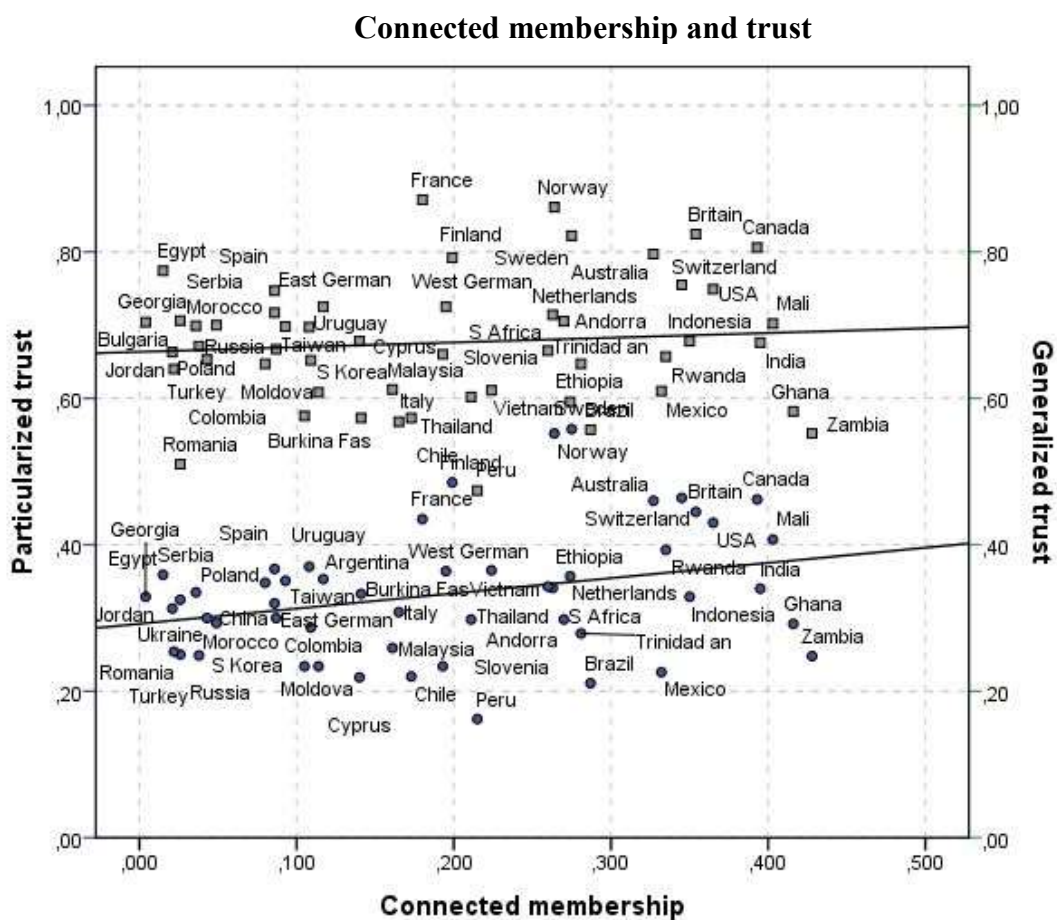
Table 1

Country-level regressions[4]

	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	Ins.	***	Ins.	Ins.	*
Known people trust	0.552***	0.794***	0.597***	0.632***	0.677***
Human empowerment	-1.795***		-1.627***		
Human empowerment^2	2.036***		1.786***		
Open access activities				-0.588*	-0.638**
Open access activities^2				0.851***	0.797**
Connected membership		0.231***	0.181**		0.182**
Adj. R^2	0.745	0.704	0.770	0.715	0.737
N of countries	48	52	48	52	52

*** *significant at the 0.001 level,* ** *significant at the 0.05 level,* * *significant at the 0.1 level*

Table 2

Multi-level regression models with significant predictors from all theories

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.062**	-0.070***	-0.265***
Emp.	-0.616***	-0.616***	-0.616***
Known trust	***0.308****	***0.293****	***0.270****
Emp.	ins	ins	ins
Locus of control	*ins*	*ins*	*ins*
Emp.	ins	ins	ins
Happiness	*ins*	*0.012**	*ins*
Emp.	ins	ins	ins
Fin. satisfaction	*0.059****	*0.032****	*ins*
Emp.	-0.126**	-0.126**	-0.126**
Income	*ins*	*ins*	*ins*
Emp.	ins	ins	ins
Unemployed	*0.016****	*ins*	*ins*
Emp.	-0.054*	-0.054*	-0.054*
Connected membership	*ins*	*ins*	*0.032****
Emp.	0.081***	0.081***	0.081***
Open- access activities	*ins*	*ins*	*0.036***
Emp.	0.085*	0.085*	0.085*
Emancipative values	**ins**	**0.085****	**0.179****
Emp.	0.297***	0.144***	0.297***
Confidence	**0.080****	**0.144****	**0.238****
Emp.	0.030***	0.030***	0.030***
Tolerance	**ins**	**0.017***	**0.045***
Emp.	0.090*	0.090*	0.090*
Female	***-0.011****	***-0.013****	***-0.012****
Emp.	ins	ins	ins

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[4] All coefficients are standardized solutions.

Age	*-0.044**	*0.068****	*0.235****
Emp.	0.526***	0.526***	0.526***
Education	*-0.031**	*ins*	*0.080****
Emp.	0.210***	0.210***	0.210***
Random effects			
Intercept	0.004***	0.004***	0.004***
Known trust	0.004***	0.004***	0.004***
Locus of control	0.003***	0.003***	0.003***
Happiness	0.001**	0.001**	0.001**
Fin. satisfaction	0.002***	0.002***	0.002***
Income	0.002***	0.002***	0.002***
Connected membership	0.0003**	0.0003**	0.0003**
Open access activities	0.001***	0.001***	0.001***
Emancipative values	0.002**	0.002**	0.002**
Confidence	0.004***	0.004***	0.004***
Tolerance	0.0004***	0.0004***	0.0004***
Age	0.004***	0.004***	0.004***
Education	0.002***	0.002***	0.002***
Exp. var.	20.0%	20.0%	20.0%
Exp. var.	68.0%	68.0%	68.0%
N ind.	47870	47870	47870
N country	45	45	45

Table 3

Final multi-level regression models

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.066***	ins	-0.079***
Emp.	-0.273***	-0.273***	-0.273***
Known trust	***0.300****	***0.300****	***0.301****
Emp.	ins	ins	ins
Connected membership	***ins***	***0.011****	***0.032****
Emp.	0.067**	0.067**	0.067**
Open-access activities	***ins***	***0.015****	***0.045****
Emp.	0.094**	0.094**	0.094**
Emancipative values	***ins***	***0.073****	***0.138****
Emp.	0.207***	0.207***	0.207***
Confidence in institutions	***0.078****	***0.146****	***0.248****
Emp.	0.323***	0.323***	0.323***
Education	***-0.022****	***0.012****	***0.063****
Emp.	0.161***	0.161***	0.161***
Random effects			
Intercept	0.003***	0.003***	0.003***
Known trust	0.004***	0.004***	0.004***
Connected membership	0.001**	0.001**	0.001**
Open-access activities	0.001***	0.001***	0.001***
Emancipative values	0.003***	0.003***	0.003***
Confidence in institutions	0.004***	0.004***	0.004***

Education	0.001***	0.001***	0.001***
Exp. var.	18.6%	18.6%	18.6%
Exp. var.	68.0%	68.0%	68.0%
N ind.	62624	62624	62624
N country	48	48	48

Individual-level variables

Variables and Indexes	The procedure of construction	Questions in WVS5	Scale
Generalized trust	Single question	I 'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? V128. People you meet for the first time	4-point scale from 0 to 1
Particularized trust	Single question	I 'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? V127. People you know personally	4-point scale from 0 to 1
Control over one`s life	Single question	V46. Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means "no choice at all" and 10means "a great deal of choice" to indicate how much freedom of choice and control you feel you have over the way your life turns out.	10-point scale from 0 to 1
Happiness	Single question	V10. Taking all things together, would you say you are: – Very happy – Rather happy – Not very happy – Not at all happy	4-point scale from 0 to 1
Life satisfaction	Single question	V22. All things considered, how satisfied are you with your life as a whole these days?	10-point scale from 0 to 1

Financial satisfaction		V68. How satisfied are you with the financial situation of your household?	10-point scale from 0 to 1
Education	Single question	V238. What is the highest educational level that you have attained?	9-point scale from 0 to 1
Open-access activities	Additive index	Have you or have you not done any of these activities in the last five years? V100. Signing a petition V101. Joining in boycotts V102. Attending peaceful demonstrations	Dummy, 0 – no, 1 – yes
Connected membership	Index	Now I am going to read off a list of voluntary organizations. For each one, could you tell me whether you are an active member, an inactive member or not a member of that type of organization? V24. Church or religious organization V25. Sport or recreational organization V26. Art, music or educational organization V27. Labor Union V28. Political party V29. Environmental organization V30. Professional association V31. Humanitarian or charitable organization V32. Consumer organization	Dummy 1 - if a person is a member of two or more civic associations 0 – if a person not a member or member of one civic association
Confidence in different institutions.	Additive index	I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all? V132. The armed forces V136. The police V137. The courts	4-point scale from 0 to 1

		V138. The government (in your nation's capital) V139. Political parties V140. Parliament V141. The Civil service V145. Charitable or humanitarian organizations	
Tolerance towards people of different origin	Additive index	On this list are various groups of people. Could you please mention any that you would not like to have as neighbours? V35. People of a different race V37. Immigrants/foreign workers V39. People of a different religion V42. People who speak a different language	Dummy, 0 – mentioned, 1 – not mentioned
Town size	Single question	V255	8-point scale from 0 to 1
Unemployment	Single question	V241 Are you employed now or not?	Dummy, 0 – not unemployed, 1 – unemployed
Age	Single question	V237	Normalized from 0.15 to 0.98
Gender	Single question	V235	1-female, 0-male

Table 2

Operationalization of emancipative values [5]

Variables and Indexes	The procedure of construction	Questions in WVS5	Scale
Personal autonomy	Additive index	Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? V12. Independence, V15. Imagination V21. Obedience	Dummy, 1 – mentioned, 0 – not mentioned (for Independence and Imagination) Dummy, 0 – mentioned, 1 – not mentioned (for Obedience)
Lifestyle tolerance	Additive index	Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between. V202.Homosexuality V203.Prostitution V204.Abortion V205.Divorce	10-point scale from 0 to 1
Gender equality	Additive index	For each of the following statements I read out, can you tell me how strongly you agree or disagree with each. V61. On the whole, men make better political leaders than women do. V62. A university education is more important for a boy than for a girl. V44. When jobs are scarce, men should have more right to a job than women.	4-point scale from 0 to 1 (for V.61 and V.62) 3-point scale from 0 to 1 (for V.44)

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[5] Source: Welzel & Inglehart, 2010.

People`s voice	Additive index of Priority on People's National Say	V. 71 You had to choose, which one of the things on this card would you say is most important? V. 72 And which would be the next most important? Choice of "Giving people more say in important government decisions" item	3-point scale from 0 (absence of choice) to 1 (first choice)
	Additive index of Priority on Protecting Freedom of Speech	V. 71 You had to choose, which one of the things on this card would you say is most important? V. 72 And which would be the next most important? Choice of "Protecting freedom of speech" item	3-point scale from 0 (absence of choice) to 1 (first choice)
	Additive index of Priority on People's Local Say	V69. People sometimes talk about what the aims of this country should be for the next ten years. On this card are listed some of the goals which different people would give top priority. Would you please say which one of these you, yourself, consider the most important? And which would be the next most important? Choice of "Seeing that people have more say about how things are done at their jobs and in their communities" item	3-point scale from 0 (absence of choice) to 1 (first choice)

Table 3

Operationalization of human empowerment[6]

Variables and Indexes	The procedure of construction	Measure	Scale
Economic	Country statistic	GDP PPP per capita	Normalized from 0 to 1
Cultural	Country-means of emancipative values	See table 2 this Appendix	Normalized from 0 to 1
Institutional	Country statistic	"Voice and accountability" from Governance Indicators of World Bank	Normalized from 0 to 1

Table 4

Additional country-level variables

Variables and Indexes	The procedure of construction	Measure	Scale
Connected membership	Country-means of active membership index	See table 1 this Appendix	Normalized from 0 to 1
Open-access activities	Country-means of open-access activities index	See table 1 this Appendix	Normalized from 0 to 1
Low human empowerment	Human empowerment – Human empowerment in Vietnam or Egypt	See table 3 this Appendix	From 0 to 0,530
Middle human empowerment	Human empowerment – Human empowerment in Mexico	See table 3 this Appendix	From -0.213to 0.317
High human empowerment	Human empowerment – Human empowerment in Norway	See table 3 this Appendix	From -0.530 to 0

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[6] Source: Delhey & Welzel, 2012.

Figure 1

Trust and economic dimension of human empowerment
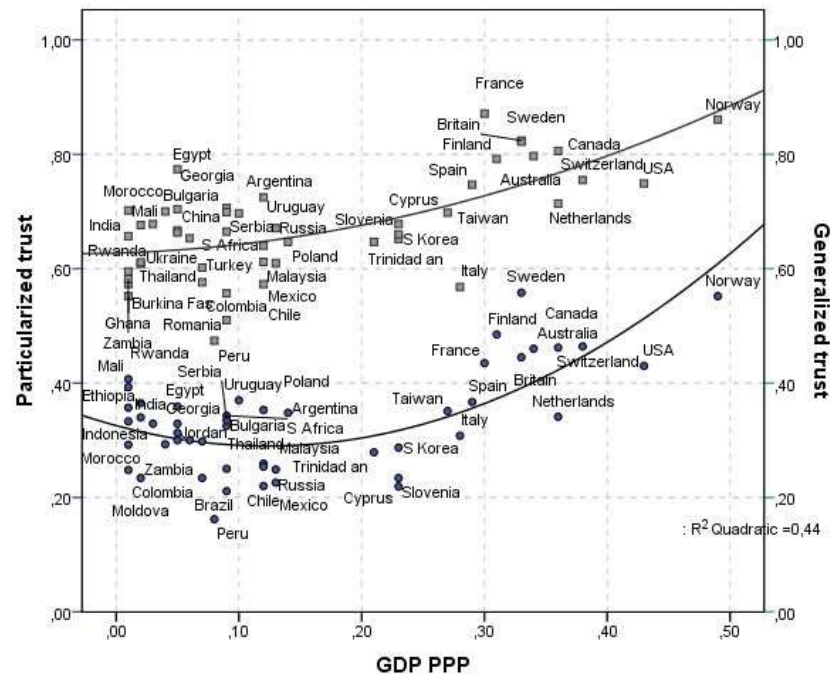
Figure 2

Trust and cultural dimension of human empowerment
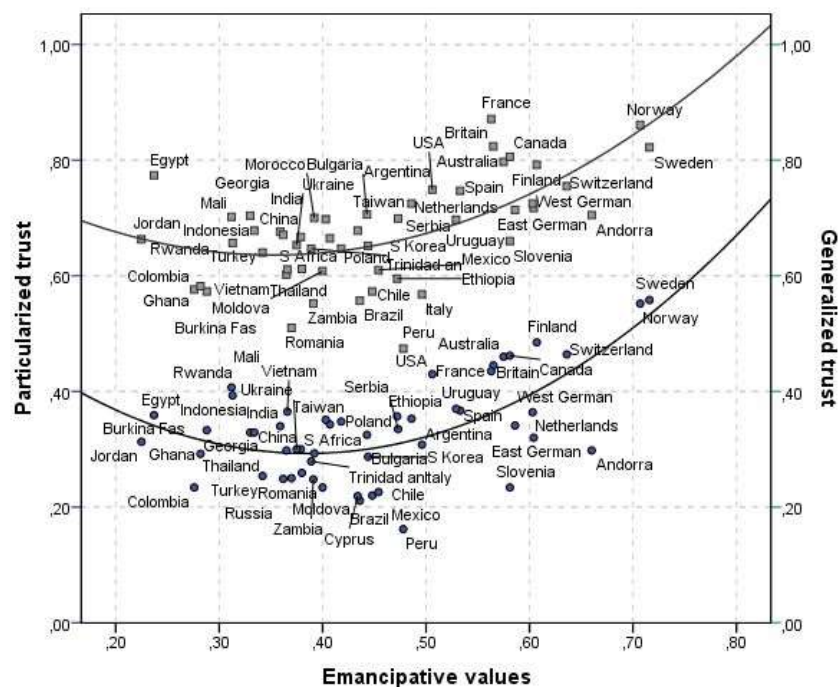
Figure 3

Trust and institutional dimension of human empowerment
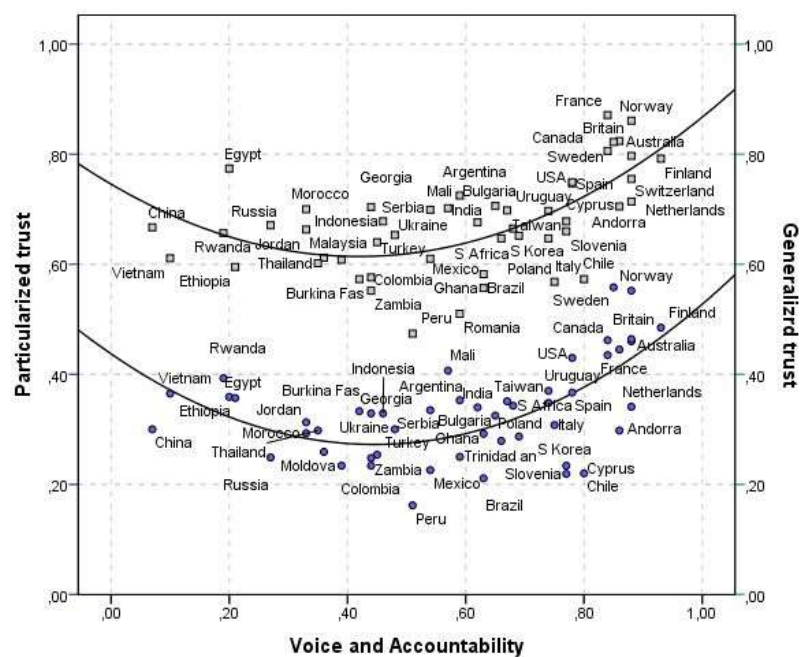
Multi-level regression models with trust in Known trust people

	Model 1.1 Low emp.	Model 1.2 Middle emp.	Model 1.3 High emp.
Intercept	0.085***	0.107***	0.140***
Emp.	0.105**	0.105**	0.105**
Known trust	***0.304****	***0.330****	***0.368***
Emp.	0.120*	0.120*	0.120*
Random effects			
Intercept	0.002***	0.002***	0.002***
Known trust	0.004***	0.004***	0.004***
Exp. var. ind.	14.3%	14.3%	14.3%
Exp. var. count.	51.5%	51.5%	51.5%
N of valid responses	66420	66420	66420
N of countries	48	48	48

Table 2

Multi-level regression models with trust in Known trust people and gender

	Model 2.1 Low emp.	Model 2.2 Middle emp.	Model 2.3 High emp.
Intercept	0.091***	0.113***	0.145
Emp.	0.101*	0.101*	0.101*
Known trust	***0.304****	***0.330****	***0.368***
Emp.	0.122*	0.122*	0.122*
Female	***-0.012****	***-0.011****	***-0.01****
Emp.	ins	ins	ins
Random effects			
Intercept	0.002***	0.002***	0.002***
Known trust	0.004***	0.004***	0.004***
Exp. var. ind.	14.5%	14.5%	14.5%
Exp. var. count.	51.7%	51.7%	51.7%
N of valid responses	66383	66383	66383
N of countries	48	48	48

Table 3

Multi-level regression models with trust in Known trust people and age

	Model 3.1 Low emp.	Model 3.2 Middle emp.	Model 3.3 High emp.
Intercept	0.079***	0.084***	0.091***
Emp.	ins	ins	ins
Known trust	***0.306****	***0.328****	***0.361***
Emp.	ins	ins	ins
Age	***ins***	***0.055****	***0.116****
Emp.	0.195**	0.195**	0.195**
Random effects			
Intercept	0.003***	0.003***	0.003***
Known trust	0.004***	0.004***	0.004***
Age	0.004***	0.004***	0.004***
Exp. var. ind.	14.7%	14.7%	14.7%

Exp. var. count.	52.2%	52.2%	52.2%
N of valid responses	66223	66223	66223
N of countries	48	48	48

Table 4

Multi-level regression models with trust in Known trust people and education

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.104***	0.092***	0.073***
Emp.	ins	ins	ins
Known trust	*0.307****	*0.326****	*0.355****
Emp.	ins	ins	ins
Education	*-0.039****	*0.029****	*0.129****
Emp.	0.317***	0.317***	0.317***
Random effects			
Intercept	0.002***	0.002***	0.002***
Known trust	0.004***	0.004***	0.004***
Education	0.002***	0.002***	0.002***
Exp. var. ind.	15.0%	15.0%	15.0%
Exp. var. count.	54.9%	54.9%	54.9%
N of valid responses	66004	66004	66004
N of countries	48	48	48

Table 5

Multi-level regression models with trust in Known trust people and locus of control

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.080***	0.089***	0.103***
Emp.	ins	ins	ins
Known trust	*0.304****	*0.326****	*0.359****
Emp.	ins	ins	ins
Locus	*ins*	*0.031****	*0.062****
Emp.	0.096*	0.096*	0.096*
Random effects			
Intercept	0.003***	0.003***	0.003***
Known trust	0.004***	0.004***	0.004***
Locus	0.002***	0.002***	0.002***
Exp. var. ind.	14.4%	14.4%	14.4%
Exp. var. count.	51.1%	51.1%	51.1%
N	64863	64863	64863
	48	48	48

Table 6

Multi-level regression models with trust in Known trust people and happiness

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.076***	0.088***	0.105***
Emp.	ins	ins	ins
Known trust	*0.304****	*0.326****	*0.357****
Emp.	ins	ins	ins

Happiness	ins	0.032***	0.059***
Emp.	0.084*	0.084*	0.084*
Random effects			
Intercept	0.003***	0.003***	0.003***
Known trust	0.004***	0.004***	0.004***
Happiness	0.001***	0.001***	0.001***
Exp. var. ind.	14.6%	14.6%	14.6%
Exp. var. count.	52.2%	52.2%	52.2%
N	65840	65840	65840
	48	48	48

Table 7

Multi-level regression models with trust in Known trust people and life satisfaction

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.087***	0.086***	0.084***
Emp.	ins	ins	ins
Known trust	**0.307***	**0.326***	**0.353***
Emp.	ins	ins	ins
Life sat.	**ins**	**0.037***	**0.093***
Emp.	0.178***	0.178***	0.178***
Random effects			
Intercept	0.002***	0.002***	0.002***
Known trust	0.004***	0.004***	0.004***
Life sat.	0.002***	0.002***	0.002***
Exp. var. ind.	14.7%	14.7%	14.7%
Exp. var. count.	51.9%	51.9%	51.9%
N ind.	65664	65664	65664
N country	48	48	48

Table 8

Multi-level regression models with trust in Known trust people and financial satisfaction

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.077***	0.085***	0.099***
Emp.	ins	ins	ins
Known trust	**0.305***	**0.325***	**0.353***
Emp.	ins	ins	ins
Fin. sat.	**0.027*	**0.049***	**0.080***
Emp.	0.101*	0.101*	0.101*
Random effects			
Intercept	0.002***	0.002***	0.002***
Known trust	0.004***	0.004***	0.004***
Fin. sat.	0.003***	0.003***	0.003***
Exp. var. ind.	14.6%	14.6%	14.6%
Exp. var. count.	52.6%	52.6%	52.6%
N ind.	63065	63065	63065
N country	47	47	47

Table 9

Multi-level regression models with trust in Known trust people and income

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.080***	0.093***	0.112***
Emp.	ins	ins	ins
Known trust	**0.308***	**0.329***	**0.359***
Emp.	ins	ins	ins
Income	**ins**	**0.038***	**0.089***
Emp.	0.161***	0.161***	0.161***
Random effects			
Intercept	0.002***	0.002***	0.002***
Known trust	0.004***	0.004***	0.004***
Income	0.002***	0.002***	0.002***
Exp. var. ind.	14.7%	14.7%	14.7%
Exp. var. count.	49.9%	49.9%	49.9%
N ind.	59405	59405	59405
N country	47	47	47

Table 10

Multi-level regression models with trust in Known trust people and unemployed

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.077***	0.106***	0.078***
Emp.	0.136**	0.136**	0.136**
Known trust	**0.311***	**0.332***	**0.361***
Emp.	ins	ins	ins
Unemployed	**0.187**	**-0.009**	**-0.050**
Emp.	-0.130***	-0.130***	-0.130***
Random effects			
Intercept	0.002***	0.002***	0.002***
Known trust	0.004***	0.004***	0.004***
Unemployed	0.003*	0.003*	0.003*
Exp. var. ind.	64302	64302	64302
Exp. var. count.	47	47	47
N ind.	14.8%	14.8%	14.8%
N country	51.3%	51.3%	51.3%

Table 11

Multi-level regression models with trust in Known trust people and connected membership

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.086***	0.105***	0.132***
Emp.	ins	ins	ins
Known trust	**0.306***	**0.328***	**0.359***
Emp.	ins	ins	ins
Con. Memb	**ins**	**0.018***	**0.053***
Emp.	0.111***	0.111***	0.111***
Random effects			
Intercept	0.002***	0.002***	0.002***

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Known trust	0.004***	0.004***	0.004***
Con. memb	0.001***	0.001***	0.001***
Exp. var. ind.	14.9%	14.9%	14.9%
Exp. var. count.	52.7%	52.7%	52.7%
N ind.	65494	65494	65494
N country	48	48	48

Table 12

Multi-level regression models with trust in Known trust people and open-access activities

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.090***	0.101***	0.117***
Emp.	ins	ins	ins
Known trust	*0.304****	*0.326****	*0.358****
Emp.	ins	ins	ins
Open activities	*ins*	*0.028****	*0.088****
Emp.	0.190***	0.190***	0.190***
Random effects			
Intercept	0.002***	0.002***	0.002***
Known trust	0.004***	0.004***	0.004***
Open activities	0.001***	0.001***	0.001***
Exp. var. ind.	15.6%	15.6%	15.6%
Exp. var. count.	56.3%	56.3%	56.3%
N ind.	64169	64169	64169
N country	48	48	48

Table 13

Multi-level regression models with trust in Known trust people and emancipative values

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.093***	0.069***	0.034***
Emp.	-0.112**	-0.112**	-0.112**
Known trust	*0.308****	*0.327****	*0.354****
Emp.	ins	ins	ins
Values	*ins*	*0.081****	*0.192****
Emp.	0.349***	0.349***	0.349***
Random effects			
Intercept	0.002***	0.002***	0.002***
Known trust	0.004***	0.004***	0.004***
Values	0.003***	0.003***	0.003***
Exp. var. ind.	15.4%	15.4%	15.4%
Exp. var. count.	57.9%	57.9%	57.9%
N ind.	66420	66420	66420
N country	48	48	48

Table 14

Multi-level regression models with trust in Known trust people and confidence

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.055***	0.051***	0.046***

Emp.	ins	ins	ins
Known trust	***0.295********	***0.308********	***0.328********
Emp.	ins	ins	ins
Confidence	***0.070********	***0.144********	***0.255********
Emp.	0.348***	0.348***	0.348***
Random effects			
Intercept	0.003***	0.003***	0.003***
Known trust	0.004***	0.004***	0.004***
Confidence	0.005***	0.005***	0.005***
Exp. var. ind.	16.4%	16.4%	16.4%
Exp. var. count.	59.9%	59.9%	59.9%
N ind.	65904	65904	65904
N country	48	48	48

Table 15

Multi-level regression models with trust in Known trust people and tolerance towards people of different origin

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.093***	0.081***	0.062***
Emp.	ins	ins	ins
Known trust	***0.309********	***0.329********	***0.358********
Emp.	ins	ins	ins
Tolerance	***ins***	***0.083********	***0.094********
Emp.	0.206***	0.206***	0.206***
Random effects			
Intercept	0.003***	0.003***	0.003***
Known trust	0.004***	0.004***	0.004***
Tolerance	0.002***	0.002***	0.002***
Exp. var. ind.	14.4%	14.4%	14.4%
Exp. var. count.	51.9%	51.9%	51.9%
N ind.	62885	62885	62885
N country	47	47	47

Table 16

Multi-level regression models with trust in Known trust people town size

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.102***	0.114***	0.133***
Emp.	ns	ns	ns
Known trust	***0.306********	***0.330********	***0.366********
Emp.	ns	ns	ns
Town size	***ns***	***ns***	***ns***
Emp.	ns	ns	ns
Random effects			
Intercept	0.004***	0.004***	0.004***
Known trust	0.005***	0.005***	0.005***

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Town size	0.002**	0.002**	0.002**
Exp. var. ind.	13.6%	13.6%	13.6%
Exp. var. count.	46.4%	46.4%	46.4%
N ind.	43952	43952	43952
N country	35	35	35

Multi-level regression models with trust in Known trust people and personality theory

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.109***	0.044***	-0.052**
Emp.	-0.304***	-0.304***	-0.304***
Known trust	***0.308****	***0.320****	***0.339****
Emp.	ins	ins	ins
Locus of control	***ins***	***0.030****	***0.052****
Emp.	ins	ins	ins
Female	***-0.013****	***-0.010****	***-0.008****
Emp.	ins	ins	ins
Age	***ins***	***0.072****	***0.190****
Emp.	0.372***	0.372***	0.372***
Education	***-0.041****	***0.039****	***0.159****
Emp.	0.376***	0.376***	0.376***
Random effects			
Intercept	0.003***	0.003***	0.003***
Known trust	0.004***	0.004***	0.004***
Locus of control	0.002***	0.002***	0.002***
Age	0.004***	0.004***	0.004***
Education	0.002***	0.002***	0.002***
Exp. var.	15.9%	15.9%	15.9%
Exp. var.	57.3%	57.3%	57.3%
N ind.	64279	64279	64279
N country	48	48	48

Multi-level regression models with trust in Known trust people and success and well-being theory

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.100***	0.033***	-0.070***
Emp.	-0.315***	-0.315***	-0.315***
Known trust	***0.315****	***0.318****	***0.322****
Emp.	ins	ins	ins
Happiness	***ins***	***0.013****	***0.023****
Emp.	ins	ins	ins
Life satisfaction	***ins***	***ins***	***ins***
Emp.	0.112**	0.112**	0.112**
Fin. satisfaction	***0.060****	***0.038****	***0.042****

Emp.	ins	ins	ins
Income	*ins*	*ins*	*0.043**￼*
Emp.	0.099*	0.099*	0.099*
Unemployed	*0.015**￼*	*ins*	*ins*
Emp.	-0.053*	-0.053*	-0.053*
Female	*-0.013***￼*	*-0.010***￼*	*ins*
Emp.	ins	ins	ins
Age	*ins*	*0.070***￼*	*0.198***￼*
Emp.	0.407***	0.407***	0.407***
Education	*-0.047***￼*	*0.028***￼*	*0.141***￼*
Emp.	0.356***	0.356***	0.356***
Random effects			
Intercept	0.003***	0.003***	0.003***
Known trust	0.004***	0.004***	0.004***
Happiness	0.002***	0.002***	0.002***
Life satisfaction	0.001***	0.001***	0.001***
Fin. satisfaction	0.003***	0.003***	0.003***
Income	0.002***	0.002***	0.002***
Age	0.004***	0.004***	0.004***
Education	0.003***	0.003***	0.003***
Exp. var.	16.3%	16.3%	16.3%
Exp. var.	53.2%	53.2%	53.2%
N ind.	54436	54436	54436
N country	45	45	45

Table 19

Multi-level regression models with trust in Known trust people and voluntary theory

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.114***	0.025**	-0.107***
Emp.	-0.416***	-0.416***	-0.416***
Known trust	*0.311***￼*	*0.317***￼*	*0.325***￼*
Emp.	ins	ins	ins
Connected membership	*ins*	*0.014***￼*	*0.034***￼*
Emp.	0.061**	0.061**	0.061**
Open access activities	*ins*	*ins*	*0.034**￼*
Emp.	0.077*	0.077*	0.077*
Emancipative values	*ins*	*0.083***￼*	*0.167***￼*
Emp.	0.270***	0.270***	0.270***
Female	*-0.013***￼*	*-0.013***￼*	*-0.013***￼*
Emp.	ins	ins	ins
Age	*ins*	*0.080***￼*	*0.207***￼*
Emp.	0.401***	0.401***	0.401***
Education	*-0.031**￼*	*0.025**￼*	*0.107**￼*
Emp.	0.261***	0.261***	0.261***
Random effects			
Intercept	0.003***	0.003***	0.003***
Known trust	0.003***	0.003***	0.003***
Connected membership	0.001***	0.001***	0.001***

Open access activities	0.001***	0.001***	0.001***
Emancipative values	0.003***	0.003***	0.003***
Age	0.004**	0.004**	0.004**
Education	0.001***	0.001***	0.001***
Exp. var.	17.7%	17.7%	17.7%
Exp. var.	64.4%	64.4%	64.4%
N ind.	63345	63345	63345
N country	48	48	48

Table 20

Multi-level regression models with trust in known trust people and social conditions theory

	Model 1 Low emp.	Model 2 Middle emp.	Model 3 High emp.
Intercept	0.097***	ins	-0.169***
Emp.	-0.501***	-0.501***	-0.501***
Known trust	*0.303***	*0.302***	*0.300***
Emp.	ins	ins	ins
Confidence	*0.074***	*0.140***	*0.240***
Emp.	0.313***	0.313***	0.313***
Tolerance	*ins*	*0.023***	*0.074***
Emp.	0.162***	0.162***	0.162***
Female	-0.012***	-0.012***	-0.011***
Emp.	ins	ins	ins
Age	*ins*	*0.064***	*0.196***
Emp.	0.419***	0.419***	0.419***
Education	-0.036***	0.038***	0.147***
Emp.	0.348***	0.348***	0.348***
Random effects			
Intercept	0.003***	0.003***	0.003***
Known trust	0.004***	0.004***	0.004***
Confidence	0.005***	0.005***	0.005***
Tolerance	0.001***	0.001***	0.001***
Age	0.004***	0.004***	0.004***
Education	0.002***	0.002***	0.002***
Exp. var.	17.6%	17.6%	17.6%
Exp. var.	64.9%	64.9%	64.9%
N ind.	61859	61859	61859
N country	47	47	47