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Examining the validity and reliability of generalized trust measuring

Márk Hegedüs^{1, *}

¹University of Pécs (Hungary), and Centre for Economic and Regional Studies (Hungary)

*Corresponding author

Abstract

Trust is a field of research in social sciences that has complex, well-developed theoretical approaches, but its empirical tools are less established. The most common survey tool for measuring generalized trust is a formula often referred to in the literature as standard trust question, which reads as follows: „*Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?*”. The aim of the publication is to examine this standard survey item along the dimensions of reliability and validity. In my analysis, I use Hungarian data obtained from various international surveys. My results indicate serious validity problems, as the standard question shows only weak linkage with additional variables, which, based on the conceptual background, should be in a close relationship with trust. The question arises, however, as to whether generalized trust, as a personal and social phenomenon, actually exists, whether the concept is worth dealing with, and, from a methodology point of view, whether we can say that the standard trust question used to measure generalized trust works properly. In any case, the number of critical observations appearing in the literature in connection with measurement is increasing, some of them raise theoretical concerns and others are very critical of the methodology. The starting point of my own endeavors is theoretical in nature, too, and does not merely shed light on the methodological issues in connection with the measurement of trust. I'm showing this through Hungarian data, using the biggest survey databases.

Keywords: trust, generalized trust, measurement, validity, reliability

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1. Introduction

Trust is considered a relevant topic in social sciences, particularly in the field of sociology, political science, economics, management studies, psychology and social psychology. Research agendas of trust usually apply multidisciplinary approaches based on refined theoretical backgrounds and complex empirical frameworks. However, in spite of the rich conceptual background of general trust, the empirical measurement of this notion is still not fully developed. Trust is one of the research areas of social sciences that has complex theoretical approaches, but at the same time, its empirical tool system is less elaborate. At the same time, generalized trust towards the widest possible group of people affects all other forms of trust, and there are several studies that reviewed the measurement of general trust (e.g. Bauer and Freitag 2018; Cook and Cooper 2003; Nannestad 2008; Welch et al. 2004).

There are two ways to measure trust, either using lab experiments conducted by psychologists and social psychologists (e.g., association tests, non-zero-sum games or wallet experiments etc.), or the questionnaire technique (also referred to as the self-report method). This article focuses on the latter. In the questionnaire technique, researchers ask direct or indirect questions about trust. These are usually representative surveys with a large number of items. Based on the responses, researchers aim to conclude the level of trust, as well as the decisions and behavior of the individual. In the case of trust measurement with a questionnaire – due to the nature of the survey method – the respondent reports how he considers his own trust (or perhaps trust of others). The most common survey tool for measuring generalized trust is a formula often referred to in the literature as the standard trust question, which reads as follows: „*Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?*”. The application of the standard question in surveys started in the 1960s, first in the American National Election Studies (ANES) and from 1970s in the General Social Survey (GSS). Cross-national comparative surveys, such as the World Values Survey, International Social Survey Programme, Eurobarometer, European Values Study, European Quality of Life Survey and European Social Survey contain the standard trust question as well.

But how general is the trust measured by the standard trust question? This is not a completely new problem, given that standard trust question has been criticized by many authors. There are researchers who wanted to measure general trust with more than just one question. In the 1950s, Morris Rosenberg and later Julian Rotter have tried to add more questions, these were the first validity and reliability experiments. Morris Rosenberg (1956) developed a 5-question Guttman-scale for measuring trust, this is the misanthropy or faith-in-people scale, and it included the standard trust question too. Although in its original form this scale did not

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become widely used in trust research, it significantly contributed to the empirical identification of generalized trust. Two questions are still used today to test the validity of trust, these inquire about fairness and helpfulness¹. These three questions (standard, fair and help) together make up the general ‘trust index’ (or in other words GSS index, or trust scale) and it can be found in several surveys (for example in European Social Surveys or General Social Survey). There are other survey techniques which aim to capture generalized trust by different means, too.

The generalized trust operationalized by the standard question or the ‘trust index’ is a crucial topic to be addressed both in itself as a social phenomenon and in connection with many other aspects. There are studies that apply either the standard question or the ‘trust index’ in their research design. These are often being used when formulating various scientific or policy statements at the macro level (Bauer and Freitag 2018). And the biggest social and economic indexes include the trust variables too, such as the Transparency Index, the Human Development Index, the World Happiness Index, etc.

2. Validity and reliability

We can check the reliability by looking at several databases from the same area and same time, or if we check the results of different scales. The surveys that measure generalized trust use several different scales: World Values Survey (WVS) and European Values Study (EVS) use dichotomous scales; European Social Survey (ESS) and Eurostat use 0-10 scales; European Quality of Life Survey (EQLS) and Eurobarometer use 1-10 scales; International Social Survey Programme (ISSP) use 4 degrees scales – I am comparing these in my analysis. The analysis is based on Hungarian data from various cross-national surveys. If we look at Figure 1, the main trends suggest that the standard question works reliably, since the results of various surveys show a very similar picture of long-term tendencies of trust in Hungary.

¹Questions: „Do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair?“ and „Would you say that most of the time people try to be helpful or that they are mostly looking out for themselves?“.

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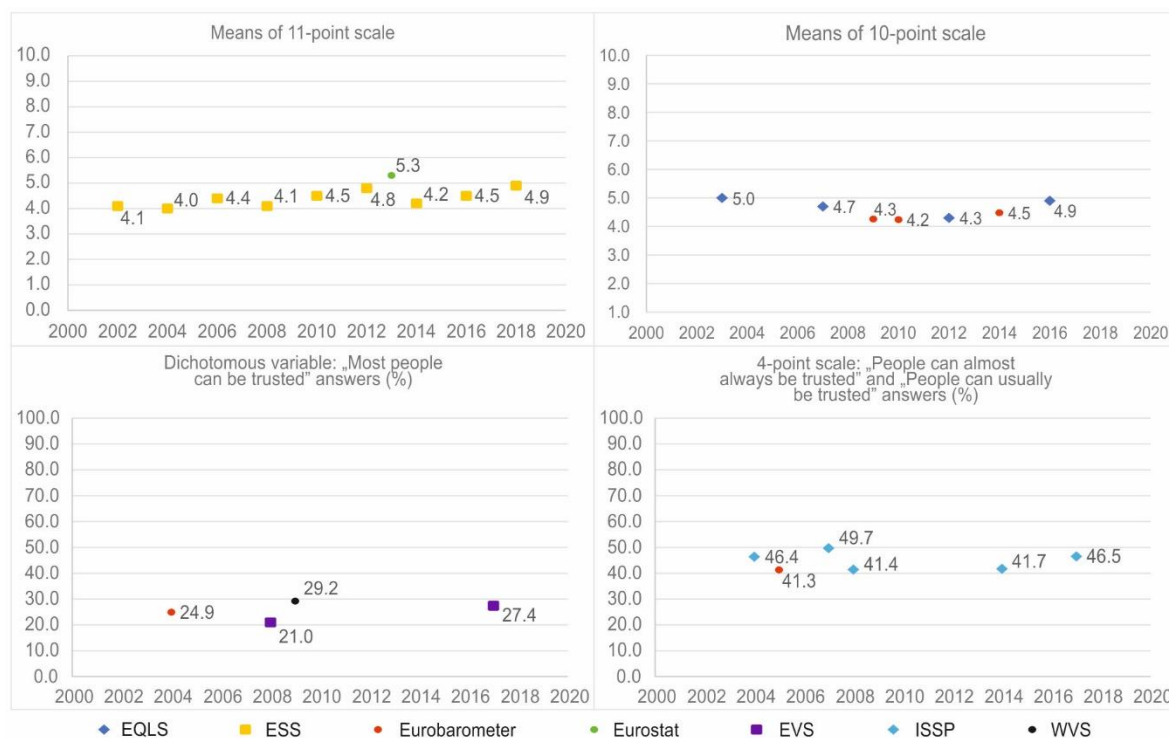


Figure 1: The results of the standard trust question in Hungary

Source: Author's own calculation based on data from ESS, Eurostat, EB, ISSP, WVS, EQLS. Note: The data were weighted as follows: anweight for ESS, weight_g for EVS 2008, gweight for EVS 2017, W1 for Eurobarometers, weighting factor for ISSP, and v259 (original weight) for WVS. In the case of Eurostat and EQLS, we were not able to work with raw data, the results are from the documents available on the following websites: Eurostat <https://ec.europa.eu/eurostat/web/income-and-living-conditions>, EQLS: <https://www.eurofound.europa.eu/hu/surveys/european-quality-of-life-surveys>. N=ESS: 2002:1685, 2004:1498, 2006:1518, 2008:1544, 2010:1561, 2012:1614, 2014:1698, 2016:1614, 2018:1661 N=Eurostat: 2013:10223. N=EVS: 2008:1513, 2017:1514. N=WVS 2009:1007 N=Eurobarometer: 2004:986, 2005:998, 2009:1000, 2010:1022, 2014:1055. N=ISSP: 2004:1035, 2007:1027, 2008:1010, 2014:1007, 2017:1007. N=EQLS: 2003, 2007, 2012, 2016: a sample of 1000-2000 respondents every year (we only have the exact number of cases from 2007: N = 1024).

If we look at this figure, as regards to the main trends, it seems that the standard question works reliably, since results of various surveys show very similar picture of long-term tendencies of trust in Hungary. These results are fundamentally in line with the theoretical statements about generalized trust, according to which it is a fairly stable phenomenon, whether we consider individuals or societies as the object of examination. However, this does not necessarily mean that there cannot be a change in the average level of trust of a given country even within a few years due to the impact of a significant event (Sztompka 1999, Uslaner 2002). Still, it can be said that the standard trust question measures something in a relatively reliable sense. Reliability is certainly an important matter, yet it must be noted that

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acceptable reliability does not ensure that a given survey tool actually measures the desired phenomenon. In this case, for generalized trust, validity criteria can be used to decide this.

The objective of this study is to address the problems of trust measurement both more systematically and more comprehensively. The following theories can help to test the validity. I am using a justification theory, the theory of moral and emotional disposition, that came from Szompka (1999) and Uslaner (2002), and it says that true trust is supported morally and emotionally. Trust towards people in general must be emotionally and morally justified, this is a subjective disposition. If the subject lacks this disposition, then trust needs to be rationally justified, although the theories claim that this latter form of justification cannot lead to valid trust. We say that the moral and emotional dispositions are for trust, and the rational dispositions are against untrust (Sztompka 1999). The literature says this can be traced back to relevant life experiences. These could be emotional, moral, and rational ones, these three types of justifications are the ones that are relevant. Those who have emotionally and morally relevant life experiences that make them believe that people in general are trustworthy, can build their trust on emotional and moral justifications, however, those who are more cautious with others need to consider and rationally assess the features of their specific partners as people in general are untrustworthy for them. This means that in order to examine the validity of trust measurement, it is necessary to expand the range of survey items from usually applied trust variables to certain additional domains that have to be in a pre-conceptualized linkage with generalized trust, and then to analyze all of these components together as intensional and extensional domains of the same latent notion.

In my case, this means that in order to examine the validity of trust measurement, it is necessary to expand the range of variables from usually applied standard trust question to certain additional questions. According to the theories, the standard trust question is a valid measuring tool for generalized trust only if it shows similar tendencies to the other two questions of the trust index (fairness and helpfulness). The combined use of the three variables is widespread in trust research (Glaeser et al. 2000, Zmerli and Newton 2008, Algan et al. 2016), but examination of empirical trust research shows only fragmentary results, with each study usually focusing only on sub-questions. The ESS use these questions from 2002, in this case I analyze these datasets because these databases contain extremely wide range of variables about individual values, attitudes, behavior, and perceptions all related to generalized trust. The following figure shows how the responses to the three questions have developed on average in Hungary over the past 20 years.

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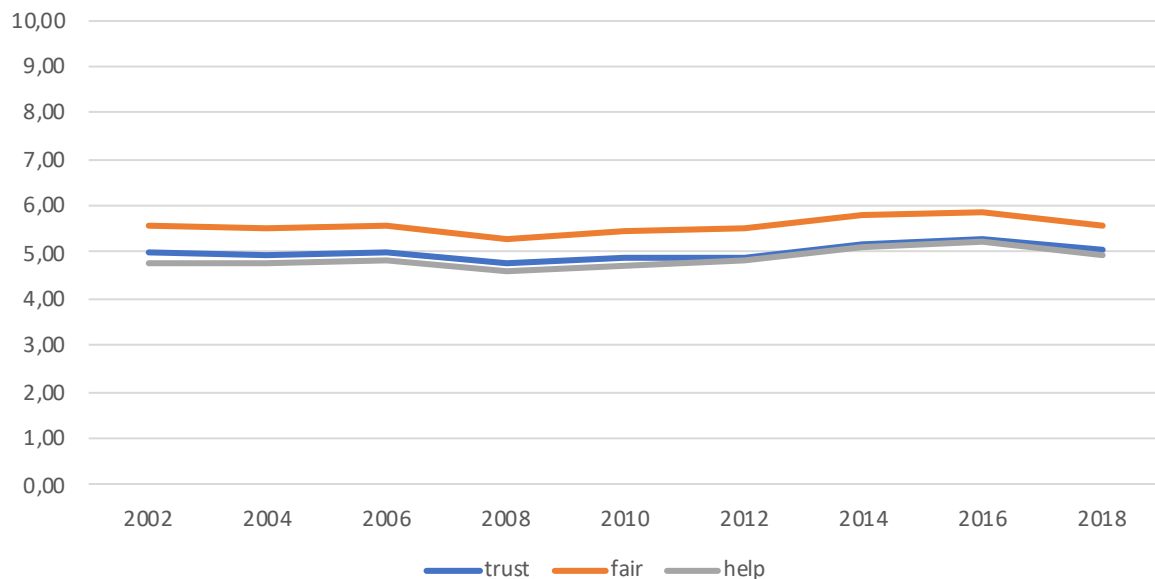


Figure 2: The results of the trust index questions in Hungary

Source: Author's own calculation based on data from ESS. Note: The data were weighted as follows: *anweight*.
N=ESS: 2002:1685, 2004:1498, 2006:1518, 2008:1544, 2010:1561, 2012:2014, 2014:1698, 2016:1614, 2018:1661.

This is a combined examination of often-used indicators of trust. The results definitely show some kind of internal consistency, since the averages and trends are similar. According to the results, the three questions were answered similarly in Hungary in the last 20 years. At the same time, it is far from conclusive evidence that all three variables really measure the same dimension. The standard indicator of trust and the other two questions show an upward trend from 2010 to 2016 in every case, and then a decreasing trend is characteristic to the present. But this figure doesn't show vast changes in the averages.

3. Conclusion

The research examines the most common questionnaire instruments of generalized trust from the standpoint of how well the standard trust question and the trust index can measure the complex theoretical concept behind these questions. During the reliability test, I examined how similar the results and trends of the standard question are in different surveys conducted in Hungary, while during the validity test, I examined whether the standard trust question and the other two questions of the trust index show the same changes. However, these are macro-level studies, which in the future must be carried out at the micro-level as well. It can be concluded that the standard trust question measures something as generalized trust, yet it can't be claimed that this form of trust is absolutely in accordance with the expectations of generalized trust.

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