

THE STRUCTURE OF SOCIAL TRUST: THE ISSUE OF INSTITUTIONAL HETEROGENEITY ACROSS COUNTRIES

Viktor Koziuk¹ , Yuriy Hayda² , Oleksandr Dluhopolskyi³ , Oksana Liashenko⁴ 
 Oksana Shymanska¹ 

Received 06.03.2026. | Send to review 22.03.2026. | Accepted 02.08.2026.

Original Article



¹ West Ukrainian National University, Ukraine

² West Ukrainian National University, Chernihiv Polytechnic National University, Ukraine

³ West Ukrainian National University, Ukraine; Lubelska Academia WSEI, Republic of Poland

⁴ Loughborough University, United Kingdom; Lesya Ukrainka Volyn National University, Ukraine

***Corresponding Author:**
 Oleksandr Dluhopolskyi

Email:
dlugopolsky77@gmail.com

JEL Classification:

A13, H11, O15, O17

Doi: 10.61432/CPNE0401041k

UDK: 316.62(4):004.738.1

ABSTRACT

This study investigates the heterogeneity of social trust structures across countries, focusing on the relationships among interpersonal trust, institutional trust, and confidence in the armed forces. Using data from the World Values Survey Wave 7 covering 88 countries, the study applies correlation analysis, analytical grouping, hierarchical and k-means clustering, ANOVA, and distance-based regression to identify patterns in trust configurations. The findings reveal that institutional trust is highly interdependent, particularly among political, legal, and administrative institutions, whereas interpersonal trust exhibits weaker associations with these structures. Cluster analysis demonstrates substantial cross-country variation in the interaction between interpersonal and institutional trust, challenging the assumption of a universal trust configuration. Confidence in the armed forces consistently exceeds both interpersonal trust and confidence in most other public institutions across all clusters. After controlling for interpersonal trust, an indirect relationship emerges between confidence in the armed forces and institutional trust, suggesting that these dimensions may originate from different social and political mechanisms. The results support the hypothesis that social trust is structurally heterogeneous and shaped by cultural, historical, and political contexts. Confidence in the armed forces appears to function as a stabilizing mechanism supporting societal needs for order, security, and national identity, particularly in countries characterized by weak political institutions or limited policy effectiveness. This study contributes to a more nuanced understanding of cross-national trust configurations and institutional legitimacy.

Keywords: social trust, confidence, economy, institution, income, distribution

1. INTRODUCTION

Social trust is considered an important dimension of a country's institutional characteristics. The nature of social trust determines the effectiveness of decentralized interactions. The burden of transaction costs directly shapes the flexibility of the economy and its capacity to adapt rapidly to shocks. Social trust is a crucial ingredient in the relationship between society and political institutions. A lack of social trust often signifies a loss of legitimacy in the implementation of public policies or serves as a precondition for electoral change (Levi et al., 2009; Hetherington, 1998; Hetherington, 2005).

Russia's war against Ukraine has demonstrated how crucial social trust is in matters of volunteering and charitable support for the army. In essence, the lack of efficiency in the centralized approach to supplying the defense forces has been partially offset by citizens' self-organization, which formed decentralized networks through which the material foundation of armed resistance against criminal aggression was significantly strengthened. It is difficult to ignore the fact that this serves as a clear example of how social trust operates in practice. On the other hand, Ukraine, like many other countries with comparable income levels and institutional quality, does not exemplify high standards of institutional trust.

At the same time, interpersonal trust within decentralized networks is not an unconditional substitute for the lack of institutional trust. In many societies, both types of social trust remain at low levels. Likewise, in some societies they are positively correlated at high levels. Conversely, certain countries may demonstrate a dominance of trust in central authorities despite the absence of strong interpersonal relationships. In light of Ukraine's experience with volunteering and charitable support, trust in the army, together with a sufficient level of interpersonal trust to sustain resilient decentralized networks, coexists with low trust in public institutions. This raises the question of whether the structure of social trust is homogeneous across countries. Different combinations of social trust components may reflect distinct institutional development trajectories and generate specific patterns that are difficult to detect through general indicators of trust in others. As [Newton, Zmerli \(2011\)](#) and [Boda et al. \(2018\)](#) argue, social trust is complex, differentiated, and dynamic; therefore, a focus on trust in individual institutions may fail to capture more intricate forms of social organization and informal regulators of interaction.

This article continues the discussion on the relationship between interpersonal and institutional trust in the context of cross-country heterogeneity and the distinctive role of confidence in the armed forces. Given the growing vulnerability to military threats worldwide, confidence in the armed forces is considered an important criterion of heterogeneity. Correlation analysis confirms that confidence in the armed forces is less strongly associated with trust in other public institutions, while cluster analysis highlights patterns of similarity among countries based on different combinations of social trust components. At the same time, an analytical grouping approach based on the level of trust in others and a clustering approach that incorporates all elements of social trust produce different results.

The findings demonstrate that when the variable of trust in others is controlled for, a latent relationship emerges between trust in the military and institutional trust. This suggests that interpersonal and institutional trust may originate from different sources, whereas trust in the military represents a specific expression of the willingness to accept the anchoring of order and protection, even when political institutions are not trusted due to their weakness or the characteristics of the political regime. In this formulation, the hypothesis of social trust heterogeneity receives empirical support, adding further nuance to our understanding of how the elements of social trust may be combined across countries.

In this study, social trust heterogeneity refers to the existence of different structural configurations of interpersonal and institutional trust across countries, implying that trust dimensions do not necessarily evolve jointly and may reflect different historical, cultural, and political trajectories.

2. LITERATURE REVIEW

Research on social trust emphasizes that it is grounded in expectations of positive outcomes from social interactions ([Levi, Stoker, 2000](#); [Hosking, 2017](#)). There is a well-es-

lished consensus regarding the relationship between social trust and economic performance (Beugelsdijk et al., 2004; Dincer, Uslander, 2010; Aghion et al., 2010; Bjørnskov, 2012; Bjørnskov, 2022). Such trust constitutes a foundation of well-being; moreover, it is an important source of optimization for decentralized interactions through the channel of transaction costs, the burden of which is a powerful driver in the formation of institutions designed to support and regulate social exchanges (Coase, 1960; Gorodnichenko, Roland, 2011).

Beyond the transaction cost channel, social trust plays a crucial role in creating rational incentives for political decision-making (Peiró-Palomino et al., 2024). In turn, political decisions are made in the public interest, generating a positive feedback loop (Hetherington, 1998; Hetherington, 2005; Kahan, 2001; Hawdon, 2008).

However, social trust remains a subject of ongoing debate.

First, the sources of social trust are highly diverse. It may originate at the individual level, reflect cultural characteristics, or develop through feedback loops between well-being, environment, experience, and beliefs (Kirby, 2025). Empirical studies often confirm the validity of the particular source of social trust they emphasize, which may indicate certain theoretical biases, or alternatively, the complexity, multidimensionality, and dynamic nature of social trust (Boda et al., 2018; Kwon, 2019).

At the same time, the persistence of certain aspects of social trust suggests that it functions as an exogenous factor linking culture and the economy. Social trust, especially its institutional dimension, is shaped through historical processes and reflects the long-term interaction of political and economic institutions (Fukuyama, 1995; Campbell, 2004; Eurofound, 2018).

In turn, Keele (2007) notes that while there is a cross-national correlation between interpersonal and institutional trust, interpersonal trust is considerably less volatile over time than trust in institutions. Nannestad et al. (2014) likewise argue that culture plays a more significant role than institutions in shaping social trust. This may indicate that different dimensions of social trust can have distinct origins.

Second, the problem of variability in the relationship between interpersonal and institutional trust over time and across countries may stem from neglecting the issue of context. The context in which economic agents demonstrate trust can play an important role in explaining why different configurations of interpersonal and institutional trust are observed. Boda, Medve-Bálint (2015) attribute this phenomenon to the dominance of cross-sectional empirical research. By contrast, accounting for changes in trust over time allows for a better understanding of the specific circumstances under which it was formed or fluctuated.

Another dimension of the context problem concerns how personal experience interacts with the cultural environment when extrapolated to institutional interactions. An example of the importance of context is found in studies examining the relationship between well-being and institutional trust. Kaasa, Parts (2009) point to the absence of a relationship between household well-being and trust in public institutions across 31 European countries. In other words, cultural determinants of institutional trust appear more convincing (Kaasa, Andriani, 2022).

Meanwhile, Catterberg, Moreno (2006) demonstrate that income levels generally have a positive effect on institutional trust, albeit with important caveats. In mature, affluent democracies, an inverse relationship is observed between income levels and institutional trust, whereas in poorer countries, rising incomes tend to strengthen such trust.

Third, trust in particular political institutions may not reflect the full range of issues encompassed by social trust in its structural integrity. Boda et al. (2018) highlight the prob-

lem of the politicization of trust in public institutions. Personal experience, perceptions of the outcomes of specific policies, crises, and related factors can all influence fluctuations in trust. Likewise, trust in a specific public institution may not necessarily reflect cultural attitudes but may instead relate more closely to questions of legitimacy (Jackson et al., 2011; Jackson et al., 2013).

Grosskopf (2008), in turn, emphasizes the importance of context: trust in government contains a clear component of political self-identification, whereas trust in judges relies more heavily on perceptions of fairness. A notable example is research on trust in central banks. The global financial crisis and the inflationary surge of 2021–2023 significantly undermined trust in monetary institutions across many countries (Ehrmann, 2024). Cultural factors were unlikely to play a major role in circumstances where trust was shaped primarily by individuals' perceptions of an institution's functional effectiveness based on their own experience.

Similarly, political identification (political partisanship) strongly shapes trust in independent regulators, and societal political fragmentation amplifies this effect (Binder et al., 2025; Kuang et al., 2025). On the other hand, political polarization may influence the intensity of engagement in political activity without necessarily eroding institutional trust, as demonstrated by Kuhn, Marquis (2025) in the case of Switzerland.

Confidence in the armed forces differs from confidence in political institutions because military organizations are frequently perceived as providers of security, continuity, and national identity rather than as actors competing within partisan politics.

This article empirically confirms the heterogeneity of countries in terms of the structure of social trust. Grouping countries based on levels of trust in others revealed a number of differences in the correlations among various elements of social trust. It was also found that confidence in the armed forces somewhat falls outside the correlational pattern typically observed for trust in public institutions.

Applying a cluster approach that incorporates all elements of social trust produced results different from those obtained through analytical grouping based solely on levels of trust in others. The composition of the clusters and the distribution of the corresponding variable values point to hidden relationships among the elements of social trust that may carry contextual or functional significance.

At the same time, controlling for the variable of trust in others demonstrates that an indirect relationship exists between confidence in the armed forces and trust in political institutions, one that is not readily visible in cluster analysis. This suggests that interpersonal and institutional trust may have distinct origins, while confidence in the armed forces may embody an anchoring of the need for order and protection that cannot be fulfilled under conditions of weak political institutions, a vulnerable democratic regime, or ineffective public policy.

Research hypotheses:

H₁: The structure of social trust is heterogeneous across countries rather than homogeneous.

H₂: Interpersonal trust and institutional trust exhibit different patterns of interaction across country groups.

H₃: Confidence in the armed forces constitutes a distinct dimension of institutional trust and displays weaker integration with other political institutions.

H₄: Country clusters based on the full set of trust indicators differ from classifications based solely on interpersonal trust.

3. METHODOLOGY

The study is based on data from the World Values Survey Wave 7 and covers 88 countries. The empirical component consists of several stages.

At the first stage, a correlation analysis was conducted to examine the relationships among the elements of social trust (Trust in Others (TIO), Confidence in the Justice System (CJS), Confidence in the Police (CPo), Confidence in the Civil Service (CCS), Confidence in the Armed Forces (CAF), Confidence in Political Parties (CPP), Confidence in Government (CG), and Confidence in Parliament (CPa)) for the entire sample.

The correlation analysis was grounded in the construction of a correlation matrix using Cheddock's gradations, defined as follows: 0.0–0.1 – very weak (light gray); 0.1–0.3 – weak (light blue); 0.3–0.5 – moderate (blue); 0.5–0.7 – considerable (blue-cyan); 0.7–0.9 – strong (blue); 0.9–1.0 – very strong (dark blue).

Subsequently, the sample of 88 countries was divided into three groups based on the variation in trust in others as the foundational dimension of social trust (Kirby, 2025). Countries were categorized into low-, medium-, and high-trust groups according to a formal criterion:

1. the first group – $N (\text{mean value}) - 0.5\sigma$ (standard deviation);
2. the second group – $> N - 0.5\sigma$ but $< N + 0.5\sigma$;
3. the third group – $> N + 0.5\sigma$.

For each group, a correlation analysis among the elements of social trust was also conducted and compared with the results of the correlation matrix across the groups and with the overall sample. Differences in the patterns of relationships would indicate whether the criterion of variation in trust in others is substantively significant.

At the third stage, a cluster analysis was conducted to refine the analytical picture of country groupings obtained from their classification based on the $N \pm 0.5\sigma$ criterion. An ANOVA test was also applied to assess the similarity of variances in the values of social trust elements across the identified clusters and to determine the statistical significance of the clustering. The cluster analysis revealed differences between the groups formed through clustering and those derived from the grouping based on the $N \pm 0.5\sigma$ criterion. The use of the mean ± 0.5 standard deviation criterion follows exploratory classification approaches frequently applied in comparative social research to distinguish low-, medium-, and high-trust societies while preserving balanced group sizes. Alternative thresholds ($\pm 1\sigma$ and tercile classification) produced qualitatively similar results.

At the fourth stage, an approach was applied to measure the distance between confidence in the armed forces (CAF) and trust in others (TIO), as well as the distance between confidence in political institutions (the average of CPP, CG, and CPa) and trust in others. The relationship between these distances was tested using graphical regression across the full sample of countries.

The choice of this approach was driven by several theoretical considerations. Trust in others may not reflect confidence in political institutions in some countries (Kirby, 2025; Boda et al., 2018; Kaasa, Parts, 2008), while in others it may correlate depending on cultural characteristics (Fukuyama, 1995; Campbell, 2004; Keele, 2007; Nannestad et al., 2014). Confidence in the armed forces may represent a way of relying on authority and an institution of order and protection, whereas other law-enforcement institutions may be perceived through the lens of political partisanship and reflect the broader problem of the reverse relationship between social trust and institutional quality (Martinangeli et al., 2020; Acemoglu, Robinson, 2012; Ostrom, 2005).

Confidence in the armed forces is also an important factor of national self-identification, particularly when other political institutions are perceived by citizens as distorted due to political attitudes toward them, their functional inefficiency, or cultural distrust of hierarchies (Abouzzohour, Yousef, 2024). It may also reflect the need for protection in light of existing threats. Accordingly, the distance between CAF and TIO indicates the extent to which confidence in the armed forces prevails over interpersonal trust. Similarly, the distance between trust in political institutions or the legal system and TIO reflects the degree to which trust in formal authority exists in society given the prevailing level of interpersonal trust.

Thus, analyzing the relationship between these distances suggests that the context of national defense or identification with an authority of order may carry significant weight in situations where the correlation between institutional and interpersonal trust may be subject to cultural or individual distortions.

4. RESULTS

The elements of social trust (Trust in Others (TIO), Confidence in the Justice System (CJS), Confidence in the Police (CPo), Confidence in the Civil Service (CCS), Confidence in the Armed Forces (CAF), Confidence in Political Parties (CPP), Confidence in Government (CG), and Confidence in Parliament (CPa)) can exhibit different forms of relationships depending on the theoretical perspective adopted. To determine the basic nature of these relationships, a correlation matrix (Figure 1) was constructed using data from the World Values Survey Wave 7 covering 88 countries. The results indicate that, in the overall sample, certain stable patterns emerge in the linkage between interpersonal and institutional trust.

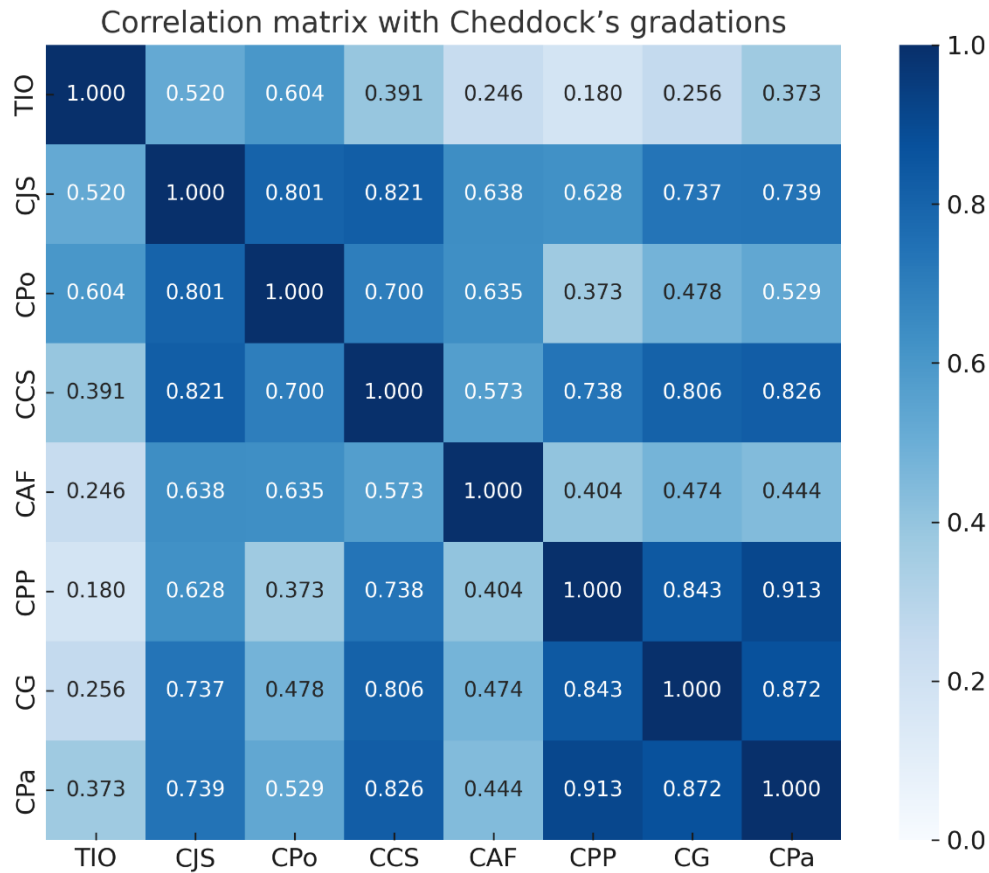
The correlation matrix reveals generally strong positive relationships among the levels of trust in different state institutions. Confidence in the judiciary system (CJS) shows particularly high correlations with confidence in the police (CPo, $r = 0.801$) and civil service (CCS, $r = 0.821$), indicating that perceptions of law enforcement and administrative fairness are closely interlinked. Similarly, confidence in political parties (CPP) is strongly associated with confidence in the government (CG, $r = 0.843$) and parliament (CPa, $r = 0.913$), suggesting that political institutions tend to be evaluated together by respondents. Moderate to strong correlations are also found between confidence in the army (CAF) and other institutions, though these coefficients are slightly weaker compared to those among the core political institutions. The lowest correlations involve trust in others (TIO), which remains only weakly to moderately related to institutional trust, indicating a certain independence between generalized social trust and institutional trust.

So, the preliminary results of empirical tests can be formulated next. Institutional trust is highly interdependent, particularly within clusters of law enforcement/justice and political institutions. Confidence in the army demonstrates a distinct, though somewhat weaker, relationship with other institutions. Generally, trust in others is only partially connected with institutional trust, highlighting a potential differentiation between social and institutional dimensions of trust.

In clustering sample countries, we applied three approaches. The first approach consisted in dividing the countries into groups according to the first variable, using the standard deviation as the criterion for differentiation. The second approach was based on hierarchical agglomerative clustering, which made it possible to trace the gradual merging of countries into larger groups depending on their similar profiles. The third approach is applied to the k-means method, which partitions the sample into a predetermined number

of clusters by minimizing within-cluster variance. The combination of these approaches ensured both the robustness of the results and the comparability of cluster structures.

Figure 1. Correlation matrix for social trust elements on entire group



Source: authors calculations based on WVS data

The results of grouping in accordance with $N \pm 0,5\sigma$ method are in Table 1.

Table 1. Country grouping by the level of trust in others

Group (interval, number of countries, mean trust)	Countries
Group 1: Trust > 33.08 (n=20, mean=51.25)	Australia, Austria, Belarus, Canada, China, Denmark, Estonia, Finland, Germany, Iceland, Japan, Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland, United Kingdom, United States
Group 2: $15.68 \leq \text{Trust} \leq 33.08$ (n=34, mean=23.23)	Andorra, Argentina, Armenia, Av, Azerbaijan, Bulgaria, Czechia, France, Guatemala, Hungary, Italy, Jordan, Kazakhstan, Latvia, Lithuania, Malaysia, Maldives, Mongolia, Montenegro, Morocco, Pakistan, Poland, Portugal, Puerto Rico, Russia, Serbia, Slovakia, Slovenia, South Korea, Taiwan, Tajikistan, Thailand, Ukraine, Vietnam
Group 3: Trust < 15.68 (n=34, mean=9.72)	Albania, Bangladesh, Bolivia, Bosnia and Herzegovina, Brazil, Chile, Colombia, Croatia, Cyprus, Ecuador, Egypt, Ethiopia, Georgia, Greece, Indonesia, Iran, Iraq, Kenya, Kyrgyzstan, Lebanon, Libya, Mexico, Myanmar, Nicaragua, Nigeria, North Macedonia, Peru, Philippines, Romania, Tunisia, Turkey, Uruguay, Venezuela, Zimbabwe

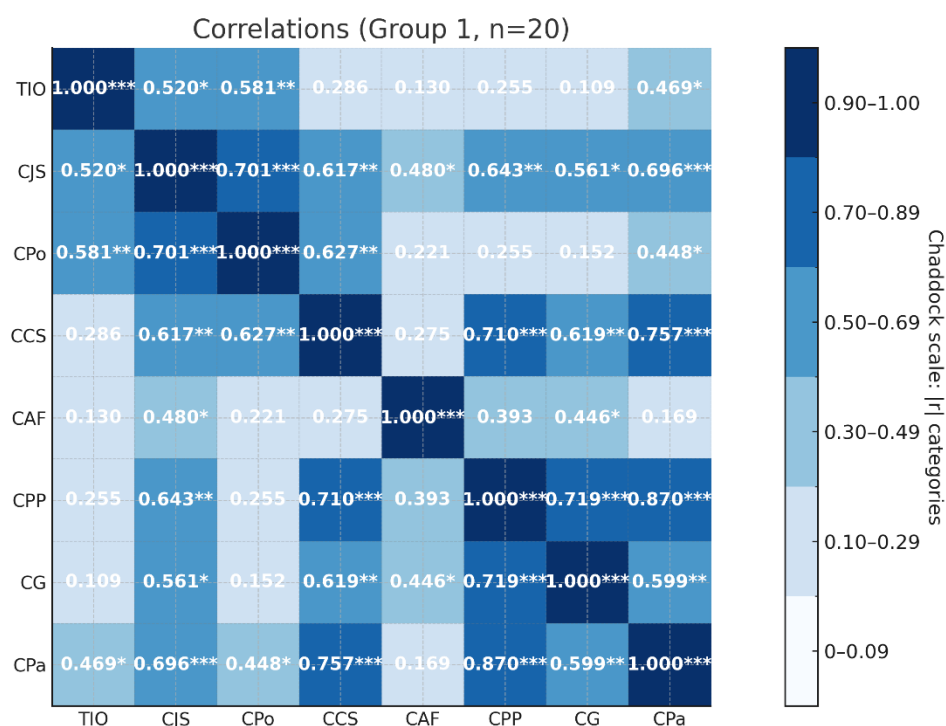
Source: authors calculations based on WVS data

The results of country grouping generally reflect research discussion on sources of trust. Generally, higher trust in others co-exist with high level of incomes. However, such pattern of relations is not absolute and deviations from it are not rare. In the same vein it is

clear that in the case of middle and low level of trust more contradictory forces may shape the picture of trust across the countries.

The next step is correlation analysis between elements of social trust across three countries groups represented in Table 1. The results are shown in Figures 2-4. Generally, the patterns of relations between elements of trust across the country's groups are close to the one that is on Figure 1. However, some noticeable moments take place.

Figure 2. Correlation matrix for social trust elements: the group of high trust

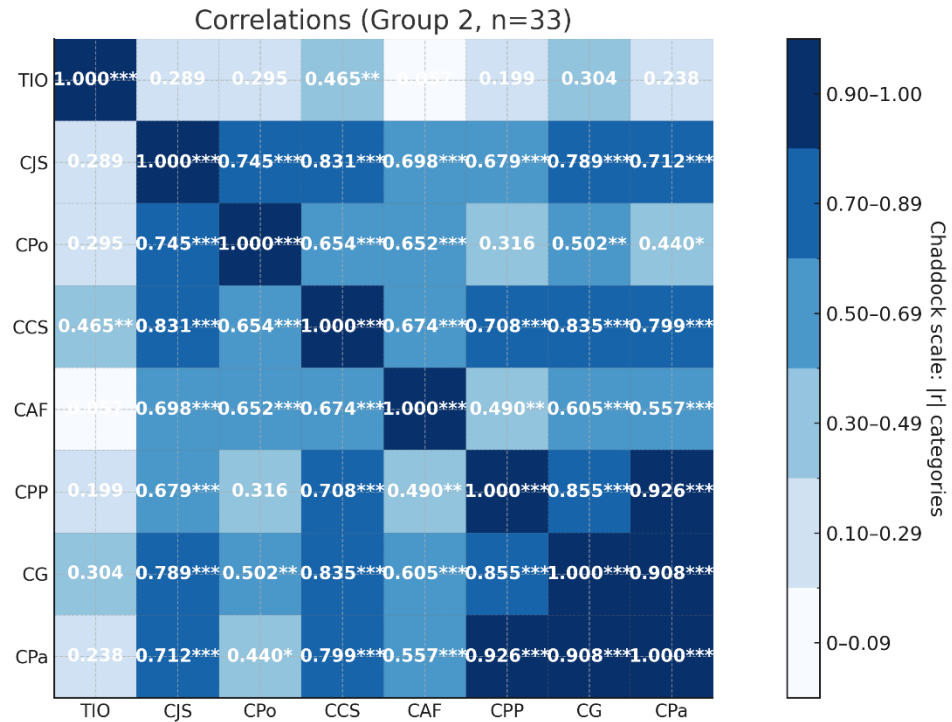


Significance: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: authors calculations based on WVS data.

The results suggest that for countries with high level of trust confidence in political institutions and personal trust are in the weakest relations compared to groups with middle and low level of trust. The correlations get higher levels between mentioned elements of social trust in second and third countries groups. This reflects the idea that level of income is not pre-defining force of institutional trust. Rather the higher level of personal trust in the high level of trust group, the weaker the correlation of TIO with confidence in political and justice institutions and vice versa. Also, it is clear that the strongest correlation between TIO and confidence in army forces takes place in the third group of countries, while in the second its weakest. In first group, confidence in army forces is in the weakest relations with other elements of social trust compared to other groups. Bearing in mind the composition of groups (Table 1), it is likely that level of income may be associated with the observed pattern between trust in others and confidence in army forces. The higher the income, the weaker the correlation. And the opposite is true for less wealthy countries with low level of trust. In such countries personal and institutional trust correlates more.

Figure 3. Correlation matrix for social trust elements: the group of middle level of trust



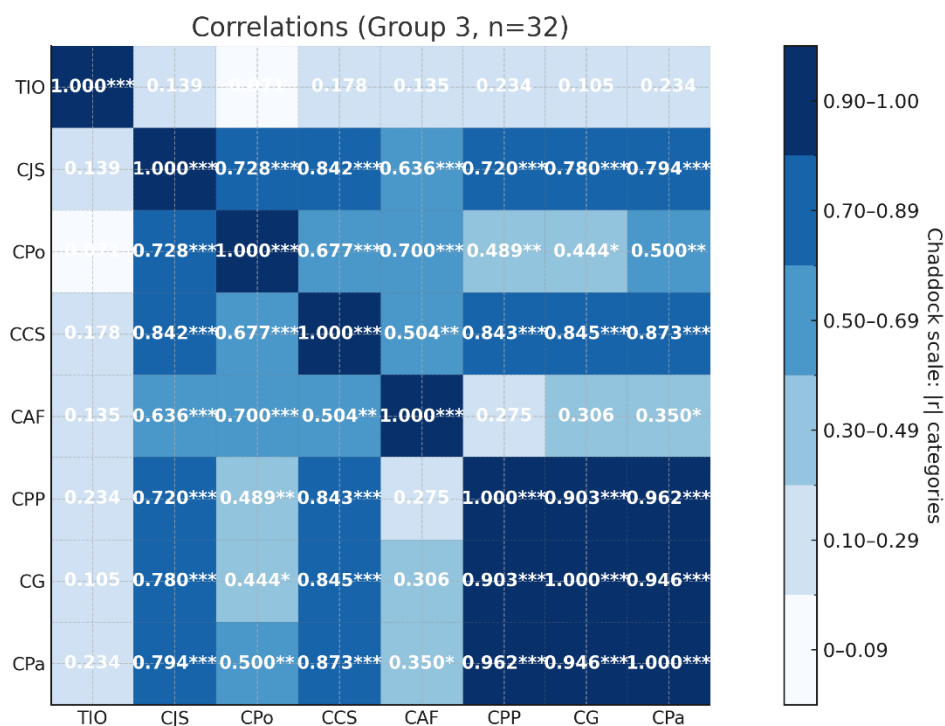
Significance: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: authors calculations based on WVS data

The next step is the more formal cluster analysis of countries that is expected to reflect more comprehensive relations between elements of social trust. The results are in Figure 5. The analysis of the dendrogram shows that at the distance level of 600 the sample splits into three clusters (Figure 5). This indicates the existence of three groups of objects, within which relative similarity is higher than between groups. This corresponds with intuition to split the countries by the level of trust (Table 1).

According to the results of hierarchical clustering (Ward's method, Euclidean distance), at the threshold distance level of 600 the sample divides into three clusters (Figure 5). Ukraine belongs to the first cluster together with the countries of the Balkans, the Caucasus, and parts of Latin America (Italy, Slovakia, North Macedonia, Georgia, Armenia, Lebanon, Tunisia, Romania, Serbia, Slovenia, Croatia, Poland, etc.). The other two clusters unite, respectively, a group of developed democracies (the United States, Canada, the countries of Northern and Western Europe, Japan, South Korea, Hong Kong, Singapore) and a group consisting mainly of South and Southeast Asian countries along with several post-Soviet Asian states. This suggests that the similarity of institutional trust profiles may prevail over geographical proximity.

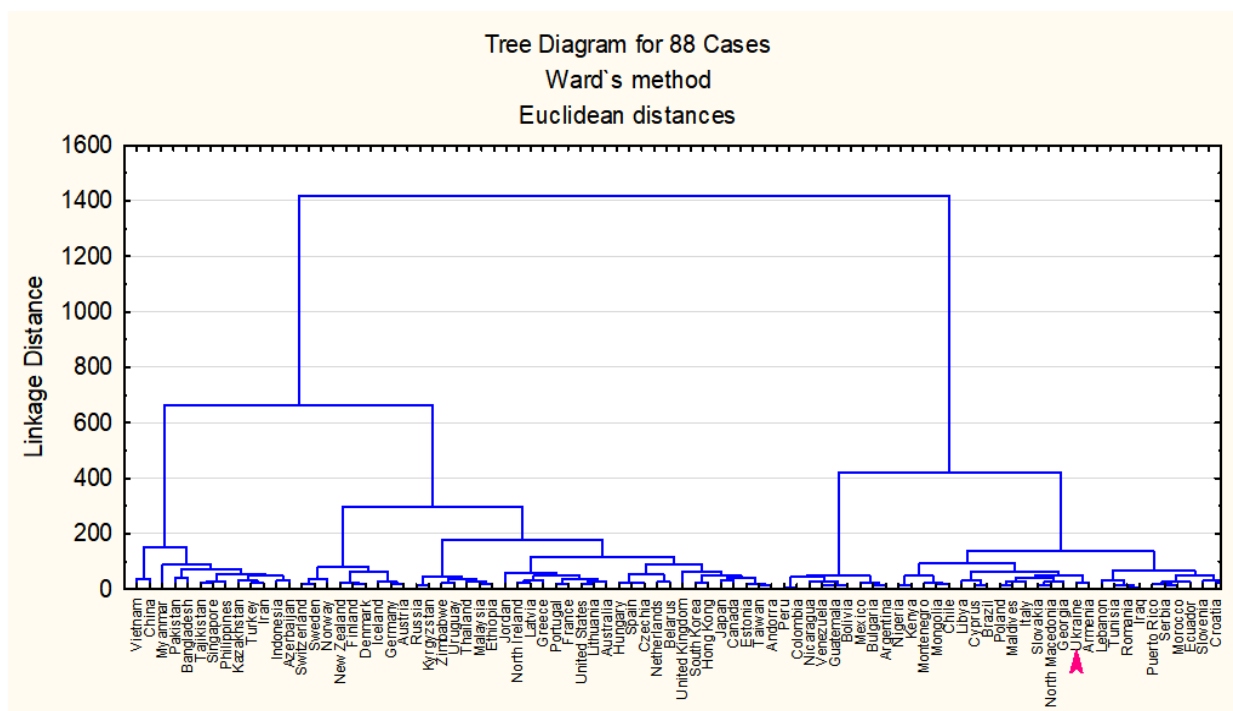
Figure 4. Correlation matrix for social trust elements: the group of low trust



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

Source: authors calculations based on WVS data

Figure 5. The results of countries clustering by combination of elements of social trust



Source: authors calculations based on WVS data

We conducted a k-means cluster analysis based on the results of a hierarchical agglomerative cluster analysis and therefore specified the number of clusters as three. The results are shown in Table 2.

Table 2. The group's composition according to cluster analysis results

Cluster	Country (ISO Alpha-3)	Means of cluster							
		TIO	CJS	CPo	CCS	CAF	CPP	CG	CPa
1 (n=14)	AZE, BGD, CHN, IDN, IRN, KAZ, MMR, NOR, PAK, PHL, SGP, TJK, TUR, VNM	25.53	74.31	74.08	71.91	83.19	55.17	77.11	69.54
2 (n=38)	AND, AUS, AUT, BLR, CAN, DNK, EST, ETH, FIN, FRA, GEO, DEU, GRC, HKG, HUN, ISL, ITA, JPN, JOR, KGZ, LVA, LTU, MYS, NLD, NZL, GBR, PRT, RUS, KOR, ESP, SWE, CHE, TWN, THA, GBR, USA, URY, ZWE	33.95	60.23	72.15	52.10	68.80	20.86	42.72	34.52
3 (n=36)	ALB, ARG, ARM, BOL, BIH, BRA, BGR, CHL, COL, HRV, CYP, CZE, ECU, GTM, IRQ, KEN, LBN, LBY, MDV, MEX, MNG, MNE, MAR, NIC, NGA, MKD, PER, POL, PRI, ROU, SRB, SVK, SVN, TUN, UKR, VEN	14.31	31.24	43.13	28.81	54.13	13.01	23.39	17.70

Source: authors calculations based on WVS data

Table 3 demonstrates that the identified trust configurations are embedded in broader socioeconomic and institutional contexts. Cluster 2, dominated by advanced democracies, combines the highest levels of economic development, democratic quality, and institutional integrity with the lowest degree of state fragility. By contrast, Cluster 1 is characterized by moderate income levels and institutional quality but relatively low democratic performance, while simultaneously exhibiting the highest confidence in the armed forces. The additional evidence presented in Table 3 indicates that Cluster 1 countries are characterized by lower democratic quality and higher levels of state fragility than advanced democracies. This institutional environment may contribute to stronger reliance on hierarchical institutions and explain the relatively high confidence in the armed forces despite lower interpersonal trust. Cluster 3 displays lower levels of economic development and institutional quality together with higher state fragility. These findings suggest that the structure of social trust cannot be fully understood without considering broader characteristics of political and economic development.

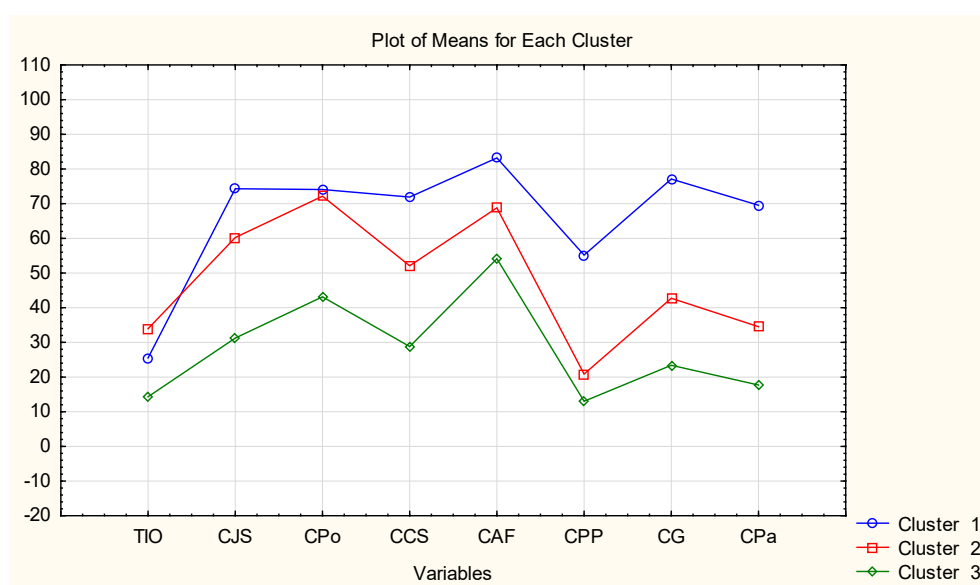
Table 3. Socioeconomic and institutional characteristics of identified trust clusters

Indicator	Cluster 1	Cluster 2	Cluster 3
GDP per capita, PPP (current international USD)	28,500	54,800	18,700
Democracy Index (0–10)	4.8	8.1	5.6
Corruption Perceptions Index (0–100)	39.2	71.8	42.5
Fragile States Index (0–120)	74.6	42.3	68.9

Source: authors' calculations based on World Values Survey Wave 7, IMF, Economist Intelligence Unit, Transparency International and Fund for Peace databases

Figure 6 demonstrates distribution of each variable's means across the obtained clusters. Table 3 demonstrates results of ANOVA analysis that confirms statistical significance of clustering. The ANOVA results indicate that all variables significantly differentiate between the three clusters ($p < 0.001$). High F-values for CG, CPa, CCS, and CPP suggest that these variables contribute most strongly to the separation of clusters, while TIO and CAF show relatively weaker, though still significant, discriminatory power. Overall, the analysis confirms that the identified clusters are statistically distinct in terms of the included variables.

Figure 6. Distribution of clusters' means



Source: authors calculations based on WVS data

As the data shows, country grouping by the criteria of TIO level (Table 1) and clustering by the criteria of k-means cluster analysis based on the results of a hierarchical agglomerate methods (Table 3) provide different results. In the first approximation this means that grouping criteria play a role and this opens the door for possible variation in analysis results. More formal cluster tests are based on all elements of social trust. Thus, it provides clustering on hidden relations between variables that are not visible using one criterion for grouping. As we may see from division of countries across clusters, relations between personal and institutional trust become more nuanced and more striking from theory viewpoint.

First of all, there is no strict co-existence between level of trust and level of income, as we can see from country composition of groups in Tables 1 & 4. Second, distribution of variables across the clusters shows more complicated picture of how personal and institutional trust interrelated. Cluster 1 (Table 4, Figure 6) agglomerates countries with lowest level of trust in others with high level of institutional trust and with highest level of confidence in the armed forces. This is a specific group of countries with less democratic political regime and very likely high attitude toward hierarchies and power distance. It also means that low levels of TIO may reflect cultural adaptation mechanisms associated with specific political environments. Cluster 2 is group of countries with moderate levels of trust in others as well as institutional trust. And it is a group of mostly developed democracies. Surprisingly, relatively low level of confidence in public policy institutions strongly corresponds with Catterberg, Moreno (2006) findings. Confidence in the armed forces here is on a similar level to confidence in policy that's meat that in perception of citizens the authorities with rights to bear arms are trusted in a similar way. And this is not the case

for Cluster 1 and Cluster 3. Cluster 3 is a group of mostly emerging market countries with lowest level of trust in others, lowest level of institutional trust, and level of confidence in the armed forces that outperform other public authorities.

Table 4. Results of ANOVA test of clusters' means

Variable	Analysis of variance					
	Between SS	df	Within SS	df	F	signif. p
TIO	7147.28	2	18881.23	85	16.0879	0.000001
CJS	24889.41	2	11424.28	85	92.5923	0.000000
CPo	18597.12	2	16197.31	85	48.7968	0.000000
CCS	21439.14	2	9448.01	85	96.4397	0.000000
CAF	9432.22	2	17727.23	85	22.6132	0.000000
CPP	18248.69	2	8279.39	85	93.6746	0.000000
CG	29484.92	2	12123.06	85	103.3657	0.000000
CPa	27201.40	2	10004.65	85	115.5523	0.000000

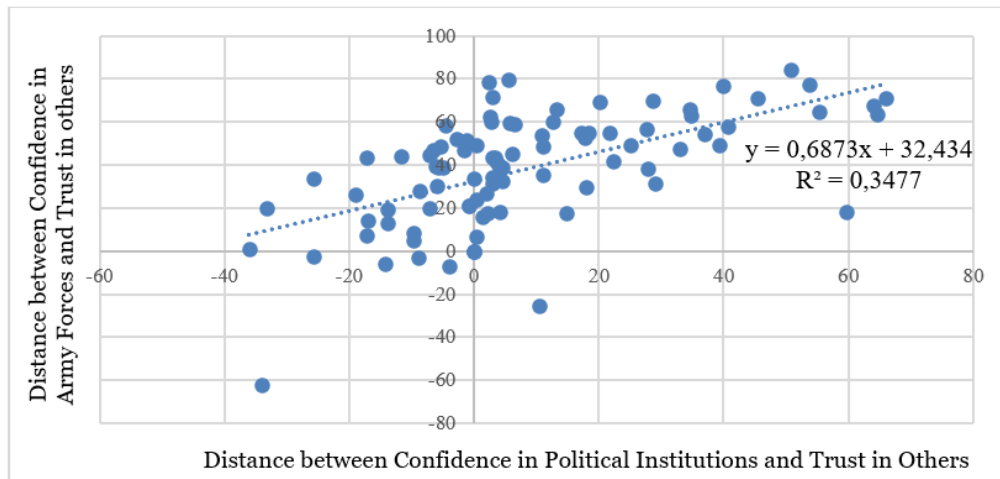
Source: authors calculations based on WVS data

Cluster validity was additionally assessed using the silhouette coefficient and the Calinski-Harabasz criterion, both supporting the three-cluster solution.

The most interesting thing is that confidence in army forces outperform confidence in public institutions in all three clusters and substantially exceeds level of personal trust. However, it is very likely that in Cluster 1 & 3 these are the signs of perception of army forces as a national self-identification, or functional efficiency compare to other public institutions. While the confidence in the armed forces in Cluster 2 is closer to general perception of enforcement system, yet the lack of confidence in public policy institutions. Having in mind this specific position of CAF across other elements of social trust the distance between it and TIO and distance between confidence in political intuitions / justice system and TIO shows the hidden relations between personal and institutional trust.

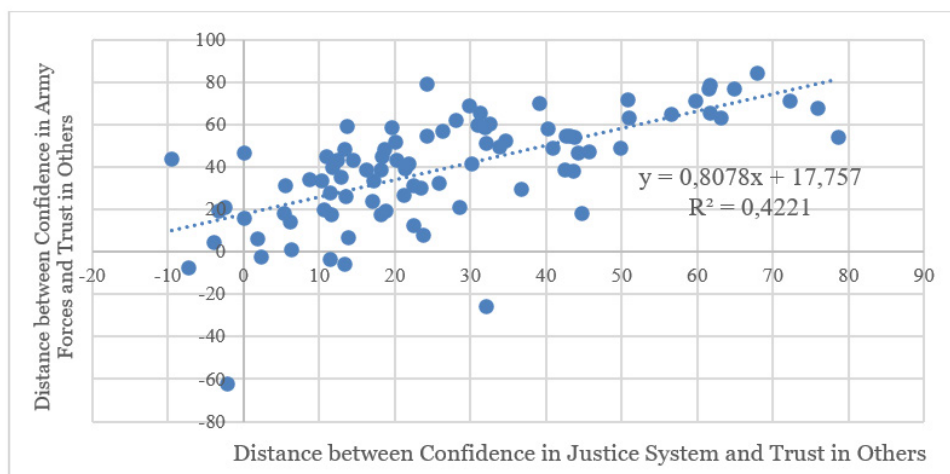
Figures 7-8 demonstrate that such distances are in opposite relations.

Figure 7. Distance between confidence in the armed forces and trust in others vs distance between confidence in political institutions and trust in others



Source: authors calculations based on WVS data

Figure 8. Distance between confidence in the armed forces and trust in others vs distance between confidence in justice system and trust in others



Source: authors calculations based on WVS data

Since both distance measures include TIO as a common component, the possibility of mathematical coupling cannot be entirely excluded. Therefore, the regression results should be interpreted as exploratory evidence of structural association rather than causal dependence.

How should the results presented in Figures 7–8 be interpreted?

First, they partly reflect the data shown in Figure 6. For the most part, the analyzed distances lie in the positive range, indicating that the sources of interpersonal and institutional trust may differ. To some extent, this corresponds with the previously identified phenomenon whereby trust in political institutions reflects both the political context and the cultural dimension (Boda et al., 2018).

In other words, trust in others may serve as a criterion for differentiating countries, as suggested in some studies (Keele, 2007), and may depend on cultural factors or levels of well-being. However, it is insufficient for explaining the more complex phenomenon of social trust and for conducting a comprehensive differentiation of countries (Kirby, 2025).

Second, after normalizing institutional trust measures relative to interpersonal trust, trust in the armed forces and in political institutions or the legal system appear much closer than suggested by the cluster analysis (Figure 6). This leads to a broader conclusion that trust in others is more strongly an embodiment of cultural and historical factors combined with elements of adaptation to the political regime.

Institutional trust, by contrast, reflects a complex combination of satisfaction with authorities, their legitimacy, and their effectiveness. This interpretation is broadly consistent with Catterberg, Moreno (2006), as well as with the view of institutional trust as a source of legitimacy (Jackson et al., 2011; Jackson et al., 2013).

Third, confidence in the armed forces plays a unique role, as it embodies an aspect of institutional trust that cannot be realized under conditions of weak institutions and, consequently, ineffective public policy. At the same time, it preserves elements of national self-identification and anchors the need for order and protection, particularly in contexts where the everyday functioning of democracy may be perceived as chaotic.

5. CONCLUSION

The relationship between interpersonal and institutional trust remains a subject of ongoing debate. This is largely due to the fact that cultural drivers of trust, embodied in trust in others, may become distorted within political processes and in manifestations

of legitimacy when institutional trust is concerned. The growing prevalence of military threats worldwide also raises the question of the role of trust in the armed forces within the broader structure of social trust.

This article employs analytical grouping, correlation, cluster, and regression methods, allowing several conclusions to be drawn. Social trust is a complex phenomenon, and hidden relationships often exist among its elements that are not always readily identifiable. Confidence in the armed forces correlates strongly with other elements of social trust across groups of countries classified by levels of trust in others. In groups dominated by lower-income countries, a more concentrated pattern of high correlation among elements of institutional trust is observed.

However, the cluster approach reveals a different grouping of countries in which the pattern of relationships between interpersonal and institutional trust takes distinct forms. When controlling for the variable of trust in others, trust in the armed forces and institutional trust begin to demonstrate an indirect relationship that was not detected in the cluster analysis. This leads to the conclusion that interpersonal and institutional trust may originate from different sources. Confidence in armed forces may coexist with lower levels of institutional trust and potentially serve as an alternative source of legitimacy of institutional trust in the context of national self-identification and anchor the need for order and protection that cannot be fulfilled under conditions of weak political institutions. The inclusion of macro-institutional indicators suggests that social trust heterogeneity is closely associated with broader development trajectories. Economic prosperity, democratic quality, corruption control, and state capacity appear to shape not only the level of trust but also its internal structure and distribution across institutional domains.

The study has several limitations. First, the analysis relies on cross-sectional data from a single WVS wave and therefore cannot capture temporal dynamics of trust. Second, explanatory variables such as GDP per capita, democratic quality, corruption perceptions, conflict exposure, or state capacity were not incorporated directly into the clustering procedure. Third, the results should be interpreted as exploratory rather than causal.

Acknowledgement

The authors acknowledge that this research was conducted within the framework of the Erasmus+ KA2 project SUSTED “Education for Sustainable Development: Synergy of Competences for the Recovery of Ukraine” (101178414-SUSTED). The project aims to strengthen institutional capacity, human capital development, and evidence-based policymaking in support of Ukraine’s post-war recovery and long-term sustainable development.

REFERENCES

- Abouzzohour, Y., & Yousef, T. M. (2024). *The paradox of trust in the military in the Middle East and North Africa*. Middle East Council on Global Affairs. <https://mecouncil.org/publication/the-paradox-of-trust-in-the-military-in-the-middle-east-and-north-africa/>
- Acemoglu, D., & Robinson, J. A. (2012). *Why nations fail: The origins of power, prosperity and poverty*. Crown Business, New York. <https://coleurope.on.worldcat.org/oclc/813861619>
- Aghion, P., Algan, Y., Cahuc, P., & Shleifer, A. (2010). Regulations and distrust. *Quarterly Journal of Economics*, 25, 1015–1049. <https://www.jstor.org/stable/27867505>
- Beugelsdijk, S. H., de Groot, L. F., & van Schaik, A.B. T.M. (2004). Trust and economic growth: a robustness analysis. *Oxford Economic Papers*, 56, 118–134. <https://www.jstor.org/stable/3488916>
- Binder C., Couture C., & Smit A. (2025). Partisan Trust in the Federal Reserve. *NBER Working Papers*, 33684, 1-43. <https://www.nber.org/papers/w33684>

- Bjornskov, Ch. (2012). How Does Social Trust Affect Economic Growth? *Southern Economic Journal*, 78(4), 1346–1368. <https://www.jstor.org/stable/41638856>
- Bjornskov, Ch. (2022). Social trust and patterns of growth. *Southern Economic Journal*, 89, 216–237. <https://www.jstor.org/stable/27190315>
- Boda, Z., Medgyesi, M., Fondeville, N., & Özdemir, E. (2018). *Societal change and trust in institutions*. Erufound. Publications Office of the European Union, Luxembourg. 66 p. Available at: <https://assets.eurofound.europa.eu/f/279033/44a922f19b/ef18036en.pdf> [Accessed 9 February 2026].
- Boda, Z., & Medve-Bálint, G. (2015). How perceptions and personal contact matter: The individual-level determinants of trust in police in Hungary. *Policing and Society*, 27(7), 732–749. <http://dx.doi.org/10.1080/10439463.2015.1053479>
- Campbell, W. R. (2004). The sources of institutional trust in East and West Germany: civic culture or economic performance? *German Politics*, 13(3), 401–418. <https://doi.org/10.1080/0964400042000287437>
- Catterberg, G., & Moreno, A. (2006). The individual bases of political trust: Trends in new and established democracies. *International Journal of Public Opinion Research*, 18(1), 31–48. <https://doi.org/10.1093/ijpor/edho81>
- Coase, R. H. (1960) The problem of social cost. *Journal of Law and Economics*, 3, 1–44. <https://doi.org/10.1086/674872>
- Dincer, O., & Uslaner, E. M. (2010). Trust and growth. *Public Choice*, 142, 59–67. <https://www.jstor.org/stable/2667866>
- Ehrmann M. (2024). Trust in Central Banks. *European Central Bank Working Paper*, 3006. <https://doi.org/10.1111/joes.12703>
- Eurofound (2018). *Societal change and trust in institutions*. Publications Office of the European Union. <https://assets.eurofound.europa.eu/f/279033/44a922f19b/ef18036en.pdf> [Accessed 9 February 2026].
- Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. Free Press Paperbacks, New York. <https://www.jstor.org/stable/20752121>
- Gorodnichenko, Y., & Roland, G. (2011) Which dimensions of culture matter for long-run growth? *American Economic Review*, 101, 492–498. <https://www.jstor.org/stable/29783795>
- Grosskopf, A. (2008). Explaining the democratic trust conundrum: The sources of institutional trust in the reunited Germany. *International Social Science Review*, 83(1/2), 3–26. <https://www.jstor.org/stable/41889924>
- Hawdon, J. (2008). Legitimacy, trust, social capital, and policing styles: A theoretical statement. *Police Quarterly*, 11(2). <https://doi.org/10.1177/1098611107311852>
- Hetherington, M. J. (1998). The political relevance of political trust. *American Political Science Review*, 92(4), 791. <https://doi.org/10.2307/2586304>
- Hetherington, M. J. (2005). *Why trust matters: Declining political trust and the demise of American liberalism*. Princeton University Press, Princeton, NJ. <https://doi.org/10.2307/j.ctv301fkq>
- Hosking, G. (2017). *Trust in the trustworthy: a key to social cohesion?* H. Prange-Gstöhl (Ed.), *Trust at risk? Implications for EU policies and institutions*, 8–16. <http://dx.doi.org/10.18235/0003911>
- Jackson, J., Kuha, J., Hough, M., Bradford, B., Hohl, K., & Gerber, M. (2013). *Trust and legitimacy across Europe: A FIDUCIA report on comparative public attitudes towards legal authority*. FIDUCIA Project. https://researchonline.lse.ac.uk/id/eprint/50650/1/Jackson_Trust_legitimacy_Europe_2013.pdf
- Jackson, J., Pooler, T., Hohl, K., Kuha, J., Bradford, B., & Hough, M. (2011). *Trust in justice: Topline results from round 5 of the European Social Survey*. ESS Topline Results Series. European Commission. <https://researchonline.lse.ac.uk/id/eprint/41680/1/Trust%20in%20justice%28lsero%29.pdf>
- Kaasa, A., & Andriani, L. (2022). Determinants of institutional trust: The role of cultural context. *Journal of Institutional Economics*, 18(1), 45–65. <https://doi.org/10.1017/S1744137421000199>
- Kaasa, A., & Parts, E. (2008). Individual-level determinants of social capital in Europe: Differences between country groups. *Acta Sociologica*, 51(2), 145–168. <https://www.jstor.org/stable/20460044>

- Kahan, D. M. (2003). The logic of reciprocity: Trust, collective action, and law. *Michigan Law Review*, 102(1), 71–103. <https://doi.org/10.2307/3595400>
- Keele, L. (2007). Social capital and the dynamics of trust in government. *American Journal of Political Science*, 51(2), 241–254.
- Kirby, N. (2025). What is social trust? *Critical Review of International Social and Political Philosophy*, 1–19. <https://doi.org/10.1080/13698230.2025.2528380>
- Kuang, P., Weber, M., & Xie, S. (2025). Central bank communication with the polarized public. *Working Paper*, 33524, 1–43. <https://www.nber.org/papers/w33524>
- Kuhn U., & Marquis L. (2025). Does ideological polarization promote political engagement and trust? Evidence from Swiss panel data, 1999–2023. *European Journal of Political Research*, 1–25. <https://doi.org/10.1017/S1475676525100248>
- Kwon, O. Y. (2019). Social trust: Its concepts, determinants, roles, and raising ways. *Business*, 19–49. <https://doi.org/10.4337/9781784719609.00008>
- Levi, M., Sacks, A., & Tyler, T. (2009). Conceptualizing legitimacy, measuring legitimating beliefs. *American Behavioral Scientist*, 53(3), 354–375. <https://doi.org/10.1177/0002764209338797>
- Levi, M., & Stoker, L. (2000). Political trust and trustworthiness. *Annual Review of Political Science*, 3(1), 475–507. <https://doi.org/10.1146/annurev.polisci.3.1.475>
- Martinangeli, A., Povitkina, M., Jagers, S., & Rothstein, B. (2020). Institutional Quality Causes Social Trust: Evidence from Survey and Experimental Data on Trusting Under the Shadow of Doubt. *CeCAR Working Paper Series*, 10, 1–42. The Centre for Collective Action Research. <https://ideas.repec.org/p/mpi/wpaper/tax-mpg-rps-2020-04.html>
- Nannestad, P., Svendsen, G. T., Dinesen, P. T., & Sønderskov, K. M. (2014). Do institutions or culture determine the level of social trust? the natural experiment of migration from non-western to western countries. *Journal of Ethnic and Migration Studies*, 40(4), 544–565. <https://doi.org/10.1080/1369183X.2013.830499>
- Newton, K., & Zmerli, S. (2011). Three forms of trust and their association. *European Political Science Review*, 3(2), 169–200. <https://doi.org/10.1017/S1755773910000330>
- Ostrom, E. (2005). *Understanding institutional diversity*. Princeton University Press, Princeton, New Jersey. <https://doi.org/10.2307/j.ctt7s7wm>
- Peiró-Palomino, J., Gianmoena, L., Picazo-Tadeo, A. J., & Rios, V. (2024). Social trust and the advanced aspects of social progress: Evidence for the European regions. *European Journal of Political Economy*, 83, 102547. <https://doi.org/10.1016/j.ejpoleco.2024.102547>

