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The Power of Networks. Individual and Contextual Determinants of Mobilising Social Networks for Help

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Abstract

In this paper we treat social networks as a resource of individuals, that is used in conjunction with other types of capital, and similarly to other types of capital, its use is context-specific. We propose a conditional mechanism for how context determines networks use: not only does context affect network mobilisation, but that it affects behaviour of different groups differently.

We test this proposition on the example of social and economic polarisation influencing probability of turning to networks for help by different income groups. Our findings show that although the poor have the greatest need to turn to networks to compensate for the shortage of other forms of capital, when context becomes adverse, in comparison with other groups they are always disadvantaged in terms of networks mobilisation.

Keywords: social capital, networks, inequality, income, post-communist, Central Eastern Europe





1. Introduction

How people use their networks to further themselves in life has been a subject of numerous studies, but research remains inconclusive in terms of who uses their networks most and with to what result. It is clear that different social strata use networks differently (Li et.al., 2005; Pitchler and Wallace, 2009), but whether informal connections are more important for the poor to get by or for the wealthy to get ahead, is unclear. Some have argued that resource-poor individuals' networks are powerless, and that social connections are used predominantly by the wealthy to retain their privileged position (Pitchler and Wallace, 2008; Portes, 1999). Others, however, have demonstrated that networks are most efficiently mobilised when they are meant to compensate for the lack of other resources, thus low-status should encourage network mobilisation (Uehara, 1990; Edin and Lein, 1997).

In this paper we treat social networks as a resource of individuals (since they can be employed for generating individual benefits, Portes), that is used in conjunction with other types of capital, and similarly to other types of capital, its use is context-specific. Our proposed mechanism is straightforward. Social position – operationalised in terms of income position – determines whether people turn to their networks for help when in need of resources, such as money or employment. Because there exist different motivations leading to networks use and these motivations are activated depending on the strains and opportunities resulting from the context an individual operates in, the effect of one's social position needs to be analysed in combination with relevant contextual characteristics. For example, level of networks reliance to access resources depends on the prevailing norms of behaviour and general approach to informality in a given country. Moreover, level of network mobilisation differs across social groups depending on the context as well. For example, social groups will refer to their networks to a significantly different degree if their access to resources is radically different. Thus, the overall pattern of wealth distribution in the society conditions use of networks by particular groups as well. In short, we propose not only that context affects network mobilisation, but that it affects *different groups differently*.

To test these propositions we refer to two contextual determinants that are known for affecting patterns of social interaction: economic inequality and post-communist transition. In both cases, as society polarises, use of networks as a resource by particular social groups changes as well. Based on existing evidence we pose that the poor have the greatest need to turn to networks to compensate for the shortage of other forms of capital, and in-

creasing social and economic distance between them and more resource-wealthy groups acts to their disadvantage. They have little to offer in terms of exchange, so they are largely confined to their own circle of family and friends.

The advantage of our approach over previous studies is threefold: first, we do not analyse the potential of social networks to be used successfully (their size or resources embedded in them, c.f. de Graaf and Flap, 1988; Lin, 2001), but whether they are perceived by actors as relevant means to access resources. Secondly, we operationalise respondents' social strata by referring to their unequal position in terms of economic resources: they are classified in reference to their income's contribution to the overall income of their country. Finally, unlike previous research, we do not rest with assessing the "average" cross-country effect of an individual's social position on their behaviour. Instead, we test a conditional mechanism for how networks are used by particular groups to access resources depending on social and economic context. We use a largely underutilised ISSP 2001 "Social Networks" dataset, which has been designed specifically with the purpose of studying social capital and social networks in the cross-national perspective.

Our findings show that the relationship between one's social position and the degree to which their social networks are mobilised to access resources is less clear-cut than so far believed. In general, the lowest income group use their networks to access resources not less, if not more (depending on the resource in question) than higher income individuals. However, this effect is highly context-specific: in the post-communist context the poor become disadvantaged, compared to the wealthy, in terms of networks use. As a result, they are unable to compensate for the lack of other resources, while the wealthy are able to use networks relatively more to reinforce their privileged position. Economic inequality has a similar effect on networks use by particular groups: as inequality grows, the poor lose their advantage over the wealthier groups in terms of mobilising social networks for help.



2. Social networks as an exchange-based resource

The point of departure for us is the individual level approach to social capital as a resource (Portes, 2000) or, as Paldam (2000) labels it, the rational choice approach, that is based on the notion of exchange and reciprocity in social and economic relationships. Bourdieu, Lin, Burt and other proponents of this approach all share the understanding that social capital consists of resources embedded in social relations and social structure, which can be mobilized to help an actor to achieve certain goals (Lin, 2001; Bourdieu, 1986; Coleman, 1990). To possess social capital, one has to be linked to others, and these “others” are the source of one’s advantages (Portes, 1998; Coleman, 1990, Burt 2000). According to Bourdieu (1986), in order to capture the power of one’s network, we should distinguish between 1) social networks a person is embedded in, and 2) the outcomes of those social relationships:

“the volume of the social capital possessed by a given agent depends on the size of the network of connections he can effectively mobilize and on the volume of the capital (economic, cultural or symbolic) possessed in his own right by each of those to whom he is connected” (Bourdieu, 1986: 51).

Having a broad network of strong relationships does not necessarily mean that a person will be able to generate any significant resources from them. Certain social networks are in greater positions of power than others, and they can therefore yield much more substantial returns to their members (DeFilippis, 2001, 791). Similarly, De Graaf and Flap (1988) found that the use of informal means per se does not lead to higher occupational prestige or greater income. What matters is the social position of a person and of those in his or her network.

Both Bourdieu (1986; 1998) and Coleman (1990) see networks as forming a system of reciprocal relationships. They note that by investing in relationships – giving gifts and providing favours - people expect future returns from these transactions (see also Lin, 2000). Creation of obligations, or the so-called credit slips is often intentional and strategic, for they can be seen as an additional source of power (Coleman, 1990). Some people may be reluctant to use the help of their networks in order not to create obligations (Lin, 2001; Coleman, 1990).

Also Lin sees social capital as resources, real or potential, gained from relationships and “used by actors for actions” (Lin, 2001: 25). He distinguishes between accessed and mobilised social capital, the former being resources “attached” to one’s contacts within a network, and the latter being resources that are effectively mobilised through these networks. Accessed social capital is mobilised through instrumental actions to obtain resources that one lacks; what portion of accessed social capital will be used depends on a range of factors, including individual psychological predispositions, their human capital, relative position in a society, and cultural and institutional context (Lin, 2001).

Lin's theory is supported by de Graaf and Flap's (1988) study on the role of social networks in finding a better paying and more prestigious employment. Their findings confirm that while accessed social capital (extensiveness of one's connections and resources embedded in them) certainly matters for returns from one's networks, the extent to which they can be mobilised successfully when in need arises is the actual measure of their value.



3. Social position and social networks mobilisation

The way networks are formed and used is strongly stratified. Individuals with higher status have higher accessed social capital, so they should have more mobilised social capital. Also, given that the upper social class has more resource-wealthy networks to draw from and more to gain from using them, they should be motivated to use these connections more often. Low-income groups would not be able to rely on their networks to the same extent, for these networks are less powerful (Pitchler and Wallace, 2008; Portes, 1999; Lin 2001; Graaf and Flap, 1988; DeFilippis, 2001). Accordingly, inequality in economic terms also implies shortage of social capital. This is why, in line with Bourdieu (1986) and Lin (2001), economists usually emphasize the strategic importance of networks, i.e., that they can be used and are used in the production and reproduction of social divisions in the society. The wealthiest social groups strategically use social capital along with other types of capital (economic, cultural, and social) to maintain their social position, gain advantages over other groups or avoid potential losses. In contrast, in poor communities the lack of any significant resources in their networks creates a self-reproducing condition of disadvantage (Portes, 1999; DeFilippis, 2001).

On the other hand, people's decision to defer to their networks for support is likely to depend on how much they need that help, on differences in norms and expectations regarding use of networks for support, and on their ability to get that support from alternative sources. Financial institutions are more hesitant to provide loans to poor people than to wealthy people, considering the risk that the loan will not be repaid.¹ The use of commercial job search sites and employment agencies is also of limited availability to poor people, as they may be unable to pay for this service. Turning to an institution requires knowledge about which institution and on what terms can provide the necessary support, and that requires human capital, which is also unequally distributed. As a result, poorer people are not always in a good position to utilize the formal support that is potentially available to them, and are "forced" to turn to their networks in time of need. Indeed, it has been documented in several studies about poor neighbourhoods that their inhabitants heavily depend on their social networks (Uehara, 1990; Edin and Lein, 1997; Putnam, 1995).

¹ One might argue that the same is true for individuals. However, in personal exchanges the affectional, relation-building aspect comes in place as well, and the moral obligation to help. In fact, friendship is often understood as the refusal to calculate (Ledeneva, 1998).

As we can see, the evidence regarding the mobilisation of social networks among different social strata suggests that although wealthier social groups have networks with more potential in terms of resources embedded in them, the poor are most likely to need and to be forced by circumstances to turn to their networks when in need. It is also clear from existing research that the poor use their networks to compensate for their disadvantaged position vis a vis the rest of the society; when their advantage in this respect disappears, their economic disadvantage becomes even more dire.



4. Social networks and economic inequality

Under the conditions of high economic inequality, those at the top of the social structure have a disproportionately better access to scarce resources than others. Moreover, economic inequality is often paired with political inequality (Solt, 2008), helping the elites to institutionalise the unequal access to resources through formal channels. Previous research also suggests that inequality has a detrimental effect on confidence in formal institutions (Rahn and Rudolph, 2005), which is likely to limit reliance on them. For example, if people do not have much confidence in banks, they would rather turn for money to people they know. If they do not believe job centres offer real and equal opportunities to all job seekers, they will rather turn to friends when looking for employment. Therefore, we expect that as inequality rises, people will increasingly choose the informal channels of social networks to reach scarce resources, as they are perceived as more efficient than institutional means. Equally importantly, the personal aspect of the exchange in one's social network is increasing the likelihood of successful mobilisation of resources through this network.

When talking about social networks mobilisation under conditions of inequality one should not forget that people have preferences for cooperation with some over others based on the principle of homophily (see Fukuyama, 2001; Portes, 2000).² Social interactions tend to take place among individuals with similar status homophily and value homophily (Lazarsfeld and Merton, 1954), leading to a conclusion that “similarity breeds connection” (McPherson et al., 2001). A similar argument is made by Bourdieu, who notes that “proximity in social space predisposes to closer relations” (1998, 10-11). Inequality represents a significant gap between social groups in terms of resources, but also education, culture, social status, and lifestyle. It makes contacts between people from different social classes less likely to occur, and more difficult to maintain (Bourdieu, 1998). In unequal societies status gaps between individuals diminish the sense of solidarity, cause feelings of threat, anxiety and stress, which is manifested in fewer interactions between people of unequal status (Wilkinson and Pickett, 2009). Increase of inequalities reinforces social hierarchy and social distance between groups, thus furthering reliance on close-knit networks (Karstedt, 2003). This is particularly disadvantageous for a low-status group, who have little to offer in a strategic exchange and are not desired members of cross-cutting networks that are potentially more resource rich.

So far there has been little empirical research into how inequality affects the way people of different social strata use their networks. Pitchler and Wallace (2008) find in a cross-national study of 27 European countries that upper layers of society have higher levels of social capital, especially through associational networks (formal

² Homophily is usually invoked as an explanation of inter-group hostility or prejudice, however, in the case of resources, it may be interpreted as a positive discriminating mechanism that allows to select potential cooperation partners who, while possibly poorer in resources than out-group members, are more likely to cooperate and reciprocate favours by the virtue of membership in the same group.

social capital), and inequality magnifies these differences between classes, giving the upper classes further advantages. Unfortunately, their study is only concerned with the extensiveness and intensiveness of networks, without actually tracking to what extent and under what circumstances these networks are used as a resource.

From the discussion above we conclude that under the conditions of high inequality, individuals will have a higher incentive to use networks than when resources are more equally distributed. Networks will be seen as more valuable and strategically important, for the “right connections” can provide privileged access to resources. Not all groups, however, will be able to count on expanding their networks. The poor, although more in need of referring to resources embedded in networks beyond their close circle of friends and relatives, will not be able to do so. The wealthy, in contrast, have both the capacity and incentives to rely on social networks to reinforce their privileged position.



5. Social networks and post-communist transition

As Coleman (1990) says, the more people need each other and call for each other's help, the more social capital is generated. Networks of cooperation and reciprocity are particularly valuable for their members when formal institutional agreements are failing to provide the necessary support, and the economic and social spheres are poorly organized (Letki and Evans, 2005). It is precisely for these reasons that the use of informal networks became so crucial and widespread in Central-Eastern Europe (CEE) during the communist times. Due to unfavourable regulatory conditions for business development and distortions of central planning, informal social relations became the base for trading and exchange (Stark and Bruszt 1998, 127-29). Private individuals relied on social networks as the key way of compensating for the inefficiencies of formal institutions (Jowitt, 1992; Ledeneva, 1998; Rose, 1999; Howard, 2003, Cook et al., 2004). Elites were using informal networks to reinforce and exploit their privileged position (Karstedt, 2003). For those at the bottom, however, a closely knit network of informal relationships formed the basis of a survival strategy, helping to deal with supply constraints of consumer goods. Relying on connections to get something done was natural and completely acceptable, and turning to your acquaintances, not institutions, when in need developed into a strong habit (Pitchler and Wallace, 2007).

In contrast to the predictable shortages and inefficiencies of the communist period, the fall of communism created an environment characterized by high uncertainty, institutional weakness and unpredictability (Rose-Ackerman, 2001; Letki and Evans, 2005). As a result, social networks remained the basis for social and economic exchanges in CEE well into the 1990s. Stark and Bruszt state that:

“The existence of parallel structures in the informal and interfirm networks that got the job done under socialism means that instead of an institutional vacuum we find routines and practices, organisational forms and social ties, that can become assets, resources, and the basis for credible commitments and coordinated actions” (Stark and Bruszt 1998, 128).

Also studies of non-economic social ties produced evidence for the overwhelming presence of informal, personal ties in the post-communist societies. For example, on the basis of in-depth interviews Ledeneva (1998) found out that *blat* and exchange of favours within a tight personal network became the key element of informal reciprocity mechanism in post-communist Russia. Howard has concluded that although they are “civically weak”, post-communist citizens still make use of their “vibrant social networks that they developed under Communism” (Howard 2003, 153).

The reforms of the 1990s in CEE caused a rapid polarisation of social groups. Those who lost employment and experienced problems with adapting to the new reality were branded as “the losers of transition”, and as such were stigmatised and isolated (Ellman, 1997; Brainerd, 1998). Economic marginalisation was accompanied by social marginalisation, which resulted in the poor being unable to expand their social networks since they themselves had very little to offer, and under the conditions of economic rivalry and uncertainty there was a high risk that the favour offered to them will never be returned.³ They have not developed ‘weak ties’ and were forced to rely exclusively on their closest family and friends (Volker and Flap, 1995; Angelusz and Tardos, 2001). In contrast, informality and *blat* remained the key way of managing the uncertainties of transition period by most of the society, and of maintaining privileged status achieved by ‘transitional winners’ (Hellman, 1998; Ledeneva 1998, Cook et al., 2004; Karstedt, 2003).

Therefore, we expect that although the experience of Communism was conducive for networks formation and use, and there is evidence for the continuity of the culture of informality from the communist to the post-communist period, marginalisation and stigmatisation of the poor as ‘transitional losers’ did not allow them to expand their networks in order to compensate for their changing situation, placing them at an increasingly disadvantaged position.

³ Although there is no direct evidence to support this, some claim that this strategic aspect of offering favours in social networks was largely absent in under the communism, when help was offered even to complete strangers based on the principle of generalised reciprocity (Rose-Ackermann 2001, Letki and Evans 2005).



6. Hypotheses

As we have discussed above, networks are a resource which is used and strategically protected by the wealthy, but is more crucial for getting by for the poor. Whether the poor and the wealthy have significantly different strategies of forming and using networks depends, however, on how their different economic position is mediated by the context they operate in. In order to test the proposition that economic and social-psychological polarisation of the society affects the way different social groups use their networks as a resource we form two hypotheses about each of the contexts. The mechanism we propose is largely similar for both types of context discussed here, but in the case of economic equality we place more emphasis on consequences of polarisation in terms of resources, while in the case of post-communist context – on the socio-psychological polarisation of the society. Based on the evidence on the effect of inequality on confidence in formal institutions, as well as the impact of inequality on cross-cutting ties, we pose that:

H1a. Where resources are unequally distributed, people rely on networks to access resources more, and

H1b. Inequality will turn the balance of relying on networks in favour of the wealthiest groups of society, for the poorest will not be able to increase their use of networks to the same extent.

Communist legacy of getting things done informally as an alternative to shortages and inefficiency of formal institutions, combined with evidence of marginalisation of the ‘transitional losers’ leads us to further two hypotheses:

H2a. In the post-communist context networks will be more important for accessing resources than in other countries, and

H2b. The low-income group in post-communist countries will be the most disadvantaged in terms of being able to mobilise their networks for help.





7. Data and methods

We use the ISSP 2001 “Social Networks” dataset, the fieldwork for which was conducted between 2000 and 2002 in 27 countries, but due to the missing data only 21 of them are included in our analysis. Six of them are the post-communist CEE countries: Czech Republic, Hungary, Latvia, Poland, Russia and Slovenia. The number of interviews in most countries is between 1000 and 1500, which is representative at the country level. Because of the nested structure of the data, we use hierarchical regressions, with respondents being nested within countries. The models are estimated using GLAMM software in STATA (Rabe-Hasketh and Skrondal, 2005).

7.1. Dependent variables: mobilising networks

We can assess subjective perceptions of the usefulness of social networks by referring to questions in which respondents indicate who they would turn to or have turned to in case of a hardship: if they needed to borrow a substantial amount of money or were looking for a job. Based on earlier research we assume that, when in need, people will turn to where they expect help is most likely to come from (Edin and Lein, 1997; Wellman and Worthley, 1990). Therefore, we do not analyse the potential of the networks to provide resources to an individual, but mobilisation of these networks for a personal benefit (Lin, 2001).

ISSP 2001 respondents were asked who they would turn to if they needed to borrow a substantial amount of money.⁴ The range of answers offered included close and more distant family, friends, neighbours and acquaintances, as well as a range of professionals and institutions designed to assist people in case of economic hardship. There was also an option “I would turn to no one”. Those who would turn to their social networks for money were coded as “1”, and others as “0”. Respondents were also asked how they have learnt about their current job (in the case of unemployed or retired - their last job). Those who indicated their family members, relatives, friends or acquaintances as the source of information were coded as “1” and others - as “0”. As a result, we have two indicators that capture mobilisation of people’s networks for accessing key resources: work and money. Even though one of the dependent variables describes to whom people *have* turned to, and the other – to whom they *would* turn to for, accordingly, job and money, we believe these questions essentially capture the same phenomena – reliance on one’s networks in case of need. Previous studies have found that people form more or less stable networks in which they exchange different types of favours with each other in repeated interactions. Thus, if one indicates

⁴ Two other questions referred to who people would turn to if they were ill and needed help around the house or if they felt depressed and wanted to talk to someone. We have decided to exclude these items from the analysis because the significant majority of respondents in both scenarios pointed to relying on networks in the first and second instance. As a result, variables referring to these scenarios had almost no variance.

that he or she *would* turn to networks for money, it means that there is a reason to assume that such help either has been, or is likely to be provided (Edin and Lein, 1997; Wellman and Worthley, 1990).

7.2. Independent variables

Individual level INCOME POSITION. One of the key hypotheses tested here is that individuals who are disadvantaged economically use their social capital to compensate for their lack of economic capital. Previous research has typically used ISCO occupational groups to capture social position and resources (e.g., Pitchler and Wallace, 2008). However, the type of occupation, especially in post-communist countries, is not a good indicator of economic position (Domanski, 2011), therefore we have decided to use income based groups.⁵

The major challenge was to find a way that would allow grouping respondents according to their income in a manner that would correspond to their relative position in a society. We have grouped them on the basis of information whether they contributed to the lowest 25% of total equalised household income in a given country, to the top 25%, or to the middle category. Employing Eurostat approach, we first calculated the equalised disposable household income of an individual (HIDI) for all households in every country.⁶ The data used was taken from available sources, such as the Luxembourg Income Study (LIS), but in some cases also The European Union Statistics on Income and Living Conditions (EUSILC) (Latvia, Cyprus), or National Statistical Office (Chile).⁷

In the next step, households were sorted according to their HIDI, and assigned to three different income groups. The lowest income group consists of the poorest households, whose HIDI together accounts for the lowest 25 per cent of the total HIDI in that particular country. The highest income group consists of the wealthiest households, whose HIDI together account for the top 25 per cent of the total equalized disposable household income in that particular country. All other households represent the middle income group. In the final step, we applied thresholds between the lowest and middle, and middle and highest income groups estimated in the previous step, to the ISSP Social Networks equalised household income variable (calculated using the Eurostat approach described in footnote 6). As a result we were able to group respondents according to whether they belong to the lowest

⁵ It would have been interesting to run the analysis for both income and employment-based social class measures, however, it was not possible to reconstruct social class from ISSP data, because it did not contain some key variables on employment status.

⁶ Total household income after taxes and contributions was divided by the weighted number of household members. For most of the countries we applied standard Eurostat weights: 1.0 to the first adult; 0.5 to the second and each subsequent person aged 1. and over; 0.3 to each child aged under 1. When the data on household members under 1. was not available, which was the case for Chile, we provided altered weights: 1.0 to the first person; 0.5 to the second person; 0. to each subsequent household member.

⁷ In cases where the information for the exact year of the ISSP fieldwork was not available, the value to be used was calculated as the weighted average between the two nearest data points, considering their "closeness" to the ISSP data (Australia, Austria, Hungary, Norway, Slovenia, Spain, Finland). When external data was available only for one year, the value was adjusted on the basis of the change in average wages during the period of time between the ISSP fieldwork and the available external data according to the official statistics (Czech Republic, Russia, Brasil, Chile, Cyprus, Latvia, Italy, France). Usually the difference was up to two years, but the farthest data points were . years oi (Brasil, Latvia, Cyprus). In case where the data in ISSP was collected about gross income instead of net income (Australia, United States, Canada, Great Britain, Norway, Denmark, Finland) it was adjusted by subtracting the proportion that accounts for direct taxes and social contributions.



income group (their income falls below the lowest threshold), highest income group (income above the highest threshold), or they fall in between.

This method is superior over the traditionally used approach of grouping respondents into four or five equal categories based on their reported income for two reasons: first, to classify respondents we do not rely on the incomplete and distorted distribution of income declared in the survey, and second, we create groups that are much more internally homogenous, especially at the top end of the distribution, and especially in the more unequal countries. For example, if we used the traditional approach, and simply divided respondents into four quartiles, in Chile the cut-off point for the wealthiest group would be 154 thousand Chilean pesos, and the group making income above this amount of money would be 25% of the total population. With our approach, the cut-off point for the high-income group is 500 thousand pesos, and the group constitutes just 1% of the population. The size of groups varies from country to country. The average size of the lowest income group in all countries is 55.6 per cent, the highest income group 9.6 per cent and the medium income group 34.8 per cent (see Table 3 in the Appendix).

Contextual effects There are two main country-specific characteristics that are of interest from the point of view of our hypotheses: income inequality and post-communist status. To reveal the importance of economic polarisation for networks mobilisation, we look at the effect of income inequality measured by GINI coefficient taken from the Standardized World Income Inequality Database (SWIID, see Solt, 2009). Post-communist status is included in the models to account for the communist culture of informality and relying on networks as a means of getting by and getting ahead in the context of institutional inefficiency and unpredictability. We include both contextual variables in all models simultaneously to assess the effect of one characteristic controlling for the level of the other. To test for the effect of contextual characteristics on behaviour of particular income groups, we add interaction terms.

7.3. Control variables

RECIPROCITY. By giving gifts or providing favours individuals create obligations. Individuals differ with respect to the extent of “credit slips” on which they can draw, and they can be seen as an additional source of power (Coleman, 1990). Therefore, it is important to control for the effect of reciprocity on networks’ mobilisation. We have used four items referring to how often a respondent has helped others within the past 12 months by doing their household work when they were ill, talking to them when they were depressed, lending them money or helping to find a job. Since the general rule of reciprocity is more important here than the equity of exchange, we do not distinguish between various types of resources used by the respondents to help others and we do not match them

with the resources they access through their networks (money or information about a job). Instead, we create a composite index called *giving*, which indicates on a scale from 0 to 5 frequency of helping others (where 0 means that the respondent has not helped anyone in any of the four described situations during the past 12 months, and 5 means that they have been helping more than once a week in all of these situations).

STRATEGIC FRIENDSHIP. People who see networks primarily as a resource often knowingly search for the most useful contacts and build their relationships *strategically*. Poor individuals may be building their networks with the purpose of gaining access to resources they lack themselves, while wealthy people will select friends and acquaintances strategically to protect their advantaged position. To deal with this potential endogeneity problem, we employ a question whether the respondent approves or disapproves of developing friendship with someone just because they can become of use.

SOCIO-ECONOMIC BACKGROUND. Following Pitchler and Wallace (2008), we account for whether respondents are *economically inactive*: those who are unemployed, disabled, retired or homemakers are usually less involved in social life and less likely to cooperate and interact with people outside of the household. In addition to that, we account for the *sector of employment*: we expect private sector employees to be less secure jobwise and more likely to be in an informal or partially formal employment, especially in post-communist countries. If a person does not have a formal work contract, they may have problems with receiving institutional support, so they are forced to turn to their networks.

We also expect that the country's wealth affects networks formation and reliance on them, with people living in wealthier countries forming smaller networks and mobilising them to a lower extent than people in countries where resources are more scarce. However, we do not find evidence that would suggest that country's wealth should condition the way different income groups use their networks. We therefore control for economic development by accounting for the real GDP per capita in US dollars at base year 2000 (Gleditsch Expanded Trade and GDP Data), but we do not interact GDP with income groups in our models.

The remaining control variables are standard socio-economic background indicators: gender, age, and education level (whether a respondent has a degree or not).



8. Mobilisation of networks: Empirical analysis

Table 1 shows results of a series of regressions, testing the hypotheses outlined above: that income position, and contextual characteristics affect how people use networks to access money. Table 2 presents models that are identical to those in Table 1, but the dependent variable is turning to networks to access information about a job. First, we present unconditional regression models with country level variables (Models 1.1. and 2.1). The intra-class correlation correlation (ICC) in both models is 0.07, which means that 7 per cent of total variance is explained by the country-level factors. Comparison of variance components (see Table 4 in the Appendix) shows that adding contextual variables results in a 45 per cent proportional reduction of intercept variance. In the next steps we explore whether contextual features - level of economic inequality and post-communist status - effect how particular income groups mobilise their networks to access money or information about a job. This supports our proposition that the effect of income position on turning to networks for help is conditioned by economic and cultural context. In order to facilitate the interpretation of interaction terms in models displayed below, we present the posterior means of predicted probabilities (PP) of turning to networks for money or information about a job for particular income groups, given the level of inequality and post-communist status (Figures 1 to 4).

Table 1 Multilevel regressions of relying on networks to borrow money, on income groups, networks, contextual characteristics and controls, N1=20897, N2=21 (unstandardised coefficients, with SE in parentheses).

	MODEL 1.1		MODEL 1.2		MODEL 1.3	
Constant	-.598	(.559)	-.526	(.554)	-.601	(.558)
Individual-level predictors						
Income group (ref.cat. low income):						
Middle income	.004	(.038)	-.065	(.058)	-.077~	(.043)
High income	.025	(.061)	-.070	(.094)	-.075	(.067)
Economically inactive (vs. employed)	.272***	(.041)	.274***	(.041)	.270***	(.041)
Exchange in networks:						
Reciprocity	.242***	(.019)	.241***	(.019)	.240***	(.019)
Strategic friendship	.085***	(.015)	.085***	(.015)	.088***	(.015)
Country-level predictors:						
GDP x10000	0.334~	(.184)	.319~	(.183)	0.350~	(.183)
GINI	.045**	(.014)	.042**	(.014)	.045**	(.014)
Post-communist	.917**	(.302)	.896**	(.299)	.784**	(.302)
Cross-level interactions:						
GINI*middle income			.008~	(.005)		
GINI*high income			.013	(.011)		
Post-communist*middle income					.320***	(.083)
Post-communist*high income					.471**	(.147)
Variance components						
σ (country level)	.127		.124		.126	
-loglikelihood	12328		12326		12318	

Note: All models include the following controls: age, sex, education (degree), and sector of employment.

****p<0.001, **p<0.01, *p<0.05, ~p<0.1*

Table 2 Multilevel logistic regressions of relying on networks to find a job, on income groups, contextual characteristics and controls, N1=20506, N2=21 (unstandardised coefficients, with SE in parentheses).

	MODEL 2.1		MODEL 2.2.		MODEL 2.3.	
Constant	1.197*	(.608)	1.310*	(.613)	1.206**	(.603)
Individual-level predictors						
Income group (ref.cat. low income):						
Middle income	-.144***	(.037)	-.266***	(.059)	-.205***	(.044)
High income	-.223***	(.061)	-.355***	(.097)	-.305***	(.071)
Economically inactive (vs. employed)	-.340***	(.040)	-.339***	(.040)	-.342***	(.040)
Exchange in networks:						
Reciprocity	.100***	(.018)	.098***	(.018)	.098***	(.018)
Strategic friendship	.027~	(.014)	.027~	(.014)	.028~	(.014)
Country-level predictors:						
GDP x10000	-0.518**	(.201)	-0.539**	(.202)	-0.509**	(.199)
GINI	.007	(.015)	.002	(.015)	.007	(.015)
Post-communist	-.416	(.329)	-.448	(.332)	-.504	(.328)
Cross-level interactions:						
GINI*middle income			.013**	(.005)		
GINI*high income			.017~	(.010)		
Post-communist*middle income					.197**	(.076)
Post-communist*high income					.306*	(.134)
Variance components						
σ (country level)	.152		.154		.149	
-loglikelihood	12684		12680		12679	

Note: All models include the following controls: age, sex, education (degree), sector of employment and employment status.

**** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, ~ $p < 0.1$.*

The results are largely, although not entirely, supportive of our expectations: context does affect reliance on networks to access resources in the entire sample, but this effect is resource-specific. Specifically, both increased income inequality and post-communist context make people turn to networks for money more, but they do not have a similar effect on searching for a job through networks.⁸ Therefore, hypotheses H1a and H2a are confirmed, but only in the case of borrowing money. Models 1.1 and 2.1 show that this pattern is reversed in the case of the key individual-level predictor, i.e. income group, as probability of turning to networks to borrow money is independent of one's income group, but income highly matters for turning to social networks to find a job (with low-income respondents finding a job through their networks significantly more often than middle and high-income respondents).

8 Unexpectedly, post-communist status seems to lower reliance on networks to find a job (the magnitude of this effect is high, although it misses conventional significance levels). We see two reasons for why in post-communist countries people would be turning to networks less than in other countries: first, a significantly higher share of the population in CEE works in the public sector, which is much more stable in terms of employment duration, and where information about jobs is more often distributed through institutional channels, and where selection procedures are much more formal than in the private sector. Second, it is likely to be partly a result of the continuity of employment among the oldest generation, who got their jobs under the previous regime, when employment was managed centrally and assigned to people by the authorities. To test for the latter explanation, we estimated Model 2.2 on the sub-sample of people below the age of 50 on the presumption that they were disproportionately more reliant on state-provided state-assigned employment. Compared to the full sample, the negative effect of post-communism was reduced by around 25%.



We now move to conditional effects: it turns out that, in line with hypotheses H1b and H2b, both contexts significantly effect how particular groups refer to their networks for help. This relationship is less pronounced in the case of income inequality, nevertheless it is still significant. For example, the mean difference in PP of turning to social networks to borrow money for the poorest respondents in the most equal (Denmark) and most unequal (Brazil) countries is 24%, while this difference for the middle income and highest income group is, respectively, 28 and 30%. The differentiating effect of inequality in the case of reliance on networks to find a job is also significant: PP for the poorest respondents is 2%, 10% for the middle-income group, and 12% for the wealthiest. As Figures 1 and 2 show, under maximum equality there is no difference between income groups in terms of probability of turning to networks for money, and the poor use networks to find a job more than the remaining two groups (PP of 41% vs. 36 and 34% for the middle and high income respectively).

All income groups are more likely to resort to networks when in need of money in the post-communist countries than in other countries, but post-communist status increases PP the most for the wealthiest: by 23%, in comparison with 21% for the middle-income group and only 15% for the poorest respondents. As discussed earlier, in post-communist countries reliance on networks to find a job is lower than in other countries, but again, as in all other scenarios discussed above, the poorest group is the most disadvantaged: their PP of turning to networks for a job is as much as 11% lower than in other countries, while for the remaining groups PP is lower by 6% and 4% for the middle and high income respondents, respectively.

It is striking that in all cases (low and high income inequality, post-communist status vs. other) the lowest income group is the outlier; PPs for middle and high income respondents turning to their networks for help are remarkably similar and similarly affected by differences in the economic and social context. The low-income respondents, in contrast, either lose their advantage in terms of networks use over the rest of the society (as in the case of accessing money and employment in post-communist countries), or they gain the least as the context is changing (as in the case of accessing money and employment under conditions of economic inequality). In short: no matter the resource and context in question, the poor are always the most disadvantaged.

Our analyses provide also some more general information about the mechanisms behind using social networks to access resources. Both Model 1.1 and 2.1. show the presence of reciprocity in exchange: those, who help more, are more likely to turn to their networks for money or receive from them information about a job. There is also some evidence of self-selection into networks: those, who approve of strategic network formation, choose to turn to networks for money, or learn about a job from their networks more often than those who disapprove of being strategic in friendship. This effect is less pronounced in the case of finding information about a job (the effect is significant only

at 0.1 level). This is easily interpretable: when one is selecting friends that might become useful, they can relatively easily assess their “target” friend’s wealth, but it is more difficult to predict who, one day, may provide you with useful information, such as information about a job opening.

Finally, even though Pitchler and Wallace find that economically inactive respondents form smaller networks (2008), our findings suggest that those who are economically inactive would refer to networks for money more than those who are in paid employment. This effect is net of the individual’s income group, and we take this as an indication of their weak position vis a vis formal institutions, where due to the lack of stable earnings they are unlikely to be able to secure, for example, a loan. We learn, therefore, that the extensiveness of networks does not translate directly into how seriously they are mobilised. It must be noted though, that those who are economically inactive are less likely to have learnt about their last job from networks.

Figure 1. Relying on networks for money on income groups conditioned by economic inequality

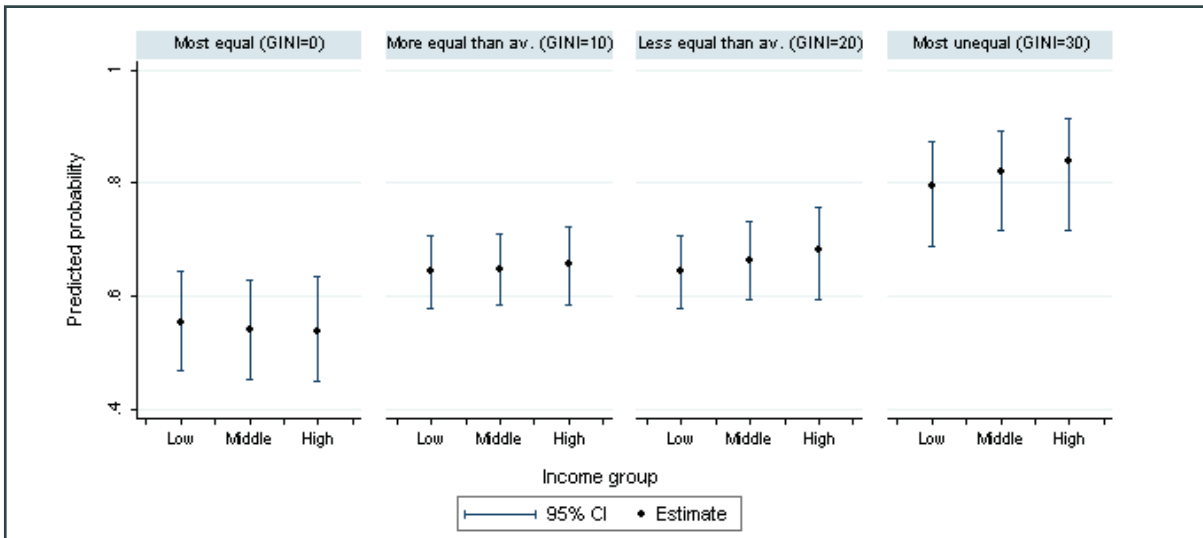
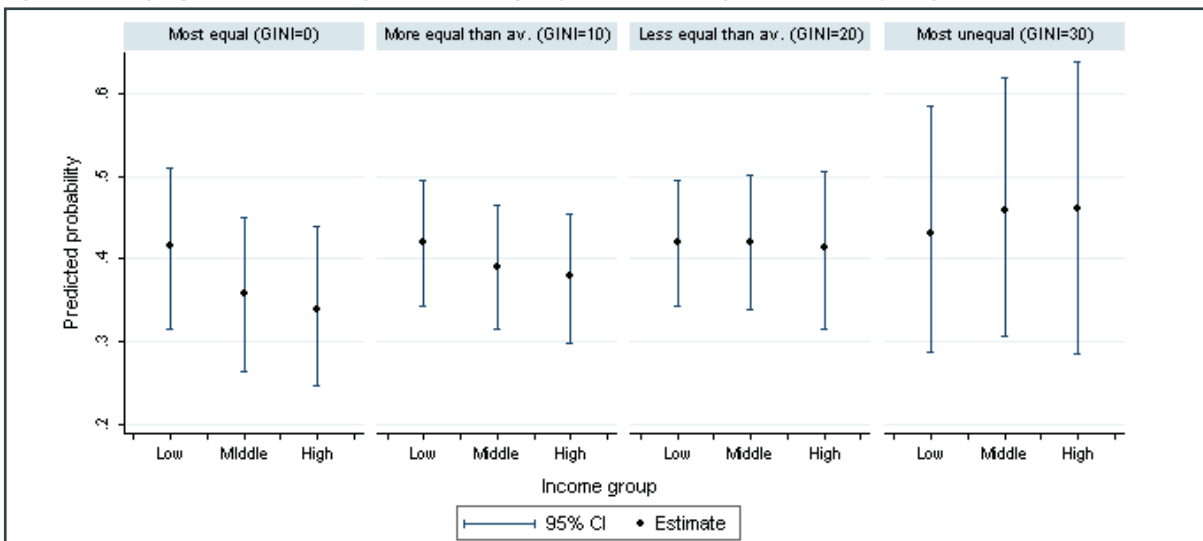


Figure 2. Relying on networks for job on income groups conditioned by economic inequality

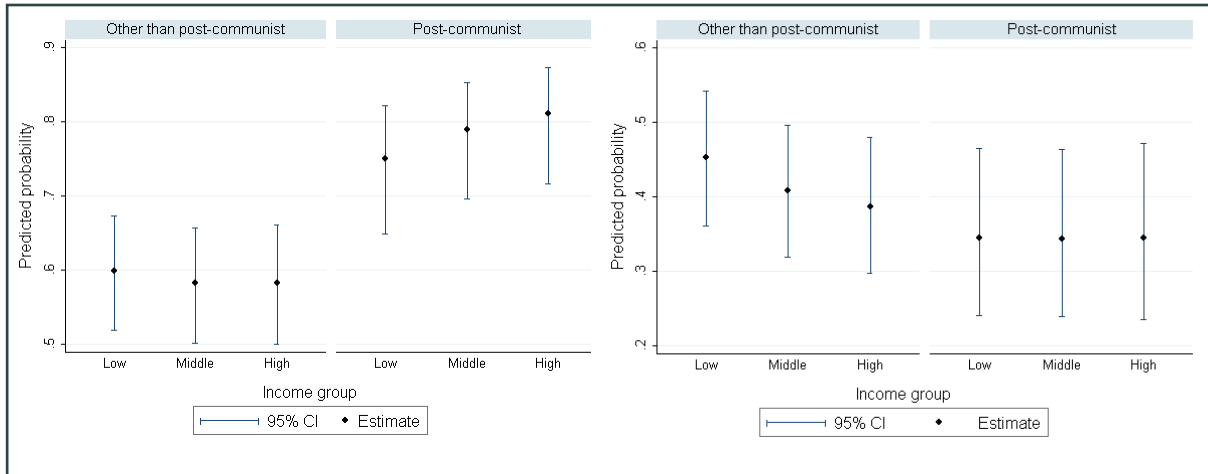


Note: Predicted probabilities are based on logistic regression models 1.2. and 2.2 respectively, and were obtained using the *glapred* option in Stata. The marginal effects are calculated while holding all other variables in the model at their means. The solid dot in the graph represents the point estimate, and the horizontal lines – the simulated 95% confidence intervals around it.



Figure 3. Relying on networks for money on income groups conditioned by country's status (post-communist vs. other)

Figure 4. Relying on networks for job on income groups conditioned by country's status (post-communist vs. other)



Note: Predicted probabilities are based on logistic regression models 1.3. and 2.3 respectively, and were obtained using the *gllapred* option in Stata. The marginal effects are calculated while holding all other variables in the model at their means. The solid dot in the graph represents the point estimate, and the horizontal lines - the simulated 95% confidence intervals around it.

8.1. Robustness of results

As noted by Maas and Cox (2004), multilevel models can sometimes provide inconsistent results. Hence, we also subjected our results to a number of robustness tests. First, in addition to a simple multivariate hierarchical model we also tested our hypotheses in a conditional logistic regression model. The conditional maximum likelihood estimates were nearly identical to the maximum likelihood estimates for the random intercept models. In addition, we also tested the sensitivity of our results to the exclusion of outliers – the two most unequal countries – Brazil and Chile. The results remained virtually unchanged, except that the effect of GDP was rendered insignificant. Finally, since there are only 21 level 2 observations in our sample, and the three contextual characteristics (GINI, GDP and post-communist status) are relatively closely correlated, our concern was collinearity. All models presented above were also estimated with the level of unemployment instead of GDP, yet it did not have a substantial effect on the results. Overall, all the performed checks show that our findings are robust.





9. Conclusions

Analyses presented in this paper shed new light on how networks are used as a resource in conjunction with other resources, and how this relationship is mediated by contextual characteristics. Our approach has been unique in that we have focused on network mobilisation rather than formation, and that we have accounted for individual's relative income position in a society. The picture that has emerged from our analyses is even more complex than what we have hypothesised, as probability of turning to social networks for help by particular income groups is not only context, but also resource specific. At the same time, our conclusions unanimously point to the fact that when context becomes adverse, poor people are *always* disadvantaged in terms of how they use their networks to access resources they need: even if in objective terms the probability that they will turn to social networks for help increases, relative to other groups it always decreases.

The mechanism we tested referred to economic and/or social polarisation breaking cross-cutting ties – for the strategic or psychological reasons – among the economically disadvantaged and other social groups. The tests we performed showed that economic inequality and post-communist transition effect network mobilisation largely independently of each other, and have an effect on particular group's behaviour even after controlling for the level of economic development, which supports our interpreting them as capturing different types of societal polarisation. We also controlled for a range of individual-level characteristics, such as educational level, age or gender, known for influencing networks formation and use, which did not affect our findings.

The relationship between social status, capacity to mobilise networks to acquire resources, and social context we have described contributes to understanding why the economically disadvantaged groups get locked in the vicious circle of poverty and alienation. They are resource-poor and in need of resources, but they have little to offer in an exchange and/or are disregarded and marginalised because of their social status, which restricts them to searching for help within the closest circle of family and friends, who are equally resource-poor. Unless some exogenous factors are activated, such as institutional assistance to the poorest to get them out of their under-privileged and stigmatised position, this vicious circle will not be broken, as while the poor become even more disadvantaged, wealthier groups consolidate and institutionalise their privileged position, also through reliance on informal social networks.

Apart from explaining why various previous studies have reached conflicting conclusions on how social groups mobilise social networks for help, and highlighting how context is affecting levels of network mobilisation by various social groups, we have also provided empirical evidence for psychological mechanisms involved in network

mobilisation. First, we have shown that help received through social networks is reciprocal, but not necessarily equitable – offering even minor help does not preclude receiving substantial help. Secondly, we have uncovered evidence for possible self-selection into networks with resources embedded in them in mind. However, even these two mechanisms are not able to compensate the poor for their decreased capability to rely on networks for help.

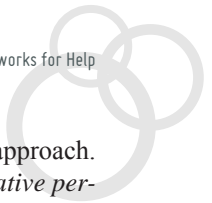
Our findings have powerful policy implications. In contrast with conclusions drawn from earlier research, poor people see potential in their networks to get them ahead, and not just get them by. However, when society polarises, the balance between relying on networks vs. relying on institutional resources is destroyed, and people turn away from institutions, forming an alternative, informal exchange order. Our findings are concurrent with the arguments emphasizing the importance of institutional arrangements for alleviating social exclusion (Giddens, 1998; Kronauer, 2002; Gallie, 2004). Policy efforts should, therefore, focus on forming institutional environment that assists individuals irrespectively of their social status and resources owned, which will help to minimise deprivation, social marginalization, and rectify the negative effects of low-income status on life chances and achievements.



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Appendix

Table A.1. Key predictor variables and dependent variables by countries and country groups

	INCOME GROUP		GINI	JOB INFO (FIRST CHOICE)	MONEY
	HIGHEST	LOWEST			
	% (0-1)	% (0-1)	(0-100)	% (0-1)	% (0-1)
Scale					
Country average	9.6	55.6	31.9	63.8	31.9
Post-com.	8.4	56.0	30.2	71.3	31.7
Other countries	10.0	55.4	32.5	60.8	33.4
Czech Republic	25.2	17.5	25.5	70.4	25.5
Hungary	2.2	82.1	27.7	56.7	27.7
Latvia	3.0	55.5	33.2	70.8	33.2
Poland	8.5	47.7	28.6	71.7	28.2
Russia	1.8	75.6	43.4	85.8	43.4
Slovenia	9.9	57.5	24.9	72.6	24.9
Australia	19.2	46.1	31.7	68.4	31.7
Austria	5.1	62.0	25.7	58.3	25.7
Brasil	1.0	92.4	52.3	64.9	52.3
Canada	6.3	71.6	31.5	47.6	31.5
Chile	0.8	90.6	51.3	71.7	51.3
Cyprus	10.0	28.4	27.0	49.1	27.0
Denmark	24.8	38.8	22.6	42.0	22.6
Finland	6.9	58.6	24.6	55.3	24.6
France	18.4	33.1	27.8	55.1	27.8
Great Britain	6.6	48.6	34.5	57.5	34.5
Italy	17.6	33.2	33.3	68.9	33.3
Norway	7.9	53.4	25.0	55.1	25.0
Spain	1.8	76.6	33.6	75.0	33.6
Switzerland	10.6	45.6	27.6	70.4	27.6
United States	13.0	52.4	37.1	72.7	37.7

Table A.2. Variance components of the regression models

		EMPTY MODEL (RANDOM	WITH INDIVIDUAL LEVEL	WITH COUNTRY LEVEL EX-
		INTERCEPT ONLY)	EXPLANATORY VAR'S	PLANATORY VAR'S
Borrowing	σ (country level)	.232	.232	.127
	-loglikelihood	17286	12334	12328
Job	σ (country level)	.257	.288	.152
	-loglikelihood	16921	12690	12684
Strategic	σ (individual level)	1.127	1.092	1.091
	σ (country level)	.286	.280	.195
	-loglikelihood	41207	32260	32269

Table A.4. Dependent variables by income groups

COUNTRY	INCOME GROUP	JOB INFO – INFORMAL NETWORKS % (informal)	MONEY – INFORMAL NETWORKS Mean (0–3)	COUNTRY	INCOME GROUP	JOB INFO – INFORMAL NETWORKS % (informal)	MONEY – INFORMAL NETWORKS Mean (0–3)
All countries	Middle	36.4	1.9	Canada	Middle	32.6	1.3
	High	33.3	1.8		High	40.9	1.0
	Low	41.5	1.9		Low	34.1	1.5
Postcommunist countries	Middle	41.4	2.1	Chile	Middle	53.5	2.1
	High	46.2	2.2		High	49.6	2.0
	Low	37.1	2.0		Low	58.6	2.1
Other countries	Middle	34.6	1.8	Cyprus	Middle	50.6	1.6
	High	29.8	1.7		High	37.8	1.4
	Low	43.2	1.9		Low	57.3	1.5
Czech Republic	Middle	43.9	2.0	Denmark	Middle	26.6	1.3
	High	52.1	2.0		High	23.3	1.3
	Low	52.5	2.0		Low	29.6	1.3
Hungary	Middle	53.9	1.8	Finland	Middle	21.8	1.9
	High	28.7	2.1		High	23.7	1.6
	Low	52.5	1.5		Low	26.3	2.0
Latvia	Middle	40.1	1.9	France	Middle	38.8	1.8
	High	40.7	2.3		High	29.1	1.8
	Low	44.2	1.9		Low	40.4	1.9
Poland	Middle	40.2	2.1	Great Britain	Middle	26.8	1.7
	High	39.1	2.1		High	24.7	1.8
	Low	40.0	2.1		Low	32.6	1.7
Russia	Middle	38.6	2.7	Italy	Middle	49.3	2.1
	High	44.7	2.9		High	48.3	2.1
	Low	23.6	2.3		Low	41.1	2.0
Slovenia	Middle	39.4	2.0	Norway	Middle	25.5	1.7
	High	46.5	2.5		High	24.2	1.6
	Low	42.6	2.0		Low	28.2	1.8
Australia	Middle	26.5	1.9	Spain	Middle	53.8	2.4
	High	23.0	2.1		High	39.3	2.3
	Low	29.7	1.9		Low	47.0	2.3
Austria	Middle	22.9	1.8	Switzerland	Middle	31.2	2.1
	High	16.4	2.1		High	33.0	1.8
	Low	24.6	1.7		Low	27.3	2.2
Brasil	Middle	60.0	1.8	United States	Middle	45.3	2.1
	High	76.9	1.9		High	36.2	2.2
	Low	70.1	1.9		Low	44.5	2.1



Table A.5. Dependent variables by education groups

COUNTRY	EDUCATION GROUP	JOB INFO	MONEY
		% (informal)	Mean (0-3)
All	Without University degree	40.7	1.9
	University Degree	28.8	2.0
Postcommunist countries	Without University degree	40.5	2.0
	University Degree	31.9	2.2
Other countries	Without University degree	40.8	1.9
	University Degree	27.9	1.9
Czech Republic	Without University degree	46.5	2.0
	University Degree	34.5	2.0
Hungary	Without University degree	52.1	1.6
	University Degree	22.3	1.6
Latvia	Without University degree	45.3	1.9
	University Degree	34.3	1.8
Poland	Without University degree	40.1	2.1
	University Degree	31.3	2.2
Russia	Without University degree	26.0	2.4
	University Degree	31.8	2.7
Slovenia	Without University degree	40.3	2.1
	University Degree	31.1	2.1
Australia	Without University degree	30.7	1.9
	University Degree	18.5	2.0
Austria	Without University degree	24.3	1.8
	University Degree	22.3	1.8
Brasil	Without University degree	69.2	1.9
Canada	Without University degree	36.5	1.4
	University Degree	29.2	1.6
Chile	Without University degree	58.3	2.1
	University Degree	43.8	1.9
Cyprus	Without University degree	54.4	1.6
	University Degree	34.4	1.7
Denmark	Without University degree	27.3	1.3
	University Degree	21.8	1.5
Finland	Without University degree	24.3	2.0
	University Degree	24.1	1.9
France	Without University degree	39.0	1.7
	University Degree	34.7	2.1
Great Britain	Without University degree	32.3	1.8
	University Degree	16.7	1.5
Italy	Without University degree	48.7	1.9
	University Degree	37.0	2.4
Norway	Without University degree	30.0	1.7
	University Degree	20.4	1.8
Spain	Without University degree	47.4	2.3
	University Degree	50.9	2.3
Switzerland	Without University degree	28.2	2.2
	University Degree	26.3	2.0
United States	Without University degree	46.6	2.1
	University Degree	34.9	2.2





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Information on the GINI project

Aims

The core objective of GINI is to deliver important new answers to questions of great interest to European societies: What are the social, cultural and political impacts that increasing inequalities in income, wealth and education may have? For the answers, GINI combines an interdisciplinary analysis that draws on economics, sociology, political science and health studies, with improved methodologies, uniform measurement, wide country coverage, a clear policy dimension and broad dissemination.

Methodologically, GINI aims to:

- exploit differences between and within 29 countries in inequality levels and trends for understanding the impacts and teasing out implications for policy and institutions,
- elaborate on the effects of both individual distributional positions and aggregate inequalities, and
- allow for feedback from impacts to inequality in a two-way causality approach.

The project operates in a framework of policy-oriented debate and international comparisons across all EU countries (except Cyprus and Malta), the USA, Japan, Canada and Australia.

Inequality Impacts and Analysis

Social impacts of inequality include educational access and achievement, individual employment opportunities and labour market behaviour, household joblessness, living standards and deprivation, family and household formation/breakdown, housing and intergenerational social mobility, individual health and life expectancy, and social cohesion versus polarisation. Underlying long-term trends, the economic cycle and the current financial and economic crisis will be incorporated. Politico-cultural impacts investigated are: Do increasing income/educational inequalities widen cultural and political 'distances', alienating people from politics, globalisation and European integration? Do they affect individuals' participation and general social trust? Is acceptance of inequality and policies of redistribution affected by inequality itself? What effects do political systems (coalitions/winner-takes-all) have? Finally, it focuses on costs and benefits of policies limiting income inequality and its efficiency for mitigating other inequalities (health, housing, education and opportunity), and addresses the question what contributions policy making itself may have made to the growth of inequalities.

Support and Activities

The project receives EU research support to the amount of Euro 2.7 million. The work will result in four main reports and a final report, some 70 discussion papers and 29 country reports. The start of the project is 1 February 2010 for a three-year period. Detailed information can be found on the website.

www.gini-research.org





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