The importance of being networked: The costs of informal networking in the Western Balkans region

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Abstract

This is the first study to measure the size and costs of informal networking in the Western Balkans (WB), quizzing the premise that informal networks benefit individuals, households and entrepreneurs. On the basis of WB survey data and econometric analysis, we establish that informal networking, or use of personal contacts for getting things done, has a regular occurrence in the region and its economic cost is substantial. In the structure of networking costs, the costs of invested time dominate over money. Respondents who perceive networking as important and beneficial tend to invest more time and more money to maintain their networks. Higher costs are associated with larger networks, which are predominantly built on strong ties. The informal networking costs are also higher for those with better education and income, and in particular for entrepreneurs. Consequently, individuals bear the high costs of informal networking not only for social and culturally determined reasons, but to a large extent for instrumental purposes. Our data suggest that both sociability and instrumentality drive informal networking, which makes it an outcome of both informal constraints (taboos, customs, traditions, and codes of conduct) and inefficient formal rules (constitutions, laws, property rights).

1. Introduction

In this study we investigate informal networking in the Western Balkans (WB) region and analyse whether the perception of benefits of informal networking are supported by the willingness of individuals to incur costs and invest their time and money into it. From the top-down perspective, informal networking is often presumed to be a problem, it is a burdensome practice that is likely to undermine 'good governance,' associated with universalist systems, public integrity or impartiality, where formal rules are enforceable and effective (World Bank 1989; Mungiu-Pippidi 2015; Rothstein 2013). Even where informal networking is driven by customs, traditions, and social norms associated with culture in local contexts, from a normative perspective, practices reliant on the use of informal networks are perceived as unfair and unjust forms of competitive advantage, leading to illicit or even illegal practices, thus being conflated with corruption. For instance, concepts such as neo-patrimonialism, clientelism, and particularism point to the subversive role of informal networks (Bratton and van der Walle 1994; Mungiu-Pippidi 2015). Regimes where such practices predominate are frequently characterised as being "weak", "failing" or "rapacious". In particular, African regimes have been often framed in this way, with evocative metaphors such as "the politics of the belly", "eating", or "father, family and food" defining ways of thinking about the connections between political order, legitimacy, and informality (Bayart, Hibou and Ellis 1999; Schatzberg 2001; Sambaiga 2018). Although the actual conceptualisations may be more nuanced, there is a tendency to equate "traditional", "cultural", "social" factors amounting to the informal constraints with underdeveloped, dysfunctional or exploitative regimes.

From the bottom-up perspective, however, informal networks are reported to provide a solution to problems and enable people to get things done. Many authors have engaged in a

critique of the normative approach to informality, arguing that the focus on formal, legal, and institutional reforms fails to embrace local practices, social norms and informal relationships that may be more binding for local actors than legal frameworks (Koechlin 2015; Baez-Camargo and Ledeneva 2017; Ayres 2017; Polese and Rekhviashvili 2017). At a community level, informal networks are essential for local governance and the states are often reliant on the informal workings of societies (de Sardan 1999, Blundo et al. 2013); especially in the periods of conflict and war when formal state institutions are dysfunctional (Efendic et al. 2011).

Our quantitative data, collected in the Horizon 2020 INFORM project, indicate that informal networking in WB tends to be used mainly to circumvent formal procedures, thus pointing to problems with effectiveness of formal institutions and the problem-solving potential of informal networks. The willingness to engage in informal networking, however, cannot be associated exclusively with ineffective formal rules, or an exclusively rational need for problem-solving. Informal constraints – cultural codes, customs, and traditions – have some explanatory power for the predominance of informal networking (Aliyev 2015; Cveticanin 2012; Grødeland 2013; Stanojevic and Stokanic 2014, 2018; Todorova 2004). The key hypothesis to test is whether the perception of the importance of informal networking in WB region is confirmed by people's willingness to invest substantial resources. In the developing and transitional contexts, the effects of "culture" and "sociality" on governance have been assessed qualitatively from an anthropological perspectives (de Sardan 1999; Leftwich 2001; Hydén 2005; Hydén 2014; Ledeneva 2006, 2013; Torsello 2016). The quantitative survey data on the time and money spent on informal networking in the WB region allows us to estimate the scale and structure of both non-monetary and monetary costs. These findings enhance our theoretical and empirical

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understanding of informal networking, and have certain policy implications for the examined WB region and its integration into the EU.

In what follows, we define characteristics of the WB institutional environment and articulate our assumptions (section two). Next, we discuss the limitations and possible proxies for the assessment of costs of informal networking (section three). The fourth section introduces data and parameters of networks, our methodology and descriptive statistics from the variables used in the empirical investigation. In the fifth section, we report the results of the econometric analysis. Section six contains robustness checks. The final section concludes with implications of the established costs of informal networking for the policy-making in the WB region.

2. Formal constraints in WB region and informal networking to circumvent them: Assumptions about the formal and informal constraints in institutional frameworks

The transition from communist to market economy in the Western Balkan region (Albania, Bosnia and Herzegovina, Kosovo, Macedonia, Montenegro, and Serbia) was complex and set against a historical background of ethnically based conflicts. These setbacks slowed down the development of formal institutional environments, thereby inviting externally driven institutional change. In the context of the EU integration, formal institutions in WB countries today are described by EU organizations as "being at an early stage" and having "some level of preparation" for the EU integration, with "moderately prepared", the strategic goal of the whole region, used very rarely (European Commission, 2015a, 2015b, 2015c, 2015d, 2015e, 2015f, 2016). The latest EU reports suggest that the economic performance exceeds the political development. Bosnia and Herzegovina (BiH) and Kosovo are at an "early stage" both in

developing a functioning market economy and in their capacity to cope with competitive pressure. Policy makers consider Albania, Montenegro and Serbia as "moderately prepared" (Ibid.). Only Macedonia has a "well prepared" rating (Ibid.). Despite improved economic performance, most EU candidate countries remain far from having a developed institutional framework constituting business-friendly environment.

In academic literature, ineffective formal institutions are widely seen to be the main reason for the increase in the role of informal activities (de Soto, 2010; Estrin and Prevezer, 2011; Guseva, 2007; Helmke and Levitsky, 2004). In the absence of effective governance, informal networks serve a variety of purposes, from exchange of information, experience and ideas between agents to the provision of goods, services, and favours, not freely accessible on the market (Jackson and Wolinsky, 1996). Efendic *et al.* (2011) found that lengthy and costly formal procedures undermine confidence in formal institutions and encourage the substitutive reliance on informal institutions in Bosnia and Herzegovina (BiH), creating a vicious circle of co-dependence. This is meant to change once countries in transition have progressed further towards developed market economies, but even at the current level of development, understanding how informal networks can facilitate the so-called 'implementation gap' is important (Hudson and Marquette 2015; Mungiu-Pippidi 2015; Williams and Vorley 2015; Blundo et al. 2013; Baez Camargo and Ledeneva 2017).

Formal institutions are costly; they are costly to set up, enforce, maintain, and change (North 1990). The same is true about informal networks. Yet these costs are difficult to assess. Unlike networks generated in the organizational context, social networks are biographical by-products of individuals. While the existing literature investigates predominantly the transaction

costs of formal institutions or the benefits of social capital (e.g. Wallis and North 1986), the question of costs of sustaining informal networks remains largely neglected.

The reforms development and modernisation are aimed at formalisation. Effective formal institutions reduce risks and the cost of transactions; both households and entrepreneurs would rationalise their transaction costs and reduce their burden where possible. Informal constraints and cultural norms are based on particularistic, rather than universalistic assumptions, and remain underrepresented in the analyses of institutional frameworks. To reassess the balance, we add the informal constraints to the analysis. Focusing on the role of informal networking is important for several reasons.

1) Whereas formal constraints are conceived to be universal and rational, informal networking serves to solve problems in particular contexts and tackle the complexity of social life.

2) Just as formal organisations function to enforce formal rules, informal networks channel social norms, informal constraints, and peer pressure. Unlike social norms, informal networking is fluid and dynamic. Networks themselves can change quickly; and stay dormant until a particular problem arises.

3) Similarly to the formal hierarchies that grant access to resources, informal networks are just as valuable to their members. People care for, pay attention, and invest time and money to establish and maintain them.

The costs of informal networking are underrepresented in the existing accounts of the benefits of networks. Previous sociological research has established the potential of networks, or 'strength of weak ties,' for channelling information and influence, specifically in the context of job markets (Granovetter 1973, 1982; Yakubovich 2005). In management studies, the focus has been

on the network facilitation and the role of inter- and intra-organisational networks for serving global and local capabilities (Ernst and Kim 2002; Yeung 2005). A quantitative network analysis has addressed the issue of value conversion of tangible and intangible assets in organisations (Allee 2008), and the role of networks in remittance economies and transaction costs in different institutional frameworks (Freund and Spatafora 2005).

Given that every social interaction is costly (Marmaros and Sacerdote 2006), it is logical to suggest that maintaining, expanding and establishing informal networks, even where these are biographical by-products, does incur costs. It is difficult to measure costs related to informal networking, because they include not only gifts and other resources, but also, inevitably, opportunity costs, such as the costs of time and other hidden costs used up on informal networking. Although the costs of informal networking are linked to activities that may not be directly visible, such activities do include cost (Marmaros and Sacerdote 2006). Thus, informal networks take financial resources, individual effort and time, and can consume immense resources overall (De Soto 1989: 131). In what follows, we estimate the costs of informal networks from a comparative perspective in the WB region by focusing on the calculable costs of informal networking and their best available proxies (money and time).

3. Working out proxies for calculating the costs of informal networking

Numeric data on the use of informal networks in the WB region have been relatively sparse. Some information on the use of personal contacts have been collected in the 2013 Global Corruption Barometer and in various regional reports (UNDP BiH, 2000-2010 reports). The existing ethnographic research amasses qualitative data on the use of contacts, *štele* or *veze*

(Bougarel et al. 2007; Brkovic 2017; Grandits 2007; Stanojevic and Stokanic 2014, 2018; Vetters 2014). Residents of BiH, regardless of generation, ethno-national group, gender, or income have used *štele* to access public and private resources throughout the 2000s and 2010s (Brkovic and Koutkova 2018). Expressed in the language of participants, such practices are a good proxy for understanding informal networking in the region and our comparative analysis. As a matter of routine, people rely on their contacts to access resources and to circumvent formal procedures in order to satisfy their needs. Relatives and friends, acquaintances, former classmates, compatriots and work colleagues constitute personal networks as individuals' biographical by-product. As Ledeneva argued for the case of a socialist 'economy of favours,' such informal networks serve people's regular, periodic, life-cycle needs as well as serve as scale up to serving the needs of others (Ledeneva 1998: 115-119). Post-socialist monetary reforms brought about important, and country-specific, changes to the 'economies of favour' of Central and Eastern Europe and West Balkans (Henig and Makovicky 2017; also in Ledeneva 2018b). The market reforms have enabled to assess the monetary value of informal favours, shifted emphasis from accessing goods and services to making income and profitable businesses, thus affecting socialist patterns of mutual help and long-term reciprocity (Ledeneva 1998: 175-206). The ratio of sociability and instrumentality of informal networking has transformed, but not as significantly as one could have expected (Ledeneva 2018b).

It is tempting to pin down the persistence of informal networking on the ineffectiveness of the formal institutions (development) or the power of customs and traditions (path dependency) with the consequence of people's willingness to investment into informal networking. Yet we choose a more nuanced approach to the workings of informal networks, which does not fit the *homo economicus* in a linear way. For example, the assumption that

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household members are ready to meet informal networking costs as long as they have benefits that exceed or are equal to the opportunity cost of formal institutional inefficiency might run against the habits, social norms, and the peer pressure in the WB region. We treat informal networking as a complex phenomenon defined by a number of parameters: size of the informal network; its structure; associated costs; as well as individual predispositions to use informal networking; and, importantly, the capacity to finance these costs. We propose that all these different dimensions of informal networking are mutually related, and this proposition will affect our empirical strategy applied later. We aim to test the following propositions:

1) Individuals' network size correlates with the networking costs.

2) Economic status of individuals explains the scale of expenditure for informal networking.

3) Informal networking is economically beneficial and often considered as investment, so the entrepreneurs engage more into informal networking and pay a higher cost.

4) Individual perception of informal networking importance in their respective societies is associated with larger presence of networks and their willingness pay higher costs.

5) The costs of informal networking are not trivial – significant resources are invested at micro, meso and macro-levels in the WB region.

Given the complexity of issues at hand, we establish proxies for both monetary and non-articulated types of costs, making them standardized and comparable. We use monetary costs as a proxy for time so that non-monetary costs can be assessed. Our intention is not to provide a precise calculation of these costs, but to offer a useful numerical representation for them.

4. Regional survey data on informal networking and descriptive statistics of variables

We analyse data[1] collected in six WB countries: Albania (Alb), Bosnia and Herzegovina (BiH), Kosovo (Kos), Macedonia (Mac), Montenegro (Mng), and Serbia (Srb) over the period March – June 2017. A multi-stage random (probability) sampling methodology ensured representative samples in the data collection. In every household, the 'nearest birthday' rule was applied to select respondents for interviewing. Every subsequent address was determined by the standard 'random route' procedure. The survey was implemented by a professional research agency operating in all WB countries and implementing the survey simultaneously in all countries. The dataset comprises 6,040 respondents from six countries, with over 1,000 observations per country. The survey covers a variety of topics related to formal institutions and informal practices in the WB countries. With regard the costs of informal networking we asked respondents the following two questions:

Q1: Over a typical week, how many hours do you spend in contacts with your relatives (outside your household), friends, neighbours, professional and business colleagues, and acquaintances through face-to-face meeting and other means of communication (e.g. chat, talks, lunch, coffee, party, Skype, Viber, etc.)? Responses: 1 – 2 hours; 3 -5 hours; 6 – 10 hours; 11 - 20 hours; more than 20 hours; I cannot estimate.

Q2: Over a typical week, what is an approximate amount of money you spend with these people (e.g. gifts, coffees, meals, party, internet, phone, transportation, hosting people at home, preparing meals, etc.)? Responses: No money at all; up to 10 EUR; from 11 to 20 EUR; from 21 to 50 EUR; from 51 to 100 EUR; more than 100 EUR; I cannot estimate.

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[1] This study relies on primary data specifically gathered as part of the INFORM project. INFORM is an EU Horizon 2020 project, which aims to conduct multidisciplinary research on formal and informal institutions in the Balkans.

These questions were asked in the local language in all WB countries respecting the language specifics. The English term "informal networking" was not used literally. Rather local phrasing was used, tried and tested in the pilot surveys in all WB countries. Pilot interviews have highlighted the importance of informal networking in the region. References to 'one's own people', like in the following quote, have been supported by the survey-based data on the use of contacts on getting things done:

> I was educated in the USA, and when I came back here I tried to do everything by the book…. This was the case until several years ago when I realized how our system is functioning, and that it was better for me to start socializing and networking more to find my 'own people'. I could not progress without them. So, Yes. Some informal networks are built. (CRO_2)

In our analysis we use the terminology as follows: the 'costs' of informal networking is an aggregate variable for costs in money and costs in time, as estimated by respondents in the survey. 'Parameters' of networks are their characteristics – size, strength of ties, centrality, diversity etc., each of which constitutes a 'factor', if found significant. Parameters of networks are 'objective' and 'subjective'. The 'objective' characteristics are rather persistent and less changeable in a short run. 'Subjective' characteristics are less persistent and based on perception of the importance of networks (at the meso-level) and individual predispositions for networking (at the micro-level), including the overall perception of the importance of networks (at the macro-level). The descriptive statistics of relevant variables is reported in Table 1, with more details available in Appendix 1.

Table 1. Descriptive statistics for variables used in modelling – full sample by country

VARIABLE / DEPENDENT VARIABLES	Alb* mean	BiH* Mean	Kos* mean	Mac* Mean	Mng* mean	Srb* mean	No of obs.	WB mean	Mean[1] Reduced	Mean[2] Omitted	Test[3]
costppp_in (weekly informal costs of networking, PPP)	21.4	21.2	34.4	20.3	31.1	18.3	3,226	23.13	23.05	25.42	YES
netsize (size of the informal networks)	7.55	14.71	9.10	16.00	18.58	14.24	6,040	13.40	13.26	13.55	NO
strongnet (1=strong ties; 0=weak ties members)	0.90	0.85	0.75	0.88	0.94	0.92	6,040	0.87	0.90	0.84	NO
Netwper (factor variable, netimp and reciprocity)	7.02	7.41	7.73	6.84	7.28	7.31	5,837	7.27	7.32	7.21	YES
pincome (continuous income 1-9, n.a. excluded)	2.35	2.64	3.12	2.97	3.54	2.88	4,341	2.89	2.83	3.05	NO
INDEPENDENT VARIABLES											
age (age of the respondents in years)	44.81	48.05	40.73	49.54	44.11	50.06	6,040	46.53	48.40	44.52	NO
female (1=female; 0=male)	0.56	0.56	0.52	0.56	0.54	0.55	6,040	0.55	0.54	0.55	YES
urban (1=urban area; 0=other)	0.51	0.47	0.43	0.60	0.62	0.55	6,040	0.53	0.54	0.51	YES
entr (1-entrepreneur; 0=other)	0.05	0.03	0.07	0.05	0.06	0.05	5,940	0.05	0.05	0.05	YES
marr_married (B) (1=married; 0=other family status)	0.67	0.54	0.60	0.67	0.55	0.48	6,040	0.58	0.61	0.55	NO
marr_single (1=single; 0=other family status)	0.22	0.25	0.31	0.15	0.28	0.22	6,040	0.24	0.20	0.28	NO
marr_cohab (1=cohabitation; 0=other family status)	0.02	0.01	0.01	0.02	0.02	0.04	6,040	0.02	0.02	0.02	YES
marr_divorced (1=divorced; 0=other family status)	0.03	0.04	0.00	0.03	0.06	0.09	6,040	0.04	0.05	0.04	YES
marr_widow (1=widow; 0=other family status)	0.07	0.15	0.06	0.12	0.08	0.14	6,040	0.11	0.12	0.09	NO
educ_elem (B) (1=elementary education; 0=other education)	0.26	0.26	0.29	0.33	0.14	0.22	6,040	0.25	0.26	0.25	YES
educ_second (1=secondary education; 0=other education)	0.46	0.56	0.44	0.46	0.62	0.59	6,040	0.52	0.52	0.53	YES
educ_univer (1=university education; 0=other education)	0.21	0.16	0.23	0.18	0.22	0.18	6,040	0.19	0.19	0.20	YES

educ_mscphd (1=postgraduate education; 0=other)	0.07	0.02	0.03	0.03	0.02	0.02	6,040	0.03	0.03	0.02	YES
int_often (1= use internet often; 0=other internet use)	0.20	0.11	0.13	0.13	0.13	0.14	6,040	0.14	0.15	0.12	NO
int_daily (1=use internet daily; 0=other internet use)	0.46	0.52	0.71	0.50	0.62	0.48	6,040	0.54	0.51	0.58	NO
netimp (Importance of networking:1=min to 10=max*	7.21	7.15	7.74	6.84	7.00	6.87	5,894	7.12	7.18	7.05	YES
reciprocity (readiness for reciprocity: 1=min to 10=max)	6.84	7.67	7.68	6.80	7.55	7.73	5,898	7.39	7.45	7.34	YES
gentrust (General trust in people: 1=min to 10=max)	3.81	3.36	3.36	2.93	3.46	3.59	5,961	3.41	3.40	3.43	YES
insttrust (Trust in instituitons:1=min to 10=max)	4.70	3.54	4.40	3.67	4.88	4.61	5,876	4.25	4.30	4.19	YES
alb (1=Albania; 0=other WB country)	1.00	0.00	0.00	0.00	0.00	0.00	6,040	0.15	0.20	0.10	NO
bih (1=Bosnia and Herz.; 0=other WB country)	0.00	1.00	0.00	0.00	0.00	0.00	6,040	0.21	0.17	0.24	NO
kos (1=Kosovo; 0=other WB country)	0.00	0.00	1.00	0.00	0.00	0.00	6,040	0.15	0.13	0.18	NO
mac (1=Macedonia; 0=other WB country)	0.00	0.00	0.00	1.00	0.00	0.00	6,040	0.17	0.19	0.15	NO
mng (1=Montenegro; 0=other WB country)	0.00	0.00	0.00	0.00	1.00	0.00	6,040	0.13	0.13	0.14	YES
srb (1=Serbia; 0=other WB country)	0.00	0.00	0.00	0.00	0.00	1.00	6,040	0.19	0.18	0.19	YES

(B) refers to the base or omitted category in the estimated models (Table 2). For space reason, we omit do not know dummies.

* alb-refers to Abania; bih-Bosnia and Herzegovina; kos-Kosovo; mac-Macedonia; mng-Montenegro; srb-Serbia.

[1] Mean value of the reduced sample used to estimate the final specification. The total sample size is 3,127

[2] Mean value of the omitted sample. The total sample size is 2,913

[3] This test is used to check if the subsamples are from the same population (YES) or not (NO) at the conventional 5% level of statistical significance. The test varies according to whether the variable is binary (Chi2 test) or continuous (Kruskal–Wallis test).

One of the challenges that we face with the available data is a high percentage of missing observations for the cost of networking variable (47%). This is an aggregated variable which integrates the estimated costs of time (21% missing), the estimated costs of money (20% missing), and the personal income variable used to standardize the costs of time (28% missing). Hence, it integrates these missing responses into a new aggregated variable. As the missing data comes from three different types of questions, we assume that these responses are missing randomly and that our inference remains valid. To probe this assumption, we divide our complete sample into the subsample used in our baseline system estimator (i.e. those observations for which we were able to derive our aggregated cost variable; n=3,127) and the remainder (i.e. those observations omitted, because one or more of the elements of our aggregate cost variable are missing, n=2,913). For each independent variable in our model, we then test the null hypothesis that their values in each of these two subsamples are drawn from the same population. Column 4, Table 1, reports that for most of our variables of interest and control variables this null is not rejected by the corresponding test (chi-square for binary variables, otherwise the Kruksal-Wallis). Those variables for which the null is not rejected are mainly age and age related.[2] Hence, given that our estimation sample has a slightly higher mean age than the remaining (omitted) observations (48.40 years with a standard deviation of 17.56 compared to 44.52 with a standard deviation of 17.51), and that – to anticipate our estimates reported later – network costs decline with age, we can infer that potential bias introduced by omitted observations into our estimates of network costs (our main topic of interest) is in a downward

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[2] An OLS regression of age on all of our independent variables establishes that age is strongly related to the following: (i) "single" and (married) status is associated with reduced age (ceteris paribus) of around 15 years (the t-statistic is -38.49), (ii) widowhood with around 11 years additional years (t-stat.=20.50); (iii) using the internet "often" or "daily" with, respectively, reduced age of around 10 (t-stat.=-20.58) and 18 years (t-stat.=-43.50). In addition, the country dummies for Albania, Bosnia and Herzegovina and Macedonia are all large and significantly related to age. This supplementary regression is available on request.

direction. This is consistent with the norm of favouring a conservative bias in estimation (i.e. if there is to be bias, it should be against discovering the effect(s) hypothesised by the researcher(s). Despite such exogenous limitations in the data set, we rely on the effective sample of over 3,100 observations, while in the robustness analysis we use more than 4,000 observations or 70% of the data.

5. Informal networking in WB region: empirical evidence and levels of analysis

The dependent and independent variables

The main innovation of our study is our intention to provide an estimate of *the cost of informal networking*. To estimate the amount of money spent on informal networking over a typical week, we asked the respondents to assess their expenses on a nine-category scale: 1) 0 euro; 2) 1-10 euro; 3) 11-20 euro; …; 9) over 100 euro. We use the mean value of the scale to calculate the average amount of money invested by every individual[3]. The calculation of the time spent on informal networking is also based on a weekly scale: 1) 1-2 hours; 2) 3-5 hours; 3) 6-10 hours; 4) 11-20 hours; 5) over 20 hours[4]. Following the same procedure, we use the mean value of the scale to calculate the average time spent in networking over a typical week by every individual.

We 'monetize' the costs of time by calculating the average value of a working hour (euros) for every individual based on the information on their net monthly earning[5]. The advantage of this approach is that it produces more accurate relative estimates, since we also

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[3] For the last category, which is open (over 100 Euro), we use 150 Euro as the mean value.
[4] For the last category, which is open (over 20 hours), we use 30 hours as the mean value.
[5] Question: What is your monthly income (including all sources): *income_1*: up to 100 Euro*; income_2*: 101-200 Euro; *income_3*: 201-300 … to the highest income category, *income_9*: over 1,500 Euro.

have data on the respondents' total income, from both formal and informal sources[6]. By multiplying this hourly rate by the number of reported hours spent on informal networking, we arrive at the cost of time for each individual. Such approximation enables us to sum up the estimated costs in money, suggested by the respondents, and the cost of their time. In the final step, we use purchasing power parity (PPP) indices to equalize the monetary costs between different countries in the WB region and aggregate them to monthly totals. The estimated (aggregated) costs per month across the WB region (*costppp_inm*) are reported in Figure 1.

Figure 1. The total costs of informal networking (monthly estimate, euro) in WB

Graphs by Country
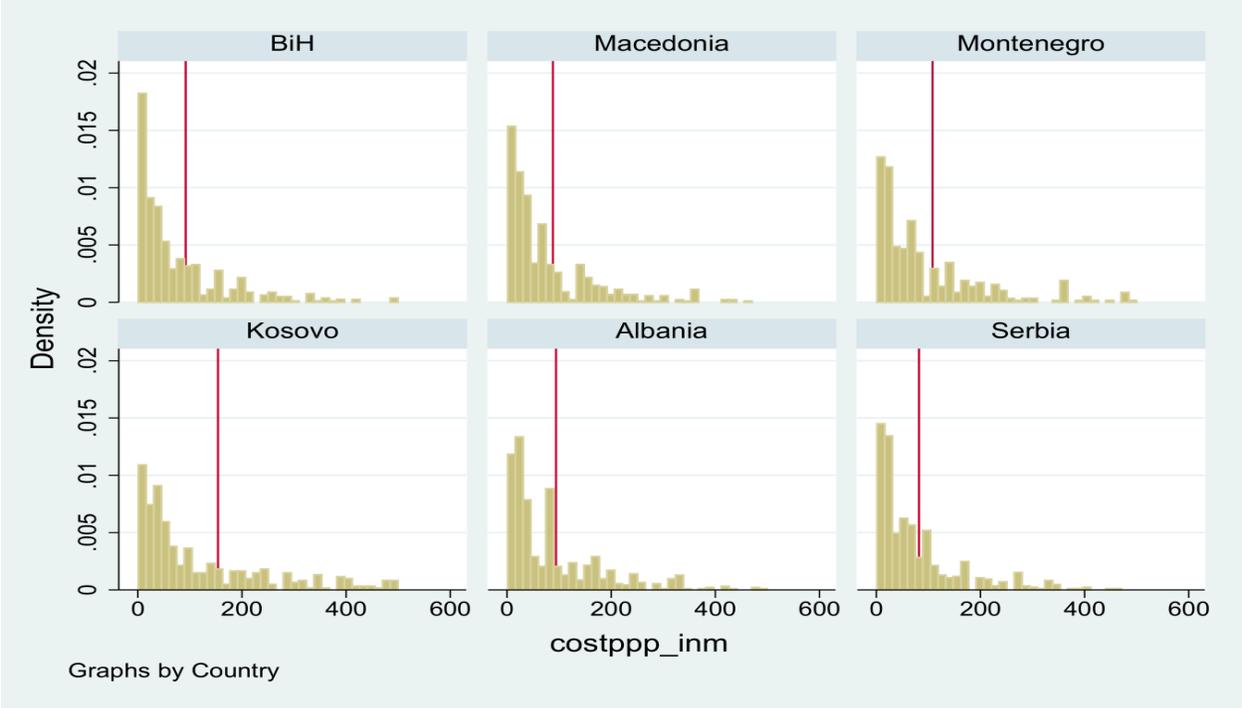
Our survey data suggests that, on average, individuals in the WB region spend around 10 hours of their time on informal networking and around 11 euros per week for gifts, coffee, meals,

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[6] To check the data reliability, we carry out the same procedure on the average gross salaries sourced from each country official statistics (and with higher level of aggregation). The results suggested 30% higher costs, as expected, since the taxes were a part of this calculation.

parties and other related costs. The total informal networking cost, the costs of time and money standardized by the PPP index, is around 23 Euro per week, on average, and if aggregated at the monthly level, around 100 euros. This means that the estimated (opportunity) costs of time are greater than the reported monetary costs. Comparing the total cost among countries, the highest monthly level is reported for Kosovo (150 euros, average net earnings reported in our dataset for Kosovo is 270 euros), the lowest one in Serbia and Macedonia (80 and 90 Euro, average net earnings reported for these two countries are 240 and 250 euros respectively), while the other countries fall closer to the average.

The next relevant variable of informal networking system that we consider is the *size of networks* (*netsize*), which is the number of people reported to be members of respondents' networks (the average network size in the sample is 13 members). Assuming the informal networking is not free, an increase in the number of members in a network could be associated with a higher total cost of networking. The pairwise correlation between the two variables – the cost and size of the networks – is indeed positive (0.09) and statistically significant (p-value=0.000). Accordingly, we expect that the larger network size is associated with higher informal networking cost.

With respect to the network characteristics, we find *the composition of the networks* to be relevant for the cost of informal networking. Following examples from the literature (Efendic et al. 2015; Rebmann et al. 2017), we ask respondents about people in their network that they can rely if they need help, and distinguish between strong network members (cousins, friends, and godfathers) and weak ties (other more distant members of the network). The strong ties dominate in the WB region (*strongnet*), with 87% of respondents reporting their reliance on them.

Accordingly, we control for whether the structure of personal networks based on this differentiation is associated with the total cost of networking.

It is essential to include in the next step the availability of financial resources to individuals into the analysis, i.e. *economic positions of the individuals and their networks in the society*. We do so by controlling the individual economic performance measured by their total monthly income. We argue that the individual income level captures the economic positions of individuals in these societies, hence, very likely, the economic status of their informal networks. We control for the income status of respondents which includes nine income categories: starting from low income categories *income_1*: up to 100 euro*; income_2*: 101-200 Euro; … to the highest income category, *income_9*: over 1,500 euro. We expect that lower income categories will be associated with lower cost of informal networking; and higher income categories with higher costs. Empirically, we use this indicator as a continuous variable for ease of interpretation (*pincome*). The scale is evenly distributed for the first five categories which capture 92% of observations, while the remaining categories have an increasing scale, but they account for less than 8% of observations. If we exclude these categories we arrive at the same conclusions. The income-related variable is also relevant in distinguishing whether the networking cost is independent of economic influences, or rather linked to sociability, defined by tradition, culture, religion and other individual or societal factors.

Our approach relates the system of informal networking to *individual predispositions for networking*. First, we include the individual's assessment of the importance of having large networks for their everyday life, expecting that the individuals perceiving networking as more important and beneficial will have greater predispositions to engage in growing their networks. For this, we rely on a variable that measures how respondents perceive the importance (1-min to

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10-max) of networking in their society (*netimp*)[7]. The average response in the sample is 7.1, suggesting high predispositions for networking, with little variation between the observed WB countries (all located in the range 6.8 to 7.7). Next, as informal networking includes reciprocity and the exchange of favours, we assume that the individuals keener to be involved in reciprocity will be also keener to build larger networks. Accordingly, our next variable (*reciprocity*) measures a strength of readiness for reciprocity (1-min to 10-max), with an average of 7.4, confirming a high desire for reciprocity in the WB region[8]. This norm of reciprocity might influence network size, as exchange of favours grows with the number of participants in the network, without direct effect on the total costs. A factor analysis reveals that these two variables (*netimp* and *reciprocity*) provide similar information and can be combined into a single variable capturing an aggregated *individual predisposition for networking (netwper)*.
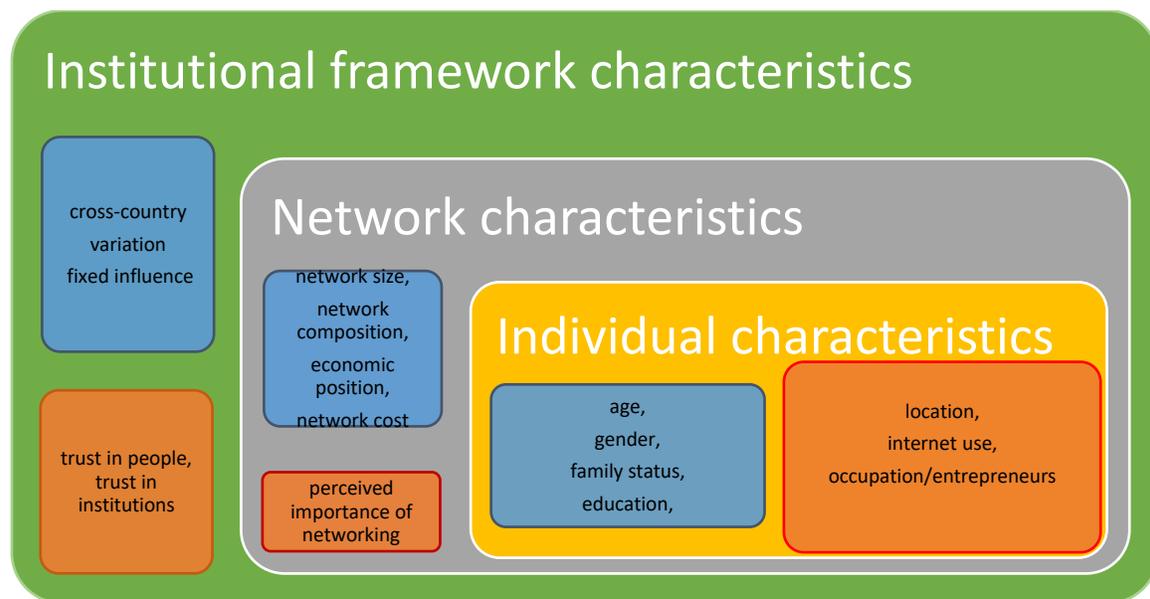
The challenge now is to establish potential relationships between informal networking cost and other informal networking influences discussed in this section. While there is a lack of clear theoretical guides for such a model, we follow our theoretical underpinnings to establish a system of equations linked to informal networking with causal relationships. We argue that the parameters of informal networking – size, type, costs, economic position and individual predispositions for networking – constitute an outcome, determined by exogenous factors. As presented on Figure 2, we disaggregate the influence of relevant contexts and introduce micro, meso and macro levels of analysis. At a micro-level, sociability within networks results in sharing resources, whereby friends and relations may at times become instrumental for survival

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[7] Original question is: On the scale from 1 to 10 please rate how important is to you to have a large number of people that you can rely on. 1 means not important at all, 10 means very important. You can choose any number in the scale.

[8] Original question is: On the scale from 1 to 10 please rate how ready you are to return a favor to someone who helped you. 1 means that it depends on many aspects and 10 that you are unconditionally ready to return a favor. You can choose any number in the scale.

and access to resources (Ledeneva, 2008: 61-62). Thus, the use of informal networking in daily routines, and its corresponding costs, might vary substantially from individual to individual. At a meso-level, the necessity to resort to informal ways of solving problems may result in a variation from region to region, or sector to sector (for example, entrepreneurs may be more reliant on the informal networking for their daily activities than state employees). At a macro-level, institutional frameworks may vary according to how ubiquitous informal networks are across countries.

Figure 2. The three-level model of factors relevant for the cost of informal networking[9]
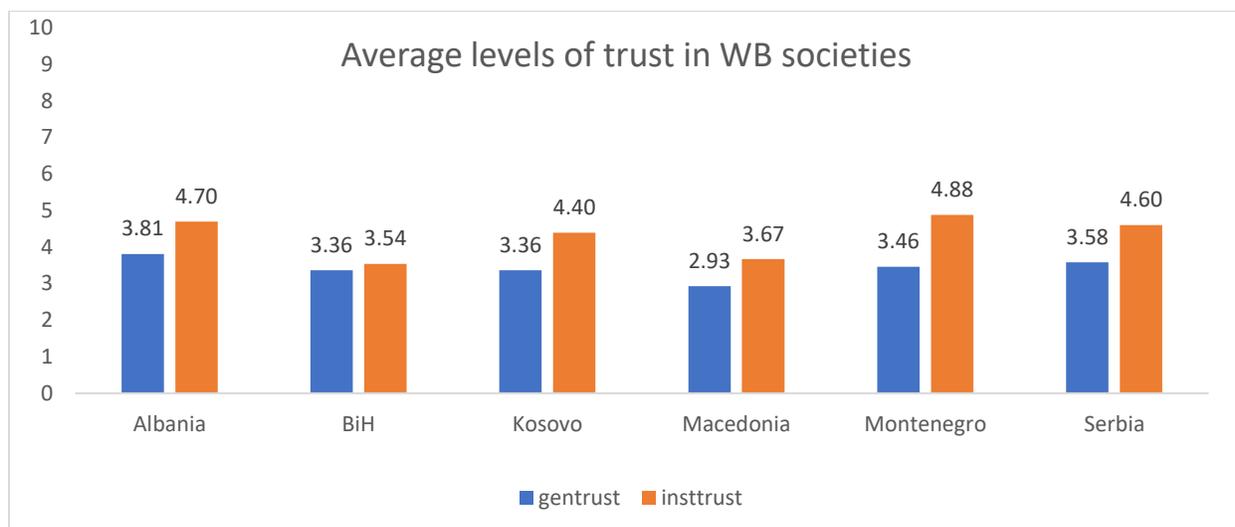

Source: authors

Starting from the variation in the institutional framework characteristics, we control the cross-country effect, as our sample contains countries with different levels of economic and institutional environments. We include five dummy variables to code five WB countries (Albania, Bosnia and Herzegovina, Macedonia, Montenegro, and Serbia, denoted as *alb*, *bih, mac, mng, srb* respectively) with Kosovo (*kos*) as the base (omitted) category. These variables capture the macro-level objectives and specific influences (e.g. institutional and EU integration performance differences) and their effect on the informal networking.

In addition, networking is generally linked to trust, both 'personalised' trust in the network of people and 'impersonal' trust in formal institutions (Sztompka 1999). To some extent, these two types of trust reflect outcomes of the formal and informal institutional environment of a country (see Figure 3). The result of the (subjective) questions with a scale of 1-minimum to 10-maximum, yield an average of 3.4 and 4.2 for personalized and impersonal trust respectively, thus confirming that the WB region is a low-trust institutional environment. The personalized trust is assessed at a slightly lower score. As networks mainly links trusted individuals in untrustworthy environments, thus we expect that higher general trust in people and institutions (*gentrust, insttrust*) have a positive effect on networking.

Figure 3. The levels of generalised and institutional trust in WB region[10] (1-min to 10 max)

Average levels of trust in WB societies

Country	gentrust	insttrust
Albania	3.81	4.70
BiH	3.36	3.54
Kosovo	3.36	4.40
Macedonia	2.93	3.67
Montenegro	3.46	4.88
Serbia	3.58	4.60

When it comes to individual characteristics influences, we control for the urban or rural area of living (*urban*) with the expectation that urban areas with more developed public and institutional infrastructure will be systematically linked with more informal networking. As mentioned earlier, different categories of population might use informal networks differently, with a general expectation that entrepreneurs will have stronger incentives to build informal networks. Thus, we include a variable capturing the entrepreneurial status of respondents (*entr*).

The development of information technologies have made communication easier, more efficient, and networking cheaper. To capture this potential effect, we rely on a variable measuring how frequently respondents use the internet, ranging between 1 – "every day" to 6 – "do not use it at all". This variable should also capture the internet literacy and reliance of respondents on internet services. 30% of respondents in the region do not use the internet at all (*int_nouse*), while 50% use it every day (*int_daily*); and the remaining responses fall in between

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[10] Generalized trust is based on the question: Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people [you can choose any number in the scale from 1 to 10] Institutional trust is based on the question: Based in your own experience, what is your trust in state institutions in our country (like courts, police, or government).

(*int_often*). One can expect that this variable is highly correlated with the age and education of individuals, which are also part of the model. However, upon checking we find that the frequency of internet use is not highly correlated (the rule of thumb is 0.7) either with age or education of individuals (the coefficients of pairwise or tetrachoric correlations do not exceed 0.6 in either combination). We therefore leave this variable as part of our model specification.

We also control for the effect of other individual "objective" variables, starting with age (*age*). For the age variable, we investigate the potential non-linear effect, which is typical to be included in economic models, in particular in the income equations (Mincer 1974), i.e. we include age and the age squared variables in all specifications (*age_sq*). This non-linear effect is significant for the income and importance of networking equations only, suggesting that older respondents have a higher income and stronger perceptions of networking importance. As this non-linear effect is not significant in other equations, it is included only in these two specifications.

We additionally control for the effect of gender (*female*), family status (married vs. *other*, *marr_single, marr_cohab, marr_widow*), and a set of variables capturing different categories of education (elementary, secondary, university, and postgraduate level denoted as *educ_elem, educ_second, educ_univer, educ_mscphd* respectively).

The five dependent variables linked to different parameters of informal networks include network size (*netsize*), structure (*strongnet*), costs (*lncostppp_in*), economic position (*pincome*) and individual incentives for networking (*netwper*), explained earlier. We use a logarithmic transformation of the informal networking cost variable (*lncostppp_in*) to reduce the skewness of the original variable (Appendix 1). The system of informal networking equations is estimated as

seemingly unrelated model, which is implemented by *sureg* (Baum et al. 2007) method of estimation and Stata 14 econometric software. This approach does not control for endogeneity. This means that there still could be unobserved factors that affect our dependent variables, and measurement errors, but the approach accounts for non-independence of equations. The estimated cross-sectional specifications (Table 3, Eq. 1.1-1.3) in this system is (for reason of space we introduce only the first, informal networking cost equation):

$$lncostppp\_in = \alpha_0 + \alpha_1 age + \alpha_2 female + \alpha_3 urban + \alpha_4 entr + \alpha_5 marr\_single +$$
$$\alpha_6 marr\_cohab + \alpha_7 marr\_divorced + \alpha_8 marr\_widow +$$
$$\alpha_9 mar\_naother + \alpha_{10} educ\_second + \alpha_{11} educ\_univer + \alpha_{12} educ\_mscphd + \alpha_{13} educ\_na +$$
$$\alpha_{14} int\_often + \alpha_{15} int\_daily + \alpha_{16} int\_na + \alpha_{17} gentrust + \alpha_{18} insttrust + \alpha_{19} alb +$$
$$\alpha_{20} bih + \alpha_{21} mac + _{22} mng + \alpha_{23} srb + \varepsilon$$

Equations 1.4 and 1.5 include additionally the age squared as an independent variable (*age_sq*), while in the robustness section Equation 4 includes additionally wealth of respondents as an explanatory influence (*wealth*).

Our specification is a joint estimate of five equations, each with its own error term. These five network parameters constituting our informal networking system are likely to be correlated. Indeed, the correlation matrix of the residuals between informal networking equations which compose our system of equations does confirm this expectation (see Table 2).

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Table 2. The correlation matrix of the residuals between informal network equations

	Netwper	*Pincome*	*lncostppp*	*netsize*	*strongnet*
netwper	1				
pincome	-0.0076	1			
lncostppp_in	0.1412	0.1529	1		
netsize	0.1325	0.0357	0.0925	1	
strongnet	0.1643	0.0147	0.1362	0.1368	1
Breusch-Pagan test of independence: chi2(10)=422.884 Pr = 0.0000					

Source: Authors

The Breusch-Pagan test of independence equations (H0: equations are independent) suggests that we can reject the null hypothesis at the highest conventional level, which means we should estimate this model as a system of equations instead as a set of five separate models. If we look the correlations between the informal costs and other network characteristics, we obtain positive associations ranging around 0.09-0.15. This implies that higher informal costs are associated with larger informal networks, with stronger networks, with respondents perceiving networking as important, and with a higher economic status. These correlations are taken into account in the estimation procedure by the SUREG estimate.

Table 3. Informal networking system – regression outputs

VARIABLES	*lncostpp_in* SUREG	*netsize* SUREG	*strongnet* SUREG	*netwper* SUREG	*pincome* SUREG	*lncostpp_in* SEM rob.	*lncostpp_in* OLS rob.	*lncostpp_in* OLS rob.
	Eq. 1.1	Eq. 1.2	Eq. 1.3	Eq. 1.4	Eq. 1.5	Eq. 2.1	Eq. 3	Eq. 4
age	-0.005***	0.06*	0.001	0.04***	0.03***	-0.005***	-0.004***	-0.005***
age_sq	-	-	-	0.001***	0.001***	-	-	-
female	-0.20***	-2.63***	0.001	-0.08	-0.52***	-0.20***	-0.18***	-0.18***
urban	0.10***	-1.10	-0.02	-0.04	0.19***	0.10***	0.07**	0.12***
entr	0.30***	2.53	0.02	0.26	0.49***	0.30***	0.29***	0.25***
marr_single	0.21***	-1.63	-0.01	0.001	-0.42***	0.21***	0.23***	0.23***
marr_cohab	0.14	-2.95	0.03	-0.17	0.12	0.14	0.11	0.12
marr_divorced	-0.03	-4.40**	-0.07***	-0.22	-0.02	-0.03	0.08	0.12
marr_widow	0.001	0.80	-0.02	0.09	0.02	0.001	-0.001	0.05
marr_naother	0.09	9.33	-0.01	0.11	-0.57	0.09	0.06	0.10
educ_second	0.17***	3.22***	0.02	0.14	0.52***	0.17***	0.22***	0.21***
educ_univer	0.26***	4.66***	0.03**	0.04	1.38***	0.26***	0.29***	0.28***
educ_mscphd	0.41***	4.76*	0.04	0.67***	1.89***	0.41***	0.48***	0.47***
educ_na	-0.67	-11.71	0.12	-3.21**	-0.31	-0.67***	-0.27	-0.50***
int_often	0.09	0.29	0.03*	-0.08	0.31***	0.09	0.04	0.02
int_daily	0.31***	2.90**	0.04**	0.09	0.52***	0.31***	0.26***	0.24***
int_na	-0.10	-2.40	-0.04	-0.63	0.37	-0.10	0.001	-0.01
gentrust	0.04***	0.37*	0.01**	0.03*	0.03**	0.04***	0.03***	0.03***
insttrust	0.02**	-0.04	0.001*	0.02	0.001	0.02**	0.01	0.01
Alb	-0.21***	-2.16	0.12***	-1.16***	-0.68***	-0.21***	-0.11**	-0.10*
Bih	0.02	4.02**	0.10***	-0.40***	-0.33***	0.02	0.09*	0.10*
Mac	-0.30***	6.16***	0.14***	-0.66***	-0.10	-0.30***	-0.29***	-0.30***
Mng	-0.17**	7.06***	0.16***	-0.39**	0.29***	-0.17**	-0.05	-0.08
Srb	-0.17**	4.08**	0.15***	-0.63***	-0.09	-0.17**	-0.17***	-0.18***
wealth	-	-	-	-	-	-	-	0.72***
_cons	2.77***	4.17***	0.73***	6.78***	1.43***	2.77***	2.71***	2.52***
R-squared	0.15	0.03	0.04	0.03	0.25		0.13	0.15
No. of observ.	3,127	3,127	3,127	3,127	3,127	3,127	4,081	3,973

Our preferred results are from the system of equations Eq. 1.1-Eq. 1.5. The specification of particular interest, Eq. 1.1, shows the total cost of informal networking. The institutional influences, which belong to our subjective measures, show a positive effect of personal and impersonal types of trust on the total cost of informal networking. The estimated coefficients imply that an increase in trust in people by 10% (increase in one unit on 10 point scale) is associated with 4% higher cost, while the effect of institutional trust is 2%. This suggest that informal networking depends more on the trust in people. In all five equations (Eq. 1.1. – Eq. 1.5) that compose the system of equations, the general trust in people is consistently positive and statistically significant.

The cross-country effects (country dummies) are mostly statistically significant and quantitatively large in their magnitudes. Apart from BiH, all countries have around 20% lower informal networking cost in comparison to Kosovo. This finding reflects the formal institutional efficiency and EU integration status of these WB countries, where Kosovo scores the lowest, and then it is BiH. This finding confirms conventional assumption that (formal) institutional progress, in this case towards the EU standards, reduces informality, rather than cultural or geographical characteristics, and that increase in formal institutional efficiency is very much associated with the reduction of informality.

Among the individual influences, we find that "objective" individual factors are relevant determinants in explaining informal networking cost. Older individuals, men and single in comparison to married or with other family statuses, report systematically higher cost of informal networking. For example, the informal networking costs for men is 20% higher than for women, which suggest that informal networking is gendered.

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The variables that can be interpreted as subjective influence of engaging in networking including location, education and internet use, all have a significant influence. Urban respondents face 10% higher informal costs than those from rural areas; respondents with higher education report higher costs of informal networking; and so do frequent internet users. The level of education provides a consistent effect on the informal networking cost: the effect is positive, statically significant at the highest level, and it systematically increases with higher levels.

Entrepreneurial status has a significant effect as expected; entrepreneurs report 30% higher informal networking costs than do the non-entrepreneurs. This large effect implies that individuals operating in the business sector invest much more money and time into informal networking than other citizens. Indeed, their network size is around 30% higher than the network size of others, while many entrepreneurs report themselves that they "invest" more money into networking (Gordy and Efendic 2019). This finding again indicates that informal networking is likely to be driven by economic, rather than by traditional, cultural or societal influences only.

The interpretation of the remaining specifications is not in the primary interest, but we shortly discuss the obtained results. Our network size specification (Eq. 1.2) finds that larger networks are associate with male respondents, with higher levels of education and frequency of internet use, and with greater trust in people. These results support expectations and finding from the similar literature from the region (Efendic et al. 2015, 2017; Rebmann et al. 2017).

The network structure specification (Eq. 1.3) reports that higher level of education, higher trust in people and institutions, and higher frequency of internet use are important factors supporting for larger networks with stronger ties among members. The dominance (87%) of strong ties is striking but it is in line with a very low trust in people reported earlier. This finding

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can be interpreted as representative of the powerful grip of kinship that enables economic exchanges but also has a lock-in effect for the size of network.

The specification explaining network importance for individuals (Eq. 1.4) suggests that individuals with the highest levels of education, i.e. those with MSc and PhD degrees, and those with greater trust in people, consider informal networking most important. Interestingly, higher level of education goes hand in hand with the perception of importance, and the use of networking (Eq. 1.2), as well as with higher level of investment into informal networking (Eq. 1.1). This result is fully consistent with the previous findings. It confirms the importance of informal networking in the Western Balkan region for even the most educated individuals.

The economic status specification (Eq. 1.5) suggests that higher levels of income is associated with older individuals, men, married respondents, living in urban areas, of higher education, more frequent use of internet, greater trust in people, and finally, with entrepreneurial status. These results can be seen also as an important robustness test; they report conventional economic effects of all these determinants on personal income.

6. Robustness of the obtained results

To check the stability of the reported results we conduct further empirical steps. The SUREG estimate that we use is not designed for robust standard errors, while there is possibility that heterogeneity of the data coming from six countries of the WB region might biased our results. We estimate a system with all five equations by using the Structural Equation Model (SEM) that gives us estimate with the robust standard errors. This specification (Eq. 2.1) is reported in

column 6, Table 3, which is our specification of interest. We obtain almost identical results, which confirms stability of the estimate with heteroskedasticity robust standard errors.

In the next step, we estimate the informal networking cost specification with the Ordinary Least Square (OLS) estimator (Eq. 3) and robust standard errors. The standard model diagnostics suggest that this model has an appropriate functional form at the conventional 5% levels of statistical significance (p-value of the Ramsey-RESET test is 0.07), while the variance inflation (VIF) check suggests no problem with collinearity (the mean VIF value is 1.50). The OLS output reports consistency with SUREG estimate, with some slight difference of the coefficients estimated.

The omitted variable bias is a typical limitation that cannot be exhausted enough in any research. To test one of the possibilities of the omitted variable bias, we modify the estimated specification by including a variable that capture the wealth of the respondents (*wealth*[11]). This is to check if the accumulated wealth of our respondents might systematically affect the possibility for meeting the costs of informal networking, conditional on all other influences that we control for. We obtain a statistically positive and significant effect of wealth (Eq. 4, Table 3), suggesting that respondents with a greater wealth report higher informal networking costs. This again confirm our earlier conclusion that the networking costs are used for instrumental purposes. However, the wealth is likely to affect other variables (e.g. education), which rises the issue of potential endogeneity that is especially challenging in cross-sectional data, and thus we believe that our preferred specification should not change.

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[11] We construct this variable from 7 binary questions which ask if respondents own: a house in which they live, an additional house, a flat in which they live, an additional flat, a weekend house, car and land. We aggregated these responses into one variable and divide it by seven to get an index from 0 (the respondent has nothing from the wealth list) to 1 (the respondent has all of the seven wealth components). The mean value of this variable is 0.29.

We exclude potential outliers from the dependent variable (i.e. those reported their costs over 100 euro per week, around 5% of respondents), with the results retaining very similar estimated correlations between equations, estimated coefficients and their signs, magnitudes and significance for the separate equations.

Finally, we have estimated the preferred specification for individual WB countries and examined the equation with informal networking costs. In general, we find consistent results for majority of influences (Appendix 2). In particular, the positive effects of higher education and personal trust on informal networking costs is fully consistent for all countries in the region. A positive influence of daily use of internet and gender also applies to all countries, except for Kosovo where we had no precise measurements. It is noteworthy that age has an opposite effect in Montenegro – younger respondents report higher informal networking costs in contrast with those in the other countries.

An assessment of the controlled factors in our informal networking system can be expressed in the following conclusions. First, institutional influences are relevant - general trust in people is a determinant that comes as statistically significant factor in all specifications. All considered parameters of informal networking are determined by general trust in people, i.e. all informalities linked to our system are enhanced if trust in people is higher, and more frequently than trust in institutions. Second, all equations show also significant effect of education. Higher level of education does not reduce informal networking – including perception of importance, size or costs – to the contrary, more educated individuals seem to recognize the benefits of informal networking in these societies and invest their effort, time, and money. Third, online communication, which reduces costs of communication and enhances possibilities for more frequent and distant communication, has a stimulating effect on informal networking size, but is

interestingly not associated with reduced costs of informal networking. While individuals can spend less money for communication, they might spend more time and our calculations take this into account. The net effect on the overall informal networking costs is positive. Fourth, the informal networking in WB region is gendered – men are building larger informal networks, have higher income and also face higher costs of informal networking. The fifth worthy finding is that entrepreneurs report systematically larger informal networks and higher informal networking costs than ordinary people, which is often categorized by them as an investment. Finally, the cross-country influences, capturing economic and institutional developments in the model, have quantitatively the largest effect, and hence, from a policy perspective, are particularly relevant to consider. Overall, there is a very strong indication that WB countries which are more successful institutionally and in the EU integration, report higher incomes and lower costs of informal networking, while they still rely on informal networking, perceive it as important and desire stronger ties with network members

7. Conclusion

The study investigates informal networking in the Western Balkans (WB) through five relevant parameters – informal networking size, structure, related cost (money and time), economic position of individuals and individual perception on networking importance. The empirical analysis is based on quantitative data obtained from a regional WB survey, implemented in six countries, namely, Albania, Bosnia and Herzegovina, Kosovo, Macedonia, Montenegro and Serbia. Our investigation reveals that informal networking is widely used in all WB countries, although more among entrepreneurs than ordinary people. On average, individuals report spending around 100 euros (including the costs of resources and time) per month. There is a

strong indication that the opportunity costs of time invested into informal networking are larger than the real costs claimed to be spent on networking. Informality is associated with significant indirect costs, which are not always visible, but are taken into account.

We analyse informal networking empirically in a system of equations with network parameters including network size, structure, costs, economic positions and perception of networking importance as explained variables. These informal networking parameters are part of a joint system of influences, mutually related and affected by similar determinants. We find that larger costs of informal networking are associated with larger informal networks, with stronger network ties, when respondents perceive networking as more important, and when they have a higher economic status. In addition, higher informal networking costs are higher among men than women, higher for single than married respondents, higher in urban areas, among more education people, more frequent internet users, and finally, substantially higher among entrepreneurs than non-entrepreneurs. These findings imply that informal costs are non-trivial, individuals who are involved into informal networking do so at a high price, and do more if they are more educated or entrepreneurs, hence very likely not as their cultural or traditional predisposition.

Theoretically, the use of informal networks serves both social and instrumental purposes. If we could distinguish between the sociability and instrumentality in informal networking, we could adjust the existing policy approaches accordingly. However, this is barely feasible, and as pointed out by one of entrepreneurs in our sample: "When you are meeting with other businessmen, you never know if you are having a break or doing business". Some two and a half centuries ago Adam Smith made a similar conclusion: "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in conspiracy against the

public, or in some contrivance to rise prices" (n.d. [1776]: paragraph 27). Keeping in mind this complexity, our approach seems to offer the best instrument for the direct observations of these costs.

To decrease these costs, more efficient formal institutional environments and better performance in the EU integration perspectives of WB societies are necessary, especially when it is possible to create alternative routes for the instrumental use of informal networks. Given the ambivalent nature of informal networking – social yet also instrumental – further research and qualitative study of informal networking is needed to identify policy measures that could affect the ratio of sociability to instrumentality and to release the powerful grip of strong ties that locks in individual freedoms in the region.

Funding

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Appendix 1. Descriptive statistics of the variables, WB sample

Variable	Obs	Mean	Std. Dev.	Min	Max
netsize	6,040	13.40	32.86	0	1413
strongnet	6,040	0.87	0.34	0	1
netwper	5,837	14.53	4.76	2	20
pincome	4,341	2.89	1.63	1	9
costppp_in	3,226	22.76	30.57	0.3	366.8
lncostppp_in	3,226	2.35	1.39	-1.1	5.9
age	6,040	46.53	17.64	18	93
female	6,040	0.55	0.50	0	1
marr_married	6,040	0.58	0.49	0	1
marr_single	6,040	0.24	0.43	0	1
marr_cohab	6,040	0.02	0.15	0	1
marr_divor~d	6,040	0.04	0.20	0	1
marr_widow	6,040	0.11	0.31	0	1
marr_naother	6,040	0.01	0.10	0	1
urban	6,040	0.53	0.50	0	1
educ_elem	6,040	0.25	0.43	0	1
educ_second	6,040	0.52	0.50	0	1
educ_univer	6,040	0.19	0.40	0	1
educ_mscphd	6,040	0.03	0.16	0	1
educ_na	6,040	0.00	0.04	0	1
int_often	6,040	0.14	0.34	0	1
int_daily	6,040	0.54	0.50	0	1
int_nouse	6,040	0.30	0.46	0	1
int_na	6,040	0.02	0.13	0	1
entr	5,940	0.05	0.22	0	1
gentrust	5,961	3.41	2.53	1	10
insttrust	5,876	4.25	2.51	1	10
alb	6,040	0.15	0.36	0	1
bih	6,040	0.21	0.40	0	1
kos	6,040	0.15	0.36	0	1
mac	6,040	0.17	0.37	0	1
mng	6,040	0.13	0.34	0	1
srb	6,040	0.19	0.39	0	1

	netsize	strong~t	netwper	pincome	costpp~n	lncost~n	age	female	marr_m~d	marr_s~e	marr_c~b	marr_d~d	marr_w~w
netsize	1.0000												
strongnet	0.1479	1.0000											
netwper	0.1437	0.1507	1.0000										
pincome	0.0893	0.0439	0.0391	1.0000									
costppp_in	0.0756	0.0640	0.0981	0.5242	1.0000								
lncostppp_in	0.1076	0.1495	0.1383	0.5332	0.7483	1.0000							
age	0.0187	-0.0442	-0.0268	-0.0910	-0.2146	-0.2667	1.0000						
female	-0.0606	-0.0083	-0.0250	-0.1812	-0.1589	-0.1765	-0.0039	1.0000					
marr_married	0.0207	0.0192	0.0093	0.0772	-0.0253	-0.0408	0.1543	-0.0734	1.0000				
marr_single	-0.0142	0.0121	0.0110	-0.0229	0.1519	0.1847	-0.4971	-0.0980	-0.6243	1.0000			
marr_cohab	-0.0113	0.0296	-0.0118	0.0475	0.0296	0.0584	-0.1238	0.0045	-0.1737	-0.0691	1.0000		
marr_divor~d	-0.0276	-0.0309	-0.0194	0.0194	-0.0232	-0.0222	0.0306	0.0421	-0.2752	-0.1095	-0.0305	1.0000	
marr_widow	0.0031	-0.0369	-0.0099	-0.1179	-0.1452	-0.1767	0.4199	0.2028	-0.4652	-0.1851	-0.0515	-0.0816	1.0000
marr_naother	0.0290	0.0044	-0.0002	-0.0089	-0.0014	0.0085	-0.0536	-0.0106	-0.0809	-0.0322	-0.0090	-0.0142	-0.0240
urban	0.0071	-0.0002	-0.0079	0.1380	0.0931	0.1165	-0.0129	0.0759	-0.0327	0.0139	0.0292	0.0623	-0.0223
educ_elem	-0.0725	-0.0732	-0.0366	-0.2989	-0.2185	-0.3235	0.3275	0.1290	0.0212	-0.1955	-0.0609	-0.0262	0.2550
educ_second	0.0335	0.0255	0.0273	0.0011	-0.0010	0.0821	-0.1470	-0.1123	0.0076	0.0788	-0.0020	0.0358	-0.1323
educ_univer	0.0386	0.0395	-0.0060	0.2747	0.1933	0.2078	-0.1265	-0.0041	-0.0151	0.0721	0.0636	-0.0065	-0.0916
educ_mscphd	0.0006	0.0209	0.0330	0.1318	0.1195	0.1144	-0.1218	0.0106	-0.0404	0.1017	0.0162	-0.0214	-0.0547
educ_na	-0.0096	0.0083	-0.0362	-0.0134	-0.0159	-0.0247	0.0218	-0.0276	-0.0057	0.0191	-0.0035	-0.0056	-0.0094
int_often	-0.0296	0.0148	-0.0219	-0.0057	-0.0321	-0.0331	0.0145	-0.0114	0.0962	-0.0955	-0.0007	0.0539	-0.0611
int_daily	0.0459	0.0465	0.0587	0.2227	0.2591	0.3237	-0.5752	-0.0056	-0.0831	0.3121	0.0649	-0.0265	-0.2743
int_nouse	-0.0236	-0.0570	-0.0416	-0.2312	-0.2469	-0.3145	0.5965	0.0113	0.0131	-0.2530	-0.0665	-0.0131	0.3328
int_na	-0.0137	-0.0223	-0.0222	-0.0099	-0.0250	-0.0282	0.0302	0.0188	0.0073	-0.0335	-0.0119	-0.0011	0.0368
entr	0.0273	0.0159	0.0320	0.1073	0.1124	0.1225	-0.0969	-0.0909	0.0294	0.0349	0.0030	-0.0049	-0.0819
gentrust	0.0217	0.0654	0.0276	0.0544	0.0931	0.1512	-0.0545	-0.0117	-0.0561	0.0848	-0.0015	-0.0089	-0.0096
insttrust	-0.0049	0.0479	0.0210	0.0234	0.0542	0.0841	0.0173	-0.0135	-0.0558	0.0366	-0.0186	0.0280	0.0362
alb	-0.1041	0.0298	-0.1177	-0.1499	-0.0248	-0.0072	-0.0962	0.0205	0.0613	0.0242	0.0068	-0.0492	-0.0883
bih	0.0154	-0.0306	0.0292	-0.0747	-0.0443		0.0684	0.0199	-0.0619	0.0169	-0.0196	-0.0031	0.0851
kos	-0.0394	-0.1320	0.1058	0.0694	0.1545	0.0981	-0.1346	-0.0328	0.0179	0.0752	-0.0120	-0.0807	-0.0598
mac	0.0580	0.0198	-0.0194	0.0386	-0.0367	-0.0302	0.0869	0.0025	0.1005	-0.0983	-0.0487	-0.0315	0.0094
mng	0.0623	0.0558	0.0364	0.1382	0.0282	0.0306	-0.0518	-0.0232	-0.0306	0.0243	0.0327	0.0228	-0.0163
srb	0.0152	0.0464	-0.0105	0.0103	-0.0712	-0.0306	0.1067	0.0053	-0.0940	-0.0286	0.0438	0.1368	0.0651

	marr_n~r	urban	educ_e~m	educ_s~d	educ_u~r	educ_m~d	educ_na	int_of~n	int_da~y	int_no~e	int_na	entr	gentrust
marr_naother	1.0000												
urban	0.0099	1.0000											
educ_elem	-0.0270	-0.2008	1.0000										
educ_second	0.0129	0.0569	-0.6128	1.0000									
educ_univer	0.0189	0.1318	-0.2896	-0.5035	1.0000								
educ_mscphd	-0.0115	0.0455	-0.1057	-0.1837	-0.0868	1.0000							
educ_na	-0.0016	-0.0020	-0.0150	-0.0261	-0.0123	-0.0045	1.0000						
int_often	-0.0001	-0.0114	-0.0159	0.0582	-0.0400	-0.0350	-0.0108	1.0000					
int_daily	0.0333	0.1134	-0.3498	0.0866	0.2216	0.1331	-0.0006	-0.4375	1.0000				
int_nouse	-0.0344	-0.1115	0.3789	-0.1360	-0.2012	-0.1121	0.0094	-0.2976	-0.7127	1.0000			
int_na	-0.0056	-0.0030	0.0341	-0.0065	-0.0230	-0.0153	-0.0022	-0.0368	-0.0881	-0.0599	1.0000		
entr	-0.0142	0.0147	-0.0755	0.0584	0.0044	0.0137	-0.0056	-0.0185	0.1059	-0.0984	-0.0012	1.0000	
gentrust	-0.0203	0.0258	-0.0817	0.0043	0.0717	0.0294	0.0162	0.0400	0.0547	-0.0910	0.0102	-0.0018	1.0000
insttrust	-0.0397	-0.0192	-0.0366	-0.0024	0.0437	0.0053	-0.0335	0.0350	0.0004	-0.0291	0.0091	-0.0340	0.3478
alb	-0.0200	-0.0394	0.0206	-0.0654	0.0128	0.1098	-0.0127	0.1038	-0.0548	-0.0205	-0.0058	0.0071	0.1303
bih	-0.0163	-0.0511	0.0305	0.0127	-0.0310	-0.0467	0.0220	-0.0377	-0.0310	0.0530	0.0500	-0.0441	0.0160
kos	-0.0103	-0.0695	0.0333	-0.0588	0.0322	0.0134	-0.0098	-0.0005	0.1665	-0.1771	-0.0001	0.0407	-0.0054
mac	0.0071	0.1182	0.0219	-0.0234	-0.0000	0.0092	0.0202	-0.0336	-0.0227	0.0489	0.0065	0.0262	-0.1230
mng	0.0206	0.0632	-0.0884	0.0846	0.0114	-0.0450	-0.0096	-0.0041	0.0588	-0.0556	-0.0213	-0.0008	-0.0234
srb	0.0209	-0.0223	-0.0265	0.0578	-0.0209	-0.0506	-0.0120	-0.0329	-0.0855	0.1221	-0.0310	-0.0257	-0.0015

	insttr~t	alb	bih	kos	mac	mng	srb
insttrust	1.0000						
alb	0.1013	1.0000					
bih	-0.0986	-0.2285	1.0000				
kos	0.0586	-0.1945	-0.1768	1.0000			
mac	-0.1478	-0.2412	-0.2194	-0.1867	1.0000		
mng	0.0392	-0.1898	-0.1726	-0.1469	-0.1822	1.0000	
srb	0.0561	-0.2372	-0.2157	-0.1835	-0.2277	-0.1791	1.0000

Appendix 2.

Networking costs equation (*lncostppp_in*) estimated for all WB countries separately using the same system

	All WB		ALB		BIH		KOS		MAC		MNG		SRB	
age	0.00	0.061	0.00	0.851	-0.01	0.258	0.00	0.629	0.00	0.454	-0.01	0.066	0.00	0.259
female	-0.41	0.000	-0.54	0.000	-0.47	0.000	-0.05	0.713	-0.32	0.003	-0.64	0.000	-0.40	0.000
marr_single	0.11	0.087	0.11	0.455	-0.29	0.065	0.30	0.138	0.22	0.211	0.24	0.123	0.15	0.301
marr_cohab	0.26	0.121	0.65	0.059	0.07	0.891	0.07	0.899	-0.28	0.699	0.58	0.104	0.15	0.591
marr_divorced	-0.07	0.486	-0.51	0.089	-0.18	0.500	0.69	0.608	0.04	0.882	0.02	0.943	0.08	0.614
marr_widow	-0.02	0.785	-0.14	0.502	0.28	0.092	-0.89	0.002	-0.01	0.937	0.03	0.908	0.07	0.628
marr_naother	-0.05	0.879	-2.10	0.073	0.65	0.594	-1.19	0.379	-0.36	0.617	-0.01	0.991	0.66	0.239
urban	0.16	0.000	0.24	0.012	-0.17	0.115	0.01	0.951	0.14	0.221	0.17	0.175	0.39	0.000
educ_second	0.47	0.000	0.39	0.001	0.63	0.000	0.74	0.000	0.42	0.002	0.46	0.017	0.36	0.005
educ_univer	0.83	0.000	0.69	0.000	1.11	0.000	1.16	0.000	0.78	0.000	0.75	0.001	0.62	0.000
educ_mscphd	1.03	0.000	0.77	0.000	1.88	0.000	1.27	0.001	1.29	0.000	0.98	0.108	0.42	0.346
educ_na	-1.05	0.224	0.00	-	-1.17	0.341	0.00		-0.35	0.778	0.00		0.00	
int_often	0.22	0.003	0.63	0.000	0.38	0.042	-0.42	0.113	0.21	0.231	0.22	0.296	-0.06	0.704
int_daily	0.55	0.000	0.73	0.000	0.79	0.000	0.26	0.266	0.40	0.014	0.52	0.006	0.42	0.002
int_na	0.07	0.777	-0.16	0.783	-0.20	0.641	0.71	0.375	0.00	0.995	0.89	0.453	-0.24	0.832
entr	0.45	0.000	0.79	0.000	-0.03	0.919	0.55	0.041	0.28	0.212	0.48	0.095	0.54	0.036
gentrust	0.05	0.000	0.08	0.000	0.03	0.247	0.00	0.886	0.04	0.093	0.11	0.000	0.05	0.014
insttrust	0.02	0.032	0.04	0.028	0.02	0.396	0.02	0.438	0.01	0.615	-0.01	0.357	0.00	0.873