Inequality and historical legacies: evidence from post-communist regions

Alexander Libman & Anastassia Obydenkova

To cite this article: Alexander Libman & Anastassia Obydenkova (2019): Inequality and historical legacies: evidence from post-communist regions, Post-Communist Economies, DOI: 10.1080/14631377.2019.1607440

To link to this article: https://doi.org/10.1080/14631377.2019.1607440

Published online: 08 May 2019.

Article views: 12

View Crossmark data
Inequality and historical legacies: evidence from post-communist regions

Alexander Libman\textsuperscript{a,b} and Anastassia Obydenkova\textsuperscript{c,d,e}

\textsuperscript{a}Ludwig Maximilian University of Munich, Munich, Germany; \textsuperscript{b}International Center for the Study of Institutions and Development, National Research University Higher School of Economics, Moscow, Russia; \textsuperscript{c}Institut Barcelona D’Estudís Internacionals, Barcelona, Spain; \textsuperscript{d}Center for Institutional Studies, National Research University Higher School of Economics, Moscow, Russia; \textsuperscript{e}Institute for Economic Analysis of the Spanish Council for Scientific Research, Barcelona, Spain

\textbf{ABSTRACT}

Egalitarianism is one of the key elements of the communist ideology, yet some of the former communist countries are among the most unequal in the world in terms of income distribution. How does the communist legacy affect income inequality in the long run? The goal of this article is to investigate this question by looking at a sample of sub-national regions of Russia. To be able to single out the mechanisms of the communist legacy effects more carefully, we look at a particular aspect of the communist legacy – the legacy of the Communist Party of the Soviet Union (CPSU). We demonstrate that the sub-national regions of Russia, which had higher CPSU membership rates in the past, are characterised by lower income inequality. This, however, appears to be unrelated to the governmental redistribution policies; we link lower inequality to the prevalence of informal networks.

\textbf{CONTACT}

Alexander Libman alibman@yandex.ru

\textbf{1. Introduction}

Studies on historical legacies, including the legacies of communism, have blossomed in the last two decades (e.g. Barany & Volgys, 1995; Beissinger & Kotkin, 2014; Crawford & Lijphart, 1997; Jowitt, 1992; LaPorte & Lussier, 2011; Millar, 1994; Pop-Eleches & Tucker, 2017). Communist countries indeed belonged to a group of particularly intrusive autocracies, with few or no spheres of society left unaffected by the interventions of the regime, which claimed its intention to create a ‘new man’ based on the principles of the communist ideology (Soboleva, 2017). The intrusiveness of the regime, however, led to the opposite reactions, as people acted in a way that reduced their ‘visibility’ to the all-powerful state (Sztompka, 1993). Both top-down policies and bottom-up adaptation and resistance generated important behavioural changes, and there are good reasons to expect these changes to persist for a long period of time. The research produced a wide array of findings confirming that former communist countries still differ from the non-communist world and that generations socialised under communist rule bear a mark of the political environment in which they grew up (Alesina & Fuchs-Schündeln, 2007; Beissinger & Kotkin, 2014; Bönisch & Schneider, 2010, 2013; Malisauskaite & Klein, 2018; Pop-Eleches & Tucker, 2011, 2013, 2014, 2017).
This article contributes to the debate on the impact of the communist history through focusing on the legacy of the Communist Party of the Soviet Union (CPSU) across the Russian regions and its implications for income inequality. Egalitarianism is probably one of the cornerstone elements of any version of communist ideology. Throughout its existence, Soviet propaganda presented the USSR as a country of complete egalitarianism, where no class or power divisions existed, where income was equally distributed, and where everyone was guaranteed access to social benefits, free education and healthcare, housing and employment. In reality, the Soviet Union was certainly not as egalitarian as its propaganda claimed; yet the country was still characterised by a much more equal distribution of (official monetary) income than Western societies. The collapse of the USSR resulted in an unprecedented increase in the levels of income inequality, which is, in fact, one of the reasons for the negative attitude many Russians share towards the contemporary economic system the country has. The Russian case is particularly interesting, since there are large differences in the extent of income inequality across different regions of the Russian Federation; this variation as such forms an attractive topic for empirical investigation.

The goal of this article is to look at the historical roots of differences in the extent of income inequality among the regions of Russia. In particular, we intend to investigate how income inequality is shaped by one particular type of communist legacy, which has been shown to matter substantially in the previous empirical research: the legacy of the variation of the membership rate in the Communist Party of the Soviet Union (CPSU) during the Soviet era. Russian regions during the Soviet period were homogenous in terms of how they were governed both politically and economically, as the Soviet leadership did not permit any form of deviation from the established set of economic and political institutions anywhere in the country. However, the provinces differed a lot in terms of the extent to which membership of the Communist Party, the ‘leading and the guiding force of the society and the nucleus of its political system’ (according to the Soviet Constitution of 1977), was present in each of the regions. In 1976, for example, the share of Communists in the regional population varied between about 4% in Checheno-Ingushetiya and more than 12% in Moscow; in spite of the continuous growth of the CPSU membership in the post-war USSR, there was a lack of convergence of regions in terms of party membership rate.

Does this variation matter in the long run and, in particular, after the fall of the communist regime? Looking at the Russian data, Obydenkova and Libman (2015) demonstrate the association between the CPSU membership rate and corruption, more specifically, a willingness to pay bribes by the public, the willingness of bureaucrats to request bribes and public approval of bribery. Ivlevs and Hinks (2018) support some of these findings using micro-level evidence from the LiTS data. Lankina, Libman, and Obydenkova (2016a) and Libman and Obydenkova (2015) argue that regions of Russia with a larger party membership rate in the Soviet era developed into more authoritarian polities after the start of transition and show that the CPSU legacy is associated with significantly lower protest activity in the regions. In a nutshell, all these studies provide empirical evidence of a long-lasting impact of CPSU membership on a wide variety of social and political aspects.

All of these studies highlight a specific mechanism of the persistence of the CPSU legacy: the opportunistic, cynical and compliant behaviour of the former CPSU members. As we will
show in what follows, in the Stagnation Era (and probably even before that, to some extent), the Communist Party, in spite of its self-proclaimed intention to represent the ‘vanguard’ of the Soviet society in terms of ideological loyalty and in spite of the massive effort the CPSU invested in indoctrinating its members, became an attractive goal for career-oriented individuals, willing to pay lip service to ideology, but having little faith in the official communist doctrine. Socialisation within the CPSU strengthened these attitudes rather than weakened them. As a result, the former communists became particularly willing to adjust and to adapt to the new social order they found themselves in, including supporting the efforts of regional autocrats and consolidating their power and paying bribes to public officials when necessary (Libman & Obydenkova, 2013). In short, the legacy of the CPSU is not that of a strong ideological commitment – it is one of opportunism.

Given the importance of egalitarianism for the communist ideology, it appears to be prudent to ask whether the CPSU legacies had an effect on inequality as well. This is what this article intends to investigate. We look at the variation of the income inequality across the regions of Russia in the 2010s, and match it with the variation of the CPSU membership rate in the regional population in the 1970s. We do find a statistically significant correlation between these two variables. However, unlike the previous research, this time the CPSU legacy seems to be associated with an improvement in terms of one of the crucial problems faced by the Russian society and economy (Treisman, 2012): regions with a higher CPSU membership rate in the past are characterised by lower income inequality levels. This effect is unrelated to the social policies of the regional governments. We suggest that the mechanism explaining lower inequality in the regions with a strong CPSU legacy is a development of informal networks, which serve as redistribution devices, providing access to resources to broader groups of the population.

The article is organised in the following way. The next section reports a number of stylised facts on the development of inequality in Russia after the onset of the economic and political transition, as well as on the differences in income inequality levels across regions. The third section briefly discusses the idea of a ‘legacy of opportunism’ associated with the CPSU. The fourth section develops the hypotheses linking the CPSU legacy and inequality in modern Russia. The fifth section presents our data and the model; the sixth section reports econometric results; and the seventh section tests some of the causal mechanisms possibly explaining the effects we observe. The last section concludes.

2. Income inequality in the USSR and after transition

The magnitude of income inequality in the USSR is a difficult topic to investigate. This is to some extent because of the lack of information and to some extent because of the difficulty with defining the concept of ‘income’ in an economy of the Soviet type, characterised by the encompassing shortage of consumption goods. Still, the existing research suggests that the USSR managed to achieve a very low level of monetary income inequality. For example, the share of income received by those in the top 1% of the income distribution in society throughout the Soviet period fluctuated around 4%, meaning that the top 1% of income earners received only about four times higher income than the average. For the top 10%, the share in the total income they received fluctuated around 25% until the early 1960s, and went down to about 20% after that (Novokmet, Piketty, &
The Soviet government invested substantial effort into creating the image of a society where everybody has an equal share of the wealth or, at least, the distribution of wealth is related only to the work effort. Kopstein (2003) points out that the communist societies reduced inequality as compared to the levels existing prior to the establishment of the communist rule.

However, even from the point of view of monetary income, Soviet society was not fully egalitarian (Bergson, 1984), and while the Soviet government attempted to replace monetary stimuli with intrinsic motivation through different forms of economic activity, differences in salaries continued playing an important role as an incentive for employees of the Soviet factories and establishments; there were also differences across various parts of the USSR (Alexeev & Gaddy, 1993). More important, however, was the system of non-material benefits, which all Soviet citizens participated in in one form or another. Given the endemic shortage of consumer goods, the fact that an individual earned a particular amount of money did not allow any access to actual goods or services. The latter was organised through two interacting systems, both leading to much larger inequalities than the official monetary income distribution. First, the Soviet government created a variety of regional, sectoral and individual privileges giving access to certain goods (Szelenyi, 1978). Second, spontaneous adaptation of society resulted in the emergence of a large shadow economy providing people with access to the goods and services they were unable to obtain officially. ‘Knowing the right people’ was the main prerequisite for obtaining deficit goods or services (Ledeneva, 1998). One can safely claim that most citizens of the USSR were to some extent involved in the shadow economy networks (Feldbrugge, 1984; Sampson, 1987).

In short, the USSR was not an equal society, although it claimed to be one (Yanowitch, 1977). However, the collapse of the Soviet Union led to a substantial increase in income inequality. To some extent, it resulted from the emergence of new economic opportunities, which were used by individuals for personal enrichment. The legalisation of private property led to growing asset inequality (which was literally absent in the USSR: even the members of the nomenklatura rarely had any sizable ownership and were merely using apartments and villas owned by the party or the government). Growing inequality was also an outcome of the failure of the welfare safety net, which existed in the USSR: the new Russian government was unable and had no desire to fully maintain all the social obligations of the Soviet era (which were to a large extent originally carried out by enterprises, which underwent privatisation and partly went bankrupt; see Juurikkala & Lazareva, 2006). Finally, the way in which privatisation was conducted in Russia resulted in the emergence of a small group controlling the majority of assets, which became the manifestation of the unequal distribution of wealth and income in the new Russian society (Guriev & Rachinsky, 2005). The economic growth of the 2000s did not offset this enormous increase in inequality (Lukiyanova & Oshchepkov, 2012); the renationalisation which Russian industry experienced under Putin also did not lead to a more equal distribution of assets and income but rather resulted in the emergence of the new cohort of Putin-affiliated oligarchs.

Thus, Russia within a very short period of time became a country with very high levels of income inequality. In 2016, according to the World Inequality Report (2016), the top 10% of the income distribution in Russia earned 46% of the total income, which is almost 10 percentage points more than in Europe (but comparable to the US level). While the increase in the inequality levels was generally present in most transition economies (although to a
very different extent; see Bandelj & Mahutga 2010), in Russia, as well as in other countries of post-Soviet Eurasia, it was particularly strong and was not offset by subsequent developments (Bernhard & Jung, 2017; Commander, Tolstopiatenko, & Yemtsov, 1999; Gerber & Hout, 1998; Milanovic, 1998; Remington, 2018). Growing inequality was ultimately disapproved of by the Russian population (Shlapentokh, 1999). In 1999, as Suhrcke (2001) shows, 79% of Russians strongly agreed that the inequality in their country was too large vs. about 30% in Germany, or 60% in France. The fact that Russian society still perceives that the social obligations of the state are fulfilled to an insufficient extent became clearly visible in 2018, when the government announced an increase of the retirement age. Not only did about 90% of Russians have a negative attitude to this measure, but also the pension reform appears to be one of the reasons for the unprecedented weak performance of the ruling party United Russia at the regional elections in September 2018.

It seems compelling to claim that the negative attitude of Russians to the income inequality can also be attributed to the Soviet legacies. On the one hand, communist propaganda could have led to a stronger rejection of inequality altogether; on the other hand, the idealised memory of the Soviet Union provides Russians with a reference point for the evaluation of the contemporary inequality, which makes the latter appear as excessively high (Kasamara & Sorokina, 2015). Indeed, Pop-Eleches and Tucker (2017) show that communist attitudinal legacies are associated with greater demand for a welfare state; similar conclusions are reached by Alesina and Fuchs-Schündeln (2007), Blanchflower and Freeman (1997), Habibov (2013), Kreidl (2000), and Mueller and Clarke (1998), although Gijsberts (2002), Kelley and Zagorski (2004), and Medgyesi (2013) argue that there was some convergence in this respect between former socialist and Western European countries. At the same time, preferences for redistribution are amplified by the experience of corruption Russians make in their everyday life (Domonkos, 2016). Contemporary economic turbulences and economic development also affect demand for redistribution, as does the low level of perceived opportunities for social mobility (Munro, 2017; Ravallion & Lokshin, 2000). According to Brosig-Koch, Helbach, Ockenfels, and Weimann (2011), communist legacies are associated with lower solidarity: this, in turn, should increase inequality rather than reduce it.

Income inequality in Russia varies a lot across sub-national regions (Denisova, 2012; Kolenikov & Shorrocks, 2005; Kufenko, 2014; Remington, 2011; Yemtsov, 2005). This variation is driven by numerous factors. To start with, it can reflect the patterns of economic growth in different parts of the country (which have shown a lot of variation as well) and the economic structure of the regions (e.g. predominant industries, age of the population, extent to which state-owned assets are present in the region etc.). It can also be an outcome of the regional economic policy: both general (e.g. measures supporting economic performance, access to public services etc.) and specific measures directed against inequality. In the 1990s, there were examples of regions in Russia which engaged in widespread redistribution of income, partly to boost support for the regional governors. In the 2000s, with the declining fiscal autonomy of the Russian regions, the importance of this redistribution diminished. However, until well into the second half of the 2000s, there were still regions in Russia which established large ‘welfare states’ more significant than those operating at the federal level. The question remains, however, as to how far the historical past of the Russian regions affected their contemporary inequality levels. In what follows, the article discusses the hypothetical mechanisms linking the CPSU legacies and inequality in the regions of Russia.
3. CPSU membership: opportunism or ideology?

The key argument of this article, as of many other contributions to the legacy literature, is that the behavioural patterns and social norms, once acquired by the population or by its particular sub-group, are very durable, survive political changes and are reproduced over generations (e.g. Dohmen, Falk, Huffman, & Sunde, 2011). In the post-communist context, as mentioned, there is abundant evidence of this persistence and reproduction of norms: for the Russian case, one of the best-known examples is the concept of a ‘homo sovieticus’ pioneered by Yuri Levada, who argues that the Soviet rule resulted in the development of a set of distinct behavioural traits and values, which outlived the USSR by decades (Gudkov, 2017). However, in the case when we talk about the legacies of the CPSU membership, an important question emerges: which types of norms, values and behavioural traits did the former communist possess, which would form the core of the CPSU legacy?

For the Soviet propaganda, the answer to this question was easy: communists were seen as the most loyal, active and reliable members of the Soviet society, who had accepted the premises of the Soviet ideology to the fullest extent possible and were willing and able to defend it at any cost. However, while in the 1940s or 1960s these ‘ideological communists’ were (at least to some extent) present in the party, since the 1970s, most observers have refused to believe that the CPSU members were particularly ideological. Unger (1981, p. 110), using a collection of interviews with immigrants from the USSR of the Cold War era, concludes that most of them ‘simply regarded party membership as a standard career requirement’. Harris (1986), talking about those who joined the party in the post-World War II period, identifies three main motives for membership: mandatory membership due to the sensitivity of their work (e.g. journalists, high-ranked administrators etc.), search for professional and social advancement, and willingness to improve one’s personal life (e.g. obtain a better flat). Glazov (1988, p. 16) goes as far as to claim that ‘The individual who decides to enter the Party, has to overcome a good number of his idiosyncrasies and sometimes even reflexes of disgust, in order to convince himself that he cannot avoid joining the Party’.

While it was not a problem for a worker to join the party, the representatives of intelligentsia and other educated strata faced restrictions in this respect, and had to pass a number of formal and informal barriers to become party members. At the same time, it was the educated strata which expressed a stronger demand for party membership, since they had more to gain from it in terms of their careers – in the Brezhnev era, intelligentsia, engineers and bureaucrats became the dominant group of CPSU members (Lankina et al., 2016a). Thus, during the Stagnation Era, for a typical individual willing to join the CPSU, party membership was associated with the search for career advancement, but also required a fair amount of adaptation and opportunism, allowing one to pay lip service to an ideology one did not really believe in (as most other representatives of the Soviet educated class; see Furman, 2001; Shlapentokh, 1990). This emulation of ideological activity did not stop with obtaining party membership – on the contrary, communists were required to continue and strengthen it throughout their career. This, along with interaction with other communists, could have nurtured and strengthened the already available inclination towards opportunism and cynicism, producing individuals highly skilled at adjusting to any social and political environment and able to use it to their advantage.
If we interpret the effects of the CPSU legacy as those of opportunism, we face a certain problem. Is it the CPSU which made its members more opportunistic, or was opportunism the necessary prerequisite for joining the CPSU? Our argument is that informal socialisation in the CPSU increased opportunism and willingness to adapt to the existing environment, however, it is difficult to find explicit empirical evidence for this socialisation effect. If we used individual-level data, distinguishing between self-selection into the CPSU and socialisation within the CPSU would be impossible. Here, however, the fact that we use region-level data is an advantage. If we find a significant link between the CPSU legacy and inequality in the region, it would be difficult to believe that there were some regions of Russia where populations were ‘on average’ more prone to opportunism and careerism – it is not clear which mechanism would produce such an effect (note that, as discussed in what follows, we control for the level of social and economic development). Thus, the explanation associated with socialisation within the party ranks becomes more plausible.

4. CPSU legacy and inequality

In order to devise our hypotheses concerning the effect of the CPSU legacy on inequality, we can rely upon two types of reasoning. The first argument is about the preferences for redistribution. In this case, the mechanism we assume is the following: first, the CPSU members have a stronger inclination to support more redistribution; and second, because of the dominant role of the CPSU members in the society and their broad network of connections, their values spread throughout the regional population and survived for a prolonged period of time (on the value diffusion see Bisin & Verdier, 2005).

Equality is, as mentioned, probably one of the core aspects of the socialist ideology, and therefore ideologically indoctrinated CPSU members could be more likely to embrace it. This, in turn, should lead to two possible outcomes: either the elites should perform more systematic redistribution in favour of the poor strata of the population because of their egalitarian preferences, or the voters with strong inequality aversion should force the hand of regional governors to make them implement broader redistributive policies. In both cases, the CPSU legacy should be associated with, first, lower inequality, and second, more intensive redistribution through governmental policy (e.g. larger social spending). As a result, we suggest the following hypothesis to guide our analysis.

H1: Larger CPSU membership rate in the past should lead to lower inequality in the region because of more intensive redistribution/larger social spending.

While this argument appears to be plausible, if one accepts the picture of the ideologically indoctrinated CPSU members, there are still two important caveats to be made. First, how autonomous are Russian regional governments in terms of their redistributive policies? Under Putin, their fiscal capacity and autonomy diminished greatly, and it is not necessarily the case that they would be able to engage in redistribution even if they wanted to. Second, if the causal mechanism is through the preferences of the population, why should the regional governors take them into account while making policy decisions? After Putin abolished direct gubernatorial elections by the end of 2004, there have been almost no incentives for governors to care
about anything but maximising votes for the federal candidates during federal elections in their region (Reuter & Robertson, 2012). Inequality should matter for the governors only in the case when it could either affect electoral outcomes (which the Russian governors are very skilled at manipulating through various forms of electoral fraud or other interventions in the electoral process) or lead to public protests, which have been infrequent in Russia so far. Note that our article focuses on explaining the levels of income inequality rather than attitudes towards inequality (on the latter see, e.g. Borisova, Govorun, Ivanov, & Levina, 2018), and the attitudes can affect the actual levels of inequality only through specific measures aimed at the redistribution of income in society (e.g. governmental redistributive policies).

More importantly, it is possible to formulate the reverse hypothesis to H1 as well. A substantial literature shows that the CPSU members were actually very successful in the new economic systems after the onset of transition, earning substantially higher wages than those who never belonged to the party (Geishecker & Haisken-DeNew, 2004; Gerber, 2000; Rona-Tas & Guseva, 2001). The existing research does not clearly attribute this success to the advantages people could have received as members of the CPSU or to the selection effect (i.e. that members of the CPSU were fundamentally different than those who never joined the party, and thus turned out to be more successful in the market economy as well). For us, however, the important fact is that the economic success of former CPSU members could have made them likely to support redistribution. The fact that legacies of communism lead to more substantial demand for redistribution does not necessarily mean that it is the CPSU members who express this demand: precisely this group could, because of their adaptation to the post-transition environment, be less interested in it. As a result, we suggest the following hypothesis:

H2: Larger CPSU membership rate in the past should lead to higher inequality of the region because more successful CPSU members would have little support for redistribution.

There is, however, a different way of thinking about the effect of the CPSU legacy on regional inequality, which is not related to attitudes towards inequality and their effect on political behaviour. This set of arguments is more likely to hold if one accepts the picture of the former CPSU members as opportunistic career-seekers. It is possible that the inequality in regions with large CPSU legacies goes down because former CPSU members are able to create additional redistribution mechanisms beyond the domain of the public policy (possibly, even without intending to do so). In particular, the mechanism we conjecture is based on the following premise: a higher share of CPSU members in the region could result in the emergence of more extensive informal networks post-transition, which would then function as a redistribution device.

The fact that transition, instead of supporting the emergence of competitive market economies, encouraged the development of informal networks is well-established in the literature (Stark, 1990). Ledeneva (2009), Schrader (2004) and Wedel (2003), among others, highlight the importance of these networks for the post-socialist social and economic development. The CPSU members, given their high position in the Soviet society, could have had extensive access to social networks during that era, being able to maintain and to preserve such access after transition. Alternatively, they could have
obtained the necessary skills for the development of contacts and ties, which were so essential for a career in the USSR; then they would be able to continue using these skills after the market transition started, thus creating new networks in the highly uncertain environment of the new market economy. These informal social networks, in turn, could have reduced inequality through a variety of channels. To start with, networks based on personal connections and informal ties could have served as an insurance device for those who happened to experience economic hardship. In this case, they would receive support from other participants of these networks (in the form of monetary or in-kind payments or assistance in finding jobs). Furthermore, post-Soviet entrepreneurship, given the extreme uncertainty of the external environment, lawlessness and poor protection of property rights by the state, heavily relied on informal connections for obtaining capital and searching for business partners. More extensive networks could have allowed more individuals access to these informal contacts and thus the ability to be more successful in the new environment. The argument that, for example, old Komsomol networks were decisive for early business success in post-communist Russia is very widespread in the literature and in the public discussions.

Our argument is specific to the post-Soviet countries (with a very particular role of social networks during the transition and the possible role of the former CPSU members in the formation of these networks). However, there is a somewhat analogous argument present in the literature on corruption and inequality. Generally speaking, there are numerous studies, which show that corruption increases income inequality (Gupta, Davoodi, & Alonso-Terme, 2002; Gyimah-Brempong & Gyimah-Brempong, 2006; Li, Xu, & Zou, 2000; Sánchez & Goda, 2017). Some studies, however, argue that under certain circumstances the relationship is reversed: corruption can actually decrease inequality. This effect was observed, in particular, in some Latin American countries (Andres & Ramlogan-Dobson, 2011; Dobson & Ramlogan-Dobson, 2010, 2012). The reason for this apparently paradoxical relationship is the existence of informal markets. In highly regulated economies, corruption allows people access to an alternative informal economic sector, where they could find employment and income opportunities absent in the formal sector – if corruption did not exist, the informal sector would be much smaller, as the bureaucrats would be more diligent in implementing their jobs. As a result, fewer people would have access to informal employment and revenue. One could develop a similar argument for the case we investigate in our article: essentially, one assumes that there exists an alternative redistribution mechanism (informal markets in the case of the Latin American countries; networks created by former CPSU members in Russia), which serves as a substitute for, e.g. governmental redistribution or reallocation of income through free market competition and therefore reduces inequality.

Of course, redistribution through networks is only a second-best mechanism for reducing inequality. In an open access order with competitive markets and ample opportunities for social mobility, there would be more options for reducing inequality than in a society based on informal networks. However, comparing different societies with limited competition, inefficient bureaucracy, high corruption, low vertical social mobility etc., we should find societies where the redistribution through networks is possibly more equal than those where even this channel is absent and large portions of the population are excluded from the rent-generation process. Based on this logic, we develop a further hypothesis linking the CPSU legacy and inequality:
H3: Larger CPSU membership rate in the past should lead to lower inequality of the region because of the proliferation of informal networks providing a larger group of people with access to resources and serving as informal redistribution devices.

Note that this hypothesis implies the same direction of effect as H1, but a different mechanism: not the ideological beliefs, but the practical experience of informal networks serving as tools for redistribution. The subsequent empirical analysis therefore should attempt to explicitly isolate the mechanism in question, should we find evidence of negative correlation of inequality and CPSU legacy.

5. Data and model

The article’s dataset covers 71 regions of the Russian Federation. Our main dependent variable is the level of inequality in individual regions in the year 2012. We use the year 2012 for our analysis because, on the one hand, it is sufficiently distant from the dissolution of the Soviet Union (to identify whether the legacies indeed persist); thus, it follows not only the period of economic decline of the 1990s, but also the period of unprecedented economic growth in 2000–2008 and the emergence (and the recovery from) the global economic crisis in 2009–2011. In 2013, Russia appears to have already entered the long-term stagnation it finds itself in as of today; furthermore, in 2014 the political conflict with the Western countries affected all aspects of Russian foreign and domestic policy. We want to investigate a period preceding this era of instability; however, if we replicate our results for any single year in the period of 2010–2016, we confirm the findings of the article reported below.

We measure the income inequality by looking at the regional Gini coefficients. Figure 1 reports the evolution of the value of the Gini coefficient for the Russian Federation since 1995 according to the official statistics (Rosstat) data. One can see that since the early 2000s, the coefficient systematically exceeds 0.4, peaking at about 2007–2008 and then slightly going down. The region-level Gini coefficients exhibit strong variation (see Figure 2). By far the highest Gini coefficients are observed in Moscow, St. Petersburg and the oil-rich Tyumen Oblast in Western Siberia, with the values exceeding 0.44 (according to the World Bank data, the City of Moscow has a level of inequality comparable to Costa Rica and Paraguay, and Tyumen is comparable to Peru). The lowest Gini coefficient in the Tver Oblast (in Central Russia) is equal to 0.366, which is roughly equivalent to the level of Greece. We have to acknowledge that the Gini coefficient is an imperfect proxy for measuring inequality. First, the official data may fail to capture revenue from the informal sector, which could be substantial. Second, it captures only income inequality, while other forms of inequality (for example, inequality in the distribution of assets) may also be highly important. Still, the variable allows us to investigate at least an aspect of the problem of inequality in Russia, and is the only one systematically available at the sub-national level.

In our empirical analysis, we regress the Gini coefficient on the CPSU legacy proxy (the former CPSU membership rate), as well as a number of controls. A fundamental problem associated with obtaining data for the CPSU membership rate is that the Soviet statistics did not publish any official region-level data on this topic. Following the empirical strategy of previous research on CPSU membership (e.g. Libman & Obydenkova, 2013, 2015), we extract the data on the CPSU membership rate in the Russian regions of the Soviet era from the
publications of the CPSU congresses. The congress (съезд) was the most important decision-making body in the CPSU, which assembled regularly (during the Brezhnev era, every five years). Each regional party organisation sent a delegation to the Congress, with the size proportional to the size of the regional party organisation itself. Since the size of each
delegation is published in the Congress minutes (which include a full list of all the delegates), we can use this information to approximately infer how large the regional party organisation was. The information is available for all Soviet regions, which coincided with the modern Russian regions with three important exceptions.

- First, a number of provinces of the modern Russian Federation were part of other regions (and hence, of other party organisations) in the Soviet era (the Republics of Adygeia, Altai, Karachaevo-Cherkessia and Khakassia, Evreyskaia Autonomous Oblast, Chukotka, Khanty-Mansi, Yamalo-Nenets and Nenets Autonomous Okrugs). We exclude all these regions from the initial analysis, but add them later in the robustness checks.

- Second, while in modern Russia the City of St. Petersburg is separated from the surrounding Leningrad Oblast, in the USSR they formed a single region (with a single party organisation). Since there is no accurate way of attributing the membership in the CPSU to either city or oblast, we exclude these regions from the analysis, again, dealing with it in a robustness check.

- Third, yet another Soviet region, Checheno-Ingushetia, was split in two (Chechnya and Ingushetia) after the collapse of the USSR. Here, because of a similar level of socioeconomic development and the fact that Chechens and Ingushs occupied a similar position in the informal ethnic hierarchy of the Soviet population, we can assume that the CPSU membership was similar in Chechnya and in the Ingushetia parts. We include Ingushetia in our analysis, assuming that the CPSU membership share in this republic was the same as in the entire Checheno-Ingushetia; Chechnya is dropped from our analysis altogether due to the lack of reliable data for its contemporary development. In a robustness check, we exclude Ingushetia as well.

To estimate the size of the CPSU organisation in a region, we use the data from the 1976 Congress – this Congress took place amidst the Brezhnev rule era and was firmly within the period of Stagnation, when Soviet practices were perceived as particularly durable (Yurchak, 2013) and thus likely to generate robust behavioural patterns and hence cause legacy effects. We use data from other time periods as well to validate our findings.

The regressions of the article include a large set of control variables. We are aware that many of these variables (listed below) could be correlated with each other, and thus include them in the regressions in different combinations, to avoid multicollinearity. We furthermore acknowledge that for many of the variables reverse causality is highly plausible, and thus we could face the problem of endogenous controls. However, if we drop all covariates except education and urbanisation (which in the Russian context are still strongly influenced by the Soviet past rather than by contemporary policy choices and hence are unlikely to be subject to the reverse causality problem), the effect of the CPSU legacy we report in the next section remains robust.

Specifically, we use the following control variables.\textsuperscript{12} To start with, we control for the level and dynamics of the regional economic development. We capture it using two variables: income per capita (in the baseline specification reported in Table 1) and the average GDP growth rate\textsuperscript{13} (substituting income per capita by this variable does not cause any changes in our results; the regression output is available on request). Income per capita
<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSU membership rate, 1976</td>
<td>-0.004</td>
<td>-0.005</td>
<td>-0.006</td>
<td>-0.005</td>
<td>-0.005</td>
<td>-0.005</td>
<td>-0.006</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>(0.002)**</td>
<td>(0.002)***</td>
<td>(0.002)***</td>
<td>(0.001)***</td>
<td>(0.002)**</td>
<td>(0.002)***</td>
<td>(0.002)***</td>
<td>(0.002)**</td>
</tr>
<tr>
<td>Income per capita, 2012</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
<td>0.002</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>(0.001)***</td>
<td>(0.000)***</td>
<td>(0.000)***</td>
<td>(0.001)***</td>
<td>(0.000)***</td>
<td>(0.000)***</td>
<td>(0.000)***</td>
<td>(0.000)***</td>
</tr>
<tr>
<td>Urbanisation, 2012</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Education, 2010</td>
<td>0.078</td>
<td>0.062</td>
<td>0.075</td>
<td>-0.030</td>
<td>0.010</td>
<td>0.041</td>
<td>0.063</td>
<td>0.058</td>
</tr>
<tr>
<td></td>
<td>(0.063)</td>
<td>(0.055)</td>
<td>(0.057)</td>
<td>(0.049)</td>
<td>(0.060)</td>
<td>(0.052)</td>
<td>(0.048)</td>
<td>(0.058)</td>
</tr>
<tr>
<td>Distance from Moscow</td>
<td>-0.003</td>
<td>-0.002</td>
<td>-0.001</td>
<td>-0.003</td>
<td>-0.003</td>
<td>-0.001</td>
<td>-0.002</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.001)***</td>
<td>(0.001)***</td>
<td>(0.001)***</td>
<td>(0.001)***</td>
<td>(0.001)***</td>
<td>(0.001)***</td>
<td>(0.001)***</td>
<td></td>
</tr>
<tr>
<td>Unemployment, 2012</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.000</td>
<td></td>
</tr>
<tr>
<td>Share of entrepreneurial income, 2012</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of income from wages, 2012</td>
<td>-0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of income from social transfers, 2012</td>
<td>-0.002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of income from property, 2012</td>
<td>0.005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of employment in state-owned companies, 2012</td>
<td>0.016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of employment in NGOs, 2012</td>
<td>-0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of employment in foreign companies, 2012</td>
<td>0.002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of mining in GDP, 2012</td>
<td>0.363</td>
<td>0.373</td>
<td>0.383</td>
<td>0.440</td>
<td>0.401</td>
<td>0.358</td>
<td>0.421</td>
<td>0.374</td>
</tr>
<tr>
<td></td>
<td>(0.017)***</td>
<td>(0.014)***</td>
<td>(0.016)***</td>
<td>(0.034)***</td>
<td>(0.023)***</td>
<td>(0.014)***</td>
<td>(0.017)***</td>
<td>(0.015)***</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.57</td>
<td>0.64</td>
<td>0.65</td>
<td>0.76</td>
<td>0.66</td>
<td>0.66</td>
<td>0.72</td>
<td>0.64</td>
</tr>
<tr>
<td>$N$</td>
<td>71</td>
<td>71</td>
<td>71</td>
<td>71</td>
<td>71</td>
<td>71</td>
<td>71</td>
<td>71</td>
</tr>
</tbody>
</table>

Note: Robust Huber-Wight standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. 
can first be seen as a proxy for the long-term regional development; GDP growth rates capture the short-term growth variation experienced by the Russian regions in the 2000s. Both long-term and short-term factors could matter for the level of inequality, and there exists a large literature studying how inequality and growth (short-term and long-term) are related to each other (e.g. Bourguignon, 2004). In addition, we control for urbanisation: in more urban localities there may be ample opportunities for employment and business activity, while the Russian countryside could literally offer no opportunities for raising one’s income (Zubarevich, 2013). Following empirical studies on the regions of Russia (e.g. Lankina, Libman, & Obydenkova, 2016b), we also control for the distance to Moscow (regions proximate to the capital could, for example, supply labour force to the Moscow labour market, where much larger earning opportunities exist; furthermore, individual groups of the population in these regions could directly or indirectly benefit from access to the wealth accumulated in the capital).

We also control for the regional share of unemployment, which is an obvious correlate of inequality, and for the level of education in the region (captured by the share of the regional population with a university degree according to the Census data in 2010): Gregorio and Lee (2002) suggest that education is likely to reduce income inequality levels. Furthermore, we control for the share of the mining industry: while the effect of the resource curse on income inequality could be ambiguous (Fum & Hodler, 2010), at the very least the mining sector could create an additional source of revenue for some groups of the regional population. In addition to that, we control for the main sources of income of the regional population as indicated in the official statistics. Rosstat, for instance, reports data on the share of income that the regional population receives from entrepreneurial activity; from wages; from social transfers from the government; and from property (e.g. real estate, securities etc.). It appears to be plausible to expect that a larger share of property and, possibly, entrepreneurial income should lead to higher inequality, as it is likely to be more unequally distributed among the population. Large revenue from transfers would typically reduce inequality, as this source of income is specifically designed to target otherwise poor groups in the society.

We also control for the share of employment in companies owned by different types of actors: government (including federal, regional and municipal government); NGOs and religious organisations; and foreign companies (the residual category is private property). The public sector could potentially have smaller variation in salaries and wages (although in Russia high-ranked managers of influential state-owned companies are notorious for having very high wages). Furthermore, the public sector is more likely to be used to maintain excess employment for political purposes (Shleifer & Vishny, 1994) – but in Russia it is not unusual for private companies to coordinate their decisions with the government if they plan sufficiently large layoffs of their personnel. Finally, we also control for two indicators of the extent to which the population of the region is at retirement age: share of pensioners and the ratio of the number of pensioners to the number of employed individuals. Regions with more people of retirement age could also exhibit a lower level of inequality both because in this case pensions (paid by the government in Russia) are more important as a source of income for the regional population (and there is smaller variation in the pensions assigned to individuals than in other sources of income) and because the salaries of the pensioners (who still continue to work, as is permitted by Russian law) could be more equitable. Unlike the
developed world, Russian pensioners rarely have a large income from property or savings, which would exacerbate income inequality.

6. Results

Table 1 reports the main results of our estimates. It contains eight specifications of the regression. Model (1) includes only the baseline controls (income, education and urbanisation). Model (2) also adds distance from Moscow. Model (3) controls for unemployment. Model (4) controls for the structure of income of the regional population. Models (5) and (6) include two proxies of the share of people at retirement age as presented above. Model (7) controls for the employment structure by form of ownership. Model (8) controls for the share of mining in the regional GDP.

Our results remain robust throughout all models. We find that the CPSU membership rate in the 1970s is negatively and significantly correlated with the contemporary Gini coefficient. In particular, an increase of the CPSU share by 1% is associated with a decline of the Gini coefficient (measured between 0 and 1) by 0.004–0.006 (or 0.4–0.6% for the Gini coefficient measured between 0 and 100%). To show the economic significance of these effects, we use the counterfactual analysis. For example, if in the Tver region (which had a very high CPSU membership rate in the past) the CPSU membership rate were twice as small as it was in the 1970s (4.4% instead of about 8.8%), its Gini coefficient would have declined from 0.366 to 0.384 (for the beta coefficient of specification (1), which is the difference between Greece and Macedonia or Bhutan).

We subject this result to a battery of robustness checks, which fully support our findings. In particular, the following robustness checks were used in our study:

- We control for two further characteristics of the regional economy and society, which could matter for the levels of inequality: sub-national political regimes (see Remington, 2011) and corruption. Russian regions are very different in terms of how their politics are organised: some may have more pluralist political systems, while in others the incumbents are in full control of the sub-national politics (Obydenkova, 2008, 2012). We use the typical proxy for the sub-national institutional variation applied in the studies of Russia – the Carnegie Center index of sub-national democracy (we use the data for 2006–2010). Similarly, in 2010, the Public Opinion Foundation (FOM, one of the largest Russian polling centres) conducted a large survey, which was used to develop an index of corruption as experienced by Russian households: we control for this proxy as well.
- We check whether the correlation we observe is driven by the legacy of the CPSU or by the contemporary popularity of the Communist Party of the Russian Federation (CPRF), the self-proclaimed successor to the CPSU, which also endorses egalitarian policies. For this purpose, we control for two variables: the share of votes CPRF received in 1999 (the last relatively open elections before the Putin era) and a dummy for the ‘red belt’ regions, i.e. territories of Russia which in the 1990s systematically voted for communists. We have to point out that in the 2000s CPRF became much more complicit with the regime, and, as Menyashev (2011) shows, the regions which voted for the CPRF in the past became loyal supporters of the
pro-governmental ‘party of power’, United Russia. Still, there may be some elements of stronger egalitarian beliefs still present in these regions.

- We substitute the share of the CPSU in the regional population by the share of the CPSU in the regional adult population (since only adults were admitted to the party).
- We experiment with the composition of the sample in the following way. We first add the regions, which were excluded in the previous analysis because of the lack of data on the CPSU membership, using the following convention: the CPSU membership rate for the ‘entire’ region, which was later split in two (Leningrad Oblast), is assumed to be the same for both parts of the region; the CPSU membership rate in the ‘smaller’ region (e.g. Khakassia), which split from the larger one, is assumed to be the same as in the large one.\(^{17}\) We also run a series of specifications, where we drop Ingushetia (given the problems we had with measuring the CPSU membership rate there), Moscow City and Moscow Oblast (as particularly developed regions, which could differ from the rest of Russia in terms of inequality), as well as estimate robust regressions (\textit{rreg} routine in Stata) to check for the impact of outliers.
- We control for the age structure of the population (share of elderly and of young people as defined in the Russian statistics), which can affect the inequality aversion, but also access of the regional population to various employment opportunities.
- We apply the fractional logit model instead of OLS to estimate our baseline regression. Fractional logit models were developed to deal with fractional response variable (i.e. share of income, of the budgetary revenue or of an amount of time spent for a certain purpose or activity), which by definition are bound between 0 and 100% (Papke & Wooldridge, 1996). The Gini coefficient, similarly, is bound between 0 and 1, which could limit the applicability of the OLS (specifically, the OLS regressions could generate predicted values of the Gini coefficient exceeding 1 or smaller than 0). The fractional logit model solves this problem.
- To make sure our results are not driven by a particular year in which the CPSU membership rate was measured (1976), we use data from several post-World War II party congresses prior to 1976 to construct alternative proxies of the CPSU membership rate (1956, 1969, 1961 and 1966), and confirm our result using each of these proxies.
- We control for the employment structure of the Russian regions (share of employed in different sectors) to eliminate the possibility that our results are driven by the prevalence of particular sectors in the regional economy or by the importance of the middle class, which varies across regions of Russia as well.
- We control for the size of the bureaucracy in 2012 (number of bureaucrats employed by the regional and the federal governments working in the region) and for the growth of the size of bureaucracy in 2000–2012 to account for the possible expansion of the group of the population better able to participate in state-led rent-generation.

As a final test, we add a battery of the Soviet-era variables from the 1970s, measuring the development of the region at that moment. This is done to find out whether the correlation between the CPSU legacy and the inequality holds \textit{ceteris paribus} other proxies for developmental legacies of the Soviet era. Soviet developmental policies could have left an imprint on the social and economic situation in the regions and
thus matter for the contemporary inequality levels. In particular, we control for the following variables:

- urbanisation, territory and population of the region in 1977 (which could capture the extent of development and the importance of the region in the eyes of the centre);
- retail trade per capita, housing construction per capita, number of doctors per capita (all 1976) and infant mortality rate (1970) (which could capture the level of regional development – income data are not available for the 1970s);
- educational structure of the workforce and of the population (the share of people with a university degree and with a vocational training degree from the 1979 census – again, a reasonable proxy for modernisation);
- the share of students of various educational establishments (universities, vocational training, evening schools and professional-technical schools) in the total population in 1976/77 (as an alternative proxy for the development of the educational infrastructure of the region); and
- the 1985 monthly income data published by the Russian official statistics as a further covariate (older data are not available).

Finally, we control for two variables, which are unrelated to modernisation or development, but could still affect both preferences of the regional population (including preferences for redistribution) and CPSU membership. First, we control for a dummy for regions located at the former Soviet external borders (Obydenkova and Libman (2015) argue that these regions showed particularly high CPSU membership rate in the past). Second, we create a dummy for ethnic republics, populated by ethnicities subject to deportation and repression under Stalin – the experience of such a deportation could provide a powerful historical experience, constituting a legacy effect in its own right (Lupu & Peisakhin, 2017), but also can reduce CPSU membership even after the end of Stalin’s era. None of these controls change our results.

Table 2 allows us to understand the logic underlying the change in the Gini coefficient more precisely. It estimates the link between the CPSU legacy and the shares of individual income quintiles in the total income. Rosstat, in its official publications, separates the population of each region into five income quintiles, and reports the share of the overall income captured by each of these quintiles. The poorest quintile earns on average 5.7% of the total income; the average shares of other quintiles are, respectively, 10.4%, 15.4%, 22.7% and 45.8%. This means that the top 20% richest inhabitants of a region receive on average 45.8% of the overall income of the region, while the poorest 20% receive only 5.7% of the overall income. As one can see from Table 2, in regions with a higher CPSU membership rate in the 1970s, poorer quintiles earn a larger share of the overall income. The beta coefficients of the CPSU membership rate reported in the first three columns of Table 2 are roughly of the same size. This means that an increase of the CPSU membership rate in the 1970s by 1% is associated with an increase in the share of the overall income received by each of the three poorer quintiles by about 0.1 percentage points. At the same time, an increase of the CPSU membership rate in the 1970s by 1% is associated with a decrease of the share of the overall income received by the richest quintile by 0.3 percentage points.
Essentially, it means the following. In regions where the CPSU membership rate was larger, the richest quintile of its population captures a smaller share of the contemporary overall income. This portion of income, which is not attributed to the richest quintile, is roughly equally divided among the three poorer quintiles. That is, in a hypothetical region, where the overall income of the population was equal to 100 units, an increase of the CPSU membership rate in the past by 10% would be associated with a decline of the income of the richest 20% of the population by three units and an increase of the income of each of the three poorer 20% groups by one unit.

The analysis therefore provides evidence in favour of hypotheses H1 and H3 and rejects hypothesis H2. However, we still need to understand which mechanism potentially drives the association between the CPSU legacy and inequality: either the redistribution policy of the regional government or the emergence of informal networks serving as redistribution devices. While we cannot provide a direct empirical test of the second mechanism (due to the lack of data on informal networks), we can test the first mechanism: if rejected, it makes the second mechanism associated with hypothesis H3 more plausible. In a nutshell, we confront two different arguments explaining the CPSU legacies: the ideological indoctrination vs. the opportunistic adaptation. The following section will offer a statistical test of H1.

7. Social networks or public policies?

This section analyses the effects of the CPSU legacy on the social policy of the Russian regions. In the Russian case, social policy expenditures are funded by both federal and regional budgets and non-budgetary institutions (like the pension fund), with the bulk of social expenditures (e.g. pensions) covered by federal institutions. The regional governments enjoy only limited autonomy in their policymaking and have to follow either formal standards set by the federal administration (determining who has access to social benefits) or the informal guidelines and requirements equally determined by the centre. Still, the structure and size of the social expenditures varies across the territory of the Russian Federation, and thus it is reasonable to look at whether there is a correlation between these social expenditures and the CPSU legacy.

We use three proxies of social expenditures as our dependent variables. The first is what we designate ‘social expenditures in the narrow sense’ (sotsial’naya politika): they
include various forms of social assistance covered by the regional budgets: financial support to individual vulnerable groups of the population (for example, families with a large number of children, orphans, individual groups of pensioners, teachers and doctors working in rural areas, the elderly and small babies etc.). Assistance can be provided in kind or in a monetary form, as well as in the form of reduction of certain types of mandatory fees (e.g. for housing services). The second indicator is designated ‘social policy’ (sotsial’no-kulturnye meropriyatiya), and it includes, in addition to the social expenditures in the narrow sense, also expenditures for education (mostly primary and secondary schooling) and healthcare: if it is ideology which leads to larger expenditures by regional governments, then most probably this will result in an increase of these expenditures as well. The third indicator includes social policy expenditures and housing expenditures: in Russia, utilities are still subsidised by the regional budgets, and this again is frequently treated as an achievement (or, depending on the ideological preferences, as a costly legacy) of socialism.

We look at both the absolute size of these three expenditure indicators, as well as their share in the total expenditures. For each of the dependent variables, we run two types of regressions: first controlling for the baseline characteristics of the region (education, urbanisation and income), and second also controlling for the total revenue of the regional budget: it goes without saying that regions where governments receive larger budgetary revenue are also able to maintain larger social expenditures. The results are reported in Table 3 and are unequivocal. If we do not control for the total revenues of the regional budget, there is no link between the CPSU legacy and the social expenditures in the region whatsoever. If we control for the total budgetary revenues, we find a marginally significant and positive association between the CPSU legacies and the social expenditures in the narrow sense, but for social expenditures including healthcare and education the association with the CPSU legacy is actually negative. This is a striking result, suggesting that the CPSU legacy does not affect inequality through the regional social policy. It can be related either to the lack of autonomy of the regions in this matter or to the fact that belief in communist values among the former CPSU members was actually not very strong – our results are much more likely to be driven by opportunistic behaviour resulting in the formation of networks than by loyalty to the communist ideology persisting after the fall of the old regime.

8. Conclusion

It only remains to summarise the main conclusions of our study. Our article attempted to find out whether the communist legacies matter for the level of inequality in Russia. We used the variation in the contemporary inequality levels across Russian regions and matched it with the levels of CPSU membership rate in the 1970s. We were able to show a consistent and robust negative correlation between contemporary inequality and the CPSU legacy. Regions where the party membership rate was higher in the 1970s have a significantly lower level of inequality in the post-Soviet era. While one could, intuitively, attribute it to the strong egalitarianism of the communist ideology, our findings do not confirm this: on the contrary, regional social policy is not correlated with the CPSU legacies. We therefore advance an alternative explanation – the ability of the former CPSU members to form networks, which are then used for the redistribution of wealth. Our article has
<table>
<thead>
<tr>
<th>Dep. var.</th>
<th>Expenditures for social policy and housing</th>
<th>Expenditures for social policy</th>
<th>Social expenditures in the narrow sense</th>
<th>Share of expenditures for social policy and housing</th>
<th>Share of expenditures for social policy</th>
<th>Share of social expenditures in the narrow sense</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSU membership rate, 1976</td>
<td>18,620.908</td>
<td>12,521.442</td>
<td>4928.205</td>
<td>−0.004</td>
<td>−0.007</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>(15,158.156)</td>
<td>(11,799.907)</td>
<td>(3562.647)</td>
<td>(0.007)</td>
<td>(0.007)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Income per capita, 2012</td>
<td>7902.819</td>
<td>6032.047</td>
<td>1649.027</td>
<td>−0.003</td>
<td>−0.007</td>
<td>−0.002</td>
</tr>
<tr>
<td></td>
<td>(3771.849)**</td>
<td>(3008.872)**</td>
<td>(882.450)*</td>
<td>(0.002)**</td>
<td>(0.002)**</td>
<td>(0.001)**</td>
</tr>
<tr>
<td>Urbanisation, 2012</td>
<td>−1691.717</td>
<td>−1122.791</td>
<td>−388.740</td>
<td>0.002</td>
<td>0.002</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(1525.025)</td>
<td>(1207.426)</td>
<td>(350.207)</td>
<td>(0.001)**</td>
<td>(0.001)**</td>
<td>(0.000)**</td>
</tr>
<tr>
<td>Education, 2010</td>
<td>1,375,652.111</td>
<td>1,106,855.478</td>
<td>317,049.554</td>
<td>0.068</td>
<td>0.034</td>
<td>−0.075</td>
</tr>
<tr>
<td></td>
<td>(521,361.124)**</td>
<td>(409,238.594)**</td>
<td>(122,412.288)**</td>
<td>(0.156)</td>
<td>(0.224)</td>
<td>(0.105)</td>
</tr>
<tr>
<td>Constant</td>
<td>−426,982.717</td>
<td>−333,937.661</td>
<td>−99,986.890</td>
<td>0.676</td>
<td>0.663</td>
<td>0.144</td>
</tr>
<tr>
<td></td>
<td>(172,562.857)**</td>
<td>(133,199.186)**</td>
<td>(40,393.184)**</td>
<td>(0.043)**</td>
<td>(0.062)**</td>
<td>(0.029)**</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.62</td>
<td>0.61</td>
<td>0.61</td>
<td>0.11</td>
<td>0.31</td>
<td>0.22</td>
</tr>
<tr>
<td>N</td>
<td>71</td>
<td>71</td>
<td>71</td>
<td>71</td>
<td>71</td>
<td>71</td>
</tr>
<tr>
<td>Controlling for budget revenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPSU membership rate, 1976</td>
<td>331.914</td>
<td>−2064.031</td>
<td>670.705</td>
<td>−0.005</td>
<td>−0.012</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>(1164.975)</td>
<td>(1090.114)*</td>
<td>(390.242)**</td>
<td>(0.006)</td>
<td>(0.006)*</td>
<td>(0.002)</td>
</tr>
</tbody>
</table>

Note: Robust Huber-Wight standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Regressions controlling for budget revenue also include all other controls of the main regressions; detailed results are available on request.
therefore provided yet another piece of evidence that historical legacies matter for the contemporary social and political development of Russia. It shows, however, that the effects are sometimes non-trivial and are associated with rather complex mechanisms, which have to be taken into account in the empirical analysis.

As an important limitation of our study, we acknowledge that our results have to be interpreted as conditional correlations rather than causal effects. Since we estimate cross-sectional regressions, we cannot fully exclude the omitted variable bias (although we try to use a broad array of control variables), which would imply that both the CPSU membership rate in the past and the contemporary inequality in the regions of Russia are driven by common unobserved factors. Using panel data for our analysis is problematic because there is no natural match between the temporal evolution of inequality in post-communist Russia and CPSU membership in the Soviet Union: if, say, we looked at inequality levels in 2010 and 2015, which years when the CPSU membership rate was measured should have been linked to each of them in a panel? Thus, the best strategy for solving the endogeneity problem in our analysis was to use instrumental variables. The problem is that for inequality as a dependent variable it is extremely difficult to find an instrument which would satisfy the exclusion restriction. Lankina et al. (2016a), for instance, argue that the CPSU membership rates were driven by two factors: the pre-revolutionary human capital and the ethnic composition of the regions. But, unfortunately, both of these variables could also have an impact on inequality by themselves, which makes them unsuitable as instruments. Still, we believe that even the conditional correlations we report in this article are of interest for students of regional inequality in Russia and of the communist legacies and could motivate subsequent research in this direction.

Notes

2. https://carnegie.ru/commentary/77201
3. Interestingly, for Poland, Grosfeld and Senik (2010) show that the demand for redistribution increases in times of transition: while at the beginning people welcome the departure from the old system, over time they become more willing to support policies leading to the expansion of the welfare state. In Russia, already at the beginning of transition, the attitude towards growing inequality was vastly negative.
4. For a historical anecdote see http://world.lib.ru/m/muradow_j/conform-01.shtml
5. Gokmen and Kofanov (forthcoming) suggest that poor incentives for sub-national governors can be seen as part of a long-lasting historical legacy present since the pre-revolutionary era.
6. In recent years, Russia has experienced a growth in labour protests though (https://www.rbc.ru/politics/07/11/2017/59fc7b0e6a794772d40d85d1), and in 2012, which will be the baseline year for our analysis, the country had just recovered from a major economic crisis. However, these protests do not appear to be threatening for the stability of the regime to the extent that the governors should become immensely concerned with them. On protests in Russian regions see also Lankina (2015) and Lankina and Voznaya (2015).
7. Of course, in this case one has to be cautious regarding the possible mechanisms of the horizontal value diffusion from the CPSU members across the society: it is not clear why the less successful would emulate the anti-redistribution preferences of the more successful.
8. Backhaus (2008), for the case of the former German Democratic Republic, actually suggests that former communists created vast informal business networks after the collapse of the
communist regime. In Russia, where the social and political environment towards former party members was even less hostile, they did have even stronger chances for developing these networks.


11. Note that for many countries data on income distribution are not available.

12. All variables are from the Rosstat data, except education, and, if not indicated otherwise, for the year 2012.

13. We use average real GDP growth rates in the decade preceding the year of our observation, i.e. 2002–2012.

14. Since, according to Kuznets (1955), the link between inequality and growth could be non-linear, we also estimate a regression controlling for the squared growth rates or squared income per capita as well, but our results do not change.


16. Note that the language of counterfactual analysis by construction could give the impression of a causal link between the CPSU membership rate in the past and contemporary inequality. We acknowledge that our analysis reports conditional correlations rather than causal effects; we discuss this issue in greater detail in the concluding section of the article.

17. By performing this analysis, we still exclude three autonomous okrugs (Nenets, Khanty Mansi and Yamalo Nenets) from our sample, as is typically done in research on Russia.

18. Note that some research indicates that informal relations in Russian society became more important in the 2010s as opposed to the second half of the first decade of the 2000s (see Kravtsova, 2012). Our study looks at the effect of the CPSU legacy on the income inequality in the 2010s, i.e. at the period when informality could have gained in importance. This again makes the interpretation of our results through the informal networks more likely.

19. As a caveat, we have to acknowledge that some of the redistribution implemented by the regional governments does not go through the regional budgets and may be associated with informal pseudo-budgetary institutions that private companies ‘voluntarily’ make contributions to, which are outside the official fiscal system and under the control of the governors.

Acknowledgments

The authors are very grateful to the participants of the DGO Economic Section conference in Berlin for helpful comments. In particular, they appreciate the suggestions of Tomila Lankina, Olga Popova and Maria Kravtsova. We appreciate the suggestions of two referees, which helped us a lot in terms of improving the article. We are also grateful to Julia Blaut for her excellent research assistance and her help with data collection. The study has been funded within the framework of the Basic Research Program at the National Research University Higher School of Economics (HSE) and by the Russian Academic Excellence Project ‘5-100’. All mistakes remain our own.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the National Research University Higher School of Economics (RU) [NA].
References


