Historical Legacy of the Communist Party of the Soviet Union and Inequality: Evidence from Post-Communist Regions

Alexander Libman and Anastassia V. Obydenkova

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. Russia became a country with very high levels of income inequality: according to the World Inequality Report (2016), top ten 10% of the income distribution in Russia earned 46% of the total income, which is comparable to the US level. How does the Communist legacy affect the income inequality in the long run? The goal of this paper is to investigate this question looking at the sample of sub-national regions. To be able to single out the causal 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 characterized 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. Our analysis demonstrates the increasing impact of Communist legacy on inequality over time and has important implications for both studies of historical legacies and inequality.

Keywords: income inequality, Communist legacy, regions of Russia

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1. Introduction

The studies on historical legacies, including the legacies of Communism, have blossomed in the last two decades (e.g., Jowitt 1992; Millar 1994; Barany and Volgys 1995; Crawford and Lijphart 1997; Beissinger and Kotkin 2014; Pop-Eleches and Tucker 2017; Obydenkova and Libman 2012; 2019). A number of studies argued the importance of a number national, regional and international factor in development of post-Communist regions, such as for example membership in international organizations, in the European Union or in the Commonwealth of Independent States and other autocracies-led organizations (Arpino and Obydenkova 2020, Lankina et. al. 2016b; Libman and Obydenkova 2013; 2018a; 2018b; Obydenkova and Arpino 2018). On the other hand, a different set of studies looked into historical roots of success and failure in democratic development of post-Communist regions. This includes a vast literature focusing on corruption, intolerance to migrants, the democratic and governance deficits in post-Soviet Eurasia and on the role of various historical legacies explaining these phenomena (Beissinger and Kotkin 2014; Dinino and Orttung 2005; Hellman 1998; Segbers 2001; Trochev 2008; Bunce and Wolchik 2011; Hough 2004; Fish 2005; Obydenkova and Swenden 2013; Wilson 2005; Hale 2005, 2006, 2015; Libman and Obydenkova 2019; 2014; Nazarov and Obydenkova 2020; Allina-Pisano 2007; Abdelal 2010; Pop-Eleches and Tucker 2017) in addition to studies looking into legacies of the Cold World War at the world-wide level (e.g., Ben-Artzi 2016; Obydenkova and Vieira 2020). In the universe of historical legacies, the paper focuses on the specific group of *Communist*, or, following Jowitt (1992), Leninist, legacies—that is, the persistent social and political phenomena that are observed in post-Communist countries in spite of the disappearance of the original political and social environment of the Communist regimes. These legacies are extremely diverse and powerful and thus call for detailed investigation (Beissinger and Kotkin 2014). This paper aspires to contribute to the debates on the impact of 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*.

Communist regimes belonged to a group of particularly intrusive autocracies, with few or no spheres of society left unaffected by the interventions of the regime. This resulted in important behavioral changes, which persisted for decades after the fall of Communism (Pop-Eleches and Tucker 2011, 2013, 2014). The intrusiveness of the regimes, however, frequently generated opposite reactions, as people behaved in a way that reduced their “visibility” to the all-powerful state (Sztompka 1992). In any case, there are good reasons to expect Communist legacies to remain persistent for a long period of time, and the research indeed produced a wide array of findings confirming that Communist countries still differ from the non-Communist world and that generations socialized under Communist rule bear a mark of the political environment in which they grew up (LaPorte and Lussier 2011; Beissinger and Kotkin 2014; Pop-Eleches and Tucker 2017).

The idea of equality is probably one of the cornerstone elements of any version of Communist ideology. Throughout its existence, the Soviet propaganda presented the USSR as a country of complete egalitarianism, where no class or power divisions exist, where income is equally distributed, and where everyone is guaranteed access to social benefits, free education and healthcare, housing and employment. In reality, Soviet Union was certainly not as egalitarian as its propaganda claimed; yet the country still was characterized by much more equal distribution of the (official) income than the Western countries. The collapse of the USSR resulted in an unprecedented increase in the levels of income inequality, which is, in fact, one of the reasons of the negative attitude many Russians share to the contemporary economic system the country has. 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 paper 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 the income inequality is shaped by one particular type of Communist legacies, which has been

shown to matter substantially in the previous empirical research: the legacy of the variation of the membership in the Communist Party of the Soviet Union (CPSU), or the *party saturation*, 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 regions differed a lot in terms of a further characteristic – the extent to which the 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. Did this variation affect the post-transition inequality level? Moreover, the regions exhibited heterogeneity in terms of their subnational political regimes and economic development in the first decade of the 21st century due to different national and international factors (e.g., Lankina et. al 2016b; Obydenkova 2008; 2012; Obydenkova and Swenden 2013).

Previous research has offered a detailed investigation of the processes of autocratic consolidation and of development of informal institutions in Russia linking it to modern institutions and strategy of autocrats (Dinino and Orttung 2005, Frye 2012; Frye et al. 2018; 2014). Other studies, added historical dimension to this discussion, referring to the legacies of pre-revolutionary Russia (so-called Tsarist legacies, e.g., Pop-Eleches 2007; Lankina 2012) as well as Communism (Pop-Eleches and Tucker 2016). The CPSU legacies appear to be an important aspect of the former. Looking closely into the later type of historical legacy, Ivlevs and Hinks (2018) and Obydenkova and Libman (2015) confirm the association between former Communist party membership and corruption, more specifically, willingness to pay bribes. Lankina et. al (2016a) and Libman and Obydenkova (2015) argue that regions of Russia with larger CPSU party membership in the Soviet era developed into more authoritarian polities after

the start of transition and show that CPSU legacy is associated with significantly lower protest activity in the regions.

In a nutshell, all these studies demonstrate the empirical evidence of the 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 behavior of the former CPSU members. In the Stagnation Era, 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 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. Socialization 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 effort of regional autocrats and consolidating their power and paying bribes to public officials when necessary. In short, the legacy of the CPSU is not that of strong ideological commitment – it is the one of opportunism.

Still, 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 paper intends to investigate. We look at the variation of the income inequality among the regions of Russia in the 2010s, and match it with the variation of the CPSU saturation in the 1970s. We do find a statistically significant correlation between these two variables. However, unlike the previous research, this time the influence of 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 higher CPSU saturation in the past are characterized by lower income inequality levels. This effect, however, is unrelated to the public policies of the regional governments. We suggest that the mechanism explaining lower inequality in the regions with strong CPSU legacy is the development of informal networks, which serve as

redistribution devices. More importantly, our analysis demonstrates that this effect does not disappear over time, as Russia moves away from the moment of the collapse of the USSR; in fact, the impact of CPSU membership on decline in inequality is getting stronger over time.

The paper is organized in the following way. The next section provides a number of stylized facts on the development of inequality in Russia after transition, as well as on the differences in income inequality levels across regions. The third section develops the hypotheses linking the CPSU legacy and the inequality in the modern Russia. The fourth section presents our data and the model; the fifth section reports econometric results; and the sixth 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 extent 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 deficit. Still, the existing research shows that the USSR managed to achieve 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 the society throughout the Soviet period fluctuated around 4%, suggesting that the top 1% income earners received only about 4 times higher income than the average. For the top 10%, the share in the total income fluctuated around 25% until the early 1960s, and went down to about 20% after that (Novokmet et al. 2018). 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) justly suggests that the Communist societies reduced inequality as opposed to the levels existing prior to the establishment of Communist rule.

However, even from the point of view of the monetary income, the Soviet society was not fully egalitarian (Bergson 1984), and while the Soviet government attempted to replace monetary incentives with intrinsic motivation, 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 (with Russian Soviet Federative Socialist Republic – the future Russian Federation - being in a relatively more “egalitarian” part of it, see Alexeev and Gaddy 1993). More important, however, was the system of non-material benefits, which all Soviet citizens participated in one form or another. Given the endemic deficit of consumer goods (an inevitable feature of the inability of the planned economy to efficiently acquire and process decentralized information, combined with the focus of the Soviet leadership on the military sector and heavy industry more important for maintaining the international position of power), the fact that an individual earned a particular amount of money did not allow any access to actual goods or services. The latter was organized through two interacting systems, both creating much larger inequalities than the official monetary income distribution. First, Soviet government created a variety of regional, sectoral and individual privileges giving access to certain goods. Second, in addition to this formal mechanism of redistribution, there also existed another important channel: the system of informal networks and shadow economy. “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, though it claimed to be one (Yanowitch 1977). However, the collapse of the Soviet Union led to a substantial increase in the income inequality. To some extent, it resulted from the emergence of new opportunities in the society, which were used by individuals for personal enrichment. The legalization of private property led to the growing asset inequality (which was literally absent in the USSR: even the members of nomenklatura rarely had any sizable ownership and were merely using apartments and villas

owned by the party or the government). To some extent, growing inequality was 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 social obligations of the Soviet era (which, even more, were to a large extent originally carried out by enterprises, which underwent privatization and partly went bankrupt, see Juurikkala and Lazareva 2006). Finally, the way how privatization 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 (Gurieva and Rachinsky 2005). The economic growth of the 2000s did not offset this enormous increase in inequality (Lukyanova and Oshchepkov 2012); the renationalization Russian industry underwent under Putin also did not lead to more equal distribution of assets and income and 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), top ten 10% of the income distribution in Russia earned 46% of the total income, which is almost ten percent points more than in Europe (but comparable to the US level).* While the increase of the inequality levels was generally present in most transition economies (though to a very different extent, see Bandelj and Mahutka 2010), in Russia, as well as in other countries of the post-Soviet Eurasia, it was particularly strong and not offset by subsequent developments (Milanovic 1998; Commander et al. 1999; Gerbert and Hout 1998; Bernhard and Jung 2017). 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 is 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 encompassing pension reform, including an increase of the retirement age. Not only did about 90% of Russian have a

negative attitude to this measure,¹ but also the pension reform appears to be one of the reasons of unprecedented weak performance of the ruling party United Russia at the regional elections in September 2018.²

It seems compelling to claim that the negative attitude of Russians to the income inequality can also be attributed to the Soviet legacies: especially the propaganda presenting the USSR as an equal society confronted with the realities of the extreme income inequality in the post-Socialist Russia. Indeed, Pop-Eleches and Tucker (2017) show that Communist attitudinal legacies are associated with greater demand for welfare state; similar conclusions are reached by Blanchflower and Freeman (1997) and Habibov (2013). Alesina and Fuchs-Schündeln (2007) show greater preference for governmental interventions in the economy in the post-Communist societies (in their case – Eastern Germany). At the same time, preferences for redistribution are amplified by the experience of corruption Russians make in their everyday life: this makes them even less satisfied with the social contract associated with substantial concentration of income in the top groups of the society (cf. Domonkos 2016). Contemporary economic turbulences and economic development also affect demand for redistribution, as does the low level of perceived opportunities for social mobility (Ravallion and Lokshin 2000; Munro 2017).³

On top of that, income inequality in Russia is strikingly different in different regions (Yemtsov 2005; Kolenikov and Shorroks 2005; Remington 2011; Denisova 2012; Kufenko 2014). This variation is driven by numerous factors. To start with, it can reflect the patterns of

¹ https://www.znak.com/2018-07-05/opros_89_rossiyan_negativno_otnosyatsya_k_pensionnoy_reforme

² <https://carnegie.ru/commentary/77201>

³ Interestingly, for Poland, Grosfeld and Senik (2010) show that the demand for redistribution increases in turn 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 the attitude towards growing inequality was vastly negative.

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, however, 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 engage in widespread redistribution of income, partly to boost support of the regional governors. In the 2000s, with the declining fiscal autonomy of the Russian regions, the importance of this redistribution diminished. However, well until 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. One example is Kemerovo in the Western Siberia under the charismatic governor Aman Tuleev (1997-2018). Tuleev forced local enterprises to sign agreements with the regional administration, containing obligations to invest in particular social initiatives of the regional government (e.g., charity to schools and hospitals) or even to maintain certain employment levels to prevent layoffs. Companies, which refused to sign the agreement, were subjected to extreme pressure by the administration.⁴ The government also systematically provides various forms of support (monetary and in-kind) to poor groups of the population: the Russian media frequently referred to this system as “Tuleev socialism”.⁵

The Tuleev case exemplifies the hypothetical link, which could exist between the CPSU legacies and the income redistribution. Tuleev himself, before entering the political life in 1989, has been member of the CPSU for almost twenty years (1968-1991) and was the head of the transportation division of the Kemerovo Oblast Committee of the CPSU in 1985-1988. It stands to reason that his Communist past shaped his preferences regarding redistribution and affected

⁴ <https://meduza.io/feature/2018/04/02/kult-lichnosti-gubernatora>

⁵ <https://www.novayagazeta.ru/articles/2017/08/09/73421-wiki-tuleevskiy-sotsializm>

the establishment of the Tuleev socialism model in Kemerovo. However, other regional governors, who also had experience of the CPSU membership, did not implement similar redistribution policies. Furthermore, preference change is not the only causal mechanism potentially linking the CPSU legacies and the extent of redistribution in Russian regions. The next section will provide a more systematic analysis of the theoretical arguments leading to our key hypotheses.

3. 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 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 survive for a prolonged period of time (on the value diffusion see Bisin and Verdier 2005).

Equality is, as mentioned, probably one of the cores of the Socialist ideology, and therefore ideologically indoctrinated CPSU members should be more likely to embrace it. This, in turn, should lead to two possible outcomes: either the elites should perform more systematic redistribution in favor of the poor because of their egalitarian preferences, or the population with strong inequality aversion should force the hand of regional governors to make them redistribute more. In both cases, the CPSU legacy should be associated with, first, lower inequality, and second, more intensive redistribution (e.g., larger social spending). While this argument appears to be plausible, there are still two important caveats to be made. First, how autonomous Russian regional governments are if they engage in redistribution? As mentioned, 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 we

look at the preferences of the population, why should the regional governors care about them? After Putin abolished direct gubernatorial elections by the end of 2004, there have been almost no incentives for the governors to care about anything but maximizing votes for the federal candidates during federal elections in their region (Reuter and Robertson 2012). Inequality should matter for them only in case it could either massively affect electoral outcomes (which the Russian governors are very skilled at manipulating, e.g., through various forms of election fraud or other interventions in the electoral process) or lead to public protests, which have been infrequent in Russia so far.⁶ Note that this paper focuses on explaining the levels of income inequality rather than attitudes towards inequality: and the latter can affect the former only through specific measures aiming at redistribution of income in the society (e.g., governmental redistributive policies). With these caveats, the following hypothesis can be formulated:

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

It is, however, possible to formulate the reverse hypothesis as well. A substantial literature shows that the CPSU members were actually very successful in the new economic systems, earning substantially higher wages than those, who never belonged to the party (Gerber 2000; Rona-Tas and Guseva 2001; Geishecker and Haisken-DeNew 2004). 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 the members of the CPSU were fundamentally

⁶ In the recent years, Russia does experience a growth in labor protests though (<https://www.rbc.ru/politics/07/11/2017/59fc780e9a794772d40d85d1>), and in 2012, which will be the baseline year for our analysis, the country 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 and Voznaya (2015) and Lankina (2015).

different than those, who have never joined the party, and thus turned out to be more successful after transition). For us, however, the important fact is that economic success of the former CPSU members could make them *less* likely to support redistribution. The existing research does indeed show that the Communist legacy is associated with stronger demand for redistribution, as we have argued in the previous section: this, however, does not necessarily mean that these are the *CPSU members*, who express this demand: precisely this group could, because of the adaptation to post-transition environment, be less interested in it. Of course, in this case one has to be more cautious regarding the possible mechanisms of the horizontal value diffusion from the CPSU members across the society: it is not clear, why less successful would emulate the anti-redistribution preferences of the more successful. Still, the following hypothesis can be formulated as well:

H2: Larger CPSU saturation 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 the regional inequality, which is not related to attitudes and their effect on political behavior. It is possible that the inequality in regions with large CPSU legacies goes down because of the behavior of the CPSU members, potentially creating redistribution mechanisms beyond the public policy. In particular, the mechanism we conjecture is based on the following premise: higher share of CPSU members in the region could result in the emergence of more extensive **informal networks** post-transition, which would function as a redistribution device. The fact that transition, instead of supporting the emergence of competitive market economies, encouraged the development of informal network ties, is well-established in the literature (Stark 1990). Wedel (2003), Schrader (2004) and Ledeneva (2009), among others, highlight the importance of these networks for the post-transition social and economic development.

The CPSU members, given their high position in the pre-transition society, could have more extensive access to social networks, being able to maintain and to preserve it after transition (or, alternatively, they could have obtained the necessary skills for the development of contacts and ties, which were so essential for the career in the USSR). These informal social networks, in turn, could have reduced inequality through a variety of mechanisms. To start with, networks based on personal connections and informal ties could have served as an insurance device for those, who happen to experience economic hardship. In this case, they would receive support from friends and relatives (in form of monetary or in-kind payment or assistance in finding jobs). Furthermore, post-Soviet entrepreneurship, given extreme uncertainty of the external environment, lawlessness and poor protection of property rights by the state, heavily relied on informal connections between people. More extensive networks could have allowed more individuals access to these informal contacts and thus ability to be more successful in the new environment. 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.⁷ CPSU members could have an advantage not only in terms of networks they already have access to, but also in terms of their capacity to establish networks – a skill they acquired during the Soviet era. Then in the uncertain environment of transition they would be more successful in creating networks and including larger number of partners in these networks than other individuals.

⁷ There is an interesting overlap between this argument and the one we presented in the previous part of this section: ideologically compelled high inequality aversion could make former Communists more willing to establish networks aiming at informal insurance and redistribution. In this case, Communists would use their networking to achieve their ideological goals.

Our argument is specific for 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. Fundamentally, there are numerous studies, which show that corruption increases income inequality (Li et al. 2000; Gupta et al. 2002; Gyimah-Brempong and Gyimah-Brempong 2006; Sanchez and Goda 2017). Some studies, however, argue that in some circumstances the relation is reversed: corruption can actually *decrease* inequality, particularly in Latin America (Dobson and Ramlogan-Dobson 2010, 2012; Andres and Ramlogan-Dobson 2011). The reason for this apparently paradoxical relation 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, they would fail to access this sector, since the bureaucrats would be much more diligent in implementing their jobs. One could develop a similar argument: one assumes that there exists an alternative redistribution mechanism (informal markets in 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 other open channels, which would reduce income inequality.

Importantly, 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 the societies where the redistribution through networks is possible to be 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. 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. We will, in fact, conduct this analysis in what follows.

H3: Larger CPSU saturation in the past should lead to lower inequality of the region because of the proliferation of informal networks providing larger group of people access to resources and serving as informal redistribution devices.

4. Data and model

Our main dependent variable in this paper is the level of inequality in Russian regions in the year 2012. We use this year for our analysis because, on the one hand, it is sufficiently distant from the dissolution of the Soviet Union (to identify that 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, we also use different time periods as a robustness check and essentially confirm our findings.

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 Rosstat data. One can see that since early 2000s, the coefficient systematically exceeds 0.4, peaking at about 2007-2008 and then slightly going down. The

region-level Gini coefficient exhibit strong variation (see Figure 2). The by far highest Gini coefficient is observed in Moscow, St. Petersburg, and the oil-rich Tyumen, with the value exceeding 0.44 (according to the World Bank data,⁸ the City of Moscow has a level of inequality comparable to Costa Rica and Paraguay (one of the countries with the highest level of inequality in the world according to the Gini coefficient), and Tyumen to Peru).⁹ The lowest Gini coefficient in the Tver Oblast (by Moscow) is equal to 0.366, which is roughly equivalent to the level of Greece. Most certainly, we have to acknowledge that the Gini coefficient may be seen as an imperfect proxy for measuring inequality. First, the official data may fail to capture revenue from informal sector, which could be substantial. Second, it is a proxy for income inequality, while other forms of inequality (for example, inequality in the distribution of assets) may be also highly important. Still, the variable allows us to investigate at least an aspect of the problem, and is the only one systematically available at the sub-national level for Russia.

In our empirical analysis, we regress the Gini coefficient on the CPSU legacy proxy (the CPSU saturation rate), as well as a number of controls. A fundamental problem associated with obtaining data for the CPSU saturation in the past is that the Soviet statistics did not publish any official region-level data on this topic. Following empirical strategy of previous research on the CPSU membership, we extract the data on the CPSU saturation in the Russian regions of the Soviet era from the publications of the regular CPSU Congresses. The Congress (*s'ezd*) was the most important decision-making body in the CPSU, which assembled regularly (during the Stagnation era – every five years). Each regional party organization sent a delegation to the Congress, with the size proportional to the size of the regional party organization itself. Since the size of each delegation is published in the Congress minutes (which include full list of all delegates), we can use this information to infer on how large the regional party organization

⁸ Data for 2012.

⁹ Note that for many countries data on income distribution are not available.

was. The information is available for all Soviet regions, which coincided with the modern Russian regions with three important exceptions.

- First, a number of regions, which are now part of the Russian Federation, were part of other regions (and hence, of other party organizations) in the Soviet era (Adygeia, Altai Republic, Karachaevo-Cherkessia, Evreyskaia Autonomous Oblast, Khakassia and Chukotka, as well as other autonomous okrugs). We exclude all these regions from the initial analysis, only to add them later in the robustness checks.
- Second, while in the 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 organization). 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 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. In a robustness check, we exclude Ingushetia as well.

To estimate the size of the CPSU organization in the region, we use the data from the 1976 Congress – it is located amidst the era of Stagnation, when the Soviet practices were perceived as particularly durable (Yurchak 2013) and thus likely to generate robust behavioral patterns and hence cause legacy effects. We use data from other time periods as well to validate our findings.

The full list of control variables we used is provided in Supplementary Material A and allows us to check for numerous alternative explanations of the sub-national income inequality. We are aware that many of these variables 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 an important problem, and thus we could face the problem of endogenous controls. If we drop all covariates except education and urbanization (which in the Russian context are still strongly influenced by the Soviet past rather than by contemporary policy choices and hence unlikely to be subject to the reverse causality problem), the effect of the CPSU legacy we report in the next section remains robust though.

5. 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 urbanization). 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 in retirement age presented above. Model (7) controls for the employment structure by the form of ownership. Model (8) controls for the share of mining in the regional GDP.

Our result remains robust throughout all models. We find that the CPSU saturation has a negative and significant effect on the Gini coefficient. In particular, an increase of the CPSU share by 1 percent leads to a decline of the Gini coefficient (measured between zero and one) by 0.004-0.006 (or 0.4-0.6 percent for the Gini coefficient measured between zero and hundred percent). It means that, for example, if Tver region (Central Russia; a region with very high CPSU saturation) had twice as small CPSU saturation rate (4.4 percent instead of about 8.8 percent), its Gini coefficient went up from 0.366 to 0.384 (for the beta coefficient of

specification (1), which is the difference between Greece and Macedonia or Bhutan). Thus, we find that the effect of the CPSU legacy is non-negligible. We subject this result to a battery of robustness checks, which are reported in the Supplementary Material B and fully support our findings.

Table 2 allows us to understand the logic underlying the change in the Gini coefficient more precisely. It estimates the effect of the CPSU legacy on the share of individual income quintiles in the total income. Using the Rosstat data, we separate the population of the region in five income quintiles, from Q5 (the highest income) to Q1 (the smallest income). 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%. One can see that the larger share of the CPSU saturation in the 1970s increases the share of income received by the lower quintiles: for instance, if the share of the CPSU membership in the regional population in the 1970s increases by 1 percent, share of each of the three poorest quintiles in the total income goes up by 0.1 percent points each, at the expense of the richest quintile.

The analysis therefore provides clear evidence in favor of hypotheses H1 and H3 and rejects the hypothesis H2. However, we still need to understand which mechanism was driving the effect of the CPSU legacy: 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 explicitly test the first mechanism: if rejected, it makes the second mechanism associated with 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.

6. Social networks or public policies?

6.1. Social policy

This section analyzes the effects of the CPSU legacy on the social policy of Russian regions. In the Russian case, social policy is funded by both federal and regional budgets and quasi-fiscal institutions (like the pension fund), with a bulk of social functions (e.g., pensions) covered by the federal institutions. The regional governments are not entirely autonomous in their policymaking and have to follow either formal standards set by the federal administration (determining who has access to social benefits) or informal guidelines and requirements. In 2012, for instance, after his reelection to the position of the president of Russia, Putin published the famous “May decrees” (*maiskie ukazy*) – a series of decrees prescribing the federal and the regional governments to achieve a number of developmental goals. One of these goals was an increase of salaries of the employees of the public sector (teachers, doctors, researchers or librarians), which partly had to be covered by the regional governments. In this case, de-facto regional governments have no choice: they have to cut other aspects of public spending or (what became especially popular in Russia) to manipulate statistical data (to appear to have fulfilled the federal decrees). Still, regions do have some discretion in the area of social policy, and in this section we will look at whether the size of the social spending is in any way correlated with the presence of the CPSU legacies.

For this purpose, we look at three indicators. 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 area, elderly and small babies etc.). The assistance can be provided in kind or in the monetary form, as well as in form of reduction of certain types of payments (e.g., for housing services). Thus, this indicator includes the actual redistribution covered from the regional budget. The second we designate “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 the regional governments, most probably, it will result in an increase of these expenditures as well. The third indicator include social policy expenditures and housing expenditures: in Russia, many payments for utilities are still subsidized by the regional budget, 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 total expenditures. In addition, we run two types of regressions: first controlling for the baseline characteristics of the region (education, urbanization and income), and second also controlling for the total revenue of the regional budget: it goes without saying that regions, where governments earn more substantial revenue, are also able to finance social expenditures to a larger extent. The results are reported in Table 3 and are unequivocal. If we do not control for the total revenues, there is no link between the CPSU legacy and the social expenditures in the region whatsoever. If we control for the total revenues, we find marginally significant and positive association between the CPSU legacies and the social expenditures in the narrow sense, but for the social expenditures including healthcare and education the association to the CPSU legacy is actually negative. This is a striking result, suggesting that the CPSU legacy does not affect inequality through social policy. It can be related either to the lack of autonomy of the regions in this matter or to the fact that belief into Communist values among the former CPSU members was actually not very strong – our results are much more likely to be driven by the opportunistic behavior resulting in formation of networks than by the loyalty to the Communist ideology persisting after the fall of the old regime.¹⁰

¹⁰ 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 private companies “voluntarily” make contributions to, which are outside the official fiscal system and under control of the governors.

6.2. Persistence over time and the role of public policies

The fact that our results are not driven by the public policies can be confirmed by yet another test, which is important for us for a further reason – we need to check whether the effect of the CPSU legacy persists over time. While our analysis so far focused at a particular year (2012), it is important to check whether the results for the CPSU are an artifact of us choosing a particular year for our analysis, or can be confirmed if we look at different time periods. For this purpose, we used the data on inequality for 2002-2015, and replicated our analysis for each of these periods to check the robustness of our findings (regressing the inequality for each of these years on the CPSU saturation of 1976 and a set of accompanying controls) The results are reported in Table 4. One can see that there is absolutely no evidence that the CPSU legacy effect is going down. On the contrary, it only becomes significant after 2010. Before 2010, the magnitude of the effect is roughly the same, but because of large standard errors it is insignificant.

How can we explain that the CPSU legacy affected the income inequality in the regions of Russia in the 2010s, but not before, although it would be more plausible for it to play an effect for periods more proximate to the Soviet past? To start with, we look at the evolution of the Gini coefficient over time. The data we have suggests that the average of the region-specific Gini coefficients does not change substantially throughout the period of our investigation. What does change, however, is the standard deviation of the coefficients. In 2002, for instance, the average Gini was equal to .35, with the standard deviation of .041; in 2014, it was .38 with the standard deviation of .021. Thus, differences between regions of Russia in terms of income inequality subside over time. A probable explanation for it is the ongoing centralization and standardization of public finance in Russia. The discretion regions formally and informally have about their public spending goes down over time; at the same time, federal expenditures become more and more important. This process was exacerbated with the crisis of 2008-2010, which in Russia (as in many other countries) was solved through a substantial increase of public

spending. Summing up, centralization results in a decline of importance of sub-national policies.

Our interpretation can also be confirmed by another observation from the regressions we run: looking at controls, in the early 2000s, we find significant effects of all region-specific variables on the Gini coefficient, while by 2015 only income per capita remains significant. One can claim that the disappearing importance of other regional covariates is indicative of the smaller role regional politics plays in the context we discuss. For example, in the early 2000s, urbanization has a negative and significant effect on inequality: it can be because rich urban regions implemented larger redistribution programs (like the City of Moscow did). The disappearance of the *formal* policy differences between regions can lead to a relative increase of the *informal institutions and practices*, where the informal networks (we hypothesized as the most important attribute of CPSU legacies in the context of inequality as the dependent variable) become more and more relevant. Essentially, we suggest that as the centralization of Russia left less and less room for formal policy differences, more and more space remained for informal societal practices, like the redistribution of networks. That is why the CPSU legacy becomes a significant predictor of Gini only after Russia becomes sufficiently centralized. Again, if the effect were driven by the public policies, we would observe the opposite to what we find.¹¹

7. Conclusion

It remains to summarize the main conclusions of our study. Our paper attempted to find out whether the Communist legacies matter for the level of inequality in Russia. We used the

¹¹ Note furthermore that some research indicates that informal relations in the Russian society became more important in the 2010s as opposed to the second half of the first decade of the 2000s (see Kravtsova 2012). This would also fit the theoretical argument we advance in this paper.

variation in the inequality levels across Russian regions today and matched it with the levels of the CPSU membership saturation in the 1970s. We were able to show a consistent and robust negative correlation between inequality and the CPSU legacy. Regions, where party saturation was higher in the 1970s, also had significantly lower levels 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 it: on the contrary, the regional social policy is unaffected by the CPSU legacies. More plausible is another explanation we advance – the ability of the former CPSU members to form networks, which are then used for redistribution of wealth.

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Figure 1: Gini coefficient for the Russian Federation

Source: compiled by authors based on Rosstat data.

Figure 2: Gini coefficient at the regional level, Rosstat

Source: compiled by authors based on Rosstat data

Table 1: CPSU legacy and inequality, dep. var.: regional Gini index, 2012, OLS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CPSU saturation, 1976	-0.004 (0.002)**	-0.005 (0.002)***	-0.006 (0.002)***	-0.005 (0.001)***	-0.005 (0.002)**	-0.005 (0.002)***	-0.006 (0.002)***	-0.005 (0.002)***
Income per capita, 2012	0.003 (0.001)***	0.003 (0.000)***	0.003 (0.000)***	0.002 (0.001)***	0.003 (0.000)***	0.003 (0.000)***	0.003 (0.000)***	0.003 (0.000)***
Urbanization, 2012	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)**	-0.000 (0.000)
Education, 2010	0.078 (0.063)	0.062 (0.055)	0.075 (0.057)	-0.030 (0.049)	0.010 (0.060)	0.041 (0.052)	0.063 (0.048)	0.058 (0.058)
Distance from Moscow		-0.003 (0.001)***	-0.002 (0.001)***	-0.001 (0.001)**	-0.003 (0.001)***	-0.003 (0.001)***	-0.001 (0.001)**	-0.002 (0.001)***
Unemployment, 2012			-0.000 (0.000)***					
Share of entrepreneurial income, 2012				0.000 (0.001)				
Share of income from wages, 2012				-0.000 (0.000)				
Share of income from social transfers, 2012				-0.002 (0.001)**				
Share of income from property, 2012				0.005 (0.001)***				
Share of pensioners, 2012					-0.000 (0.000)			
Pensioners pro employed individual, 2012						0.016 (0.008)*		
Share of employment in state owned companies, 2012							-0.001 (0.000)***	
Share of employment in NGOs, 2012							-0.013 (0.006)**	
Share of employment in foreign companies, 2012							0.002 (0.001)*	
Share of mining in GDP, 2012								-0.000 (0.000)
Constant	0.363 (0.017)***	0.373 (0.014)***	0.383 (0.016)***	0.440 (0.034)***	0.401 (0.023)***	0.358 (0.014)***	0.421 (0.017)***	0.374 (0.015)***
R ²	0.57	0.64	0.65	0.76	0.66	0.66	0.72	0.64
N	71	71	71	71	71	71	71	71

Note: robust Huber-Wight standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 2: CPSU legacy and shares of income quintiles in the total income, 2012, OLS

	Q1 (lowest income)	Q2	Q3	Q4	Q5 (highest income)
CPSU saturation, 1976	0.093 (0.045)**	0.113 (0.052)**	0.081 (0.045)*	0.030 (0.020)	-0.317 (0.161)*
Income per capita, 2012	-0.057 (0.012)***	-0.067 (0.014)***	-0.058 (0.012)***	-0.024 (0.006)***	0.206 (0.044)***
Urbanization, 2012	0.004 (0.006)	0.004 (0.007)	0.004 (0.006)	0.002 (0.003)	-0.013 (0.021)
Education, 2010	-1.575 (1.419)	-2.159 (1.704)	-1.924 (1.510)	-1.067 (0.703)	6.724 (5.286)
Constant	6.369 (0.366)***	11.336 (0.442)***	16.241 (0.397)***	23.170 (0.210)***	42.884 (1.401)***
R^2	0.54	0.56	0.56	0.57	0.56
N	71	71	71	71	71

Note: robust Huber-Wight standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 3: CPSU legacy and regional social policy, 2012, OLS

Dep. var.:	Expenditures for social policy and housing	Expenditures for social policy	Social expenditures in the narrow sense	Share of expenditures for social policy and housing	Share of expenditures for social policy	Share of social expenditures in the narrow sense
CPSU saturation, 1976	-0.004 (0.007)	-0.007 (0.007)	0.005 (0.003)	-0.004 (0.007)	-0.007 (0.007)	0.005 (0.003)
Income per capita, 2012	-0.003 (0.002)**	-0.007 (0.002)***	-0.002 (0.001)***	-0.003 (0.002)**	-0.007 (0.002)***	-0.002 (0.001)***
Urbanization, 2012	0.002 (0.001)***	0.002 (0.001)***	0.001 (0.000)*	0.002 (0.001)***	0.002 (0.001)***	0.001 (0.000)*
Education, 2010	0.068 (0.156)	0.034 (0.224)	-0.075 (0.105)	0.068 (0.156)	0.034 (0.224)	-0.075 (0.105)
Constant	0.676 (0.043)***	0.663 (0.062)***	0.144 (0.029)***	0.676 (0.043)***	0.663 (0.062)***	0.144 (0.029)***
R^2	0.11	0.31	0.22	0.11	0.31	0.22
N	71	71	71	71	71	71
<i>Controlling for budget revenue</i>						
CPSU saturation, 1976	331.914 (1,164.975)	-2,064.031 (1,090.114)*	670.705 (390.242)*	-0.005 (0.006)	-0.012 (0.006)*	0.002 (0.002)

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 at request

Table 4: Persistence of the CPSU legacy effect on inequality over time

Year	Beta	St. error
2002	-0.001	(0.003)
2003	-0.001	(0.003)
2004	-0.003	(0.002)
2005	-0.003	(0.002)
2006	-0.002	(0.002)
2007	-0.004	(0.002)
2008	-0.003	(0.003)
2009	-0.003	(0.003)
2010	-0.004	(0.002)*
2011	-0.004	(0.002)*
2012	-0.004	(0.002)**
2013	-0.004	(0.002)**
2014	-0.004	(0.002)**
2015	-0.005	(0.002)**

Note: Robust Huber-Wight standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Each row reports the effect of the CPSU legacy on the Gini coefficient for a particular year. Control variables are income of the year t , urbanization of the year 5, and education (from the 2002 census – for all periods before 2010, from the 2010 census – for all periods after 2010). Crimea and Sevastopol not included in the analysis for the 2014 and the 2015 periods.