

Data appendix

In centralised Russia, city statistics are dispersed across many sources. This appendix presents the sources on which the main text is based. We were able to collect historical housing statistics on a city level for the time period from 1825 to 2015. We trace on average about 60-120 large Russian cities throughout this two-century-long interval; during 1970-2013 our data provide coverage of about 500-900 cities.

In Imperial Russia, city-level statistics were produced sporadically and with limited information about housing. Even the first comprehensive Russian Census in 1897 did not inquire into housing conditions. To our knowledge, the first reliable source recording urban housing characteristics in the Russian Empire is the 1825 Statistical Tables of cities prepared by the Ministry of Internal Affairs; we managed to identify seven identical reports between 1825 and 1870. For the late Imperial Russian statistics, we refer to the 1904 and 1910 Surveys of cities. These pre-Revolutionary data not only featured many municipal institutions, but also included demographic, social (class) and housing-related properties of cities such as building material and the number of buildings. The data is retrieved from the open online repositories of the State Historic Public Library of Russia and Boris Yeltsin Presidential Library.

For the early Soviet city housing information, we make use of the 1920, 1923 and 1926 Census in RSFSR, urban USSR and USSR respectively. Apart from demographic characteristics, they include information about the living conditions, building materials, and, since 1923, amenities and homeownership. Inter- and post-war-period statistics from the Stalin regime are notoriously scarce. Here, we had to rely on data published in Sosnovy (1954) and Smith (2010), as well as the declassified 1953 report by the Central Statistical Administration to provide anecdotal evidence for this period.

For the late Soviet and post-Soviet periods, we use the commercially distributed database Urban Passport (years 1970-1996) which was compiled annually by Rosstat, the Russian Federal State Statistics Service since 1985 (compiled once every five years between 1970 and 1985).¹ We additionally make use of the compatible database Economy of Russian Cities for years 1997-2013, also produced by Rosstat. These data cover 1020 cities with more than 2000 inhabitants and a total population of 92.2 million in 2013, a complete picture of urban Russia. The two databases combined provide the most complete geographical and temporal coverage for our three housing characteristics (living space, personal homeownership, and degree of modernization), and contain a range of demographic and economic characteristics.

In addition to these sources, we use the last Soviet Census from 1989 to provide a more general picture of the housing stock in USSR from its last statistical snapshot. For the first time since 1926, the 1989 Census included questions about housing conditions. We also refer to the Soviet statistical yearbooks to account for the more general patterns of homeownership and housing stock conditions for urban RSFSR. For 2015 housing statistics, we rely on Rosstat's Housing in Russia report which covers 81 regional capital cities.

¹ We thank the Leibniz Institute for Regional Geography, Leipzig, for making these data available to us. Brade I. (2002) Der Wandel der russischen Städte in den 1990er Jahren. Einführungen zum Thema. In: Isolde Brade (ed) Die Städte Russlands im Wandel. Raumstrukturelle Veränderungen am Ende des 20. Jahrhunderts. Leipzig: Institut für Länderkunde, 12-19.

Working with data scattered along an almost two-hundred-year-long timespan inevitably raises questions about the over-time comparability. Three major issues have been identified: city growth, establishment of new cities, and changing names of cities. All cities in our sample grew, and their boundaries often expanded considerably during the course of the 20th century. For example, the urban proper of St. Petersburg is nowadays 14 times larger than it was in 1917 and incorporates a number of former satellite towns. These territorial expansions, despite being impressive in quantitative terms, do not necessarily imply substantial qualitative changes as the cities grew incrementally and absorbed their immediate environs.

Another problem pertains to the falling out of new cities from the over-time comparisons. We deal with this issue by controlling for pre- and post-Revolutionary year of foundation, and this proves not to disrupt the observed continuities. For the foundation of cities we relied on the following list from Wikipedia: https://ru.wikipedia.org/wiki/Список_городов_России. Where no exact date is available, we used the average value for the century indicated. We then coded all post-revolutionary years as “1” and all pre-revolutionary ones as “0”. In our sample, 216 out of 1111 cities were founded during the Soviet period.

Also, cities changed their names, sometimes several times. To harmonise names over time, we used the contemporary version of city names. In case of city mergers, we treated the cities involved as independent cases. Similarly, if settlements lost their city status, we included them in our analysis for as long as they retained city status. Finally, we had to delete implausible data values such as ownership rates of more than 100 percent.

Figure A1 shows the coverage graphically, by plotting the standard deviation of the main indicators referred to in the text.

Figure A1: Standard deviation over time

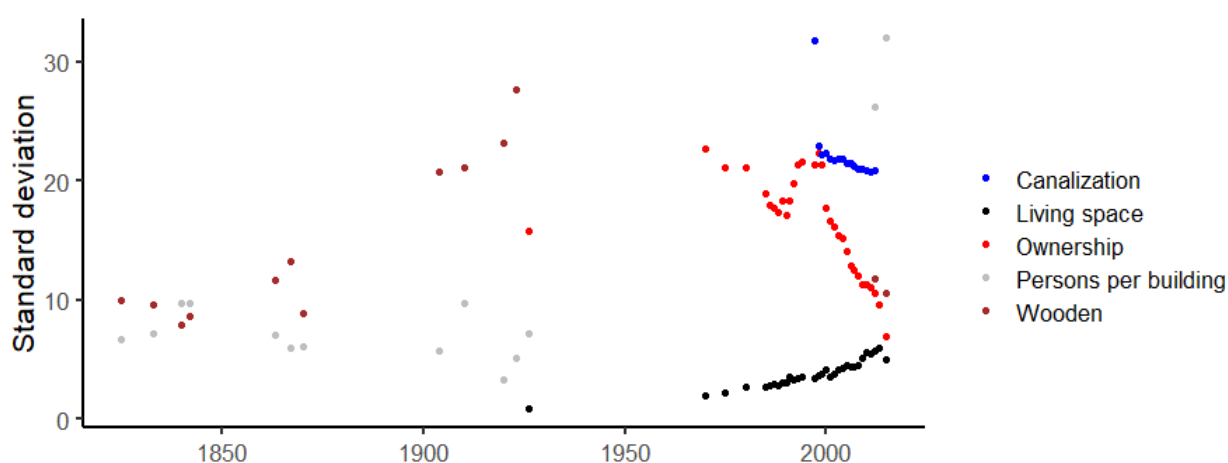
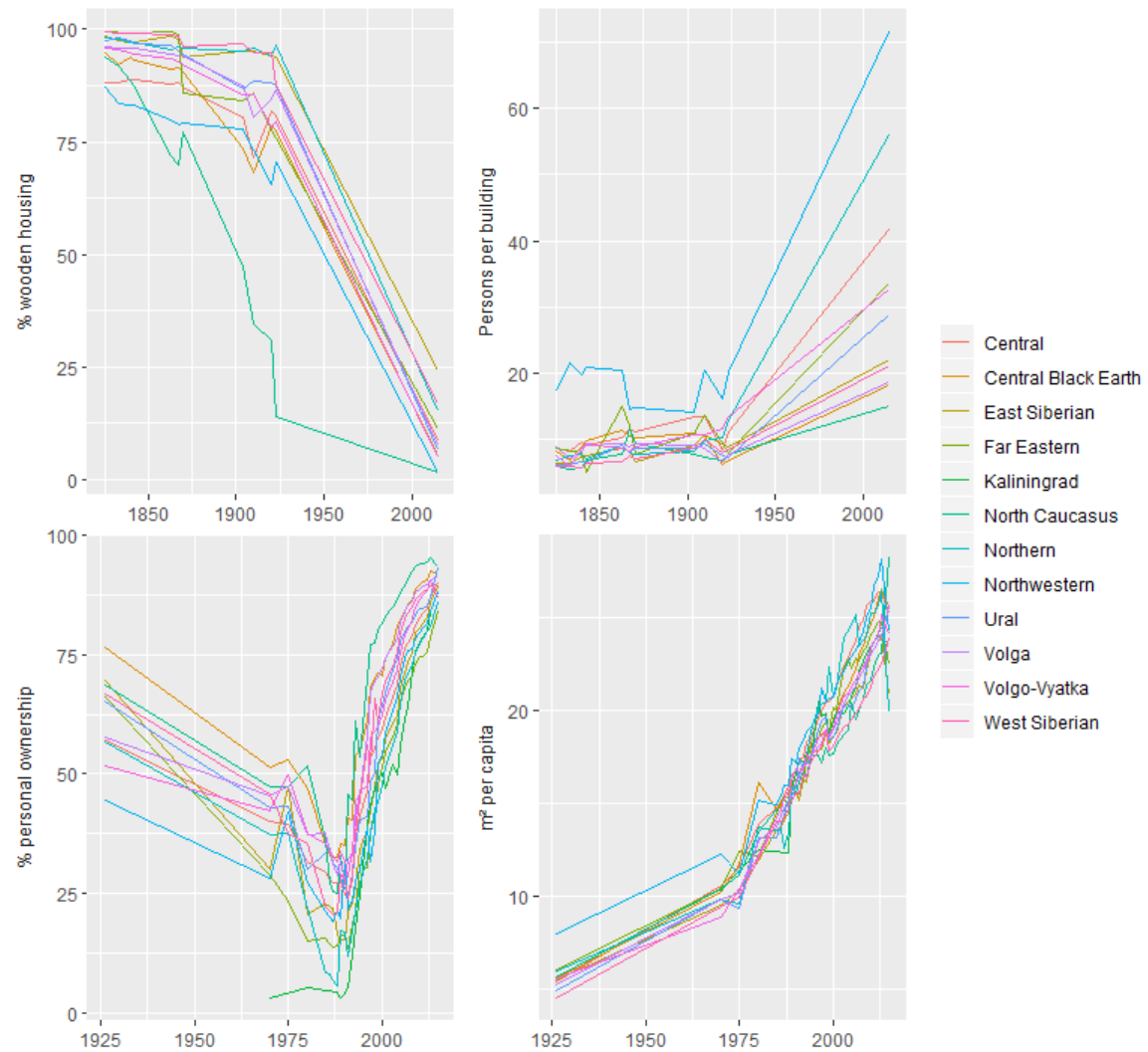


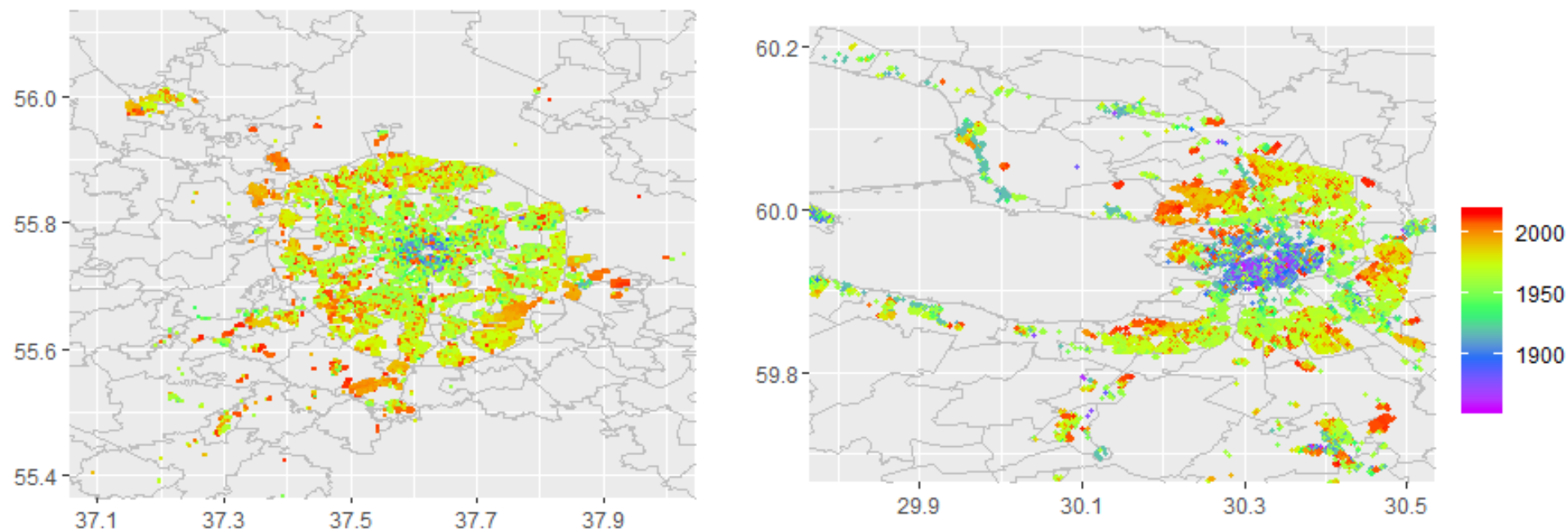
Figure A2 shows the over-time development of the key indicators grouped by region.

Figure A2: Key indicators over time by region



Additionally, for a retrospective glimpse into the Soviet building legacy in cities, we use the open data on the ongoing housing and communal services reform coordinated by the Russian Ministry of Construction, Housing and Utilities (<https://www.reformagkh.ru>). These data are geocoded and cover all apartment blocks in Russia, including information about the year of construction, exploitation passport, engineering systems, and management. The information has been available since 2014 and is constantly updated. Figure A3 shows the geographic distribution of multi-storey housing stock by building period in four major cities.

Figure A3: Multi-storey buildings by year of construction in Moscow (left) and St. Petersburg (right)



Source: Fund for Promoting Housing and Communal Services Reform, 2017

Data sources:

Statisticheskoe izobrazhenie gorodov i posadov Rossiyskoy Imperii po 1825 god (1829) Sanktpeterburg: Departament Politsii Iсполnitel'noy

Obozrenie sostoyaniya gorodov Rossiyskoy Imperii v 1833 godu (1834) Sanktpeterburg: Ministerstvo Vnutrennikh Del

Statisticheskie tablitsy o sostoyanii gorodov Rossiyskoy Imperii (1840) Sanktpeterburg: Statisticheskoe Otdelenie Soveta Ministerstva Vnutrennikh Del

Statisticheskie tablitsy o sostoyanii gorodov Rossiyskoy Imperii, Velikago Knyazhestva Finlyandskago i Tsarstva Pol'skago (1842) Sanktpeterburg: Statisticheskoe Otdelenie Soveta Ministerstva Vnutrennikh Del

Statisticheskiy vremennik Rossiyskoy Imperii, Ser. I Vyp. 1 (1866) Sanktpeterburg: Tsentral'nyi statisticheskiy komitet Ministerstva Vnutrennikh Del

Statisticheskiy vremennik Rossiyskoy Imperii, Ser. II Vyp. 1 (1871) Sanktpeterburg: Tsentral'nyi statisticheskiy komitet Ministerstva Vnutrennikh Del

Statisticheskiy vremennik Rossiyskoy Imperii, Ser. II Vyp. 10 (1875) Sanktpeterburg: Tsentral'nyi statisticheskiy komitet Ministerstva Vnutrennikh Del

Goroda Rossii v 1904 godu (1906) S.-Peterburg: Tsentral'nyi statisticheskiy komitet M.V.D.

Goroda Rossii v 1910 godu (1914) S.-Peterburg: Tsentral'nyi statisticheskiy komitet M.V.D.

Statisticheskiy ezhegodnik 1921 goda, Vyp.2 (1923) Moskva: Tsentral'noe Statisticheskoe Upravlenie

Statisticheskiy ezhegodnik 1922 i 1923 goda, Vyp.2 (1925) Moskva: Tsentral'noe Statisticheskoe Upravlenie

Vsesoyuznaya perepis' naseleniya 17 dekabrya 1926 g.: kratkie svodki, Vyp.VI: Zhilishchniy fond SSSR (1928) Moskva: Izdanie TsSU Soyuza SSR

Spravka TsSU SSSR L.M. Kaganovichu o sostoyanii gorodskogo zhilishchnogo fonda v 1940-1952 gg. (1953) Istoricheskie Materialy. <http://istmat.info/node/18429> (Accessed July, 2017)

Narodnoye Khozyaystvo RSFSR v 1968 godu (1969) Moskva: Statistika

Narodnoye Khozyaystvo RSFSR v 1990 godu (1991) Moskva: Goskomstat RSFSR

Zhilishchnoe khozyaistvo v Rossii. 2016 (2016) Moskva: Rosstat