JYU DISSERTATIONS 202

Nooa Nykänen

Managing a Path Dependent State

Organizational and Institutional Development of Economic Geography in the Soviet Union

UNIVERSITY OF JYVÄSKYLÄ
FACULTY OF HUMANITIES AND
SOCIAL SCIENCES

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Esitetään Jyväskylän yliopiston humanistis-yhteiskuntatieteellisen tiedekunnan suostumuksella
julkisesti tarkastettavaksi yliopiston vanhassa juhlasalissa S212
huhtikuun 3. päivänä 2020 kello 12.

Academic dissertation to be publicly discussed, by permission of
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JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ

JYVÄSKYLÄ 2020

Editors
Juha-Antti Lamberg
Department of History and Ethnology, University of Jyväskylä
Päivi Vuorio
Open Science Centre, University of Jyväskylä

Permanent link to this publication: http://urn.fi/URN:ISBN:978-951-39-8108-2

ISBN 978-951-39-8108-2 (PDF)
URN:ISBN:978-951-39-8108-2
ISSN 2489-9003

ABSTRACT

Nykänen, Nooa
Managing a path dependent state: Organizational and institutional development of economic geography in the Soviet Union
Jyväskylä: University of Jyväskylä, 2020, 76 p.
(JYU Dissertations
ISSN 2489-9003; 202)
ISBN 978-951-39-8108-2 (PDF)

Russia's economic history contains highly path-dependent elements, which continue to manifest in contemporary structures and influence strategic options for future development. This dissertation analyzes the historical development of the economic geography of the Soviet Union as an important source of path-dependent elements. The study contains three individual articles, which focus on organizational mechanisms that shaped the institutional environment of Soviet decision-making and economic-geographical strategy during the 20th century. The articles utilize the concepts of institutional logics, organizational imprinting and path dependence in examining how organizational and institutional dynamics influenced, constrained and legitimized Soviet decisions and policies in the field of economic geography. The articles of this dissertation provide three key findings for the field of Soviet economic and business history. First, a prolonged rivalry of military, economic and regional logics in Soviet industrial location policy produced inconsistent strategic outcomes which contributed to structural problems in the spatial allocation of industries. Second, key characteristics of the Soviet industrial district template had imprinting effects on the localized organizational collective, which manifested persistently in subsequent economic geographical strategies due to exaptation and cultural-cognitive influence mechanisms. Third, the Soviet districts of heavy industry experienced an organizational lock-in during the mid-20th century due to institutional constraints that impeded the ability of central decision-makers to initiate path-renewal processes and change mature industrial orientations through strategic interventions. Besides contributions to the context-specific field, the use of organizational concepts to study a state-managed non-market context makes a theoretical contribution by testing their validity in a non-conventional and understudied empirical setting. Overall, the study offers a historically cognizant perspective to explain why the Soviet economic geographical strategy initiated adverse and persistent outcome effects which continue to problematize economic development in post-Soviet Russia.

Keywords: Soviet Union, Russia, historical organization studies, economic geography, economic history, organizational institutionalism, Soviet economy

TIIVISTELMÄ (FINNISH ABSTRACT)

Nykänen, Nooa
Polkuriippuvuus valtiojohtoisessa talousjärjestelmässä: Neuvostoliiton talousmaantieteen kehitys instituutioiden ja organisaatiomuutoksen näkökulmasta
Jyväskylä: Jyväskylän yliopisto, 2020, 76 s.
(JYU Dissertations
ISSN 2489-9003; 202)
ISBN 978-951-39-8108-2 (PDF)

Tutkin väitöskirjassani Neuvostoliiton ja Venäjän talousmaantieteen kehitystä ja muutosdynamiikkaa historiallisen organisaatiotutkimuksen menetelmin. Väitöskirjani pääasiallisena pyrkimyksenä on löytää selittäviä mekanismeja sille, miksi Neuvostoliiton teollistaloudellinen järjestelmä kehittyi talousmaantieteen näkökulmasta ongelmalliseksi ja millä tavoin sen periytyminen osaksi Venäjän federaation talousjärjestelmää vaikeuttaa talouden modernisaatiota. Väitöskirjani koostuu kolmesta toisiaan tukevasta artikkelista, jotka käsittelevät aihepiiriä erilaisista käsitteellisistä näkökulmista. Artikkelit käsittelevät institutionaalisten logiikoiden kilpailua teollisuustuotannon sijaintia koskevassa päätöksenteossa, Neuvostoliiton aluetuotantokompleksi-mallin organisaatioleimautumista osaksi nyky-Venäjän aluesuunnittelua sekä strategisen polkuriippuvuuden rajoittavaa vaikutusta raskasteollisuuden aluekeskittymien uusiutumisessa. Kokonaisuudessaan, väitöskirjani yhdistää aiemmin Venäjä-tutkimuksessa erilleen jääneitä talousmaantieteen, taloushistorian ja organisaatioteorian tutkimussuuntia. Tutkimustulokset selventävät institutionaalisen ympäristön ja sen asettamien rajoituksien vaikutusta Neuvostoliiton talousmaantieteelliseen päätöksentekoon sekä tunnistavat organisaatiotutkimuksen piirissä teoretisoitujen mekanismien vaikutuksen talousmaantieteen historialliseen dynamiikkaan.

Asiasanat: taloushistoria, talousmaantiede, historiallinen organisaatiotutkimus, Neuvostoliitto, Venäjä, polkuriippuvuus, aluepolitiikka

Author's address

Nooa Nykänen
Department of History and Ethnology
PL 35 (Historica)
40014, Jyväskylän yliopisto
Finland

Supervisors

Juha-Antti Lamberg
Department of History and Ethnology
University of Jyväskylä

Jari Ojala
Department of History and Ethnology
University of Jyväskylä

Reviewers

Geoffrey Hodgson
Loughborough University London

Sari Autio-Sarasmo
Aleksanteri Institute
University of Helsinki

Opponents

Sari Autio-Sarasmo
Aleksanteri Institute
University of Helsinki

ACKNOWLEDGEMENTS

A PhD is not only a solitary Sisyphean project – it is also, to a large extent, an aggregate of effort by the surrounding research community.

First, it would be impossible to dismiss the involvement of three economic history professors, without whom this dissertation would have never materialized. As my primary supervisor, Professor Juha-Antti Lamberg has exerted an immense influence on my work by devoting a great amount of time, energy and intellectual resources to assist me with practically everything related to this project. Juha-Antti's idiosyncratic *scholarly persona* has been both inspiring and mind-boggling act to behold, while his remarkable ability to direct crude and gauche research ideas into fruitful directions has been extremely valuable in developing my own work and thinking. Second, Professor Jari Ojala has served as my second supervisor, completing the dynamic duo of two brilliant and visionary scholars behind this work. Jari's meticulous reviews of my numerous draft papers have greatly contributed to the quality of this work and his ship-steering skills in academic waters have been helpful in many occasions. Third, the grand old man of Jyväskylä's economic history group, Professor Ilkka Nummela was the first to push me toward studying the historical development and complexities of Russian industrialization and has always been a source of encouragement with his inimitably humorous scholarly presence.

Sari Autio-Sarasmo (University of Helsinki) and Geoffrey Hodgson (Loughborough University London) kindly accepted to serve as the pre-examiners of my dissertation, taking on the colossal task of carefully reviewing the entire manuscript. Their constructive comments and insightful suggestions have helped me to revise, polish and sharpen several of sections of the manuscript into this final version.

Over the years, I have been fortunate to conduct my research at the Department of History and Ethnology (University of Jyväskylä) in a stable and encouraging environment. The Faculty of Humanities has assisted me with continuous financial support in the form of a scholarship, multi-year employment and a generous allowance for participating in international conferences. This support has been an important causal factor to completion of this dissertation in schedule – or at least it has deprived me of good excuses for idleness. The personnel of the economic history division in Jyväskylä has greatly promoted the development of this study. I would like to thank Pasi Nevalainen, Jarmo Seppälä, Christian Stutz, Mirva Peltoniemi, Kalle Pajunen, Miikka Voutilainen, Timo Särkkä, Tuomas Pakarinen and Timo Tiainen for support, thoughtful comments and criticism during the course of my studies. From amongst other faculty members, Simo Mikkonen, Heli Valtonen and Piia Einonen in particular have provided valuable support and encouragement.

Academic life during doctoral studies is not only about withstanding the peer review – it is also about enduring the peer pressure. In this category, the fellow PhD aspirants Juho Saksholm and Zachris Haaparinne deserve particular honors for composing the most merciless duo one can imagine. Luckily, this mechanism has always worked both ways, providing a constant and collective source of humor and energy. I would also like to thank other young scholars at HELA for enriching this journey - unfortunately space constraints prevent me from name dropping all of you here.

Several colleagues from the 'metropolitan' research community at the University of Helsinki and the Aleksanteri Institute have made a contribution by providing comments, help and fruitful discussions concerning the work and related themes. I would like to thank particularly Veli-Pekka Tynkkynen, Jari Eloranta, Olli Turunen, Mila

Oiva, Saara Matala, Suvi Kansikas, Niklas Jensen-Eriksen, Matti La Mela and Aaro Sahari.

I have been privileged to meet and collaborate with foreign experts in several academic conferences and events. Some of them have helped me by providing insightful comments, critical notes and supportive encouragement, all of which has been a push forward toward the processes of writing and thinking. Special thanks to Amanda Gregg (Middlebury College), Volodymyr Kulikov (Central European University), Steven Nafziger (Williams College), Elena Kochetkova (Higher School of Economics, St. Petersburg), Julia Lajus (HSE, St. Petersburg), Martin Kragh (Uppsala University) and Ron Boschma (Utrecht University). Thanks to the travel grant received from the Faculty of Humanities (JYU), I also relished the chance to participate the ESTER Research Design Course in Pisa in 2016. I would like to thank particularly Bram Hoonhout (Leiden University) and Joost Veestra (University of Groeningen) for organization and feedback concerning my ongoing ideas related to this work. Few years later, the Organizational and Management Theory (OMT) Doctoral Consortium in Boston 2019 was helpful in developing my research ideas and as opportunities to receive comments and suggestions. Special thanks to Michael Smets (Said Business School, University of Oxford) and Lisa Cohen (McGill University) for organizing the event and Evelyn Micelotta (University of New Mexico) for helpful comments. I would also like to thank Mikko Ketokivi (IE Business School, Madrid) for putting together a thought-provoking and inspiring doctoral course in Jyväskylä 2018 on theory progress in management research. This particular course stands out as one of the most influential learning experiences during my studies, and hopefully some of those seeds have come into fruition in a positive way within these pages.

I am also grateful to the editors of *Eurasian geography and economics, Taylor & Francis* publishing unit and the anonymous reviewer(s), who helped me in publishing the first article of this dissertation.

Standing in the limelight as a PhD defendant is not a predestined situation without historical antecedents. I am particularly grateful for my secondary school history teacher Ensio Puumala, who first encouraged me to specialize in historical studies and made me realize that I might even excel in it. While conducting this work, I have tried my best to speak out only 'well-weighted words', in a way that you frequently called for.

Finally, my deepest thanks go to the members of my family: Anna-Maija, Olli, Asta and Topi. And Emilia; the one who has witnessed, endured and supported admirably this whole process from a close range and remains my favorite consultant on any possible issues related to library collections. Thank you.

Espoo, 28.02.2020
Nooa Nykänen

TABLES

CONTENTS

1 INTRODUCTION

BACKGROUND, RESEARCH ENVIRONMENT, MOTIVATION

Economic historians have extensively argued that efficient and inclusive institutions, defined here as humanly devised constraints on social behavior (North 1990), are a necessary prerequisite for economic growth and enduring prosperity (North 1990; Greif 2006; Mokyr 2008; Acemoglu & Robinson 2012; 2019).[1] Institutions are often further categorized into inclusive and extractive types, where the former refers to an efficient system of secure property rights, law and order, state support for equal and unrestricted business opportunities and contract enforcement, and the latter to systems where these elements are either lacking, ambiguously enforced or restricted to privileged actors (Acemoglu & Robinson 2012).

During the course of the 20th century, the international system was organized according to dualism created by the competition of extractive socialist economies and, more or less, inclusive capitalist systems. Although the collapse of the Soviet Union marked an end of this era, the current trends in world politics demonstrate that state-centered policies of autarky, trade wars and unpredictability have not disappeared, whereas the elements of inclusive institutions, such as democratic participation, trust and stability, are not immune to erosion and fragmentation. Political and economic development in the former socialist countries, such as China and Russia, demonstrate that the once-assumed universal convergence toward inclusive institutional systems (e.g., Fukuyama 1992) has not materialized at a global level (Hodgson 1999; Levitsky & Way 2010).

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[1] The debate regarding the role of institutions in economic development forms has also attracted criticism from economic historians. McCloskey (2010; 2016) has criticized institutional and neo-institutional explanations of economic development, highlighting the role of ethics and values instead of economic incentives. Alternatively, Gregory Clark (2007a) has advocated a thesis of downward social mobility as an explaining factor of economic development out of the Malthusian trap. Also, a recent stream of studies (Ogilvie 2007; Clark 2007b; Allen 2011) has also highlighted that although institutions may contribute to economic development, their efficiency alone does not explain their persistence. This latter perspective has also been discussed in organizational institutionalism (section 2.2) and is also present in this study.

Particularly in the case of Russia, the historical and cultural embeddedness of exclusive structures and institutions has played a large role in economic and political divergence toward an authoritarian system of state governance (Gel'man 2016). This process is generally regarded as a major obstacle for economic modernization (Klochikhin 2013; Kinossian & Morgan 2014; Gel'man 2017) and the development of inclusive institutions within the society. In particular, the authoritarian model of the political system is coupled with persistence of adverse legacy effects, deriving from the Soviet system (Crescenzi & Jaax 2017).

While searching for new alternatives to persistent exclusive institutional systems (e.g., Gel'man 2019), it is equally important to reflect on how and why such legacy-related issues emerge, exist or persist in related institutional and organizational fields. During recent years, a stream of literature in organization studies (e.g., Marquis & Qiao 2018) has contributed to the study of these aspects by exploring why organizations adopt or maintain social mechanisms which contribute to inefficient or economically suboptimal outcomes. Recent studies focusing on the concepts of path dependence (Sydow, Schreyögg & Koch 2009; Schreyögg & Sydow 2011) and organizational imprints (Marquis & Tilcsik 2013; Simsek, Fox & Heavey 2015) have provided novel theoretical insights into the understanding of mechanisms between the past and the present states. Regarding Russia, one significant finding has been that past exposure to socialism appears to exert a long-term influence on actors' economic and political behavior through social-normative, cultural-cognitive and regulatory mechanisms (Banalieva et al. 2017; Marquis & Qiao 2018; Wang, Du & Marquis 2019). A crucial insight from this research has been that many such mechanisms are historically contingent and cultural-cognitively influenced, and they set out to perform contextually defined institutional problems (Kogut & Zander 2000; Greenwood et al. 2008; Scott 2013; Thornton et al. 2012). Importantly, these mechanisms are not easily dismantled, despite transformational institutional changes at the society level (e.g., Yavlinsky & Braguinsky 1994); instead they may develop into novel institutional arrangements as a response to identified economic problems between actors. For instance, Braguinsky and Myerson's (2007) model of "oligarchic property rights" demonstrates a Russian example of how complex field-level institutions may positively affect economic performance, while simultaneously maintaining, or even reinforcing, exclusive institutions. Thus, theoretically informed analysis, which acknowledges the context specificity of institutional arrangements, is an important way to advance understanding of historically contingent organizational fields and their development. The empirical contexts of Russia and its predecessor, the Soviet Union, provide fertile and relatively unexplored grounds for such historical-organizational analyses due to continuing political and economic tensions between legacy and modernization.

This situation has motivated this dissertation to take a closer look at historically contingent organizational and institutional mechanisms, which originate from the Soviet period and potentially continue to influence

development in contemporary Russia. The field of economic geography[2] stands out as one of the most illustrative sub-contexts in which the historical interplay of institutional and organizational activities leaves a mark on the social, political and economic development of the country (Martin 2000; Murphy & O'Loughlin 2009). Within this field, the legacy implications of Soviet infrastructure and regionalization structures are highly relevant for post-Soviet Russia. During the 20th century, the economic geography of the Soviet Union underwent significant transformations, developing from a backward agrarian country into an industrial economy, characterized by regionally distributed heavy industrial districts and interconnected, resource-abundant production complexes. A close relationship between the socialist economic system and spatial economic structures gave further impetus to system-specific organizational and institutional arrangements, which in time developed strong path-dependent mechanisms. The existing literature includes several studies on the overall effect of the Soviet economic geographical structures on post-Soviet Russia (Gaddy & Ickes 2003; Hill & Gaddy 2003; Mikhailova 2005; 2012), but it has less systematically defined or analyzed how its specific historical and institutional forms emerged during the Soviet period or how their influence was transmitted into persistent institutions and mental models in localized organizational fields. Insights into these configurations are important, not only because of their value in framing historical phenomena, but also due to their relevance in evaluating present and future manifestations of persistent and potentially reproductive elements in Russia's economic and economic geographical development (e.g., Kinossian 2013). 0

RESEARCH PROBLEM AND OBJECTIVES

In this dissertation, I study how the historical development of Soviet economic geography (both as a scientific field and as a real-world phenomenon) and its outcomes reflect institutional arrangements emerging from contextually constrained responses to distinctive political, ideological and economic problems. A particular focus of this study is the development of industrial districts as field-level entities, which are simultaneously regionally concentrated engines of economic geography (Porter 1990) and localized organizational communities (Marquis & Battilana 2009). From an organizational perspective, the operation of industrial districts is defined through institutional fields, which are influenced by society-level logics (Friedland & Alford 1991) and strategic decision-making. Thus, the development of industrial districts provides a meso-level perspective on institutional and organizational dynamics, which shape economic geography and its path-dependent trajectories.

The dissertation extends the recent literature, which has highlighted that the Soviet economic geography and its legacy have imposed historically

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[2] "Economic geography" as a concept has dual meanings, referring to: 1) the spatial distribution of economic activity and 2) its study as an academic discipline; both of these are acknowledged in the study (see section 3.2).

contingent irregularities and adverse forms of path dependence onto the context of post-Soviet Russia (Gaddy & Ickes 2003; Hill & Gaddy 2003; Mikhailova 2012; Klochikhin 2013). The objective of this dissertation is to analyze how various problems and characteristics in the historical development of Soviet economic geography generated particular institutionally and organizationally embedded responses, which contributed to the formation of distinct institutional arrangements and directed the environment of strategic decision-making. Thus, the dissertation explores the role of institutional mechanisms and organizational change behind the adverse effects of legacy and path dependence. The study focuses mainly on the Soviet era (1918–1991), although the articles also briefly acknowledge the temporal extension of the studied phenomena to the late Czarist (1861–1918) and post-Soviet (1991–) eras.

I have operationalized this task by focusing on three aspects of Soviet economic geography: 1) industrial location policy, 2) Soviet industrial complex models, and 3) heavy industry orientation. Each of these aspects is studied in a separate article in order to emphasize various elements of Soviet economic geography and their institutional legacy. The articles use conceptual frameworks of institutional logics, organizational imprinting and path dependence. These frameworks originate from the disciplines of historical organization studies, organizational institutionalism and economic geography. Based on the results of the articles, I argue that the Soviet economic-geographical policy and strategies were constrained by a distinctive institutional environment and its dynamics had a critical influence on the strategic actions of the Soviet decision-makers.

Although this study is situated somewhat at the crossroads of these disciplines, its identity is fundamentally tied to the discipline of economic and business history. In this field, a particular source of motivation for this work has been Douglas Allen's (2011) study of the "institutional revolution," in which he proposed that the most overwhelming change in economic history during the 18th and 19th centuries was not technological but institutional. Specifically, Allen highlighted fine-grained contextualization of institutional arrangements as an explanation to seemingly irregular economic behavior and argued that the most important question for economic historians was "*what economic problem(s) were given institutions trying to solve?*" This perspective escaped the trap of categorizing counterintuitive findings and inconsistent social behavior as "ignorance," "inefficiency" or "irrationality" (Langlois 2013), and instead stressed a more nuanced understanding of history as a dynamic mixture of humanly devised institutions, bounded cognitive restrictions of actors and context-specific problems. This dissertation has aimed to follow this approach by highlighting the historical contingency of organizational action, institutional practices and path dependence as a key to understand the history of Soviet economic geography. Therefore, the title "Managing a path-dependent *state*" also acknowledges the dual meaning of its last word, representing both: 1) structures and forms subject to mechanisms of path dependence, and 2) the task of Soviet and post-Soviet decision-makers to lead the nation under such conditions.

2 THEORETICAL BACKGROUND

The perspective of this study on the Soviet economic system is to build on multidisciplinary and interlinked theoretical frameworks. An underlying theme of the study is to examine how the historical development of an economic system and its spatial organization is contingent on institutional dynamics and social norms, which control and direct its forms. Theoretically, the approach of this study is thus situated between three intertwining bodies of literature: 1) historical organization studies, 2) organizational institutionalism and 3) economic geography. The articles of this dissertation utilize theoretical concepts which provide a complementary perspective to the research topic. The origins of these concepts—namely, 1) organizational imprinting, 2) institutional logics and 3) critical junctures—belong to the aforementioned branches of literature and contain mutually complementary theoretical links between the three disciplines (see also Table 2, p. 38).

In this section, I provide an overview of the theoretical background of these concepts and branches of literature. I also discuss how the concept of industrial districts, an important level of analysis in the articles, is situated in an intermediary position between the various literature corpora. Article-specific theoretical discussions can be found in the respective sections of the articles themselves.

2.1 Historical organization studies

"Historical organization studies" as a discipline is situated on the borderline of history and organization studies. Following the definition of Maclean, Harvey & Clegg (2016, 611), historical organization studies stands for

> …organizational research that draws extensively on historical data, methods and knowledge, embedding organizing and organizations in their socio-historical context to generate historically informed theoretical narratives attentive to both disciplines.

Although this discipline has often been synonymously mixed with the term "organizational history," there has recently been attention to the dual integrity of history and organization studies, which should be discerned from historical accounts of specific organizations or sets of organizational circumstances (Leblebici 2014; Maclean, Harvey & Clegg 2016). Interest in these themes has also promoted fruitful overlaps with the field of business history, which has traditionally been a small discipline separate from management and organization studies (Kipping & Üsdiken 2007; Ojala et al. 2017).

Overall, historical organization studies is a relatively newly recognized disciplinary field. The initial push toward a "historic turn" in organization studies emerged when Kieser (1994) and Zald (1996) argued that organization studies neglected the value of a historical understanding of organizational behavior, hence possibly compromising temporal dimensions of organization theory. Clark and Rowlinson (2004) and Kipping and Üsdiken (2014) echoed similar arguments, claiming that historical studies could, and should, be more closely integrated with the study of organizational phenomena. Since then, scholars have constructed multiple typologies to validate and explore how the role of history and uses of the past should be incorporated into organization studies. For example, Kipping and Üsdiken (2014) distinguished two possible approaches: *history in theory* and *history to theory*. *History in theory* acknowledges that the temporal dimension of organizational development should be an endogenous part of theoretical propositions, since past historical events shape the identity and operation of organizational actors. The *history to theory* approach refers to the ways in which historical studies can contribute to theory development by illuminating the long-term development of organizational phenomena. Rowlinson, Hassard and Decker (2014) further problematized the relationship between history and organization theory, identifying dualisms of *explanation, evidence and temporality.* These dualisms paved way for four alternative research strategies (*corporate history*, *analytically structured history*, *serial history* and *ethnographic history*), which provided a sound theoretical foundation for organizational scholars wishing to conduct historical studies. These discussions have also extended to the field of strategy. Vaara and Lamberg (2016) emphasized how, similarly to organizations, the field of strategic management is embedded in historical development, suggesting approaches of *realist history*, *interpretative history* and *poststructuralist history* as potential ways to study strategic processes and practices in history. Maclean, Harvey and Clegg (2016) proposed that history should be used to *evaluate*, *explicate*, *conceptualize* and *narrate* organizational phenomena. Recently, Clemente, Durand and Roulet (2017, 25) defined the use of history in organization studies as a

> description and analysis of changes in institutional orders and mentalities, choices in organizational logics and associated practices, and how and why organizations make these choices.

Wadhwani and Bucheli (2014, 4) stressed this point as well, when arguing that the real contribution of the "historic turn" lies not in the application of a

longitudinal research design nor in using theoretical knowledge to explore temporally remote settings, but instead in challenging existing assumptions about the nature of organizations and their behavior in *both* organization theory and business history.

This final point has been a motivation for this dissertation in combining insights from the literatures of Soviet economic and business history and organization theory. In terms of the former, the purpose is to go beyond the prevailing analyses of Soviet industrial decision-making and economic geographical development by applying conceptual knowledge of organization theory to study the Soviet context. For the latter, I seek to evaluate and empirically test the rigor of organization theory concepts under the institutional conditions of the non-market Soviet economy.

Although each of the three key concepts of this study intersect with historical organization studies, the idea of "organizational imprinting" (Article 2) exemplifies well how the application of historical understanding is adjoined with organization theory (Kipping & Üsdiken 2014). Imprinting refers to an idea that organizations contain and reflect characteristics from the period of their founding and other sensitive points in time, which are strongly embedded in their culture and activities (Stinchcombe 1965; Johnson 2007; Marquis & Tilcsik 2013; Simsek, Fox & Heavey 2015). Thus, organizational forms and characteristics are not shaped only in response to their current environments but also their historical antecedents. Imprinted characteristics may also originate from organizations' earlier experiences, management decisions and strategies. All of these characteristics demonstrate how history plays an integral role in theory as a driver and/or moderator of organizational behavior. While case studies of imprinting focus on particular contexts, the underlying idea is to point out that the mechanisms of imprinting explain historical dynamics which are universally applicable and free of contextual specifics (Kipping & Üsdiken 2014, 541). Finally, it is important to highlight that imprinting is not synonymous with the concept of path dependence. The former involves environmental conditions, short sensitive periods and stability of stamped features as critical influence mechanisms (Marquis & Tilcsik 2013, 203), whereas the latter emphasizes historical accidents or recursive events (Garud & Karnøe 2001; Sydow, Schreyögg & Koch 2009).

2.2 Organizational institutionalism

This study follows a neo-institutionalist conceptualization of "institutions," which Douglas C. North has defined as humanly devised constraints that shape human interaction (North 1990). [3] These constraints provide structure by

[3] There are multiple definitions and conceptual discussion related to the meaning of "institutions." (for a broad review, see Scott 2013, 1 – 55). The literature in institutional economics typically distinguishes "old institutionalism" (e.g., Veblen 1899; Commons 1934), focusing on formal rules, norms and habits (Hodgson 1998), from

reducing uncertainty and guide social interaction by defining legitimate forms of behavior (North 1990, 3–4). An underlying theoretical starting point for organizational institutionalism is that organizational behavior, its development and consequences are linked to underlying institutions (Greenwood et al. 2008; Scott 2013). Importantly for this research, organizational institutionalism, and particularly its modern perspective, referred to as "neo-institutional" theory of organizations (DiMaggio & Powell 1991), helps to explain why organizational and institutional arrangements may take forms that can persist for extended periods of time, regardless of their efficiency. Whereas the perspectives in historical organization studies have advanced the field of neo-institutionalism by "importing history to theory," an equally important contribution for economic and business history would be to "export theory to history" (Rowlinson & Hassard 2013, 121).

Since the late 1970s, a growing tendency in organization studies has been to highlight the role of the institutional context in organizational activity (Meyer & Rowan 1977; Zucker 1983; Greenwood et al. 2008a; Scott 2013) as a factor determining appropriate, legitimate and meaningful types of behavior (Zucker 1983; DiMaggio & Powell 1983). Institutions also enact shared normative and cognitive belief systems in organizations (Scott 1983). DiMaggio and Powell (1983) argued that widespread homogeneity of organizational forms and practices is caused by isomorphic pressures to adopt legitimate (and not necessarily efficient) types of behavior, as they are defined by given organizational fields and societal environments.

Friedland and Alford (1991) argued that conflicting institutional pressures of the societal environment could be defined as an "inter-institutional system," consisting of different institutional pillars, which are connected to corresponding institutional logics. Thornton et al. (2012) specified the definition of institutional logics as "socially constructed historical patterns of cultural symbols and material practices," which are nested within higher-order logics in the inter-institutional system. Organizations and individuals use institutional logics to legitimize their norms, practices and behavior, but logics also direct and constrain their actions and orientation. Following the definition of a society as an inter-institutional system, institutional logics can be categorized as society- and field-level logics, which are shaped in constant interaction (Friedland & Alford 1991; Thornton & Ocasio 2008; Thornton et al. 2012). Institutional logics are

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several types of "new institutionalism" (e.g., Williamson 1975; North 1990; see also DiMaggio & Powell 1991, 3–5), which emphasize the role of transaction costs and institutions in constraining, regulating and legitimating modes of social behavior. A similar distinction exists also within organizational institutionalism (Selznick 1996; this chapter). Currently, North's (1990) definition of institutions remains the most influential, yet its short form does not encompass the role of important components, which some scholars see as critical to the creation of institutions. For instance, Searle (2005, 21–22) defined institutions as "collectively accepted system of rules (procedures, practices) that enable us to create institutional facts (i.e. collective assignments of status functions)," where language plays a fundamental organizing role in the existence and operation of institutions. For further discussion of the uses and conceptual issues related to institutions in institutional economics and organization theory, see Hodgson 1998; 2000; Hirsch 2013; Scott 2013; Meyer 2013.

historically contingent, and organizational fields may contain multiple, conflicting logics (Ocasio & Thornton 1999; 2008; Scott 2013; Greenwood et al. 2008). Conflicting logics may engage in competition and generate situations where the dominant organizational legitimacy is contested and its behavior and identity can become fragmented (Kitchener 2002). However, coexisting and cooperative forms of logics are also possible (Reay & Hinings 2009).

In this study, the institutional logics perspective is valuable due to its ability to explicate how the acts of decision-making and strategy are grounded in a cognitively influenced reproduction of different socially constructed and historically contingent values, assumptions and beliefs. Thus, historical studies of evolving field-level policies and decision-making (*history in theory*) benefit from insights into past institutional logics and their interaction, particularly if the studied field contains multiple logics which are contradictory to each other. The institutional logics perspective provides a bridging explanation between differences of historical representations (written sources) and historical events. In terms of data, historical research is restricted to those materials which have been preserved, and there is no possibility to observe directly how cognitive, cultural or ideological factors influenced actual decision-making events and their unfolding. However, methods of historical analysis make it possible to identify key institutional logics from historical accounts, which document acts of contemporary representation and analyze their different elements in order to interpret how these institutional logics (and the modes of their mutual coexistence) shaped and guided the decision-making and organizational actions of past actors. Finally, the institutional logics perspective allows a "consequentialist" [4] research approach (Kipping & Lamberg 2017), because institutional logics are historically contingent and thus avoid possible drawbacks of periodization. Even if the society (i.e., distinct type of inter-institutional system) formally undergoes swift institutional transformations, institutional logics survive due to their embeddedness in culture-cognitive and social-normative roles of informal organizational and human behavior.

The institutional logics perspective is used as the main tool of analysis in Article 1 to reframe the development of Soviet industrial location policy as a contested field, which was shaped by competitive interaction between three institutional logics. The theoretical value of applying this framework to the selected case emerges from the possibility to explain how seemingly contradictory historical representations and the actual historical events are interlinked via presence and the competition of multiple institutional logics. This explanation also expands the understanding of the historical contingency of the field (localized industrial location policy), because institutional logics are not tied to formal institutional systems (e.g., the Soviet Union). Whereas most historical analyses of field-level phenomena are restricted with such periodization, the institutional logics framework may yield broader insights into the studied phenomena, because it acknowledges culture-cognitive and social-normative mechanisms of reproduction that follow institutional changes (Scott 2013).

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4 Discussed in section 4.2.

2.3 Economic geography and path dependence

In this dissertation, the analysis of organizations and the historically contingent development of institutions makes frequent intersections with the discipline of economic geography. These links include a focus on the development of the spatial division of production (Walker 2000) and resource extraction, but, more importantly, on the institutional context accompanying them. Ron Martin (2000, 77) defined the institutional approach in economic geography as a

> …recognition that the form and evolution of the economic landscape cannot be fully understood without giving due attention to the various social institutions on which economic activity depends and through which it is shaped.

Although theoretical literature of new institutional economics (e.g., Williamson 1975; 1985; North 1990) and organizational institutionalism (e.g., Granovetter 1985; March & Olsen 1989) were important catalysts for this development, there have been also increasing intra-disciplinary pushes (e.g., Storper & Walker 1989; Thrift & Olds 1996) toward a more institutionally precise analysis of economic geography.

In this dissertation, I apply the institutional approach to economic geography to study particularly the spatial embeddedness of economic action and social-cultural and political contexts. Whereas the analytical and economistic approaches to location theory and industrial production (Sheppard & Barnes 1990) hold socio-political context as a "constant" variable, the institutional approach highlights the role of social action and institutional structures in shaping economic activity and geographically uneven processes (Mitchell 2000; Boschma & Frenken 2009). Institutional differences are causally linked to economic geographical development as a necessary, yet it is unlikely that they are a sufficient part of its outcomes (Martin 2000, 79).

I also approach economic geography as a political and scientific entity that is subject to development strategies in the form of regional policy. This entity refers to a localized discipline-specific tradition and organizational collective, which has shared socio-cultural and institutional norms, conventions and context-specific paradigms (Zyglidopoulos 1999; Marquis & Battilana 2009). My approach highlights contextual embeddedness and local traditions as important factors in the development of scientific disciplines, which not only represent local networks of knowledge, innovation and inventions, but also localized institutional norms and organizational environments (Almandoz, Marquis & Cheely 2016). Economic geography in particular is a discipline that is socially constructed rather than ontologically omnipresent (Barnes 2000).

In Anglo-American countries, there has been a significant surge of literature in economic geography during the recent decades with a focus on the embeddedness of technological innovation and diffusion to local institutional environments and arrangements. These factors have been emphasized as an explanation for why certain localities perform better and more dynamically than

others (Marquis & Battilana 2009; Trippl et al. 2016; Blažek 2019). To a large extent, the localized conditions are outcomes of evolutionary and causal historical processes, such as *path dependence* and *lock-in* (Mahoney 2000; Molema & Svensson 2019), with the latter being an outcome of certain types of *critical junctures* (Capoccia & Keleman 2007; Soifer 2012; Capoccia 2015; 2016). By interlinking the dimensions of neo-institutionalism, historical development and economic geography, these concepts provide useful theoretically grounded tools for the purposes of this study.

The concepts of path dependence and lock-in have been especially influential in the study of regional processes of economic geography (e.g., Boschma 2007; Martin & Sunley 2006; 2010; Hassink 2005; 2010; 2011; 2016; Blažek 2019). Although the concept has been recently utilized in several disciplines, such as historical sociology (e.g., Mahoney 2000) and organization studies (e.g., Schreyögg & Sydow 2011), the differences of definitions are relatively minor. According to Martin & Sunley (2006, 5), path dependence in economic geography refers to a place-dependent process, which

> is intended to capture the way in which small, historical contingent events can set of self-reinforcing mechanisms and processes that "lock-in" particular structures and pathways of development.

In connection to the organizational version of the concept, Schreyögg and Sydow (2011, 322) further emphasized that the concept of "process" necessitates that there are multiple contingent events which form a sequence that is imprinted by its course of action. Thus, path dependence also takes place through sequences of events, and any diversion from a path-dependent trajectory of development has to manifest in the form of a critical juncture. Critical junctures refer to periods of heightened contingency, when existing structural constraints of the path trajectory loosen ("permissive conditions") and open up space for divergent courses of action. If there is a sufficiently strong presence of aspects that shape the courses of action toward diverging outcomes ("productive conditions"), then the periods of critical junctures lead to an emergence of alternative paths (Soifer 2012).

"Lock-in" refers to a trajectory where self-reinforcing mechanisms support the prevalence of a chosen path and impose high costs on deviation from that trajectory (Sydow, Schreyögg & Koch 2009). Lock-in of particular structures of path dependence may occur in two ways (Soifer 2012). First, in the absence of permissive conditions, the path-dependent process continues without divergence, since established structures constrain any divergent paths from emerging, regardless of any possible presence of productive conditions. Second, in the absence of productive conditions, the established structures remain unchanged from the existing path of development, even if permissive conditions were present to allow the selection of diverging courses of action.

Critical junctures end after a set of reproductive mechanisms activates to reinforce the outcome of the juncture, thus establishing new structural constraints for divergence from the selected path. Schreyögg and Sydow (2011)

identify four types of such mechanisms (coordination effects, complementarity effects, learning effects, adaptive expectation effects) and highlight their self-reinforcing characteristics in producing increasing returns and positive feedback, while imposing costs for divergence.

In Article 3 of this dissertation, I have utilized the framework of critical junctures and path dependence to examine the ways in which the path-dependent development and lock-in of key Soviet industrial districts was tied to structural and institutional constraints in the state-managed regional strategy. This perspective emphasizes the role of reproductive and self-reinforcing mechanisms in shaping the institutional environment (and institutional logics) of Soviet strategic decision-making. In Article 3, I extend this perspective by evaluating the possibilities of escaping locked-in patterns in the light of findings from "industrial path-renewal" literature. The resulting view of the development of Soviet industrial districts thus encapsulates and brings together historical, institutional and path-dependent aspects of economic geography.

2.4 Industrial districts

According to the inter-institutional system perspective (Friedland & Alford 1991), society and field levels are in constant interaction regarding institutional logics and other institutional mechanisms. The same approach is also feasible for the study of national economic geographies. The historical and organizational development of economic geography at the society level manifests vividly in its regional and field-level subsystems, industrial districts. Industrial districts are not simply spatially delimited sites of industrial specialization—they are also localized communities, where geographical proximity between actors creates institutional and organizational spaces (Marquis & Battilana 2009). In terms of definition, what qualifies as a geographical organizational community is largely an empirical question, often based on bottom-up relations between actors and organizations (Aldrich 1999). In a state-managed society such as the Soviet Union, regional delimitation was also conducted formally by the state (see section 3.2), leading to varying regional concepts.

Representing a localized field-level entity, industrial districts offer a valuable level of analysis for the purposes of this dissertation. Industrial districts are important sources of economic development, due to associated agglomeration and scale economies (Porter 1990; 1998). From a historical perspective, industrial districts are in many ways showcases for national competitiveness (Delgado et al. 2012), technological capabilities (Lall 1992) and economic strategies (e.g., Rouvinen & Ylä-Anttila 1999; Jääskeläinen 2001), and thus they represent entities which are highly regarded in terms of state and society-level interests. Particularly in a state-managed system, such as the Soviet Union, industrial districts are economic subsystems, which illustrate long-term outcomes of organizational path-dependent and institutional dynamics of economic geography and strategy at both society and field levels.

The concept of an industrial district originates from Alfred Marshall's notion of distinctive regional concentrations of firms who operate within particular industries. Marshall suggested that the spatial proximity of enterprises and consequent agglomeration economies explained why such a form of economic organization had taken place during the first wave of industrialization in Western Europe during the early 19th century (Marshall [1890] 1922). After Marshall's works, the industrial district concept long remained forgotten by economic geographers until the 1980s, when the extraordinary success of Italian manufacturing industries was credited with similar organizational form (Brusco 1982; 1990; Boschma & Lambooy 2002; Becattini 2004). Italian authors highlighted the value of Marshallian district-based organization, further demonstrating the benefits of a non-metropolitan environment and shared cultural values within particular production regions (Zeitlin 1992). Soon thereafter, empirical evidence from other countries appeared to document analogous forms of industrial geography (Pyke & Sengenberger 1992).

These comparative contributions prompted further conceptual discussion regarding industrial districts. Harrison (1992) distinguished the novel contributions of Italian industrial district theory from the traditional agglomeration perspective, arguing that the contextual significance of a local non-economic environment and communal trust-building institutions embedded within industrial districts deviated from the traditional view, whereas agglomeration and competition between spatially co-located firms within the same industry followed the neoclassical logic of localized microeconomics. Park and Markusen (1994) criticized the New Industrial District (NID) literature, arguing that the theoretical core of the Italian district model was hard to apply to an analysis of districts in different countries and contexts. Instead, they suggested that industrial districts might appear in different forms (i.e., satellite platforms) due to specific economic and geographical conditions (Park & Markusen 1994, 101; Markusen 1996).

In the early 1990s, Michael Porter (1990; 1998; 2003) re-conceived the advantages of industrial district in the framework of competitive advantage. According to Porter, these "clusters" grasped the benefits of local external and agglomeration economies that refined firm performance in a competitive environment created by the coexistence of firms and subsidiaries within the same region (Porter 1990; Jääskeläinen 2001). A cluster consisted of a "geographically proximate group of interconnected companies, suppliers, service providers and associated institutions in a particular field, linked by externalities of various types" (Porter 2003, 562). Though different conceptual definitions have been proposed (e.g., Markusen 1996; Gordon & McCann 2000), Porter's analysis and conceptual model remains most influential despite concerns whether such a vague concept is relevant for broadly differing empirical or theoretical frameworks (Simmie & Sennett 1999; Martin & Sunley 2003). Zeitlin (2007) suggested that a thin and open model of industrial districts or clusters would best enable the accommodation of empirical findings from different types of regional entities into the body of theoretical literature. Extensions of cluster

literature have also been linked to other theoretical approaches in economics. Evolutionary economics (Boschma & Lambooy 1999; Trippl et al. 2015; Boschma & Frenken 2017), life cycle theory (Fornahl, Henn & Menzel 2010; Fornahl & Hassink 2017) and industrial dynamics (Frenken, Cefis & Stam 2015) present a few such examples of recent theories utilizing the cluster approach.

In the Russian and Soviet context, the development of regional industrial districts has been a long-term emphasis in national economic policy. Industrial specialization in economic regions began to take shape in Czarist Russia during the late 19th century (Spechler 1979; Owen 1995; Nykänen 2015), before economic regionalization schemes became institutionalized during the Soviet period (see section 3.2.). The development of industrial districts remains topical also in post-Soviet Russia. Though agglomeration economies associated with industrial districts are generally unmoved by changes in political system (Glückler 2007), the massive waves of migration and the destruction of old production networks caused by the collapse of the Soviet economy had major consequences for established industrial districts in Russia (Abazov 1999; Korobkov & Zaionchkovskaia 2004). This development partly explains why the first Russian clusters in the early 2000s emerged around new industrial sectors, such as ICT (Ivanov 2016), agriculture and pharmaceuticals (Lin & Ivanov 2017). Especially since 2005, the Russian federal and regional authorities have adopted cluster policies, inspired by Porter's model, to support the development of cities and areas, which represent "industrial nodes" in the former Soviet classification (Korolev 2013). While policy initiatives aim to pursue cluster-model growth through a system of "urban agglomerations" (Kinossian 2017), Russia continues to face a simultaneous challenge in revitalizing old and peripheral industrial districts constructed during the Soviet era (Plipenko 2011; Chasovsky 2015).

3 STUDY CONTEXT: SOVIET ECONOMY IN HISTORICAL AND ORGANIZATIONAL PERSPECTIVE

Based on centralized economic planning, the Soviet economic system was fundamentally different from Western market economies and it held a major importance in defining institutional and organizational forms of regional development policies of economic geography. In this section, I concisely discuss how the extant literature has evaluated the Soviet economic system and its system of industrial management. I also review the history of Soviet economic geography and its role as an academic community in the Soviet Union, both of which are central elements of the study context of this dissertation.

3.1 The Soviet economic system and its organization

Several scholars (e.g., Selznick 1952; Granick 1959; Ward 1967; Nove 1986; Dembinski 1991; Kornai 1992; Tsoukas 1994) have presented theoretical conceptualizations of the general logic of socialist economic systems. The Soviet economy falls within this category as the earliest and perhaps the most influential form of a socialist economy. According to Kornai (1992, 33–48), the classical socialist economy was a product of an institutionalized structure of power. Tsoukas (1994) articulated this as a dualist institutional configuration, where a "party-state" was in charge of directing the implementation of the socialist "vision" and monitoring its performance through an incentive system, while subordinate organizational units enforced these goals through a techno-structural and hierarchical socio-economic system.

The performance logic of socialist socio-economic systems manifested through four organizational mechanisms: 1) isomorphic relationships between enterprises and the state, characterized by structural and political-ideological dependences, 2) ceremonial management practices, 3) systematic decoupling of

formal and informal organizational practices and 4) separation of the actions of economic units from their consequences (Tsoukas 1994, 23). These mechanisms contributed to key institutional differences in industrial production, management and economic performance at all levels of the hierarchy (Kornai 1992).

The Soviet economic system underwent several reforms throughout the 20th century, yet remained largely unchanged after its initial formation in the early 1930s. Its most fundamental elements, the central planning of economic inputs and outputs and the hierarchical system of production and enterprises, became institutionalized already in the first five year plan between 1928 and 1932 (Nove 1986). At that time, the introduction of the Stalinist regime renounced alternative variants of socialism and adopted a forced industrialization program, which was enforced and monitored by a combination of planning and Party organizations (Kotkin 1995; Davies 1989; 1996). The economic and political system operated as a "party-state," where the Communist Party held a dominant political role over the organizational apparatus, which performed the administrative functions of the system (Kornai 1992, 36–39). The party organs used formal and informal institutional mechanisms to monitor, enforce and incentivize economic functions toward desired outcomes. In practice, this meant that the formal status of the economic organs did not necessarily reflect their actual role in economic management and decision-making. The State's Planning Committee (Gosplan) was an exemplary case of an organization which formally undertook planning and executive functions at the top of the economic hierarchy, yet in practice was closely monitored, controlled and directed by the Politburo's members (Zaleski 1980; Harrison 2007).

The economic objectives of the Soviet leaders translated into Soviet economic policy in the form of five-year plans, which were declared by the Party Congresses. A five-year plan consisted of detailed instructions for planning organs, who were responsible for allocating resources to production establishments. The system of planning was supposed to replace market functions and oversee all aspects of economic activity (Kornai 1992, 111). Five-year plans were amended with annual and quarterly plans, which gave specified aggregate instructions for individual industrial ministries (Barnett 2004; Harrison 2007). Dyker (1992) highlighted that the Soviet planning system originated from the task of creating industrial assets instead of merely managing them. In practice, the planning mechanism began to incorporate a plurality of informal negotiations between the planning and producing units (see Dyker 1992, 6–12; Kornai 1992, 110–127). Information problems, plan subordination to political maneuvers and bargaining between principals and agents resulted in inherent distortions of the formal plan, which resulted in skewed reporting, biased statistics and a systemic conflict between the planners and executive actors (Kornai 1992).

Table 1 presents a stylized overview of the organizational hierarchies from the perspectives of political economy, industrial organization and economic geography (section 3.2). Overall, the Soviet economic organization was a highly

complex system of hierarchical networks and interconnections (for a comprehensive discussion, see Zaleski 1980; Freris 1984; Kornai 1992), which included both formal and informal influence mechanisms due to monitoring and enforcement problems. Various alternative vertical hierarchies existed besides the formal hierarchical system, for example, in the case of enterprises that operated under the direct control of All-Union industrial ministries or other state-level organs (Freris 1984; Nove 1986).

TABLE 1 Vertical hierarchy of the Soviet economic organization[5]

	Political system	Industrial economic system	Economic geographical system
All-Union level	Central Committee of the Communist Party	GOSPLAN	
	Politburo		Economic regionalization
	Council of Ministries (Council of People's Commissars until 1946) (All-Union ministries)	All-Union Industrial ministries	
	Presidium	Chief administrations (*glavki*)	
	Supreme Soviet (Soviet of the Union & Soviet of Nationalities)		
Union-Republic level (Federal republics, ASSRs)	Council of Ministries (Council of People's Commissars until 1946) (Union-Republic ministries & Republic ministries)	Republican industrial ministries	Economic regions
	Presidium	Production associations	Territorial-production complexes
	Supreme Soviet	Trusts	
Regional level (Oblast', Kray)	District committees	Combines	Territorial-production complexes
		Trusts	Industrial nodes
Individual level		Industrial enterprises	Industrial enterprises, factories, production sites

From a historical perspective, the Soviet economy was built on the ruins of the Czarist economy. Before World War I, the structure of the Russian economy was overwhelmingly based on agriculture, although isolated regional centers of heavy industry existed and experienced rapid periods of growth in the late 19th century (Gershenkron 1962; Gatrell 1986; Owen 1995; Nykänen 2015). After the

5 Table 1 is based on Zaleski 1980; Aganbegyan & Bandman 1984; Freris 1984; Nove 1986, 4–11; Kornai 1992. The purpose of this table is illustrative rather than exhaustive, and thus it only includes the most essential formal units of the system. For example, the role of R&D institutes and organizations is excluded here (see Graham 1975).

October Revolution and economic turmoil during the early 1920s, the Soviet economic system adopted its general form and launched the first Five Year Plan in 1928 (Davies 1989; Barnett 2004). Catching up to and overtaking advanced capitalist countries in terms of their industrial output (per capita) and technological level became the focal goal of the emerging Soviet economic strategy. This strategy also included a preference for capital goods over consumer products and a long-term perspective on industrial location policy (Erlich 1960; Barnett 2004). Heavy industries had received state priority already during the Czarist era, and they continued to do so due to the strong lobbying position of the sector (Harris 1999; Barnett 2004, 117) and military considerations (Fallenbuchl 1970). The heavy industry sector also boosted short-term growth rates and provided employment possibilities for less educated workers, both of which helped in institutional legitimation of the Soviet system (Nove 1969; Dyker 1992).

World War II did not introduce fundamental changes to the formal system of planning, but it had a considerable impact on institutions within the system. In particular, the relative influence of the defense industry sector increased and so did the organization of industrial production in vertically integrated large-scale complexes, such as TPCs (Harrison 2007). In the 1950s and 1960s, the Soviet economy began to find it difficult to maintain technological and innovation development at a competitive level compared to its rival Western economies (Amann, Cooper & Davies 1977; Amann & Cooper 1982; Parrott 1983). The core problem regarding innovations was not their absence, but rather their adoption and implementation in production within the planning system (Dearden, Ickes & Samuelson 1990). In the military sector, a preferential policy and abundance of resources helped to alleviate the situation, but this did not extend to the benefit of other sectors (Davis 1990). Fundamental problems in the efficient creation of industrial innovations within the system of planning (Grossman 1966) were partly circumvented by means of technological transfers (Autio-Sarasmo 2016), yet these grew more drastic toward the late 1970s and early 1980s. By that time, the cumulative and interlinked effects of innovation problems, the planning system and unsuccessful reforms of the industrial management system (section 3.2) began to manifest as a decreasing, and eventually stagnating, rate of economic growth, which contributed to the decline of the Soviet economic system.

Overall, there have been multiple yet non-pervasive appraisals of the Soviet economic system and its performance. Friedrich Hayek (1944) argued that socialist economic systems were fundamentally unable to solve the problem of decentralized knowledge regarding optimal planning, and thus they remained inferior to market economies. Following his pessimistic view, the question whether the Soviet economy was inherently incapable of maintaining high economic performance or reforming its system during the late 20th century has remained a matter of dispute among experts of Soviet economy (Davies 2010). Hanson (2003), Gregory (2004) and Spulber (2003) have argued that the system of Soviet socialism restricted the realization of these goals, whereas Khanin (2008) and Allen (2003) have stressed that the top Soviet management was largely to

blame for the economic stagnation and political development during Brezhnev's regime.
Barnett (2004, 125) highlighted that a success of any type of rational planning of society depended on an elaborate and well-informed conception of how the system should operate. Thus, imperfect information, heuristic decision-making and discontinuities in enforcement were sufficient conditions for distortions and the inability to reach set targets. The Soviet planning mechanism formulated goals more as a result of political initiative than from theoretically and empirically grounded scholarship (Dyker 1992, 1–2), which further problematized both the operation and management of the system. In these conditions, the role of institutional logics, persistent cultural-cognitive characteristics and strategic inscriptions (Koch 2011) played a large role in defining legitimate courses of actions for actors within the system.

3.2 Development of economic geography in the Soviet Union

"Economic geography" as a concept refers linguistically to two different meanings: 1) physical and spatial relations and distribution of economic activity and 2) its study by means of scientific methods conducted in academic communities. In this subsection, I discuss how economic geography developed in the Soviet Union, observing these dual definitions of the concept.

The most striking challenge for Czarist, Soviet and Russian economic geographers and politicians has been the task to identify and exploit vast geographical distances and accompanying natural endowments, and to organize industrial production efficiently within these spatial conditions. As Sachs and Warner (1995; 2001) have observed, such an abundance of natural resources may also prompt adoption of suboptimal economic structures ("resource curse"), which are excessively dependent on resource extraction. Strong path-dependent tendencies in the development of industrial infrastructure can be identified since the beginning of Russian industrialization (Blackwell 1968; Bater & French 1983; Bradshaw 1991). Construction of railroads during the 19th century was the most important industrial milestone of the Czarist era, which also set definite limits and constraints for early Soviet industrialization (Haywood 1998). After the October Revolution, the electrification campaign (Coopersmith 1992) became the main industrial objective of the Bolsheviks. Lenin considered electrification as one of the most important methods of industrializing the country and securing the political power of the Bolshevik regime. The state-initiated campaign of electrification (GOELRO)[6] was drawn up in 1920–1921. Besides economic and political objectives, the electrification program was simultaneously an influential template for economic geography due to its emphasis on regional power stations. Despite frequent acclamations of its importance in Soviet economic geography literature, the actual economic effect of the GOELRO plan has been questioned

6 State Commission for the electrification of Russia.

(Zaleski 1980; Barnett 2004, 96). According to Coopersmith (1992), the criteria of economic rationalization was present in the GOELRO scheme, but the chosen method of regionalizing the production of electricity was a politically grounded maneuver that allowed the central state to monitor the operation of economic regions.

During the first Five Year Plan (1928–1933), forced industrialization assigned the emphasis of economic geography toward eastern regions and industrial expansion in Siberia, particularly in the form of the Ural-Kuznetsk Combine (UKC) project. The goal of the UKC was to create industrial links between the Kuznetsk Basin (which contained vast coal reserves) and the Ural region, where metallurgical specialization was particularly strong. At the same time, the focus of economic policy began to shift from the established industrial centers in European Russia toward heavy industrial production in Siberia and other eastern regions (Holzman 1957; Lonsdale 1961).

During the 1940s, World War II and its aftermath caused significant relocations of industry. Industrial evacuations took place from the occupied and endangered regions into remote Siberian regions. This relocation of industry diversified the industrial structure of the Ural region, particularly branches of machinery and the defense sector, to some extent at the expense of respective industries in European Russia (Lieberman 1983; Samuelson 2011).

World War II and the strategic bipolarity also challenged pre-existing conceptions of economic and regional security. In terms of economic geography, the chairman of the Gosplan, A.N. Lavrishchev proposed in 1948 that a system of 13 economic regions as autarkic regional entities would respond to potential military threats and atomic warfare (Saushkin 1966). However, this system proved non-economical and problematic in terms of the geographical division of production endowments. In the 1950s, the Soviet leadership adopted the territorial-production complex (TPC) model as the cornerstone of economic regionalization in order to economize regional production and formalize inter-regional relations (Saushkin 1966; Kolosovskiy 1969). Nikolay Kolosovskiy (1969, 142–183), the author of the theory, defined TPCs as

> interdependent (coordinated) combination of production enterprises and lodgings (population centers) either in particular territories (local complexes) or within the economic region or sub-region (regional complexes).[7]

Kolosovskiy emphasized the organization of different linkages and production procedures as "(energy)-production cycles," which constituted a vertical chain of industrial production from resources to final products. Kolosovskiy (1958) also saw TPCs as a model which gave the Soviet economy a competitive advantage over capitalism and thus was suitable for conditions of peaceful coexistence and competition between the two superpowers.

Lonsdale (1965, 477–478) linked the TPC model and its operational form to Alfred Weber's (1909) locational analysis, concerning similarly defined production cycles, and to Walter Isard's (Isard & Vietorisz 1955; Isard & Schooler

[7] Author's translation.

1959; Isard 1960) concept of the industrial complex. Isard's industrial complex model itself relied on Weber's optimal location analysis, where the spatial concentration of industries into complexes helped firms to minimize their observable transaction costs within particular input-output production patterns and consumption hierarchies (Isard 1951; Isard & Vietorisz 1955; Gordon & McCann 2000). Linge, Karaska and Hamilton (1978, 158–159) estimated that TPC's energy-production cycles were comparable to the Isardian complex model, depending on the degree to which the Soviet complex model considered the practical cost efficiency of theoretically conceptualized cycles. Soviet scholars also recognized the value of Isard's ideas. Kolosovskiy's student Yulian Saushkin commented that Isard's industrial complex model provided a parallel concept that could be utilized in the development of Soviet TPCs with minor differences (Saushkin 1961). Inside the Soviet Union, Kolosovskiy's model received official endorsement from the 20th Party Congress (Saushkin 1966). Despite slight criticism from fellow economic geographers and suggestions for modification (e.g., Moshkin 1962; Lis 1975; Probst 1977), its fundamental ideas remained uncontested during the Soviet period.

Regionalization schemes underwent several changes, due to which the amount of economic regions and TPCs fluctuated. Kolosovskiy (1958) proposed an extension of Lavrishchev's 12 economic regions into 26 TPCs. Alampiev (1960, 47–51) estimated that the optimal amount of TPCs was somewhere between 20 and 30, which could be organized under a broader division of five to six economic regions. Lowering of transport costs, development of interregional industrial nodes and growth of population and living standards were the most concrete reasons for territorial reforms (Alampiev 1960).

In the 1960s, geographical expeditions revealed new deposits of natural resources in Western and Eastern Siberia (Saushkin 1966), which led to increased demands to promote the oil and gas industry in Western Siberia. The expansion of resource-extraction production sites to Central Asia and Siberia coincided with energy shifts from coal to oil and then to natural gas during the 1970s (Bradshaw 1991). Following the logic of energy-production cycles, this also led to the formation of TPCs in these regions. In the 1970s, the largest regional investments were directed at the eastern regions, where TPCs based on hydro-energy were formed in Angara-Yenisey, Middle Ob' and a coal-powered TPC was planned for Sayan in the 1980s (Aganbergyan & Bandman 1984). These plans were officially drawn up until the 1990s, but the economic crisis brought on by Perestroika disrupted their implementation (Bradshaw 1991).

Economic geography as a scientific and academic discipline was formally founded during the early decades of Soviet rule (Saushkin 1966). Academic study of economic geographical subjects had been modest in Czarist Russia, focusing primarily on cartographical studies (Saushkin 1966). Lenin's emphasis of economic geography in his "Draft Plan for Scientific Technological Work" (Lenin 1918) promoted the legitimation of the discipline and encouraged academic inquiries within the field. During that time, the Soviet Academy of Sciences increased its status into that of a dominant science institution in the Soviet Union

and successfully decoupled academic research from pedagogical tasks. Thus, research activities were concentrated in research institutes under the Academy of Sciences (and within some of the major universities), while most of the teaching responsibilities were assigned to universities (Graham 1975, 325).

During the 1920s and early 1930s, several theoretical approaches competed for paradigm status in economic geography. Bernshstein-Kogan (1924) and Baranskiy (1926) introduced a so-called "regional approach," which emphasized territorial division and the centralized coordination of economic production. Chayanov's (1921) "nomographic approach" and Den's (1924) "commodity-statistical approach" provided alternative paradigms, but fell victims to field-level rivalries. In 1934, the Central Committee condemned them as "bourgeois" methodologies. Nikolay Baranskiy, the chair of economic geography at Moscow State University (MSU) and the journal editor of *Geografiya v Shkole* (literal translation "Geography in School") (1934), was able to establish strong academic authority within the institutionalized field. Alongside MSU, economic geography was recognized as a discipline in the Communist University named for Ya. M. Sverdlov and in the Russian Association of Scientific Research Institutes in the Social Sciences during the late 1920s, and later in the Department of Economic Geography of the Soviet Geographical Society (1934) and the Institute of Geography at the Soviet Academy of Sciences (1937). After the Second World War, the focus of economic geography extended from the development of regionalization theory into more practical tasks, when the leading institutions organized numerous field expeditions to Arctic and Siberian regions (Saushkin 1966). At the same time, the emphasis on industrial location theory remained strong (Tokarev 1956; Feygin et al. 1963). Also, the value of mathematical modeling in regional planning aroused interest among Soviet economic geographers (Jensen & Karaska 1969).

In the 1960s, the study of economic geography was conducted in the research institutes of the Gosplan, the Soviet Academy of Sciences and higher educational institutes, particularly MSU and Leningrad University (Saushkin 1966, 74). The Institute of Economics of the Academy of Sciences USSR, under the leadership of Ya. G. Feygin, specialized especially in industrial location problems (Saushkin 1966; e.g., Feygin 1958). According to Saushkin (1966), there were 57 departments of economic geography at Soviet higher education institutes at the time. In the Gosplan, there were two sub-units—the Council for the Study of Production Forces (SOPS) and the Institute of Complex (Integrated) Transport Problems (IKTP)—with a particular emphasis on economic geography (Saushkin 1966).

The study of TPC theory remained active during the 1970s and 1980s, due to its role in economic plans and its endorsed status in the five-year plans. At the same time, orientation toward economics- and practice perspectives was gaining ground in theoretical debates of Soviet economic geography (Lavrov & Aganfonov 1974). Despite the increasing focus on capital investments and economic perspective (e.g., Krasovskii 1984), the official policy of expanding Siberian TPCs was not exceedingly questioned, and despite encountered

problems of urban development (e.g., Demko 1987), its long-term potential continued to attract Soviet economic geographers.

3.3 Soviet industrial management and decision-making systems

Despite a seemingly formalized organizational hierarchy in Soviet economy, the reality and manifestations of strategic planning, management and execution of industrial production were greatly influenced by informal institutional practices, including negotiations between different vertical and horizontal levels over production quotas, resource inputs and supply channels (Granick 1960; Nove 1986), and black market exchange, commonly referred to as *blat* (Ledeneva 1998; 2000). Vertical integration of the bureaucracy relied on a sophisticated and complex system of negotiations and bargaining in the planning mechanism (Kornai 1992), which had dire implications for decision-making and industrial management.

While the precise details of top-level strategic decision-making remain undocumented, their main characteristics are known (Kragh 2013). According to Kragh (2013, 4), the key strategic decisions were made by the Politburo—a group of 5–10 individuals—based on reports from government organs. These decisions were generally discussed in informal meetings, which left no material documentation. Secondary and executive decisions were subordinated to the lower echelons of the hierarchical system, although they were closely supervised from above (Markevitch 2005). For example, in terms of economic geography, decision-making regarding industrial location was commonly undertaken by the officials in Gosplan and industrial ministries (Saushkin 1966), who still had to follow the investment decisions and allocation principles determined by the Presidium and the Party Congress.

In the articles of this dissertation, there are several remarks to the multiplicity of different rationalities as drivers of Soviet industrial and regional decision-making. Economic logic was fundamentally rooted in the Soviet industrial system and its management through planning, although not always as dominantly as in the market economies. In the 1920s, the Soviet leadership, and particularly Vladimir Lenin, endorsed industrial organization of labor according to the principles of Taylorism, which was supposed to create the necessary cultural infrastructure for economic development toward socialism (Sochor 1981). Despite the capitalist character of Taylorism, Lenin viewed it as a template which could be applied as a method of building a state-controlled and scientifically grounded management system over society (Bailes 1977; Sochor 1981). Formal recognition of economic objectives became institutionalized during Stalin's industrialization campaign and the development of the five-year plan scheme (Harrison 2007). In the Stalinist system, hierarchical allocation of tasks within the system became the main objective of the planning over formulation of economically efficient plans according to acquired production feedback (Zaleski 1980). Complexity of the planning mechanism in coordinating all economic

activity resulted in a system of informal practices where the role of management predominated planning, not vice versa (Berliner 1952; Zaleski 1980; Kornai 1992; Rees 1997). These practices emerged from the disconnection between formally announced objectives for planning agencies and their managerial execution due to the enormous magnitude of the task assigned to Union-level planning officials relative to their capacity to process information and distribute resources (Zaleski 1980; Kornai 1992).

During the 1950s and 1960s, Nikita Khrutschev initiated several attempts to reform the Soviet system of industrial management, mostly resulting in failure (Conyngham 1973; Dyker 1992; Kibita 2013). The most renowned cases are the 1957 territorial reorganization scheme and the 1965 economic reform, which both illustrated the dynamics and conflict between economic and regional institutional logics (see Article 1). In the former case, industrial and construction ministries were reorganized into regionally distributed councils of the national economy (*Sovnarkhoz)*. The reform sought to increase inter-branch connections and develop more decentralized production networks. However, this change of formal economic institutions did not provide intended solutions to problems in production. Instead, it increased the tension between central and local management departments, who both endeavored to gain control over coordination of production and economic plans. The central authorities reacted quickly to the situation and the reform was reversed in less than a year (Kibita 2013). The 1965 economic reform attempted to solve a similar dilemma between complex industrial decision-making and the monolithic planning system by decentralizing certain management functions to the enterprise level. The reform also sought to rectify observed incentive problems by creating a new scheme of success indicators for enterprises, which were under the monitoring of industrial ministries. However, the vertical hierarchy of the planning system made the distribution of decision-making mandates exceedingly difficult. When different organizational levels had different responsibilities over plan fulfillment, the industrial ministries found themselves incapable of coordinating the tasks for which they were held accountable (Berliner 1983).

In the aftermath of these events, a new theoretical framework of "scientific management" was developed for the Soviet industrial management system, in order to reconcile incentive and coordination problems and pressures to increase innovation performance while sustaining the existing political structure (Conyngham 1982; Beissinger 1988). The development and adaption of cybernetics in economic planning were closely associated with these goals (Gerovitch 2000). Despite early widespread enthusiasm toward the possibilities of mathematical modeling and the optimizing of the planning mechanism during Khrutschev's regime, the actual role of cybernetics in guiding economic decision-making was subdued under the influence of other institutional logics during Brezhnev's era (Peters 2012). During the 1970s, reforms and modifications to planning and management system had become "routinized" (Berliner 1983), meaning that formal announcements of incremental and technical changes were

introduced to the existing system without a lasting, genuine transformation of management behavior.

In the 1980s, Joseph Berliner (1983, 363–364) observed that the "conservatism" of the Soviet management system was also extended to local discourses: the term "reform" was replaced with the expression "improving the operation of the economic mechanism." This detail crystallizes how the planning system was gradually unable, and possibly reluctant, to fundamentally solve the problems of imperfect information, enforcement and monitoring, which characterized the relationship between economic producers and central planners (Kragh 2013). Instead, the planning system became more and more comprehensive in order to minimize the amount of management decisions of individual managers. Markevich (2011) modeled this problem by demonstrating how the decision-maker could use "rules of thumb," "stick" and "carrot" to carry out management tasks in an environment of asymmetric information. The economic reforms and the high hopes directed toward mathematical models of planning and computerized systems to address these problems reveal how the formal assumption of the superiority of the planning mechanism remained institutionally embedded in the Soviet economic system. In sum, the "economic logic" (see also Article 1) was an important but not sufficient constituent in the coordination of the Soviet industrial system.

4 RESEARCH DESIGN

4.1 Research problem, questions and design

The research problem arises from the prospects that approaching economic geography from a neoinstitutionalist perspective offers a deeper understanding of the Soviet economy. Applying the neoinstitutionalist theory of organizations to study the development of Soviet economy and economic geography not only touches on presently ongoing debates on the subject (e.g., Hill & Gaddy 2003; Markevich 2011; Mikhailova 2012), but also opens up an array of new questions that may inspire the field in a more analytical and theoretical direction. Thus far, there has been a limited amount of studies which combine insights from neoinstitutional organization theory in the context of the Soviet Union (e.g., Deroy & Stewart 2015) or extend them to its economic system and economic geography. The Soviet history in itself is loaded with organizational peculiarities, and hence it offers a valuable context for understanding how institutional and organizational mechanisms operate in state-dominated and non-market environments. By taking the initial steps in this direction, the selected research approach yields a novel contribution to existing debates.

I have chosen the domain of economic geography as the main focus of inquiry for three particular reasons. First, the historical-contingent concepts in organization theory highlight the role of path-dependent mechanisms in shaping recursive historical development (Sydow et al. 2009; Schreyogg & Sydow 2011; Clemente, Roulet & Durand 2017) and, by nature, economic geography is an exceedingly path-dependent subspace of economic activity. Second, the historical conditions of economic geography have come to play a topical role in contemporary Russia. Currently, the Russian strategy programs on modernization and long-term development have placed particular emphasis on the development of spatial economic structures and regional agglomerations (Zubarevich 2009; Kinossian 2017b), and the outcomes of these initiatives may

hold dire implications for Russia's economic future. Thus, historical contingency within society- and field-level development is in important role in understanding current development. Third, the literature on Soviet economic history has remained relatively separated from economic geography, despite clear intersections between these two fields (Zeitlin 2007). Coupled with interest in the long-term evolution of industrial agglomerations from yet another stream of literature, industrial cluster studies (section 2.4), there is room for an integration of the literatures to study the Soviet context of economic geography.

TABLE 2 Research design

Articles	A1: Competing institutional logics in Soviet industrial location policy	A2: Following the old road: Organizational imprinting and the regional policy of Russia	A3: State management and strategic lock-in: Development of industrial districts in the Soviet Union
Research questions	How to explain inconsistencies, irregularity and the "irrationality" of the Soviet industrial location policy over a long-term period?	How does the Soviet legacy of TPCs manifest in the contemporary Russian economic geography and urban agglomeration strategies?	What kinds of strategic constraints interfered with path-renewal processes and the reindustrialization of Soviet heavy industrial districts?
Explanatory models	Institutional logics	Imprinting	Path dependence
Domain of inquiry	Economic geography as *an outcome of policy*	Economic geography as *a paradigm*	Economic geography as *strategy*

Table 2 presents an overview of the dissertation, summarizing the research questions, explanatory models and domains of inquiry of each dissertation article. All three of the articles focus on Soviet economic geography from a neoinstitutionalist perspective in order to demonstrate how organizational mechanisms can affect this field through institutional arrangements. Both institutional logics and imprinting are examples of mechanisms that influence the emergence and dynamics of field-level paradigms. Regarding both decision-making and paradigms, institutional logics direct the attention of actors, while

constraining orientation to consider alternative sets of behavior (Dosi 1982; Thornton et al. 2012). Paradigms can also become organizationally imprinted, such as in cases where initial environmental conditions legitimize certain types of paradigms while averting organizational attention to other variants (Zyglidopoulos 1999). The difference between imprinted paradigms and dominant institutional logics is that the former are not necessarily based on the pillars of the inter-institutional system (Friedland & Alford 1991), which is the primary source of the latter. Path dependence is a concept which encapsulates the constraining role of institutions by focusing organizational attention to those strategic options that conform to organizational conceptions of legitimacy. Thus, all three of the articles contribute to an understanding of the development of the Soviet economic (geography) system as an entity shaped by organizational mechanisms and institutions.

In the first article, I study the Soviet industrial location policy as a long-term determinant of regional development. Recurrent location choices shaped the Soviet economic geography into those regions and forms that the decision-makers at the ministerial and All-Union levels deemed desirable. However, economic regionalization has been labeled an aggregate of incremental irregularities and "irrationalities" (e.g., Hill & Gaddy 2003) over the decades, which indicates that location policy was not rooted in a stable strategic vision of desirable outcomes, but instead multiple decision-making logics. The first article outlines the makings of this policy by identifying and analyzing three field-level institutional logics which found themselves competing for political influence and legitimation in order to gain a decisive role in directing economic geography. The results showcase how both material and non-material aspects of Soviet economic geography are produced as an *outcome of policy*, where different institutional dynamics at the field level influenced, and were influenced by, overlying society-level dynamics.

The effect of institutional logics on organizational culture, identity and strategy changes over time (Thornton et al. 2012). In the second article, I focus on the temporal influence that dominant organizational templates impose on the organizational community in terms of field-level paradigms and institutional arrangements. I use organizational imprinting (Marquis & Tilcsik 2013; Simsek, Fox & Heavey 2015) as an explanatory model to study the characteristics of Soviet TPCs and their extended influence on the contemporary Russian economic geography community. I first analyze how the TPC model was legitimized and sustained as a dominant form of regional planning and economic production during the Soviet era. Second, I examine post-Soviet Russian strategies and economics discourses based on the industrial cluster model, compared to characteristics of the Soviet TPC model, arguing that there are plausible grounds to interpret the former as an imprint manifestation of the latter, due to distinctive resemblances between utilization and paradigmatic characteristics of both models. As a result, the article highlights the role of economic geography as *a paradigm*, which demonstrates how localized organizational communities adhere

to their past organizational identities and carry institutional continuities through cultural-cognitive influence mechanisms (Scott 2013).

Finally, in the third article I point out that the institutional environment may also impose significant constraints on regional industrial development. Escaping locked-in trajectories and diverging to alternative courses of development via "path-renewal" processes necessitates breaks away from established trajectories at critical junctures (Martin & Sunley 2006; Soifer 2012). During these junctures, the binding constraints of established conditions become loose and permit the emergence of productive actions and contesting of institutional designs toward alternative forms of development. In the article, I analyze how state-level strategies and the implications of path dependence influenced Soviet heavy industry districts and their path-renewal processes during critical junctures, resulting in mature and locked-in structural orientation. I conclude that Soviet economic institutions, path inscription (Koch 2011) and the conservative management system contributed to inertia and the lock-in of the Soviet district-specific strategies. Overall, the article highlights the role of economic geography *as a strategy*, which defined the path of Soviet economic development toward an industrial decline of its most important production regions.

In sum, the articles demonstrate how the impact of organizational mechanisms had a multi-level effect on Soviet economic geography. Hence, organizational mechanisms are an important constituent in explaining Soviet economic policies and economic geographical development. Despite apparent institutional variances between the Soviet socialist system and market economies, it is possible to use similar conceptual approaches to explain how historical, economic-geographical and organizational outcomes unraveled in both cases. In line with the "history in theory" perspective, this experiment of using organization theory in the Soviet context also makes it possible to reflect how theoretical explanations of organizational behavior originating from Anglo-American countries account for organizational variances in a state-dominant, non-market research context.

4.2 Research method

The methodological approach of the dissertation articles is closely related to a "historical approach in process organizations studies," which represents a relatively unexplored field in business history (Kipping & Lamberg 2017). This approach is closely related to what Kipping and Üsdiken (2014) have labeled as "history in theory," referring to the use of history as an integral part of theoretical model. Essentially, a historical process organization study is interested in extending the depth of organization and process theories by analyzing historical structures and processes ("how did that happen?") as reflections of theoretically assumed organizational mechanisms, rather than focusing on accurate ontological representation of the past ("what happened?") (Kipping & Lamberg 2017). These approaches also contain intersections with the historical realism

approach (Vaara & Lamberg 2016) and analytically structured business history (Rowlinson et al. 2014).

This study follows a (con)sequential approach (Kipping & Lamberg 2017) in the sense that I have situated historical-organizational mechanisms, such as institutional logics, imprinting and path dependence, at the core of the research design in each paper as a starting point for a historical inquiry. These theoretically grounded perspectives serve as a lens to allow reinterpretation of the development of historical business environments by focusing on effects and conditions that shaped contemporary agency during past events in institutionally constrained organizational environments. This approach also enables comparisons of decision-making and organizational development between highly context-specific environments because of its context-free theoretical underpinnings (Kipping & Üsdiken 2014). Hence, analyses of similar organizational mechanisms in different contexts [e.g., comparing the field-level competition of institutional logics between Soviet industrial location policy (Article I) and a Canadian health care community (Reay & Hinings 2005)] may also yield novel insights into and implications of context-specific cases of business and organizational history. In the case of the Soviet Union, this approach offers particularly promising avenues for future research and reinterpretations, due to the lack of theoretical cross-references in the extant literature and the importance of understanding the ways in which the past can possibly shape future outcomes.

Finally, an important methodological consideration in this work has been its emphasis on "historical cognizance" (Kipping & Üsdiken 2014), which refers to a sensitive and nuanced understanding of the conditions that the past imposes on the studied context at a certain time. In particular, "historical cognizance" highlights that analysis of historical particularities and contingencies could take steps toward a more explicitly theorized understanding of history (Isaac & Griffin 1989, 886; Kipping & Üsdiken 2014). These considerations have been an important methodological point of departure for each of the dissertation articles.

In Article 1, I analyze discourses and rhetorical practices in : 1) Soviet economic geography literature and 2) Western scholarly publications focused on Soviet economic geography as historically embedded expressions of institutionalized vocabularies and their underlying institutional logics (Suddaby & Greenwood 2005). In order to gain a comprehensive understanding of the extant literature, I conducted an extensive literature review and then analyzed the content of publications through an iterative process of metasynthesis (Jensen & Allen 1996; Lamberg et al. 2014). After going through the materials in search of discursive claims which contained explicit statements regarding factors of industrial location decision-making, I categorized the findings as "claims" under broader domains, which I then reviewed and arranged according to the framework of institutional logics. A complete summary of the methodological process is included in the appendix section of the article.

Article 2 utilizes Simsek, Fox and Heavey's (2015) framework as an analytic tool to inquire how the Soviet economic geography and particularly the TPC

model manifest as imprints in Russia's economic geography. Here, the imprinting framework serves as a systematic methodological tool in organizing the findings from the data through qualitative analysis of extant literature from both Soviet and post-Soviet academic outlets of economic geography. A similar method of metasynthesis as in Article 1 was used to arrange the findings in order to match their correspondence with the imprinting framework. Methodologically, the appeal of using a pre-existing imprinting framework stems from the fact that the imprinting concept is usually employed in quantitative studies, and thus there are few precedents to systematically study imprinting effects. Also, the framework of Simsek, Fox & Heavey (2015) is well-grounded in a large review of detached studies on imprinting effects, and the use of this framework addresses their call (p. 25) for more comparative and rigorous findings, which may also yield possible theoretical contributions. Similarly to Article 1, a complete discussion of the methodological process is included in the appendix section of Article 2.

In Article 3, the purpose of historical analysis was to explicate mechanisms of regional path dependence as constitutent of Soviet industrial lock-in. In order to avoid "unidimensional invocations" (Glasmeier 2000, 269–270) of path dependence and its underlying factors, I employ a model of critical junctures (Soifer 2012) to explicate diachronically how context-specific path-reinforcing constraints controlled the process of path dependence and maintained continuity by imposing high costs on path breaks and renewal processes. Soifer's (2012) model of critical junctures consists of four parts : critical antecedents, permissive conditions, productive conditions and mechanisms of reproduction. I first consulted the existing secondary literature of the case districts to identify 9 critical junctures (3 per district) in their historical development. I then analyzed the source materials (see section 4.3) and conducted a synthesis of the events surrounding these junctures, in order to evaluate how the findings corresponded to the components of the critical juncture model. Finally, I consulted the current theoretical and empirical literature of path dependence, lock-in and industrial path renewal and rechecked the source materials for possible complementary observations that might be relevant to assess and helpful in refining the analytical framework.

4.3 Source materials

Following the opening of Soviet archives (sometimes referred to as the "archival revolution" (Markevitch 2005; Gatrell 2006; Kragh & Hedlund 2015), the possibilities to study the Soviet economy through primary sources have increased substantially. Kragh (2013, 2) observed that the access to new archival resources has brought new discoveries around some topics, such as labor camps, repression campaigns, demography and defense, but regarding most economic functions of the system the new data has mostly empirically confirmed what had been previously inferred but insufficiently demonstrated.

Furthermore, an "archival approach," especially concerning the study of Russia, poses significant limitations on research design and questions. Formal and informal rules regarding the limited amount of orders, permissions to take photos of materials or gaining entry to archives impose considerable restrictions on archival work, decreasing its possible value due to fragmentary overall access and work-economic reasons. These limitations are particularly felt when studying long-term organizational processes and decision-making actions, which require feasible datasets from regular intervals and multi-level perspectives. As Kipping & Lamberg (2016, 8) highlight, conducting historically grounded process studies ("history in theory") is problematic,

> owing to the difficulty of obtaining data that are akin to observations. Historical data tend to be less comprehensive and may only reflect the parts of the process that have been documented in writing, usually by certain actors for certain purposes.

In the case of the Soviet Union, this problem of data access is especially present because of selective preservation, skewed data and the inconsistent availability of archival documents (Kragh & Hedlund 2015). Not only do the quantitative materials contain significant biases (Bergson; Berliner 1976; Harrison 2007, 281; Kragh 2013), but qualitative sources are also fragmented due to secrecy and the destruction of sensitive documents (Gregory & Harrison 2005; Kragh & Hedlund 2015). These difficulties are particularly colossal for studies whose scope extends over many decades.

Hence, accessing, collecting and analyzing the amount of archival materials necessary for the purposes of this dissertation proved unfeasible in terms of work-economical resources and the planned scope of inquiry. This exclusion is not without its limits, regarding the objectives of the study to make sense of the organization and institutional aspects of the Soviet economic geography and spatial planning. There are archival sources from committee and industry levels (Markevitch 2005) that could be further utilized to document how industrial decision-makers diffused and facilitated higher-level preferences when executing planning decisions (Article 1) or dealt with a decreasing range of strategic options (Article 3). I have outlined a few of these avenues for future inquiries, particularly related to decision-making logics, in the discussion section (6.2)

Given these data considerations, I have grounded the core of my analysis on two source types: 1) serial publications of Soviet economic organizations as primary materials and 2) secondary sources, including contemporary academic textbooks and expert analyses on Soviet and post-Soviet economic geography. The first category presents a regularly and internally consistent set of documentation, which enables consistent tracking of field-level activities and manifestations of studied processes. The second domain complements a historical construction of the field-level events by providing a triangulation on studied processes and primary documents, thereby increasing the rigor of the process analysis (Kipping & Lamberg 2017). These sources provided a fruitful perspective on the discussion of contemporary problems in Soviet economic

geography while enabling the necessary rigor in data selection. This approach also acknowledges that the results are open-ended inquiries into the mechanisms of the Soviet organizational system, rather than conclusive causal arguments pointing toward deterministic outcomes of historical development (e.g., Kipping & Lamberg 2017).

In Article 1, I have based the analysis on three data sources: 1) Soviet economic geography textbooks, 2) expert analyses in Western journal publications and 3) articles in the Soviet professional journal *Planovoye Khozyaystvo*. The Soviet economic geography textbooks comprise a body of literature that represents institutionalized views of Soviet economic geography in the localized major academic institutions. To a large extent, the Soviet economic geographers were affiliated with the Moscow-based institutes of geography and economics at the Soviet Academy of Sciences or in higher education institutes, particularly Moscow State University's Department of Economic Geography of the USSR. Western scholarship on Soviet studies and economic geography was predominantly U.S.-centered during the Cold War era. Analyzed debates and empirical works on Soviet industrial location policies were published as monographs and in article format in the following journals: *Soviet Geography*, *Annals of the American Geographers*, *The Professional Geographer*, *Soviet Studies*, *Europe-Asia Studies* and *Slavic Review*. The articles published in the *Planovoye Khozyaystvo* represent the views of the Gosplan and its subdivisions. The authors of the articles comprise economists and economic geographers who conducted research while also participating in executive roles, carrying out specialized tasks of planning, location decisions and industrial policies in the Council for the Study of Productive Forces (SOPS) and the Institute of Complex (Integrated) Transport Problems (IKTP). Overall, the analyzed publications consist of 217 titles, of which 30 were selected for in-depth analysis, producing a total of 188 individual claims. A detailed description of the data selection is provided along with the method section in the appendix of Article 1.

In Article 2, the analysis of organizational imprinting is grounded on TPC-related literature from Soviet sources (in particular, translated articles in *Soviet Geography* and *Planovoye Khozyaystvo*) and articles published in Russian academic outlets (*Vestnik Rossiiskoy Akademii Nauk: Seriya Geografiya* and *Vestnik Moskovskogo Gosudarstvennogo Universiteta: Geografiya*)[8]. A study of the scholarly debates and discourses surrounding the topics of regional economic development, TPCs and their sequential metamorphosis into "industrial cluster model"-focused literature makes it possible to trace the process of imprinting within the organizational community over a long-term period. The studied articles were selected first through a meta-analytic search process and then by narrowing down the amount of articles into a sample of the most relevant titles, in the end an aggregate of 163 studied articles. Once again, a detailed description of the data selection is situated in the appendix section of Article 2.

In Article 3, I use economic analyses from *Planovoye Khozyaystvo*, focusing on district-level problems of production, regionalization and economic strategy,

[8] Accessed via https://e-library.ru.

published between 1940 and 1970.[9] The analysis of the article is concentrated on the strategic decision-makers, which required alternative research strategies than primary documentation, since the Soviet Politburo conducted the most important state-level decisions in an informal manner without documentation. In this case, my research strategy has built on Tsoukas' (1994) observation that decision-making in socialist economies was based on: 1) the preferences of the decision-makers ("what is desirable?") and 2) information about the capabilities of the economic system ("what is possible?"). In the former case, the most concrete expressions of how the Soviet leaders preferred to develop industrial and regional production are presented in the five-year plans, which contained specific planning instructions for economic actors (Zaleski 1980). The Soviet economists regularly reviewed these plans and their production expectations in the issues of *Planovoye Khozyaystvo*, discussing both region- and industry-specific issues. In the latter case, another distinct stream of articles from *Planovoye Khozyaystvo* consists of region-specific reports of industrial development. These reports were produced by Gosplan economists, who were effectively in charge of collecting and analyzing information about the state of the economy and its future potential (Harrison 2007). A careful study of these articles made it possible to analyze the unfolding of regional paths, despite the presence of ideological tendencies in discursive practices.

Explicit expression of source-critical dispositions on the studied materials is an important part of the triangulation process in historical research. In the articles of this dissertation, three series of studied materials (Western academic publications, Soviet publications and post-Soviet publications) provided material for the conducted analysis. Accordingly, each of these sources represents a discursive sphere of text production, which contains a specific set of intrinsic assumptions and cultural conventions. Understanding these characteristics is essential for historical analysis, as is their explicit deconstruction.

The general tone of Western academic publications on economic geography was more critical than that of its Soviet counterpart, yet restricted access to primary data is a lasting characteristic that marked Western academic discussions on Soviet development during the Cold War era. According to Nove (1986), the academic interest in the Soviet economy by Anglo-American countries was significantly influenced by the political developments of the 1950s and 1960s (e.g., launching of Sputnik) associated with the Cold War. This interest gradually subdued as the Soviet economy began to show signs of decline and lock-in toward the 1970s. Most of the scholars studying Soviet industrial location policy relied on analysis of Soviet secondary sources and those select sources which were available on the other side of the Iron Curtain. The emerging picture was relatively accurate in portraying the wider picture, yet it lacked primary data for confirming and clarifying results (Hill & Gaddy 2003). Analyses of Soviet economic geography generally considered its role as an extension of the

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[9] I have accessed these sources via the Slavonic Collections in the Finnish National Library in Helsinki. The following issues of *Planovoye Khozyaystvo* are missing from this collection and thus are excluded from the analysis: 6, 8–12 (1940); 6 (1941).

economic policy of the Soviet state, rather than a context from which to draw empirical evidence for theory development. The main academic outlets of economic geography were peer-reviewed journals based in Anglo-American countries.

With respect to topics of economic geography, the Soviet publications (textbooks and journal articles) were subject to standard ideological biases, which affected all printed materials in the Soviet Union. These biases were both self-imposed and institutionally monitored. The authors of scientific output had a culturally embedded, nuanced understanding of informal ideological guidelines, which defined the tone and relationship of the publication in relation to official Soviet rhetoric. Economic geographers, who were required to have a formal affiliation with Soviet academic institutions to be able to publish their works, tacitly acknowledged that a certain ideological tone was necessary in order to attain recognition in the field and gain acceptance from publishers. On the other hand, the publishers had an informal responsibility to make sure that all of the published material passed the ideological bar. Any possibility of getting the stigma of "anti-Soviet" was to be avoided, since the repercussions could easily mean a quick exit from established status or even more dire consequences (during Stalin's regime). In practice, this situation explains why the majority of Soviet works on economic geography repeatedly uphold the views of Vladimir Lenin and Joseph Stalin in their introduction sections, in a similar way as academics position their argument in relation to classics within their discipline. However, the custom of "repeating the ideological mantra" had deeper implications for the distribution and development of theoretical ideas and paradigms. For instance, a frequently cited chapter from Lenin's (1918) "Draft Plan for the Scientific Technological Work," where Lenin argues for the distribution of industrial location close to raw material deposits, became a widely employed rhetoric component of Soviet industrial location theories, arguably due to its legitimation through official ideological goals. In particular, the two significant authorities of Soviet economic geography, Nikolay Kolosovsky and Nikolay Baranskiy, who were closely related to Lenin during his original proclamation, could later entrench their institutional status by presenting their ideas as a continuation of Lenin's opinion. As a rule, rhetoric legitimacy was always defined in relation to contemporary Soviet official policy (often expressed in Party Congress statements or in speeches of the current ruler). Thus, emphasis on the specific date of published articles is important in interpreting Soviet materials. For example, texts predating the 20th Party Congress (in 1956), where Nikita Khrutschev publicly renounced the legitimacy of Stalin's regime, contain a very different predisposition toward Stalinist economic programs than texts published in the aftermath of the Congress (e.g., Saushkin 1966).

Post-Soviet Russian journal articles relate more closely to Western publication standards, yet their genre retains localized nuances due to language barriers and the local scholarly tradition. These characteristics are noteworthy when using journal articles as source material for studying paradigmatic influences within the community. Particularly in economics, the institutional

change from Soviet paradigms was immense and undertaken rapidly during the transition crisis of the 1990s (Suspitsyna 2005). At the same time, the collapse of the Soviet Union had dramatic financial consequences for national academic and science institutes (Gaponenko 1995); these have continued to constrain their development (Yegorov 2009). One important feature of the Russian academic system (and a partial outcome of the financial situation) is the high status and impact of the leading institutes, mainly the Academy of Sciences and Moscow State University (Gaponenko 1995; Suspitsyna 2005). These institutes also publish the most impactful domestic academic publications, thus contributing to a legitimation of paradigms. Some of the journals (e.g., *Vestnik RAN: Seriya Geografiya*) also publish reports from conferences, which also give an indication of the relevant networks within the community.

Yegorov's (2009, 603) analysis of scientific publication indicators suggests that internationally the impact of Russian publications has remained relatively low, compared to those in Western Europe and the US. Significantly, this impact varies starkly between different disciplines. Based on the findings during the research process of this study, my rough estimation based on bibliographies of articles on economic geography and economics suggests that while these disciplines acknowledge major works within the international field, most of the cited literature is based on titles in Russian language. The legitimacy of Soviet-era studies and paradigms varies. Although it is rare to see articles that uncritically adopt ideologically biased study results from the Soviet era, there are some instances (such as TPCs in economic geography) where Soviet theories are assimilated in contemporary frameworks.

4.4 Limitations

With respect to notable issues specific to the development of the Soviet economic and political system, I have excluded several topics and phenomena outside the scope of this dissertation.

First, despite the undertone of studying Soviet economic geographical structures and industrial development relative to economic performance, the aim of this study is not to evaluate the impact of Soviet economic policy on economic growth as such (e.g., Ofer 1987; Easterly & Fisher 1995). This delimitation is mainly due to the lack of reliable quantitative data about economic growth or performance at the level of industrial districts. While the Soviet statistical publications and yearbooks do express indices of growth and production according to macro-regional division, these definitions do not correlate with industrial districts to a sufficient degree (Dellenbrant 1986). In addition, the problems with Soviet statistics are dire enough to focus the study more closely on the development of the institutional environment and its role in economic strategies.

Second, the study mainly focuses on the Soviet Union and its economic development between 1917 and 1989. Although Articles 2 and 3 also discuss

trends in economic geography during the Czarist and post-Soviet periods, the Soviet economic geography nevertheless remains the main context of study. However, it is important to observe that historically contingent mechanisms are conveyed across institutional transformations; thus, both what existed before and what came after is relevant for the study of the Soviet era.

Third, the concept of "economic geography" features extensively in this study. Although the concept in its full meaning encompasses a diverse range of economic activity in the sphere of geography, it is commonly sub-divided into agricultural and industrial sections. This study focuses particularly on the industrial side, and the conditions of Soviet agricultural production and development are excluded outside the scope of the dissertation. This limitation is based on the fact that the agricultural section of the Soviet economy followed a separate course of economic development, associated with different institutional, demographic and socioeconomic environment. Also, the agricultural sector played a minor role in the Soviet economy and declined in importance throughout the 20th century. Despite some transformative economic geographical changes, such as the ambitious "nature-changing" projects with irrigation systems, agriculture remained a peripheral priority in the organizational and institutional development of Soviet economic geography (Hedlund 1984).

Fourth, a key sector of the Soviet economy, the military-industrial complex, figures only indirectly in the analysis of this study. This sector of the economy has sometimes been excluded from analyses of the Soviet economic system (e.g., Nove 1986) due to its secrecy and associated lack of available information. Nevertheless, the military-industrial complex played a large role in determining industrial distribution, innovations and investment policies (Amann & Cooper 1982; Barber & Harrison 1998; Kumo 2004). This sector also deviated from the other sectors of the economy due to investment priorities and institutional arrangements that enabled its higher technological and performance levels (Barber & Harrison 1996). In this study, the impact of the military-industrial complex on the organizational and institutional development of economic geography is recognized as a constituent and enforcer of the "military logic" (Article 1), which participated in the conflicting rationales for industrial location decision-making. Also, the significant role of military industries in determining strategic allocations of resources and innovation activities (Rowen & Wolf, Jr. 1990), which had an indirect impact on the development of heavy industry districts discussed in Article 3. A more extensive coverage of the military-industrial sector in terms of the focus of this study is prevented by the fact that the selection of the analyzed source materials does not provide sufficiently reliable grounds to warrant its inclusion in the analysis. This flaw is caused by a combination of problems present in the secondary data (see section 4.3), related to conscious biases or due to a lack of information. The lack of conclusive links between the civilian economic sector and the military sector remained a considerable challenge for the scholars of the Soviet economy during the Cold War period (Rowen & Wolf, Jr. 1990; Markevitch 2005), and it has started only

after the opening of Russian archives (Harrison 1996; Simonov 1996; Samuelson 2000). Recently, several works (e.g., Bystrova 2006; Simonov 2015) have made a significant effort to study the role of the military-industrial complex based on archival works, offering fruitful possibilities for organizational analysis in future research.

Finally, the discussion of industrial development, location policies and economic geographical changes in general exclude the GULAG[10] section of the Soviet economy. There are particular reasons for this omission, arising from the difficulties of assessing the secretive and fragmented history of the GULAG, but also due to its unique institutional infrastructure and organizational objective. Overall, study on the fundamentals of the GULAG system is still under way, and there are a limited amount of studies that have comprehensively evaluated its economic and institutional role in the Soviet system (Khlevniuk 2001). For this dissertation, such a task fell outside the limits of feasibility. The study by Gregory and Lazarev (2013) suggests that the GULAG had an effect on the distortions of the economic system but was unlikely their original cause. While comprising a significant section of the national economy (particularly during the Stalin era, until 1956 and the start of rehabilitation), the GULAG economy as such played a limited role in the theory-level development of economic geography, and the use of prison labor was an exceedingly banned topic in all Soviet publications. The environment of the GULAG economy operated under different institutional rules compared to economic geography as a whole.

In sum, the impact of the GULAG for the results of this study remain arguably minor. For example, Article 1 refers to institutional logics as the driver of industrial location decision-making, which was relatively indifferent as to whether the industrial labor consisted of forced labor or free workers. In Article 2, the imprinting of centrally planned industrial districts to the post-Soviet era has not reflected any signs of dependency on different sources of labor inputs.

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10 GULAG ("Glavnoe Upravlenie Lagerei"; the Main Administration of Labor Camps) is a commonly used abbreviation for the Soviet prison and penal system.

5 SUMMARY OF THE ARTICLES

The study contains three articles, which approach the topic by explicating different organizational and institutional components of the Soviet economic geography. The articles employ mutually supporting theoretical insights from historical organization studies, based on concepts of institutional logics (Thornton et al. 2008; 2012), organizational imprints (Marquis & Tilcsik 2013; Simsek 2015; Marquis & Qiao 2018) and path dependence through critical junctures (Sydow et al. 2009; Soifer 2012; Clemente, Durand & Roulet 2017).

5.1 ARTICLE I: Competing institutional logics in Soviet industrial location policy

BACKGROUND AND OBJECTIVES

The Soviet legacy of industrial and infrastructural distribution remains a path-dependent element that influences regional economic policies and the industrial structure of the Russian Federation. The Soviet legacy of industrial distribution is generally considered as an adverse barrier for economically efficient regional development (Hill & Gaddy 2003; Mikhailova 2005; 2012). According to these prior studies, the Soviet industrial location decisions between during the early Soviet period (roughly 1920–1960) were strategically inconsistent, economically inefficient and imposed institutional constraints on the strategic allocation of socialist industries during the latter 20th century. Although general principles behind Soviet location decisions have been outlined in previous research (e.g., Dellenbrant 1986), there have been scant efforts to explain why the Soviet decision-makers did not respond to the adverse effects of these location decisions. The first article, entitled *Competing institutional logics in Soviet industrial location policy* (published in February 2019), approaches Soviet industrial location policy as an outcome of recurring decision-making events that reflect 1) legitimate organizational responses to identified challenges, and 2) implicit future

expectations of economic geography. The objective of the article is to go beyond the existing literature by constructing an organizationally cognizant account of Soviet industrial location policy and exploring the rationales behind these acts of strategic decision-making.

THE MAIN FINDINGS

Based on qualitative analysis of Soviet and Western industrial location literature, I distinguish three institutional logics, which were grounded in different types of rationalities and thus constituted competing criteria for industrial location decisions. These logics (regional, economic and military) managed their rivalry through arrangements that correspond to mechanisms of competing institutional logics in Western organizational contexts (Reay & Hinings 2009; Purdy & Gray 2009; Goodrick & Reay 2011; Greve & Zhang 2017). First, the conflict between logics during the inter-war period manifested as rivalry through open encounters, which decisively affected location decisions of heavy industry, favoring industrialization in the Ural region, opposed to industrial districts of European Russia. Second, the rivalry between regional and economic logics remained as an informal unresolved conflict throughout most of the 1920s and 1960s, since both remained set policies for the Communist Party yet neither were able to establish a priority position, which contributed to the instability of economic geographic policy. Third, the logics were occasionally able to overcome their contradictions and engaged in pragmatic collaboration after World War II. In situations where the goals of two logics were synergized to a sufficient degree in industrial location decisions, they were able to achieve a dominant position in directing decision-making. For example, the goals of self-sufficiency and interconnectedness served both regional and military logics in directing industrial distribution toward eastern regions. Similarly, the construction of TPCs satisfied the objectives of both economic and regional logics, and thus increased the legitimacy of regional distribution of industries.

The article advances two pivotal findings. First, discontinuities and disruptions in long-term economic-geographical planning were a direct implication of the competition of logics. The vertical hierarchy of Soviet economic decision-making and the path-dependent nature and sunk costs of economic geography investments further aggravated the impact of logics. Second, persistent existence and competition contributed to structural inertia and lock-in of Soviet economic geography. The performance evaluation of Soviet industrial location patterns was possibly embedded in the objectives of the logics themselves, which might provide an explanation for the lack of a dominant logic. Another possibility is that bound rationality over long-term expectations and performance outcomes hindered the ability of Soviet decision-makers to disregard certain logics at the expense of others, and thus the logics survived to exert their competitive influence. Overall, both the Soviet and Western observers

were unable to conclusively predict the extent of strategic failure that each logic presented.

CONTRIBUTION

The article contributes to the prior literature of Soviet industrial location policy (e.g., Koropeckyj 1965; 1967; Dellenbrant 1986) by offering a theoretical explanation for periodical shifts in policy-making and inconsistencies between explicitly stated objectives and actual policy outcomes. The results also contribute to the literature of institutional logics and organizational institutionalism by demonstrating that their forms of competition are not dependent on the inter-institutional system of Western market societies, and that rivalries of logics may continue for prolonged periods if their outcomes cannot be conclusively evaluated. With regard to Soviet economic geography performance, the presented framework of competing institutional logics explains why diverging patterns of location policies remained a persistent policy outcome and why there was no convergence toward a dominant undisputed logic. Finally, the article suggests that examination of similar forms of contradictory field-level logics might also provide new avenues of research on post-Soviet Russia.

5.2 ARTICLE II: Following the old road: Organizational imprinting and the regional development of Russia

BACKGROUND AND OBJECTIVES

Recent decades have witnessed a two-dimensional trend in the strategic development of Russian economic geography. Since 2008, the Russian government has actively initiated projects that aim to support top-down creation of industrial clusters and regional agglomerations. At the same time, the Russian state has continued to block a full-scale reform of formal and informal economic institutions, which disrupts adoption of inclusive and innovative economic conditions. The second article, entitled *Following the old road: Organizational imprints in Russian regional development*, studies this mismatch between public rhetoric and actual institutional development as a historically contingent management practice. In the article, I use the framework of organizational imprinting to assess the influence that the Soviet economic geography has had on the development of the Russian academic and organizational community regarding the economic development of regional clusters and industrial districts. The article joins the extant literature on organizational imprints, which has shown that exposure to a socialist ideology and economic system has an effect on the later behavior of firms, organizations and individuals (Kogut & Zander 2000; Kriauciunas & Kale 2006; Davis-Sramek et al. 2017; Banalieva et al. 2017; 2018;

Marquis & Qiao 2018). The objective of the study is to determine how past organizational conditions shape the local community and persist in contemporary strategies regarding Russia's economic geography and regional policy.

THE MAIN FINDINGS

Based on a literature review of 190 Soviet and post-Soviet economic geography articles, I argue that the characteristics associated with the Soviet TPC model have an imprinting effect on the local economic geography community, which currently manifests as a promotion of urban agglomerations in the Russian Federation. I utilize the imprinting framework of Simsek, Fox & Heavey (2015) to locate and analyze the historical genesis, transformation and manifestation phases of this imprint, tracking its prevalence and influence in Soviet and Russian economic geography journals and discourses related to urban agglomeration concepts, such as territorial production complexes, industrial districts and clusters. I also find that the empirically identifiable mechanisms of this imprint correlate with the theoretical framework of organizational imprinting.

In particular, I use the imprinting framework to link Soviet and Russian economic geographical paradigms, emphasizing that the shift from TPCs to industrial clusters and urban agglomerations suggests a paradigm-level manifestation through cultural-cognitive influence mechanisms. I distinguish how the imprint underwent a metamorphosis process during the societal change from the Soviet Union to the Russian Federation, by dissecting this phase into trends of imprint amplification, persistence, decay and transformation. I then build a synthesis of historically contingent imprint manifestations and analyze their influence on contemporary regional development and strategic policies.

In terms of the results, I find that the imprint manifestations are stronger in the contemporary regional economic policy than in the local academic collective of economic geography. The findings indicate that the Soviet imprint continues to influence Russian regional strategies through the exaptation mechanism and the associated institutional logic, favoring political stability, state dominance over economic logic, and institution-building toward inclusive and innovation-centered cluster policy.

Overall, I argue that the imprint persistence points toward the existence of embedded cultural-cognitive influences on the post-Soviet organizational community, which were sufficiently powerful to resurrect those social-normative and regulatory influence mechanisms that disintegrated during the metamorphosis phase. The strength of the cultural-cognitive influence mechanisms also explains how an imprint may survive and evolve, even during periods of bad performance.

CONTRIBUTION

The article provides a contribution to existing organizational imprinting literature by testing recent attempts to build a model of imprinting processes (Marquis & Tilcsik 2013; Simsek 2015) and by studying socialist imprints (Shinkle & Kriauciunas 2012; Marquis & Qiao 2018; Wang, Du & Marquis 2018) in localized organizational collectives. The article also contributes to the literature on Russian economic policy by evaluating the process of community development in Russia through a novel theoretical perspective and related findings from associated organization studies.

5.3 ARTICLE III: State management and strategic lock-in: Development of industrial districts in the Soviet Union

BACKGROUND AND OBJECTIVES

The third article, entitled *State management and strategic lock-in: The development of industrial districts in the Soviet Union*, discusses the implications of strategic lock-in for highly state-managed economies by presenting a historical study of path-dependent development in three heavy industrial districts of the Soviet Union. The industrial districts of Baku, Donbass and the Urals held major importance for Soviet economic development during the Stalin era, but lost this status due to the industrial decline during the late 20th century. In the article, I examine the critical junctures in the development of these districts in order to illustrate the role of the Soviet leadership in considering prospects of alternative structural orientation and industrial renewal. In particular, I seek to assess the extent to which path dependence and the institutional context of Soviet economic strategy constrained the introduction of alternative orientation models, such as structural diversification toward technology- and innovation-based reforms. In the article, I utilize a framework of critical junctures (Sydow et al. 2009; Soifer 2012) and analyze nine key events in the historical development of Soviet heavy industrial districts (Baku, Donbass, the Urals). I use a series of Soviet articles from *Planovoye Khozyaystvo* and secondary literature to study how decision-making and historically embedded institutional constraints manifested during critical and potentially path-breaking events between 1880 and 1970, and I discuss how these events directed the courses of strategy and self-reinforcing mechanisms.

THE MAIN FINDINGS

The analysis of critical junctures demonstrates that the early development of Baku, Donbass and the Urals was characterized by the presence of permissive and productive conditions, resulting in the adoption of an orientation toward heavy industry. After World War II, the lack of permissive conditions and the

lack of local alternative endowments resulted in structural lock-in states, with first positive and later negative outcomes. I find that decisions related to the adoption and maintenance of structural orientation during critical junctures contributed to self-reinforcing institutional and organizational mechanisms, and thus directed Soviet industrial districts toward regional and organizational lock-ins. I highlight that changes in the external environment made the outcomes of structural orientation increasingly negative, which contributed to industrial decline. Overall, the results of the article clarify the sources of persistence related to the extensive growth strategy of the Soviet Union.

CONTRIBUTION

The article makes two contributions to the literature of economic geography, related to industrial lock-in and industrial cluster evolution (Belussi & Hervas-Oliver 2016). First, the results highlight the influence of orientation-related strategic lock-in for regional development in state-managed economies. Second, the study exemplifies how the structural orientation of industrial districts and associated self-reinforcing mechanisms may lead to an industrial decline, when the lock-in effects change from positive to negative. Related to the Soviet context, the results stress the role of the institutional environment in shaping strategic path inscription as a moderator of Soviet economic geographical development.

6 CONCLUSION

6.1 Contributions

In addition to the contributions of individual articles, the dissertation as a whole yields a novel neo-institutionalist perspective on the Soviet economy and economic geography. In this section, I summarize the results of the study in the forms of three context-specific propositions, which extend the results of the individual articles. The aim of these "propositions" is to discuss the implications arising from the articles in a broader perspective.

6.1.1 Proposition #1: The Soviet decision-making system was not irrational

With respect to economic geography, the results of the dissertation highlight that the Soviet decision-makers were subject to a variety of organizational pressures, such as: 1) conflicting institutional logics, 2) social-normative pressures of organizational coalitions and institutional constraints and 3) the cognitive restrictions of paradigmatic templates and bound rational expectations. Within these limits, Soviet long-term strategies, such as the industrial location policy, represent recursive responses to economic geographic challenges in dynamic institutional environments. Economically, the state of Soviet economic geography in the 1980s may indeed have given cause for it to be labeled as a "failure" (e.g., Mikhailova 2004), yet in terms of organizational dynamics the nuances of that outcome were much more complex and subject to logical causes. From the perspective of military and regional logics of industrial location (Article 1), the recursive line of events leading to the given geographical distribution of industries was arguably more defendable. The important insight from a detailed institutional and organizational analysis of the Soviet economic-geographical decision-making is that during the exact moments of that decision-making, the responses to the problems at hand were grounded in constellations of

institutionally rooted logics and envisioned best-practice solutions within the surrounding environmental frames.

Hence, this study has attempted to demonstrate that labeling the Soviet economic geographical planning as "irrational" (as essentially argued by Hill & Gaddy 2003, 3) fails to acknowledge how the acts of decision-making were conducted under distinctive institutional and organizational constraints, which may have been highly complex (e.g., Dyker 1992, 23) and not easily identified in historical research. Yet, the difficulty of capturing the exact managerial logic in decision-making events does not imply that such a logic did not exist. For a complete evaluation of the "rationality" of the Soviet economic geographical strategy, it would be useful to presume that *different* rationalities (Kalberg 1980) were at play, manifesting themselves as roots of legitimacy for field-level logics.

6.1.2 Proposition #2: The path toward the lock-in of Soviet economic geography was recursive, not sudden

Following Clemente, Durand and Roulet's (2017) view of historical development as a recursive process, I argue that a similarly recursive, path-dependent process of institutional change sufficiently constrained Soviet economic-geographical strategies to block possible path-break and path-renewal trajectories toward reformed and inclusive industrial development. The development of these institutional constraints took place incrementally at different levels of Soviet economic and political organization since the early 1920s, and perhaps even before as manifestations of imprinting conditions from the Czarist era (Spulber 2003). In this study, the conducted historical analysis of critical junctures (Article 3) supports the argument that these constraints and self-reinforcing mechanisms, as well as a lack of permissive conditions, were predominant factors for structural inertia. At the field level, these constraints engaged in a dynamic interaction with the previously identified competing institutional logics, whose rivalry was undoubtedly related to increased structural lock-in. This conclusion is also logically consistent with the failures of reform in the field of industrial management. In the field of economic geography, however, the consequences of lock-in were more dire. Recursive development on this path continued to take incremental steps toward a situation where the institutional constraints and associated self-reinforced mechanisms no longer offered legitimate ways for strategic decision-makers to fully diverge from the established course or initiate lasting path-renewal processes.

6.1.3 Proposition #3: The Soviet legacy persists in Russian organizational and institutional characteristics

Concepts such as "legacy" and "modernization" are often invoked to characterize both political and economic development in the context of post-Soviet Russia (e.g., Sakwa 2012; 2013; Kivinen 2013). In these analyses, processes of modernization are characterized as a movement toward more inclusive institutions and value-based betterment of cultural and societal spheres. These

studies also recognize a variety of types of modernity,[11] counting the Soviet type of modernity among them (Kivinen 2002; 2011; Maslovskiy 2019). In this study, the Soviet legacy is approached from neo-institutional and organizational perspectives, referring to the inheritance of a specific type of inter-institutional system, which manifests as institutional logics and by them defines legitimate types of behavior within different levels of society (Friedland & Alford 1991; Thornton et al. 2012). This composition of the Soviet legacy was transmitted to post-Soviet Russia through processes at organizational and institutional levels (e.g., imprinting effects), which experienced a dramatic change during the transition period in the 1990s due to regulatory and social-normative upheavals following the Soviet collapse.

Despite the appearance of new institutional arrangements during the transition economy period (Braguinsky & Myerson 2007a; 2007b), the Soviet system continues to influence Russian economic management through multiple imprinting effects. As prior studies have suggested (Banalieva et al. 2017), the lengthy exposure to Soviet institutions makes it difficult for the Russian society and organizations to escape from the effects of these imprints. Instead, in some cases self-reinforcing mechanisms (Schreyogg & Sydow 2011) may make it even advantageous to prolong their influence in institutionalization processes in contemporary Russia, hence amplifying critical elements of the original imprints. During the Soviet era, the economic system and society gradually responded to the formal Soviet rules by adopting a complex and interdependent system of informal institutional arrangements (Ledeneva 2006). In line with the imprinting argument presented in Article 2, it is important to recognize that even though the collapse of the Soviet Union weakened the social-normative and regulatory aspects of existing institutions, it did not change overnight how institutions affect actors at the cultural-cognitive level (Scott 2013). Instead, both the formal and informal legacy of Soviet institutions continued, and arguably still continues, to influence Russian organizational and societal development.

In Russian economic geography, imprinted characteristics affect policy-makers and academic researchers by making them more susceptible to maintain inherited institutional practices with their new ventures and comply with pressures stemming from existing field-level culture and legitimacy. Based on the results of this dissertation, I argue that this legacy manifests particularly as cultural-cognitive influence, which appears strong enough to resurrect associated social-normative and regulatory institutions that collapsed or decayed after the dissolution of the Soviet Union.

So far, the decision-makers of regional economic policy have attempted to reconcile these pressures in two ways: 1) by introducing new industrial district models as pilot projects with vast campaigning efforts, and 2) by merging existing networks of regional production within more recent cluster networks. Both of these methods demonstrate how a persisting cultural-cognitive influence of imprinting problematizes a clear withdrawal from the Soviet-era system of

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11 See also Sakwa (2012) and (2013) on "neo-modernization" related to Soviet and post-Soviet Russia.

regional organization, marked by overwhelming state-involvement, intra-state demand networks and established regional production functions. Despite the efforts of the Russian government to outline future avenues for a modernized regional policy and urban agglomerations (Kinossian 2017b), it remains probable that making these words a reality will not manifest with a linear trajectory of success.

6.2 Discussion

This study has concentrated on the organizational and management aspects of regional development in the context of the Soviet Union. These aspects were analyzed with a focus on recursive change of historically contingent institutional arrangements, suggesting that the results may also yield insights into an understanding of the field-level arrangements regardless of institutional transformations. Each of the three presented articles have shed light on field-level problems, which still remain topical for the regional and economic development of Russia. The effort conducted in this dissertation highlights that analysis of context-specific constraints and the institutional environment is important in order to understand how the Soviet actors approached and tried to solve economic problems within these fields. The articles have aimed to pursue a historically and institutionally cognizant view of the development of Soviet economic geography. Acknowledging that institutional arrangements and logics are historically contingent, the results of the study and the implications drawn also hold relevance for a study of consequent development in post-Soviet Russia. This type of study represents a potential future avenue that might prove valuable from both empirical and theoretical perspectives. Recent tangential studies of competing logics in Russian regional policy (e.g., Kinossian 2013), socialist imprinting (e.g., Wang, Du & Marquis 2019) and path-dependent change in Russian economic geography (e.g., Klochikhin 2012) provide further cases in point to illustrate the potential of such direction.

The theoretical perspective is particularly important, since the "history in theory" approach implies that the proposed historical-organizational mechanisms are not context-specific. The findings of this dissertation emerge from the Soviet Union, yet the theoretical framing of presented ideas makes it possible to extend the results and implications to study contexts which reflect parallel organizational forms of state management and exclusive institutions. The application of concepts and frameworks, such as institutional logics or imprinting, to complex institutional contexts serves as a test of their theoretical depth and explanatory power. Presently a large proportion of concepts in organization theory are constructed by U.S.-based scholars, studying U.S.-based organizations (Scott 2005, 478), which leaves fertile opportunities for the globalization of organization theory and historical organization studies.

Although the scope for further research is vast, I conclude by outlining three potential prospects of further research, which would build on the findings of this

dissertation and also pave the way for further integration of organization theory and the context of Soviet/Russian economic geography. First, the perspective of competing institutional logics presented in this study distinguishes between the main categories of logics but does not venture to the micro level to demonstrate the forms of rivalry between logics or their proponents. Case studies of individual industrial location events or particular regional-specific manifestations of logics fall outside the scope of this dissertation, even though such analysis would greatly improve our understanding of conflicting interests in Soviet economic geography. Archival materials which document how the Soviet decision-making unfolded in committees and at the industry level are central to this research avenue, providing information from the planning-level perspective. Following Tsoukas' (1994) definition of the role of available information as a constituent of strategies, the analysis of this level of locational and strategic decision-making would allow an intriguing viewpoint on the dynamics and contradictions of new information and established logics.

Similarly, empirical testing of the competing logics framework in the context of post-Soviet location policies (most likely investment programs and other sorts of financial and institutional support) would provide fruitful information about the persistent elements of the identified logics and documentation of their survival after the collapse of the Soviet Union. Second, the framework of imprinting could be also extended to broader empirical analyses of post-Soviet organizations within fields which are stakeholders in economic geographical development. Theoretically, one ambitious prospect would be to examine the extent to which the imprinting framework could be applied to broader organizational units in socialist countries, and perhaps even to countries themselves, given a sufficient persistence of institutions. Third, the present-day program of the Russian Federation to modernize its regional structures remains a viable topic for inquiries with respect to path-renewal processes, the opening up of locked-in structures and reindustrialization. As documented by Mikhailova (2012), the distribution of Russia's industrial and socio-infrastructural assets remains in its Soviet form to a large extent, but at some point in the future this distribution will have to erode, if the results of regional development schemes in old industrial regions remain underwhelming. If the trajectories of path dependence continue to define the development of Russia's old industry districts, then the dynamics between institutional constraints and path-renewal attempts similar to the Soviet era may also reflect potential development scenarios in the future.

SUMMARY

Tutkin väitöskirjassani Neuvostoliiton ja Venäjän talousmaantieteen kehitystä ja muutosdynamiikkaa historiallisen organisaatiotutkimuksen menetelmin. Väitöskirjani pääasiallisena pyrkimyksenä on löytää selittäviä mekanismeja sille, miksi Neuvostoliiton teollistaloudellinen järjestelmä kehittyi talousmaantieteen näkökulmasta ongelmalliseksi ja millä tavoin sen periytyminen osaksi Venäjän federaation talousjärjestelmää vaikeuttaa talouden modernisaatiota. Väitöskirjani koostuu kolmesta toisiaan tukevasta artikkelista, jotka käsittelevät aihepiiriä erilaisista käsitteellisistä näkökulmista.

Ensimmäisessä artikkelissani (suom. Kilpailevat institutionaaliset logiikat Neuvostoliiton teollisuussijaintipolitiikassa) käsittelen institutionaalisten logiikoiden käsitteen kautta talousmaantieteen päättäjien erilaisia näkemyksiä optimaalisesta tavasta sijoittaa teollisuustuotantoa maantieteellisesti. Esitän kolmen institutionaalisen logiikan (aluepoliittinen, sotilaallinen, taloudellinen) vaikuttaneen keskeisesti teollisuussijaintipolitiikan rakentumiseen ja kehitykseen sekä analysoin logiikoiden keskinäisten ristiriitojen suhdetta talousmaantieteellisen kehityksen epäjatkuvuuteen.

Toisessa artikkelissani (suom. 'Vanhaa tietä jatkaen': Neuvostoliitosta periytyvien organisaatiojälkien vaikutus Venäjän aluetalouden kehitykseen) tutkin organisaatiojälkien vaikutusta nyky-Venäjän talousmaantieteellisessä akateemisessa ja aluepoliittisessa kollektiivissa, keskittyen erityisesti Neuvostoliiton aluetuotantokompleksien teoriamallin periytymiseen osaksi talousmaantieteellisen suunnittelun käsitteistöä. Esitän organisaatioleimautumisen vaikuttaneen Venäjän talousmaantieteellisen keskustelun ja tiedepolitiikan kehitykseen ja tukeneen Venäjän tapaa luoda valtiojohtoisia agglomeraatio-hankkeita osana modernisaatiokehitystään.

Kolmannessa artikkelissa (suom. Valtiojohtoisuus ja strategian lukkiutumisprosessit: Raskasteollisuusalueiden kehitys Neuvostoliitossa) pohdin Neuvostoliiton keskeisten raskasteollisuuden aluekeskittymien taantumiseen johtaneita rakenteita 1880-luvulta 1900-luvun jälkipuoliskolle. Käsittelen artikkelissa erinäisiä syitä, jotka johtivat teollisuusstrategian kyvyttömyyteen modernisoida teknologisia ja institutionaalisia tuotanto-olosuhteita kilpailukykyisiksi. Analysoin kriittisten päätöksentekohetkien vaikutusta teollisuusstrategian myöhempään kehitykseen, itseohjautuviin mekanismeihin ja teollisuusrakenteen lukkiutumista edesauttavien institutionaalisten olosuhteiden rakentumiseen.

Kokonaisuudessaan, väitöskirjani yhdistää aiemmin Venäjä-tutkimuksessa erilleen jääneitä talousmaantieteen, taloushistorian ja organisaatioteorian tutkimussuuntia. Tutkimustulokset selventävät institutionaalisen ympäristön ja sen asettamien rajoituksien vaikutus Neuvostoliiton talousmaantieteelliseen päätöksentekoon sekä tunnistavat organisaatiotutkimuksen piirissä teoretisoitujen mekanismien vaikutuksen talousmaantieteen historialliseen dynamiikkaan.

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ORIGINAL PAPERS

I

COMPETING INSTITUTIONAL LOGICS IN SOVIET INDUSTRIAL LOCATION POLICY

by

Nooa Nykänen, February 2019

Eurasian Geography and Economics vol 59: 3-4, 314-339

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Competing institutional logics in Soviet industrial location policy

This is an Accepted Manuscript of an article published by Taylor & Francis in Eurasian Geography and Economics on 14.02.2019, available online: https://www.tandfonline.com/doi/full/10.1080/15387216.2019.1581631

Nooa Nykänen
Department of History and Ethnology
University of Jyväskylä
Jyväskylä, Finland
nooa.nykanen@jyu.fi

Abstract

The Soviet legacy has been widely demonstrated to have had negative impacts on the regional and economic development of Russia. This article studies the mechanisms of competing institutional logics in Soviet industrial location policies as a source of this adverse heritage. The results indicate that prolonged competition between three institutional logics complicated the adoption and practice of consistent industrial location strategies and contributed to structural problems in economic geography. An analysis of Soviet institutional logics demonstrates parallel forms of competition and coexistence with findings from other institutional environments, paving the way for a broader theoretical analysis of Soviet organizations and institutions.

Keywords: Soviet Union; Institutional logics; Industrial location; Economic geography; Economic history

1 Introduction

The Soviet legacy, specifically its institutions, infrastructure and industrial structure, are often identified as key obstacles in modernizing the Russian economy (Bradshaw 1991; Spulber 2003, 234-235**;** Bradshaw & Connolly 2016). Institutionally, the Soviet model of socialist economy developed into a particular organizational form of central planning, accompanied by direct interventions from the state authorities (Kornai 1992). Structurally, the industrial organization of the Soviet Union was characterized by institutional complexities of vertical integration and uneven spatial distribution. The decline of the Soviet economy has been explained by variety of factors, ranging from chronic shortage (Kornai 1992) and extractive institutions (Acemoglu & Robinson 2013) to a lack of innovations (Amann & Cooper 1982; Ericson 1991; Spulber 2003). Michael Bradshaw (1991) has connected the lack of innovation to conservatism in Soviet production, noting that improvements in production methods were not rewarded sufficiently to risk possible deficiencies in existing production rates. This conservatism and unwillingness to introduce changes that could alter the existing structures in power and production hierarchies extended to the higher ranks of the political and economic administration (Grossman 1962; Peters 2016). Several reforms aimed to tackle these issues, but they resulted in a failure to introduce fundamental changes to the industrial structure or to initiate economic success (Hoeffding 1959; Amann & Cooper 1982, 12; Autio-Sarasmo 2016).

The development of economic geography in the Soviet Union has also been marked by structural conservatism and resistance to modernization. Hill and Gaddy (2003) have strongly argued that the costly industrialization and settlement of Siberian peripheries caused severe obstacles for industrial reforms and continue to impede political and economic development. Even today, Russia's orientation towards traditional heavy industry and resource sectors remains strong (Hill & Gaddy 2003; Markevich & Mikhailova 2013; Bradshaw & Connolly 2016). The origins of this development derive from early Soviet industrialization campaigns, which transformed the Soviet economic geography

and organization during the late 1920s and 1930s and led to the emergence of consequent industrial location principles (Koropeckyj 1965). Although the post-Stalinist era prompted numerous reforms in the Soviet economy, the outlines of the country's industrial location policy remained largely in place (Koropeckyj 1965; Nove 1986; Dellenbrant 1986). According to Kofanov and Mihailova (2015), the consequent industrial distribution based on raw material proximity overlooked the creation of knowledge-intensive agglomerations, which are necessary for high-tech industries. Transformations in economic geography are strongly path dependent (Krugman 1991; Martin & Sunley 2006), suggesting that outcomes of those locational decisions and strategies still delimit the ways Russia can coordinate and develop its economy.

Against this background, it is somewhat surprising that the institutional foundations of Soviet industrial location principles and consequent policies have received little attention from scholars. Motivated by recent conceptual and theoretical development in organization studies, this article assumes an institutional logic perspective (Thornton et al. 2012) to study the institutional environment of Soviet industrial location decisions by exploring underlying rationales of Soviet economic geographical strategy. Specifically, I argue that the industrial location policy in the Soviet Union was influenced by competing institutional logics, which survived for several decades and manifested in the so-called location principles that were identified and analyzed by Western scholars during the Cold War (e.g. Koropeckyj 1965; Holzman 1957; Hooson 1972; Huzinec 1977). Based on extensive qualitative analysis of industrial location discussions, the core argument of the paper is that competition between these institutional logics partially accounted for the inconsistent location strategies, eventually contributing to the adverse economic geographical structure of the country. The results extend Hill and Gaddy's (2003) analysis of how industrial misallocation took place during Soviet times by concentrating on particular rationales for adopting and sustaining such an industrial location strategy. The presented framework of competing institutional logics also contributes to the

study of regional development trends in Russia, where Kinossian (2013) especially has highlighted the institutional legacy of socialism as a component of the formation and practices of new regimes and observed the enduring presence of competing logics in decision-making. The notion that similar institutional mechanisms still complicate the adoption of consistent territorial development policy in post-Soviet Russia underlines the need to explicate the dynamics of corresponding competing logics during the Soviet era.

The contents of the article are organized as follows. Section 2 discusses the concept and theory of institutional logic and its use in studying the Soviet context, also specifying how the analysis of the study is related to previous scholarly work on the topic. Section 3 provides a short historical account of Soviet economic geographical development. Section 4 presents a framework of three competing institutional logics in Soviet industrial location policy based on an extensive review and analysis of Soviet and Western economic geography publications. The contradictory objectives and mutual competition of these logics are analyzed in section 5 and the outcomes of this interaction in section 6. Section 7 summarizes the findings, discussing the contributions, implications and limitations of the article, while pointing out possible avenues for further research.

2 The concept and theory of competing institutional logics

The concept of institutional logics has drawn intense attention within organization studies since the 1990s (Friedland & Alford 1991; Thornton et al. 2008; 2012). Thornton et al. (2008; 2012, 2) define institutional logics as "socially constructed historical patterns of cultural symbols and material practices." These symbols and practices include assumptions, values and beliefs by which individuals and organizations provide meaning to their daily activities, organize time and space, and reproduce their lives and experiences (Thornton et al. 2012, 10). Institutional logics are used by organizations and individuals to elaborate and manipulate their content through interpretation, but logics also constrain and direct how means and ends of behavior are selected (Friedland & Alford

1991; Thornton et al. 2008, 101). On a supra-organizational level, logics operate as material-symbolic languages (Thornton et al. 2012; Friedland 2012), helping to explain connections that create a sense of common purpose and unity within organizational fields (Reay & Hinings 2009, 629).

A meta-theoretical notion that institutional logics are historically contingent (Thornton & Ocasio 2008, 108-109) is central for the purposes of this study. Although the organizational field is commonly organized according to a dominant logic (Strang & Meyer 1993; Lounsbury 2002), the simultaneous existence of multiple logics is possible over lengthy periods of time (Scott 2008; Thornton & Ocasio 1999; Purdy & Gray 2009). The degree of ontological conflict between logics determines whether simultaneously existing institutional logics manifest, on an organizational level, as coexistence or competition of managerial practices and organizational forms. Power struggles over political status deviate from the competition of logics in the sense that the theory of institutional logics perceives these organizational actions as derivatives from existing institutions (Thornton & Ocasio 1999; Thornton & Ocasio 2008, 111) and actors' understanding of prevailing institutional logics. Three different ways have been identified as to how competing logics may operate in the organizational field (Reay & Hinings 2009, 645; Goodrick & Reay 2011). First, the rivalry takes the form of a series of battles where actors supporting the winning logic achieve dominance and contradictory logics lose relevance. Second, the rivalry of logics avoids confrontations and takes place through covert operations, where actors attempt to gradually elevate their logic to preeminence or to undermine the currently dominant logic. Third, the coexistence of competing logics through collaborative actions at the micro level leads to the enabling of institutionalized arrangements.

The institutional logic approach follows the conceptualization of society as an inter-institutional system introduced by Friedland and Alford (1991) and developed by Thornton (2004) and Thornton et al. (2012). The inter-institutional system is composed of multiple sectors representing different sets of expectations

for social relations and human and organizational behavior. Each of these sectors provides a different source of rationality, potentially leading to the emergence of contending institutional logics. The inter-institutional system of society determines different institutional orders with their own characteristic logics, which interact with institutional orders, and their logics, at organizational and individual levels. As an example, Friedland and Alford (1991) decomposed Western society into the orders (and their corresponding logics) of the capitalist market, the bureaucratic state, democracy, family and Christian religion. In the Soviet Union, the main institutional sectors at the societal level included the economic system based on planning, the state and Party bureaucracy, socialism and ethnic nationalism. In this study, the Soviet Union represents the societal level of analysis, and the sphere of industrial location decision-making the organizational level of analysis. This perspective adopts Kornai's (1992, 33–61) definition of the Soviet system as an array of organizations under distinct formal and informal rules of power and ideology. Industrial location decision-making, the central object of this study, took place at an organizational level, specifically in planning organs and industrial ministries, which were subordinate to Party directives (Zaleski 1980). Thus, Soviet industrial location policy constituted an institutional field, one which was continuously influenced by the logics of Soviet society.

Institutional logics are connected to organizational decision-making by directing the attention of responsible actors to problems that reflect their understanding of self-interest and collective identity in institutional environments (Thornton & Ocasio 2008, 114), limiting the set of alternatives available for strategic choice based on what is considered appropriate and legitimate within the sphere of given institutional logic. Conflicting interpretations of these issues may lead to the formation of several organizational coalitions (Greve & Zhang 2017), each of whom commits to a certain logic and competes with others to implement their own in decision-making processes. This is consistent with Dellenbrant's (1986, 26–27) view that Soviet regional decision-

making took place within a bureaucratic system consisting of different, competing groups. During the 1920s and 1930s, the institutional field of Soviet industrial location policy began to emerge (e.g. Purdy & Gray 2009), reinforcing the formation of multiple competing logics and thus serves as a relevant starting point for this study.

Elements of Soviet industrial location: Principles, priorities and logics

The analysis of logics in this article builds on previous studies of Soviet industrial location. These studies have recognized a set of principles behind industrial location policy consisting of military needs, economic rationalization and regional equalization (Koropeckyj 1965; Rodgers 1974; Huzinec 1977). A criteria for prioritizing was necessary because investment demand constantly exceeded distributable resources (Dellenbrant 1986; Kornai 1992). During the Cold War, Western literature reviewing Soviet development remained inconclusive in its conceptualization of the phenomena. The principles identified were often categorized into numerous sub-parts (e.g. Koropeckyj 1965, 54–55), and the order of priority for the principles could not be established while the existence of theoretical underpinnings behind location decisions was questioned (Rodgers 1974; Huzinec 1977). A similar incoherence plagues Soviet publications on the theme, especially since military considerations were omitted from the analysis for political reasons (Samuelson 2011, 128–129). Despite occasional statements of set principles in locational planning, the Soviet textbooks hardly described the realities of economic geography critically or conclusively.

Koropeckyj (1965) and Dellenbrant (1986) have classified the principles of Soviet location theory into three groups: (1) purely economic, (2) combined economic, social and political and (3) purely political. The second category corresponded closely with the principle of regional equalization, whereas the third category was close to synonymous with military considerations. However, much space in his analysis is devoted to a discussion of the internal contradictions of these groups as well as the distinction between locational

theory and locational policy. The former was seen as strongly reliant on Alfred Weber's (Weber 1909) theory of production and transport costs, even though Weber's theories were officially dismissed as incompatible with Soviet ideology. Although Weberian principles had a large influence in Soviet location principles, they were subordinate to the political objectives of the Communist Party, which ultimately decided the locational policy (Koropeckyj 1965, 52–54).

Approaching the issue of Soviet industrial location through the framework of institutional logics develops the discussion of principles in the following ways. First, the institutional logic perspective allows internal contradictions between principles and their implementation by highlighting the cognitive element of logics, which consist of socially constructed and historically contingent values, assumptions and beliefs. Instead of providing unambiguous sets of guidelines for locational decision-making, each logic directs and constrains the selection of means and ends (in this case, the application of location principles) based on interpretations of institutional environments. Second, analyzing Soviet industrial location policy as outcomes of institutional logics bridges the gap between seemingly contradictory location theories and location policies. Whereas the historical outcomes of Soviet industrial location decisions greatly deviate from theoretical principles presented in Soviet publications, the institutional logic perspective explains this difference by emphasizing how theoretical location principles reflect the operation of institutional logics as material-symbolic languages, whereas the actual policy reflects the environment of conflict between different logics and their constraints on decision-making processes. Here, the framework of coexisting institutional logics as constellations (Goodrick & Reay 2011, 399), is particularly useful to study the decision-making environment, because it explains how multiple logics or principles may combine as patterns during specific situations (industrial location decisions) to produce an outcome, which reflects the mode of their coexistence at that time. Location decisions do not necessarily reflect location principles (Dellenbrant 1986, 46), but they certainly follow some sort of combinations of logics. Outlining the outcomes

of decision-making process as an outcome of competing logics makes it possible to understand how emphases changed in Soviet location planning due to changes in inter-relations between logics and how the logics themselves developed by diffusing feedback from economic geographical development and changes in institutional environment. Third, assessing the history of Soviet industrial locations as outcome of competing institutional logics instead of locational principles provides a possible link between the Soviet legacy and post-Soviet regional policy. The Soviet locational principles, as defined by Koropeckyj and others, were established for the institutional environment of the socialist economic system, which has ceased to exist and thus does not offer direct analytical relevance for studying the economic geographical environment of post-Soviet countries. However, whereas the Soviet location principles have collapsed, the institutional logics and their material-symbolic languages have not. Recognizing the long-lasting influence of institutional logics on industrial location strategy enables further study of the dynamics and decline of their constituent elements, making it possible to analyze the historically contingent impact of logics on post-Soviet development. Although this avenue has not been pursued extensively in this article due to space constraints, it might provide a useful research opportunity to study the extent to which similar logics behind location principles have endured in the transition to post-Soviet countries.

3 Historical context of Soviet economic geography

Despite the devastating effects of World War I and the Russian Civil War on the national economy, the remnants of Czarist-era industry defined the direction of early Soviet strategies for economic development. Geographically, technology and industrial infrastructure was unevenly distributed and connected to the railroad network. Industrial centers, such as Donbass, Baku and Lodz, emerged in the peripheries, representing isolated points of modernity while political and administrative power remained in St. Petersburg and Moscow (Nove 1969; Owen 1995).

Significant geographical redistribution of the Soviet industry took place when the Bolsheviks instated their power during the first half of the 20th century (Nove 1969). In many ways, the industrialization efforts were carried out without antecedent examples. The nationwide electrification program, GOELRO,[1] was one of the first and most essential industrial goals for the Bolsheviks. Started in the 1920s, GOELRO aimed at building large regional electric power stations and systems which would pave way for a new, long-term economic division of territorial regions (Saushkin 1962; 1966). GOSPLAN set up a special commission in 1921 to define such economic regions. Initial plans in 1920–21 identified 8 to 10 major economic regions, before a scheme comprising 22 regions was approved in 1922 by the All-Russian Central Executive Committee (Saushkin 1966, 9–15).

At the 14th Party Congress in 1925, Stalin introduced the "general line" of Soviet economic development, explaining that, in order to avoid economic dependence on capitalist countries, the Soviet Union would have to change the structure of its economy and invest in self-sufficient heavy industry and machine-building instead of relying on agricultural exports (Kotkin 1997, 30). The construction of the Ural Kuznetsk Combine (UKC) came to epitomize the characteristics and strategic goals of Soviet industrialization campaign under Stalin's leadership. In 1920, VSNKh (Supreme Soviet of the National Economy) began planning the UKC project to develop coal mining and metallurgical industries in the Ural mountain range. The idea behind the massive project was to combine the coal reserves in Western Siberia and ore reserves in the Urals under one industrial complex. UKC received heavy investments during the first and second five-year plans, accounting for approximately one-third of all industrial investments between 1932 and 1937 (Holzman 1957). Nevertheless, the production output fell short of the planned goals and large quantities of steel and iron products were of poor quality and unusable outside production quota calculations (Kotkin 1997, 62–65). The costs of transporting raw materials and final products with inadequate and congested railroad lines made UKC a hugely

[1] Gosudarstvennaya Komissiya po Elektrifikazii Rossii (State Commission for the Electrification of Russia)

expensive project and after the second five-year plan, its emphasis declined drastically. No new production units were built in Magnitogorsk after 1936 and the relative, though not absolute, production output decreased after World War II (Holzman 1957, 383-387). The costs of World War II, both social and economic, were immense for the Soviet Union (Davies 1998, 58–67). In the 1950s, displacement of evacuated industries to the eastern regions had ended, while industrial potential in western Russia reached its prewar level.

Despite the relatively quick economic recovery after World War II, the structure and distribution of industrial geography contained problems that have since become intrinsic and resisted modernization efforts. Dienes (1983) categorized Soviet economic regions of the 1950s into three prevailing types: old economic cores requiring modernization and diversification; environmentally harsh peripheries which contained promising future resources, but remained insufficiently integrated into national economic system; and overlooked rural areas with a large population, but unutilized in industrial potential (Dienes 1983, 219). Jan Åke Dellenbrant (1986, 12–13) has conceptualized the Soviet regional problem as "triangular," where development of Siberian, Central Asian and European macro-regions was partly mutually exclusive and required investment priorities. In the 1960s and 1970s, intensive investments were directed to less-developed and peripheral regions, overlooking economic arguments in favor of equalizing regional disparities (Dienes 1972; Kumo 2004). This movement did not severely alter the geographical pattern in the form of new industrial districts, but strengthened already established plants and regions (Mellor 1982, 142, 153). Several relocations to economically more efficient centers were adopted only from 1975 onwards, when industries in numerous peripheral regions (north Caucasia, far east, central Asia) began to decline (Kumo 2004). As recently observed by Bradshaw and Connolly (2016), Western economic geographers predicted at the turn of 1980s that Far Eastern regions might profit from the expansion of foreign trade with Asian countries, but this development did not commence. Overall, however, the adverse structure of industrial geography has

remained in similar form until modern times (Hill & Gaddy 2003; Markevich & Mikhailova 2013).

4 Competing institutional logics in Soviet location policy

This chapter discusses three institutional logics—military, economic and regional—which competed for field-level dominance in the Soviet economic regionalization and influenced the environment of industrial location decisions. Each logic was translated into the institutional field in the form of theories, frames and narratives (Thornton et al. 2012, 152), which utilized different types of rationality (Kalberg 1980). This prompted their different approaches to industrial geography, development possibilities and expectations of policy outcomes. While the logics had historical roots in the development of earlier periods, the societal and economic development experienced during the Soviet era extended and modified epistemological boundaries of logics, leading to the emergence of new cultural symbols and material practices.

One distinct category, bureaucratic logic, does not feature in the analysis, despite its overwhelming impact within the Soviet inter-institutional system (Kornai 1992). Although bureaucratic logic was perhaps the most dominant institutional logic directing Soviet industrial investments and planning mechanism after World War II, it had no specific or verified preferences in the initial industrial site selection process. Instead, different levels of bureaucracy adopted perspectives and principles of argumentation from those institutional logics they felt best fit their interests. Bureaucratic support for one of the institutional logics could be decisive in attaining dominance over the others in location decisions, though its effective impact is difficult to evaluate.

The inclusion and analysis of three individual logics is based on an extensive qualitative review of Soviet and Western industrial location literature. The purpose of this work has been to assess the role of institutional logics as macro-level constituents of Soviet industrial location policy and to analyze the impact of competing logics for Soviet industrial development at large. This

boundary condition warrants, on the one hand, the inclusion of Western publications to complement Soviet discussions (especially in the case of military logic) and, on the other, the exclusion of micro-level antecedents of logics and their conflicts within the Soviet system, which could be studied using archival materials highlighting specific location decisions. An explicit elaboration of the data collection process and review method is available in the appendix.

The selected empirical approach is not without its limits, especially regarding the relationship between decision-making events and retrospective accounts of industrial location policy as their outcome. Although the connection between institutional logics and organizational decision-making is assumed in theory (Thornton & Ocasio 2008), the analysis of retrospective publications provide only directive insights on the specific role that the identified logics employed in directing the actions and perceptions of responsible decision-makers and shaping the outcomes of actual decision-making events. Establishing specific links between different organizational interests within the Soviet bureaucracy and advocated institutional logics would require substantial efforts in tracking and cross-examining archival documentation of these events over the course of multiple decades, which exceeds the scope of this article and might still fall short of reaching conclusive statements about the intensions and rationales of the decision-makers. As a result, the presented conclusions regarding the role of logics in guiding the decision-making and execution of Soviet industrial location strategy should be treated as indicative and interpretative generalizations of manifestations over a long-term period, offering only a limited perspective to specific location decisions or to the institutional environment surrounding them. The results, however, present rich possibilities for hypothesis-testing in micro-level case studies of decision-making events and their contextual environments.

Military logic

Military logic was based on the core idea that industries and their location were subordinate to the demands of national defense considerations and the improvement of the country's military capabilities. The purpose of industrial location policy was to secure essential requirements of army mobilization and supply logistics while ensuring that possible foreign invasions would not disturb industrial operations (Rodgers 1974; Davies 1998). This stream of thought had been imprinted on Russian industrial policies ever since Peter the Great's reign in the early 18th century. In the 19th century, the construction of a railroad network, especially the Trans-Siberian railroad in the 1890s, and the development of textile, metal and petro-coal industries were central to Tsarist economic strategy (Von Laue 1953; Gatrell 1982). The role of military importance was high: Nicholas II's financial minister Sergey Witte used to complain that railroad allocation was not optimal for economic development because the rail network had been planned by military generals (Von Laue 1951, 187; 1953, 439). Between the two world wars, achieving military strength was the most immediate objective of the Soviet industrialization effort (Nove 1969).

Military logic was reinforced by the growing likelihood of war in Europe, which directed industrial location policy further towards the eastern peripheral regions (Rodgers 1974; Bradshaw 1991). Siberia's secretive remoteness and the planners' concept of a closed economy increased the appeal of this logic in location policy (Mellor 1982). The autarky of regions was in part encouraged by military logic. Still in the 1950s, the self-generating growth of the far eastern regions was considered important in order to discourage China's aggression and encourage Japan politically (Hooson 1972). Pledges to invest in far eastern regions were repeatedly renewed in official statements with little considerations of the high costs and low turnover compared to European regions (Hooson 1972).

World War II and its aftermath cemented the position of military logic in industrial location policy. During the war, many industrial plants and their workers located in the Western regions were evacuated to the eastern regions,

leading to emergence of strong concentrations in the Volga-Ural and Baikal regions (Rodgers 1974; Mellor 1982). Earlier investments in the eastern regions could also be justified due to experiences of the German invasion, giving the military logic further impetus to influence post-war location policies (Mellor 1982). The strong political position of the victorious Red Army along with the intensifying Cold War ensured that strategic viewpoints of military logic remained critical in Soviet location decisions (Chernyavskiy 1967, 60; Hooson 1972; Davies 1998).

With the exception of the concept of self-sufficiency, argumentation based on military logic, such as the emphasis on mobilization efficiency, were mostly omitted from printed discussions in Soviet economic-geographical journals during the 1930s (Samuelson 2011, 128-129). Scattered observations noting the importance of defensive capabilities in location decisions appeared after World War II, but mostly the role played by military logic in Soviet planning has been reconstructed from economic geographical analyses appearing in Western journals.

Economic logic

The economic logic bound together various arguments, representing a formal type of rationality (Kalberg 1980, 1158–1159) from the perspective of economic profitability. This logic included arguments stating the need to locate industrial enterprises according to economic utility and to minimize costs of production and transport within the limits of the socialist economic system. Economic logic has also directed occasional reorganizations of changes in investment allocations according to signals of shortage and imbalances (Kornai 1992, 164).

The objectives of Soviet planning organizations were based on economic optimization and maximizing the output of productive forces ever since they were established in the early 1920s (Lonsdale 1961). During that time, Russian

and Soviet economic geographers were introduced to Alfred Weber's (1909)[2] theory of industrial location which, alongside Lenin's fascination with Taylorism (Maier 1970; Sochor 1981), provided scientific argumentation for economic logic and improved its priority claim during the 1920s and 1930s (Rodgers 1974). In 1918, Vladimir Lenin had acknowledged the importance of economic logic, when decreeing that industrial distribution should derive from proximity to raw materials, in order to minimize the costs of transportation between the site of production and local markets (Lenin 1918). The proclaimed goals of regionalization closely followed contemporary economic logic: good interregional transport connections, the calculation of the most suitable natural conditions and energy resources for industrial specialization, and the maximization of labor efficiency under an integrated economic system (Lonsdale 1965, 467 – 468; Saushkin 1966, 6; Nekrasov 1966). The Soviet discourse, significantly influenced by works of Nikolay Baransky[3] and Nikolay Kolosovsky,[4] preserved and invoked the concept of economic regionalization throughout its existence, implying that the regional model–based GOELRO followed the objective of formal economic rationalization. Particularly, the attention paid to the potential of uncharted energy resources in industrial location decisions (e.g. Nekrasov 1964) recounted the doctrinal narrative behind the GOELRO program.

[2] Alfred Weber's main work, *Theory of the Location of Industries*, was translated into Russian in the 1920s and reportedly received large attention (Friedrich 1969, xxix).
[3] Nikolay Baransky (1881-1963) worked in the VSNKh[3] in 1919 -1920 and founded the officially supported Regional School approach in Soviet economic geography, while also setting up the chair of economic geography in Moscow State University (MGU). Baransky authored and supervised numerous publications and textbooks, including his major textbook *Economic Geography of the U.S.S.R.* (1956).
[4] Nikolay Kolosovsky (1891-1954) took part in the GOELRO project and worked as the director of East Siberian and Far East sector in GOSPLAN from 1920 to 1925. He also participated actively in the buildup of the First Five Year Plan in 1928-29 and was put in charge of the UKC organization commission in 1930. After the Second World War, he was appointed to professorship in MGU where he worked until his death in 1954 (Kazanskiy, Kalashnikov and Saushkin 1969). Kolosovsky contributed significantly to conceptual development of territorial-production complexes (*territorial'no-proizvoditel'nyj kompleks*). His ideas emphasized the importance of interdependence between economic regions and natural and economic conditions of local geography in order to determine distribution of production in socialist system (Kolosovsky 1969).

The reaction to Weberian location theory created a distinct contradiction between economic logic and socialist institutional framework. Weberian theory asserted that the optimal industrial location is determined by the optimization of the costs of transporting resources to the location of production and the costs of transporting commodities from the production location to the markets. The calculation of these costs also enabled the situation when a firm would relocate to optimize its production function to be determined. However, Weber's model was based on a market environment, which was interpreted to be incompatible with the socialist economic model (Saushkin 1966). Official Soviet rhetoric renounced the Weberian perspective as a bourgeois influence (Feygin 1958; Lonsdale 1961; Probst 1965) despite its implicit influence on economic geography via economic logic (Lonsdale 1961, 13; 1965; Saushkin 1961; Huzinec 1977). Growth orientation in location principles revealed that Weberian thinking was gradually reintroduced in planning methodology (Rodgers 1974) in the 1960s. For example, Nikolay Baransky's (1956) textbook approach was predominantly Weberian.

An internal debate emerged within the economic logic concerning the costs of transportation and the exploitation of local natural resources. Regarding industrial locations, the question was essentially whether to locate more industrial plants to peripheral regions in the east due to the seemingly limitless potential of unutilized natural resources or to continue to develop existing and technologically advanced industrial districts in the western part of Russia (Rodgers 1974; Shaw 1991). Despite opposite alternatives to industrial location planning, the reasoning behind both approaches relied on contemporary economic logic. The eastern regions promised rich deposits of raw materials to fuel industrial expansion, while investments in the western regions were economically sound due to the proximity of markets and an established transportation network (Davies 1956; Rodgers 1974). Another contradictory form of economic logic was the growth of plant size—so-called giantism (*gigantomania*) which started as an established practice during the first five-year plan (1928–

1933) and was officially abandoned in 1936, only to surface once again in the 1950s (Katz 1977; Taaffe 1980, 157). Giantism manifested itself in exceptionally large plant sizes in heavy industry, intended to boost agglomeration economies and scales of production to unparalleled levels (Katz 1977). Leon Smolinski (1962) saw the essence of giantism as a misinterpreted Marxist doctrine of centralized increase in the scale of production. According to him, the original Marxist idea characterized industrial processes from a historical perspective, rather than offering operational guidelines for industrial organization, as Soviet planners interpreted them (Smolinski 1962, 140). Yet the preference for large-scale production units in Russia did not originate solely in Soviet ideology. According to Katz (1977, 211), the preference for large factories was already present in Tsarist times, with 41.4 percent of the industrial labor force employed in factories with more than 1,000 workers. Further reasons for giantism were embedded in the institutional mechanisms of central planning that favor large-scale operations (e.g. Eucken & Hutchinson 1948) and the drive to surpass the efficiency of large establishments in the United States (Smolinski 1962, 141). Kornai (1992) argued that giantism was partly supported by bureaucratic logic. Although Smolinski considered the giantist projects of the 1930s failures in their own times due to high transport costs and various shortfalls and delays during their formation, he admitted that over long-term development these projects appeared more feasible and found more justification for the increased size of production units in the 1960s (Smolinski 1962, 146). After giantism and eastern development sharply increased transport costs, Soviet planners grew more conscious of their minimization, which also supported the idea of regional self-sufficiency from the perspective of economic logic (Lonsdale 1961).

Regional logic

The core tenets of regional logic emerged from the idea of equal industrial distribution between regions, which was included in the Marxist-Leninist program during the early 1920s. Regionally balanced industrialization was

thought to decrease social and economic inequality within the country (Rodgers 1974; Liebowitz 1991), promote economic growth in diverse industrial sectors and regions and develop peripheral areas which remained largely non-industrialized (Baransky 1956; Mellor 1982). In many ways, the argumentation of regional logic employed a theoretical type of rationality (Kalberg 1980, 1152–1155), grounding its central beliefs in the Marxist doctrine of social equality. For example, the discursive concept of the territorial division of labor included in itself a theoretical assumption that a regional dimension was a necessary component of the ideal organization of a national economy. However, frequent discussions in Soviet economic geographical journals (e.g. *Planovoye Khozyaystvo*) of the complex development of territorial production and regionalization did not automatically invoke regional logic, since coordination of economic production at the regional and sectoral level was also guided by economic logic. The concepts of territorial-production complex and regionalization utilized regional logic as a premise for their legitimation, but not as a concrete argument that should direct economic-geographical operations. Regional logic was also politically invoked to attract support from minority nationalities during the early Soviet period, when the establishment of the Soviet system was still incomplete (Rodgers 1974).

The GOELRO program was one of the first and most essential industrial goals for the Bolsheviks and a crucial tool for the establishment of centralized control and development of regions. GOELRO was strongly associated with regional logic and was considered a means of increasing economic and political interrelatedness and connections between regions while retaining administrative control in the hands of central leadership. Consequent mutual dependence and regional specialization was supposed to benefit industrial growth, integrate interregional planning and boost equality between regions (Saushkin 1962, 29–30; Lonsdale 1965).

At the turn of the 1930s, regionally equality in location policy was also seen as a way to increase the self-sufficiency and interconnectedness of regions (Lonsdale 1965; Mellor 1982; Shaw 1991). The concept of self-sufficiency also

drew support from local needs. For example, a decree in the 18th Party Congress outlined that the manufacturing of foodstuffs, such as dairy and meat products, flour and beer, must take place in sufficient quantities in each republic, territory and region (Baransky 1956). When regionally autarkic production faced difficulties due to needs for, for example, highly specialized branches of industry such as chemistry, regions participated in interchange with each other (Mellor 1982). The interconnectedness of regions and urban areas also served as a way to even out the size of cities (Nekrasov 1964; Mikhailov & Solovyev 1965). At the enterprise level, interconnectedness through informal horizontal relations became an important, though not explicitly admitted, function of the Soviet economy alongside central planning (Davies 1998).

Despite its fundamental role in official statements, the effective influence of regional logic was not substantial during the late Stalinist era between 1940 and 1955 (Rodgers 1974). This did not, however, prevent Soviet economic geographers from including elements of regional logic into theoretical models, and the emphasis on regional logic in Soviet location theory increased in the 1960s. For example, Alexey Lavrishchev (1969, 9) argued that distribution and location of enterprises was based on the so-called balanced method, which was principally based on the estimations of production and consumption balances between regions and secondarily on regional specialization, agglomeration and Weberian cost calculations. During the late 1950s and 1960s, development in economic cybernetics further boosted the interest in decentralizing planning system and optimizing production according to regional specialization (Grossman 1962; Peters 2016). Lavrishchev (1969, 15) devoted considerable attention to the role of technological progress in economic geography, noting that the industrial development of several Soviet regions depended on scientific production methods and technological apparatus. Huzinec (1977, 263) notes that the use of such technologies and mathematical models were slowly introduced to Soviet planning in the 1970s, though on a limited scale.

Finally, regional logic also gave impetus for vertical bargaining and local patriotism in different Soviet republics throughout the Soviet era. Regional officials sought to maintain their political power and prestige by demanding industrial investments on an equal scale compared to other regions (Kornai 1992). When giantism generated self-reinforcing development towards further large-scale projects, each region and republic pleaded for the launching of new projects in their own area (Smolinski 1962). Despite these appeals, regionally grounded location policies after the Stalinist era were enacted mostly in the distant regions of the Russian republic, rather than in other Soviet republics (Hooson 1972). This has been criticized as possible Great Russian chauvinism (Hooson 1972), which was starkly in contrast to the ideological goals embedded in regional logic.

5 Dynamics of institutional logics – competition and coexistence

Although contended institutional fields often tend to settle on a dominant logic (Reay & Hinings 2005), the environment for Soviet industrial location sustained multiple logics for prolonged periods of time. During the early period of industrialization, when the institutional field of industrial location policy was developing, the conflict of logics emerged in different ways to interpret and rationalize (Kalberg 1980) location problems. Once the logics and their competitive positions had become established, the forms of coexistence stabilized. When the balance of power shifted between institutional logics at the societal level, they altered the form of interactions and the coexistence of logics at the organizational level of industrial location policy.

As described earlier, the literature has identified three modes for simultaneously existing logics and how the competing logics operate on the organizational level: (1) a rivalry managed by a series of battle encounters, (2) informal covert influencing to achieve dominance, and (3) coexistence through collaborative mechanisms. An analysis of Soviet industrial location policy between the 1920s and 1960s strongly suggests that these were also the forms in which the presented institutional logics coexisted, as exemplified below. This

would imply that specific industrial location decisions resembled constellations (Goodrick & Reay 2011), which reflected temporary and prevailing hierarchies of logics and their coexistence.

First, confrontational encounters between logics aroused intensive, battle-like debates among Soviet economic geographers in the late 1920s and early 1930s. The issue of conflict concerned industrial location decisions to expand heavy industry in the Siberian regions, spearheaded by the establishment of the Ural-Kuznetsk Combine (UKC) as the flagship of the first five-year plan. This particular debate was exceedingly important for proponents of each logic, because the ultimate stance of the Communist leaders to the question determined the direction of Soviet industrialization for years to come. In 1926, negotiations between the officials from GOSPLAN, VSNKH and the Central Committee of the Communist Party led to a decision to build a new large-scale metallurgical complex in the Urals rather than to boost the established complex in Donbass (Holzman 1957). The Metallurgical Division of the Ukrainian Planning Commission and the Commissariat of Railroad Transport opposed the development of the UKC, invoking the economic logic that transport costs of interconnected production between Kuzbass and Magnitogorsk were too high for local or all-Siberian demand. Even if the scale of operations would be large enough for economical production, the consumption would have to be projected to the European part of Russia, which would increase the length of transport to markets and total costs. Another opposing argument of railroad officials questioned the UKC plan on the grounds that consequent railroad construction did not meet the contemporary needs of the Siberian region, which should have been geared towards agricultural, not industrial, development (Holzman 1957, 375–376). However, the military logic ultimately prevailed and the 15th Communist Party Congress in 1927 adopted a policy to concentrate the metallurgical and arms industries in the Urals. The goal was not only to protect key industries from invasions from the west, but also from the east—as Japan

might participate in a coalition of foreign powers (Samuelson 2011, 41–43).[5] This policy was also in line with regional logic: UKC's key location would enable further industrialization in the eastern regions and thus even out the distribution of industry across the Soviet Union. Already in the early 1920s, the governmental electrification commission GOELRO had realized the difficulties that the vast distances and minor population centers in Siberia presented for energy distribution and foresaw the need for a large industrial center in the Ural region (Holzman 1957, 373–374). Finally, the propaganda value of building a gigantic industrial complex from scratch in Magnitogorsk made the UKC an attractive industrial experiment for Soviet leadership (Kotkin 1997, 38). The outcome of this discussion repeated during the 1930s, resulting in the establishment of, among others, an industrial district in Chelyabinsk (Samuelson 2011), and reflecting the acquired dominance of military logic. The experiences of invasion during World War II influenced allocation strategies after the death of Stalin. Despite efforts in the 1930s to industrialize eastern regions based on military logic, the invading Germans were able to occupy territories containing 20% of the Soviet industrial capacity (Davies 1998, 59; Harrison 1998, 252–254). Hooson (1972) and Dienes (1972) observed that after World War II, strategic priorities continued to clash with economic considerations in industrial planning and allocation. For example, in the fuel and energy industries the focus of allocation turned to western Siberian regions from Donbass and Baku, which accounted for two-thirds of energy supply in 1941 and had been occupied during the war. Confrontations and divided opinions over the distribution and transfer of energy hampered the projects, making it hard for planners to decide whether to promote long-distance transmissions lines from far-away regions where large complexes operated or to favor local energy sources and electricity grids (Dienes 1972, 447; Hooson 1972, 543–544). The attempts to pursue economically sound investments in industrial districts in European Russia repeatedly faced political pressure from the

[5] Although the Ural development policies were repeatedly highlighted in official plans, the actual state demand for raw materials, products and machinery also led to the simultaneous strengthening and expansion of older industrial districts in Leningrad and Donbass in the 1930s (see Samuelson 2011, 43).

supporters of regional and military logics, which gained leverage due to deteriorating diplomatic relations with China (Hooson 1972, 554).

Second, throughout most of the 1920s and 1960s the rivalry between regional and economic logics can be described as an unresolved conflict or "uneasy truce" (Goodrick & Reay 2011, 377). Neither logic could establish a constant dominant position over the other, since both regional equalization and economic progress remained set objectives of the Communist Party. Vertical bargaining between central planners and regional producers became intrinsic phenomena (Kornai 1992), reflecting not only the hierarchical struggles or incentives of different parties in an economic sense, but also the ongoing clash of separate logics. Soviet economic geographers attempted to consolidate the situation. For example, Nikolai Baransky highlighted economies of scale in pursuing large construction projects in the peripheries as well as benefits of agglomeration in transportation, while simultaneously underlining Siberian industrialization as a way to even out social and economic equality (Baransky 1956, 17, 40, 46, 57). The instability of what logic dominated led Western observers to discuss what the prioritization of location principles was. In particular, the question of whether military considerations had been indisputable priorities was frequently discussed in Soviet studies journals throughout the 1970s (see Koropeckyj 1967; Abouchar 1973; Davies 1974). Contrary to Holzman (1957) and Lonsdale (1961), Koropeckyj saw military priorities as the most important principle to which the two others were subordinated, with economic principles taking priority over regional ones (Koropeckyj 1965, 61, 64–65). The conflict between regional and economic logics continued throughout the Soviet period and has maintained its role in the post-Soviet debates as well (Kinossian 2013, 615–618).

Third, pragmatic collaboration of logics became possible after World War II, once the basic location principles and field-level logics had become established. In most cases, two logics with integrated goals were able to achieve dominance in location policy. In these cases, the third logic was either overlooked

or indifferent to locational outcomes. Combinations of the military and economic logics existed within the military-industrial complex, where production efficiency was beneficial from an economic and military perspective (Barber et al. 1999). The promotion of regional self-sufficiency and interconnections, especially in locating industries to eastern regions satisfied the needs of both regional and military logics (Lonsdale 1965; Mellor 1982; Shaw 1991). In turn, a synthesis of economic and regional logics led to the formation and regionally balanced distribution of territorial-production complexes (TPC) (Kolosovskiy 1969; Lavrishchev 1969) and the increasing of auxiliary industrial branches in urban agglomerations (Cheremisin 1966). Although military logic was not the primus motor in the planning of TPCs, its status was not endangered by such regional organization. This congruence of aims might partly explain the intensive efforts of several economic geographers to promote TPC-based regional organization as the template for the Soviet industrial economy from the 1960s onwards.

6 Impact of competing logics on Soviet institutional environment

An analysis of Soviet industrial location policy as an outcome of competing institutional logics underlines two pivotal questions: How did the competition of logics affect Soviet industrial location policy? Why was the configuration of multiple logics able to survive without convergence towards a dominant logic?

First, the most important implication is that the competition of institutional logics and the shifting status of dominance created strategic discontinuities and disruptions to economic geographical planning. Each logic was able to survive indefinitely, becoming deeply embedded in the Soviet organization. The impact of logics on industrial location decisions was particularly direct because of the vertical hierarchy of Soviet bureaucracy. According to Kornai (1992, 41, 118–130), the primary incentive of bureaucratic decision-makers was to obey or support the views of superiors, not to find the best possible solutions for economic problems. Thus, any shift of dominance between logics at the top level was reflected in locational policies, even if the subordinate levels held on to a different

logic. Alternatively, in the absence of a dominant logic at the superior level, different logics at the subordinate level could achieve dominant status. The resulting picture helps to explain why locational decision-making contained inconsistencies and the results deviated from originally designated plans. From a long-term perspective, the outcomes of industrial location policy represented unsolved conflicts within Soviet organizational and bureaucratic entities. An additional difficulty arouse from the intrinsic path-dependence of industrial geography (Martin & Sunley 2006). It was difficult to make optimal location decisions to solve the problems of the regional economic system because the transport network, urban concentrations and industrial interdependencies had developed according to earlier location decisions. A similar path-dependence governed industrial production, because inconsistent decision-making created shortages of non-prioritized products (Kornai 1992, 176–177), but in the case of economic geography, the accumulated sunk costs (Clark & Wrigley 1995) prevented significant reversal of adopted locational strategy (Hooson 1972, 553). The industrialization of the Siberian regions, the most pressing issue in the criticism of Hill and Gaddy (2003), is a prime example of this process. The transformation of development in the east from an ambitious venture into irreversible misdirection encapsulates the harmful impact of competing logics, which not only contributed to suboptimal location strategies, but also complicated retreat from the chosen course of strategy due to vested interests, when the expectations began to falter. In this way, the prolonged simultaneous existence of logics and their consequent competition was connected to lock-in and structural inertia in Soviet economic geography. In the 1960s and 1970s, pressures to reform industrial geography and development of international economic competition posed formidable challenges for the Soviet economy. Rival Western nations were capable of maintaining a steady rate of technological progress, upholding economic growth through innovations and transforming their industrial geography with market mechanisms. Meanwhile, Soviet industry was reluctant and even incapable of transforming its industrial structure or

geography to meet the demands of such economic model (Davies 1998, 79–80). The proclaimed military rivalry with the United States and consequent huge state investments in the arms industry further complicated full-scale reforms of the Soviet industry model.

If the competition of multiple logics produced suboptimal results, then why was there no emergence of a dominant logic and how to explain the survival of multiple logics for prolonged periods of time? One possible explanation is that the evaluation of performance was dependent on embedded institutional logics. This interpretation touched on Kornai's (1992) view of bureaucratic performance logic, which preferred hierarchical and institutional stability over economic profit. Similarly, Lounsbury (2007) has shown that performance evaluations of American money management firms varied because of competing logics. Hence, it would be possible to conclude that different performance indicators both maintained the unsettled rivalry of logics and resulted in an adverse form of industrial location policy, at least when viewed in hindsight.

However, another key factor was that the planners and decision-makers were bound rationally regarding the results of decisions, causing the survival of logics and their inability to reach lasting dominance. Industrial location decisions were made with long-term expectation (Hill & Gaddy 2003, 91) and their success remained unpredictable for equally long periods. For example, Holzman (1957) thought that the development of the Siberian regions might eventually lower the transport costs to profitable levels, at least if examined in light of the other objectives of Soviet planners or in the anticipation of consequent markets (Lonsdale 1961, 14). A similar concession was made by Katz (1977, 219), concerning the time preference of giantism: only over a *very* long period could the policy possibly overcome its negative strains. Koropeckyj (1965, 68) questioned Holzman's view that large-scale industrial projects, such as UKC, might prove to be economically more profitable investments in the long run. He argued that expansions of western industrial centers, such as Donbass, would have enjoyed higher profits in the short run, which could have then been re-

invested to boost profits in the long run as well. The purpose of directing investments in heavy industry to the eastern regions was, according to Koropeckyj, part of a long-term plan to create a strong arms industry that, once developed in due course, would integrate raw material resources with the machine-building industry. This strategy seemed perfectly rational at the time when the UKC was established, but political developments and Hitler's rise to power in 1933 disturbed the realization of the original plan and redirected industrial investments to centers in European Russia in the late 1930s (Koropeckyj 1965, 70–72). After the country's victory in the Second World War, the state of the Soviet economy hardly showed signs of irreversible strategic failure. In the 1960s, short-term struggles to meet the expectations of economic development and coordination problems in production were visible, but eventual long-term outcomes of location policy remained unclear and thus no logic could be outrightly proclaimed as adverse. Although the competition of logics presumably disrupted consistent locational strategies, accumulating difficulties in the spatial industrial structure and the real scale of economic problems became apparent only closer to the end of the Soviet Union (Bradshaw & Connolly 2016, 711).

7 Discussion

The objective of this study was to utilize a theoretically oriented approach to understand the mechanisms and processes behind Soviet industrial location policies. The article contributes to extant literature by proposing a link between Soviet industrial location policies and underlying institutional logics. The results of the analysis highlight the disruptive effect that competing institutional logics had on Soviet locational strategies. For Soviet leaders, addressing the problems created by structural inertia and inconsistent planning strategies would have required the management of competing institutional logics. There were, however, structural, institutional and ideological factors which maintained the existence of multiple logics and forestalled convergence towards one dominant

logic. Bounded rationality and the complexity of path-dependent outcomes made it increasingly difficult to refute claims of rival logics.

The results re-conceptualize prior accounts of industrial location principles with up-to-date organizational institutionalist literature. These principles not only resonate with the institutional logic perspective, but the modes of interaction and the competition of these logics match the forms of simultaneous existence that has been observed in other studies and different institutional contexts (Reay & Hinings 2009; Goodrick & Reay 2011). By demonstrating such correspondence, the study encourages more theoretically oriented analyses of Soviet society and its organizational history. Meanwhile, the article addresses the call for historically oriented studies of institutional logics, their contingency and influence on organizational strategy (Thornton et al. 2012, 13, 182–183) as well as origins, structure and role in decision-making (Lounsbury 2007, 303).

It must be emphasized that the results of this study should not be directly extended to the post-Soviet era. However, the path dependence argument and the observation that the analyzed framework parallels the manifestations of competing logics in other environments suggest a link to the study of the post-Soviet environment. In recent years, similar settings of competing logics have been identified in Russian regional planning (e.g. Kinossian 2013), with similar consequences of inconsistent policies and stagnant development. An important topic for further study would be to examine the source of these logics in the contemporary context. It should be considered if the competition and coexistence of logics are recurring due to the persistence and historical imprinting of certain elements in the Russian institutional environment or if they stem from other sources in the post-Soviet inter-institutional system.

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Appendix

Summary of data collection and review method

The analysis was conducted as an extensive, qualitative literature review of Soviet and Western-based textbooks and journal articles discussing the theory and practices of Soviet industrial locations. The goal of the review process was to identify and categorize different elements and factors which influenced industrial location and spatial allocation decision-making in the Soviet Union from 1920s to 1960s. For this reason the industrial location principles presented by Koropeckyj (1965) and subsequent scholars were not taken as the point of departure, since the analysis was conducted to holistically view elements in the institutional environment and discover possible overlooked factors. The time period of the analysis was selected to depict the emergence of the institutional field of industrial location policy as well as the initial development of Soviet industrial geography. Elements of industrial location policy had become established by the 1960s and the development during the following decades did not dramatically alter prevailing economic regionalization. The reviewed publications were selected to represent two sources of industrial location literature: (1) Soviet textbooks of economic geography which consisted of broad presentations of national economic geography and more narrow studies of economic regions in the Soviet Union, and (2) textbooks and journal publications outside the Soviet Union, which analyzed the development, economic policies and strategies behind Soviet industrial location decisions. A criteria used for inclusion was that the author presented explicit claims or appraisals of factors which, in the author's view, influenced Soviet industrial location decision-making between 1920 and 1960. In addition, the claims, appraisals and analyses had to concentrate on location policies that either primarily or indirectly had an influence on actual industrial location decisions. The review process contained several phases. The first phase of data collection consisted of creating a comprehensive literature database around the subject literature. This phase was

conducted using search engines (Web of Science, Google Scholar), available university library databases and bibliographies of the most relevant studies to identify relevant publications related to economic geography, economic history, economics and urban studies of Russia and the Soviet Union. The search results consisted of 217 publications, including 140 monographs, 59 articles and 18 book chapters. Of these, 30 publications were selected for in-depth analysis in the second phase based on criteria fulfillment and periodical and thematic relevance. From these publications, a total of 188 individual claims and appraisals were sketched (e.g. Lamberg et al. 2014) and arranged into an Excel database (available by request from the author). Economic logic contained 76 claims, military logic 21 claims (subject to censorship in Soviet publications) and regional logic 52 claims. During the later stages of research, the database was updated with ten selected articles from the Soviet journal *Planovoye Khozyaystvo* (Planning economy). Claims and appraisals were subjected to discursive analysis from which the proposed logic categories and their goals, expectations and outcomes were specified. A total of 39 outlier claims did not constitute any coherent entity of institutional logic and fell outside the analyzed categories. Logic entities were then evaluated in the light of institutional logic literature (e.g. Thornton et al. 2012) to ensure their fit with the theoretical framework. Finally, a description of each logic was summarized in narrative form in section 4.

II

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III

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