Kazakhstan’s evolving regional economic policy: assessing strategies of post-socialist development

Yerken Turganbayev\textsuperscript{a} and Alexander C. Diener\textsuperscript{b}

\textsuperscript{a}Graduate School of Business, Nazarbayev University, Astana, Kazakhstan; \textsuperscript{b}Department of Geography and Atmospheric Sciences, University of Kansas, Lawrence, KS, USA

**ABSTRACT**
Core foci of economic geographic research are spatial inequality and policies to mitigate it. The variables considered in creating such policy evolve over time and attend to changing political, social, economic, ecological, and geopolitical circumstances and ideals. As a former Soviet republic with considerable hydrocarbon resources and substantial executive power, Kazakhstan has periodically reconsidered its regional economic policies. This study analyzes Kazakhstani government documents to track evolving strategies of development and utilizes econometric analysis to assess their effect on disparity across the state’s regions. Such research should prove useful in comparison with other cases of the post-Soviet realm and developing states more generally.

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**Introduction**

For states of the former Soviet Union, emergence onto a capitalist world stage is complicated by legacies of communist central planning’s economic geographic logic (Ozornoy 1991; Skryzhevska 2008). The challenges presented by this logic have been approached in macro-economic policy in the broad-based reform processes of “gradualism” and “shock therapy,” but also through a succession of domestic policy initiatives aimed at mediating variance in regional prosperity and curtailing extant and potential social problems. Several empirical studies (Petrakos 2001; Iodchin 2007; Skryzhevska 2008) nonetheless show increased economic disparities across the territories of transition countries.

The Republic of Kazakhstan presents a particularly significant case for such research because of its considerable progress transitioning from a planned to market-based economy, its size both territorially and in terms of economy, and its centrality in Eurasia’s regional economy. Despite being the second largest post-soviet economy, Kazakhstan remains challenged by extreme differences in physical geographic conditions and infrastructure development across its...
regions. Its recent history would seem to align with studies suggesting that the combination of large state-territory and propensity for economic growth lead to regional disparity. Additional factors of Kazakhstan’s significance to such research include the uneven distribution of mineral resources across its territory and its status as the largest landlocked country in the world. The state’s complex resource geography has both positive and negative impacts on economic growth (Stijns 2005; van der Ploeg 2011; Frey, Frey, and Wieslhuber 2013), and landlocked countries generally experience slower economic growth (MacKellar, Wörgötter, and Julia 2000), which in turn, affects development within intra-state regions.

Ultimately it is Kazakhstan’s sustained economic growth over the last 20 years that compels this study. Despite various global economic crises and resource-value fluctuations, the state’s average growth rate of per capita GDP in the last 20 years was 4.7%. Over the period between 1993 and 2016, the real per capita GDP of Kazakhstan grew almost 2.7 times. Generally, favorable prices for oil, gas, and other commodities found within its borders obviously contributed to this growth. But while the economic boom succeeded in raising the overall standard of living for most of Kazakhstan’s citizens, rejuvenated infrastructure, expanded services provided by the (post-Soviet) state, and improved education and health-care...
systems relative to levels of the early 1990s, intra-state regional disparities remain profound.

Kazakhstan’s efforts to situate within a new global geopolitical and economic reality accelerated the development and expanded the diversity of its intra-state regional problems. Transition from a planned to market economy was further complicated by unstable government regulation, economic crises (1998–1999, 2007–2008, 2015–2017), emergence of new cross-border regions, infrastructure degradation, and manufacturing supply chain disruption. Some regions clearly suffered more than others.

Regions sustaining a stark decline in production and population witnessed increased disparities in living standards, declining access to social services, and crumbling production and transport infrastructures to a far greater degree than regions with high levels of capital investment and population growth. Rural areas and small, one-industry cities have become particularly marginalized. Moreover, Soviet efforts to equalize socio-economic development generally involved subsidies to “problem regions.” Kremlin-directed capital investments were transferred from relatively resource rich regions and accumulated in relevant budgets at varied levels of government. While this redistribution mechanism enabled the development of “problem regions,” it also masked certain underlying economic geographic illogics. Regional governments consequently lacked effective policies of self-financing and self-sufficiency; they were overly dependent on the center, and their respective populations overtly dependent on them.

Through analysis of the Kazakhstani government’s strategic documents, we identify two main stages of the regional policy of the Republic of Kazakhstan. The first, from 1996 to 2006, sought to equalize regions. This effort to overcome regional disparities involved redistribution of direct assistance from advantaged areas to disadvantaged areas. For various reasons that will be outlined below, this policy failed to achieve its goal and the disparities across regions increased. The second stage (2006 – present) entailed a strategic shift to the idea of growth poles and axial development for the country. The success of this approach is harder to gauge because, while the absolute differences across regions have grown, inequality in terms of relative measures has fallen. As shall be discussed below, there are also a number of possible negative outcomes that could accompany growth pole regional policy. This is not the first analysis of the strategies of regional policy in Kazakhstan (Berkutova 2015; OECD 2017). However, the main contributions of this article are demonstrated links between Kazakhstan’s regional policies and existing theoretical models, and empirical evaluation of its evolving approach to regional policy.

**Regional policy: theoretical models and approaches**

In every region and every state, resource endowments, levels of economic development, investment in infrastructure, environmental quality, and employment
opportunities vary across space. Even within the wealthiest states or “the big seven” per capita income disparities vary between 30 and 50% across their respective largest territorial administrative units (e.g. states, provinces, departments, etc.) (Bachtler, Mendez, and Wishlade 2013; Richardson, Bae, and Choe 2011). Despite emerging and operating within different geopolitical and geo-economic contexts, this is no less true amongst the states of the former Soviet Union.

Regional policy is therefore formulated and enacted to catalyze the development of productive forces within specific regions so as to distribute civil beneficence and minimize social conflicts that might encumber states as a whole (Mamyrov and Akchura 2003). The strategies and actions taken by governments relate not only to the relationship between the state and its composite regions, but also to the relationships between these sub-state regions themselves (Vidyapin and Stepanov 2007).

Theories of regional economic growth

Although each country and sub-state region are unique, there are common theoretical and practical approaches to the formation of regional policy that may be identified. In order to give theoretical context to the evolution of regional policy in Kazakhstan and understand the logic of its instruments, we offer the following review of several theories of regional economic growth, upon which its evolving policies are based. Following Armstrong (2002) and Stimson, Stough, and Roberts (2006), we will not cover all theories in this review but only those we deem directly relevant to the analysis of our case study.

In their review of key theories and models of regional economic development Stimson, Stough, and Roberts (2006) started with what they called the “economic base theory.” This theory postulates that local regional economies consist of two parts: a basic component, which is called the export consumption, and a non-basic component, which is called the local consumption (Alexander 1954; Tiebout 1956). The regional economy thereby develops through the growth of an economic base having a multiplying effect. Growth in export consumption leads to growth in local consumption due to an inflow of funds from external customers. This, in turn, leads to increased production of local suppliers and a process of cycling and recycling externally derived funds. This theory postulates that the initial increase in the economic base produces subsequent direct and indirect multiplying effects that promote economic development. So, its main policy implication is the development of the “economic base.”

Neoclassical growth theory (Solow 1956; Swan 1956) holds that economic growth is determined by the expansion of production factors and predicts that, due to decreasing returns to capital, economies will converge and differences in per capita GDP will decrease in the long run. The theory also points to
a number of other convergence mechanisms: interregional migration, capital mobility, and technology transfer. Accordingly, stimulation of labor and capital mobility, technology transfer, and free trade can be mentioned as instruments of regional policy (Barro and Xavier 2003; Capello 2007).

Endogenous theories of economic growth have emerged in response to neoclassical theory’s emphasis on the exogenous nature of technological progress. The main difference between these approaches is that endogenous theory holds technological progress to be part of the model and determined by economic growth. Human capital, R & D innovations, etc. are considered determinants of long-term growth (Aghion and Howitt 1998; Barro and Xavier 2003; Lucas 1988; Romer 1986). The conclusions of these theories regarding regional disparities are, however, contradictory. Some models predict regional convergence (Abramovitz 1986; Capolupo 1998; Jones and Manuelli 1990; King and Rebelo 1989; Rebelo 1991; Tamura 1991), while other models predict divergence (Aghion and Howitt 1992; Dixit and Stiglitz 1977; Ethier 1982; Grossman and Helpman 1991; Lucas 1988; Romer 1987, 1990; Spence 1976). A third group of models (Arrow 1962; de la Fuente 2002; Sheshinski 1967) suggest that regional economic disparities can either grow or decrease depending on values of parameters of the models. Endogenous models of economic growth propose improving the quality of human capital through education and health, stimulating the spread of knowledge and the development of innovations as instruments of regional policy.

Building upon these approaches, the New Economic Geography theory sought to explain the phenomena of “geographical concentration” (Fujita, Krugman, and Venables 1999), or industrial agglomeration, on which the growth of local economy heavily depends. This theory recognized three fundamental factors affecting the agglomerative process. The first is increasing returns, which promote spatially concentrated production activities and increasing profitability of relocation due to the expansion of local markets. The second factor is transportation costs, prompting firms to locate close to their main markets. The third factor is migratory flows which influence both an area’s labor force and capacities of local markets. The models of “new economic geography” hold agglomeration to be the result of two forces: centrifugal and centripetal. Centrifugal forces manifest in efforts of firms to avoid direct competition over local markets and maximize coverage of spatially distributed demand. Centripetal forces manifest in firms benefiting from increasing returns for broader markets and households’ access to higher wages, a wider range of goods at lower prices, and more comfortable living environments.

Another theory that has influenced regional policy in Kazakhstan is Growth Pole Theory. The term “growth pole” was first proposed by the French economist Francois Perroux (1950) to represent compactly arranged and dynamically developing industries and individual companies, in which
“development momentum” affects the territorial structure of an economy. This momentum is attributed to the concentration of innovations, which are grouped around the leading industry. If this industry is a propulsive one (i.e. possessing a positive multiplier effect), it forms a growth pole. Perroux’s approach dramatically departs from prior ideals of homogeneity and uniformity of development. There are centripetal forces that draw economic activity to certain centers, poles, or foci, and outgoing centrifugal forces that propel economic activity away.

A related theory of development axes (Pottier 1963) suggests that development is transferred along the major highways that connect the most important industrial centers. Pierre Pottier’s work plays a significant role in the modern theory of location, as it helps to link the impact of transport networks with theories of urban hierarchy and growth centers.

Building upon both Perroux and Pottier, Parr (1999a, 1999b) argues that there are both favorable and unfavorable effects of growth pole strategies. Among the favorable effects are positive spillover; such as increasingly efficient systems of production in the growth pole having favorable effects on income and employment in the region that could, in turn, promote multiplier effects resulting from the increased demand for goods and services from local producers. Another favorable effect of a growth pole policy comes from the adjustment of labor and capital within the region. Labor adjustments come from the increased commuting or migration opportunities within the region, while capital adjustments are related to increased opportunities for investment of local capital within the region.

By contrast, unfavorable effects of growth poles on the economy include the possible driving-out of local businesses by more effective firms oriented primarily to extra-regional markets, possible orientation of companies toward supply-chains from other regions or countries that circumvent local providers, out-migration of active and enterprising labor force from the hinterland of agglomeration centers (such migrations can negatively affect economic development in the region as a whole), and possible outflow of capital from places within a region to the growth pole. In other words, in spite of agglomeration’s benefits, heavy concentration of production in growth poles could increase congestion costs, as well as, aggravate social divisions between a region of intense capital investment and the rest of the country (Richardson, Bae, and Choe 2011).

**Regional planning approaches**

Economic and social policies constitute primary means by which governments may affect the development of intra-state regions. These policies often include public financial assistance, the attraction of local investments – including private capital, legislative measures, financial constraints, and
fines. Social policies commonly target differences in living standards across a given population with special attention paid to ethnic, racial, and urban/rural disparities.

As noted by Stimson, Stough, and Roberts (2006), in the 1950s, a master planning approach was broadly in vogue and focused on industrial production, infrastructure and market development. While this approach was dramatically modified or fell from favor in much of the developed West throughout the latter half of the 20th century, socialist countries continued to employ it until the 1990s. Master planning was elemental to centrally planned economies that sought to address such issues as infrastructure, unemployment and promotion of “…industrial estates, many of which were used to support the development of state-owned enterprises as part of a policy of national and regional self-reliance” (Stimson, Stough, and Roberts 2006, 16). Below, we will see that the elements of the master planning approach were popular in the early stages of Kazakhstan’s regional policy.

From the late 1960s, most Western states turned to “goals and objectives planning approaches” that focused on establishing directions and aims of regional economic development in pursuit of defined strategic outcomes. This differed from master planning by shifting the emphasis to involvement with and support of private industry. Although regions’ roles in realizing the national aims and objectives increased during this period, their economic development paths were still overwhelmingly prescribed by national governments.

In the early 1970s, economic development planning embraced a “structure planning approach” that took into account the geography of economic activities. Again, although structure planning assumed more flexible possibilities for regions, their economic development remained subjugated to serve national government policies directed at enhancing social equity and decentralizing investment and employment. Rising popularity of “strategic planning approaches,” by the mid of the 1970s, morphed regional development planning increasingly towards ‘business practices’. These involved formulation of aims, objectives, and strategies for regions to gain advantages relating to their environment and location. By the late 1980s, the strategic planning approach to economic development began to address effects of globalization, broader environmental, and social issues. We will see later that Kazakhstan’s regional policy also evolved successively through “goals and objectives planning”, “structure planning” and “strategic planning;” although elements of all the approaches are still evident.

In the 1990s, a focus on sustainable economic development gave rise to “integrated strategic planning approaches.” Their application to regional economic development compelled consideration of social, environmental and community value contexts. Some researchers called it a “paradigm shift” (Bachtler and Yuill 2001; Bachtler, Mendez, and Wishlade 2013), which is “characterized by decentralized intervention based on integrated regional
development plans and strategies, designed and delivered by partnership of regional local actors” (Bachtler and Yuill 2001, 4). Policy goals in regional economic planning switched from “balanced regional development” to “regional specialization and competition in order to implement effective self-reliant regional policies.” This paradigm shift is also observable in Kazakhstan’s evolving regional policy.

In a significant addition to the varied planning approaches to regional economic development outlined above, Richardson et al. (2011, 6) assert that in the global economy “mega-city regions will play a greater role rather than national states” and “national development will be promoted via selective concentration around global mega-city regions.” Evidence of this is also apparent in the most recent iterations of Kazakhstan’s regional policy.

**Place-based versus place-neutral approaches**

In 2009–2010, several reports on regional development policy interventions were published by such international organizations as World Bank (World Bank 2009), the European Commission (Barca 2009), the OECD (OECD 2009a, 2009b), and the Corporación Andina de Fomento (CAF 2010). These reports (Barca, McCann, and Andrés 2012) present two opposite approaches to regional policy, namely place-neutral and place-based. The first approach, advocated by the World Bank, posits a development model based on “spatially-blind” strategies; that is “policies that are designed without explicit consideration to space” (World Bank 2009, 24) as the “most effective way of generating efficiency, guaranteeing equal opportunities, and improving the lives of individuals wherever they live and work” (Barca, McCann, and Andrés 2012, 138). The grounding theory of the World Bank report is the above-discussed New Economic Geography within which agglomeration effects produce competitive advantages for large cities, the nature of economic growth is unbalanced, and policy aiming to spread economic activity beyond dynamic poles is regarded as ineffective.

In contrast to the World Bank report, the other four reports (Barca 2009; OECD 2009a, 2009b; CAF 2010) advocate a place-based approach according to which development policy should not be “spatially-blind.” These reports argue that “space matters and shapes the potential for development not only of territories, but, through externalities, of the individuals who live in them” (Barca, McCann, and Andrés 2012, 139). Hence, development policy should not be space-neutral but customized to the geographical context of a given territory. “Geographical context” may be interpreted to include cultural, institutional, and social characteristics. As shall be shown below, Kazakhstan’s regional policy has deployed both approaches.
Republic of Kazakhstan – geographical context and administrative divisions

While particular economic sectors, such as hydrocarbon extraction and mining/smelting industries, are well developed in Kazakhstan, the production infrastructures of many regions remain antiquated. This produces a bipolar economy that militates against integration. Isolated sectors of raw material export and low-quality manufacturing are unable to compete on a global or even Eurasian regional scale. Northern and eastern regions of the country produce a surplus of the electric power, whilst southern and western regions import energy from other regions or nearby countries (Kyrgyzstan, Russia, Tajikistan). This is just one example of the uneven development that characterizes Kazakhstan’s economic geography.

According to the data of Kazakhstan’s Statistical Agency, the state’s population is 18,117,641, ranking 64th in the world. However, the population density is only 6.6 people per square kilometer. The population decline of the 1990s has reversed, affording a positive demographic dynamic relating to high birth rates among ethnic Kazakhs, a lessening of emigration among non-titular peoples, and return-migration of the Kazakh diaspora. Like Russia, Kazakhstan’s relative economic health has become a magnet for labor-seeking migrants from other Central Asian states (Davé 2014). This said, it is important to note that the state possesses regions of indigenous labor surplus.

Politically, Kazakhstan is divided into 14 oblasts (equivalent to provinces in other countries, see Figure 1). Each oblast is subdivided into rayons (districts). Three large

Figure 1. Kazakhstan’s Oblasts and population density, map prepared by Turganbayev 2019.
cities, Astana, the capital of the country, Almaty, the former capital, and Shymkent enjoy special political status. Of the 14 oblasts of Kazakhstan, 12 are categorized as “frontier regions.” It is worth mentioning that these frontier regions are elemental to Kazakhstan’s desire to parlay the state’s geographic centrality within Eurasia into economic expansion through improved transport and communication infrastructure (Cummings 2003; Diener 2015). Kazakhstan’s railway and highway network currently connects all intra-state regions with border-portals to adjacent countries. Moreover, the state’s roads and railways are increasingly networked into international transport corridors including China’s OBOR, the US New Silk Road, and Russia’s Eurasian Union. Relatedly, the Caspian seaport at Aktau functions as a multimodal transport hub within the international transit corridors of “TRACECA” and “North-South.” Twenty-one airports operate within Kazakhstan, of which 14 are committed to the provision of international flights.

Balanced development approach to regional policy in Kazakhstan

After five years of ad hoc or reactionary approaches in the wake of the Soviet collapse, Kazakhstan’s government adopted several strategies of regional development to address the problem of economic and social disparity across its territory. The first such approach in the post-soviet era was titled “The Concept of Regional Policy of the Republic of Kazakhstan.” This plan was approved by the Resolution of the Government of the Republic of Kazakhstan on 9 September 1996 (Government of the Republic of Kazakhstan 1996) and implemented amidst a series of state-directed market reforms, the Asian financial crisis of 1997–1998, and the economic crisis of 1998 in Russia.

The 1996 “concept of regional policy” was premised on the variance of socio-economic development across Kazakhstan’s regions being akin to that of any country but acerbated by the transition of the Republic to a market economy. Disparities intensified because of imbalances in the territorial organization of the economy, as well as, the disruption of Soviet era economic networks and support systems. Experts identified a growing gap in the quality of life between regions (Turganbayev 2016). Specifically, regional differences in unemployment and objective employment opportunities for the economically active population were increasingly significant.

The problems of small and medium-sized cities and remote rural areas within Kazakhstan were of particular concern to government officials during this period (Government of the Republic of Kazakhstan 2012). Out of the country’s 57 towns and cities, only a few were able to independently weather the economic crisis. The majority of the cities plunged into economic depression, requiring active government support for basic needs. The inhabitants of the country’s remote areas encountered particularly difficult circumstances and petitioned for governmental assistance. The 1996 “concept of regional development” document suggested
that problems of the transition economy compounded unsolved, long-term regional imbalances extending from Soviet economic policy. A clear shortcoming of both Soviet era and early Kazakhstani policy included the lack of a clear separation of functions between central and local executive bodies addressing regulation of social and economic development.

From a strategic perspective, the Republic of Kazakhstan’s regional policy in 1996 was “to create equal life-opportunities for the population and efficient use of the resource and production potential in each region based on a rational territorial division of labor and the formation of the principles of local self-government” (Government of the Republic of Kazakhstan 1996, 3). Implementation of this strategy required the determination of national regional priorities and specification of a new tax and budget policy. Regions of the country were, therefore, divided into three groups according to their per capita income. This typology was applied during the first and second stages of regional policy implementation when inter-regional reallocation of funds was to be most prevalently carried out. The status of various regions was expected to vary with the implementation of this regional policy and thereby reconstitute groups within the typology over time.

The 1996 regional policy generally reflected economic ideals and governance practices of the “planned tradition.” On one hand, it contained such reasonable market measures as (1) supporting the development of small and medium enterprises, (2) creation of favorable conditions to attract investors, including foreign direct investments, especially in the sphere of material production and regional infrastructure, and (3) formation of financial resources for respective regions’ institutional investors and non-budgetary sources that could accumulate savings and effectively turn them into investments. On the other hand, some of this policy’s measures contradicted efforts at privatization and the state’s declared desire to withdraw from direct management of the economy. Examples include (1) selective governmental assistance to the regional businesses and industries regarded as priorities for respective regions, (2) reorganization of enterprises in accordance with the government’s industrial and investment policies, (3) a gradual drawdown of inefficient production sectors and increase of environmental control, and (4) formation of new interregional organizational structures for technologically interconnected products.

While methods of implementation of the 1996 “concept of regional policy” tended toward a command-administrative management of the economy, they contrasted to Soviet modes in that specific policy initiatives were often unsupported by attendant funding sources. As a result, the concept did not work and regional disparities across Kazakhstan became more entrenched. Recognition of this fact led to a 2001 amendment titled “The Concept of Regional Policy of the Republic of Kazakhstan for 2002–2006.” This was approved by the Resolution of the Government of the Republic of Kazakhstan dated 7 December 2001 N1598 (Government of the Republic of Kazakhstan 2001).
This amended regional economic policy sought “to reduce existing differences in levels of socio-economic development between regions through the implementation of major investment projects that would strengthen infrastructure, economic activity, and improve standards of living” (Government of the Republic of Kazakhstan 2001, 10). Like its predecessor, the new policy included selective support for troubled regions, with a core goal of pursuing equivalent living conditions and employment opportunities across Kazakhstan.

This policy was, however, nuanced by the introduction of specific principles, namely: (1) giving priority to national interests over regional, and future benefit over current, (2) making efficient use of natural resources within regions (i.e. taking into account the peculiarities of their territorial location), (3) selectively supporting the economies of problematic regions through the creation of the state mechanisms to stimulate business activity of economic entities within these territories, (4) and giving priority to development of areas of particular strategic importance to the state.

By enacting these principles within the policy, the government of Kazakhstan sought to ensure sustained and balanced socio-economic development of its regions. It would continue to support small towns and remote, depressed, rural areas previously enabled by Soviet investiture, while simultaneously developing and implementing new public policies to strengthen the economic potential of “frontier regions.” This latter objective was considered particularly relevant on the state’s southern border. Moreover, the 2002–2006 regional policy was designed to improve relations between the central and local governments, while also offering rational settlement plans for Kazakhstan’s highly mobile population. Return-migrant settlement and urbanization trends among the general public had proven complex for planners and compelled strategic consideration (Yessenova 2005).

Few could argue with the stated priorities of the regional policy for underdeveloped regions. Creation of new jobs, increasing employment and enterprise development was intended to improve production and sales both inside and outside the region. Attention was also given to preservation, reconstruction and development of industrial, social and recreational infrastructure, while ensuring environmental safety of all activities within the Republic of Kazakhstan. Though possessing a goal of reducing poverty and unemployment, the amended concept of regional development nevertheless failed to decrease regional inequalities.

We will show in more detail below that despite the government’s efforts, the differences across Kazakhstan’s regions grew and, by 2006, evinced that regional policy required revision. A new “Strategy of Territorial Development of the Republic of Kazakhstan until 2015” was therefore approved by the Decree of the President of the Republic of Kazakhstan on 28 August 2006 N167, with a time scope of 2006–2015 (President of the Republic of Kazakhstan 2006).
Growth poles and development axes approach to regional policy in Kazakhstan

The declared goal of Kazakhstan’s new strategy was to “ensure sustainable development of the country and the creation of favorable conditions for the population by forming competitive specializations in the regional and global economy, rational spatial organization of economic potential, and the resettlement of the population” (President of the Republic of Kazakhstan 2006, 7). Breaking from a concept of equal development for all intra-state territories, Kazakhstan’s new approach advanced a plan for polarized development more in line with market principles. Rather than eliminating regional disparities through efforts to support all regions, the government sought to create conditions for the rational territorial organization of economic potential and the efficient use of natural, economic, and human resources, as well as, geographical location.

Applying the concept of “growth poles,” Kazakhstan began to allocate the majority of public funds and focused development efforts in the most dynamically developing cities or regions. The government placed special attention on those integrated with regional and global markets so that they might act as a “locomotive” for all other regions of the country, and eventually for the Central Asia more broadly. To advance its position within the world economic system, Kazakhstan sought to “expand beyond its current role as a provider of natural resources and transit zone, to become an economic and technological service center and hub of Eurasian trade” (President of the Republic of Kazakhstan 2006, 8). Within its own borders, the 2006 economic policy sought to concentrate economic and human resources in districts favorable for sustainable development and quality of life. It also placed a priority on improving the competitiveness of regions by introducing mechanisms for cluster development, self-organization, and mobilization of domestic resources.

Perhaps the most unique feature of Kazakhstan’s 2006 shift in economic policy is the adoption of an axial approach to its spatial organization and settlement system. The axes would be based on existing and planned transport corridors, providing access to foreign markets, and thereby advancing the country’s major cities as nodes within regional and global economies. The new policy established three strategic axes of territorial development of the country: North, South, and Central (see Figure 2).

Building upon the 2006 policy shift, the Kazakhstani government set forth the “Prognostic Scheme for Spatial Development of the Country until 2020,” which was approved by the Decree of the President of the Republic of Kazakhstan on 21 July 2011 № 118 (President of the Republic of Kazakhstan 2011) and the Program for the “Development of Regions”, which was approved by the Decree of the Government of the Republic of Kazakhstan № 862 dated 26 July 2011 (Government of the Republic of Kazakhstan 2011). The Prognostic Scheme constituted a strategic document, while the Program for Development of Regions was a tactical document directed to the realization of the Prognostic Scheme,
identification of stages, mechanisms and financial resources of territorial development of the country.

The aim of the Prognostic Scheme was to create conditions for public welfare through the development and effective use of social and economic potential of each region and industry of Kazakhstan. According to the document, the state regional policy in the coming decade would focus on forming a “rational system of spatial organization” (Government of the Republic of Kazakhstan 2011, 16). Policy applications of such “rationality” would concentrate people and capital in specific places and industries targeted for growth. This would involve rapid development of highly urbanized areas, business activity, provision of productive employment, and favorable living environments for the population. The Prognostic Scheme represented a profound departure from the pre-2006 regional economic strategy through specific policy elements such as: territorial concentration of population, urbanization and the formation of urban agglomerations, innovative development, axial spatial development, advancing development of infrastructure, the formation of competitive strategies of specialization for Kazakhstan’s regions, and improving the distribution of population within the country.

Kazakhstan’s government was well-aware that the implementation of the new regional policy required adequate and efficient financial instruments. As evinced by other cases of developing agglomeration economics, the most important financial instruments of regional policy are Structural Funds (widely used in the European Community), Infrastructure Development Programs

Figure 2. Axial development corridors of Kazakhstan, map prepared by Turganbayev 2019.
(Canada), and Funds for Regional/Municipal Development (in more than 50 countries including the Russian Federation, Brazil, India, Latvia). These funds, in particular the EU Structural Funds, are essential tools for increasing the long-term competitiveness and productivity of regional economies.

Drawing from a variety of international examples, Kazakhstan envisioned an array of funding schemes to support investments in infrastructure, human capital, realization of innovative capabilities, and improvement of the environment in its regions. Examples of such schemes include contractual agreements for several years between the state and regional authorities (such as occurred in France and Germany), grants and co-financing (such as occurred in the European Union), and public–private partnership (such as occurred in Russia).

The mechanism of implementation was the Program for “Development of Regions”, which focused on supporting areas with high potential for growth and economic activity. It identified potential “bottlenecks” or likely challenges to development and gave priority to regions regarded as holding the most comprehensive multiplier effect for budgetary expenditure. Kazakhstan’s government envisioned that financial support for regional development and promotion of local initiatives would enhance growth potential for targeted regions and ultimately lead to a reduction of disparities. The key point of this strategy was and remains the targeting of specific regions rather than universal support for all regions.

The Program for “Development of Regions” gave priority of financial support to regions with high potential for economic development and stable population growth. Determination of such regional potentials was to be based on research into the prospects of social and economic development of cities, districts, and villages of the Republic of Kazakhstan. The final decision-making power on the financing of projects submitted by regional authorities rested with the Interdepartmental Commission on Regional Policy as a consultative and advisory body under the Government of the Republic of Kazakhstan.

**Regional policy amidst economic downturn**

On 28 June 2014, just two months before the advance of Russian troops into Eastern Ukraine, Kazakhstani government announced the Decree of the Government of the Republic of Kazakhstan № 728 approving a new “Program of the Development of Regions until 2020” (Government of the Republic of Kazakhstan 2014). This program constituted an effort to coordinate state efforts to enhance regional development within the country. Among them were the “Rural Development Program for 2004–2010” (President of the Republic of Kazakhstan 2003), “Development of Single-Industry Towns for 2012–2020” (Government of the Republic of Kazakhstan 2012), and the “Territorial Development Strategy of the Country until 2015” (President of the Republic of Kazakhstan 2006). Moreover, a set of recent policy initiatives, including a variety of social programs, the “Program of Forced Industrial Innovative Development,” sector programs, employment
programs, and others affected some aspects of regional development in various areas. These followed a narrow bureaucratic approach that is loosely focused on priorities of the state regional policy, formulated in the “Prognostic Scheme for Spatial Development of the Country until 2020.” Critical analysis of these policy initiatives revealed a lack of coordination of institutional and administrative resources, and sometimes wasteful and/or conflictual overlap. The Kazakhstani government, therefore, concluded that the above policies required an organizational retooling around a strategy for regional development – i.e. the formation of regional centers of economic growth.

The 2014 “Program of Development of Regions until 2020,” therefore, became a primary mechanism for implementing the “Prognostic Scheme for Spatial Development of the Country until 2020” and is considered a “doctrine” of the new regional policy. In addition to synergizing the above-mentioned specific programs, the government utilized the “Program of Development of Regions until 2020” to implement an investment hierarchy for state funds. Kazakhstan’s economic territories were categorized thusly: the cities of the “first level” (agglomeration centers in the cities of Astana, Almaty, Shymkent and Aktobe); the cities of the “second level” (oblast centers, the cities of Semey and Turkestan); the cities of the “third level” (small cities and single-industry cities); supporting rural settlements; border areas. Representing a major re-conceptualization of economic-geographic policy in Kazakhstan, each category of the territory was assigned a specific developmental approach (Government of the Republic of Kazakhstan 2014).

Under mounting economic pressure brought on by reduced energy prices, slowing of China’s economic growth, and economic sanctions against Russia, in July 2016, the government of the Republic of Kazakhstan took things a step further by dramatically altering the “Program for the Development of Regions until 2020” (Government of the Republic of Kazakhstan 2016). Specifically, its central principle was reformulated to read: “As a basic ideology of regional policy, a sustainable development strategy is proposed to be based on a rational balance of prioritized development for centers of economic growth, territorial concentration of population and managed urbanization, and macro-regional development based on the hub and beam principles.” In accordance with this document, the government ceases to “support regions with low economic potential at the minimum sufficient standard of quality of life.” Most pointedly, the planned expenditures for the implementation of the Program of the Development of Regions from the national and local budgets were reduced in 2016 – from 363.0 billion to 125.1 billion tenge; in 2017 – from 437.2 billion to 108.5 billion tenge; in 2018 – from 513.3 billion tenge to 101.7 billion tenge.

Moreover, the amended version of the “Program of the Development of Regions until 2020” revised the categories into four macro-regions, based on similar economic, natural and socio-demographic characteristics: the Northern (Akmola, Kostanay, North-Kazakhstan regions), the Central-East (East Kazakhstan, Karaganda, Pavlodar regions), Southern (Almaty, Zhambyl, Kyzylorda, South-
Kazakhstan regions) and Western (Aktobe, Atyrau, Western Kazakhstan, Mangistau regions). For a balanced development of macro-regions, it is necessary to pursue a policy of diversifying their economies, ensuring the flow of investment and labor resources from the extractive industry and low-productivity agricultural sectors to the manufacturing industry and high-performing service sectors of the economy. Hub cities are to function as centers of national and regional interaction in terms of trade, logistics and transport, financial and personnel matters, and information and technology providers. The hub city for the Northern region is Astana city; for the Southern region – both Almaty and Shymkent; for the Western macro-region – Aktobe city; and for the Central-East macro-region – the city of Ust-Kamenogorsk.

**Empirical assessment of regional policy in Kazakhstan**

As described above, the goal of regional policy in Kazakhstan changed from reducing regional disparities to stimulating economic growth in all regions based on their competitive advantages. This review is therefore divided into two subperiods, corresponding to the main stages of the state’s regional policy: 1993–2006 and 2006–2017. For some indicators, the first stage may not start from 1993, but a little later, depending on the availability of statistical data. In assessing the results of regional policy in Kazakhstan, we employ a spatial approach (van Dijk, Folmer, and Oosterhaven 2010), which utilizes data from statistical agencies that conduct surveys of micro-units, to analyze how main socio-economic indicators differ across regions and time. We follow the generally accepted approach of studying convergence across the regions of Kazakhstan (de la Fuente and Vives 1995; Sala-i-Martin 1996) as manifest in four indicators of economic development. These are gross regional product (GRP), unemployment rate, monetary income of the population, and total factor productivity (TFP).

Gross regional product is an analog of gross domestic product (GDP) and is the most frequently used indicator both for comparing the economic efficiency of different regions, and for assessing intra-state regional policy. Another common objective of the regional policy is job creation. We will approximate such an obvious indicator through the unemployment rate, assuming that the lower the latter, the more jobs were created in an economy. Quality of life will be approximated by the population’s monetary income. This indicator reflects how an increase in gross regional product affects the welfare of citizens and serves as a means of assessing regional differences. Of course, quality of life is a much broader concept. It includes education, healthcare, environment and other parameters. While acknowledging its limitations, we nevertheless apply the measure because income is considered an important indicator of “objective” quality of life, and other parameters are often highly correlated therewith (Diener and Suh 1997, 192). We will approximate the competitiveness of a business through total factor productivity (TFP). There is still a lot of debate whether TFP can be used to measure technological change or not (Lipsey and Carlaw 2004). However, it is commonly accepted that this indicator is
one of the key factors of economic growth (Carlaw and Lipsey 2003; Kumar and Chen 2013; Wolff 2014). So, ultimately, the regional policy aims to increase it.

**Model and data**

Our analysis uses the coefficient of variation of the four above-stated socio-economic indicators to measure regional differences. First, we draw graphs of the evolution of the coefficient of variation for the four chosen indicators and study the main tendencies of their disparities over the two periods (Lee, Pesaran, and Smith 1997; Islam 2003). Secondly, in order to exclude the influence of annual fluctuations and enable formal conclusions on either convergence or divergence across Kazakhstan’s regions, we apply unit root tests to the time series of the coefficient of variation for the four indicators (Drennan, Lobo, and Strumsky 2004).

Data on the gross regional product, unemployment rate, and monetary income of population in Kazakhstan’s regions are taken from 1993–2017 Regions of Kazakhstan’s statistical report (Committee on Statistics of the Republic of Kazakhstan). For GRP, we deflate the nominal figures by the aggregate GDP deflator available from the Statistical Yearbook of Kazakhstan, divide by the size of the population of corresponding regions and obtain a sampling of the real per capita GRP. This allows us to eschew the influence of inflation and compare gross regional product across regions in terms of per capita values. In calculating TFP series of Kazakhstan’s regions, we follow Turganbayev (2017), who, assuming the

![Figure 3. Variation coefficient of four indicators across Kazakhstan regions.](image-url)
neoclassical model of Solow and Swan (Solow 1956; Swan 1956) with the Cobb–Douglas production function and Hicks neutral technical progress (Hicks 1932), applied growth accounting methodology for the calculation of TFP series of Kazakhstan regions as a geometric index (Mrkaic 2002; Byrne, Fazio, and Piacentino 2009). During the calculations, we use data on investments and employed population also available from the Regions of Kazakhstan statistical report. These data allow for the calculation of capital and labor inputs that, in turn, are employed to calculate TFP series across Kazakhstan’s regions.

**Results**

Figure three plots the calculation of the time-series for the coefficient of variation of real per capita GRP, unemployment rate, monetary income of population and TFP across Kazakhstan’s regions over the period of 1993–2017 (Figure 3).

Over the period as a whole, the coefficient of variation of real per capita GRP grew by approximately 30%. Therefore, we observe sigma-divergence (indicating increase in GRP disparity) across Kazakhstan’s regions over the period 1993–2017. However, on the graph, we see a period of sigma-divergence (1997–2006) when the indicator grew by 50%, but a period of sigma-convergence (indicating decrease in GRP disparity) between 2006–2017, when it fell by 13%. The inequality of Kazakhstan’s regions in terms of real per capita GRP reached its maximum in 2006.

A slightly different picture emerges when considering the coefficient of variation of the unemployment rate. In the period from 1994 to 2005, it fluctuated around its initial value, having decreased in 2006 by only 11% compared with 1994. However, starting from 2005, it declined steadily, interrupted by short bursts in 2008–2009 and 2015–2017. In general, for the period 2005–2017, the coefficient of variation of the unemployment rate fell by 69.3%, which indicates its convergence. Over the whole period of 1994–2017 it fell by 70%.

The line with triangle markers shows the evolution of the coefficient of variation of the population’s monetary income from 1996 to 2017. We see that from 1996 to 2006, the coefficient fluctuated around the value of 0.40, reaching its maximum of 0.53 in 2005. Since 2006, there was a steady decline of the indicator, accompanied by small jumps in 2008–2009 and 2013–2014.

Next, we see that from 1997 to 2006, the coefficient of variation of TFP grew continuously, reaching a maximum of 1.36 in 2009. From 2009 to 2017, it continuously decreased with a jump in 2015–2016.

In order to make formal conclusions on either convergence or divergence of the chosen indicators and exclude the influence of annual fluctuations, we apply unit root tests to the time series of the coefficient of variation of the four chosen indicators for the two periods: 1993–2006 and 2006–2017.⁶

These tests of sustainability of trends over time confirm divergence of all four indicators for the period of 1993–2006, but for the period 2006–2017, GRP and
unemployment are confirmed as converging, while monetary income of population and total factor productivity indicators are unconfirmed in convergence.

**Discussion**

A visual and statistical examination of the time series for the coefficient of variation of real per capita GRP, unemployment rate, monetary income of population, and total factor productivity argue against the hypothesis of sigma convergence over the period of 1993–2006. The observed growth of inequality of all four chosen indicators across Kazakhstan’s regions during this period confirms the failure of the regional policy of that period.

There are several reasons why the expected results of Kazakhstan’s balanced regional development policy failed to materialize in spite of intense governmental, financial, and organizational efforts. First, the collapse of the Soviet Union ruptured traditional economic networks and many enterprises lost traditional markets. Their inability to adapt to the new market conditions led to a significant decline and curtailment of production in certain regions (Pomfret 2006). This catalyzed further economic decline and the emergence or expansion of depressed areas and localities. Second, the Soviet-directed distribution of population and system of settlement generally defied economic geographic logic and fundamentally failed to accord with Kazakhstan’s geo-economic reorganization. Some towns and villages were built on the basis of proximity to mineral deposits. When certain raw materials became economically superfluous and, with a lack of governmental support, these villages/cities were rendered economically unviable. Third, both iterations of the policy were undercut by a lack of coordinated actions by central and local governing bodies. Speaking to the weakness of “institutions” that the World Bank (2009) considered essential for regional policy success, Kazakhstan’s regional issues were regulated by different agencies and readily subject to bureaucratic deadlock by the competing interests of neighboring administrative units (provinces, districts, towns and villages).

In a review of regional growth theories and approaches to regional policy, we see the strong influence of the economic base theory and evidence of the master planning approach in the 1996–2006 stage of Kazakhstan’s regional policy. The neoclassical approach that involves the free flow of labor and capital became more evident since the 2002 Concept of Regional Policy.

Shifting to the period of 2006–2017, the statistical analysis shows that differences in such indicators as per capita GRP and unemployment rate diminished, while we could not confirm convergence in monetary income of population and total factor productivity. We suggest the reason for this is the intensive mobility of labor flowing from less prosperous to more prosperous regions, thereby reducing unemployment in the regions being abandoned. At the same time, such a mobility trend does not contribute to leveling of the per capita income of population and total factor productivity.
In addition, the total factor productivity is a rather inertial indicator. This is evinced by Figure 3, in which we see that regional differences begin to decrease in Kazakhstan only since 2009. Factoring a lag effect, this indicates that Kazakhstan’s change of approach to regional policy since 2006 was more successful in decreasing regional disparities. Also, interesting is the fact that although the new approach to regional policy does not directly seek to align regions or narrow the spectrum of development across the state’s administrative territories, it nevertheless achieves greater results in this, in contrast to the earlier approach through which disparity grew.

Augmenting the influence of growth pole theory and axial development strategies on the formation of regional policy in Kazakhstan after 2006 is the effect of endogenous theories. In particular, this manifested in a desire to develop human capital and innovations. For example, the 2011 Program for the Development of Regions clearly formulates the objective of “Creating an enabling environment for the development of innovations (high-tech industries, small innovative companies)” (Government of the Republic of Kazakhstan 2011). Also, the 2011 Prognostic Scheme of the Territorial Spatial Development of the Country until 2020 outlines objectives such as “developing human capital and increasing labor mobility of the country”, as well as “ensuring innovative industrialization and diversification of the economy of the country and each region” (President of the Republic of Kazakhstan 2011).

On a strategic level, regional policy in Kazakhstan appears to have transitioned from a master planning approach to one in which regions are being directed to develop their own development strategies. This is commonly framed as “goals and objectives planning”, “structure planning” and “strategic planning” approaches, but despite the appearance of delegating economic strategizing, Kazakhstan’s latest strategy of regional development remains highly influenced by central planning concentrated within a very limited number of locations (i.e. growth poles). Kazakhstan’s most recent regional development strategy fails to articulate regional autonomies or their capacity to determine respective economic policies within the broader structure of what remains a largely national-executive-centered system of governance. In short, regional policy in Kazakhstan is still largely enacted from the top down (OECD 2017).

Conclusions

Analysis of the above data suggests that regional policy in Kazakhstan evolved gradually over the course of the state’s independence. It began with a balanced development approach reminiscent of the Soviet era Engel’s Dictum. This carry-over policy approach advanced a goal of diminishing regional disparities without taking into account geographical conditions of the country. Reviewing government documents pertaining to intra-state regional development strategies, we identify two subsequent stages of proactive regional policy reformation in the Republic of Kazakhstan.
The first, from 1996 to 2006, sought to overcome regional disparities through direct financial assistance to less-developed regions at the expense of the more-developed region. This policy failed to achieve its goal and disparities across regions actually increased. Several factors played into this failure. First, enterprises in several regions failed to adapt to the new market conditions, which led to a significant decline in production along with the emergence of depressed areas and localities. Second, logics of the Soviet era settlement system and distribution of population proved incompatible with a market-driven spatio-economic organization of the country. Third, the actions of central and local executive bodies, as well as, interests of neighboring administrative units were not properly coordinated. Fourth, the concepts of regional development were not effectively synergized with Kazakhstan physical geography.

The second stage of regional policy reform has been implemented from 2006 to present. This involves the deployment of growth pole and axial development strategies. During this period, inequality in terms of the coefficient of variation for the four socio-economic indicators has fallen. It should be noted that there are some risks and possible negative outcomes accompanying growth pole regional policy. These include possible driving out of local businesses by more effective firms oriented primarily to extra-regional markets and the possible orientation of companies toward trans-regional or transnational supply-chains that circumvent local firms. Other risks include potential out-migration of enterprising labor from rural areas that can negatively affect regional economic development; and possible outflow of capital from various smaller cities and settlements within a region to the growth pole.

Notes

1. For studies on countries with large territories see – China (Demurger 2001), Russia (Benini and Czyzewski 2007), and Canada (Polèse and Shearmur 2006).

2. There are various types of convergence (de la Fuente 2002; Barro and Xavier 2003; Islam 2003). In this article, we study σ-convergence across Kazakhstan’s regions, which is the tendency of the variation of the growth rate and/or income level across economies to decrease over time (Quah 1993). It is the strongest and most readily understandable notion of convergence. A persistent decline in the variation indicates σ-convergence.

3. We choose the indicators based on the conventional objectives of regional policy. For example, European Union regional policy declares that “Regional policy targets all regions and cities in the European Union in order to support job creation, business competitiveness, economic growth, sustainable development, and improve citizens’ quality of life” (European Commission 2019). In Bachtler & Yuill’s (2001) analysis of changing paradigms of regional policy employment, investment and competitiveness are the main objectives of different approaches to regional policy.

4. In the simplest case, the coefficient of variation is the ratio of the standard deviation $\sigma(X)$ to the mean $\mu(X)$: $C_v = \frac{\sigma(X)}{\mu(X)}$. 

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5. We ask whether the coefficient of variation of our chosen indicators can be characterized as random walks with drift. If they do then temporary shocks will not dissipate over time but will instead be permanent. This means that the coefficient of variation does not diminish over time and the indicator diverges.

6. Since there are visible time trends in Figure 1, we use the following basic model:

\[ y_t = \alpha + \rho y_{t-1} + \delta_t + \epsilon_t \]

where is the coefficient of variation of a chosen indicator at time , is a constant, and is a time trend. We estimate the equation (1) by applying an Augmented Dickey-Fuller (ADF) test (D. A. Dickey and Fuller 1979; 1981), the most commonly used for the presence of a unit root, and DF-GLS test developed by Elliot et al. (1996), which has higher power than the ADF test. Here, 'higher power' means that the DF-GLS test is more likely to reject the null hypothesis of a unit root against the stationary alternative; when the alternative is true that is indicative of convergence. If we cannot reject the null hypothesis of a unit root then the variable can be characterized as a random walk with drift. In that case the effects of local and temporary shocks will not dissipate in time, reverting to the long-running trend, but will instead become permanent (Drennan, Lobo, and Strumsky 2004). This means the coefficient of variation of the chosen indicator does not diminish over time and we observe divergence. And vice versa, if we reject the null hypothesis of a unit root then we can make conclusion on convergence of a respective indicator.

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