INSTITUTIONAL DIVIDES: HOW DEMOCRACY AFFECTS ECONOMIC COMPLEXITY IN THE TRANSITION ECONOMIES OF EASTERN EUROPE AND CENTRAL ASIA

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ABSTRACT
MARY FRANCES HOLLAND
Institutional Divides: How Democracy Affects Economic Complexity In the Transition Economies Eastern Europe And Central Asia
(Under the direction of Dr. Joshua First)

The transition economies, in making their way from a command economy to an integrated market economy, experience vastly different levels of development. This work proposes an influence of inclusive, democratic institutions on increased economic complexity. This project reviews the history of diverging political and economic policy decisions across the region. Case studies for Poland, Ukraine, and Kazakhstan review trade data and democratic policies to better understand groups of development across the region. This paper utilizes Daron Acemoglu and James A. Robinson’s institutional-developmental theory as a basis for the creation and sustainability of democratic and economically diverse structures.
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<td>Democracy Index</td>
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<td>ECI</td>
<td>Economic Complexity Index</td>
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<td>FSU</td>
<td>Former Soviet Union</td>
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<td>CEE</td>
<td>Central and Eastern Europe</td>
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<td>IIT</td>
<td>Intra-industrial trade</td>
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Introduction

The years 1989 to 1991 catapulted a vast region of economically, politically, and culturally diverse countries into a new, globalizing and market-oriented world. Twenty-five countries\(^1\), located across two continents, were forced to find new ways both to relate to the rest of the world and, perhaps most importantly, understand and build new national identities, along with the institutions to support them. This project addresses how these variations in transition have created different economic environments with different levels of economic output. To do this, this study observes the connection between the level of democracy and the economic complexity index score, an evaluation of the strength of an economy based on trade data. Globally, there is a positive correlation between increased levels of democracy and increased economic complexity ratings, which categorize economic performance through the movement and ubiquity of goods. Unsurprisingly, the countries of Eastern Europe and Central Asia are less democratic and less economically diversified than their Western neighbors of the European Union. This research looks into the connections between democracy and economics and hopes to find whether or not it is regime type, or some other factor, that determines the level of economic complexity in this region.

Transition economies have extensive differences in terms of economic policy, and, in turn, there is a significant range in their economic complexity. The economic

\(^1\) Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russian Federation Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan
complexity index (ECI), proposed by Cesar A. Hidalgo and Ricardo Hausmann is a way of interpreting economic growth and development, by analyzing how well the knowledge of individuals in a country is collected by organizations and markets to produce exported. Quantitatively, an economic complexity score “[interprets] trade data as a bipartite network in which countries are connected to the products they export.” The score also evaluates countries and goods based on the volume of trade between countries and the ubiquity of products. In this way, the economic complexity score categorizes and quantifies a country’s economic network, productive output, and the ability to combine knowledge towards the added value of a given product. Additionally, the level of economic complexity, following the network of exported products from a country, converges to a level of income for a country, determining a predictive level of economic growth. By showing the revealed comparative advantage and the ubiquity of goods within a country, the ECI shows the level of specialization created by educational and industrial sectors. Hidalgo and Hausmann argue that “economic complexity matters because it helps explain differences in the level of income of countries, and more importantly, because it predicts future economic growth.” Additionally, as Thomas Remington and other scholars note, changing levels of income and economic diversity lead to changing economic class systems, such as the growth of a middle-class, which is a

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determining factor in occurrences of democracy.\(^6\) Therefore, it is meaningful to view the relationship between changes in the level of democracy to changes in the economic complexity score.

Accordingly, this research relates a country’s ability to effectively transfer knowledge, as expressed through its ECI score, through the lens of Daron Acemoglu and James Robinson’s way of viewing how institutions are split between inclusive and extractive structures. The scholars’ perception of how countries develop along these opposing institutional lines informs the project’s understanding of the divergence between the political and economic outcomes of the transition economies.\(^7\) This work, in turn, views how the creation of inclusive or extractive institutions, measured here with a level of democracy, relates to a level of economic performance, here measured in economic complexity. Acemoglu and Robinson argue that the two are deeply related, that political institutions support and are supported by economic institutions. Therefore, it is the road of transition, the particular choices of state building, and the persistence of these choices that have created the transition economies as we know them today. The history of transition, therefore, can help better evaluate the modern, cyclical connection between economic complexity and democracy. Perceived success or failures of political and economic reforms, based on the level of economic complexity, can also be evaluated.

In short, the theoretical framework of this research project focuses on how the changing nature of these countries creates a feedback loop, in which regime types affect the level of economic complexity that in turn influences the autonomy and the prosperity


of the people, influencing their political decisions. By questioning the source of
differences in democratic performance and the relatively new measurement of economic
complexity, this project fits both into and challenges the existing research on economic
transition in Eastern Europe in addition to extending to a discussion about Central Asia.

Structure of the Thesis

The first chapter of the thesis begins with a discussion of the historical narrative
of the political and economic reforms enacted throughout Eastern European and Central
Asian transition economies from 1989 until the present. This chapter discusses the history
of varying reform outcomes in the region. Featured within the larger narrative are
regressions of the aggregated group concerning the connection between levels of
democracy and economic complexity as well as how their economic performance
diverged over time. The first chapter ends in the discussion of how and why the three
case studies were chosen for further analysis.

Chapters two through four are devoted to the case studies of this project: Poland, Ukraine, and Kazakhstan. These discuss in further detail the economic and historical
landscape of the countries as well as present statistical regressions concerning various
economic and developmental factors. Additionally, these chapters analyze the problems
and limitations within each country, which help explain the level of democracy and, in
turn, economic performance. The thesis ends in summary of the findings of the case
studies.

Historical Overview

The beginning of transition occurs during a period of a few years rather than all at
once, with portions of Central Europe finding independence in 1989 after years of
political and social struggle. The Soviet Union, beginning with individual republics peeling off, fell into 15 independent states in 1991. This unequal divergence away from the state-controlled market and the subsequent deviations in economic and political policy has created the great variation that characterizes the region today. Central Europe, dominated by the Solidarity-led political forces of Poland and urged along by burgeoning movements in Czechoslovakia, was able to peacefully and swiftly negotiate the shift out of the communist block and into democratic market capitalism akin to the likes of Western Europe. The ease of transition seen here was built on decades of growing unrest and allowed the countries of Central Europe to fully transition relatively quickly, a movement that culminated in ascension to the European Union and ensuing economic relations.

While the Baltics, which were the first to declare independence from the Soviet Union, were able to achieve this level of success as well, the rest of the former Soviet Union (FSU)\(^8\) has not been as successful. The Soviet Union’s sudden fall into independence coupled with the expectation of pro-market and democratic reforms left many of the former Soviet republics without the leadership, culture, or institutions necessary to facilitate the peaceful or well-coordinated transitions seen in Central and Eastern Europe (CEE)\(^9\) at the same time. They lacked the long-seated social-democratic movements that shaped institutions in Central Europe and allowed neo-liberal economic reforms to be successful. The attempts at transition, whether committed or neglected,

\(^8\) Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, see Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan

\(^9\) Croatia, Czech Republic, Hungary, Poland, Slovak Republic, Slovenia, Albania, Bulgaria, Macedonia, Romania, Latvia, Lithuania, and Estonia
under these conditions have produced the mix of economically and politically rich and poor countries of Eastern Europe and Central Asia.

_Literature Review_

The late 1980s and early 1990s marked a period of new beginnings in the region, with the appearance or evolution of 25 countries. The economic performance, measured in output, initially declined for these countries but began increasing, at various rates, at some point after the mid-1990s. Stanley Fischer and Ratna Sahay propose that commitment to structural reforms, most notably monetary policy, the pace of privatization, and source of capital flows, made by the countries in order to stabilize made significant difference in their success. Beyond these structural reforms, these scholars also note that particular factors helped determine a country’s likelihood of success, finding that countries in CEE were more likely to be characterized by speedy economic turnaround (output increasing rather than decreasing within a period of 6 years), proximity to Western Europe (which provided incentives to join the EU), limited years under communism, and relatively improved economic conditions at the fall of communism, relative to the FSU. Another scholar, Georges de Menil adds that the idea of a return to Europe mobilized Central and Eastern European countries in a way that was not available to the FSU. Without a secure model to follow or direct encouragement from the European Union, Aslund Anders posits that the FSU was reluctant to

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fundamentally change its institutional structures. The countries of the FSU, therefore, stand in contrast to the energetic reform formula of successful transition as proposed by Fischer and Sahay, choosing instead gradual economic turnaround, held back by many years under communism.

In addition, both Alexander Gorobets and Rafael Di Tella argue that culture and belief systems in these countries account for a lack of belief and support in a true market economy. It is true that countries that were most consistently committed to reform had the most immediate economic success, but these countries, as Fischer and Sahay gather, were “closest to Western Europe and had spent the least time under communist rule.”\textsuperscript{14} Therefore, the idea of market success in the Central European region was the least alien and held significant public support. On the other hand, the less successful gradual reformers experienced a longer period of education under a communist system, meaning the general population had little faith or knowledge of successful democracy or market-based economy. After years of disorganization during transition, many citizens still hold general mistrust of institutions themselves.\textsuperscript{15} Belief systems represent the “human landscape” and formal institutions reflect the underlying structures of that landscape. In order to change the economic landscape and build a foundation for a sustainable, diverse economy, Di Tella argues that there needs to be a change in the widely shared belief systems.\textsuperscript{16} A swift, committed social-educational investment in changing these beliefs

\textsuperscript{14} Fischer and Sahay, “Transition economies,” 3.
toward faith in market mechanisms is required to sufficiently alter the poor performing gradual reformers of the FSU.

This thesis proposes a causation direction in the manner of how democracy affects economic complexity. Due to the complicated nature of transition from centralized command economies to liberalized market economies (or some variation thereof), institutional transformation has far-reaching effect within each country and on the region as a whole. Democracy and capitalism did not arrive the moment the constitutions changed.\(^\text{17}\) We can see in the case of countries throughout the FSU, most notably the Russian Federation, Kazakhstan, and Turkmenistan, when one authoritarian regime ended in 1991, another filled its place. These ideas and research were inspired by Thomas Remington’s book \textit{Politics of Inequality in Russia} via his way of looking at how regime type and economics are linked in Russia. This research project expands these ideas to other transition economies in Eastern Europe and Central Asia.

While the larger traditional debate is that higher income leads to higher democracy scores, Remington finds that, when Russian republics are viewed individually, richer regions (in terms of economic output) are generally less democratic and less economically diverse, whereas slightly poorer regions are more economically diverse with the presence of a quasi-middle class. This arises out of resource endowments across regions and subsequent unequal distribution of wealth.\(^\text{18}\) Anders Aslund supports the basis of these findings, citing how self-interested oligarchs supported market economy transition, noting their presence as one of the reasons the FSU


\(^{18}\) Remington, \textit{Politics of Inequality in Russia}. 
initially grew more rapidly than CEE, but also was the cause of unsustainable growth.\textsuperscript{19} Additionally, Joel Moses identifies that Russia and other FSU countries must face dilemmas, such as an oligarchical economic structure that arises from the short-term need for privatization, in order to meet the long-term goal of a democratized nation, in which a diversified economy can exist.\textsuperscript{20} The main takeaway from these works is that Eastern Europe and Central Asia may appear to be one way on the outside, but in practice and experience are completely different when further research is conducted. This is, in part, due to their status as transitional economies.

\textit{Methodology}

This project observes the history of the 25 transition economies of Eastern Europe and Central Asia together, grouping some into identifiable types, before delving further into the types through three case studies: Poland, Ukraine, and Kazakhstan. Statistical analysis allows for discussion about the group of transition economies as a whole to understand how they have operated as a unit over time. Moreover, the project follows a most similar different outcomes (MSDO) format, as each of the chosen cases has a similar history under communism and has been transitioning towards a market economy for a similar amount of time. Yet, they have drastically different levels of democracy and economic complexity. The case studies, Poland, Ukraine, and Kazakhstan, were chosen based on their relative economic size, all within the top ten GDP outputs of the transition economies for 2017, and their position across the democracy index (DI) score, from flawed democracy (Poland) to hybrid regime (Ukraine) to authoritarian regime

\textsuperscript{19} Anders Aslund, \textit{How Capitalism was Built: The Transformation of Central and Eastern Europe, Russia, the Caucasus, and Central Asia} (Cambridge, Cambridge University Press, 2013).

\textsuperscript{20} Joel Moses, \textit{Dilemmas of Transition in Post-Soviet Countries} (Lanham, MD: Rowman & Littlefield, 2003).
(Kazakhstan). The Economist Intelligence Unit (EIU) defines democracy as a “set of practices and principles that institutionalize and thus ultimately protect freedom,” and produces rankings of Democracy Index score, which uses survey data to evaluate political institutions, culture, and participation within countries.21 These rankings provide the initial basis for understanding the democratic background of each case study.

Each case study begins with a historical narrative in the context of their individual groups. In order to properly analyze the difference between these countries within the last decade, it is necessary to discuss how they arrived in their current economic and political state. This narrative covers their transitions from the end of communism until the present, taking inspiration from the methodologies from Fischer & Sahay, Berend, and others. Most importantly this historical review discusses the economic landscape and natural resource endowments of the three states, which is important for this discussion for their trade patterns.

The main economic assessment function of this project is the statistical connection between democracy index and economic complexity scores, but this is too simplistic to view by itself. Therefore, the revealed comparative advantage (RCA) and intra-industrial trade (IIT) levels for each country are used as disaggregate measures of the economic complexity scores. RCA, created by Bela Balassa, is used in the formulation of the ECI and shows if a country has a comparative advantage in certain goods by comparing the global share of trade with how much a country exports. If the country exports more than the global average, this reveals that the country has a

comparative advantage in said good.\textsuperscript{22} IIT is further improvement on RCA, and shows the extent of trade within industries of different countries. The “goal” is to have an IIT score closer to 1, where industries export and import at equal rates, which reveals a level of economic specialization and complexity.\textsuperscript{23} In each case study, these values are supported by qualitative evidence of the political structures behind the economic outputs.

In support of the economic data analysis for each country, OLS models analyze the trends of how the countries have changed economically and administratively over the past ten years. These OLS models show how various development and economic (independent) variables interact with one another and result in a ECI outcome, the dependent variable, while showing the strength and significance of those interactive trends. Here, the models test the how the democracy index score, GDP per capita, manufacturing as a percent of GDP, urban population, inflation, mineral rents as a percent of GDP, and trade as a percent of GDP affect the ECI score. These independent variables were chosen based on similar models produced by Thomas Remington and provide possible alternative explanations to economic complexity growth.\textsuperscript{24} These variables are tested with a country-year unit of analysis, with data for years 2006-2016. World Bank data for development factors are used to run these models. Additionally, the World Bank’s Business Environment and Enterprise Performance Survey (BEEPS), which is a collection of surveys and other data from business leaders in Eastern Europe and Central Asia, presents a background surrounding economic attitudes and beliefs. Used to contextualize the larger data analysis, BEEPS provides a qualitative review of

\textsuperscript{22} Ricardo Hausman & Cesar A. Hidalgo et al. \textit{The Atlas of Economic Complexity}
\textsuperscript{24} Remington, \textit{Politics of Inequality in Russia}. 
businesses and business culture, vital for the success and growth of international trade, in the target countries.

Results

Building on Acemoglu’s and Robinson’s study of the connected nature of a country’s politics and the economy, this research shows that institutional structure, which is associated with a level of democracy, of these transitional states affects the productivity and success of the economic climate. Therefore, in the case of these transition economies, the more authoritarian a country is, the less economic complexity the country will have. These trends create a feedback loop that results in generally less democratic and less productive states, where low economic complexity perpetuate and support one another as time goes on and make it more difficult to improve in either area. Here, high levels of authoritarianism, thus, inadequately distributed wealth and power, negatively affect the real incomes and success of the population. Although there are variations in the strength of correlation and the significance of democracy on countries’ economic diversification, the trend is still present in each case studied.

In reviewing the data, Poland’s performance in economic complexity closely follows changes in democracy over time, with a one to two-year delay. This strongly supports the hypothesis that changes in institutional structure (democracy) lead to changes in economic complexity. Moreover, there is a mix of complex and non-complex industries in the country combined with a history of civil society and democracy building institutions. These economic and political realities are supported by the democratic values and free-trade measures of the European Union. Nevertheless, some of the results do not strictly follow the hypothesis. Poland’s data does exhibit a negative relationship between
economic complexity and democracy and the OLS models have no significance, with a strong R-squared output. The recent non-democratic trends in Poland’s political climate has created turbulence in the data.

On the other hand, Ukraine lacks the EU incentives and support that could fortify democratically and economically complex activities. Shown in a time series, changes in the DI score are followed by a change in the ECI score, while the time-delay and magnitude of the changes are less uniform than in the time-series data for Poland. Like many countries of the FSU, Ukraine has experienced issues defining its own social and political identity in the years since 1991. Attempts to create supportive, inclusive institutions, which could have allowed the population to thrive, generally failed as centralized, oligarchic power became the norm. This has resulted in a weak mix of economically complex industries and lack of a strong civil society. Ukraine does not perfectly fit within the parameters of the hypothesis because it is a “hybrid democracy,” not necessarily authoritarian or fully democratic. The data outputs are similar. For these reasons, Ukraine does not fit perfectly within the bounds of the hypothesis. While there is an overall positive relationship in Ukraine’s ECI and DI scores, changes in democracy over time often resulted in adverse effects on economic complexity. Nevertheless, democracy has been greatly revitalized after the internal political revolutions of 2004 and 2014, and these popular pushes to define Ukrainian political identity have proved to be economically beneficial. OLS models for this case study are also not significant, yet the R-squared value is even greater when democracy index is included. This shows that the data is very closely connected to the trendline. Following these social movements, a
greater connection and subsequent improvement of both DI and ECI scores is expected in the future.

The positive correlation between the DI and ECI scores for Kazakhstan follows the hypothesis, but the connection of the two variables over time shows a less clear relationship. Here, the level of economic complexity, along the lines of the hypothesis, again follows movements in the change in democracy, yet perhaps disrupted by the influence of changes in oil prices, on which the country strongly depends. Additionally, there is a drastic increase in economic complexity that is not predated by an increase of democracy of a similar size. This is not directly due democratic change but, instead, internal moves to diversify while oil prices were low. While this phenomenon does not directly follow the hypothesis, authoritarian Kazakhstan faces a resource curse and, therefore, has economically specialized in relatively few ubiquitous goods, and overall does not have a strong predictive future without further diversification. Extractive institutions have, therefore, traded long-term sustainable growth for short-term power and stability. This is especially true as democracy scores continue to decline and authoritarianism persists, all of which has led to a weak civil society and free-market culture. This is also the only case in which the OLS models follow the hypothesis and produce significant results with very high R-squared scores. This leads to the idea that, if democracy and economic complexity scores are low, development factors have greater effect on the diversity of the economy.

These results are further fleshed out in the coming case study chapters. As explained previously, each attempts to highlight a type of transition economy, in terms of
size, history, and transitional status. Through understanding these cases, we can better understand the transition economies as a whole.
Chapter 1:
Defining the Histories of the 25 Transition Economies

1.1 Breakdown of the Communist Block

The end of the Cold War in 1991 marked the beginning of a transitional period. Suddenly, the countries of Central Europe, Southeast Europe and the newly independent former Soviet republics faced the task of rewriting their master narratives as countries and their economic policies. What emerges are different interpretations of a market economy, based on the varied histories, social structures, and economic powers within each country. This project evaluates the outcomes of these various interpretations of a market economy as they developed from a group of largely similar, in terms of levels of economic complexity, centrally-planned command economies. In order to simplify the discussion of these 25 countries, I have grouped 4 examples into three types, with a case study to be examined in greater detail later. Yet, first, the history of transition economies will be discussed.

In post-War Europe, American and Soviet powers worked to establish of spheres of influence, as Stalin strived to create a socialist “buffer zone” in Central and Eastern Europe. Internally, in a mass rejection of fascism in the wake of World War II, communist parties, strongly backed by Soviet support, swept elections in the years after 1945. These elections were followed by mass nationalizations, i.e. the movement of private enterprise into government control. Ivan Berend writes that even “communist-
dominated regimes, without an open adoption of monolithic Soviet communism, became subservient allies of the Soviet Union.”

For these reasons, the communist system of Eastern Europe and Central Asia was initially defined by Stalin’s oppressive political structures that created the prevailing method of rule in this region and demanded Soviet-style socialism. Janos Kornai remarks that this model of socialism began with “undivided political power of the ruling party, the interpretation of the party and the state, and the suppression of all forces that depart from or oppose the party’s policy.” This demanding political system coupled with complete nationalization was meant to “render the restoration of capitalism impossible.” Nevertheless, implementation of these goals differed slightly within the communist block and ultimately failed to provide the structures necessary to cope with the rapidly globalizing world economy of the 20th century, leading to the collapse of the communist system by 1991.

1.2 Economic Developments During the Soviet Period

Despite depressing democracy throughout Eastern Europe and Central Asia, communist party rule allowed the region to industrialize at an incredible pace. Economic policy, especially in the beginning, was based on the pragmatic goals of modernizing and the industrializing vast, rural “peasant” areas while also creating a “just” society beyond the bounds of class distinction and wealth. Socialists set up an authoritarian regime to achieve these goals, sacrificing individual freedoms for the national good. While these methods helped to modernize the countries within the Soviet bloc, they could not keep up

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with the socio-economic modernization of the rest of the developed world. These countries overvalued investment in heavy industry at the expense of other economic activities. Therefore, by the time accelerated economic growth ceased in the 1970s, CEE and the Soviet Union had fallen behind on a technological and infrastructural basis. These obstacles persisted beyond 1989 and 1991.

1.3 End of Communism

In an era of popular revolutions around the world, forces in Central and Eastern Europe began to push back against the strict structure of Soviet-style communism during the 1960s, 70s, and onward. These movements were the culmination of civil unrest that began appearing after the death of Stalin in 1953 and the subsequent “thaw” of Soviet policy in CEE and the USSR. The most notable of these political movements occurred with the 1956 Hungarian and Polish revolts and the Prague Spring in 1968, resulting in Soviet invasion.

The Polish revolt of ‘56 was comprised of many different groups, some intellectuals and some workers, and culminated in July in a meeting of the Central Committee of the Polish party, which stipulated half-enforced reforms, such as a faux multi-party system. While economic reforms were limited, reformers established some market measures into the planned economy, such as decreases in compulsory plans and the small-scale liberalization of cottage industries.\(^{28}\) Democratizing elements of these reforms, while not fully realizing the goals of the uprising, established a degree of pluralism and personal freedom “unparalleled in other countries of the region.”\(^{29}\)

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\(^{28}\) Berend, *Detour from the Periphery to the Periphery*, 110.
\(^{29}\) Ibid., 116.
Nonetheless, these moves show the gradual institutional change that occurred in Eastern Europe after the death of Stalin.

The same gradual moves were not possible in the Soviet Union during the same time, and it was not until Mikhail Gorbachev’s institutional restructuring that the communist system in the 1980s would fall into widespread, popular trouble. In order to combat rising inflation and falling growth rates, Gorbachev instituted a series of market reforms, known as Perestroika. This “reworking” attempted to establish small market reforms and more autonomy for the republics. Creating perhaps too much regional power, these reforms failed to achieve the economic growth hoped for and did much to break down long-held party beliefs. Gorbachev's moves towards a market economy and socialism with a more human “face” pushed the country into transition but did not do enough to prepare the republics to successfully transition when the Soviet Union fell in 1991. Thus, the pro-market trajectories at the end of communism created the impetus that further differentiated their transitional pathways.

Meanwhile, the early 1980s in CEE, marked the end of the Brezhnev doctrine, a Soviet enforcement measure in Central Europe, and thus signaled the beginning of a systematic exit from the socialist systems of the past. These exits took place in three forms: negotiated transition, as in Poland; popular revolt, as in Czechoslovakia; and communist coups, as in Romania. Poland, for example, built upon the momentum of decades of popular dissent, most notably from the Solidarity trade union and the Catholic Church. Roundtable negotiations between communist and opposition leaders resulted in the decision to hold parliamentary elections in September 1989, which brought a
landslide victory for Solidarity.\textsuperscript{30} The Polish government was, therefore, able to peacefully transfer power and begin the process of pro-market transition.

\textit{1.4 Free-market transition}

For example, Poland’s peaceful negotiation of both political and economic power today stands as a model for how other countries in the region could establish democratic and free-market structures. These movements were able to survive due to bottom-up liberalizing movements that occurred during the latter half of the 20th century. The most significant mobilizing force in the region was a resident of Poland: The Solidarity Movement. This group, which was aligned with the Roman Catholic Church, began as a unionizing force in Poland and ultimately, through decades of political struggle, brought about democratic elections in 1989, which overthrew the Communist party majority.\textsuperscript{31} These elections continued the democratic trajectory that had been building since the 1950s and brought the country into an independent, democratic future.

These democratic reforms instituted the economic reforms that would bring Poland into enhanced economic performance and complexity. Initially, the “Washington Consensus,” mained at privatizing as much as possible, was adhered to in order to receive international financial support. Despite initial economic decline, such as a sharp rise in unemployment with changing labor regulations, these privatization measures helped to diversify the economy.\textsuperscript{32} Using positive aspects of initial transition policy, the private sector was then opened up to market constraints and state-owned enterprises (SOEs) were subject to budget constraints, microeconomic efficiency, and maximization of

\textsuperscript{31} Berend. \textit{Detour from the Periphery to the Periphery}, 266.
government revenue. The success of this was Poland’s ascension in 1996 to OECD. Such institution-building benefited the society at large, leading to decreased inequality, more advantages to entrepreneurs, and more people coming back to Poland.33

These successes are owed to the gradual structural policy, which was at odds with the Washington Consensus of rapid privatization and shock therapy. Poland’s economic policy has since struggled to combine the aspects of shock therapy and gradualism. As a result, periods of overcooling occurred just as the “the Polish economy was opening to external contacts, grass-roots business was flourishing, microeconomic management was improving.”34 Despite these issues, Poland’s economic and political improvement allowed the country to come into the EU and continue the process of macroeconomic management, the building of local governments, and the reception of EU membership benefits.

Grzegorz Kolodko outlines some of the lessons other developing countries can learn from Poland’s transformation. These lessons include the introduction of “economic reforms that increase[d] the flexibility of markets.”35 To enforce these economic reforms, systematic reconfiguring of the “legal and organizational framework” is vital.36 Furthermore, the country should balance different policies, understanding the social costs of each. The rest of central Europe, especially Czechoslovakia and Hungary, despite slightly different movements into transition, followed the same model as Poland, implementing “radical structural reforms” of privatization and price liberalization from

34 Ibid., 330.
35 Ibid., 342.
36 Ibid., 343.
1990 onward. Built upon a history of willingness to reform, institutional changes allowed Central Europe as a whole to become resilient, fully-fledged market economies with access to the democratic benefits and greater economic environment of the European Union.

1.5 Mitigated Market Transition

Where Central Europe moved forward through popular movements and demonstrations, leading the way to broad-based change, the collapse of the Soviet Union left both the masses and their leaders reluctant or unready for change. Gorbachev's democratic reforms allowed the republics to grow in national legitimacy and, subsequently, rapidly break away from the whole. Gorbachev underestimated the enduring national identities of certain key republics, especially the Baltics and Ukraine. Furthermore, the democratization efforts at the national level eroded the legitimacy of the union, causing a “war of laws.” As the republics broke away, they followed patterns of initial transition: an attempt at democratic and economic reform, as in Russia; determined reform, as in the Baltics; retained communist power, as in Ukraine; war-disrupted reform, as in Georgia; and continued authoritarian rule, as in Kazakhstan.

1.6 Partial democratic and free-market transition

Ukraine experienced similar pro-national and anti-communist forces as experienced in Central Europe, but they were not enough to gain a majority and fundamentally change the institutional structures left behind by the Soviet Union. Instead, the same communist leaders from the previous regime capitalized on nationalist movements and rebranded themselves. Continued debate over the split of power between

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the president and the parliament throughout the 1990s resulted in the subsequent loss of local self-governance and “threatened civil rights and political representation.” Power remained concentrated in the hands of the few with the rise of powerful oligarchies, and is why Illya Prizel posits that “Ukraine lacked both an elite committed to democratic reforms and liberal economics and a fully developed, capable democratic alternative.” These forces led to the erosion of the strong civil society necessary to provide support for democracy “from below.” Without these proper pro-democratic institutions in place, Ukraine failed to transition politically with the same success as the Baltics. Furthermore, unlike the Baltics, which received formal backing from the European Union, Ukraine could not fully turn away from the economic and political offerings from Moscow, and, in turn, were caught between the pulls of both Russia and the European Union. This leaves both the elites and the populous with political fatigue.

Economically, Ukraine did follow the lead of Poland and Central Europe with the implementation of market reforms, but only gradually. Whereas Central Europe was marketized by 1992, Ukraine and others, such as Russia, Georgia, Armenia, etc., only achieved the status of full market economies in 2000. These countries struggled to privatize, leading to the creation of massive former SOEs, and price liberalization in the Commonwealth of Independent States (CIS) proved more difficult than in Central

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Europe, due to greater distortion in prices. At the head of former SOEs, holding massive political and economic power, an oligarchic class appeared in the region, most notably in Ukraine and Russia. These “financial-political groups” established patron-client networks and protected against uncertainty, in the 1990s, helping to solve both “collective and individual problems.” While beneficial in the short term, these networks have been hard to dismantle in the long term. Therefore, gradual policy, while perhaps initially less violently tumultuous to the population, resulted in countries that struggle to continue the momentum of the pro-democratic dreams of initial transition and become full market economies.

1.7 Non-democratic and non-free-market

Across Central Asia and Belarus, authoritarian rule has continued after independence. Communist leaders, and the structures they represented stayed in power. Although the Communist party was widely abolished, the systems of power, i.e. clans, remained the same. Oil revenues and other natural resources also seriously affected the establishment of power, as leaders were afraid to democratize and lose their lucrative power. Nazarbayev, leader of Kazakhstan, in relation to its neighbors, did slightly soften his dictatorship and chose to enact gradual market reforms but has remained in power since 1991.

In Kazakhstan, remnants of the communist system make up the institutional structure. This ultra-centralized political structure has created and maintained enduring patron-client networks. The mentality that arise from these patron-client networks

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43 Minakov and Rojanky, Democracy in Ukraine, 3.
44 During the writing of this thesis (spring 2019), Nazarbayev resigned, but his power structures remain largely intact.
perpetuates corruption and prevents the creation of self-advocating civil society organizations. Furthermore, the large, lucrative natural resource endowments and the rents they create has further tempered political participation. These factors combine to create incentives to limit democratic institutions and turn away from a complete free-market system. This lack of positive incentives is why Kazakhstan and the Central Asian region lags behind the rest of the transition economies.

1.8 Further review of reforms

The countries discussed above followed up their initial transition periods, whether they be straightforward or bloody, with economic policy reform towards a market economy. This calls up the great debate over the means and processes of economic reform. Should reforms take place quickly, to “shock” the economy? Or should reforms be established gradually to ease the population into a capitalist system and avoid short-term austerity? A look into these questions will be discussed below. In practice, the choice between these two main methods of economic transition was clearly divided along the conditions under which the country transitioned.

Throughout all the transition economies, some form of neoliberal reforms were instituted. Neoliberal reforms consist of some combination of the following revisions: macroeconomic stabilization, deregulation, privatization, and a reinforcement of a social safety net.\textsuperscript{45} The first main course of divergence arose in the choice of the speed and aggression of reforms. Radical, “shock therapy,” reformers in Central Europe and the Baltics hoped to create new economic policy that would swiftly and comprehensively cement and market economy, limit short-term social costs, and retain support for the new government. The flaws, and accompanying fears, of this type of policy are that the

\textsuperscript{45} Aslund Anders, “Communism and Its Demise,” 33.
disorganization and inaccurate information, coupled with the incomplete belief in markets from the people, in the beginning, could prove both politically and economically risky for the state. Therefore, democracy, according to Aslund Anders, is the hand necessary to retain social and political order necessary to ensure the capitalist model.\textsuperscript{46} In CEE, as outlined above, democratic reforms ran parallel and supported economic reforms. Those that chose radical reforms and displayed no trust in the old way were willing to risk short-term losses of pulling back state economic intervention to fully liberalize prices and privatize industries. This radical ideology of moving against the old way is the distinct factor separating shock therapy supporters from those backing and enacting more gradual reforms. Some Western scholars did support gradual rather than radical reforms, stating the risk of disruption to democratic reforms via recession-fuelled social unrest, the need for continued social engineering, and the time required for full institutional transition, among others. Nevertheless, in practice, the main reason to forego radical reform was the presence of leadership unwilling to turn too far away from their communist past.

Consequently, in much of the FSU, the belief in the communist state continued, at least in part. In this regard, leaders conducted gradual market reforms in order to retain as much, if not more, power as they had held before. For example, rent-seeking ballooned throughout the block of transition economies during the initial years but was shut out where radical reforms took place. In gradual reforming countries, rent seekers initially encouraged transition, because they were able to skim off the top during the times of disorganization but ultimately delayed further transition in order to prolong their

\textsuperscript{46} Ibid., 36.
The many countries who participated in gradual reforms have retained similar patterns of corruption to the present day. Moreover, citizens of these countries are less likely to support a free-market in their belief systems, especially without a substantial avenue to express such beliefs.

1.9 History of Transition Economies within Development Theory

Another way of understanding the historical divergence of the transition economies between the successful transition of the radical reformers and the stumbling performance of the gradualists, as well as the persistence of their respective economic and political choices over time, is through the lens of institutional developmental theory, as proposed by Daron Acemoglu and James A. Robinson. These scholars believe in the power of inclusive and extractive institutions to create either inclusive or exclusive economic systems. Through this lens, they propose terminology and institutional models that can help explain how this group of transition economies has diverged according to institutional histories and structures.

Acemoglu and Robinson have developed a way of characterizing political movements into two defining models—inclusive or extractive. They argue that, based on the country’s existing institutions, virtuous or vicious cycles are formed, only breakable by critical junctures in history. On this basis, there is a persistent feedback loop between political-institutional structure and the performance of the economic institution. Based on the review of the history of initial transitions and the varying speeds of economic reform, the transition economies follow Acemoglu and Robinson’s model of intertwined economic and democratic movement. The extractive absolutist model is generally troublesome for the generation of inclusive institutions. In fact, these scholars find, that

\[\text{Ibid., 52.}\]
the communist regimes set up extractive economic institutions “designed to extract resources from the people, and by entirely abhorring property rights, [leaders] often created poverty instead of prosperity.”48 These authors support this claim by outlining the current state of the Uzbek political structure, which retained the authoritarian power of President Karimov into the independence period, as it retains the extractive absolutist structure of the Soviet-socialist era.49 These accounts show how resistant former communist, and most particularly Soviet, systems of power have been to change in the last quarter century.

The countries of Central and Eastern Europe that were first to peacefully, determinedly transition, such as Poland, Romania, and the Baltics, best fall into the category of countries with inclusive institutions. Political power is spread broadly throughout society yet retains a centralized, with cohesive law and order as well as well-defined property rights.50 Shown in the negotiated transitions and popular revolts that propelled Central and Eastern Europe towards radical economic reform, new institutions were able to replace the old. To measure the “inclusiveness” of the institutions, the level of democracy, via the Democracy Index score is used because it measures democracy by measuring how widely freedom and power are distributed. Therefore, countries that have higher levels of democracy are judged to have more inclusive institutions, which are able to form what Acemoglu and Robinson call virtuous cycles.

On the other hand, countries that were more stubborn in the transition process, such as Kazakhstan, Russia, and Uzbekistan have fairly low democracy scores. Based on their collective collapse into transition and leaders’ insistence on gradual transition, the

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49 Ibid., 392-394.
50 Ibid., 430.
character of these countries is that of extractive institutions. Such countries may have short-lived growth (Kazakhstan), but fail to create effective, sustainable economic institutions because of the fear of true destruction of the old power structures for the new. This has been evidenced above through the high occurrence of rent-seeking in the early days of transition, delayed by leaders who chose gradual transition. Therefore, extractive institutions tend to persist, creating a vicious cycle. This plays into the hypothesis, that authoritative regimes have low economic complexity, creating a feedback loop of low economic performance.

There is a great range of economic complexities for the group, especially considering that the group had clustered scores at the beginning of the transition period, as seen in Chart 1.1. This chart reveals that, through choosing differing political and
economic policies, the transition economies followed diverging development paths. Arevik Gnutzmann-Mkrtchyan notes that “[s]ome have managed to build complex production economies; while others' comparative advantage remains in raw materials.”

When viewed today (using 2015 data), these countries tend to group into three distinct types. There are the high achievers, as shown in the Chart 1.2 with full or flawed democracies, and high economic complexity scores. This first group is made up of European Union members Poland, Croatia, the Czech Republic, and the Baltics and exhibits inclusive, broadly representative institutions. On the other end, there are those that have low democracy scores coupled with low economic complexity. This group, made up of Kazakhstan, Azerbaijan, Tajikistan, and Turkmenistan, exhibit extractive, non-representative institutions. The middle, “grey zone” group is made up of countries that have mainly a democratically “hybrid regime,” somewhere between authoritarianism and democracy, with mid-range values for economic complexity. This group is made up of Ukraine, Georgia, Kyrgyzstan, and Moldova and have mixed institutions with constantly transforming structures, especially due to recent public revolutions.

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Chart 1.2 shows there is a clear, positive correlation between democracy scores and economic complexity. To better understand the mechanisms of this trend, the following chapters will further dive into the interplay between economics and democracy within each of the three types of transition economies, highlighting one country from each. The transitional pioneer Poland represents the first group and shows the importance of consistent, gradual pushes for change in terms of the success of subsequent political and economic reforms. Ukraine represents the “grey zone” countries and exhibits the dilemmas of an ideologically split population, the persistence of previous political organization, and the importance of critical junctures brought on by popular revolutions. Lastly, Kazakhstan represents the last group. While Kazakhstan has taken a relatively more open view towards trade and leadership, the country’s economic and political situation still demonstrates the difficulties of altering the plight of countries will great
natural resource endowments, lasting clan networks, and poor models for fair, free transition.

<table>
<thead>
<tr>
<th>Table 1.1 Combined Case Study OLS</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy Index Score</td>
<td></td>
<td>.2210</td>
</tr>
<tr>
<td>Lagged Democracy Index Score</td>
<td></td>
<td>-.0520</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>-.0004**</td>
<td>-.0002</td>
</tr>
<tr>
<td>Manufacturing (% of GDP)</td>
<td>6.42e-11**</td>
<td>3.45e-11*</td>
</tr>
<tr>
<td>Urban population</td>
<td>-5.26e-08</td>
<td>-2.45e-08</td>
</tr>
<tr>
<td>Inflation</td>
<td>.0087</td>
<td>.0049</td>
</tr>
<tr>
<td>Mineral rents (% of GDP)</td>
<td>-.0173</td>
<td>.0081</td>
</tr>
<tr>
<td>Trade (% of GDP)</td>
<td>-.0177</td>
<td>-.0074</td>
</tr>
<tr>
<td>Number of Observations</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td>R-squared</td>
<td>.9144</td>
<td>0.9325</td>
</tr>
</tbody>
</table>

Unstandardized coefficients with standard errors in parenthesis; * p < .05, ** p < .01, *** p< .001

In preliminary OLS models (Table 1.1), using data from all three case studies with the years 2006-2016 as the unit of analysis, democracy is an insignificant factor determining ECI. When democracy is not included in Model 1, GDP per capita and manufacturing (% of GDP) are the only significant factors related to ECI. GDP per capita, which is expected to lead to higher complexity via greater individual economic opportunities, actually has a negative relationship with ECI. Increases in the manufacturing percentage of GDP has a minimal, positive relationship with ECI. The R-squared values for both of these models is very high, showing that, while little of this data is significant, there is little variation in the data as a whole. These OLS models bring the
validity of the hypothesis into question, as democracy is an insignificant factor in relationship to ECI development.
Chapter 2

Poland: Profound Democratizing Impact of Committed, Early Transition

Now a part of the European Union, Poland has successfully transitioned and stands as an example, in terms of reform policy, for other transitioning economies in the region. Poland’s group of high performers, consisting of Poland, the Czech Republic, the Baltics, and Romania, all have achieved high levels of economic complexity and score relatively well democratically. The countries in this group are, based on their DI score, “flawed democracies,” meaning that free and fair elections are present and civil liberties are respected while there is still an “underdeveloped political culture and low levels of political participation.”\(^\text{52}\) Furthermore, these countries have managed to develop the institutions necessary to have relatively high levels of economic complexity, revealing the population’s level of economic capability to produce high knowledge goods.\(^\text{53}\) This discussion of Poland will examine the country’s communist history and early reforms, a look into how ECI and DI are connected in terms of Poland’s democratic institutions, an overview of Poland’s business culture, and a comparison of how different development factors influence ECI. In understanding the triumphs and shortfalls of Poland, we can understand the institutional reforms recommended for a successful transition.

In the wake of World War II, as Europe was drawn along the lines of the standing Allied armies, Poland, like the rest of CEE, fell under communist rule, supported by the Soviet Union. As depicted by the popular demonstrations throughout the 1950s, 60s, and

\(^{52}\) Economist Intelligence Unit, "Democracy index 2010: Democracy in retreat," 31.

70s, opinion and conditions under communism were unfavorable.\textsuperscript{54} This history of underlying dissent allowed the labor union Solidarity to gain traction and support. Solidarity hoped, as Berend suggests, to provide an “authentic representation of the working class.”\textsuperscript{55} Polish leaders, like others during this era of “post-socialist shift,” moved away from efforts to transform the socialist economic system and towards building a new capitalist market economy. Similar revolutionary movements were present in Czechoslovakia and the Baltics, but Poland was the trailblazer, being the first to implement open market reforms.\textsuperscript{56} Solidarity was able to overthrow communist rule in Poland’s 1989 legislative elections, an event known as the largest rejection of communist rule in history.

With Solidarity at the head, the new Polish state had the following goals: price liberalization, monetary policy, and market expansion. These reforms occurred during a short transition time from 1989 until 1992. This brief transition time is not so much a result of precise policy but rather improvements upon reforms implemented during socialism. Poland’s bottom-up push for privatization was perhaps one of the most successful political reforms. Brian Levy posits that transforming states lack the organizational structure to carry out many necessary transitional tasks. Therefore, in order to overcome “low organizational capability,” states should begin systematic reform with “stroke of the pen” (legislative) measures before more organizationally intensive

\textsuperscript{54} Pienkos, Donald E. "Review Seeing through the Eyes of the Polish Revolution: Solidarity and the Struggle Against Communism in Poland" Bloom Jack M. Brill Leiden; Boston." The Polish Review 60, no. 2 (2015).

\textsuperscript{55} Berend, From Periphery to the Periphery, 257.

\textsuperscript{56} Grzegorz W. Kolodko, "Socialism, Capitalism, Or Chinism?" Communist and Post-Communist Studies 51, no. 4 (2018).
ones. This makes privatization “from below” easier before organizing a large-scale “from above” system. In Poland’s case, this meant the creation of laws and institutions that allowed at least partial private enterprise during the communist period and ease of full private enterprise after. Especially in the beginning of transition, these moves allowed for more semi-seamless privatization of enterprises by more ordinary citizens, not only powerful elites. These committed, systematic economic reforms were able to produce the “Polish economic miracle” because there was an accompanying societal shift towards democracy.58

2.1 Economic Complexity Score by Democracy Index Score

Therefore, there is some connection between the democratic reforms Poland was able to make in 1989 and their steady trend of an increasing level of economic complexity. Surprisingly, despite the steady increase in ECI scores, there is actually a slightly negative correlation between Poland’s DI and ECI scores between the years 2006 and 2017, as shown Chart 2.1. This trend is not very strong, but it does disprove the original hypothesis that there is a positive relationship between DI and ECI scores.


58 Kolodko, “A Two-thirds success.”
Nevertheless, when ECI and DI are graphed together over time, across two axes, there is a perceivable effect on ECI when DI changes. As seen in the Chart 2.2, there appears to be a time delay reaction in the economic complexity score, following the democracy index score. The first indication of this trend occurs as DI begins to decline in 2008, a trend which lasts until 2010. ECI initially remains stagnant but eventually significantly falls from 2011 until 2013, mirroring the DI trend from 2008-2010. Again, the trend occurs in reverse from 2013 until 2015. DC rises sharply from 2013 to 2014. ECI rises sharply from 2014 to 2015. The only unanswered question is the ECI result from the drastic DI decline beginning in 2014. Future data is necessary to answer this question.

Trends are even more clear when observing the magnitude change (first derivative), shown in Chart 2.2. Even though the direct regression of the two factors results in a negative relationship between the two variables, this time-series chart shows...
that there is a significant relationship between the movement of the two variables together. As DI has declined in recent years, ECI may soon decline as well.

It is necessary to understand the underlying economic conditions and accompanying political causes that have created this phenomenon. The discussion and
analysis of revealed comparative advantage (RCA) and the intra-industrial trade (IIT) patterns breakdown the complicated metric of economic complexity into two, more simple parts. These parts help reveal some qualitative background into how changes in democratic institutions have attempted to create the infrastructure and opportunities necessary to achieve high economic status.

2.2 Revealed Comparative Advantage and Intra-Industrial Trade

The mathematical expression of economic complexity utilizes the idea of revealed comparative advantage (RCA), accounting for the ubiquitous nature of a good and the trade of goods between countries.\(^{59}\) RCA determines whether a country produces a prominent share of a particular good. In economic theory, a particular country must choose between an array of goods based on a set of capabilities. It is economically more beneficial to put more capabilities towards the production of some goods than others, i.e. they face an opportunity cost trade-off between goods. A good that a country has RCA in is exported from that country at a higher percentage than the good makes up in the world share of trade. When countries focus on goods in which they have RCA, they are able to trade those goods for goods that other countries have RCA. Therefore, trade between those countries is mutually beneficial.

Poland’s trade breakdown, found in Table 2.1, shows that they have an RCA in goods that arise from natural resources, such as wood and food products, and manufacturing capabilities, such as consumer goods and transportation. Poland’s large availability of arable land explains the high values for natural resource goods. The other manufacturing goods require an educated population and other institutional factors.

Table 2.1 Poland: Top Goods with Revealed Comparative Advantage

<table>
<thead>
<tr>
<th>Product Group</th>
<th>RCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood</td>
<td>2.18</td>
</tr>
<tr>
<td>Food Products</td>
<td>2.08</td>
</tr>
<tr>
<td>Animal</td>
<td>2.06</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1.43</td>
</tr>
<tr>
<td>Plastic or Rubber</td>
<td>1.42</td>
</tr>
<tr>
<td>Metals</td>
<td>1.41</td>
</tr>
</tbody>
</table>

Furthermore, the success of a country’s entrance into a liberalized market can be evaluated, according to Gabrisch and Werner, by the improvement of intra-industrial trade (IIT) values over time. IIT, shown in Table 2.2, reveals the amount of trade within the same sectors of different countries and is a measure of the amount of manufacturing value added. A score of 1 is the goal, where countries import and export the same volume between industries; this shows a high level of specialization. In the globalizing world, and in relatively small markets like the European Union, the total supply chain of a product may pass national borders multiple times. This idea of IIT builds upon the idea of ECI and RCA because it shows the movement of goods between countries and the associated competitiveness of a country’s firms, showing how much firms have specialized.
<table>
<thead>
<tr>
<th>Product Type</th>
<th>Export</th>
<th>Import</th>
<th>IIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin; articles thereof</td>
<td>63,802,766</td>
<td>63,435,361</td>
<td>1.00</td>
</tr>
<tr>
<td>Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof</td>
<td>25,254,135,302</td>
<td>24,818,808,212</td>
<td>0.99</td>
</tr>
<tr>
<td>Headgear and parts thereof</td>
<td>91,044,030</td>
<td>92,864,465</td>
<td>0.99</td>
</tr>
<tr>
<td>Grand Total</td>
<td>194,461,157,270</td>
<td>189,696,473,787</td>
<td>0.99</td>
</tr>
<tr>
<td>Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles</td>
<td>23,810,647,760</td>
<td>24,738,853,412</td>
<td>0.98</td>
</tr>
<tr>
<td>Umbrellas, sun umbrellas, walking-sticks, seat sticks, whips, riding crops; and parts thereof</td>
<td>30,468,224</td>
<td>28,722,446</td>
<td>0.97</td>
</tr>
<tr>
<td>Metal; miscellaneous products of base metal</td>
<td>1,376,624,247</td>
<td>1,477,358,953</td>
<td>0.96</td>
</tr>
<tr>
<td>Apparel and clothing accessories; not knitted or crocheted</td>
<td>2,461,195,239</td>
<td>2,660,289,609</td>
<td>0.96</td>
</tr>
<tr>
<td>Paper and paperboard; articles of paper pulp, of paper or paperboard</td>
<td>3,692,732,870</td>
<td>4,018,224,834</td>
<td>0.96</td>
</tr>
<tr>
<td>Fertilizers</td>
<td>768,104,227</td>
<td>837,951,347</td>
<td>0.96</td>
</tr>
<tr>
<td>Carpets and other textile floor coverings</td>
<td>245,003,070</td>
<td>223,744,231</td>
<td>0.95</td>
</tr>
</tbody>
</table>

Of 98 commodities evaluated, 58% of industries experienced intra-industrial trade index of over 70%. Overall, all Polish industries experienced an average intra-industrial trade of 70%. Trade of this type was the result of efficient sectors that held internal economies of scale for their products, ready to sell to international markets. Poland is able to access these markets through trade agreements it created or opted into as a member of the EU, further showing the economic and political importance of EU integration.

This IIT level is particularly important for Poland and the other countries in this group, which, by entering the European Union, entered a highly heterogeneous, industrial
market. Gabrish and Werner argue that increasing the economic competitiveness of firms coping with the problems acquired from the previous centrally planned system is the most difficult task for the transition economies.  

Poland’s success in European economic convergence perhaps arises from the performance of privatized businesses, building upon the relatively larger portion of semi-private enterprises during the centrally-planned economy. Poland’s top ten industries with high IIT all require high levels of infrastructure and education, as they are largely specialized sectors that deal with the production and development of goods, and, therefore, require the support of inclusive, democratic institutions to efficiently transfer knowledge.

This is where the logic of Acemoglu and Robinson meets that of Hidalgo and Hausmann. Acemoglu and Robinson offer that, as is the case in Poland, that “inclusive economic institutions led to the development of inclusive markets, inducing a more efficient allocation of resources, greater encouragement to acquire education and skills, and further innovations in technology.” These inclusive institutions “allow and encourage participation by the great mass of people in economic activities that make the best use of their talents and skills that enable individuals to make the choices they wish.” This theory suggests that the economic institutions are supported by, and in turn support, political institutions. Therefore, Poland’s RCA and IIT conditions, which are

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62 Acemoglu and Robinson, Why Nations Fail, 313.

another way of viewing economic complexity, would not be possible without the inclusive economic and political climate to support them. The *Atlas of Economic Complexity* notes that the institutions of “[m]arkets and organizations allow the knowledge that is held by few to reach many.”  

Consequently, the inclusive, democratic institutions Poland has been able to create support the economic situation (markets and organizations) necessary to mobilize and encourage the individual and collective knowledge to establish high economic complexity.

Moreover, the success of Poland’s small industrial firms in this market shows a movement towards convergence to the EU standard, which is associated with a level of democratic and economic success. Perhaps the EU is the true force that allows Poland’s industry specialization and thus economic complexity. Therefore, Poland’s democracy level scores may not be the only guiding force behind the country’s level of economic complexity, but it is a predominant one.

Using Poland as an example, transition economies that present high levels of democracy are also those that have the economic potential to diversify their markets and connect with the larger world market through a number of industrial avenues. Through rigorous economic reform, Poland has been able to develop specialized industries that are significant parts of the value chain. Yet, in order to continue to compete economically, as Poland has, both private and public spheres must be built on a “wider framework of liberty, law, and order, and resultant general trust,” as to retain beneficial trade relations

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both inside and outside the EU. As seen in the following sections, economic complexity in Poland must be supported by complex and diversified democratic institutions.

2.3 Business Environment and Enterprise Performance Survey

As seen in Poland, transition economies must work to rewrite their pasts to create inclusive institutions. As Hubert Gabisch and Klaus Werner note, governments must have an active role in creating the infrastructure necessary to support active markets with high RCA and IIT. The authors state that “adopting the rules of the game” is only one part of the equation. Governments must also work to change the “attitude of all economic agents, both public and private.”

Survey data of Poland’s economic and business environment reveal the presence of a relatively inclusive economic environment.

Conducted by the European Bank for Reconstruction and Development and the World Bank, the Business Environment and Enterprise Performance Survey (BEEPS) surveys the barriers to success, such as crime and corruption, present in the transition economies. As a transition economy recently accepted into the European Union, the 2008 survey results compare Polish business’ owner’s responses to those in both Western Europe (EU10) and Europe & Central Asia (ECA). In this survey, Poland performs predictably well, as the conditions surveyed land between the those reported for the EU10 and the rest of ECA. The Chart 2.4 shows the particular concerns of business directors in Poland compared to the other regions.

68 Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic and Slovenia
69 Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Georgia, Hungary, Kazakhstan, Kosovo, Kyrgyz Republic, Latvia, Lithuania,
This comparison shows that Polish business leaders are most concerned with the regulatory practices of the Polish state, most particularly the tax rate, and the current nature of financing a business. Additionally, Jan Winiecki supports the BEEPS findings, stating that Polish institutions were more open to the establishment of new private businesses, with little institutional resistance. In the whole of the BEEPS review, the starkest contrast between Poland, EU10, and the ECA are the differences between official and unofficial payments. Polish businesses leaders bemoan official taxes and financial barriers to licenses, inspections, etc. but complain relatively little about bribes and other

Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovak Republic, Slovenia, Tajikistan, Turkey, Ukraine, and Uzbekistan.
unofficial barriers. While the level of corruption is not inconsiderable, further corruption information later in the BEEPS report and Winiecki’s review of Polish regulations show that Poland’s institutions, at least historically, have worked to the highest level of economic freedom within CEE and the FSU.  

Attempts to minimize corruption and other business concerns are a signal of open, organized political structure that democratic institutions are able to provide in Poland. While businesses present concerns about macroeconomic instability and tax regimes, their confidence in their court systems and the absence of corruption has increased over time. Acemoglu and Robinson note that such mechanisms for a virtuous cycle cannot be formed immediately. They must be formed over time, as seen here in Poland. These gradual changes make room for more progressive regulations and adaptations of the business culture in the future.

2.4 OLS

After observing the economic and business climate of Poland, we return to a comparison of factors that affect the level of economic complexity of Poland. An OLS model is able to test the relationship and significance of multiple independent factors on a dependent variable. As shown in two models in the Table 2.3, there are distinct differences in the level of significance when the DI score is included and when it is not. When the variable is included, none of the variables are significant. When it is excluded, as in not held constant when regressing the other variables with ECI, three variables become more significant. Manufacturing value added, urban population, and inflation in

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72 Acemoglu & Robinson, Why Nations Fail, 318.
this model are more significant predictors of economic complexity than democracy, even when tested directly with ECI.

<table>
<thead>
<tr>
<th>Table 2.3 Poland OLS</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy Index Score</td>
<td>- .4748</td>
<td>-.2815</td>
</tr>
<tr>
<td>Lagged Democracy Index Score</td>
<td>(-.2419)</td>
<td>(.2892)</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>.0012 (.0006)</td>
<td>-.0001 (.00004)</td>
</tr>
<tr>
<td>Manufacturing (% of GDP)</td>
<td>3.97e-10 (1.26e-10)</td>
<td>-4.88e-12 (4.33e-12)</td>
</tr>
<tr>
<td>Urban population</td>
<td>.00004 (.00001)</td>
<td>4.18e-07 (2.88e-07)</td>
</tr>
<tr>
<td>Inflation</td>
<td>-1.035 (.3404)</td>
<td>.0534 (.0252)</td>
</tr>
<tr>
<td>Mineral rents (% of GDP)</td>
<td>.1314 (.3412)</td>
<td>.1890 (.4706)</td>
</tr>
<tr>
<td>Trade (% of GDP)</td>
<td>-.0253 (.0239)</td>
<td>-.0071 (.0071)</td>
</tr>
<tr>
<td>Number of Observations</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>R-squared</td>
<td>.8884</td>
<td>.8916</td>
</tr>
</tbody>
</table>

Unstandardized coefficients with standard errors in parenthesis; * p < .05, ** p < .01, *** p< .001

There are also three interesting caveats to the outcomes of these models. First of all, in Model 2, trade (% of GDP) has negative relationships to an increase in the ECI. This inverse relationship with trade (% of GDP) is surprising, as ECI score is expected to rise as trade increases. Perhaps this comes from an increase in the trading of ubiquitous goods that have relatively high RCA, such as wood and food products. High volumes of this type of trade could depress the ECI score.

Secondly, the variable of mineral rents (% of GDP) was included with the expectation that the relationship with ECI would be negative but, for both models, it is
not. In the case of Poland over the last decade, an increase in the mineral rents (% of GDP) actually showed a positive, yet not significant, increase in the ECI score.

Lastly, in the second model, where the DI score is included, the relationship between ECI and DI scores is still negative, as it was when the two variables were directly regressed earlier in this chapter. It seems, when looking at a larger scope of factors, democracy still has a positive, yet not significant, effect on the ECI score. This is contrary to the hypothesis, and speaks to the complexity of transition economies.

2.5 Conclusion

Overall, Poland’s committed, enthusiastic push towards full market integration was successful in creating and supporting the institutions necessary to create lasting democratic and economic performance. A history of gradual creative destruction, resulting in both economic reforms, such as semi-privatized businesses, and political reforms, such as the push for more democratic policies, allowed Poland to succeed. Nevertheless, as evaluations of the democratic climate and faith in the common European economic marketplace continue to decline, time will tell whether Poland’s institutions are strong enough to weather the storm.
Chapter 3

Ukraine: Stuck in the Grey Zone

This second case study, Ukraine, is representative of the transition economies in the middle range of performance. Ukraine sits between the leading democratic and economic figures of the transition economies, such as Poland, and the rent-seeking countries, such as Kazakhstan, whose centrally-planned structures have not changed much since the fall of the Soviet Union. Ukraine, and the countries in its group, are considered “hybrid regimes” by their DI scores, meaning that irregularities prevent elections from being called free and fair, there is a lack of civil society, and corruption and pressure on opposition parties is widely present.\(^73\) Ukraine’s democratic trajectory has made pro-democratic strides during its recent Orange Revolution (2005) and Euromaidan protests (2014). Due to Ukraine’s economic size and relative success of its pro-democracy movements, this case study is a representative of the transition economies in the middle of the overall trend. Countries in this group, such as Georgia, Kyrgyzstan, and Moldova, have all experienced recent public revolutions, the Rose (2003), Tulip (2005), and Grape (2009) revolutions, respectively, and also land in the middle of the trend of the transition economies in regards to ECI and DI.

The transitional trajectory for all of these countries is much like that of Ukraine. While the populace viewed independence as favorable, communism did not end in a popular election, as was the case in Poland and other states in Central and Eastern Europe. Western Ukrainian nationalist groups, made up mostly of former communist

leaders, pushed for independence but were not joined by sympathy in Eastern Ukraine. Without enough support to win a democratic majority, the Parliament of Ukraine took the first steps towards Ukrainian independence in 1990 before the Soviet Union officially fell in August of 1991. Therefore, the same incremental steps of greater public political alliance against communism and its structures that had occurred in Poland did not occur in Ukraine. Due to its strategic position, natural resources, highly educated population, and a population highly motivated towards independence, Ukraine had the potential for significant growth post-independence. Unfortunately, the country’s top-down transitional development meant that many of the elites, as well as their structures of power, remained in place and true economic and political reform was barely considered.

As Ilya Prizel remarks: “Ukraine lacked both an elite committed to democratic reforms and liberal economics and a fully developed, capable democratic alternative.”

Therefore, despite Ukraine’s potential at the end of the Soviet Union, in practice, transitional reforms did not prove successful in creating adequate political or economic institutions to propel the country to success along the lines of its European neighbors.

Additionally, the gradual reform measures that were taken at the beginning of transition led to selling off of state-owned enterprises (SOEs). This is the transition economies’ most significant structural challenge where the initial transition phases lacked the adequate civil-service infrastructure (i.e. inclusive institutions) necessary to guide this movement of businesses from the public to the private. Many of the new owners of SOEs did not, and even still do not, have an interest in maximizing the revenues and benefits to

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75 Gorobets, “An independent Ukraine,” 94.
77 Ilya Prizel “Ukraine between Proto-Democracy and ‘Soft’ Authoritarianism,” 344.
society as a whole. Without the inclusive institutions to support an open economic market, the sale of state-owned enterprises (SOEs) led to a forming of an oligarchic elite, whose wealth and political connections dominated every aspect of Ukraine. This hasty transition from the command economy shows the link between troubled democratic institutions and declining performance and competitiveness of a country’s industries.

In context, economic complexity dipped after independence until 1995. Meanwhile in Poland, immediate growth in small private businesses was able to compensate for the immediate decline of remaining SOEs. With large SOEs still intact at the beginning of transition, the same cannot be said for Ukraine because, in an unsuccessful transition, the recovery phase was different. First of all, SOE decline was slower, and the generic private sector had few incentives to grow, all of which lengthened the SOE transfer process. The result was an overall slower economy. Economic performance increased after 1996, but the following years were still turbulent. ECI fell significantly in the years preceding the most recent pro-democracy protests, the Euromaidan demonstrations of 2014.

At the fall of the Soviet Union, Ukraine had high potential for growth and, in 1991, the state set out to create and sustain a variety of welfare state programs but failed to maintain them into the present period. This lack of sufficient public institutions diminished confidence in both democracy and the government as well as limited the capabilities (education, transportation, etc.) that support a complex economy.

3.1 Economic Complexity Index score by Democracy Index score

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As shown in Chart 3.1, there is a general trend downwards of both the ECI and DI scores over the decade, with exception of a jump between 2014-2016. Following the general hypothesis, changes in the DI score are followed by minor changes in the ECI score. Furthermore, the negative slope of both variables from 2006-2014 reflects the poor economic and democratic situation even a decade into transition. It also follows the theory that DI and ECI are closely tied together. What is less explainable is the drastic fall of ECI in 2012 followed by an even more drastic rise in 2015, all without much alteration in the DI score. Economic behavior in Ukraine defies the patterns of both the causation direction suggested in the hypothesis and the trends present in the other two case studies. Most notably, the ECI score increases drastically before DI improves in 2015. This relationship could be explained by increased international engagement after the 2014 Euromaidan protests. Without clear evidence, this is just speculation.

Furthermore, because the two scores are based on fairly different ranges, the minutiae of the trends are easier to see in Chart 3.2, which maps the amount of change between the
two variables. Here, there is actually a turbulent, opposing relationship between the two variables from 2006 until 2011. Beginning in 2011, the scores begin to sync in the amount of change. Most notably, in 2014, the year of the Euromaidan, both scores converge in growth and begin to move together, perhaps further united by the protests.

These two phenomena bring into question the principles of both the predictive quality of the ECI and the hypothesis that greater democracy over time leads to greater economic diversity. First of all, Hidalgo and Hausmann claim that the ECI is predictive, but Ukraine’s performance is greatly varied over time and does not stick to a perceivable trend, as Poland and Kazakhstan’s ECI scores over time do. Secondly, the ECI score seems to move almost independently of the DI score, with the exception of data points after 2014. Nevertheless, even though this ECI score has decreased over the span of Ukraine’s independence, the regression of Ukraine’s ECI and DI scores show that there is still a moderate, positive correlation between ECI and DI scores for Ukraine.
As seen in the disruption point of 2014 in the charts above, political movements in recent years have brought radical moments of change to the country. The first of these occurred in 2004. Historically, despite favorable initial conditions for a fully democratic society, the first two presidents, Leonid Kravchuk (1991-1994) and Leonid Kuchma (1994) continually negotiated power between the presidency and the legislative body, the Verkhovna Rada. Even after the first Ukrainian constitution was created in 1996, Kuchma still continued to whittle away legislative power by pushing for the legislative body to be split into two parts. In response to this, a popular uprising over the validity of the 2004 election, called the Orange Revolution, caused the constitution to be rewritten and established a “parliamentary-presidential” republic, ascertaining a more equitable split of executive power.  

In this way, these revolutions have allowed Ukraine and others to experience a phenomenon called “creative destruction,” or an exchange of the old for

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81 Minakov and Rojanky, “Democracy in Ukraine,” 2.

54
the new that is typical in economic or technical change.\textsuperscript{82} Centralized power systems, such as oligarchies, attempt to prevent creative destruction in order to prevent a loss of power.

Once it is achieved, it lowers the stakes of further, even minimal, creative destruction. These continuous changes build a “gradual virtuous cycle” that is less threatening to elites and builds inclusive institutions on stable, not uncharted ground.\textsuperscript{83} Evidence of this gradual virtual cycle is present in the success of reforms of the Euromaidan, or “Revolution of Dignity,” of 2013-2014 that reinstated the 2004 constitution after pro-Russian president Yanukovich disrupted the reforms of 2004 through corruption and political influence. These protests, which were led “from-below,” began a rebuilding of civil society and the waning of traditional elite-driven parties. As seen in the charts, the impressive rise in democracy following this period was accompanied by an improvement in economic complexity. As the momentum of the Euromaidan continues, increased levels of democracy and subsequently increased levels of economic performance are expected.

3.2 Revealed Comparative Advantage & Intra-Industrial Trade

Before discussing the breakdown of economic industries through RCA and IIT, it must be noted that Poland and Ukraine entered into their respective transition periods with very different economic compositions. As seen in Chart 1.1, Poland had one of the highest economic complexities of the transition economies at the start of the transition, while Ukraine began with significantly less economic complexity, in the middle of the group. While the ECI of each has increased since, they still remain in the same relative

\textsuperscript{82} Acemoglu and Robinson, \textit{Why Nations Fail}, 84.
\textsuperscript{83} Acemoglu & Robinson, \textit{Why Nations Fail}, 318.
ranks. This is to reiterate, that all the transition economies did not begin with the exact same level of economic complexity, and differences have grown significantly over time and have increased economic inequality as well.

While Poland had existed as an independent entity throughout the communist period, building industries to support only itself, Ukraine was one small piece of a much larger Soviet unit. Furthermore, due to the lack of incentives within central planning in CEE, firms in these countries pushed towards self-sufficiency and development of processing industries in order to prevent against supply shocks from either firms not meeting their quotas or other countries becoming disinterested in trade. Subsequently, the economic capabilities developed in Ukraine were instead meant to support a large economic system, the USSR, and were less able to enable the country to be self-sufficient into independence. These differences between Poland and Ukraine highlight another larger transitional obstacle of the countries of the FSU (excluding the Baltics) that goes beyond political institutional structures: the issue of moving out of a larger economic unit and into economic independence.

Moreover, the composition of trading industries in Ukraine has not significantly changed since the beginning of independence, partially due to only marginally inclusive institutions, as reflected in trade outcomes of revealed comparative advantage and intra-industrial trade. As key aspect of the ECI, RCA shows a country’s economic capabilities by revealing its most efficient and productive industries. As shown in the Table 3.1, Ukraine mainly specializes in goods that arise from natural resources, such as vegetables and raw materials. This explains Ukraine’s relatively low ECI score, as all of these goods are fairly ubiquitous. They do not require the same institutional factors as a more

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84 Berend. *Detour from the Periphery to the Periphery*, 192.
complex good, such as transportation, in which Poland has RCA. These values mostly serve as a confirmation that there are institutional problems, such as the inefficient distribution of power, that have not allowed Ukraine to achieve the same economic results as its Western neighbors, most notably Poland.\textsuperscript{85} Under such systems, there is unfair competition in the way construction projects and land distribution are conducted.\textsuperscript{86} Furthermore, due to the lack of transparency and developmental opportunities, there is economic insecurity. Although prices are comparable to countries in the region, wages and pensions are low. This leads to heavy emigration from the country for work, sometimes illegally and often open to exploitation. Additionally, young people leaving the villages leave rural communities with few developmental opportunities, due to a remaining low-skilled or aged population.

| Table 3.1 Ukraine: Top Goods with Revealed Comparative Advantage |
|-------------------------|------------------|
| Product Group           | RCA              |
| Vegetable               | 8.5              |
| Minerals                | 5.82             |
| Metals                  | 3.38             |
| Raw materials           | 2.68             |
| Wood                    | 2.14             |
| Intermediate goods      | 2.04             |
| Food Products           | 2.03             |

Furthermore, IIT dives deeper into the concept of ECI, conceptualizing how goods in the same industry are traded between countries to add value. The top IIT sectors, as shown in the Table 3.2, are a mixed group of complex and simple goods. This shows that Ukraine has varied capabilities, from industrial products, like electrical machinery and aircraft parts that have intricate supply chains, as well as ubiquitous natural resource


\textsuperscript{86} Gorobets, “An independent Ukraine,” 100.
goods, such as iron and fruit preparations. Nevertheless, only 29% of Ukrainian industries experience IIT of over 70%, and the national IIT average is only 42%. This means that few Ukrainian industries experience economies of scale and are not truly competitive in the international market.

Table 3.2 Ukraine's Top Intra-Industrial Trade Goods

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Export</th>
<th>Import</th>
<th>IIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron or steel articles</td>
<td>689,793,623</td>
<td>647,206,673</td>
<td>0.97</td>
</tr>
<tr>
<td>Commodities not specified according to kind</td>
<td>186,143,899</td>
<td>205,060,628</td>
<td>0.95</td>
</tr>
<tr>
<td>Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations</td>
<td>11,359,437</td>
<td>10,148,448</td>
<td>0.94</td>
</tr>
<tr>
<td>Preparations of vegetables, fruit, nuts or other parts of plants</td>
<td>140,272,386</td>
<td>110,802,375</td>
<td>0.88</td>
</tr>
<tr>
<td>Copper and articles thereof</td>
<td>74,682,303</td>
<td>57,818,353</td>
<td>0.87</td>
</tr>
<tr>
<td>Natural, cultured pearls; precious, semi-precious stones; precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin</td>
<td>51,957,816</td>
<td>67,314,847</td>
<td>0.87</td>
</tr>
<tr>
<td>Tobacco and manufactured tobacco substitutes</td>
<td>321,815,988</td>
<td>430,223,216</td>
<td>0.86</td>
</tr>
<tr>
<td>Cocoa and cocoa preparations</td>
<td>162,209,101</td>
<td>217,081,666</td>
<td>0.86</td>
</tr>
<tr>
<td>Apparel and clothing accessories; knitted or crocheted</td>
<td>107,334,130</td>
<td>160,723,766</td>
<td>0.80</td>
</tr>
<tr>
<td>Umbrellas, sun umbrellas, walking-sticks, seat sticks, whips, riding crops; and parts thereof</td>
<td>5,864,852</td>
<td>3,909,784</td>
<td>0.80</td>
</tr>
<tr>
<td>Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles</td>
<td>2,076,689,751</td>
<td>3,203,224,585</td>
<td>0.79</td>
</tr>
</tbody>
</table>

Unlike Poland, Ukraine’s economy has failed to converge to the EU norm.

Continuing to specialize in these “low-quality products,” and the economic structures that produce them may result in diverging economic structures between the EU and Ukraine. EU nations, which experience high IIT as well as economic complexity, also tend to be richer and more prosperous. Moreover, by adding only a small share of value to products, Ukraine may find themselves in a “technology gap,” unable to catch up economically to
EU members.\textsuperscript{87} Gorobets argues that the economic and technological failures exhibited in the above RCA and IIT data result from a “deep socio-political-economic crisis in Ukraine,” via 1) a weak institutional base, unable to manage the environment, education, or civil society, 2) a poor understanding, from both the government and the public, of sustainable development, and 3) an “absence of clear, consistent goals and specific well-developed national programs for sustainable development.”\textsuperscript{88} While the number of students with higher-education (tertiary degrees) is high, Ukraine’s lack of specialized researchers arises from poor institutional management in key industrial sectors. This means that Ukraine often falls behind in specializing goods and has significantly less purchasing power.\textsuperscript{89} Thus, as Sergei Meleshuk argues, the Ukrainian government can use the country’s regionally lagging ECI scores to decide how and where best to tackle the aforementioned socio-political-economic crisis and to right the path towards new technological production.\textsuperscript{90}

Additionally, as Gabrisch and Werner note, lack of access to adequate trade agreements, particularly the European Union, may have magnified Ukraine’s poor ECI scores.\textsuperscript{91} Ukraine’s failure to democratize and ascend to the European Union, and the access to international markets through FTAs that come with membership, means that Ukrainian industries have fewer opportunities to trade than their western counterparts. Even from outside the EU perspective, Ukraine failed to create a well-centralized governing body or create strong economic ties with the CIS, a trading union that could

\begin{itemize}
\item \textsuperscript{87} Gabrish & Werner, “Structural Convergence,” 148.
\item \textsuperscript{88} Gorobets, “An independent Ukraine,” 99, 102.
\item \textsuperscript{89} Ibid., 98.
\item \textsuperscript{90} Sergei Meleshchuk, “Evoliutsiia ekonomicheskoi clozhnosti Ukrainy: beg na meste.” \textit{Ekonomicheskaia Pravda}. Last modified January 19, 2016.
\item \textsuperscript{91} Gabrish & Werner, “Structural Convergence,” 149.
\end{itemize}
have been tightly connected the economies of the FSU. These failures to maintain advantageous trade partnerships further diminishes already low organizational capabilities. For these reasons, Ukrainian industries have difficulty specializing, as shown by the country’s poor volume of goods with RCA and lackluster IIT levels.

3.3 Business Environment and Enterprise Performance Survey

Local business culture, which is a reflection of the society at large, also affects how firms operate in international markets. This is implicitly reflected in the both the DI and ECI scores. Ukraine’s BEEPS report compares the country to the Northern Former Soviet Union (FSUN)\(^92\) and ECA. From this comparison, businesses in Ukraine and Poland have similar concerns--taxes and corruption. Ukraine’s concerns most closely follow the trends of the FSUN with more disparity between the ECA region as a whole, especially in 2008.

It is important to note the time of these reports. Almost all of Ukraine’s business concerns actually increase between the two time periods. This is significant because the Orange Revolution (2004) occurred between the two surveys. As these were pro-democracy movements, it could be expected that Ukrainian confidence in their business environment and state institutions would increase after the protests. These results show the opposite. Based on this simple review, it is difficult to say whether or not conditions actually worsened or simply awareness of the faults in the systems throughout the FSU grew over time.

\(^92\) Belarus, Kazakhstan, Russia and Ukraine.
Nevertheless, in both time periods, Ukrainian firms reported a higher percentage of unofficial payments for services, such as customs fees and court bribes, than both other groups. The Soviet system gave rise to these still-active informal payment networks. The uneasy transition of Ukraine that failed to fully prepare or equip citizens for a pro-market system, also resulted in a government that was arguably too permissive during the initial stages of transition. This lack of parallelism has resulted in “corruption, crime, collusion between power and businesses, … and further power-society antagonism.” These are barriers to a firm’s success and are markers of inefficiencies of the centralized state. This may also cause successful foreign firms to choose not to do business in Ukraine.

Despite the strength of informal payment networks, organizations that build a more fully-formed civil society, such as a free press and NGO development, have been

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growing in recent years, especially after the Orange Revolution of 2004 and the Euromaidan of 2014. In some ways, the popular revolutions themselves have served as institutions to gradually build civil society and increase democratic attitudes. For example, elections in 2006 brought new political fervor but failed to attract young people, leaving the government stuck between proposed new ways and the remaining Soviet ways.\textsuperscript{94} The “civil society organizations” (CSO) that formed around this time helped to organize young people and form legislation and other documents to “[advocate] for deeper and faster democratic reforms” from 2004 on and especially in the power vacuum left after the 2014 protests.\textsuperscript{95} To increase the gains made by these movements, social groups in Ukraine must continue to effectively organize networks, promote leadership development, and protect democratic rights. Such civil society is vital to the improvement of inclusive institutions and, by extension, the level of democracy, in Ukraine. This is the backbone of sustainable economic development in transition economies. In the meantime, the prevalence of corruption and social inequity in the business community shows that Ukraine, as well as the countries in this middle group, still have much progress to make in terms of transforming both their formal and informal structures in order to allow a free, prosperous, and fair economic and political system.

3.4 OLS

The same variables in the Polish case were used to test the economic factors in Ukraine. Here, in both models shown in Table 3.3, none of the variables resulted in significant trends. Nevertheless, interesting, unexpected trends did arise in these regressions. The relationships between ECI and GDP per capita and urban population

\textsuperscript{94} Ibid., 101.
\textsuperscript{95} Minakov and Rojanky, “Democracy in Ukraine,” 9.
were negative, meaning that as each of these independent variables increases, the ECI decreased. Overarching scholarship concludes that richer nations have higher economic performance and accompanying ECI scores. This output goes against the idea that, when there is more capital available per citizen, there should be more opportunity for economic success and knowledge added to traded goods.

Table 3.3 Ukraine OLS

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy Index Score</td>
<td>.3054</td>
<td>.3054</td>
</tr>
<tr>
<td></td>
<td>(.2056)</td>
<td>(.2056)</td>
</tr>
<tr>
<td>Lagged Democracy Index Score</td>
<td>.1256</td>
<td>.1256</td>
</tr>
<tr>
<td></td>
<td>(.1187)</td>
<td>(.1187)</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>-.0005</td>
<td>-.0005</td>
</tr>
<tr>
<td></td>
<td>(.0005)</td>
<td>(.0004)</td>
</tr>
<tr>
<td>Manufacturing (% of GDP)</td>
<td>1.12e-10</td>
<td>1.03e-11</td>
</tr>
<tr>
<td></td>
<td>(8.32e-11)</td>
<td>(2.61e-11)</td>
</tr>
<tr>
<td>Urban population</td>
<td>-2.65e-07</td>
<td>-4.38e-07</td>
</tr>
<tr>
<td></td>
<td>(5.80e-07)</td>
<td>(6.76e-07)</td>
</tr>
<tr>
<td>Inflation</td>
<td>-.0025</td>
<td>-.0028</td>
</tr>
<tr>
<td></td>
<td>(.0065)</td>
<td>(.0039)</td>
</tr>
<tr>
<td>Mineral rents (% of GDP)</td>
<td>-.0676</td>
<td>-.0123</td>
</tr>
<tr>
<td></td>
<td>(.0797)</td>
<td>(.0620)</td>
</tr>
<tr>
<td>Trade (% of GDP)</td>
<td>.0109</td>
<td>-.0001</td>
</tr>
<tr>
<td></td>
<td>(.0143)</td>
<td>(-.0001)</td>
</tr>
<tr>
<td>Number of Observations</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>R-squared</td>
<td>.7763</td>
<td>0.7881</td>
</tr>
</tbody>
</table>

Unstandardized coefficients with standard errors in parenthesis; * p < .05, ** p < .01, *** p < .001

Additionally, in Model 1, where democracy is excluded, the manufacturing value added is the most significant factor, as shown in Table 3.3. When democracy is introduced in Model 2, it is the most significant factor determining the ECI score. Based on the mechanics of the ECI and the economic picture depicted thus far, this is to be expected. Overall, these mixed results of the OLS regression mirrors the democratically mixed status of Ukraine. For these countries in the middle, there is no clear factor that determines their economic success, at least in terms of ECI.
3.5 Conclusion

Ukraine shows, in the last decade, gradual changes of both DI and ECI scores with unifying disruptions brought about during times of creative destruction. Despite a lagging economic system, Ukraine has become a model for how bottom-up movements can help build strong civil society networks. These networks, over time, allow the adequate distribution of power and knowledge necessary to improve economic complexity. In this way, Ukraine’s continued insistence on the building of more inclusive institutions through a gradual virtuous cycle is expected to result in further improving ECI scores into the future.
Chapter 4

Kazakhstan: The Slow Churn of a Resource Economy

In the realm of the transition economies, Kazakhstan represents the group of post-Soviet rentier states. Kazakhstan, Azerbaijan, Tajikistan, and Turkmenistan, are marked by a high dependence on natural resources and very limited democratic structures. Because of their limited range of economic activities, all of these countries fall at the lower spectrum of the ECI. Additionally, they are all considered to be “authoritarian regimes,” meaning that elections (if they occur) are not free and fair, there is a disregard for civil liberties, media is state-owned, and any democratic institutions have little substance. These countries were the most reluctant to change during the initial transitional period and, therefore, have experienced little structural or social transition following the fall of the Soviet Union.

Kazakhstan’s independence was practically accidental, as it became a country with the fall of the Soviet Union, not by means of popular political movement. This passive independence meant that nothing really changed in terms of governmental structure. First Secretary of the Communist Party of Kazakhstan, Nursultan Nazarbayev, almost immediately became president and other communist leaders from the Soviet time remained in their positions of power. The first constitution included factors that put checks on elite power and signaled a democratic future, but the speedy annulment of these reforms showed a return towards authoritarianism. In this case, authoritarianism was tolerated because it provided the stability necessary to attract foreign support and

\textsuperscript{96} Economist Intelligence Unit, "Democracy index 2010: Democracy in retreat," 32.
investment. Elites found that Western talk of democracy and human rights did not result in any sanctions or pressure when democracy and human rights were not protected. The need for immediate security combined with the lack of national and international incentives to democratically transition meant that Nazarbayev and the circles of elites surrounding him cemented themselves into the political and economic fabric of Kazakhstan.

In turn, a mix of the traditional clan structure with that of former leaders of the Communist party creates Kazakhstan’s static political structure. In the context of Kazakhstan and the other countries in this group, this phenomenon is called “neopatrimonialism,” and forms the non-transparent network of patronage that characterizes post-Soviet rentier states. Hossein Mahdavy originated the term “rentier state,” to describe states that “[receive] substantial rents from foreign actors, be they individuals, enterprises or governments.” The money governments earn through rent-seeking behavior frees them from the responsibility of accounting for the needs of the people because the people’s tax revenue does not fund the government. Instead, the rent funds funnel into socially unproductive patron-client networks that inappropriately allocate resource wealth rather than create new wealth. These activities, in the short

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98 Ibid., 113.
term, provide political and economic security because elites are able to stay in power and unproductive industries are protected from market pressures. Nevertheless, all of this is unsustainable in the long run.  

Nazarbayev's sole rise to executive power from the Soviet period into independence meant (and still means) that he is the sole guarantor of political power and stability. Circling Nazarbayev is his family, followed by companions, then by national business and regional elites. These groups hold predominant power in Kazakhstan, which means they have control over all aspects of life and have few incentives to share or diversify their power and subsequent wealth. Although the specific makeup or “brand” of political power changed as communism came to an end in Kazakhstan, the extractive nature of the institutions and the vicious cycle they create did not change. Consequently, elites effectively consolidate political power in a way that prevents substantial economic or political reform, which could destabilize their power. Furthermore, as Franke et al. remark, “[t]he sudden discontinuation of the system of central planning after the collapse of the Soviet Union had a negative impact on the production capacities of the Kazakh economy.” Elites’ consolidation of economic power to be wielded as a political force has further weakened the country’s production capabilities because inefficient industries are able to remain. The continuation of these negative impacts of transition are seen in Kazakhstan’s ECI and DI scores over time.

4.1 Economic Complexity Score by Democracy Index Score


102 Franke et al., "Kazakhstan and Azerbaijan as post-Soviet rentier states,” 116.

103 Acemoglu and Robinson, Why Nations Fail, 350.
Like Ukraine, Kazakhstan’s ECI and DI scores have steadily decreased in the past decade, with the exception of a drastic uptick in ECI between 2014 and 2015. This was the result of an internal push, in response to declining oil prices, to transform industrial policy towards more diversified economic activities and a reduction on the dependence on oil.\textsuperscript{104} Before this internal change, there is a small, though present, accompanying trend upward in DI during the years (2012-2014). Again, the magnitude change makes the trends even more clear. When the amount of change is evaluated in the magnitude change chart (Chart 3.2) a massive increase in ECI score follows an increase in the DI between 2011 and 2012 with a plateau between 2012 and 2013. Here, as was the case in Poland, there is a time-delayed ECI score response in the change of DI score. Only here, the magnitude of change in the two variables are less equal in value (amount of change in

one factor does not result in the same amount of change in the other) than in Poland’s case.

Not shown in the charts above is the sharp increase in ECI that occurred between 1992 and 1998 before beginning its general decline downward. This follows Franke et al.’s and Acemoglu and Robinson’s claim that rentier states, i.e. extractive institutions, can be prosperous initially, but are unsustainable. The trends also follow the claim that the ECI is predictive; as ECI scores continue to decrease, it becomes more difficult to improve the industrial capacity to compete internationally. These low scores arise from the trade with few countries of products that are highly ubiquitous, such as natural resources. The post-Soviet Rentier states’ abundance of oil and other natural resources add volatility to economy output values and “may become a vicious circle” because they lack of incentives to diversify the economy.105

105 Hausmann, “Kazakhstan’s Macro Challenges Ahead,” 2.
Furthermore, there is a fairly flat, weakly significant, positive correlation between ECI and DI for Kazakhstan, shown in Chart 4.3. This helps to support the hypothesis that the more authoritarian a country is the less economic complexity a country will have. Moreover, Kazakhstan’s behavior falls into the classification Acemoglu and Robinson call the “vicious cycle” that is formed by extractive institutions, as such institutions locate power within a narrow elite with few restrictions on that power. These scholars claim that such extractive political institutions accompany extractive economic institutions. As stated above, the Nazarbayev clan and other business elites form the hands to which Kazakhstan (and by extension Nazarbayev) narrowly places political and economic power. The vicious cycle continues because the wealth and economic power funneled to elites can then, in turn, buy political power. Extractive political and economic institutions dominate all the countries in this group because they created initial stability for the

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Central Asian region, which lacked broad “bottom-up” democratic or free-market movements.\textsuperscript{107} Unrestricted elite power actively limits economic institutions that could create incentives for economic progress and hence redistribute power away from the inner circle, diminishing the power of the extractive institution.\textsuperscript{108} Furthermore, the uneven development that arises from post-Soviet rentier states’ extractive institutions, in both resource and non-resource sectors, supports slow economic reform and even further authoritarianism. RCA and IIT analysis shows a more in-depth image of these clan-supported economic institutions and how Kazakhstan’s political and economic factors work together.

4.2 Revealed Comparative Advantage and Intra-Industrial Trade

As expected, Kazakhstan is most efficient in its export of raw materials, shown in Chart 4.1. The country has the highest RCA in fuels, raw materials, and minerals and only a narrow advantage in the production of intermediate goods and vegetables. Despite the differences in their economic institutions, Kazakhstan and Ukraine have similar industries with RCA. Nevertheless, this spread is highly characteristic of enduring extractive institutions. High complexity goods, which require inclusive, redistributive institutions to arise, such as machinery & electricity and transportation, do not appear in Kazakhstan’s RCA breakdown. Unsurprisingly, Kazakhstan’s main good with RCA is fuel. Franke et al note that the “post-Soviet states in the Caspian Region are not only the future resource markets; they also show the highest level of external rent income amongst former Soviet republics.”\textsuperscript{109} Kazakhstan's group of post-communist rentier states

\textsuperscript{107} Acemoglu & Robinson, \textit{Why Nations Fail}, 343, 357.
\textsuperscript{108} Ibid., 84.
\textsuperscript{109} Franke, "Kazakhstan and Azerbaijan as post-Soviet rentier states,” 119.
experience natural resource rents between 40 and 90% of GDP.\textsuperscript{110} Kazakhstan actually has the smallest rent share of GDP for the group. Nevertheless, this high share of oil resources, which signals high outside demand, often causes non-oil sectors to contract and to lose firm competitiveness; this is known as the “Dutch disease.” The continuation of this pattern, which causes socially unproductive, undemocratic activities, is called a resource curse.\textsuperscript{111} Kazakhstan’s high volume of oil reserves, low economic complexity, and low democracy scores signal that the country is experiencing a resource curse.

Kazakhstan’s oil reserves did initiate economic growth, but now the main challenge is channeling knowledge and resources towards sustained growth. An Asian Development Bank study shows that continued reliance on Kazakhstan’s resource sectors cannot produce as much growth as in the past or allow Kazakhstan to reach its full economic growth potential.\textsuperscript{112} The resource curse makes the process of changing economic policy more difficult. Moreover, channeling sustained growth now depends on deep institutional transformation because “long term growth requires fundamental changes in the way that the society and polity is organized around economic issues.”\textsuperscript{113} Because of Nazarbayev's clan’s consolidation of power, fundamental changes are not apparent under the current system and are only possible under conditions of a critical juncture.

\textsuperscript{110} Ibid.
\textsuperscript{111} Hausmann, “Growth and Competition in Kazakhstan,” 2.
Table 4.1 Kazakhstan: Top Goods with Revealed Comparative Advantage

<table>
<thead>
<tr>
<th>Product Group</th>
<th>RCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuels</td>
<td>5.42</td>
</tr>
<tr>
<td>Raw materials</td>
<td>4.88</td>
</tr>
<tr>
<td>Minerals</td>
<td>4.64</td>
</tr>
<tr>
<td>Metals</td>
<td>3.26</td>
</tr>
<tr>
<td>Intermediate goods</td>
<td>1.57</td>
</tr>
<tr>
<td>Vegetable</td>
<td>1.02</td>
</tr>
</tbody>
</table>

Looking into industries that actively trade with other countries to develop goods, only a few Kazakh industries conduct substantial intra-industrial trade. The industries that exhibit the most IIT are fish & crustaceans, food industries, ships, and wool, shown in Table 4.2. All goods, with the exception of ships, have very simple supply chains. Compared to Poland and Ukraine, Kazakhstan’s industries participate in little IIT, as only 15% of experience IIT value over 70%. Therefore, Kazakhstan is not adding significant specialized value to international goods. Institutions that produce innovation and broad investment into the populous, and thus result in a stronger private sector as well as human capital development, are the source of such specialization.\(^{114}\) Conversely, underinvestment in the industrial capacities of the state, not investment in innovation, is a further characteristic of a rentier-state.\(^ {115}\) As an extractive institution, the Kazakh government has incentives to limit economic and, thus, democratic innovation.

Kazakhstan and the other post-Soviet rentier states built their resource policies from scratch, using knowledge from Soviet economic theory, with little awareness of more modern industrial policy. As a result, the supported economic policy at the


\(^{115}\) Di Tella, “Kazakhstan: Institutions,” 74
beginning of transition believed that “natural resources raise the rate of investment and imports, thereby necessitating and accelerating a restructuring of the economy, as well as strengthening social security, therefore easing the social costs of unemployment.”

Kazakhstan’s lack of substantial, sustained economic improvement in the last 27 years, combined with increasing authoritarianism within each country, disprove this theory. Although it is possible to rely on natural resource extraction while building sustainable institutions, natural resource extraction can also undermine democratic institutions.

Rodrik argues that natural resources come with benefits, such as short-term political stability and economic ignition, as well as disadvantages, such as the lack of economic complexity and democracy necessary to prevent instability and shocks. In this case, Kazakhstan and other post-Soviet rentier states reformed (privatized) enough to get foreign investment. The institutions, meant to invite and economic improvement, did quite the opposite. These institutions, in funneling oil-rents towards the elites and away from the populace, failed to create a fair, transparent political or economic environment that could facilitate the hoped-for market success.

\footnote{Franke et al., "Kazakhstan and Azerbaijan as post-Soviet rentier states,” 110}
\footnote{Rodrik, “Notes on an Industrial Strategy for Kazakhstan: The Growth Challenge,” 49-54.}
\footnote{Franke et al., "Kazakhstan and Azerbaijan as post-Soviet rentier states,” 120.}
### Table 4.2 Kazakhstan's Top Intra-Industrial Trade Goods

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Export</th>
<th>Import</th>
<th>IIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish and crustaceans, molluscs and other aquatic invertebrates</td>
<td>50,902,864</td>
<td>50,655,222</td>
<td>1.00</td>
</tr>
<tr>
<td>Food industries, residues and wastes thereof; prepared animal fodder</td>
<td>54,416,934</td>
<td>62,687,773</td>
<td>0.93</td>
</tr>
<tr>
<td>Ships, boats and floating structures</td>
<td>69,627,809</td>
<td>55,559,737</td>
<td>0.89</td>
</tr>
<tr>
<td>Wool, fine or coarse animal hair; horsehair yarn and woven fabric</td>
<td>3,907,563</td>
<td>3,070,421</td>
<td>0.88</td>
</tr>
<tr>
<td>Silk</td>
<td>324,766</td>
<td>435,580</td>
<td>0.85</td>
</tr>
<tr>
<td>Fertilizers</td>
<td>45,036,582</td>
<td>66,117,157</td>
<td>0.81</td>
</tr>
<tr>
<td>Ores, slag and ash</td>
<td>1,193,597,789</td>
<td>694,568,515</td>
<td>0.74</td>
</tr>
<tr>
<td>Aluminium and articles thereof</td>
<td>382,485,269</td>
<td>216,306,048</td>
<td>0.72</td>
</tr>
<tr>
<td>Commodities not specified according to kind</td>
<td>17,973,283</td>
<td>32,017,735</td>
<td>0.72</td>
</tr>
<tr>
<td>Pulp of wood or other fibrous cellulosic material; recovered (waste and scrap)</td>
<td>4,514,960</td>
<td>8,419,117</td>
<td>0.70</td>
</tr>
<tr>
<td>Tobacco and manufactured tobacco substitutes</td>
<td>110,963,895</td>
<td>209,736,179</td>
<td>0.69</td>
</tr>
</tbody>
</table>

### 4.3 Business and Enterprise Environment and Performance Survey

The BEEPS report on Kazakhstan, presented in Chart 4.4, helps to reveal how businesses in the country operate and respond to elite control and extractive economic institutions. The report, as with Ukraine, compares the business environment to the ECA and FSUN. Much like Poland and Ukraine, Kazakh businesses find taxes and corruption to be the most significant problems for conducting business. As shown in the Chart 4.4, these concerns increased over time. Businesses’ concerns with the skills and education of workers is more severe than the ECA while they find labor regulations to be far less of an issue than both the ECA and the FSUN. Favorable labor regulations combined with an authoritarian regime might be a lingering article of Soviet institutions, which aimed for...
“economic democracy first and political democracy last” and provided many employment benefits.\textsuperscript{119}

While not directly addressed in the chart, BEEPS report later shows that firms in Kazakhstan also paid a greater share of unofficial payments than both the ECA and the FSUN.\textsuperscript{120} Over time fewer firms reported unofficial payments, but the payments, as a share of annual sales, did increase between 2005 and 2008. In fact, Kazakh firms reported an average bribe payment that was around twice as much as the average payments reported by the ECA and the FSUN. In the rent-oriented world of Kazakhstan, incomes

\textsuperscript{119} Acemoglu & Robinson, \textit{Why Nations Fail}, 125.

not earned through work per se, but instead are results of rent opportunities. This mentality leads to widespread corruption through patron-client networks.\textsuperscript{121}

These evaluations again follow Acemoglu and Robinson’s idea of extractive institutions. High levels of corruption, especially when power is held by a small elite, creates barriers to economic improvement because it raises the average operating costs and requires businesses to exist only within the limit allowed by the ruling group: the state. Truly extractive institutions, where political power is held in the hands of those who benefit from the extraction, make corruption difficult to eliminate because the roots of corruption remain fundamentally intact within the government organization.\textsuperscript{122}

Additionally, this complicated informal business environment deters international firms, which might be competitive innovators, from entering the market.

In addition, widespread corruption creates a mindset that values connections and luck over effort and participation. This mentality fundamentally questions the power and success of capitalist markets and, even, democratic institutions. Moreover, the failure of the post-Soviet rentier states to diversify economically, to obstruct corruption networks, and to administer vital economic development damages sustainable socio-economic and civil society transformation. This lack of socio-economic development plays into the broadly-held social beliefs about the viability of capitalist markets. Not only has the political sphere not developed into a democratic, advocating body, but the populace has also not gone through an accompanying transition of democratic thought in order to fully hold the Kazakh government accountable. The manipulation of oil-rents and a non-taxed

\textsuperscript{121} Franke et al., "Kazakhstan and Azerbaijan as post-Soviet rentier states,”112.
\textsuperscript{122} Ibid., 123.
populous means that civil society simply lacks the incentives to fully organize itself.\textsuperscript{123} In Kazakhstan, the mentality towards the government has remained largely intact since the Soviet era, with citizens not willing to speak out against leaders, not having the adequate information to do so, and not being motivated to do so, especially if their basic needs are met through state benefits.\textsuperscript{124}

Part of this lack of social transition comes through the lack of free media, which could aid in democratic and economic reform. Unfortunately, authoritarian regimes understand the importance of free media to the success of popular revolutions because they allow threats to “economic and political institutions [to be] widely known and resisted” and try to suspend it as much as possible.\textsuperscript{125} Without a voice to speak to the contrary, Kazakh government and business leaders can create an illusion of economic diversification while paying off important public groups.\textsuperscript{126} Where national opposition parties have failed to create a strong civil system, a small number of NGOs, mainly in large cities, have been able to create initiatives and dialogue that create avenues for greater transparency.\textsuperscript{127}

NGOs and other civil society organization help to build a strong social society, which in turn helps to protect against economic and social damages during times of uncertainty. Drastic changes in oil prices have a massive impact in post-Soviet rentier states because so much of the society is built around the backbone of the oil industry. Yet, oil revenues will not last forever. In other countries, such as Poland, the effects of uncertainty are buffered by a diversified private sector that strong civil society, as seen in

\textsuperscript{123} Di Tella, “Kazakhstan: Institutions,” 74.
\textsuperscript{124} Franke et al., "Kazakhstan and Azerbaijan as post-Soviet rentier states,” 133.
\textsuperscript{125} Acemoglu & Robinson, \textit{Why Nations Fail}, 325, 461.
\textsuperscript{126} Di Tella, “Kazakhstan: Institutions,” 70.
\textsuperscript{127} Franke et. al, "Kazakhstan and Azerbaijan as post-Soviet rentier states,” 131
competitive, intra-industrial trade data and relatively stable ECI scores over time. For these reasons, Rodrik finds that democracy, built by exchange of ideas in a free media and the civil support of NGOs, is “the most important institution of conflict management.”

As the ECI and trade data have outlined above, autocratic post-Soviet rentier states have the ability to ignite growth, but the inclusive institutions of democracies have the diversifying power to protect and sustain the economic system when it comes under stress.

4.4 OLS

The qualitative and quantitative measures above outline why resource wealth and autocracy have created the economic situation that exists today in Kazakhstan. The OLS model, shown in Table 3.4, continues the analysis by showing the statistical relationship between various development factors and the resulting ECI score. The same variables as were used in the previous case studies were used to test Kazakhstan’s data. Results in Model 1 are highly significant. In both models the urban population has a positive correlation to ECI. This may result from the clustering of people and businesses in urban areas and away from border regions. GDP per capita has a negative relationship to ECI in Model 1 but has an insignificant, positive relationship in Model 2. In the broader sense, both of these results are unusual because greater GDP and democracy is typically associated with greater economic performance.

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Table 4.3 Kazakhstan OLS

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy Index Score</td>
<td>-0.3495</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.147)</td>
<td></td>
</tr>
<tr>
<td>Lagged Democracy Index</td>
<td>2.473</td>
<td>2.54e-10</td>
</tr>
<tr>
<td>Score</td>
<td></td>
<td>(0.0005)</td>
</tr>
<tr>
<td>GDP per capita</td>
<td><strong>-0.0044</strong></td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0004)</td>
</tr>
<tr>
<td>Manufacturing (% of GDP)</td>
<td><strong>8.37e-10</strong></td>
<td>2.54e-10</td>
</tr>
<tr>
<td></td>
<td>(5.89e-11)</td>
<td>(8.08e-10)</td>
</tr>
<tr>
<td>Urban population</td>
<td>***4.92e-06</td>
<td>7.75e-07</td>
</tr>
<tr>
<td></td>
<td>(1.41e-07)</td>
<td>(3.98e-07)</td>
</tr>
<tr>
<td>Inflation</td>
<td><strong>0.0582</strong></td>
<td>0.0222</td>
</tr>
<tr>
<td></td>
<td>(0.036)</td>
<td>(0.0248)</td>
</tr>
<tr>
<td>Mineral rents (% of GDP)</td>
<td><strong>-1.513</strong></td>
<td>0.1441</td>
</tr>
<tr>
<td></td>
<td>(0.963)</td>
<td>(0.3394)</td>
</tr>
<tr>
<td>Trade (% of GDP)</td>
<td><strong>0.0813</strong></td>
<td>-0.0169</td>
</tr>
<tr>
<td></td>
<td>(0.0033)</td>
<td>(0.0178)</td>
</tr>
<tr>
<td>Number of Observations</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.9996</td>
<td>0.9350</td>
</tr>
</tbody>
</table>

Unstandardized coefficients with standard errors in parenthesis; * p < .05, ** p < .01, *** p < .001

The most surprising result is that when democracy is added to the regression with the other variables, there is actually a weak, negative relationship between democracy and ECI. There is a positive relationship between the two variables have a positive correlation when the compared directly. The r-squared value is also very high in both models. This relationship is less significant than the other factors. It seems that, whenever a matrix of industrial and developmental factors are included in the regression, the result goes against both the hypothesis and the simplified regression.

4.5 Conclusion

Kazakhstan has not been able to fully economically transition due to the persistence of authoritarianism, an extractive institution that destroys the "incentives
needed for people to save, invest, and innovate.” The transformation of Kazakhstan's political and economic situation can only come through a critical juncture that would allow for widespread awareness of and reeducation towards corruption. The government would have to go directly against the will of the people in a way that was irreconcilable to create such a moment of possible change. Most likely this process would take years of gradual change to build a robust, legitimate democracy, built on inclusive institutions. This gradual process could begin with a state-sponsored diversification project that would allow the improvement of business culture, an increase in private enterprise, and the competition of all businesses, not just those that the government chooses to champion.

This process requires the creative destruction of the “old ways” of patronage and corruption and the bringing in of incentives for new, innovative ideas that stand for the mutual benefit of all the people involved. These changes must then be upheld by a strong civil society with access to a free media.


Conclusion

The transition economies have changed immensely since the end of communism in the region 28 years ago. As the communism established throughout Eastern Europe and Central Asia was a force that connected the ideas of social equality to that of a command-controlled economic system, transition economies faced particular challenges in establishing themselves with newly formed democratic systems with market-based economic systems. This research builds upon previous work that connected democracy with high levels of economic performance to see how the transition economies perform within the theory. The Economic Complexity Index score as a measure of economic performance measures these countries on the basis of a globalizing world in which these countries must trade with each other and specialize in particular goods in order to succeed. The Democracy Index score uses a broad range of survey questions to study of the level of freedom and social democracy in order to dive deeper into the citizen’s life and availability of political choices. These two indexes are connected with the idea that improvement in democratic, inclusive institutions have the ability to best utilize and improve upon the capabilities of people within a country which in turn allows industries within the country to best add value and knowledge to goods for trade. Those that exhibit authoritarian, or extractive institutions, are unable to distribute power effectively and are thus unable to fully access the capabilities and knowledge required to specialize and add significant value to goods for trade.

Based on their own individual histories and the overarching trends of the region, the 25 have developed into a diverse mix of economic and political forces, falling into three loose groups: those that were able to successfully politically and economically
transition to converge with their Western European neighbors; those that developed more
slowly and are still caught in the gradual stages of mass popular movements and
sufficient economic performance; and those that are tied to political and economic
structures of the past, having changed very little in the period of independent transition.
The case studies discussed here are among these groups.

Poland has been able to build upon reforms over time that created a virtuous
cycle. Within this system, democratic institutions are able to feed back into economically
beneficial and diversifying institutions. Because Poland was one of the most
economically complex countries at the beginning of the transition and stood as a model of
democratic reform, the relationship between the development variables is not significant.
The difference between them just is not enough to constitute a significant relationship.
This does not mean that the two variables are not related. On the contrary, this supports
the idea that once a country achieves a high enough level of democracy, such as that of a
“Flawed Democracy,” that the connection between democracy and economic complexity
are less vitally connected because they can work and grow independently. Broad-based
individual power allows citizens to receive and create their own information, create
private social systems, and make enriching economic choices that are not directly in
connection to the government. The inclusive institutions Poland’s people and government
have been able to build together has resulted in a level of democracy that supports a level
of economic complexity; each, in turn, supports and perpetuates one another, forming a
virtuous cycle that is able to defend (with recent turbulence) against the non-democratic
forces of extractive institutions.
Ukraine operates under a similar, but still significantly different, set of circumstances. While the development factors are still not significantly related to the level of economic complexity, the statistical time analysis of the two variables and the qualitative review of factors shows that the political organizational structure does develop the economic climate. Additionally, the social movements in the country and the subsequent formation of more civil society organizations have increased political participation, thus proving indispensable for the creation movement towards a virtuous cycle. These social movements, experienced across a select group of transition economies, have been critical junctures that have allowed creative destruction to whittle away at the extractive structures, such as the massive individual power of the Ukrainian president and subsequent oligarchical clan connections. With the continued movement of these domestic civil society organizations, in connection with international support, Ukraine may be able to continue the democratic movements necessary to allow citizens and businesses to make significant economic decisions; this is how economic diversification can improve. These democratic movements bolster inclusive institutions that more effectively distribute economic power. As seen in the continued elite encroachments of power (see Kuchma and Yanukovych) and accompanying mediocre economic performance, Ukraine has not yet been able to cement the inclusive institutions needed to initiate a fully and truly virtuous cycle that is able, as in Poland, to defend against the threat of extractive institutions.

Without a substantial model in Central Asia to follow, Kazakhstan’s initiatives to transform the country’s power structures and accompanying belief in market capitalism must be done independently. Unlike Ukraine, Kazakhstan does not have the European
Union to offer, even half-hearted, initiatives or incentives towards European integration. Because democracy scores are so low, and there is a more tangible connection between the political structure, i.e. Nazarbeyev’s clan of elites, and the industrial sectors, which the elites control. Consequently, there is a significant connection between development factors and the level of economic complexity in the OLS model. Where democracy and economic complexity scores are low enough, there is a significant connection between development factors, in conjunction to the time delay effects of a change in a democracy with a change in economic complexity, as shown in the ECI/DI section of the Kazakhstan case study. Nevertheless, to change these scores, a significant public opinion change and consequent popular show of force (as there have been in Ukraine and Poland) are required to fundamentally change the strict structures that exist Kazakhstan. These forces have perpetuated for decades, and the vicious cycle continues to spin forward as elites continue to benefit from oil revenues and further economic inequality. These extractive efforts of Nazarbayev’s authoritarian regime fully prevent the spread of democratic thought necessary to support the spread of power required by true economic diversity.

With this research project, I hoped to provide a look into the trends and variation that exist in the transition economies as a whole. While the close discussion of these three cases cannot exactly provide analysis and prescription for the rest of the transition economies, the lessons to be learned from each is the same for the region. States and their populations must work together to create and support the institutions necessary to enable effective and efficient knowledge collection and transfer. This is at the root of economic complexity. Future research might look further into specific political and industrial policy recommendations to support economic complexity goals.
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