The Transition from a Command to a Market Economy: Is Kazakhstan a Success Story in terms of Economic Performance?

Abstract

Kazakhstan has made considerable progress in shifting from command to a market economy. The transition process towards a “market economy was expected to enhance the economic performance” of the country which in turn was anticipated to uplift the life of a common man. This study, therefore, aims “to examine the impact of economic freedom on economic growth” of Kazakhstan. The results indicate that though the reform process of Kazakhstan is in a transition phase, yet economic freedom has contributed positively towards the economic growth” of the country. “The results also indicate that in sub-indicators of economic freedom, monetary freedom” and protection of property right have contributed to the growth of Kazakhstan’s economy while an increase in government size impedes the economic growth of the country.”

Key Words: Transition, Market economy, Reforms, Economic Freedom

Introduction

In the wake of the cold war, the Union of Soviet Socialist Republics (USSR) disintegrated into fifteen new countries. Kazakhstan was one of them having an agrarian economy and industrial hub of the former Soviet Union. The USSR disintegration badly affected the Kazakhstan’s economy; inflation reached four-digit figures with high unemployment rates and the entire economy was almost at the verge of destruction in early 1990s (Alshanov, 2011; Woodard, 2018). After the collapse of the USSR, Kazakhstan chose to pursue a ‘shock therapy’ approach in its development strategies and has managed partial success to implement liberal economic reforms (Åslund, 2007; Hall & Elliott, 1999). Kazakhstan introduced free market economic principles and has been open for market capitalism (Pomfret, 2009; Spechler, 2003, 2008:33). The government of Kazakhstan privatized its energy industry and majority of state-owned corporations of oil and gas sector were purchased by foreign companies in early 1990s (Luong & Weinthal, 2001). It has made considerable progress in terms of shifting from a command to a market economy with high economic growth, especially during the second decade of independence (Knox, 2008; Teal, Toxanova, & Izzo, 2011). The IMF (2011:122) considered Kazakhstan as one of the emerging and developing economies.

Table 1 below indicates the status of economic freedom in Kazakhstan as result of political, institutional and economic reforms. It shows that overtime Kazakhstan has passed through a significant economic reform process after 1995, in the area of trade, business and investment reforms which were market-oriented where there is the encouragement of private property rights and promotion of enterprises in the light of neo-classical paradigms. It is apparent from the table that compared to other central Asian economies, Kazakhstan is a more open and market-oriented economy. Thanks to her political, institutional and trade reforms which were pursued with the active role of the government. The Kyrgyz Republic is the only country which like Kazakhstan, has undergone significant market-
oriented reforms. However, after 2010, Kazakhstan has surpassed other central Asian economies in terms of economic freedom ranking.

**Table 1. Economic Freedom Data of Central Asia**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>50.4</td>
<td>53.9</td>
<td>61</td>
<td>63.3</td>
<td>65.4</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>38.1</td>
<td>45.8</td>
<td>47.5</td>
<td>47</td>
<td>53.3</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>44.8</td>
<td>50.4</td>
<td>53</td>
<td>52.7</td>
<td>55.6</td>
</tr>
<tr>
<td>Kyrgyz Republic</td>
<td>55.7</td>
<td>56.6</td>
<td>61.3</td>
<td>61.3</td>
<td>62.3</td>
</tr>
<tr>
<td>Turkmenistan</td>
<td>37.6</td>
<td>47.6</td>
<td>42.5</td>
<td>41.4</td>
<td>48.4</td>
</tr>
<tr>
<td>WORLD</td>
<td>58.1</td>
<td>59.6</td>
<td>59.4</td>
<td>60.4</td>
<td>60.8</td>
</tr>
</tbody>
</table>

*Source: Freedom House data, Heritage Foundation.*

Hence the main research question of the study is that has economic freedom which is used as a proxy for the reform and the transition process of Kazakhstan contributed towards the economic performance and growth of the country or not. The rest of the paper is organized as below: Section 2 presents a brief empirical literature review. Section 3 shows the data and methodology. Section 4, indicates estimation results while section 5 concludes the findings of the study.

**Empirical Evidence**

The notion that free-market economies perform better was first identified by Adam Smith in his Wealth of Nations, which indicates that the concept has historical roots and has strong theoretical underpinnings (Wu & Davis, 1999). Yet a formal application of economic freedom index in empirical studies focusing on economic growth is a relatively new one. In particular, after the freedom indexes introduced by the Fraser Institute and the Heritage Foundation, several studies have used this index as a measure of free market economies where they have examined its impact on economic growth (Slotrlik, 2002; Weede & Kämpf, 2002). In the last decade, there are a number of studies which have examined the impact of economic freedom on economic growth. However, empirical results are mixed at large (Bashir & Xu, 2014; Heckelman, 2000; Seputiene & Skuncikiene, 2011; Tiwari, 2011; Wu & Davis, 1999, 2004). For instance, some studies indicate a positive impact of economic freedom on economic growth (Ali, 1997; Anwar & Nguyen, 2014; Dawson, 1998; Doucouliagos & Ulubasoglu, 2006; Easton & Walker, 1997; Heckelman, 2000; Hussain & Haque, 2016; Justesen, 2008; Nowak-Lehmann, Dreher, Herzer, Klasen, & Martinez-Zarzoso, 2012; Nyström, 2008; Williamson & Mathers, 2011). There are also some studies which indicate that economic freedom has contributed negatively towards economic performance (Brumm, 2003; Burnside & Dollar, 2000; Easterly, 2003). However, there are other studies which indicate an insignificant impact of economic freedom on economic freedom (Adkins, Moomaw, & Savvides, 2002; Dawson, 1998; De Haan & Sturm, 2000; Gwartney, Lawson, & Holcombe, 1998; Gwartney, Lawson, & Clark, 2005; Park & Wagh, 2002; Pitlik, 2002; Weede & Kämpf, 2002).

In the literature, many studies have examined the impact of individual sub-indicators of economic freedom on economic growth, however, the studies have come up with mixed findings where some indicators tend to have a positive impact while some have a negative impact on economic growth. In terms of individual indicators, the impacts are country specific and different variables have a differential impact in different countries. It can be said that depending upon the type of reforms in which a country have performed better, those reforms are supposed to have contributed to the development of a specific country (Akin, Aytun, & Aktakas, 2014; Assane & Chiang, 2014; Ayal & Karras, 1998; Ayala, Cunado, & Gil-Alana, 2013; Barro, Sala-i-Martin, Blanchard, & Hall, 1991; Gwartney, Lawson, & Block, 1996; Heckelman, 2000; Knack & Keefer, 1995; Kneller, Bleaney, & Gemmell, 1999; Levine & Renelt, 1992; Nelson & Singh, 1998; Pal, Dutta, & Roy, 2011; Torstensson, 1994).
Data and Methodology
To investigate the interaction of GDP with economic freedom, foreign direct investment, capital and other economic variables, this study derives the growth equation using the production function framework. We use the following Cobb-Douglas production function as below:

\[ Y = AK^\alpha L^\beta \]  

Both capital and labor are the main variables in the Cobb-Douglas model that affect economic growth. Variable ‘A’ indicates technological change which is assumed to be exogenous. However, A is assumed to include many other variables which tend to affect economic growth. In our study, we also include some control variables such as FDI, technological change, trade openness and economic freedom. Hence, our model takes the following form:

\[ Y = a_0 + a_1(Labor) + a_2(Capital) + a_3(Technology) + a_4(Trade Openness) + a_5(FDI) + a_6(V) \]  

Labor, capital, technology, trade openness and FDI are main control variables, while V is a vector of variables which includes economic freedom and individual indicators of economic freedom. To investigate the impact of economic freedom on economic growth in Kazakhstan, we rely on secondary data from 1993 to 2018. The main source of the data is the World Bank except for the data of Economic freedom. For the index of economic freedom (EF), we use data from the Heritage Foundation. In this study, we use GDP growth as a dependent variable, while economic freedom along with some other control variables is used as explanatory variables. While both economic freedom and GDP growth rate may affect each other, thus the model may have the issue of endogeneity. To address the endogeneity issue, this study uses the GMM approach for estimation. In addition, we also use the OLS approach to check the robustness of our results.

Estimation Results
Table 2 presents the empirical results showing the impact of economic freedom on economic growth. Since, 1990, the economy of Kazakhstan has undergone a significant transition towards a market and a more liberalized regime where, the country with the support of the state has promoted market-oriented policies that include trade and investment liberalization, promotion of business, labor freedom and monetary freedom as well. Similarly, the country has moved along with a couple of pro-market reforms which we try to capture through index of economic freedom. In the empirical analysis, we are interested to see whether the type of economic freedom and liberalization reforms that have taken place in the case of Kazakhstan is successful or not. For this purpose, we examine whether the economic freedom has contributed to economic performance of the country or not. Since, economic freedom is an index composed of many sub indicators that capture, business, labor, investment and trade liberalization related freedom indicators, hence, this study examines not only the impact of overall economic freedom on economic growth; rather it also investigates the impact of sub-components of economic freedom on economic performance of Kazakhstan.

We have estimated the growth equation with six different model specifications. We estimate model-1 with both OLS and GMM. However, in model-1, we do not include other control variables. We are interested solely in the coefficient of the overall economic freedom.

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS Model-1</th>
<th>OLS Model-2</th>
<th>OLS Model-3</th>
<th>GMM Model-1</th>
<th>GMM Model-2</th>
<th>GMM Model-3</th>
</tr>
</thead>
</table>
Hence, the results show that in the case of both OLS and GMM, economic freedom tends to contribute positively towards economic growth of Kazakhstan. It indicates that as long as the transition phase from a state oriented regime to a market oriented regime gets mature, it causes an improvement in economic performance of the country. Similarly, model-2 indicates that when we include other main control variables in the model such as labor, capital, trade and technology, the robustness of the results of economic freedom is intact. In other words, when we include other main control variables in the model, we still come up with the results that show that economic freedom has a positive and significant impact on the economic growth of Kazakhstan which indicates that the results are not sensitive to the inclusion of other control variables. Similarly, when we examine the impact through the GMM approach, we still get a positive and significant impact of economic freedom on economic growth. Thus, it indicates that economic freedom has a positive and significant impact on economic growth and the findings is robust to a change in estimation approach or inclusion of other variables.

In model-3, we estimated the model with both OLS and GMM but we excluded the FDI variables, but we still have positive coefficients of the economic freedom variables but the coefficients are insignificant which indicates that the results show some sensitivity to the inclusion of FDI variable. Other control variables tend to carry expected and theoretical signs. For example, in case of Kazakhstan, trade liberalization, technological innovation and capital accumulation have a positive impact on economic growth of Kazakhstan.

In Table-3, we present the regression results for the growth equation as shown in Model-4, Model-5 and Model 6. In Model 4 to Model 6, we examine the impact of sub-indicators of economic freedom such as property rights, business freedom, government size and monetary freedom. Since the economic freedom index is composed of many sub-indicators thus we want to examine the impact of the selected indicators individually on economic growth. It is supposed to help identify the individual factors for its role in economic development of Kazakhstan.

In Model 4 and Model 5, we examine the impact of property rights and business freedom on economic performance of Kazakhstan while controlling for other main economic variables. The findings indicate that property rights have an insignificant impact on economic growth while the estimates are robust with regards to both estimation techniques; the OLS and the GMM. Though the results seem to be in contrast with the theoretical findings of the literature, yet our results have already been supported.

### Table 3: Regression Results for Economic Growth of Kazakhstan

<table>
<thead>
<tr>
<th></th>
<th>OLS</th>
<th>GMM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted R-squared</td>
<td>0.978701</td>
<td>0.955397</td>
</tr>
<tr>
<td>J-statistic</td>
<td>0.170127</td>
<td>0.122551</td>
</tr>
</tbody>
</table>

**Notes:**
- Source: Author’s own calculation
- Significant at 10% level, ** significant at 5% level.
- a)Robust t-statistics are given in parentheses.
- b)Standard errors are HAC (heteroskedasticity- and autocorrelation-consistent) or Newey-West standard errors.
(Carlsson & Lundström, 2002; Thompson & Rushing, 1996; Swaleheen & Stansel, 2009. As far as the impact of business freedom on economic growth is concerned, the results indicate that when we use OLS approach to estimation, business freedom does not have any significant impact on economic growth, however, when we use GMM approach to estimation, the results show that business freedom has a positive and significant impact on economic growth.

Model 6 shows estimation results both with OLS and GMM approach. In this model, we examine the impact of property rights, business freedom, government size and monetary freedom on economic growth, while we control for other relevant economic variables.

### Table 3. Empirical Results Showing the Impact of Economic Freedom on Economic Growth

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS Model-4</th>
<th>OLS Model-5</th>
<th>GMM Model-4</th>
<th>GMM Model-5</th>
<th>OLS Model-6</th>
<th>GMM Model-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-54.553</td>
<td>-55.859</td>
<td>-55.859</td>
<td>-46.150</td>
<td>-54.689</td>
<td>-56.619</td>
</tr>
<tr>
<td></td>
<td>(-7.019)**</td>
<td>(-7.725)**</td>
<td>(-7.725)**</td>
<td>(-8.031)**</td>
<td>(-7.106)**</td>
<td>(-34.572)**</td>
</tr>
<tr>
<td>LABOR</td>
<td>4.858</td>
<td>5.068</td>
<td>4.175</td>
<td>5.367</td>
<td>6.195</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(10.458)**</td>
<td>(11.185)**</td>
<td>(11.482)**</td>
<td>(12.466)**</td>
<td>(16.994)**</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>0.143</td>
<td>0.075</td>
<td>0.132</td>
<td>0.120</td>
<td>0.145</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.996)**</td>
<td>(0.917)**</td>
<td>(1.892)**</td>
<td>(1.859)*</td>
<td>(2.897)**</td>
<td></td>
</tr>
<tr>
<td>TECH</td>
<td>0.228</td>
<td>0.273</td>
<td>0.177</td>
<td>0.135</td>
<td>0.164</td>
<td></td>
</tr>
<tr>
<td>TRADE</td>
<td>0.363</td>
<td>0.304</td>
<td>0.536</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.228)**</td>
<td>(3.020)**</td>
<td>(4.951)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade(-1)</td>
<td>0.194</td>
<td>0.194</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FDI</td>
<td>-0.002</td>
<td>-0.036</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.091)</td>
<td>(-1.743)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FDI(-1)</td>
<td></td>
<td></td>
<td>0.001</td>
<td>0.187</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.089)</td>
<td>(0.070)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property rights</td>
<td>0.011</td>
<td>-0.028</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.144)</td>
<td>(-0.652)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business freedom</td>
<td>-0.396</td>
<td>0.472</td>
<td>-0.474</td>
<td>-0.830</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.380)</td>
<td>(3.956)**</td>
<td>(-2.621)**</td>
<td>(-4.944)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government size</td>
<td>-1.544</td>
<td>-1.797</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.482)**</td>
<td>(-4.193)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monetary freedom</td>
<td>0.419</td>
<td>0.265</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.169)**</td>
<td>(1.948)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.981724</td>
<td>0.975916</td>
<td>0.964216</td>
<td>0.962804</td>
<td>0.994120</td>
<td>0.980776</td>
</tr>
<tr>
<td>J-statistic</td>
<td>0.174668</td>
<td>0.172863</td>
<td>0.107866</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Author’s own calculation

Significant at 10% level, ** significant at 5% level. a)Robust t-statistics are given in parentheses. b)Standard errors are HAC (Heteroscedasticity-and autocorrelation-consistent) or Newey-West standard errors.

The results indicate that government size, which is captured through an increase in government expenditure, tends to have a significantly negative impact on economic growth. The result seems to be in line with the economic theory as the more, there is the role of the government, which is reflected in more public sector enterprise, the lesser, they seem to have efficiency, and at the same time, it may crowd out the private sector investment, thus we may expect a negative impact of government size on economic growth. On the other hand, freedom on the monetary side tends to contribute positively and significantly towards economic growth. It supports the idea that a more liberal financial institution can
be a key towards economic growth of Kazakhstan. Finally, when we compare the role or contribution of other main economic variables, it shows that almost all the results are in line with the economic theory. The labor force, gross domestic capital, trade liberalization, technological change and foreign direct investment have a positive and significant impact on economic growth of Kazakhstan. In the case of FDI, in most cases, FDI has a negative impact on economic growth, though the result is insignificant. Theoretically, FDI is expected to contribute positively towards the economic growth of a country. In case of Kazakhstan, the FDI does not seem to play the required or desired role. However, interestingly, our findings are not very unexpected as Avinshah et al. (2011) who investigated the impact of FDI on different sectors of economy in Kazakhstan shows that FDI has negative impact of agriculture sector which include forestry, hunting and fishing. Also FDI was found to have a negative impact on construction sector, trade sector, and services sector. Only in case of mining and manufacturing, FDI tends to have a positive impact. Since, we use an aggregate level of FDI; hence, negative impact of FDI can be attributed to the negative impact that FDI is supposed to have on agriculture and the service sector. Overall, our empirical results of economic freedom and individual indicators support the findings of Niclas and Henrik, J (2006); Swaleheen and Stansel (2009).

Conclusion

This study investigates the economic progress of Kazakhstan in the aftermath of its socio-political and economic reforms. To capture these socio-political and economic reforms, we have used economic freedom index in order to investigate its impact on economic growth of Kazakhstan. The empirical results point to the fact, that these liberation reforms have been conducive to the economic development of Kazakhstan. Though the reform process is still in process, and yet the true impact and response of these policies can be materialized if the liberalization policies are implemented in true spirit and with an active participation of the government. The results also indicate that the increase in government size has a negative impact on economic growth while monetary freedom and freedom of the property right have been beneficial for the growth of Kazakhstan’s economy.
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References


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