

García Gonzalez, Juan David; Manso, José Ramos Pires; Garcia, Juan Milán; de Pablo Valenciano, Jaime

Article

Size of government and economic growth: A convergence analysis of former Soviet Union countries from 1991 to 2018

Amfiteatru Economic

Provided in Cooperation with:

The Bucharest University of Economic Studies

Suggested Citation: García Gonzalez, Juan David; Manso, José Ramos Pires; Garcia, Juan Milán; de Pablo Valenciano, Jaime (2024) : Size of government and economic growth: A convergence analysis of former Soviet Union countries from 1991 to 2018, Amfiteatru Economic, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, Vol. 26, Iss. Special Issue No. 18, pp. 1256-1269,
<https://doi.org/10.24818/EA/2024/S18/1256>

This Version is available at:

<https://hdl.handle.net/10419/319803>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

SIZE OF GOVERNMENT AND ECONOMIC GROWTH: A CONVERGENCE ANALYSIS OF FORMER SOVIET UNION COUNTRIES FROM 1991 TO 2018

Juan David García González^{1*} , Jose Ramos Pires Manso² ,

Juan Milán García³  and Jaime de Pablo Valenciano⁴ 

¹⁾³⁾⁴⁾University of Almeria, Almeria, Spain

²⁾University of Beira Interior, Covilha, Portugal

Please cite this article as:

García González, J.D., Pires Manso, J.R., García, J.M. and Valenciano, J.P., 2024. Size of Government and Economic Growth: A Convergence Analysis of Former Soviet Union Countries from 1991 to 2018. *Amfiteatru Economic*, 26(Special Issue No. 18), pp. 1256-1269.

DOI: <https://doi.org/10.24818/EA/2024/S18/1256>

Article History

Received: 14 August 2024

Revised: 21 September 2024

Accepted: 15 October 2024

Abstract

There are 15 independent countries that emerged (re-emerged) from the Union of Soviet Socialist Republics since its collapse in 1991. The process of independence of the Former Soviet Union (FSU) countries was followed by massive economic, political, and institutional reforms that, in most cases, sought the transition from centralised systems to market economies. This paper uses the club convergence method developed by Phillips and Sul (2007, 2009) to analyse convergence in terms of size of government and economic growth between 1991 and 2018 for 14 FSU countries: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Lithuania, Latvia, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The results suggest the existence of two convergence clubs in terms of size of government. In both groups, the government spending has been reduced until 2008, followed by a stabilisation process. Turkmenistan is the only non-convergent country to any club. Likewise, there are three different convergence clubs in terms of GDP per capita. The analysis of economic convergence and the size of government in the FSU countries provides valuable insight into their path to sustainability. Economic efficiency, social equity, and institutional stability are essential components that these countries must strengthen to achieve long-term sustainable development.

Keywords: growth, size of state, convergence, club convergence, post-soviet, sustainability

JEL Classification: A10, O10, Q01

* Corresponding author, **Juan David García González** – e-mail: judgarciago@gmail.com



This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. © 2024 The Author(s).

Introduction

There are independent countries that emerged (re-emerged) from the Union of Soviet Socialist Republics since its crumbling in 1991. The process of independence of the Former Soviet Union (FSU) countries was followed by massive economic, political, and institutional reforms that, in most cases, sought the transition from centralised systems to market economies. This transformation not only implied a change in economic models, but also in the way these countries approached sustainability and economic convergence.

Each of these countries has followed its own path of economic and political development. Armenia has experienced moderate economic growth, but faces significant challenges due to regional conflicts (Libman and Vinokurov, 2012). Azerbaijan has achieved considerable growth driven by its oil and gas resources, although it faces long-term sustainability risks (Luong, 2002). Belarus has maintained a more centralised and less reformed economy, which has limited its economic growth (Way, 2002). Estonia, considered a success story among FSU countries, rapidly implemented market reforms, and joined the EU in 2004, achieving sustained growth (Karo and Kattel, 2015). Georgia has made significant reforms to liberalise its economy, but still faces internal conflicts and the need to improve infrastructure (Gleason, 2003). Kazakhstan, rich in natural resources, has attracted large foreign investments, especially in the energy sector, but faces economic diversification challenges (Libman and Vinokurov 2012). Kyrgyzstan has had a slower transition to a market economy, constrained by political instability and lack of infrastructure (Black and Tarassova, 2003). Lithuania, like Estonia, joined the EU in 2004 and implemented significant reforms that have boosted its economic growth (Randma-Liiv and Drechsler, 2019). Latvia has followed a similar path, benefiting from EU integration and adopting market policies (Way and Casey, 2018).

Russia, as the main successor to the USSR, has had a mixed transition with major economic reforms and a resurgence of state control in several sectors, facing challenges due to its dependence on oil and gas revenues (Prado and Trebilcock, 2009). Tajikistan has faced significant challenges since independence, including a civil war in the 1990s and a fragile economy dependent on remittances (Black and Tarassova, 2003). Turkmenistan has maintained a highly centralised and state-controlled economy, which has limited its growth and diversification (Gleason, 2003). Ukraine has had a turbulent economic and political history, with economic crises and regional conflicts, but has implemented important reforms in recent years (Levitsky and Way, 2002). Uzbekistan has recently begun to open up its economy after years of autarkic policies, moving toward attracting foreign investment and economic modernisation (Libman and Vinokurov, 2012).

By 1991, FSU countries had significant differences in terms of endowments, infrastructures, institutional strengths, natural resources, literacy, productivity, and the degree of nationalism within each country (Luong, 2002; Black and Tarassova, 2003; Darden and Grzymala-Busse, 2006; Libman and Vinokurov, 2012; Lucan Ahmad Way and Casey, 2018). However, the post-soviet countries also experienced similar baselines, in the sense that all of them shared institutional legacies from the Soviet Union such as the currency, a common language, and, even more importantly, a society conceived as a big body of bureaucracy with Moscow in its core (Gleason, 2003). Thus, after the critical juncture of 1991, the FSU needed to rethink the size, tools, strategies, and purposes of the new states.

As it can be seen in figure no. 1, government in the FSU countries has been experiencing a declining trend in terms of size since 1991. This is explained by the massive privatisation

processes that took place in these countries (Berkowitz and DeJong, 2003; Tiits et al., 2008), due to the belief in socioeconomic profits of market-oriented economies to achieve economic convergence (Randma-Liiv and Drechsler, 2019).

This phenomenon will allow countries to achieve GDP levels so that they can focus on activities to promote sustainability from an economic, sociocultural, and environmental approach (Lucan Ahmad Way and Casey, 2018). Thus, developing an efficient policy of allocation of public resources (which can be measured by government size) is crucial to achieve a sustainable long-term socioeconomic growth.

It then becomes essential to understand what are the trends in terms of size of government and what kind of economic outcomes have been achieved by the post-Soviet countries since 1991. In particular, this paper suggests no general convergence neither in the size of government nor in economic growth. On the contrary, club convergence analysis identifies two clubs in terms of size of government and three clubs in terms of economic growth.



Figure no. 1. Size of government as % of GDP, FSU against world

Notes: Vertical line indicates the point in which the world overtakes the FSU in terms of size of government. Both the FSU and the world lines are calculated as simple averages of all the countries within each group, based on data from The World Bank (2020b).

The outline of this paper is as follows. Section two sums up key political and economic transitions in the post-Soviet countries. Section three explains the data and the club convergence analysis used in this paper. Section four outlines convergence results in terms of size of government and economic growth between 1991 and 2018. Lastly, section five concludes.

1. Review of the scientific literature

International institutions such as the World Bank or the International Monetary Fund had a huge impact on the political and economic transitions in the FSU countries. By implementing

measures to promote trade liberalisation, fiscal and monetary discipline, free exchange rates, and privatisation of public companies (Berkowitz and DeJong, 2003; Drechsler, 2005; Tiits et al., 2008), they made the effort to reduce the bureaucracy level these countries reached during the Soviet period (Gleason, 2003). However, these attempts had limited effects in the socioeconomic development of the FSU countries (Kurtz and Barnes, 2002) because of technical competences, political motivations, and institutional arrangements (Davis and Dombrowski, 2000).

The possibility of entering the European Union also influenced these reforms (Lucan Ahmad Way and Casey, 2018), which had even more impact than the institutions mentioned above by the standardisation of policies and rules, investment funds, and access to one of the most important markets worldwide (Karo and Kattel, 2015; Randma-Liiv and Drechsler, 2019). Even China and the Arab World had influenced aspects regarding corruption and transparency in the FSU countries (Drechsler, 2015; Breslauer, 2019).

Both political and economic reforms were subject to internal factors and initial endowments of each country. The degree of literacy, nationalist movements, and reforms toward democracy are strongly interrelated (Levitsky and Way, 2002; Darden and Grzymala-Busse, 2006). Endowments related to the physical and human capitals such as education and technology or transport infrastructures are associated with better economic outcomes, while dependence on commodities has had negative effects in countries with extractive elites (Clark and Naito, 1998; Gleason, 2003; Lucan Ahmad Way and Casey, 2018).

Even more important have been the institutional frameworks of the FSU countries that have shaped the success of economic and political reforms, as well as key transition points like corruption, shadow institutions, lack of participation, privatisation processes, among others (Way, 2002; Berkowitz and DeJong, 2003; Black and Tarassova, 2003; Prado and Trebilcock, 2009). For instance, Wegren and O'Brien (2018) find that post-soviet reforms did not bring any significant life improvement for most small farmers subject to institutional weaknesses; in fact, economic exclusion and rural poverty are even worse 25 years after the emergence of post-soviet countries. This turmoil after the independence of the FSU countries also had negative impacts on land use in countries such as Ukraine, Russia, and Kazakhstan. Abandonment of agricultural land after independence in Ukraine accounted for 56%, while countries with stronger institutional frameworks from Eastern Europe abandonment of agricultural land was explained in the long(mid)-term as a result of socioeconomic transformation, such as urbanisation and industrialisation (Kuemmerle et al., 2008; Baumann et al., 2011; Rakhmatullaev et al., 2011; Meyfroidt et al., 2016).

As a result of the above factors, reforms in the post-Soviet countries have shaped different types of states and socioeconomic systems. The FSU countries are in diverse points between several trade-offs such as the market-oriented against the state-guiding approaches, internationally created against domestically created frameworks, or western public administration against non-western public administration systems (De Melo and Gelb, 1996; Mintzberg, 1996; Murrell, 1996; Drechsler, 2015; Randma-Liiv and Drechsler, 2019). Smart specialisation, resource-based, and extractive institutions are some of the economic approaches adopted by the post-Soviet countries (Luong, 2002; Karo and Kattel, 2015; Lucan Ahmad Way and Casey, 2018).

Although the initial reforms related to political institutions focused on promoting democratisation, constitutional regimes, and participation, most of the FSU countries only

went half-way to these goals. This led to the development of hybrid systems between democratic and authoritarian regimes, like competitive authoritarianism, in which key institutions and the power of the state are controlled by religion, former soviet elites, or extractive interest groups (Levitsky and Way, 2002; Nikolova, 2016; Breslauer, 2019). These political hybrid systems have enabled elites to create extractive economic systems characterised by lack of competition, low productivity, and high industry concentration, thus preventing sustainable economic growth (Luong, 2002; Coricelli, 2007).

2. Methodology

This paper uses the club convergence method developed by Phillips and Sul (2007, 2009) to analyse convergence in terms of economic growth and size of government between 1991 and 2018 for 14 FSU countries: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Lithuania, Latvia, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan (Figure no. 2).

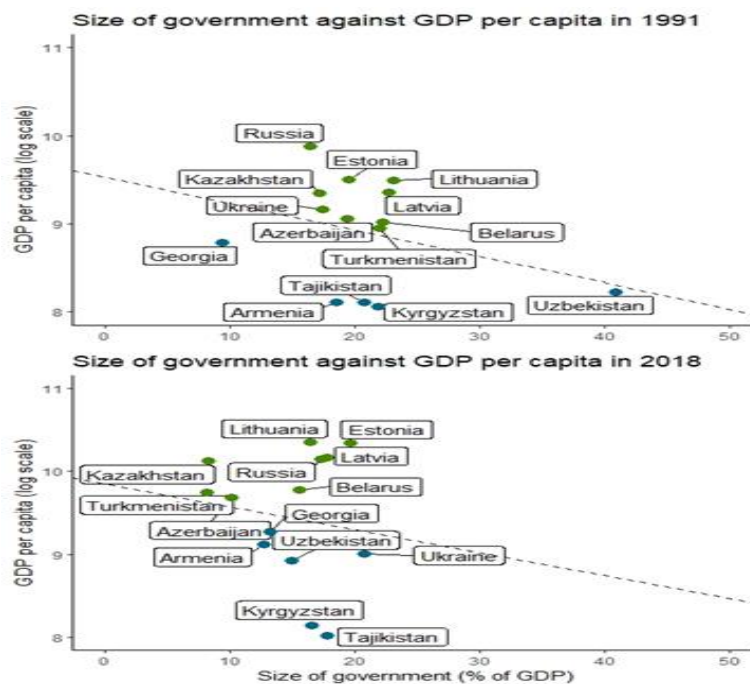


Figure no. 2. Size of government against GDP per capita in FSU, 1991 to 2018 comparison

Notes: Regression lines are calculated by an Ordinary Least Squared (OLS) Regression taking GDP per capita as Y variable and size of government as X variable, based on data from The World Bank (2020a, 2020b).

The size of government refers to the general government expenditure as a percentage of GDP. Economic growth is measured by GDP per capita, purchasing power parity (PPP), in 2011 constant international dollars. The variable of economic growth is subject to a logarithmic transformation. Then, both the size of government and the economic growth variables are

filtered using the `pfilter` command in Stata in order to wipe out the cyclical component (Phillips and Sul, 2009; Du, 2017). All the data come from The World Bank (2020b, 2020a).

Phillips and Sul (2007) propose an approach to test for the existence of convergence clubs supported by a nonlinear time-varying factor model. It allows to analyse heterogeneous agent behaviour and its evolution. Club convergence is also robust to the stationarity property of the series. Even more importantly, in order to group individuals into clubs that are similar within them but diverse between them, club convergence clusters individuals into clubs with similar transition paths. Thus, it is no longer necessary to pre-divide individuals into subgroups to test the convergence hypothesis on each subgroup (Du, 2017).

The relative convergence of X_{it} requires:

$$\lim_{t \rightarrow \infty} \frac{X_{it}}{X_{jt}} = 1, \text{ for every } i \text{ and } j \quad (1)$$

Consider a set of observable series X_{it} of an individual i such that:

$$X_{it} = \delta_{it} \theta_t \quad (2)$$

Where θ_t is the only common component and δ_{it} captures the deviation of an individual i from the common path defined by θ_t . The regression t test for the null hypothesis of convergence for all i takes the form of:

$$H_0 : \delta_i = \delta \text{ for } \alpha \geq 0 \quad (3)$$

Against the alternative hypothesis $\delta_i \neq \delta$ for $\alpha < 0$.

The initial database used to analyse economic growth (GDP per capita, purchasing power parity PPP, in 2011 constant international dollars) had 3.2% of missing information. The countries affected by this lack of information include Estonia, Lithuania, and Latvia. Likewise, the initial database used to analyse the size of government (general government expenditure as percentage of GDP) had 4.6% of missing information. Countries affected by this lack of information are Estonia, Kazakhstan, Lithuania, Latvia, Tajikistan, Turkmenistan, and Uzbekistan. Imputation of those missing values was made by interpolation of the general trend on countries with missing information.

Phillips and Sul (2007) club convergence method tests and identifies if there is cluster convergence in a panel data. This relative convergence means that:

$$\lim_{t \rightarrow \infty} \frac{X_{it}}{X_{jt}} = 1, \text{ for every } i \text{ y } j \quad (4)$$

Decomposing the panel data X_{it} as:

$$X_{it} = g_{it} + a_{it} \quad (5)$$

Where g_{it} is the systematic components and a_{it} is the transitional components. Following Du (2017), the past equation is transformed in order to split the common components from the idiosyncratic components:

$$X_{it} = \left(\frac{g_{it} + a_{it}}{\theta_t} \right) \theta_t = \delta_{it} \theta_t \quad (6)$$

Where θ_t is the only one common component and δ_{it} is an idiosyncratic element variable over time. With this dynamic model, we can separate the trend from the cyclical component to define the parameter of relative transition h_{it} as:

$$h_{it} = \frac{x_{it}}{\frac{1}{N} \sum_{i=1}^N x_{it}} = \frac{\delta_{it}}{\frac{1}{N} \sum_{i=1}^N \delta_{it}} \quad (7)$$

h_{it} (the relative transition parameter) measures the loading factor with respect to the panel mean at time t . So, it is the transition path of an individual in the panel data. It means that the mean of the h_{it} cross-sections is equal to 1 with the following variance:

$$H_{it} = \frac{1}{N} \sum_{i=1}^N (h_{it} - 1)^2 \rightarrow 0, \text{ if } \lim_{t \rightarrow \infty} \delta_{it} = \delta, \text{ for every } i \quad (8)$$

It means that convergence comes down to the following test, null hypothesis for the group of countries i :

$$H_0: \delta_i = \delta, \text{ for } \alpha \geq 0 \quad (9)$$

If null-hypothesis is rejected for the whole panel, it is possible to continue with the algorithm proposed by Phillips and Sul (2007) and adjusted by Schnurbus, Haupt and Meier (2017) to find the cluster convergence. The algorithm consists of the following steps:

- Sort countries according to the Hodrick and Prescott (1997) smoothed log income of the final period T .
- Find a k (number of countries) that does not reject the null hypothesis using the log t test, there is no convergence by clusters if k is not found. Then, operate with $\{k, k + 1, \dots, k + j\}$ to find a j that maximises the log t regression test.
- Create a complementary group with countries outside the core group. Add one country to the core group and test the log t regression, verifying that it does not reach the critical point of rejection.
- All countries that are not part of the initial convergence club form another group. Perform the log t test for this group. Repeat from step 2 if a new cluster is not created from this last step.
- Run the log t regression for all pairs of subsequent initial clubs. Merge those clubs fulfilling the convergence hypothesis jointly.

Although the first purpose of Phillips and Sul (2007) was to study the convergence in terms of economic growth. The method has been used by many researchers in a wide range of subjects such as inequality, carbon dioxide emissions, market integration, investment, unemployment, among others (Carrion-i-Silvestre and German-Soto, 2009; Kim and Rous, 2012; Panopoulou and Pantelidis, 2012; Apergis, Christou and Miller, 2014; Apergis and Payne, 2017; Monfort, Ordóñez and Sala, 2018; Barrios, Flores and Martínez, 2019).

3. Results

Club convergence analysis has identified two clubs in terms of size of government and three clubs in terms of economic growth (Table no. 1). These clubs do not have a one-to-one correspondence between them, suggesting, thus, a complex relationship between the analysed variables. They also suggest that there is no general convergence neither in the size of government nor in economic growth.

Table no. 1. Identification of clubs

Log(t)		Club 1	Club 2	Club 3
Size of Government	Coefficient	0.145	2.749	NA
	T-stat	2.692*	2.338*	NA
Economic Growth	Coefficient	0.453	0.594	0.970
	T-stat	3.262*	14.926*	4.912*

Notes: Results with the psecta command in Stata. It implements club convergence analysis using the algorithm proposed by Phillips and Sul (2007). Own calculations using data from The World Bank (2020a, 2020b).

**The critical value of the Log(t) regression is -1.65. If the Log(t) is greater than -1.65, then a subgroup (club) is formed with those individuals (Du, 2017).*

The convergence analysis suggests the existence of two clubs in terms of the size of government (Table no. 2). In both groups, the government spending has been reduced until 2008, followed by a stabilisation process. Turkmenistan is the only non-convergent country to any club. These results confirm a clear trend during the first decade of analysis toward liberalisation and deregulation promoted by the westernisation (Luong, 2002; Drechsler, 2015; Karo and Kattel, 2015; Randma-Liiv and Drechsler, 2019).

Libman and Vinokurov (2012) suggested the existence of three clusters in relation to the macroeconomic variables of the speed and efficiency of post-Soviet reforms. Furthermore, it is important to note that the answers to the 2008 crisis were different between the FSU countries and the worldwide trend. Some Central Asian countries and the Baltic states implemented austerity plans instead of Keynesian approaches to tackle the 2008 crisis (Kattel, 2010; Karo and Kattel, 2015). Figure no. 3 corresponds to Libman and Vinokurov (2012) results by showing that club convergence exists rather than general convergence and, after 2008, the size of the government in the post-Soviet countries remains roughly the same.

Table no. 2. Clubs of size of government in FSU

Clusters	Countries
Club 1	Armenia, Belarus, Estonia, Georgia, Kyrgyzstan, Latvia, Lithuania, Russia, Tajikistan, Ukraine, and Uzbekistan
Club 2	Azerbaijan and Kazakhstan
Non-convergent	Turkmenistan



Figure no. 3. Club convergence analysis of size of government in the FSU

Notes: Club convergence trends are calculated as a simple mean of trend components in terms of size of government of all countries within each club, based on data from The World Bank (2020b).

There are three convergence clubs in terms of economic growth (Table no. 3). Club 1 can be classified as the most successful case of the sample, reaching a significantly higher level than the other FSU countries. The Baltic states, all of them EU members, are part of this best performed club. However, there are still concerns with respect to the rising inequality, as well as the kind of growth and the economic risks taken by the best performed cluster (club 1) in terms of economic growth (Black and Tarassova, 2003; Tiits et al., 2008; Kattel, 2010).

Club 2 can be classified as cases of some degree of success since the beginning of the 21st century, while Club 3, formed by Kyrgyzstan and Tajikistan, has failed to significantly raise GDP per capita level since 1991 (Figure no. 4). This claim about economic stagnation over one to two decades (lost decade) after the collapse of the Soviet Union has been widely discussed in academia, mainly suggesting structural weaknesses to create institutional frameworks to steer sustainable growth (Luong, 2002; Way, 2002; Gleason, 2003; Prado and Trebilcock, 2009; Acemoglu and Robinson, 2012).

Table no. 3. Clubs of economic growth in FSU

Clusters	Countries
Club 1	Azerbaijan, Belarus, Estonia, Kazakhstan, Latvia, Lithuania, Russia, and Turkmenistan
Club 2	Armenia, Georgia, Ukraine, and Uzbekistan
Club 3	Kyrgyzstan and Tajikistan



Figure no. 4. Club convergence analysis of economic growth in the FSU

Notes: Club convergence trends are calculated as a simple mean of trend components in terms of economic growth of all countries within each club, based on data from The World Bank (2020a).

By analysing economic convergence and the size of government in the countries of the former Soviet Union (FSU), we can draw several implications related to sustainability.

According to these results, different scenarios of economic development can be suggested among the FSU countries. Countries with a higher degree of economic convergence are laying foundations toward sustainable development that increases the well-being of their citizens (Phillips and Sul, 2009).

Reforms made to reduce the size of public economy institutions increase the sustainability of the process by granting stronger financial stability. This will produce positive effects in the major areas of public services such as education, health, or information and communication infrastructures (Phillips and Sul, 2007), and it can reduce the socioeconomic disparities in the different regions of these countries (World Bank, 2020).

In addition, reforms of public institutions towards greater citizen participation and transparency will make the whole process accepted by national and international societies, increasing their sustainability even further (ERBD, 2021). Nonetheless, countries such as Turkmenistan do not converge with any club, which translates into more difficult challenges to face for them in order to achieve socioeconomic sustainable development. Regarding the environmental approach of sustainability, efficient governments can implement more effective environmental policies and allocate resources to mitigate climate change and protect natural resources. The convergence towards sustainable economic practices can include the adoption of clean technologies and the promotion of the green economy (UNEP, 2019).

Conclusions

This research has identified two convergence clubs in terms of government size and three convergence clubs in economic growth in the countries of the former Soviet Union (FSU), indicating a lack of general convergence in both government size and economic growth in post-Soviet states. The results may have significant policy implications for supporting regional integration efforts, as well as for targeting international aid, development funds, or

economic growth policies. From an academic point of view, this research uses a holistic approach, in terms of the period of analysis, the countries included, and potential comparability, to describe and analyse the trajectories of post-Soviet countries in terms of government size and economic growth.

The lack of overall convergence and the presence of multiple convergence clubs suggest a complex relationship between the variables analysed. This finding underlines the need to design tailor-made policies that address the particularities of each group of countries, rather than applying one-size-fits-all approaches. Furthermore, the identification of Turkmenistan as a non-converging country in terms of government size indicates that it faces specific challenges that may require unique solutions.

From a sustainability approach, it is essential to consider not only economic growth and government efficiency, but also how these factors can contribute to more inclusive and equitable development. The reduction in government spending until 2008, followed by a stabilisation process, reflects efforts to make public finances more efficient, which is crucial for long-term economic sustainability. An efficient government can allocate resources more effectively to critical areas such as education, health, and infrastructure, which are fundamental to improving the quality of life and supporting sustainable development.

The disparity in levels of convergence in terms of GDP per capita and size of government also highlights the importance of addressing regional inequalities. For development to be truly sustainable, it is necessary to implement redistributive policies and social programmes that ensure that the benefits of economic growth are shared more equitably among the population. This not only promotes social equity, but also strengthens social cohesion and political stability.

The integration of sustainability issues into economic and governmental policies is crucial to ensure that growth and development benefit all parts of society and preserve the environment for future generations.

References

- Acemoglu, D. and Robinson, J.A., 2012. *Why nations fail: The origins of power, prosperity, and poverty*. S.I.: Crown Books.
- Apergis, N. and Payne, J.E., 2017. Per capita carbon dioxide emissions across U.S. states by sector and fossil fuel source: Evidence from club convergence tests. *Energy Economics*, [e-journal] 63, pp. 365-372. <https://doi.org/10.1016/j.eneco.2016.11.027>.
- Apergis, N., Christou, C. and Miller, S.M., 2014. Country and industry convergence of equity markets: International evidence from club convergence and clustering. *The North American Journal of Economics and Finance*, [e-journal] 29, pp. 36-58. <https://doi.org/10.1016/j.najef.2014.05.002>.
- Barrios, C., Flores, E. and Martínez, M.Á., 2019. Convergence clubs in Latin America. *Applied Economics Letters*, [e-journal] 26(1), pp. 16-20. <https://doi.org/10.1080/13504851.2018.1433288>.
- Baumann, M., Kuemmerle, T., Elbakidze, M., Ozdogan, M., Radeloff, V.C., Keuler, N.S., Prishchepov, A.V., Kruhlov, I. and Hostert, P., 2011. Patterns and drivers of post-

- socialist farmland abandonment in Western Ukraine. *Land Use Policy*, [e-journal] 28(3), pp. 552-562. <https://doi.org/10.1016/j.landusepol.2010.11.003>.
- Berkowitz, D. and DeJong, D.N., 2003. Policy reform and growth in post-Soviet Russia. *European Economic Review*, [e-journal] 47(2), pp. 337-352. [https://doi.org/10.1016/S0014-2921\(02\)00186-1](https://doi.org/10.1016/S0014-2921(02)00186-1).
- Black, B.S. and Tarassova, A.S., 2003. Institutional Reform in Transition: A Case Study of Russia. *Supreme Court Economic Review*, [e-journal] 10, pp. 211-278. <https://doi.org/10.1086/scer.10.1147144>.
- Breslauer, G.W., 2019. Reforming sacred institutions, part II: the Soviet Party-State and the Roman Catholic Church compared. *Post-Soviet Affairs*, [e-journal] 35(4), pp. 338-357. <https://doi.org/10.1080/1060586X.2019.1620977>.
- Carrion-i-Silvestre, J.L. and German-Soto, V., 2009. Panel data stochastic convergence analysis of the Mexican regions. *Empirical Economics*, [e-journal] 37(2), pp. 303-327. <https://doi.org/10.1007/s00181-008-0234-x>.
- Clark, A.L. and Naito, K., 1998. Risks and opportunities for foreign investment in the mineral sectors of the Central Asian Republics. *Resources Policy*, [e-journal] 24(2), pp. 105-114. [https://doi.org/10.1016/S0301-4207\(98\)00014-2](https://doi.org/10.1016/S0301-4207(98)00014-2).
- Coricelli, F., 2007. Democracy in the Post-Communist World: Unfinished Business. *East European Politics and Societies: and Cultures*, [e-journal] 21(1), pp. 82-90. <https://doi.org/10.1177/0888325406297127>.
- Darden, K. and Grzymala-Busse, A., 2006. The Great Divide: Literacy, Nationalism, and the Communist Collapse. *World Politics*, [e-journal] 59(1), pp. 83-115. <https://doi.org/10.1353/wp.2007.0015>.
- Davis, P. and Dombrowski, P., 2000. International Assistance to the Former Soviet Union: Conditions and Transitions 1. *Policy Studies Journal*, [e-journal] 28(1), pp. 68-95. <https://doi.org/10.1111/j.1541-0072.2000.tb02016.x>.
- De Melo, M. and Gelb, A., 1996. A Comparative Analysis of Twenty-Eight Transition Economies in Europe and Asia. *Post-Soviet Geography and Economics*, [e-journal] 37(5), pp. 265-285. <https://doi.org/10.1080/10889388.1996.10641020>.
- Drechsler, W., 2005. The Re-Emergence of “Weberian” Public Administration after the Fall of New Public Management: The Central and Eastern European Perspective. *Halduskultuur*, 6, pp. 94-108.
- Drechsler, W., 2015. Paradigms of non-Western public administration and governance. In: A. Massey and K. Johnston eds., 2015. *The international handbook of public administration and governance*. Cheltenham: Edward Elgar Publishing, pp. 104-132.
- Du, K., 2017. Econometric Convergence Test and Club Clustering Using Stata. *The Stata Journal: Promoting communications on statistics and Stata*, [e-journal] 17(4), pp. 882-900. <https://doi.org/10.1177/1536867X1801700407>.
- European Bank for Reconstruction and Development (EBRD), 2021. *Transition Report 2021-22: System Upgrade: Delivering the Digital Dividend*. London: EBRD.
- Gleason, G., 2003. *Markets and Politics in Central Asia*. S.I.: Routledge. <https://doi.org/10.4324/9780203417683>.

- Hodrick, R.J. and Prescott, E.C., 1997. Postwar U.S. Business Cycles: An Empirical Investigation. *Journal of Money, Credit and Banking*, [e-journal] 29(1), pp. 1-16. <https://doi.org/10.2307/2953682>.
- Karo, E. and Kattel, R., 2015. Economic development and evolving state capacities in Central and Eastern Europe: can “smart specialization” make a difference? *Journal of Economic Policy Reform*, [e-journal] 18(2), pp. 172-187. <https://doi.org/10.1080/17487870.2015.1009068>.
- Kattel, R., 2010. Financial and economic crisis in Eastern Europe. *Journal of Post Keynesian Economics*, [e-journal] 33(1), pp. 41-60. <https://doi.org/10.2753/PKE0160-3477330103>.
- Kim, Y.S. and Rous, J.J., 2012. House price convergence: Evidence from US state and metropolitan area panels. *Journal of Housing Economics*, [e-journal] 21(2), pp. 169-186. <https://doi.org/10.1016/j.jhe.2012.01.002>.
- Kuemmerle, T., Hostert, P., Radeloff, V.C., Van Der Linden, S., Perzanowski, K. and Kruhlov, I., 2008. Cross-border Comparison of Post-socialist Farmland Abandonment in the Carpathians. *Ecosystems*, [e-journal] 11(4), pp. 614-628. <https://doi.org/10.1007/s10021-008-9146-z>.
- Kurtz, M.J. and Barnes, A., 2002. The Political Foundations of Post-communist Regimes: Marketization, Agrarian Legacies, or International Influences. *Comparative Political Studies*, [e-journal] 35(5), pp. 524-553. <https://doi.org/10.1177/0010414002035005002>.
- Levitsky, S. and Way, L.A., 2002. Elections Without Democracy: The Rise of Competitive Authoritarianism. *Journal of Democracy*, [e-journal] 13(2), pp. 51-65. <https://doi.org/10.1353/jod.2002.0026>.
- Libman, A. and Vinokurov, E., 2012. Regional Integration and Economic Convergence in the Post- Soviet Space: Experience of the Decade of Growth. *JCMS: Journal of Common Market Studies*, [e-journal] 50(1), pp. 112-128. <https://doi.org/10.1111/j.1468-5965.2011.02209.x>.
- Luong, P.J., 2002. *Institutional Change and Political Continuity in Post-Soviet Central Asia: Power, Perceptions, and Pacts*. S.I.: Cambridge University Press.
- Meyfroidt, P., Schierhorn, F., Prishchepov, A.V., Müller, D. and Kuemmerle, T., 2016. Drivers, constraints and trade-offs associated with recultivating abandoned cropland in Russia, Ukraine and Kazakhstan. *Global Environmental Change*, [e-journal] 37, pp. 1-15. <https://doi.org/10.1016/j.gloenvcha.2016.01.003>.
- Mintzberg, H., 1996. Managing government, governing management. *Harvard Business Review*, 74(3), pp. 75-83.
- Monfort, M., Ordóñez, J. and Sala, H., 2018. Inequality and Unemployment Patterns in Europe: Does Integration Lead to (Real) Convergence? *Open Economies Review*, [e-journal] 29(4), pp. 703-724. <https://doi.org/10.1007/s11079-018-9488-x>.
- Murrell, P., 1996. How Far Has the Transition Progressed? *Journal of Economic Perspectives*, [e-journal] 10(2), pp. 25-44. <https://doi.org/10.1257/jep.10.2.25>.
- Nikolova, M., 2016. Minding the happiness gap: Political institutions and perceived quality of life in transition. *European Journal of Political Economy*, [e-journal] 45, pp. 129-148. <https://doi.org/10.1016/j.ejpoleco.2016.07.008>.

- Panopoulou, E. and Pantelidis, T., 2012. Convergence in per capita health expenditures and health outcomes in the OECD countries. *Applied Economics*, [e-journal] 44(30), pp. 3909-3920. <https://doi.org/10.1080/00036846.2011.583222>.
- Phillips, P.C. and Sul, D., 2007. Transition Modeling and Econometric Convergence Test. *Econometrica*, 75(6), pp. 1771-1855.
- Phillips, P.C.B. and Sul, D., 2009. Economic transition and growth. *Journal of Applied Econometrics*, [e-journal] 24(7), pp. 1153-1185. <https://doi.org/10.1002/jae.1080>.
- Prado, M. and Trebilcock, M., 2009. Path dependence, development, and the dynamics of institutional reform. *University of Toronto Law Journal*, [e-journal] 59(3), pp. 341-380. <https://doi.org/10.3138/utlj.59.3.341>.
- Rakhmatullaev, S., Huneau, F., Le Coustumer, P. and Motelica-Haino, M., 2011. Sustainable Irrigated Agricultural Production of Countries in Economic Transition: Challenges and Opportunities (A Case Study of Uzbekistan, Central Asia). In: F. Columbus ed., 2011. *Agricultural production*. New York: Nova Science Publishers, pp. 139-161.
- Randma-Liiv, T. and Drechsler, W., 2019. The politics of bureaucracy: The Central and Eastern European perspective. *The British Journal of Politics and International Relations*, [e-journal] 21(3), pp. 504-512. <https://doi.org/10.1177/1369148119834835>.
- Schnurbus, J., Haupt, H. and Meier, V., 2017. Economic Transition and Growth: A Replication. *Journal of Applied Econometrics*, [e-journal] 32(5), pp. 1039-1042. <https://doi.org/10.1002/jae.2544>.
- The World Bank, 2020a. *GDP per capita, PPP (constant 2011 international dollar)*. [online] Available at: <<https://data.worldbank.org>> [Accessed 4 February 2020].
- The World Bank, 2020b. *General government final consumption expenditure (% of GDP)*. [online] Available at: <<https://data.worldbank.org/indicator/NE.CON.GOV.T.ZS>> [Accessed 3 February 2020].
- Tiits, M., Kattel, R., Kalvet, T. and Tamm, D., 2008. Catching up, forging ahead or falling behind? Central and Eastern European development in 1990-2005. *Innovation: The European Journal of Social Science Research*, [e-journal] 21(1), pp. 65-85. <https://doi.org/10.1080/13511610802002254>.
- United Nations Environment Programme (UNEP), 2019. *Global Environment Outlook – GEO-6: Healthy Planet, Healthy People*. Nairobi: UNEP.
- Way, L.A. and Casey, A., 2018. The structural sources of postcommunist regime trajectories. *Post-Soviet Affairs*, [e-journal] 34(5), pp. 317-332. <https://doi.org/10.1080/1060586X.2018.1494959>.
- Way, L.A., 2002. The Dilemmas of Reform in Weak States: The Case of Post-Soviet Fiscal Decentralization. *Politics & Society*, [e-journal] 30(4), pp. 579-598. <https://doi.org/10.1177/003232902237827>.
- Wegren, S.K. and O'Brien, D.J., 2018. Introduction to symposium: Smallholders in communist and postcommunist societies. *Journal of Agrarian Change*, [e-journal] 18(4), pp. 869-881. <https://doi.org/10.1111/joac.12281>.
- World Bank, 2020. *World Development Report 2020: Trading for Development in the Age of Global Value Chains*. Washington, DC: World Bank.