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The impact of governance quality on inbound tourism demand of Central Asia

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Abstract

This study analyzes the effect of governance quality on international tourist arrival to Central Asia from 108 countries of origin over the period 2000-2018 using the gravity model. The findings show that governance quality highly impacts the behaviour of tourist arrivals. A peaceful political environment in Central Asia could lead to an increase in the volume of tourism flows. Surprisingly, the findings reveal that improving the quality of governance and institutions will not provide a swift increase in the number of tourist arrivals to Central Asia in the short term. Policymakers should take actions to improve governance quality and achieve to increase significantly international tourist arrivals.

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1. Introduction

Central Asia is regarded as a region in Asia, located in the heart of the Great Silk Road. The region comprises five emerging countries of former Soviet republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. The number of international visitors in Central Asia increased by 43% in 2018 with respect to 2017 (UNWTO, 2019). In 2019, the contribution of Travel & Tourism to economic growth and employment of the region grew at 7.3% and 6.15% respectively (WTTC, 2019). Moreover, the record of 2019 showed that tourism receipts of the region reached over $ 5,114.8 million, accounting for 18.5% of total exports (WTTC, 2019).

With its long history and unique traditions, Central Asia has an enormous capacity to attract thousands of tourists. It is home to 18 cultural and natural heritage sites that are recognized by the UNESCO World Heritage Sites. In 2018, the region welcomed 22 million international visitors, of which 40% were from Kazakhstan, 20% from Uzbekistan, 15% from the Russian Federation, 9% from Kyrgyzstan, 2% from Turkey and 14% from the rest of the World (WTTC, 2021). The motivations of tourists visiting Central Asia are personal reasons (88%) mainly visiting relatives and friends (VRF), business and professional (9%), holidays, leisure and recreation (4%). The main modes of transport used by tourists visiting Central Asia are by land (railways, bus, charter buses etc.) (83%), and air (17%) (UNWTO, 2021). In comparison with global tourism, the transport modes for international tourism are mainly air travel (59%), then land (36%), and water (5%) (UNWTO, 2020).

The tourism industry of the region also faces many challenges and obstacles. Primarily, very little research has been conducted on the tourism of Central Asia. Nevertheless, some researchers have highlighted the important obstacles of the tourism sector in Central Asia namely unsatisfied quality of tourism products, underdeveloped transport infrastructure (Kantarci et al., 2015), the high price of accommodation (Kuralbayev et al., 2017), complex visa regime (Safarova, 2016), scarcity of travel information related to Central Asia (Kantarci, 2007a) and outdated service of travel agents or tour-operators (Kantarci, 2007b). The solution to these challenges relies on identifying the appropriate role of governance quality on the development of tourism in Central Asia, which there has been no detailed investigation in the literature.

The main aim of this study is to analyze the effect of governance quality on the number of international tourist arrivals to Central Asia, based on the panel data set of 108 countries of origin and Central Asia as the destination from 2000 to 2018. The variables of interest represent the World Governance Indicators (WGI) obtained by the World Bank. The WGI consists of six indicators (e.g. political stability, voice & accountability, government effectiveness, regulatory quality, rule of law, and control of corruption.) that measures governance quality according to the World Bank (Kaufmann et al., 2011; Detotto et al., 2021). These indicators have been used to assess the relationship between governance quality and tourism demand in Central Asia. The outcome of this study will identify challenges among governance and tourism, and provide solutions for policymakers to formulate and update the role of governance in promoting tourism in Central Asia. Moreover, this study will contribute to the tourism literature.

The tourism industry is considered to be very competitive and more sensitive to many factors. In the most empirical exercises, it is proved that tourism is highly sensitive to the quality of governance and institutions (Tang, 2018; Detotto et al., 2021), political stability, corruption and rule of law (Tang, 2018; Fourie et al., 2020).

Governance entails complex procedures, mechanisms, relationships, and institutions to establish communication in which citizens and groups express their interests, carry out their legitimate rights, acknowledge their obligations and reconcile their differences (UNDP, 1997). Good governance encompasses important aspects in the way quality of life, public services, peaceful political environment or human well-being, which yield short-run and long-run consequences in a country (Kaufmann et al., 2011; Detotto et al., 2021). Specifically, Detotto et al. (2021) highlight that improving the governance quality in the destination has a strong positive effect on tourism receipts. Similarly, good performance of the government in formulating and implementing effective policies tends to increase the volume of tourism flows and tourism expenditure in the destination (Tang, 2018; Detotto et al., 2021). The government with weak political stability has a strong negative impact on the tourism industry (Saha & Yap, 2015). Furthermore, corruption is regarded as another form of safety threats in the tourism industry (Fourie et al., 2020). Poprawe (2015) shows that in countries where corruption is regarded as common to society, it discourages tourism development at this destination.

Table 1 shows a summary of recent literature on the relationship between governance quality and tourism demand.

Table 1 Summary of literature on governance indicators and tourism

Authors	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
Period: from/to	1995 2016	1995 2016	1996 2016	1998 2016	2000 2013	2002 2012	1995 2010	1999 2009	2005 2015	1999 2009	2000 2010	2000 2009	2005	1985 1998
Country	192	171	40	191	208	100	100	130	45	139	179	66	135	all
Dep. Variable	TA	TA	TA	TA	TA	TE	TA	TA	TA	TA	TA	TA	TA	TA
Methodology														
Panel OLS	yes	yes		yes	yes			yes		yes	yes	yes	yes	yes
FE							yes	yes		yes		yes		
RE										yes		yes		
Haus.Taylor							yes							
GMM			yes			yes	yes		yes					
PPML	yes													
Economic														
Income	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)		(+)		(+)
Price		(-)		(-)					(-)					
Distance			(-)		(-)						(-)		(-)	
Non-economic														
Transport infrastructure			(+)									(+)	(+)	
Border				(+)	(+)						(+)			(+)
Visa				(-)							(-)			
Governance Indicators														
Political Stability						(+)			(+)	NS				(+)
Rule of Law	(+)				(+)	(+)			(+)					
Corruption		(-)				NS	(+)	(+)	(+)					

Government effectiveness	(+)	(+)
Regulatory quality	(+)	(+)
Voice & accountability	(+)	NS

[1]=(Waqas-Awan et al., 2020); [2]=(Fourie et al., 2020); [3]=(Adeola & Evans, 2020); [4]=(Rosselló-Nadal & HE, 2019); [5]=(Rosselló et al., 2017); [6]=(Detotto et al., 2021); [7]=(Poprawe, 2015); [8]=(Saha & Yap, 2015); [9]=(Tang, 2018); [10]=(Saha & Yap, 2014); [11]=(Tur et al., 2016); [12]=(Su & Lin, 2014); [13]=(Cho, 2010); [14]=(Eilat & Einav, 2004); TA= Tourist arrivals; TE= Inbound Tourism Expenditure; (+), (-) indicate a sing of estimated variable. NS=not significant.

To sum up the previous literature, we find the following gaps. There has been no detailed investigation of governance quality on tourism demand of Central Asia. Secondly, there are limited studies that analyze tourism demand considering six major governance indicators. The impact of governance quality on tourism has been analyzed using dynamic panel data (Tang, 2018; Detotto et al., 2021) which leads us to fill the limitation as a way to estimate it using three-dimensional panel data (origin, destination and year) with gravity applied approach.

2. Methodology and data

2.1 Gravity equation.

We develop a gravity model to investigate the effect of the quality of governance on international tourist arrivals to Central Asia. The gravity model has been successfully applied to explore the determinants of international tourism flows (Okafor et al., 2018; Waqas-Awan et al., 2020). Morley et al. (2014) develop a theoretical application of the gravity model to international tourism flows derived from consumer choice theory. Accordingly, we have obtained an augmented version of the gravity equation as follows:

$$lnTOU_{IJt} = \beta_0 + \beta_1^k M_{Jt}^k + \beta_2^l M_{It}^l + \beta_3^d M_{IJ}^d + \delta_{IJ} + \lambda_t + \mu_{IJt} \quad (1)$$

Where *ln* is a natural logarithm form. $lnTOU_{IJt}$ denotes the logarithm of the number of international tourist arrivals from 108 countries of origin (*I*), to Central Asia as destination (*J*), at the year *t* (2000-2018). M_{Jt}^k indicates a set of *k* destination-aspect time-variant explanatory variables such as the logarithm of per capita of gross domestic product lagged by one year ($lnGDPpc_{Jt-1}$), the logarithm of the relative price ($lnRprice_{IJt}$), control of corruption (Cor_{Jt}), government effectiveness (Gov_{Jt}), political stability and absence of violence/terrorism ($Stab_{Jt}$), regulatory quality (Reg_{Jt}), rule of law ($Rlaw_{Jt}$), voice and accountability (Vac_{Jt}), quality of air transport infrastructure ($Qtrans_{Jt}$), and quality of road ($Qroad_{Jt}$). M_{It}^l denotes a set of *l* origin-aspect time-variant explanatory variables such as per capita of gross domestic product lagged by one year ($lnGDPpc_{It-1}$). M_{IJ}^d represents a set of *d* country-pair explanatory variables such as the logarithm of the distance between capital cities of origin and destination county ($LnDist_{IJ}$), having a common border between origin and destination countries ($Border_{IJ}$), visa restriction between origin and destination countries ($Visa_{IJ}$). β_0 is an intercept and (β_1,..,β_3) are estimated parameters. δ_{IJ} and λ_t indicate country-pair and year fixed effects; u_{ijt} is a well-behaved disturbance term.

2.2 Data

Regarding the study aim which analyzes the impact of the governance quality on tourism flows to Central Asia, we have employed strongly balanced panel data for 2000-2018. Table 2 shows the definition of the dependent and independent variables, their expected sign and sources.

Table 2 Data definitions and sources

Variables	Definition	Expected sign	Source
TOU_{IJt}	Dependent variable: the number of international tourist arrivals (in thousands) from 108 origin counties *(I)* to 4 destination countries *(J)* in period *(t)* (2000-2018); Sub-index: I -origin country; J -destination country; t – year		UNWTO (2019) CAS
$GDPpc_{Jt}$ $GDPpc_{It}$	Per capita of gross domestic product (current US dollars);	+	WDI (2019) OECD (2019)
$Dist_{IJ}$	Great circle distance (in km) between countries of origin and destination;	-	CEPII
$RPrice_{IJt}$	The relative price of goods and services in destination relative to origin countries	-	Elaboration of WDI (2019)
$Qtrans_{Jt}$	Quality of air transport infrastructure;	+	GCI (2019)
$Qroad_{Jt}$	Quality of road;	+	GCI (2019)
$Border_{IJ}$	A dummy variable takes 1 if the country of origin and destination share the same border, 0 otherwise;	+	CIA
$Visa_{IJ}$	A dummy variable takes 1 if the country of origin and destination has mutual visa restriction, 0 otherwise;	-	HPI (2019)
Cor_{Jt}	Control of Corruption;	+	WDI (2019)
Gov_{Jt}	Government effectiveness;	+	WDI (2019)
$Stab_{Jt}$	Political stability and absence of violence/terrorism;	+	WDI (2019)
Reg_{Jt}	Regulatory quality;	+	WDI (2019)
$Rlaw_{Jt}$	Rule of Law;	+	WDI (2019)
Vac_{Jt}	Voice and accountability;	+	WDI(2019)

Note: UNWTO: World Tourism Organization; CAS: National Statistics Committee of Central Asian countries; WDI: World Bank Development Indicators; CEPII: Research and Expertise on the World economy; CIA: The World Factbook; HPI:Henley Passport Index; GCI: Global Competitiveness Index.

Table 3 represents the summary of descriptive statistics for each variable. Columns 1-4 describe correspondingly the mean, standard deviation, the maximum and minimum value for each variable.

Table 3 Summary of descriptive statistics

Variable	Mean	Std.Dev.	Min	Max
$lnTOU_{IJt}$	5.851	3.04	0	15.286
$lnGDPpc_{It-1}$	8.946	1.516	4.718	12.152
$lnGDPpc_{Jt-1}$	7.388	1.212	4.93	9.539
$lnRprice_{IJt}$	1.809	3.327	-9.225	9.145
$lnDist_{IJ}$	8.356	0.743	5.273	9.743
$Border_{IJ}$	0.054	0.226	0	1
$Visa_{IJ}$	0.696	0.46	0	1
$Qtrans_{Jt}$	3.773	0.423	2.729	4.336
$Qroad_{Jt}$	108.1	16.08	44	133
Cor_{Jt}	-1.089	0.165	-1.415	-0.502
Gov_{Jt}	-0.726	0.328	-1.23	0.022
$Stab_{Jt}$	-0.55	0.663	-1.959	0.777
Reg_{Jt}	-0.851	0.582	-2.105	0.17
$Rlaw_{Jt}$	-1.047	0.29	-1.477	-0.411
Vac_{Jt}	-1.381	0.425	-2.124	-0.373

As a dependent variable, we have used the number of international tourist arrivals ($lnTOU_{IJt}$) to Central Asia. Panel data incorporates 108 countries of origin (I) and four destination countries of Central Asia (J) such as Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan for the period 2000-2018. Note that one country of Central Asia namely, Turkmenistan is not involved in this study due to unavailable data.

Control variables. Real gross domestic product per capita lagged by one year ($lnGDPpc_{It-1}$;$lnGDPpc_{Jt-1}$) is used as a proxy for tourist's stock of savings (Husein & Kara, 2020; Narayan, 2004).The relative price ($Rprice_{IJt}$) accounts for the price of goods and services in the destination relative to the origin country and it is measured by the ratio of consumer price index between the destination and origin countries adjusted by the bilateral exchange rate (Crouch, 1992; Morley, 1994). The great circle distance is used as a proxy for transport costs and measured in kilometers between capital cities of origin and destination countries (Mayer & Zignago, 2011). $Border_{IJ}$ is incorporated as a dummy variable and takes 1 if countries of origin and destination have a common border, 0 otherwise (Eilat & Einav, 2004). $Visa_{IJ}$ is assigned as a dummy variable and takes 1 if the country of origin and destination have mutual visa restriction, 0 otherwise (Tur et al., 2016). $Qtrans_{Jt}$ and $Qroad_{Jt}$ indicate the quality of air transport infrastructure and road in Central Asia, measures in the range between 1 extremely poor to 7 extremely good.

Variable of interest. We have used World Governance Indicators (WGI) to capture the quality of governance. As stated by Kaufmann et al. (2011), WGI is composed of six time-variant indicators, measuring in the range between -2.5 and 2.5. These indicators have been collected using different sources, specifically surveys, public sector organizations, non-governmental organizations and commercial business information suppliers (Kaufmann et al. 2011). Accordingly, the WGI can be defined as follows. Voice and accountability (Vac_{Jt}) capture citizens' capacity to take a part in a government election, also indicate freedom in expression, association and free media. Higher value of this indicator accounts for a good voice and accountability in a country. Political stability and the absence of violence ($Stab_{Jt}$) represents the perception of the likelihood that the government will be weakened or overthrown including political violence and terrorism. Higher values show a peaceful political environment and the absence of violence in a country. Government effectiveness (Gov_{Jt}) measures the quality of public and civil services, the credibility of policy implementation and formulation and the government's responsibility to such policies. Higher values signify the good quality of government services in a country. Regulatory quality (Reg_{Jt}) measures the ability of the government to implement and formulate effective policies which allow the private sector to develop. Higher values of this indicator rate a high level of policy implementation and formulation to promote the private sector in a country. Rule of law ($Rlaw_{Jt}$) represents the perception of the degree to which the citizens follow the rule of society, quality of contract enforcement, property rights, the police and the courts. Higher values represent the good relationship between institutions and citizens in a country. Control of corruption (Vac_{Jt}) measures the level of corruption in the public sector in a country. Higher values denote the low possibility of corruption acts in a country.

2.3 Panel data analysis

We have conducted three techniques to estimate the static panel data. These techniques are pooled ordinary least squares POLS (Rosselló-Nadal & HE, 2019), the fixed effect (Martins et al., 2017) and the random effect (Saha & Yap, 2014). However, we have selected the most appropriate estimation based on some statistical tests (Table 5). Accordingly, when poolability F-tests reject the use of POLS estimator, fixed and random effect estimators have been performed. The most suitable model between fixed and random effect is selected according to

the Hausman test Table 5. Besides that before estimating the model, we have performed a panel data unit root test and multicollinearity test in order to estimate the gravity model consistently avoiding the problems of spurious regression.

3. Empirical Results

The result section shows the estimated outcomes of the gravity equation (1). A fisher-type panel unit root test has been conducted for strongly balanced panel data (Maddala & Wu, 1999), as shown in Table 4. Accordingly, all included variables (excluding time-invariant variables $Dist_{IJ}$, $Border_{IJ}$, $Visa_{IJ}$) are significant at the 1% level and stationary. Moreover, the variance of inflation (VIF) shows the amount of multicollinearity in each variable (Table 4). The value of VIF strongly endorses the absence of multicollinearity issues in the regression.

Table 4 Diagnostic test

Fisher-type Panel unit-root test	$lnTour_{IJt}$	$lnGDPpc_{It-1}$	$lnGDPpc_{Jt-1}$	$lnRPrice_{IJt}$	$Qtrans_{Jt}$	$Qroad_{Jt}$
Inverse normal (Z)	-11.07***	-13.20***	-13.05*	-4.77***	-7.28***	-18.5***
Inverse logit (L*)	-15.11***	-13.04***	-11.83***	-7.17***	-6.80***	-19.7***
	Cor_{Jt}	Gov_{Jt}	$Stab_{Jt}$	Reg_{Jt}	$Rlaw_{Jt}$	Vac_{Jt}
Inverse normal (Z)	-12.9***	-20.9***	-15.3***	-5.72***	-8.80***	-24.2***
Inverse logit (L*)	-12.9***	-21.5***	-17.2***	-5.48***	-7.69***	-36.3***
Multicollinearity test	$lnGDPpc_{It-1}$	$lnGDPpc_{Jt-1}$	$lnRPrice_{IJt}$	$LnDist_{IJ}$	$Border_{IJ}$	$Visa_{IJ}$
VIF	1.63	4.34	1.66	1.65	1.40	1.35
1/VIF	0.61	0.23	0.60	0.60	0.71	0.73
	$Qtrans_{Jt}$	$Qroad_{Jt}$	Cor_{Jt}	Gov_{Jt}	$Stab_{Jt}$	Reg_{Jt}
VIF	4.05	2.59	4.20	4.85	2.18	4.88
1/VIF	0.24	0.38	0.23	0.20	0.45	0.20
	$Rlaw_{Jt}$	Vac_{Jt}				
VIF	5.07	4.59				
1/VIF	0.19	0.21				

Note: Fisher-type Panel unit-root test hypothesis: Ho: All panels contain unit roots, Ha: At least one panel is stationary; VIF: variance of inflation, if VIF value is greater than 10 or 1/VIF value is less than 0.1 then confirm the presence of multicollinearity problems in the regression.
Significant level at ***p < 0.01; **p < 0.05; *p < 0.1.

Model selection criteria (Table 5) identifies an appropriate model estimation according to the poolability and Hausman test. As a result, the poolability F-test is rejected which is not in favor of POLS estimator, and the Hausman test results in the favor of the Random effect estimator.

Table 5 Statistic tests for Model Selection

	Null-hypothesis	Result	Decision
Poolability test	H_0: all of the fixed effects intercepts are zero	F(11, 228) = 24.90 Prob > F = 0.0000	Reject H_0
Hausman test	H_0: difference in coefficients of FE & RE not systematic	chi2(22) = 26.82 Prob>chi2 = 0.218	Accept H_0, in favor of RE

Table 6 represents the correlation table of tourist arrivals and six WGI indicators. It observes a positive correlation between tourist arrivals and governance.

Table 6 Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) Tou_{IJt}	1.00						

(2) Cor_{Jt}	0.05	1.00					
(3) Gov_{Jt}	0.06	0.77	1.00				
(4) $Stab_{Jt}$	0.03	0.48	0.63	1.00			
(5) Reg_{Jt}	0.06	0.71	0.68	0.58	1.00		
(6) $Rlaw_{Jt}$	0.06	0.86	0.87	0.59	0.79	1.00	
(7) Vac_{Jt}	0.06	0.37	0.31	0.42	0.82	0.46	1.00

Finally, Table 7 represents the estimated result of governance quality effect on international tourist arrivals to Central Asia. The table shows the result of FE, RE and POLS estimators for comparison.

Table 7 Panel data estimation results

Dep. variable	(1)	(2)	(3)
$lnTou_{IJt}$	FE	RE	POLS
$lnGDPpc_{It-1}$	0.119	0.448***	0.832***
	(0.135)	(0.090)	(0.113)
$lnGDPpc_{Jt-1}$	-0.621**	0.902***	1.076***
	(0.294)	(0.133)	(0.129)
$lnRprice_{IJt}$	0.027	0.199***	0.078
	(0.122)	(0.046)	(0.048)
$lnDist_{IJ}$		-1.539***	-1.671***
		(0.199)	(0.202)
$Border_{IJ}$		4.025***	3.974***
		(0.508)	(0.493)
$Visa_{IJ}$		-1.006***	-1.275***
		(0.330)	(0.326)
$Qtrans_{Jt}$	0.014	-0.172	-0.301
	(0.171)	(0.175)	(0.203)
$Qroad_{Jt}$	0.015***	0.013***	0.015***
	(0.003)	(0.003)	(0.003)
Cor_{Jt}	-0.249	-0.554*	-0.815***
	(0.287)	(0.284)	(0.307)
Gov_{Jt}	0.267	-0.803***	-1.674***
	(0.208)	(0.188)	(0.238)
$Stab_{Jt}$	-0.054	0.225**	0.479***
	(0.100)	(0.088)	(0.105)
Reg_{Jt}	-2.415***	-0.299	1.773***
	(0.324)	(0.225)	(0.358)
$Rlaw_{Jt}$	-1.321***	-1.506***	-2.834***
	(0.242)	(0.239)	(0.358)
Vac_{Jt}	-0.690***	-0.217	0.573**
	(0.211)	(0.193)	(0.221)
Constant	4.207	4.303***	0.854
	(2.748)	(2.089)	(2.259)
Observations	2551	2551	2551
R-squared	0.334	0.511	0.584
Country-pair effects	yes	yes	yes
Year effects	yes	yes	yes
Hausman test		26.82	
		(0.218)	

Robust standard errors in parentheses;
Year and country-pair fixed effects are not reported;
Significant level at *** p<0.01, ** p<0.05, * p<0.1;

However, we have focused on the outcome of the RE estimator (Table 7, model 2) according to the Hausman test result. The results are consistent with the theory of gravity model. Given the result of interest, all governance indicators (except for Reg_{Jt} and Vac_{Jt}) are statistically significant and have a positive and negative impact on tourism flows. The political stability

($Stab_{Jt}$) and absence of violence is only the variable that is positively associated with tourism flows to Central Asia. This result suggests that establishing a peaceful, stable political environment in Central Asia could tend to increase the volume of tourist arrivals to Central Asia by 0.22%. In terms of the control of corruption (Cor_{Jt}), this study finds that the effect of corruption on tourism demand of Central Asia is negative. The findings suggest that in the short term, improving the control of corruption in the public and private sector will not encourage rapid tourism development or increase the volume of tourism flows to Central Asia. However, a rise in the level of corruption would lead to a reduction in the number of tourist arrivals to Central Asia. The main reason behind that, the Central Asia region has presented extremely low-level control of corruption over the last 19 years (see Figure 1 in appendix), which requires a period to improve and recuperate, meanwhile it could cause a drop in the number of tourist arrivals to this region by 0.5%. Regarding the result of government effectiveness (Gov_{Jt}) , the variable is negatively related to tourist arrivals. Implying that, the perception of the quality of public and civil services are considered to be less developed in Central Asia which would lead to a slump in the number of tourist arrivals to this region by 0.8%. Improving government effectiveness, in the initial stage, could gradually support the tourism development of Central Asia. Because the quality of public services in Central Asia has shown a very low level over the last 19 years (see Figure 1 in appendix). Moreover, the study finds that rule of law ($Rlaw_{Jt}$) has a strong negative effect on tourism flows to Central Asia by 1.5%, which is significantly higher than the impact of other governance indicators. This suggests that the degree of confidence to which the citizens follow the rule of society, the courts, the police, property rights indicate significantly low in Central Asia, and this could cause a decrease in the number of tourist arrivals to Central Asia. Furthermore, the result reveals that the regulatory quality (Reg_{Jt}) and voice and accountability (Vac_{Jt}) are the only governance indicators considered to have an insignificant effect on tourism demand, suggesting that international tourists in Central Asia are not highly concerned about the level of "freedom" or the role of institutions in policy implementation in the destination

Overall, the findings highlight that the low quality of governance leads to a drop in the number of international tourist arrivals to Central Asia by 2.8%, and it considers a significant loss for developing countries of Central Asia.

4. Conclusion

This study takes the first step to provide a comprehensive investigation exploring the influence of governance quality on international tourist arrivals to Central Asia from 108 countries of origin for the period 2000-2018 using the gravity model. The random effect estimator has been found to be an appropriate technique to estimate the gravity equation in this study. The findings highlight that besides the economic, geographical factors, the role of governance considers another essential factor in determining the volume of tourism flows to Central Asia. The result reveals that international tourists are not concerned about regulatory quality, voice and accountability, however, they are considered to be very sensitive to corruption, governance effectiveness, political stability and rule of law. The low perception of governance quality could cause a significant drop in the number of tourist arrivals to Central Asia by a total of 2.8%. Thus, the policymakers should take actions based on the following assumptions to implement effective policies in Central Asia. The petty and grand form of corruption in the public and private sector should be controlled because the control of corruption level would decrease the number of crimes and enhance tourist arrivals in Central Asia. Central Asia policymakers should improve the quality of public and civil services since the better quality of services attracts more tourists. Central Asia should ensure a high level of security, political stability including violence, terrorism, internal and external conflicts because safety and

security would lead to an increase in the volume of tourist arrivals to Central Asia. Besides, more initiatives and efforts should be directed to the improvement of rule of law because it shows the largest negative impact on tourism flows in Central Asia as compared with the other governance indicators. All mentioned implications: (i) provide a peaceful environment for tourists and local people, (ii) establish a reliable connection between government and tourists, (iii) recover the perception of governance quality which have been faced depletions over the last years.

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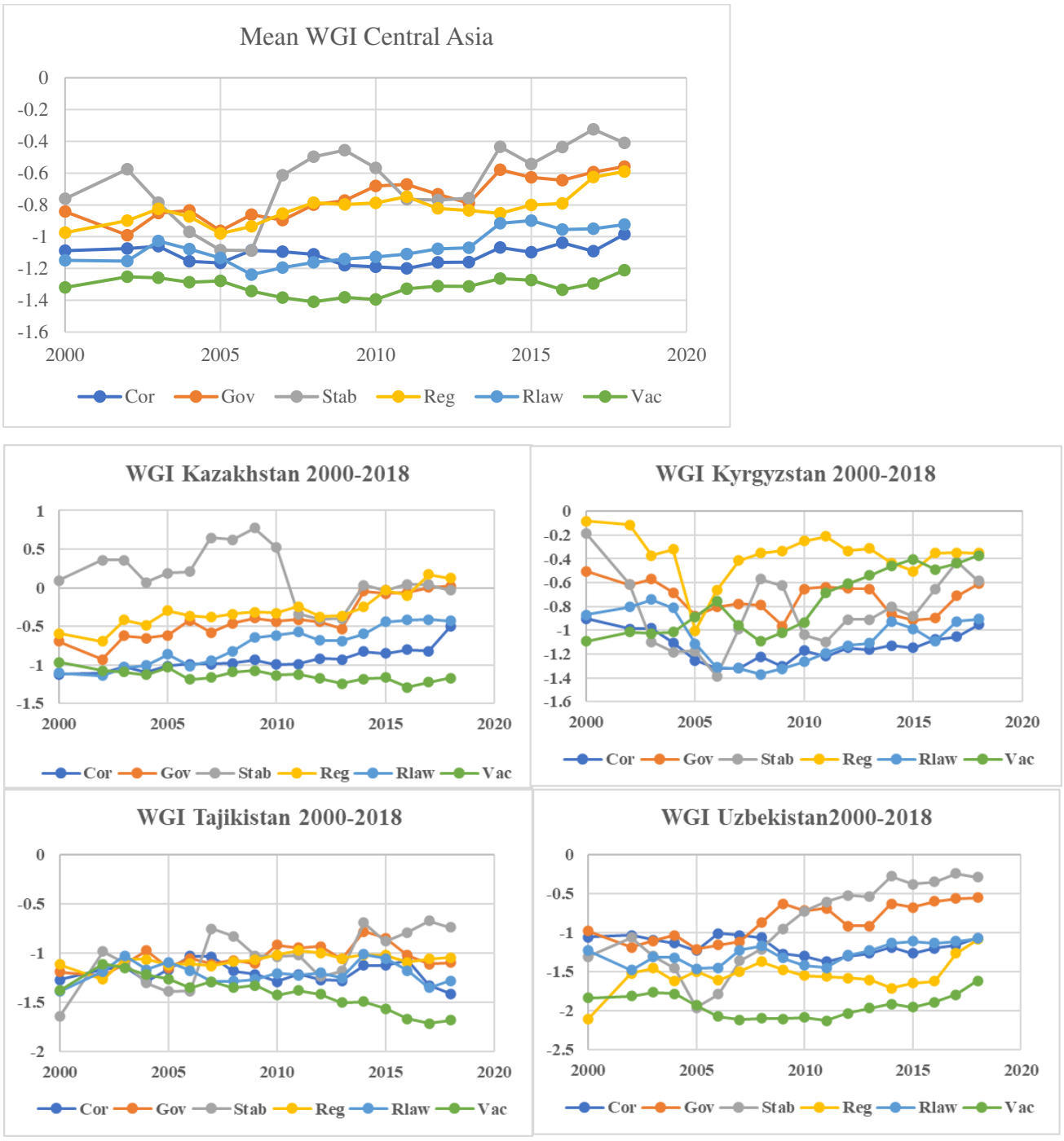
Appendix

Figure 1 WGI Outlooks, case of Central Asia and countries



Source: elaboration in excel, data from the WGI dataset. Note that, this figure shows the revolutions of governance quality in terms of six indicators over the period 2000-2018 for the overall region of Central Asia and countries separately.