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Educational Expenditures and Governance

Qurat ul Ain[1]

Abstract

This study analysis the correlation between expenditures on education which are categorized into different types and governance among 26 developed countries from 2002 to 2020 for which data is collected from World Bank Databases and World Governance Index (WGI). Data is analyzed by doing a full sample survey and sub sample analysis. Expenditures on education are categorized as government expenditures on education as a % of GDP and as a percentage of total government expenditures, government expenditures on primary, secondary and terteriy as a percentage of GDP. A positive and statistically significant correlation between expenditures on education and governance is found in full sample analysis. For most of the variables a strong positive correlation is observed for sub-samples of G7, European and Non- European Countries. Hence, it is clear that both educational expenditures and governance are correlated and are important determinants for a country's good economic outcomes.

Keywords: Educational Expenditures, Governance, Correlation, G7 Countries

1. Introduction

Spending on education for developed countries is based on the rationale that education is a fundamental driver of economic growth, social mobility and human development. Developed countries recognize that investing in education can lead to significant economic and social benefits. Education is a critical factor in driving innovation, entrepreneurship and productivity. A well-educated workforce can generate new ideas, improve technology and create new industries that boost economic growth and prosperity. Developed countries often prioritize educational spending because they have already achieved a certain level of economic development and are seeking to maintain and improve their competitive advantage. They recognize that investing in education is a key factor in sustaining their economic growth, enhancing their social welfare systems and ensuring their citizens have the necessary skills and knowledge to adapt to new challenges and opportunities.

Developed countries often have more advanced education systems that require higher levels of investment. For example, providing high-quality teachers, modern facilities, and access to technology can be more expensive than providing basic education services. Developed countries may therefore need to invest more in education in order to maintain high standards and meet the evolving needs of their education systems. There is a growing recognition among policymakers in developed countries that investing in education is essential for remaining competitive in the global economy. As technology and the nature of work continues to evolve, countries need a highly-skilled workforce in order to compete and succeed in the global marketplace. Education is therefore seen as a crucial investment in human capital that can help maintain and improve a country's economic competitiveness. Developed countries generally tend to spend more on education compared to the rest of the world, although there are variations within and across countries. According to the UNESCO Institute for Statistics, the average expenditure on education per student in primary, secondary, and tertiary education in high-income countries was around USD 9,200 in 2018, compared to the global average of around USD 1,800. Similarly, high-income countries spent an average of 5.7% of their GDP on education, compared to the global average of 4.7%.

However, it is important to note that the level of education spending varies widely within and across developed countries, with some countries investing significantly more in education than others. For example, in 2018, the United States spent around 6.6% of its GDP on education, while Denmark spent around 8.8% of its GDP on education. Similarly, some developed countries, such as Japan and South Korea, have relatively low per-student expenditure on education, while others, such as Switzerland and Norway, have high per-student expenditure on education. While developed countries do tend to spend more on education compared to the rest of the world, the effectiveness of that spending can vary depending on factors such as the quality of education systems, teacher training, curriculum design and other factors that impact student learning outcomes. Developed countries generally have larger budgets and higher levels of economic development, which allows them to allocate more resources towards education. Education is seen as a priority investment in human capital that can help drive economic growth and improve social outcomes so governments in developed countries often prioritize education spending as a means of achieving their broader economic and social goals (Ali, 2015; Ali and Rehman, 2015).

Good governance is important for developed countries as it promotes stability, efficient and effective public services, economic growth and development, social inclusion and equality and a positive international reputation. Good governance ensures stability and security which is crucial for the functioning of a developed country's economy. A stable and secure environment is necessary for businesses to invest, create jobs and generate economic growth. Effective governance helps to maintain a stable political environment, ensure the rule of law and provide a reliable and predictable legal framework for

[1] Corresponding Author, Incharge, Department of Economics, University of Okara, Pakistan, quratulain@uo.edu.pk

businesses to operate in. Developed countries require efficient and effective public services to support their high standard of living. Effective governance ensures that public services, such as healthcare, education and social welfare are delivered in a timely and effective manner with appropriate resources allocated to address the needs of citizens. Good governance is a key factor in promoting economic growth and development. Sound economic policies, effective regulation and efficient public services all contribute to creating an environment that is conducive to economic growth. Effective governance also promotes transparency, accountability and anti-corruption measures which create an environment that is attractive to foreign investors (Ali, 2022; Audi and Ali, 2023).

Developed countries usually have better governance indicators than less developed countries, according to measures such as the World Governance Indicators (WGI) produced by the World Bank. For example, developed countries typically score higher on indicators such as government effectiveness, regulatory quality, rule of law, control of corruption, and political stability compared to less developed countries (Ali, 2022). This is due to a variety of factors, including higher levels of economic development, stronger institutions, and more mature political systems. Glewwe and Kremer (2006) focuses on developing countries and analyzes the impact of education expenditures, teacher quality, and governance on student outcomes. It examines how governance factors such as corruption and accountability affect education effectiveness.

One example of good governance in a developed country is Finland. Finland consistently ranks highly in global governance indicators, with a strong commitment to democracy, rule of law, and social welfare policies. Finland's governance system is characterized by transparency, accountability, and an active civil society that ensures the government is responsive to citizens' needs. Another example is Denmark, which is consistently ranked as one of the least corrupt countries in the world. Denmark has a strong tradition of transparency and accountability, with a highly effective legal system and a culture that values social welfare and public goods. Denmark's governance system is also characterized by a strong commitment to environmental protection and sustainability. Acemoglu and Johnson (2005) investigates the impact of institutions, including the rule of law on economic development. It demonstrates that countries with better institutions, such as a strong rule of law, tend to have higher educational investments and better educational outcomes. The study emphasizes the role of institutional quality in fostering effective educational expenditures. However even in developed countries there are variations in governance quality and not all countries perform equally well on all indicators. For example, some developed countries may score high on indicators such as government effectiveness but lower on indicators such as political stability or regulatory quality

Government expenditures on education can play a crucial role in improving governance in developed countries. Education is a critical investment in human capital development, which is essential for a country's economic growth and development. A well-educated workforce is more productive, innovative and adaptable to change which can improve a country's competitiveness and economic performance. Hanushek and Kimko (2000) investigates the impact of educational quality, measured by student achievement, on economic growth across countries. It finds that countries with higher educational quality tend to experience greater economic growth and development. The authors argue that educational expenditures and governance play crucial roles in improving educational outcomes.

Good governance can play a crucial role in improving government expenditures on education in developed countries. By promoting transparency, accountability, and efficiency in public spending governments can ensure that education budgets are used effectively and efficiently, resulting in better outcomes for students and society as a whole. Good governance can also help to promote innovation and creativity in education spending. By creating an environment that is conducive to innovation and experimentation, governments can encourage educators and policymakers to come up with new and innovative ways to improve education outcomes.

Developed countries can experience a strong positive correlation between educational expenditures and governance and the reason for this is that education is a key factor in promoting good governance, while good governance can also help to improve education outcomes. On the one hand, government expenditures on education can promote good governance by improving the quality and accessibility of education. A well-educated population is more likely to participate in democratic processes, hold public officials accountable, and advocate for policies that promote the common good. Moreover, education can help to promote a culture of transparency, accountability, and integrity, which are essential for promoting good governance.

On the other hand, good governance can also help to improve education outcomes by ensuring that education budgets are used effectively and efficiently. By promoting transparency, accountability, and efficiency in public spending, governments can ensure that education resources are used to maximum effect, leading to better outcomes for students and society as a whole. Moreover, good governance can help to promote innovation and creativity in education spending, leading to new and innovative approaches to teaching and learning.

Overall, the positive correlation between government expenditures on education and governance in developed countries highlights the importance of investing in education as a key component of promoting good governance. By prioritizing educational spending and promoting good governance governments can help to build a more equitable, prosperous and democratic society.

2. Literature Review

There are some empirical studies which have founded a positive correlation between government expenditures on education and governance. Easterly and Levine (1997) investigated the factors contributing to Africa's economic growth tragedy and examined the impact of various factors, including political stability and educational spending. The findings suggest that political stability is positively associated with higher educational investments indicating that countries with more stable political environments tend to allocate a greater share of resources to education. La et al (1999) explored the relationship between the quality of government including the rule of law and economic outcomes. They argue that countries with better governance institutions have higher levels of human capital including education which leads to higher economic growth. The study emphasizes the importance of the rule of law in facilitating educational investments.

Beck et al (2001) focused on the relationship between political institutions, including political stability and educational expenditures by using the Database of Political Institutions to examine the impact of political stability on educational spending. The findings suggest that more politically stable countries tend to allocate a larger portion of their budget to education. Fisman and Gatti (2002) examined the relationship between decentralization, corruption and educational expenditures in a cross-country analysis and concluded that greater decentralization is associated with lower corruption levels and higher education expenditures. They recommended that decentralized governance structures can lead to more efficient allocation of resources including education spending in developed countries.

Bleaney and Nishiyama (2002) investigated the determinants of economic growth, including the role of education and the rule of law. The study finds a positive relationship between education expenditure and economic growth with the rule of law playing a mediating role. It suggests that countries with higher education expenditures and stronger rule of law tend to experience greater economic growth. Lambsdorff et al (2002) analyzed the relationship between education and corruption across countries and suggested that higher education levels are associated with lower levels of corruption, indicating that education plays a crucial role in reducing corrupt practices. Svensson (2003) examined the relationship between corruption, governance and economic performance and found that fostering educational expenditures can enhance better control on corruption and leads towards better economic performances.

Gerring et al (2005) examined the impact of public expenditures on education and governance outcomes across countries. Their findings suggested that higher education spending is associated with improved governance indicators, such as political stability and government effectiveness. Acemoglu and Johnson (2005) analyzed the impact of different institutional factors including the rule of law on economic development. The study finds that the rule of law is a crucial institutional element for promoting investment in human capital, such as education. It suggests that countries with a strong rule of law are more likely to allocate resources efficiently to education and achieve better educational outcomes. Li and Reuveny (2006) explored the link between democracy, educational expenditure and political stability by utilizing pooled cross-sectional time-series data to analyze the association between democracy and educational spending across countries. The findings suggest that democratic regimes tend to allocate a higher share of resources to education which can contribute to political stability.

Treisman (2007) provided a comprehensive review of cross-national empirical studies on corruption. The review highlights the consensus among studies that education is negatively correlated with corruption. Dreher and Jensen (2007) investigated the relationship between corruption and educational outcomes across different countries and the findings suggested that corruption has a detrimental impact on school performance, as measured by student achievement scores. The authors argued that reducing corruption and improving governance are crucial for enhancing educational expenditures and outcomes. Sutherland (2007) examined the relationship between educational expenditures and student performance in the European Union (EU) by using data from different EU countries and investigates how various components of educational expenditures, such as teacher salaries and infrastructure investments, relate to student outcomes. The study provides insights into the governance indicators that influence the effectiveness of education spending in developed countries.

Rothstein and Stolle (2008) investigated the relationship between trust, education, and corruption. Their findings indicated that higher education levels are associated with lower corruption levels and that trust mediates this relationship. Wacziarg and Welch (2008) examined the relationship between trade liberalization, institutions (including the rule of law), and economic growth. The study finds that the rule of law is an important institutional determinant of education spending and economic growth. It suggests that countries with a well-functioning rule of law tend to allocate more resources to education and experience higher economic growth rates. Aidt (2009) analyzed the relationship between corruption and education in a cross-country analysis. The findings suggest that higher levels of education are associated with lower levels of corruption. Kimenyi and Mbaku (2009) investigated the relationship between corruption, educational expenditure, and economic growth and found that effective utilization of educational expenditure can mitigate corruption and contribute to economic growth. Hanushek and Woessmann (2012) explored the relationship between educational outcomes, economic growth and governance indicators and found how variations in cognitive skills, measured through international student assessments are linked to economic performance in developed countries. The study highlights the importance of effective governance in improving educational expenditures and economic outcomes. Busch, and De Mello (2012) analyzed a panel dataset of

OECD countries and investigated the relationship between educational expenditures, corruption, and educational outcomes. The findings indicated that higher education expenditures are associated with lower levels of corruption, and corruption negatively affects educational outcomes. The study emphasizes the need for good governance to ensure effective utilization of education spending in developed countries.

Halleröd et al (2013) conducted a study on Sweden and investigated the association between some specific indicators of governance including control of corruption and rule of law and expenditures on education and concluded that higher governance score are linked with higher government expenditures on education which results in better education outcomes.

Ram (2015) investigated the relationship between government effectiveness and expenditures on education using data from various countries. By applying panel regression analysis a positive association between government effectiveness and education expenditures were found which indicated that a more effective government is more likely to allocate a higher share of resources to education sector of their country.

Wößmann (2016) analyzed international differences in student achievement and their relationship with educational expenditures and institutions. The findings show that countries with a better rule of law tend to have higher educational investments which in turn lead to improved student performance. The study highlights the crucial role of the rule of law in supporting effective spending on education. Kehinde and Oke (2017) investigated the relationship between government effectiveness and public expenditure on education in Nigeria by applying cointegration analysis to examine the long-run relationship between the variables. The findings suggest a positive relationship between government effectiveness and educational expenditures indicating that a more effective government is associated with higher investments in education.

Bhatti (2017) conducted a study in which he analyzed the link between education expenditure, governance and economic growth in developing countries by using data from 2000 to 2014 and suggested a positive relationship between government effectiveness, education expenditures and economic growth indicating that a more effective government tends to do higher educational expenditures leading towards improved economic outcomes.

Overall, empirical studies provide strong evidence for the positive correlation between government expenditures on education and governance. By investing in education, governments can help to promote good governance while good governance can also help to improve education outcomes leading to a virtuous cycle of development and progress.

3. Data Methodology and Variable Description

3.1. Data

In order to check the correlation between educational expenditures and governance data for 26 developed countries is collected from World Development Indicator (WDI) and World Governance Indicators (WGI) respectively from 2002 to 2020.

3.2. Variable Description

We have two major variables as educational expenditures and governance which are further explained into different categories.

3.2.1. Educational Expenditures

Educational expenditures are categorized into 5 different categories which are explained as followings

3.2.1.1. Government expenditures on education total as a percentage of GDP (GEET)

Government expenditures on education as a percentage of GDP is an indicator that measures the level of financial commitment of a government to the education sector. It is the ratio of total government expenditure on education to the country's gross domestic product (GDP), expressed as a percentage. This indicator reflects the priority that a government places on education as a means to develop the human capital of a country.

3.2.1.2. Government expenditures on education total as a percentage of government expenditures (GEETGS)

Government expenditures on education as a percentage of total government spending is an indicator that measures the share of a government's budget that is allocated to education. It is the ratio of total government expenditure on education to the country's total government spending, expressed as a percentage. This indicator reflects the priority that a government places on education within its overall spending priorities. A higher percentage of government expenditure on education as a percentage of total government spending generally indicates a greater commitment to education by the government. This can lead to improved access to education, increased quality of education, and better outcomes for students.

3.2.1.3. Government expenditure per student primary as percentage of GDP (GEPSP)

Government expenditures per student primary is an indicator that measures the amount of money that a government spends on each primary school student. It is calculated by dividing the total government expenditure on primary education by the total number of primary school students. This indicator reflects the level of financial resources that a government devotes to primary education. Higher government expenditures per student primary generally indicate a greater financial commitment to providing quality primary education. This can result in improved access to education, increased quality of education, and better outcomes for primary school students.

3.2.1.4. Government expenditures per student secondary as a percentage of GDP (GEPSS)

Government expenditures per student secondary is an indicator that measures the amount of money that a government spends on each secondary school student. It is calculated by dividing the total government expenditure on secondary education by the total number of secondary school students. This indicator reflects the level of financial resources that a government devotes to secondary education. Higher government expenditures per student secondary generally indicate a greater financial commitment to providing quality secondary education. This can result in improved access to education, increased quality of education and better outcomes for secondary school students.

3.2.1.5. Government expenditure per student tertiary as percentage of GDP (GEPST)

Government expenditure per student tertiary is an indicator that measures the amount of money that a government spends on each tertiary (higher education) student. It is calculated by dividing the total government expenditure on tertiary education by the total number of tertiary students. This indicator reflects the level of financial resources that a government devotes to tertiary education. The costs of providing tertiary education can be quite high, and the benefits of tertiary education may not be realized immediately. Therefore, governments may prioritize other areas of expenditure over tertiary education, such as healthcare, infrastructure, and social welfare. As a result, government expenditure per student tertiary may vary widely among countries, depending on their economic and political situations, as well as their education goals and challenges.

3.2.2. Governance

For governance estimates a detailed description of each indicator of governance is as following.

3.2.2.1. Control of corruption (COC)

The Control of Corruption indicator is intended to measure the extent to which public power is exercised for private gain. The indicator is expressed on a scale from -2.5 (indicating very high levels of corruption) to +2.5 (indicating very low levels of corruption). A closer value towards +2.5 indicates that the country have very good control on corruption.

3.2.2.2. Government Effectiveness (GE)

The Government Effectiveness indicator is intended to measure the quality of public services, the degree of independence from political pressures, the quality of policy formulation and implementation and the credibility of the government's commitment to such policies. The indicator is expressed on a scale from -2.5 (indicating very low levels of government effectiveness) to +2.5 (indicating very high levels of government effectiveness).

3.2.2.3. Political Stability and Absence of Violence/Terrorism (PSAV)

The Political Stability and Absence of Violence/Terrorism indicator is intended to measure the likelihood of political instability and violence, including terrorism, and the capacity of the government to respond to such threats. The indicator is expressed on a scale from -2.5 (indicating high levels of political instability and violence) to +2.5 (indicating low levels of political instability and violence).

3.2.2.4. Regulatory Quality (RQ)

The Regulatory Quality indicator is intended to measure the ability of the government to formulate and implement sound policies and regulations that promote private sector development, reduce market distortions, and protect the public interest. The indicator is expressed on a scale from -2.5 (indicating poor regulatory quality) to +2.5 (indicating good regulatory quality). Any value closer to +2.5 indicates very good regulatory quality in a country.

3.2.2.5. Rule of Law (ROL)

The Rule of Law indicator is intended to measure the extent to which the government and its institutions operate within a framework of laws and regulations that are fairly and impartially enforced. The indicator is expressed on a scale from -2.5 (indicating weak adherence to the rule of law) to +2.5 (indicating strong adherence to the rule of law). This index provides an insight how much a country is committed to provide law and order to its citizens. A sense of security enhances the productive capacity of individuals and promotes businesses thus paving the ways for economic growth.

3.2.2.6. Voice and Accountability (VA)

The Voice and Accountability indicator is intended to measure the extent to which citizens can participate in the selection of their government and hold it accountable for its performance. The indicator is expressed on a scale from -2.5 (indicating low levels of voice and accountability) to +2.5 (indicating high levels of voice and accountability). A more accountable society promotes equality and encourages individuals to work for their betterment.

3.3. Methodology

Pearson correlation analysis is performed to check the correlation between educational expenditures and all indicators of governance for a full sample of 26 developed countries. Same analysis will be conducted for sub samples of G7, European and Non-European countries to check the correlation between educational expenditures and governance. The results from full sample and sub samples may vary depending on the data of each country.

4. Results

4.1. Full Sample Correlation Analysis

Table 1 explains full sample correlation analysis. GEET is positively correlated with coc, ge, psav, rq, rol and va in the full sample correlation analysis and this correlation is statistically significant. The positive correlation between geet and coc expresses that when government expenditures on education as a percentage of GDP will increase than there will be more control on corruption or an increase in government spending on education will decrease corruption. Similarly, an increase in government expenditures on education as a percentage of GDP will also increase government effectiveness (ge), political stability (PSAV), regulatory quality (RQ), rule of law (ROL) and voice and accountability (VA).

GEETGE is positively correlated with coc, ge, psav, rq, rol and va in the full sample correlation analysis and this correlation is statistically significant at 1%. GEPSP is positively correlated with coc, ge, psav, rq, rol and va and these positive correlations are also statistically significant at 1% level except the correlation between gepsp and psav which is statistically insignificant. GEPSS and gepst both are positively correlated with coc, ge, psav, rq, rol and va and these relationships are statistically significant at 1% level. All of these results in full sample indicates that if government expenditures on education as a total percentage of GDP and total government expenditures on primary, secondary and teritority education increases than all components of governance will also improve.

Table 1: Full sample Corelation Analysis

	GEET	GEETGE	GEPSP	GEPSS	GEPST	COC	GE
GEET	1.0000						
GEETGE	0.6794 0.0000	1.0000					
GEPSP	0.4064 0.0000	0.1444 0.0151	1.0000				
GEPSS	0.5997 0.0000	0.2549 0.0000	0.4901 0.0000	1.0000			
GEPST	0.6331 0.0000	0.5797 0.0000	0.1861 0.0022	0.4471 0.0000	1.0000		
COC	0.6208 0.0000	0.6626 0.0000	0.1702 0.0037	0.5250 0.0000	0.6203 0.0000	1.0000	
GE	0.5698 0.0000	0.6205 0.0000	0.0846 0.1509	0.4951 0.0000	0.6179 0.0000	0.9520 0.0000	1.0000
PSAV	0.3410 0.0000	0.3131 0.0000	0.1876 0.0013	0.3774 0.0000	0.2697 0.0000	0.5613 0.0000	0.6096 0.0000
RQ	0.5019 0.0000	0.5938 0.0000	0.0224 0.7044	0.3283 0.0000	0.4676 0.0000	0.8932 0.0000	0.8793 0.0000
ROL	0.5917 0.0000	0.6116 0.0000	0.1404 0.0167	0.5150 0.0000	0.5539 0.0000	0.9556 0.0000	0.9526 0.0000
VA	0.5573 0.0000	0.4789 0.0000	0.2326 0.0001	0.5723 0.0000	0.4371 0.0000	0.8219 0.0000	0.8244 0.0000

	PSAV	RQ	ROL	VA
PSAV	1.0000			
RQ	0.5942 0.0000	1.0000		
ROL	0.6348 0.0000	0.9121 0.0000	1.0000	
VA	0.7506 0.0000	0.8354 0.0000	0.8639 0.0000	1.0000

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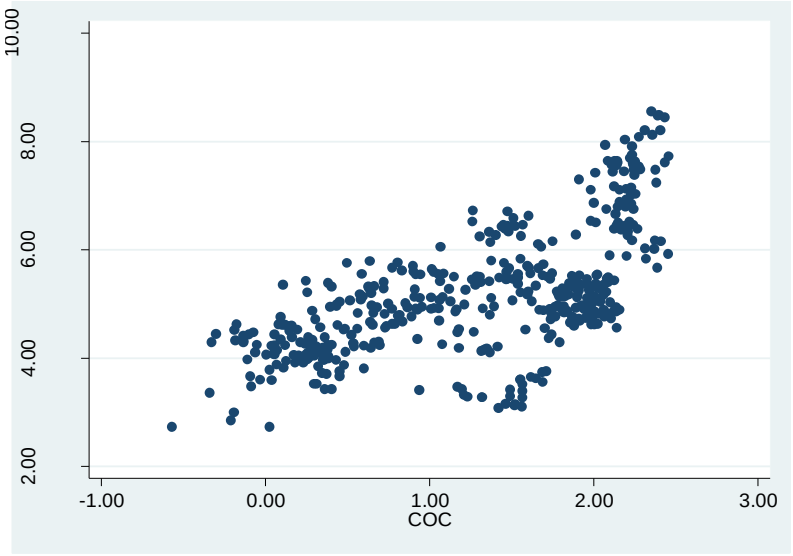
4.1.1. Scatter Plot Diagram

The positive correlation between coc and geet is indicated in the scatter plot diagram as followings.



4.2. Regional Results (Sub-Sample Analysis) G7 Countries Correlation Analysis

Table 2. indicates the corelation analysis for G7 countries. GEET is positively related with coc, ge, rq,rol,va and all of these relationships are statistically significant while geet is negatively corelated with psav and this negative corelation is statistically significant at 1% level of significance. The positive corelation between geet and ge indicates that if governmnet expenditures on education total as a percentage of GDP will increase than government effectiveness will also increase meaning that an increase in government expenditures on education improves government efeecectiveness and this positive corelation is statistically significant at 1% level of significance. GEETGE is positively corelated with coc, ge, rq, rol and va and all of these relationships are statistically significant at 1 percent level of significance while geetge is negatively corelated with psav and this is ststistically insignificant relationship. The variable gepsp is negatively corelated with coc, ge, psav, rq, rol and va while the variable gepss is negatively corelated with coc, psav, pq and rol while it is positively corelated with ge and va but these positive relationships are not statistically significant. Lastly, the variable gepst is positively corelated with coc, ge, psav, rq, rol and va and all of these relationships are statistically significant.

4.3. Correlation Analysis of European Countries

Table 3. indicates the correlation analysis for European countries. The variable geet and geetge are positively correlated with coc, ge, psav, rq, rol and va and all of these positive correlations are statistically significant at 1 percent level of significance. This positive correlations explains that an increase in government expenditures total as a percentage of GDP and as a percentage of total government expenditures will improve all of the indicators of governance in European countries. Similarly, the variable gepsp is also positively correlate with coc, ge, psav,rq,rol and va. Gepss and gepst are also positively correlated with coc, ge, psav, rq, rol and va and all of these positive correlations are statistically significant at 1 percent level of significance.

4.4. Correlation Analysis for Non-European Countries

Table 4 explain correlation analysis for Non-European countries. Geet is positively correlated with coc, ge, rq, rol and va while it is negatively correlated with psav and this negative correlation is statistically significant. The variable geetge is positively correlated with coc, rq, rol and va while it is negatively correlated with ge and psav. The negative correlation between geetge and ge indicates that an increase in government expenditures on education as a percentage of total government spending will decrease government effectiveness among Non-European countries but this negative correlation is statistically insignificant. The variables gepsp and gepss are negatively correlated with coc, ge, rq, psav, rol and va. While gspst is positively correlated with coc, ge, rq, psav, rol and va.

Table 2: G7 Countries Correlation Analysis

	GEET	GEETGE	GEPSP	GEPSS	GEPST	COC	GE
GEET	1.0000						
GEETGE	0.7396	1.0000					
	0.0000						
GEPSP	-0.0500	-0.0302	1.0000				
	0.7096	0.8217					
GEPSS	0.1605	-0.1207	0.1133	1.0000			
	0.2330	0.3710	0.3765				
GEPST	0.2165	0.0462	-0.3644	0.0375	1.0000		
	0.0966	0.7257	0.0046	0.7796			
COC	0.2802	0.5166	-0.4535	-0.0832	0.5025	1.0000	
	0.0032	0.0000	0.0001	0.5135	0.0000		
GE	0.2420	0.5238	-0.4512	0.0133	0.4364	0.9210	1.0000
	0.0112	0.0000	0.0002	0.9172	0.0002	0.0000	
PSAV	-0.4520	-0.0937	-0.1847	-0.4642	0.3104	0.3189	0.3048
	0.0000	0.3516	0.1408	0.0001	0.0106	0.0002	0.0004
RQ	0.4100	0.6574	-0.2111	-0.1479	0.3682	0.8471	0.7708
	0.0000	0.0000	0.0914	0.2434	0.0022	0.0000	0.0000
ROL	0.3763	0.6080	-0.4045	-0.0661	0.4444	0.9447	0.9448
	0.0001	0.0000	0.0008	0.6037	0.0002	0.0000	0.0000
VA	0.4213	0.4467	-0.5244	0.0106	0.5617	0.7226	0.5916
	0.0000	0.0000	0.0000	0.9338	0.0000	0.0000	0.0000

	PSAV	RQ	ROL	VA
PSAV	1.0000			
RQ	0.1426	1.0000		
	0.1014			
ROL	0.2804	0.8509	1.0000	
	0.0011	0.0000		
VA	0.1653	0.7146	0.6327	1.0000
	0.0572	0.0000	0.0000	

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Table 3: Correlation Analysis of European Countries

	GEET	GEETGE	GEPSP	GEPSS	GEPST	COC	GE
GEET	1.0000						
GEETGE	0.6774	1.0000					
	0.0000						
GEPSP	0.4205	0.1737	1.0000				
	0.0000	0.0050					
GEPSS	0.6357	0.3224	0.4951	1.0000			
	0.0000	0.0000	0.0000				
GEPST	0.6794	0.6719	0.1908	0.4341	1.0000		
	0.0000	0.0000	0.0023	0.0000			
COC	0.7065	0.7096	0.1871	0.5798	0.6614	1.0000	
	0.0000	0.0000	0.0021	0.0000	0.0000		
GE	0.6588	0.6683	0.0934	0.5403	0.6631	0.9537	1.0000
	0.0000	0.0000	0.1279	0.0000	0.0000	0.0000	
PSAV	0.4168	0.3627	0.1955	0.4021	0.2705	0.5704	0.6266
	0.0000	0.0000	0.0013	0.0000	0.0000	0.0000	0.0000
RQ	0.5573	0.6092	0.0443	0.3967	0.5133	0.8990	0.8889
	0.0000	0.0000	0.4711	0.0000	0.0000	0.0000	0.0000
ROL	0.6656	0.6380	0.1565	0.5771	0.6066	0.9576	0.9540
	0.0000	0.0000	0.0104	0.0000	0.0000	0.0000	0.0000
VA	0.5866	0.4945	0.2497	0.6120	0.4477	0.8284	0.8403
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	PSAV	RQ	ROL	VA
PSAV	1.0000			
RQ	0.6286	1.0000		
	0.0000			
ROL	0.6539	0.9171	1.0000	
	0.0000	0.0000		
VA	0.7733	0.8504	0.8785	1.0000
	0.0000	0.0000	0.0000	

Table 4: Correlation Analysis for Non-European Countries

	GEET	GEETGE	GEPSP	GEPSS	GEPST	COC	GE
GEET	1.0000						
GEETGE	0.9219	1.0000					
	0.0000						
GEPSP	-0.0563	-0.3059	1.0000				
	0.7987	0.1558					
GEPSS	-0.0642	-0.2221	0.8507	1.0000			
	0.8134	0.4083	0.0001				
GEPST	-0.1726	-0.2858	-0.2001	-0.0664	1.0000		
	0.4199	0.1757	0.4574	0.8069			
COC	0.2217	0.0512	-0.4665	-0.7763	0.6851	1.0000	
	0.0859	0.7129	0.0249	0.0004	0.0002		
GE	0.1506	-0.1552	-0.1082	-0.0179	0.7158	0.7898	1.0000
	0.2467	0.2626	0.6233	0.9474	0.0001	0.0000	
PSAV	-0.4742	-0.4153	-0.3161	-0.5494	0.5573	0.3541	0.2428
	0.0001	0.0018	0.1418	0.0275	0.0047	0.0017	0.0346
RQ	0.5180	0.4685	-0.6026	-0.9012	0.3351	0.7205	0.5993
	0.0000	0.0004	0.0023	0.0000	0.1094	0.0000	0.0000
ROL	0.5618	0.4797	-0.6859	-0.8553	0.5043	0.7771	0.7158
	0.0000	0.0002	0.0003	0.0000	0.0120	0.0000	0.0000
VA	0.4368	0.3475	-0.6554	-0.9174	0.5292	0.8503	0.6582
	0.0004	0.0100	0.0007	0.0000	0.0078	0.0000	0.0000

	PSAV	RQ	ROL	VA
PSAV	1.0000			
RQ	0.0376	1.0000		
	0.7473			
ROL	0.2141	0.8354	1.0000	
	0.0633	0.0000		
VA	0.2724	0.7179	0.7606	1.0000
	0.0173	0.0000	0.0000	

5. Conclusion

Education plays a vital role in promoting good governance in any country and for this expenditures on education plays a significant role. In our research we have analyzed the correlation between expenditures on education which are categorized as government expenditures on education as a % of GDP and as a percentage of total government expenditures, government expenditures on primary, secondary and terteriy education as a percentage of GDP and governance. The analysis is being divided in a full sample survey of 27 developed countries and sub samples of European, Non-European and G7 Countries. Data for our analysis is collected from World Development Indicator (WDI) and World Governance Index (WGI) from 2002 to 2022 on yearly basis.

In full sample analysis our findings reveal a positive and statistically significant correlation between expenditures on education and governance. Similarly, a strong positive correlation is present among for most of the variables for the sub

samples including G7 Countries, European and Non- European Countries. Thus, the correlation between expenditures on education and all indicators of governance indicate that both expenditures on education and governance are important for each other as improvement in one leads towards betterment in the other one. Thus, if developed countries will increase their expenditures on education they will have better governance indicators.

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