Impact of Government Spending in Education on Economic Growth in Pakistan

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ABSTRACT

The purpose of this research is to examine empirically how government spending contributes to economic growth in Pakistan from 2004 to 2014. Using the regression linear model, government spending resulted in insignificance relationship between government expenditure and economic growth however it could have significant relationship in long run. The study has found 4 variables that is education, health, GDP and GDP per capita. Government should make policies regarding its spending on education and health sector. Government should make budget to promote education. Economic growth represents the development of a country’s potential outcomes from its GDP. The main object of this study is to find out the impact of government spending in education on economic growth in Pakistan. This research study is descriptive in nature and involved quantitative data analysis which employed secondary data to examine the effect of government expenditure on economic growth in Pakistan. Data for education expenditure, health expenditure, GDP and GDP Per capita is obtained from World Bank from 2004 to 2014. The research study’s findings stated that there is insignificance relationship between government spending in education and economic growth. The government should emphasize on proper budgeting of its expenditure. Thus it has been recommended that government should spend fairly on education in order to increase economic growth.

Keywords: Government spending, GDP, Economic growth.

INTRODUCTION

This research study is based on Impact of Government Spending in Education on Economic Growth in Pakistan over a period from 2004 to 2014. Government spending in education can play positive role in increasing economic growth. The fiscal policy plays an imperative role in increasing the pace of economic growth (Keynesian and endogenous growth theories). Education is regarded as expenditure on human capital that influences economic growth obliquely. Education has more opportunities to augment their earnings for enhance employment and assist them in raising their living standard. There is a positive impact on public health and government spending on education (Nabila, Parvez and Hafeez Ur Rehman 2011).

Public expenditure on infrastructure investment and productive activity education are expected to contribute positive impact on economic growth while government consumption spending is expected to be growth decelerates (Olukayode 2009).

To fulfill the trade labor requirements government should raise the productive public spending on education. In order to enlarge skilled labors, government should control the public spending on education. Government should make education policies and their first priority should be professional schools in the
country and training programs for betterment (Abdylmenaf and Besime 2015).

If government spending is raised 1% as a percent of GDP it would increase the unemployment rate by approximately .36 of 1% (Public Choice).

There is a strong negative outcome of the growth of government expenditure as a part of GDP. The coefficient is highly important and taken literally; it implies that a 1 standard deviation raise in government growth reduces average GDP growth (Journal of Monetary Economics).

Government spending in Pakistan on education and health as a fraction to GDP and GDP per capita is among the lowest level in the world though there is a major raise over the past few years (International Monetary Fund 2004).

**PROBLEM STATEMENT**

Education is the base of any country in order to make their economic development. It increases growth of a country rapidly. Government spending plays a significant role to increase economic growth. Government of Pakistan should use their spending on education system that will be beneficial for people as well as for Pakistan. In order to attain this purpose government spending has to be fairly distributed. Poor people are unable to get necessary knowledge, and education is necessary to increase their productivity skills. Poor works with low productivity and gets low income as compare to others. In order to participate in any sector a person should be educated to receive higher income. Government spending on education is not properly channeled, Pakistan will bear loss if a person is having skills and capability and he can't afford private education. If the inequality gap is not filled by fair distribution of education then wealthy will remain wealthy and poor will remain poor.

**RESEARCH QUESTION**

How government spending on education can impact economic growth in Pakistan?

How government spending on education effect GDP and GDP Per Capita in Pakistan?

**SIGNIFICANCE OF THE STUDY**

Government spending on education in Pakistan can play a significant role in order to increase economic growth. Significant of education is that it increases human capital and it helps in attaining the objectives of social and economic development. If we see in past years Pakistan has reduced poverty over time because of education. Government spending on education has a positive impact on economic growth. According to the situation government should utilize their policies accurately.

**OBJECTIVES OF THE STUDY**

The general objective of this study is to find out how Pakistan’s government spending in education is provided to all citizens who are rich or who are unable to pay for education in Private institutions. This study observes how government spending in education can impact economic growth, how it is positive for a country and is income distributed reasonably or not?

The specific objective of this objective is to investigate the impact of government education spending towards GDP and GDP Per Capita.

**LIMITATIONS**

Researchers haven’t studied this study as a particular area education they have taken it as a whole impact of government spending on economic growth. The limitation of this study includes secondary data gathered from World Bank and Federal statistical bureau. Availability of literature data was limited. Focus is limited on Pakistan due to data and time availability.
SCOPE OF THE STUDY

This study explores the impact of government spending in education on economic growth in Pakistan. Data is used from 2004 to 2014.

LITERATURE REVIEW

Nabila, Parvez and Hafeez Ur Rehman (2011) highlighted the problems responsible for low economic growth that needs to overcome the economic, social and political problems. In this study data is gathered for the period of 1974 to 2009. There was a positive relationship between economic, community services, government spending in human capital and economic growth while law and order and government expenditure on subsidies are negatively associated to economic growth. For achieving the study’s objective the research concluded that government should provide training facilities and education to maintain law and order situation and corruption in Pakistan.

Yewukai, Hlanganipai, Gabriel and Mangena (2014), the study investigates the strength of the Keynesian macroeconomics structure and the classical perception of a long run correlation and causality between government spending and economic growth in South Africa using the quarterly data from 1990 to 2010. Research was specifically studied one country to examine the long run connection between the former and soon after one nation’s production. The study used testing for unit roots and co-integration before they get employ in ganger causality for testing the causality connection between government expenditure and growth. They found existence of long run relationship between government spending and growth by Dickey and the Philips tests approach. By the research study concluded with the obtained results, rising government spending has no led to a significant development of the nation which is not consistent of the Keynesian position in South Africa.

Jhon, George, James and Gideon (2013) reveal the purpose of the study to find out the impact of public spending distribution on economic growth in Kenya from 1964-2011. The main purpose of the study was to study the effect of government expenses on education, health, infrastructure, protection and community order and safety on economic growth. The research study conducted stationary test, co-integration test and causality test before using vector error model to estimate the data. The result from survey showed positive relationship of government expenditure on education related to economic growth. On other side health increases and improves to justify purely on the basis of its impact on labor efficiency. In the end they concluded by recommending government to decrease the giant budget lay out for importing medicines and drugs and government should support research and development in their sector locally it was noted that the government should promote programs similar to construct work and move to forward increased asset and prerequisite of public utilities. Government should bring good policies for public and private investment.

Olukayode (2009), the research tells the relationship between economic growth and government spending in Nigeria, his study examined is of 30 years from 1977 to 2006 using time series data to evaluate the Ram Model. The study regress human capital, government and real GDP on private investment and consumption spending. The analysis shows insignificant effect on economic growth by private and public investments. Study concluded that there is no significant connection between economic growth and government spending on the basis of his analysis. Study analysis also declares that the variables have not managed a consistent pattern since 30 years it resulted persistent random shock effect on the time series. The result also showed rising rate of government expenditure to real GDP since
Structural Adjustment programmed without significant involvement towards economic growth.

Hajamini and Falahi (2014), investigated about the effect of government consumption expenditure as a share of GDP on economic growth in developing countries and under developing countries. Study have discussed structural problem in these countries that increase in the share of government expenditure must be avoided before adopting the reforms. Research has shown results by threshold panel approach estimated that government size in this research is smaller than the outcome. Concluded their study by telling the impact of government size on economic growth in twenty one low income and eleven low-middle income countries during 1981-2007. they showed the share of low and low-middle income countries that was expected to be 16.2% with the assurance interval (13.7% to 17.3%) and 16.9% with the confidence interval (16.5% to 16.9%), respectively.

Abdu and Professor Melesse (2014) has shown relationship between real domestic product and government expenditure on agriculture, health, education, transport and communication, total capital expenditure and total recurrent expenditure, urban development and housing in Ethiopia. Study has researched that which composition of government expenditure promotes economic growth in Ethiopia. Researcher has collected data from 1975 to 2011 from ministry of finance and economic development and other federal and regional bureaus. Study have used co-integration error connection model. Their result showed positive expenditure on health and total capital expenditure while expenditure on remaining composition is statistically insignificant.

Komain and Tantatape (2007) research found correlation between government spending and economic growth by using Granger causality test in Thailand. The results reveal that there is no co-integration between government expenditures and economic growth. Study has further exposed unidirectional causality existence of government expenditures to economic growth on the other hand they did not observed causality from economic growth to government expenditure. Their results estimated positive impact of government expenditure on economic growth during their study.

Dr. Emad (2015) highlighted how government works in the economy through its expenditure. They have studied the data from 2006 to 2010 with significant raise in government expenditure in Iraq. Their government has appropriate policy for expenditure that can provide a suitable environment and infrastructure for upgrading the society and economy. Study showed the main reasons of weak government expenditure and economic growth because of corruption in government ministries, no particular strategy for fiscal policy and there is no suitable share of the government expenditures on ministries. Study tells for future government should make another study of Iraq's fiscal policy in order to bring improvement to society and economy.

Marta and Santigo (2006) studied the connection between government spending and economic growth which is important part in the society. Correlation between government expenditure and economic growth is the main part of this study. Researchers gathered data from European Union countries and panel data techniques are used for the analysis. Study concluded positive relation of government spending with economic growth in European Union countries.

Constantinos (2009) provided evidence on the connection between government spending and economic growth. Study have used 2 different methods that have been applied on seven transition economies in SEE, to
generate significant result in order to improve the economic performance of the countries in South Eastern Europe. Research has found four significant variables that have positive effect on economic growth that is private investment, development assistant, government spending on capital formation and trade openness. In contrast one variable is statistically insignificant which population growth is.

Andreas and Anastasios (2012) had investigated relationship between inflation, money supply, economic growth and government expenditure by using Error Correction Mechanism and Johansen co-integration test for short run and long run respectively for Cyprus by using data from 1980 to 2009. Their result showed promotion of economic development by public spending and negative effect of inflation due to adverse supply shock. In this case there were inflationary pressure that caused excess growth of money that should be allowed on the basis of the real output of the economy. Study is concluded by suggesting that government should control current expenditure; focus on development expenditure and increase real output level.

Abdylmenaf and Besime (2015) examine the connection between public spending on education after the decentralization and economic growth in Macedonia. Study has used Logarithmic Multiple Regression Model. In case of Macedonia there result was having negative effect on public spending on education. Study concluded that there should be channels to produce quality education and skilled labor from which they can raise the productivity and economic growth.

Chude and Chude (2013) had studied to carry out the objective of finding the outcome of government spending on economic growth over a period of 1977-2012 in Nigeria using Error Correction Model. Study have applied Ex-post facto study plan and applied time sequence econometrics technique to observe the long run and short term effects of public spending on economic growth. The outcome specifies that total expenditure education is extremely and statistically important and have positive correlation on economic growth in Nigeria in Long run. They concluded that economic growth is impacted by factors exogenous and endogenous both to the public expenditure in Nigeria. Study recommends that the government should express its spending towards the fruitful sectors similar to education.

Naftaly, Aquilars, Symon, Lawrence and James (2014) study to explore how government spending contributes to economic growth in East Africa. They gathered data from 1980 to 2010 by using balanced panel fixed effect model, government spending was disaggregated to analyze its effect of growth. Study has found 2 variables investment expenditure and GDP. Their result has shown that investment expenditure promotes economic growth while on other hand consumption retards it. Researchers concluded their study by suggesting that they should make policy of rising government spending on investment budget to support economic growth.

Abu Nurudeen and Abdullahi Usman (2010) observed that increasing government consumption has not translated to significant development in Nigeria, as Nigeria ranks in poorest countries. They investigated about the effect of government spending on economic growth from 1970 to 2008. Study have used disaggregate analysis to unravel outcome. Study’s result reveal that there is negative effect on economic growth by government total capital expenditure, government expenditure on education and total recurrent expenditure. On the other hand, economic growth increased by raising government expenditure on transport and communication and health. Study is concluded by recommending that government should raise capital and recurrent expenditure
including expenditure on education to ensure that funds intended for expansion in these sectors are appropriately utilize and government should encourage and rise funding of anti-corruption agency in order to engage in the high level corruption found in public offices in Nigeria.

**METHODOLOGY**

From all the reviews, this paper has adopted the regression test to check the results for government spending in education on economic growth in Pakistan. Secondary Data is gathered through World Bank's Website. The best method of collecting information is studying descriptive data that will express relationship and portray the world as it exists. The motive of this research is to explore the relationships between variables. It is essential to see that just because variables are connected, do not essentially means that one is directly causing the other one.

**HYPOTHESIS**

$H_01$ There is no relationship between Health and GDP.

$H_{A1}$ There is a relationship between Health and GDP.

$H_{02}$ There is no relationship between Health and GDP per capita.

$H_{A2}$ There is a relationship between Health and GDP per capita.

$H_{03}$ There is no relationship between Education and GDP.

$H_{A3}$ There is a relationship between Education and GDP.

$H_{04}$ There is no relationship between Education and GDP per capita.

$H_{A4}$ There is a relationship between Education and GDP per capita.

**DATA DESCRIPTION**

This study is based on secondary data. This paper is showing the relationship between government spending in education sector and economic growth in Pakistan, this study employs annual time-series data for the period of 2004 to 2014. The data is gathered through The World Bank, Pakistan Economic Survey, International Monetary Fund and Federal bureau Statistics.

**DATA COLLECTION TECHNIQUES**

Secondary data is used in this paper to analyze the effect of government spending in education and economic growth in Pakistan. Arasa (2008) highlighted that secondary data taken as information that has previously collected for a different reason other than the current reason of a new researcher. He further highlighted that the data should be relevant and effective for the current research. This paper analyzes the government spending in education on economic growth in Pakistan using the co-integration techniques on time-series data covering the period of 2004 to 2014.

**DATA SOURCES**

The data is gathered through The World Bank website.

**FRAME WORK**
DATA ANALYSIS

HYPOTHESIS # 1
Regression
Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.022a</td>
<td>0.000</td>
<td>-0.111</td>
<td>2.074</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), HEALTH EXPENDITURE (% OF GDP)

Coefficients*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
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<td>(Constant)</td>
<td>4.333</td>
<td>1.931</td>
<td>2.244</td>
<td>.051</td>
</tr>
<tr>
<td>HEALTH EXPENDITURE (% OF GDP)</td>
<td>0.042</td>
<td>0.628</td>
<td>0.022</td>
<td>.066</td>
</tr>
</tbody>
</table>

a. Dependent Variable: GDP (ANNUAL GROWTH %)
y = 4.333 + 0.042(x)

Whereas,
y = GDP (Annual Growth %) (Dependent variable)
x = Health Expenditure (% of GDP) (Independent variable)
Bo = Constant
B1 = Health Expenditure (% of GDP)

The level of significance in the Coefficient Model is greater than 0.05 which is 0.949 it shows that (H0) is fail to reject. There is insignificant relationship between health expenditure and GDP. It means that Government of Pakistan is not spending significant percent of GDP in Health sector. If there will be 1 unit increase in GDP it will increase 0.042 units of Health expenditure. In this model summary R-squared is 0.00 that indicates that the variability of the data is around its mean and R-squared value is low.

HYPOTHESIS # 2
Regression
Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.474a</td>
<td>0.225</td>
<td>0.139</td>
<td>212.461</td>
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</table>

a. Predictors: (Constant), HEALTH EXPENDITURE (% OF GDP)

Coefficients*

<table>
<thead>
<tr>
<th>Model</th>
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</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
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<td></td>
</tr>
</tbody>
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RADS Vol 3, No. 1, January 2015, 25-35

<table>
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<tr>
<th>Model</th>
<th>R</th>
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<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.169a</td>
<td>.029</td>
<td>-.079</td>
<td>2.044</td>
</tr>
</tbody>
</table>

*Predictors: (Constant), GOVERNMENT EXPENDITURE ON EDUCATION (% OF GDP)*

**Coefficients**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>5.286</td>
<td>1.728</td>
<td>3.059</td>
</tr>
<tr>
<td></td>
<td>HEALTH EXPENDITURE (% OF GDP)</td>
<td>-.381</td>
<td>.740</td>
<td>-.169</td>
</tr>
</tbody>
</table>

*Dependent Variable: GDP (ANNUAL GROWTH %)*
y=Bo+B1(x)
y=5.286+ (-.381) (x)
Whereas,
y= GDP (Annual Growth %) (Dependent variable)
x= Government Expenditure on education (%of GDP) (Independent variable)
Bo= Constant
B1= Government Expenditure on education (%of GDP)

The level of significance in the Coefficient Model is greater than 0.05 which is 0.619 it shows that

**HYPOTHESIS # 3**

**Regression Model Summary**

The level of significance in the Coefficient Model is greater than 0.05 which is 0.141 it shows that (H0) is fail to reject. There is insignificant relationship between health expenditure and GDP Per Capita. GDP Per Capita is low that's why productivity of the economy is less. If health expenditure is decreased by 103.958 units then GDP Per Capita will increase by 1339.333. In this model summary R-squared is 0.225 that indicates that the variability of the data is around its mean and R-squared value is low.

**Regression Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
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</thead>
<tbody>
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<td>.029</td>
<td>-.079</td>
<td>2.044</td>
</tr>
</tbody>
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*Predictors: (Constant), GOVERNMENT EXPENDITURE ON EDUCATION (% OF GDP)*

**Coefficients**

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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>5.286</td>
<td>1.728</td>
<td>3.059</td>
</tr>
<tr>
<td></td>
<td>HEALTH EXPENDITURE (% OF GDP)</td>
<td>-.381</td>
<td>.740</td>
<td>-.169</td>
</tr>
</tbody>
</table>

*Dependent Variable: GDP (ANNUAL GROWTH %)*
y=Bo+B1(x)
y=5.286+ (-.381) (x)
Whereas,
y= GDP (Annual Growth %) (Dependent variable)
x= Government Expenditure on education (%of GDP) (Independent variable)
Bo= Constant
B1= Government Expenditure on education (%of GDP)

The level of significance in the Coefficient Model is greater than 0.05 which is 0.619 it shows that
(H0) is fail to reject. There is insignificance relationship between Education expenditure and GDP. It means that Government of Pakistan is not spending significant percent of GDP in Education sector. If government expenditure on education is decreased by .381 units then GDP will increase by 5.286 units. In this model summary R-squared is 0.029 that indicates that the variability of the data is around its mean and R-squared value is low.

**HYPOTHESIS # 4**

**Regression**

**Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.429a</td>
<td>.184</td>
<td>.093</td>
<td>218.020</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), GOVERNMENT EXPENDITURE ON EDUCATION (% OF GDP)

**Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1282.000</td>
<td>184.260</td>
<td>6.958</td>
<td>.000</td>
</tr>
<tr>
<td>HEALTH EXPENDITURE (% OF GDP)</td>
<td>-112.333</td>
<td>78.896</td>
<td>-.429</td>
<td>-1.424</td>
</tr>
</tbody>
</table>

a. Dependent Variable: GDP PER CAPITA (CURRENT US$)

**EQUATION**

\[ y = Bo + B1(x) \]

\[ y = 1282.000 + (-112.333) (x) \]

Whereas,

\[ y = GDP \text{ Per Capita (Current US$)} \] (Dependent variable)

\[ x = \text{Government Expenditure on education (%of GDP)} \] (Independent variable)

\[ Bo = \text{Constant} \]

\[ B1 = \text{Government Expenditure on education (%of GDP)} \]

The level of significance in the Coefficient Model is greater than 0.05 which is 0.188 it shows that (H0) is fail to reject. There is insignificance relationship between Education expenditure and GDP Per Capita. Because of low GDP per capita educated employees are less and GDP per capita is also low as compare to other developing countries. If government expenditure on education is decreased by 112.333 units it will result in increase of GDP Per Capita by 1282.000 units. In this model summary R-squared is 0.184 that indicates that the variability of the data is around its mean and R-squared value is low.

**FINDINGS**

The findings reveal that in Pakistan, Government expenditure is insignificant in education and health sector which is not good for our economy. Education and health is the most important sectors from which a country's economy can rise or fall.

**CONCLUSION**

The results reveal that total government expenditure on education and health has
in insignificant effect on GDP and GDP Per Capita in Pakistan as per test results. P-value confirmed the findings of the regression coefficient which is all around higher than 0.05 it means that (H0) is fail to reject. It is found that 1 unit increase in government expenditure can increase economic growth and it results in decreasing as per its expenditure. It is observed from the findings and results that when government decreases its expenditure, human skills are demoted and when it is increased they are enhanced in Pakistan. It can be positive in long run relationship. As per data GDP, Education expenditure and Health expenditure is decreasing where as GDP per capita is increasing, In Pakistan because of law and order situation and corruption government expenditure is not distributed fairly. If they follow rules and regulation they can make everything perfect and better. Government of Pakistan is not paying their attention on necessary sectors which can lead them decrease in economic growth. Pakistan's economy is decreasing, by not full filling the needs and requirements of the country.

RECOMMENDATION

In the end I will conclude that, government should take actions on it and make their spending distribution fair. Human's skill should be enhanced by giving them education and proper health checkup. Government should spend on education in order to increase Pakistan's economic growth as educated people will make everything possible to make our economy good. Education is the key to success in any country and it should be necessary for everyone to be educated enough to serve his country. Government should make policies regarding its spending on education and health sector.

REFERENCE


http://erepository.uonbi.ac.ke/bitstream/handle/11295/74926/Ndonga_Effects%20of%20government%20spending%20on%20economic%20growth%20in%20Kenya.pdf?sequence=1

