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EFFECTS OF FISCAL POLICY IN ECONOMIC GROWTH OF RWANDA

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ABSTRACT: *This study provides an empirical analysis of the Analysis of implication of fiscal policy on economic growth in Rwanda (1995-2020). This research based in theories that formulated the following research hypotheses; H1: Government expenditure has effect on economic growth. H2: Tax revenue has effect on the economic growth and H3: External debt has effect on the economic growth. Secondary data obtained from World Bank data set have been used within empirical analysis in the study. Using SPPS-22.0, through ANOVA and regression analysis, the findings indicated that government expenditure (GE) has a positive relationship with Economics growth. The findings indicated that Tax revenue (TR) has a positive effect on economic growth in Rwanda and the results reveled also that External debt (EXD) has a positive effect on economic growth (GDP) in Rwanda. The value of R-Squared 0.972 indicated that all independent variables (GE, EXD, and TR) cause variation in Dependent variable (GDP) at the level of 97.2%. The model was valid as it was confirmed by normality test and multi-collinearity test. All the above facts allowed the researchers to confirm that GE, EXD and TR have a statistical significance on GDP in Rwanda. The government of Rwanda has been recommended to improve tax administration as means for improving the working environment, ensuring quality and sustained growth that can potentially improve the pace of Rwanda's economic advancement and increasing revenue generation preferably through encouraging investments and supporting the creation of small business that can yield capital in order to generate more tax revenue for economic growth.*

Key words: *GE, EXD, TR, GDP*

1. INTRODUCTION

In Africa, Fiscal policy is one of the most important tools of economic management in achieving economic development and eliminating the problems that impede economic stability. In addition to the distributional and specialized effects of fiscal policy instruments, there are stable effects of the role of government spending and taxes on the overall demand and hence macroeconomic variables (1). In Rwanda, the fiscal policy is considered one of the most important economic policies affecting economic growth, where it can play an important role in achieving the various objectives of the national economy, especially in terms of raising the rate of economic growth through its various tools, which are easily controlled by the government (2).

Economic growth considers the main factor officially adopted in measuring the progress of countries. Most developed countries have high economic growth rates, unlike those of developing countries with very low growth rates, with the exception of some oil-producing countries that control their rate of growth. The importance of economic growth stems from its positive effects on the national economy and society, which giving a strong impetus to new investments, resulting in greater employment and purchasing power for the community (3). It is also necessary to realize that the issue of the mutual interaction of fiscal policy and economic growth of Rwanda belongs among important topics. Main reasons do not derive only from the fact that fiscal policy has the potential to influence the long-term economic growth of Rwanda, but they also lie in the further mentioned facts. Current, modern and globalized society is characteristic by the necessity of the redistribution processes existence, which are usually represented by the level of government spending.

The existence of government spending is conditioned by the necessity of its financing, where the taxes can be considered as one of the most important revenues of the public budgets. However, there does not exist the unified opinion among the economists and politicians about the way and range of taxation, or necessary amount of government spending financing a wide spectrum of activities. Theoretically there is a debate on the question of whether fiscal policy stimulates growth of Rwanda (4). Proponents of government intervention in economic activity maintain that such intervention can spur long term growth of Rwanda. They cited that government role in ensuring efficiency in resource allocation, regulation of markets, stabilization of the economy, and harmonization of social conflicts as some of the ways in which government could facilitate economic growth of Rwanda. In that range of proponent, we find John Maynard Keynes who proposed the concept of government intervention in economy through the use of macroeconomic policies such us fiscal and monetary policies. Fiscal policy deals with deliberate action in spending and collecting taxes with the aim of influencing macroeconomic variables in the direction. This includes sustainable economic growth of Rwanda, high employment creation and low inflation (5).

Statement of the Problem

Fiscal policy has been very vital to the formulation of government plans in Rwanda, that is to say; the level of government spending and taxes are to large extent determined by objectives and plans of the government. For objectives of optimal growth of Rwanda, the government is likely to increase its investment spending and other outlays on the provision of infrastructure facilities and providing subsidies to private sector (6).

The composition of government spending and taxes in Rwanda is broadening, that is, the selection and combination of the fiscal policy variables involves identification and measurement of their impact on the economy and their relationship with the overall objectives of government. The individual impact of the fiscal variables has not been identical, and one task for policy makers has been to ascertain the impact of each of the variable and to direct them, so that they collectively serve the purpose that they are intended for. In effect, understanding how government spend and budget deficit affect the economy can help us to understand how redirect fiscal policies to advance economic growth of Rwanda and growth (6).

According to the above explanation, literature reveals that so far Implication of fiscal policy on economic growth of Rwanda has not been studied extensively. Many papers and dissertation talked about economic growth of Rwanda and fiscal policies; some have studied factors affecting continued economic growth in developing countries; some have examined influence of taxation on economic growth in selected Western countries (Borcherding and Dong, 2004); and these inspire me to make deep and proper analysis about impacts of fiscal policy to foster economic growth of Rwanda in developing countries like Rwanda.

General Objective

The study analyzed the effects of fiscal policy on economic growth in Rwanda.

Specific objectives

The specific objectives are:

i) To analyze how government expenditure affect economic growth in Rwanda.
ii) To assess the effect of tax revenue on the economic growth in Rwanda.
iii) To determine the impact of external debt on the economic growth in Rwanda.

Hypotheses

This study consisted of testing the hypotheses:

1. **H1:** Government expenditures (**i.e.:** acquisition of goods and provision of services such as education, healthcare, social protection, and defense) have significant and positive effect on economic growth in Rwanda.
2. **H2:** Tax revenues (**i.e.:** taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership and transfer of property, and other taxes) have significant and positive effect on economic growth in Rwanda.
3. **H3:** External debt has significant and positive effect on the economic growth in Rwanda

2. EMPIRICAL REVIEW

In this section, a review on effect of government expenditure on economic growth, effects of tax revenue on economic growth and effect of external debt on economic growth is presented.

Effect of government expenditure on economic growth

In the study on effects of government consumption spending, public social spending, and public investment on economic growth in Nigeria, the finding shows that when public social spending increases, economic growth experiences negative and significant impact, there is no significant effect between government consumption spending and public investment have with economic growth (7).

The assessment on the effect of expenditure on various sector of the economy separately can promote growth as seen study which tested the importance of various categories of public expenditure, the functional structure, and growth in the gross domestic product (GDP) using data for 10 Central and Eastern European countries from 1995–2015, found that education and health care expenditures impact positively on the economy, but other sector expenditures such as general public services defense, social welfare, and economic affairs impact negatively on the economy (8). The relationship between unemployment and growth in Nigeria (1985-2009) confirmed by major finding of this study is that the economy grew by 55.5% between 1991 and 2006 and the population increased by 36.4%. This should ordinarily have resulted to a decrease in the rate of unemployment but rather unemployment increased by 74.8% (9).

While investigating the impact of government expenditure components (education; infrastructure; health; defense; and public order and security) on economic growth in Kenya, they found out that on average there is a long run relationship between public expenditure and potential economic growth. The composition of government expenditure was found to influence growth with public expenditure components like education, transport and communication, and public order and security being the main drivers of economic growth. Expenditure on health was, however, found to be negatively related to economic growth, a possible explanation according to authors being that Kenya is a net importer of Medicare facilities and drugs (10).

Impact of tax revenue on the growth of the economy

The tax revenue is the primary revenue source in Kenya and it represents payment by communities as a whole for public goods and services. In the years of this study the Kenya government has committed itself to provision of additional public goods and services such as free primary and secondary education, free health care and physical infrastructures. The tax revenue raised by the government depends to a large extent on the state of the economy; therefore, the impact of tax revenue on economic growth is an issue of great importance (12). Generally, the level of growth of the economy is expected to positively influence tax revenue performance and a large non- agricultural sector, urbanization and high per capita income levels are all expected to positively influence tax revenue mobilization (13). The tax effort is determined by the level of growth as proxied by per capita GDP, the level of trade openness and public expenditure on education. Further, they showed that these positive effects can however, be undermined by macroeconomic instability and disparities in income distribution (14). They compiled Computable General Equilibrium (CGE) approaches on Rwanda to show that efficient public expenditure is important in promoting economic growth and poverty reduction (15).

Effect of external debt on the economic growth

External debt is the debt owed to external creditors. These are World Bank (WB), African Growth Bank (ADB), and International Monetary Fund (IMF). Others are countrieslike example China, USA, Japan, Italy, Germany as well as Commercial creditors essentiallyprivate institutions, for example Standard Bank United Kingdom. In addition to these factors,drought conditions have also contributed to the external debt burden. External debt refers to credit owed to foreign lenders. The service of external debt may negatively affect growth by discouraging private investment. The larger debt service can inhibit growth by squeezing public resources available for investment in infrastructure and human capital. Also, external debt has string attached and interest payment on the debt can reduce public saving by widening a countries' budget deficit. If interest rates rise the credit available for private investment is crowded out, thereby depressing economic development (16).

They centered to examine the effect of external debt on financial growth in Malaysia. The dissection was directed both at total and disaggregate level. The observational results showed that aggregate outer obligation decidedly influence the monetary development at total and disaggregate level. In the short run, all out external debt had positive consequences for growth of economy. It additionally uncovered that Malaysia had not experienced debt overhang issue (17). The study assessed the non-linear impact of external debt on growth using a panel data of 93 countries over 1969–1998 and found that the impact of debt on growth can be very different at low levels of debt and at high levels.

At high levels of debt, doubling debt from any initial debt level reduce per capita income growth by about 1% point while high debt reduces growth mainly by lowering the efficiency of investment. At low levels, however, the effect was generally positive but often not significant. Meanwhile, the negative impact of high debt on growth operated through both a strong negative effect on physical capital accumulation and on total factor productivity growth. However, the study is cross-country in nature whose results cannot be directly applied to Nigeria (18).

Determinants of economic growth

The author analyzed the influence of trade openness on growth for 120 countries between 1970 and 1997. He used several variables to measure openness like for example volume of exports, volume of imports, the sum exports and import and the volume of trade with developed countries. He also used trade policy variables for measuring restriction or openness of trade. The result concluded that for developed and developing states the indicators that measure the volume of trade have a positive effect on growth. An interesting result in our opinion is that trade restrictions have the effect of accelerating growth of GDP for developing countries (19).

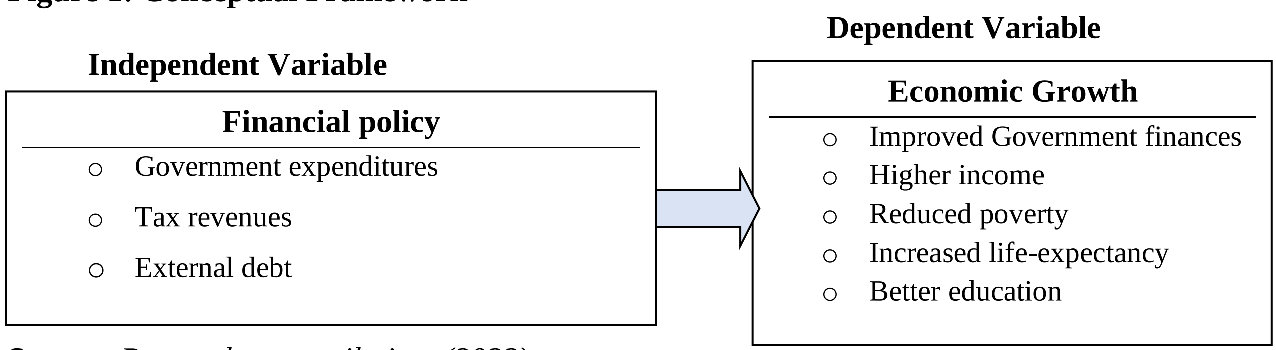
The correlation between trade openness and financial openness and economic growth confirmed that trade openness and financial openness (FDI) have a significant impact on growth and also that institutional openness is affecting indirectly the economy via trade and FDI (20). The role of FDI on economic growth for a large sample of countries those are both developing and developed. The results conclude that FDI directly and positively influences growth. The findings of other researchers in the beginning of the 2000s demonstrated that FDI may have a positive link between it and economic growth. Aisen and Veiga (2013) investigated the negative effects of higher degrees of political instability on economic growth for 169 countries from 1960 to 2004.

The channels of transmission through which political instability affects economic growth are productivity, physical and human capital accumulation. Also, democracy may have a small negative effect on economic growth. Empirical literature is still ambiguous relating the significance of democracy in foster economic growth. It may have a negative or not a significant influence on growth. Socio-cultural factors also have an important role on economic growth.

3. CONCEPTUAL FRAMEWORK

In order to solve the problem, the researcher established the relationship between independent variable in terms of financial policy and the dependent variable in terms of economic growth in Rwanda. The conceptual framework was shown in the figure 1 as follows:

Figure 1: Conceptual Framework



Source: *Researcher compilation, (2022)*

4. RESEARCH METHODOLOGY

The nature of the research is analytical research it seeks to explain the relationship between fiscal policy and economic growth in Rwanda. The type of the investigation is the correlation, as it tried to observe whether the fiscal policy has a significant impact on it. This was achieved by showing the existence, direction, strength and greater significance of the relation. This study used secondary data on the study variables for the period 1995 to 2020. The data were collected from World Bank.

The researcher entered data into statistical package SPSS version 22.0 to derive statistic for the data. The researcher used documentation to analyze the fiscal policy and economic growth in Rwanda in order to get secondary data that served the achievement of study objectives. The researchers used time series data obtained from World Bank annual Reports during the period of the study. This was done face to face between the interviewer and the respondents. It was conducted for the purpose of obtaining the information related to the fiscal policy and economic growth in Rwanda. In this study, an interview guide was given to the Head of Macro-economics department in MINECOFIN. The econometric methods were used in the estimation of the coefficients of the explanatory variables in order to test the influence of the independent variables on the dependent variable.

As the dependent variable (Economic Growth) has many determinants, it has been necessary to add some controls variables. The new model specification has been in the general form as: GDP = f (GE, EXD, TR…). This function has been converted into the econometric model; it was derived as: GDP was$\beta_0+\beta_1 GE+\beta_2 EXD+\beta_3 TR+\mu_t$; GDP = Gross Domestic Product; GE = Government Expenditure; EXD= External Debt; TR = Tax revenue; μ_t = error term and β= coefficients. β_0: is the intercept showed the level of GDP. The economic estimation technique for this study was used the following necessary and important test for its relevancy and validity. Using OLS methods, the study pointed out correlational analysis, model summary, coefficients and ANOVA in order to examine the effect of government expenditures on economic growth in Rwanda. The normality test and multi-collinearity test have been tested in order to ensure the correctness and goodness of the model.

5. DATA ANALYSIS

The analysis of this study provides the answers to the research questions and tests of the hypotheses. Each research question has been verified according to the secondary data obtained from World Bank Annual Reports from 1995 to 2020. The evolution of independent variables (GE, EXD, and TR) and dependent variable (GDP) have been established as well as the correlational analysis.

Data analysis and interpretation of the Relationship between the variables of the study

The multivariate regression was used in this study to determine the relationship between the dependent variable (Economic growth) and independent variables (Government expenditure, External debt and Tax revenue). The following part describes the model summary of the study where the coefficient of determination (R Square) has been pointed out. This indicates the level at which independent variables (Government expenditures, External debt and Tax revenue) cause variation in dependent variable (Gross Domestic Product).

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.986[a]	.972	.968	1.50930

a. Predictors: (Constant), *Tax revenue (% of GDP), External debt, total (current US$), Gross national expenditure (constant LCU)*

Source: *Computed by the author using SPSS 22.0, November, 2021*

The R-Squared is 0.972 implying that 97.2% of the Economic Growth in Rwanda could be explained by independent independents variables: Tax revenue (% of GDP), External debt, total (current US$), Gross national expenditure (constant LCU) [b] and the dependent variable is Gross domestic Product. The adjusted R-square is used to compensate for additional variable in the model. In this case, the adjusted R-square is also 96.8%.

Analysis of Variance

Table 2: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2498.340	3	832.780	254.440	.000[b]
	Residual	720.0573	22	3.272		
	Total	2570.345	25			

a. Dependent Variable: GDP (current US$)

b. Predictors: (Constant), Tax revenue (% of GDP), External debt, total (current US$), Gross national expenditure (constant LCU)

Source: *Computed by the author using SPSS 22.0*

The value of the F-Critical (2.26) was less than the F-calculated (254.440) and the P-Value (0.000) was below the significant level, this implies that the model could be used in predicting the contribution of Government Expenditure, External debt and Tax revenue (independent variables) on Economic growth (dependent variable) in Rwanda. according to the findings from analysis of variance, the following research hypotheses were retained which are H1 stated that "Government expenditures (i.e.: acquisition of goods and provision of services such as education, healthcare, social protection, and defense) have significant and positive effect on economic growth in Rwanda." H2 stated that Tax revenues (i.e.: taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership and transfer of property, and other taxes) have significant and positive effect on economic growth in Rwanda**.** H3 said that External debt has significant and positive effect on the economic growth in Rwanda.

Coefficients
Table 3: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	0.521	0.293		3.307	.031
	External debt, total (current US$)	.099	.173	054	.572	.003
	Gross national expenditure (constant LCU)	.001	.000	.835	4.371	.000
	Tax revenue (% of GDP)	.064	.096	.206	4.551	.005

a. Dependent Variable: GDP (current US$)
Source: *Computed by the author using SPSS 22.0,*

From the data in table 3, the established regression equation was:
$GDP = 0.521 + \ 0.099EXD + 0.001GE + 0.064TR$. As presented in the above table, External debt has a significant positive influence on Economic growth as indicated by regression coefficient of 0.099 and P-value of 0.003. It is also clear that Gross national expenditure has a significant positive influence on economic growth as indicated by regression coefficient of 0.01 and P-value of 0.000. Tax revenue has a significant positive influence on economic growth as indicated by regression coefficient of 0.064 and P-value of 0.005. As matter of the fact, it is very true to confirm that all independent variables have an impact on economic growth in Rwanda.

6. CONCLUSION AND RECOMMENDATION

CONCLUSION

The study sought to examine the impact of a selection of fiscal policy variables and economic growth. Annualized Secondary data were used to estimate the effects ofgovernment expenditure, tax revenue and external debt on economic development. The analysis covered the period 1995 to 2020. The outcome showed that these variables had statistical significance effect on economic growth. This is in contrast with some studies done before. The policy lesson that can be learnt from the findings is that a continued sensible use of government recurrent and growth expenditure as a policy tool can speed up economic growth and development, additionally, if the fiscal policy tool is undertaken there should be an associate monetary policy to take care of the spillover of the fiscal policy like inflation.

RECOMMENDATIONS

The study reveals that public expenditure had a significant effect on economic growth in Rwanda. There is need for government to improve tax administration as means for improving the working environment.

Expenditure on productive activity can trigger economic growth therefore much emphasis needs to focus on generating performance. There is need for government policy ensuring quality and sustained growth that can potentially improve the pace of Rwanda's economic advancement. There is need for enhancing the government expenditure on improving the informal sector for generating economic growth in Rwanda. On the second objective tax revenue contributes to improved economic growth. Therefore, enterprising of the informal sector is needed for increasing the tax bases.

There is need for increasing revenue generation preferably through encouraging investments and supporting the creation of small business that can yield capital in order to generate more tax revenue for economic growth. There is need for enhancing the proper revenue usage of the taxes in the country for infrastructure growth in order to generate the revenue for the country. The government of Rwanda has to minimize external debt as their repayments have a negative impact on economic growth of the country. The study concentrated on government expenditure (recurrent and development), tax revenue, external debt. Further studies need to be carried on the following: 1. to carry out on the challenges of fiscal policy in Rwanda. 2. To identify relationship between fiscal policy and investment growth. 3. Investments and economic growth in Rwanda.

7. BIBLIOGRAPHY

1. Gechert, S. *What fiscal policy is most effective? A meta-regression analysis.* . New york : Oxford Economic Papers, 67(3), 553-580, 2015.
2. MINECOFIN. *Annual Report on fiscal policy affecting economic growth.* 2020.
3. Dosi, G., Fagiolo, G., Napoletano, M., Roventini, A., & Treibich. *Fiscal and monetary policies in complex evolving economies.* s.l. : Journal of Economic Dynamics and Control, 52, 166-189., 2015.
4. Guajardo, Jaime; Leigh, Daniel; and Pescatori, Andrea. *"Expansionary Austerity: New International Evidence"(PDF).* . s.l. : International Monetary Fund. Retrieved 22 December 2011., 2011.
5. Blinder, Alan S. *"Keynesian Economics". In David R. Henderson(ed.). Concise Encyclopedia of Economics (2nd ed.).* s.l. : Indianapolis: Library of Economics and Liberty., 2008.
6. Asiimwe H.Mutamba. *Dictionary of economics and commerce.* s.l. : MK publisher's Ltd, 2006.
7. Connolly, M., Li, C. *Government spending and economic growth in the OECD countries".* . s.l. : Journal of Economic Policy Reform, 10.1080/17487870.2016.1213168, 2016.
8. Dan Lupu, MihaiBogdanPetrisor, Ana Bercu & Mihaela Tofan. *The Impact of Public Expenditures on Economic Growth: A Case Study of Central and Eastern European Countries, Emerging Markets Finance and Trade,54:3,552-570,DOI: 10.1080/1540496X.2017.1419.* 2018.
9. Njoku, A., & Ihugba, O. A. *Unemployment and Nigerian economic growth (1985-2009). In Proceedings of the International Conference on Teaching, Learning and Change (Organized by International Association for Teaching and Learning [IATEL]).* 2011.
10. Muthui et al. *investigate the impact of government expenditure components (education; infrastructure; health; defense; and public order and security) on economic growth in Kenya.* . Nairobi : s.n., 2013.
11. Fan, S. and Rao, N. *Public Spending in Developing Countries: Trend, Determination and Impact.* . s.l. : EPTD Discussion Paper No. 99, Washington, D.C., 2003.
12. Heinemann. *Tax revenue is the primary revenue source in Kenya* . 2001.
13. Garriet. *government has several taxes from which it generates total tax revenue.* 2009.
14. Pessino & Fenochietto. *the tax effort is determined by the level of growth as proxied by per capita GDP.* 2010.
15. Sennoga and Mativu. *Computable General Equilibrium (CGE) approaches on Rwanda* . 2010.
16. Clement et al. *larger debt service can inhibit growth by squeezing public resources available for investment in infrastructure and human capital.* 2005.

17. Babu et al. *the effect of domestic debt on economic growth in East African countries over the period 1990–2010.* 2015.
18. Pattillo et al. *study assessed the non-linear impact of external debt on growth* . 2004.
19. Ynikkaya. *the influence of trade openness on growth for 120 countries between 1970 and 1997.* . 2003.
20. Malešević-Perović et al. *investigated the correlation between trade openness and financial openness and economic growth.* 2014.
21. Novák, & Popesko . *Cost variability and cost behaviour in manufacturing enterprises.* . s.l. : Economics & Sociology, 7(4), 89-103, 2014., 2014.
22. Pichetkun, & Panmanee. *The Determinants of Sticky Cost Behavior: A Structural Equation Modeling Approach.* s.l. : http://www.jap.tbs.tu.ac.th/files/Article/Jap23/Full/Jap23NuchPana.pdf (2015-10-21), 2014., 2012.
23. Hansen. *Financial performance in manufacturing firms: a comparison between parametric and non-parametric approaches, DISCE - Quaderni del Dipartimento di Scienze Economiche e Sociali dises1282, Università Cattolica del Sacro Cuore, Dipartimentie* . 2009.
24. Sharman. *The case for management accounting.* s.l. : Strategic Finance, 85(4), 42-47., 2003.
25. Okunbor. *The application of cost behaviour and estimation in organisational decision making process.* s.l. : Journal of Research in National Development, 11(1), 217-227., 2013.
26. Drury. *Management and Cost Accounting, Eighth Edition. Thomson Learning.* 2012.
27. Hilton et al. *Cost Management: Strategies for Business Decisions (4th ed.).* New York : New York: McGraw-Hill, Inc., 2008.
28. Bozkurt et al. *the importance of cost calculation method in the accounting and management of Turkish operating costs. A research within the scope of TAS-2.* . s.l. : International Journal of Academic research in accounting, finance and Management Sciences,, 2014.
29. Slavik and Bednar. *Analysis of Business Models.* . s.l. : Journal of competitiveness, 6(4), 19-40., 2014.
30. Waddock and Graves. *The asymmetrical behavior of cost: evidence from Jordan.* . s.l. : International Business Research, 7(8), 113., 2011.
31. Orlitzky et al. *The dynamics of firm competitiveness: evidence from cost behavior of Filipino firms.* . s.l. : Academy of accounting and financial studies Journal, 18(4), 84-95., 2013.
32. Huselid. *Modeling cost behavior: linear models for cost stickiness.* . s.l. : Academy of Accounting and Financial Studies Journal, 15(1), 25-34, 2010.
33. Roberts & Dowling. *Cost Management Practices and Firm's Performance of Manufacturing Organizations.* . s.l. : International Journal of Economics and Finance, 6(6), 234., 2012.
34. Alleyne. *Managing overhead costs. McKinsey Quarterly, 41 (2), 106-117.* 2010.
35. Adler. *Cornerstones of Cost Management, 3th ed. Mason, OH: Cengage Learning.* 2012.
36. Jonhson. *Multivariate data analysis: A global perspective (Vol. 7).* Upper Saddle River, NJ: Pearson. : s.n., 2015.
37. Oberholzer & Ziemerink. *Cost behaviour classification and cost behaviour structures of manufacturing companies",.* s.l. : Meditari Accountancy Research, Vol. 12 Iss 1 pp. 179 – 193, 2004.
38. Novák, and Strouhal. *cost management as one of the most significant issues in company performance and company financial management.* 2017.
39. Florence M. and Patrick M. *effect of corporate diversification on financial performance of manufacturing firms in Rwanda: a case study of selected manufacturing firms.* 2018.
40. Murungi Deborah Justine. *cost control and profitability of manufacturing companies in Rwanda, a case study of Bralirwa Plc.* 2016.
41. Fangtao Liu et al. *real economy as the important basis for the development of a country, especially after the global financial crisis in 2008.* 2017.