The Macroeconomic Black Holes

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1. Abstract

This paper proposes a theoretical framework of the Macroeconomic black holes. The idea is to observe ***"HOW"*** the macroeconomic black holes can generate less economic growth according to this paper. The same paper proposes the multi-dimensional graphical modeling and a basic mathematical modeling framework to analyze the impact of the macroeconomic black holes into the economy of any country. This paper proposes to join the black hole theory by Wheeler (1962) and Megasverse by Ruiz Estrada (2008) modeling concept.

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JEL: E0

2. Introduction

The idea to write this paper is to observe how the black markets can generate a negative impact on the final GDP in any country. In our case, we represent the black markets by the macroeconomic black holes. It is to observe how the black markets can generate considerable outflow from the initial GDP. In the process to analyze and visualize the impact of the macroeconomic black holes (See Figure 1 and 2) on the outflow of economic growth, we propose a new indicator that counteract on the performance of the GDP. The basic premise in the construction of macroeconomic black holes depend on the "the black markets outflow circumference (BMO-Circumference)". To build the BMO-Circumference, we suggest first to find the diameter "$☼Y^{i}$" (See Expression 1). It is equal to the total sum of the drugs smuggling growth rate under the application of multi-dimensional partial differentiation in real time ($☼X_1$), the human smuggling rate under the application of multi-dimensional partial differentiation in real time ($☼X_2$), the mafias growth rate under the application of multi-dimensional partial differentiation in real time ($☼X_3$), the corruption growth rate under the application of multi-dimensional partial differentiation in real time ($☼X_4$), the laundry money growth rate under the application of multi-dimensional partial differentiation in real time ($☼X_5$), the prostitution

growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_6$), the gangsters growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_7$), the tax evasion growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_8$), the arms smuggling growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_9$), the assaults and murders growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_{10}$), the kidnapping and extortion growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_{11}$), the financial speculators growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_{12}$), the terrorism growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_{13}$), the black markets growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_{14}$), the vandalism growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_{15}$), the illegal financial services growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_{16}$), the financial and traders speculators growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_{17}$), the natural resources predators growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_{18}$) and the illegal gambling growth rate under the application of multi-dimensional partial differentiation in real time ($\text{☼}X_{19}$) (See Expression 1).

(1.) $$\text{☼}Y^{i} = \text{☼}\partial X_{1(t)}/\partial X_{1(t+1)} + \text{☼}\partial X_{2(t)}/\partial X_{2(t+1)} + \text{☼}\partial X_{3(t)}/\partial X_{3(t+1)} + \text{☼}\partial X_{4(t)}/\partial X_{4(t+1)} + \text{☼}\partial X_{5(t)}/\partial X_{5(t+1)} + \text{☼}\partial X_{6(t)}/\partial X_{6(t+1)} + \text{☼}\partial X_{7(t)}/\partial X_{7(t+1)} + \text{☼}\partial X_{8(t)}/\partial X_{8(t+1)} + \text{☼}\partial X_{9(t)}/\partial X_{9(t+1)} + \text{☼}\partial X_{10(t)}/\partial X_{10(t+1)} + \text{☼}\partial X_{11(t)}/\partial X_{11(t+1)} + \text{☼}\partial X_{12(t)}/\partial X_{12(t+1)} + \text{☼}\partial X_{13(t)}/\partial X_{13(t+1)} + \text{☼}\partial X_{14(t)}/\partial X_{14(t+1)} + \text{☼}\partial X_{15(t)}/\partial X_{15(t+1)} + \text{☼}\partial X_{16(t)}/\partial X_{16(t+1)} + \text{☼}\partial X_{17(t)}/\partial X_{17(t+1)} + \text{☼}\partial X_{18(t)}/\partial X_{18(t+1)} + \text{☼}\partial X_{19(t)}/\partial X_{19(t+1)}$$

Note: (t) = present period of time and (t+1) = next period of time

Hence, the construction of the macroeconomic black holes is following by: firstly, we use the black markets outflow circumference on the top and bottom of the macroeconomic black hole. We assume that the top and bottom of the BMO-circumference size in the black hole is the same, and the middle part or throat size of the macroeconomic black hole is equal to 1/3 part of the original size from the top and bottom BMO-circumference in the same macroeconomic black

hole (See Figure 1). Therefore, the BMO-Circumference of the macroeconomic black hole is equal to π (3.14159…) multiply by the diameter "$☼Y^{i}$" (See Expression 2).

$$(2.) \quad \text{BMO-Circumference} = \pi * ☼Y^{i}$$

The diameter of the BMO-Circumference can show two possible results follow by: First, if the diameter ($☼Y^{i}$) is large then we can observe a huge outflow of the GDP growth from the original GDP to the final GDP. On the other hand, if the diameter ($☼Y^{i}$) is small then we can observe a small outflow from the original GDP growth to the final GDP.

However, the top and bottom circumference always keep in constant movement and sizes. It is possible based on the application of multi-dimensional partial differentiation in real time (Ruiz, 2009) and the application of the Omnia Mobilis assumption (Ruiz, Yap and Shyamala, 2007) to generate the relaxation of all variables that involve the macroeconomic black holes all the time.

Finally, when we finish build our macroeconomic black hole, it is possible to start to evaluate the impact of the outflow from the original GDP to the final GDP of any country. Therefore, the final GDP is equal to the initial GDP minus initial GDP multiply by the BMO-Circumference follow by expression 3.

$$(3.) GDP_{final} = GDP_{initial} - (GDP_{initial} \text{ x BMO-Circumference})$$

According to the possible results from expression 3, we have three possible results: First result, if the BMO-Circumference is large then exist high possibility to have poor performance of the GDP. Second result, if the BMO-Circumference is equal to zero then can exist high possibility to have better performance of the GDP. And third result is that if the BMO-Circumference is small then exist high possibility to have less good performance of the GDP. Our basic premise is that the size if the BMO-Circumference can be controlled by strong legal framework, national security, efficient institutional control, political stability, democracy and strong regulations framework. The main idea here is that the active participation of law, political, institutional supports play a crucial role in the control of black markets or macroeconomic black holes expansion and less outflow from the original GDP to the final GDP. Another of our premises is that the problem in the economic growth and development for less developed countries (LDC's), it can be originated by the huge size of the macroeconomic black holes that they are generating a

large outflow from the initial GDP to the final GDP. Hence, the major factors can be the weak legal framework, controls, national security, inefficient institutional framework, political instability, limited democracy and weak regulations framework.

Figure 1
The Macroeconomic Black hole Structure

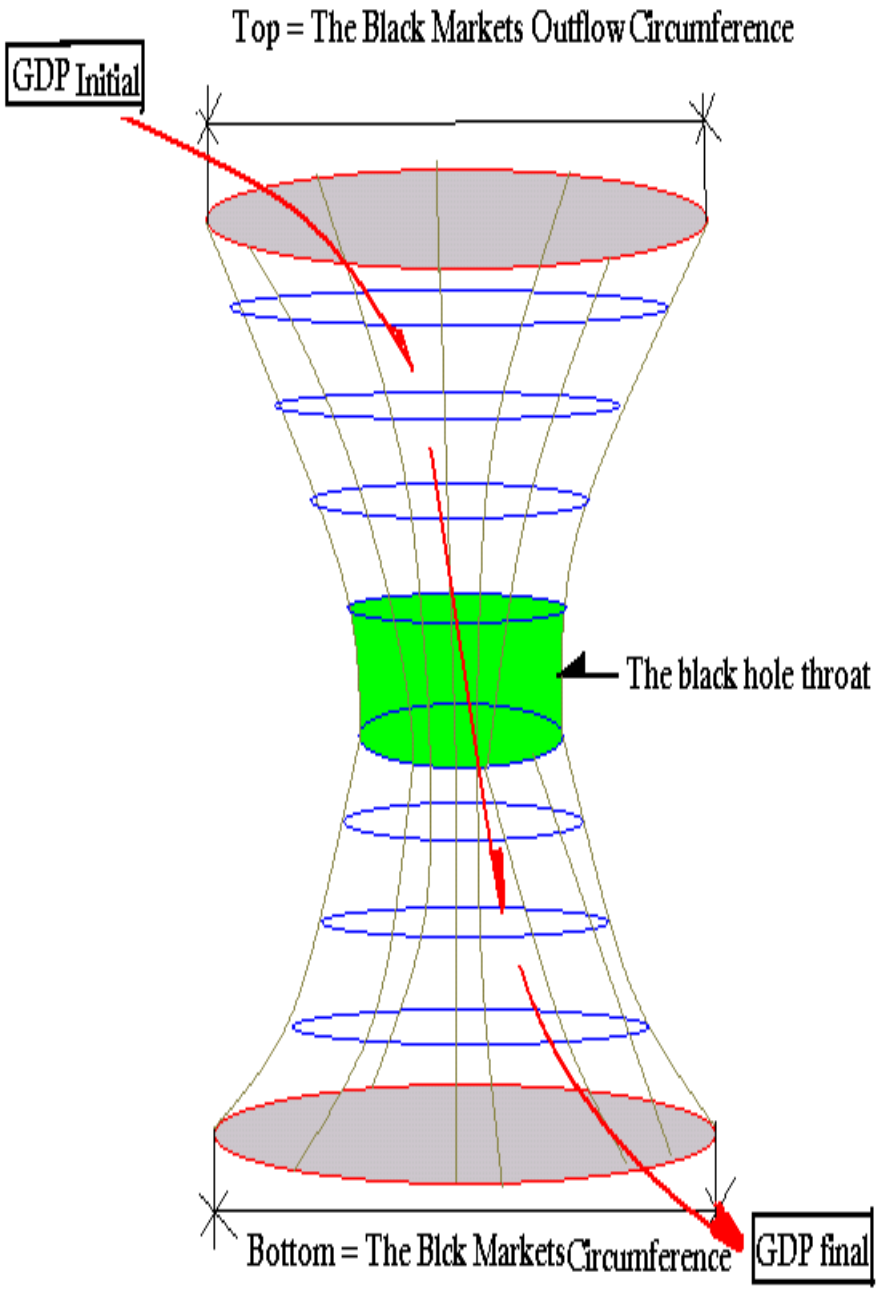
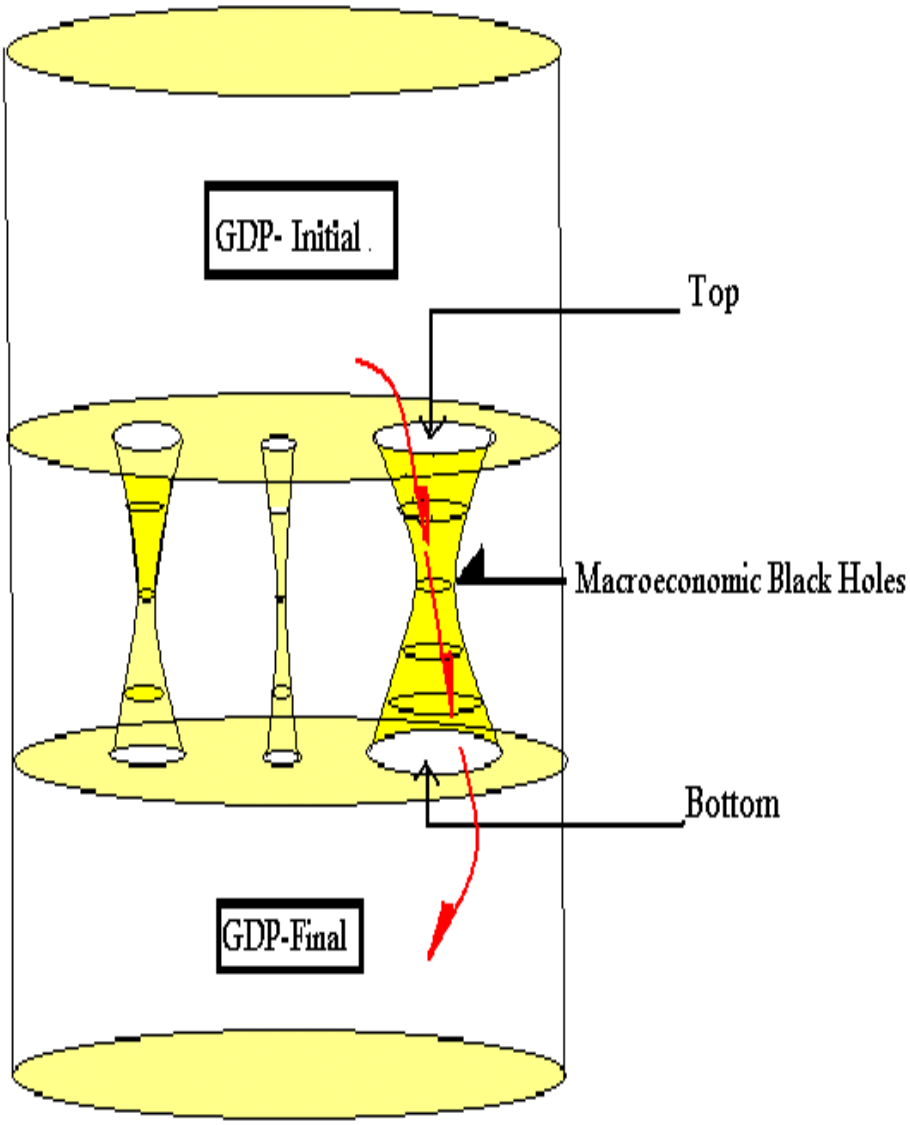


Figure 2
The Effect of the Macroeconomic Black Holes on the Final GDP



3. Conclusion

We conclude that the size of the "the black markets outflow circumference (BMO-Circumference)" play important role in the final size of the macroeconomic black holes to evaluate the final outflow from the initial GDP to the final GDP of any country. Therefore, the size of the BMO-Circumference can be controlled under the application of suitable legal frameworks and political stability in the short and medium term according to our premises.

4. References

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