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The Fiscal Theory of Price Level and its impact on the Way Fiscal Monetary Interplay: Is it Inevitable in Algeria?

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Abstract:

Our study highlights the importance of the fiscal theory of price level, showing the role of FTPL in the interaction and coordination between monetary-fiscal policies under different economic regimes (ricardian and non-ricardian). Depending on analytic methodology, the main results show that the economics regime is an important determinant of the theory of price level and the coordination way between policies. Besides, in Algeria, it is inevitable to choose FTPL according to its economic capabilities.

Key words: Fiscal theory ; price level; ricardian regime; non ricardian regime; Algeria; monetary fiscal interplay.

JEL Classification Codes:E62 ;E63; H03; O23.

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Introduction:

The fight against inflation and attempts to reduce its rates and achieve stability in prices in the long term remains one of the most important strategies of countries to achieve growth, raising employment rates, and achieve the required effectiveness in economic performance. All this can be achieved only through the evaluation of the monetary and financial potential of the economy, from the side of institutional framing, as well as from the side of resources and infrastructure.

From here, we can say that the economic policy in general depends in its challenges on two main players, the financial authority and the Monetary Authority. In addition, the way of coordination or interaction between the financial and monetary authorities has a great role in achieving economic goals. It also reflects the principles and ideas of the state in the aspect of economic.

Price stability were and still the main problematic to solve, as Beningo (2020), confirm that the prices determination has been at the most important economic debate since the existence of monetary systems with discussions ranging from the policies that monetary institutions should follow to the assets that they should hold to back the value of money. (Beningo, 2020, p. 258)

These study ideas cope with an updated problematic situation regarding the impact of the fiscal theory of price level on the interplay between fiscal and monetary policies (Algeria as an example). In the same line of thought, and based on the aforementioned ideas, the following research questions are put forward to guide the present work:

- What's the fiscal theory of price level?
- Did the fiscal theory of price level affect the way economic policies interplay?
- Is the choice of fiscal theory of price level in Algeria inevitable?

As required in any empirical study to meet standards of academic writing, the hypotheses derived are:

- The fiscal theory of price level is a new evolution in price level determination.
- The fiscal theory of price level displaces the concept of limited role of fiscal policy in the economy.
- In Algeria the fiscal theory of price level is the only way to face the economic challenges.

Using a deductive approach, we define the fiscal theory of price level and show the way it affects economy, depending on many studies. and we touch on many sides of the Algerian economic, and what must be done by the Algerian authorities to promote the Algerian economic performance.

The Fiscal Theory of Price Level (FTPL):

After the great recession in 1929, the world experienced a great case of doubt in the classical economic principles, and it came to existence many debates to make clear what would replace the traditional role of central bank to determine price level.

Fialho and Portugal (2005) mentioned that the fiscal theory of the price level rests on the assumption that price stability is unattainable unless government intertemporal solvency is guaranteed. It means that a rise in inflationary pressure calls for an increase in interest rates and for the sterilization of high debt service payments. (Fialho & Portugal, 2005, p. 658)

Bassetto (2008) argued that the price level determination depends on the government debt and fiscal policy alone, with monetary policy playing at best an indirect role. Furthermore, the price level is defined as the inverse of the value of money: how much money it takes to buy a given basket of goods. By contrast, the FTPL is about the inverse of the value of government debt. (Bassetto, 2008, pp. 1-3)

Xu and Serletis (2017) defined the fiscal theory of the price level representative of a significant departure from the quantity theory of money, as it based on that active (non-Ricardian) fiscal policy provides the nominal anchor and determines the price level. (Xu & Serletis, 2017, p. 251)

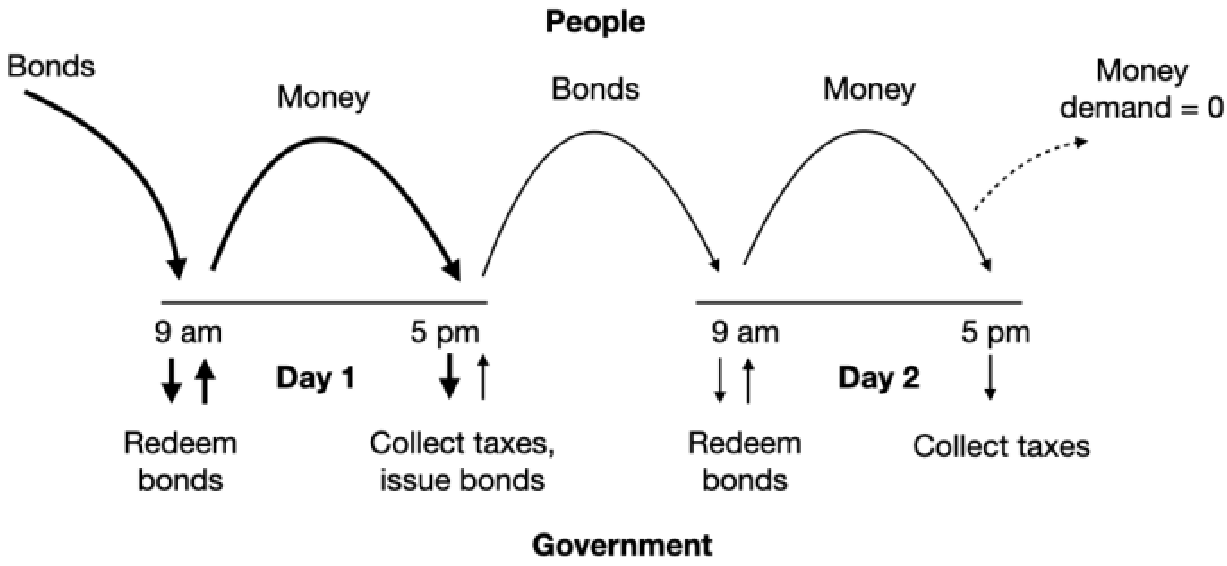
Berentsen and Waller (2018) defined the ftpl as a controversial idea that states that fiscal policy, not monetary policy, pins down the aggregate price level. Additionally, this theory depends on that the price level must adjust to make the real value of the government debt satisfy the intertemporal government budget constraint. (Berentsen & Waller, 2018, p. 1)

In other debate Coleman et al (2021), addressed in their work that the fiscal theory of price level means that prices and inflation depend on the overall liabilities of government money and bonds, not on money. To rephrase it, inflation is always and every where a monetary and fiscal phenomenon. In a manner, government monetary policy will sometimes depends on the government's fiscal behaviour. (Coleman et al, 2021, p. 3)

Cochrane (2021) reached that the thought process is that this theory points to a larger theme of fiscal theory, since a wise government will not just leave the price level to the whim of people's expectations of future surpluses. It will create institutions, commitments, and (hopefully) believable signals of its plans. It will find ways to commit that some kinds of debt issues are backed, so that by committing to repay the treasury raises revenue and does not cause inflation. (Cochrane, 2021, p. 6)

A simple model of two days economy created by Cochrane (2021):

Figure 01: Timing in a two-day fiscal theory economy



Source: (Cochrane, 2021, p. 2)

Cochrane (2021) gave a simple picture of price level determination in figure 01, by showing how the government acts through its strategy saying that the real value of nominal debt equals the present value of real primary surpluses. In the first day, the government prints up money to redeem maturing bonds, and soaks some up with primary surpluses. But now it can also soak up money by selling debt, coming due on the second day. Automatically, the price level will be adjusted like the government strategy requires. (Cochrane, 2021, pp. 2-3)

To put it simply, Cochrane (2021) clarified his model noticing that People prefer not to keep any money or debt overnight after the one day is over. By the end of the day, people who have money surplus than they need to pay taxes try to buy something with it. People who had money deficits to pay taxes try to sell something to gain more money. If there are more buyers than sellers, aggregate demand is too large. There is too much money chasing too few goods.

The price level rises. As the price level rises, however, the amount of money due in taxes also rises. So, the price level rises until all the money printed up to retire nominal debt in the morning is soaked up by primary surpluses – the difference between taxes and transfers – by the evening. And simply the price level has just determined. This is the fiscal theory of the price level. (Cochrane, 2021, p. 2)

The Coordination between Fiscal-Monetary Policies under the Fiscal Theory of Price Level:

The fact, that the relationship between the fiscal and monetary policies is somehow always about reaching the price level stabilization, and targeting inflation; many studies took this phenomenon into account in modeling trials to define it to determine the reality of the economy.

The study of the interaction between monetary and fiscal policies has been the object of vigorous interest since the seminal works of Sargent and Wallace (1981) as Rym and Guillard (2020) mentioned. Furthermore, Davig and Leeper (2005), confirm that Research on policy interactions has spawned a number of results that have become part of the standard reasoning about macroeconomic policy. (Davig & Leeper, 2005, p. 1).

A passive monetary policy in coordination with an active fiscal policy leads to a unique price level is referred to as the fiscal theory of the price level (FTPL). (Farmer & Zabczyk, 2019, p. 03).more than that, this theory is a continuity of Sargent and Wallace

(1981) work entitled "monetarist arithmetic", in which they established the first steps to studying the fiscal policy as a determinant of price level, and a leader of interactions between monetary and fiscal policies in contrast to the quantity theory approach in which fiscal policy plays little or no role in determining the price level. (Xu & Serletis, 2017, p. 252)

Furthermore, the fiscal theory of price level brought into the macroeconomic debate an important aspect of monetary and fiscal policy coordination. It highlighted the idea according to which even the most committed Central Bank to an inflation target can have to deal with a loss of monetary policy's effectiveness and credibility if the fiscal authority does not respond to long-term solvency goals and budget restrictions. (Moreira & Monte, 2021, p. 83)

When talks and discussions are about monetary-fiscal policies coordination and interaction aiming the determination of the general price level, it comes automatically to mind the conditions in which the system of coordination is set, and especially the economic system of the country. So, we will try to make a compendium of the conditions and strategies of economic policies under and out of fiscal policy of price level, to make some ideas clear of why is a particular regime being followed, as follows in table 01:

Table 01: Ricardian and Non-Ricardian regimes

Ricardian Regime		Non-Ricardian Regime	
Monetary Policy	Fiscal Policy	Monetary Policy	Fiscal Policy
-Monetary policy plays the big role into economic global policy. -Central banks release the aim of targeting inflation. - inflation was purely a monetary phenomenon" as long as the consumers have a rational expectations, the fiscal policy shouldn't have any effects on the aggregate demand, and consequently any effects on inflation" -The monetary policy is supposed to have a little effect on the government's budget. -the price level is determined in conventional ways (by the interaction of money demand and money supply).	-fiscal policy has a limit role. - The reduction of the taxes or the rising in the deficit to finance the budgetary outlays does not affect the overall demand. - The expansion in the government debt does not increase the wealth. - The primary surpluses respond automatically to debt to assure fiscal solvency for any path of the price level and the discount factor, in other words budget constraint must be satisfied.	- Monetary policy played an indirect role, a passive monetary policy. - The zero lower bound constraint on the policy rate is binding.	-inflation caused is budgetary not monetary. - the reduction of taxes or the rising in the deficit to finance the budgetary outlays does not predict future Rises of taxes. - The price level is determined in such a way that the real value of government debt is equal to the sum of the discounted future primary surpluses.

Source: made by authors depending on information mentioned by, (Mezhoud & Achouche, 2017, pp. 308-309), and (Xu & Serletis, 2017, pp. 254-255-271)

Xu and Serletis (2017) concluded that, the difference between ricardian and non-ricardian regimes is that monetary policy provides the nominal anchor for the economy in the former and fiscal policy in the latter. Also, they showed that fiscal policy has a potential advantage in choosing or restoring the equilibrium. (Xu & Serletis, 2017, pp. 255-271)

Back in 2005, Fialho and Portugal (2005), tried to make a model of coordination between fiscal and monetary policies to determine the price level. Using, two equations, the first represents the money demand function:

Mt*V=Pt*Y (1)

Where:

Mt=nominal money supply, Y=income, V: the velocity of circulation, P=a variable to determine (price level).

And the second equation represents the government's intertemporal budget constraint:

$$Bt = 1/Pt = \mathrm{Et} + \sum_{j=1}^{\infty} \mathrm{mt,t+j\ St+j} \qquad (2)$$

Where:

Bt-1= nominal value of bonds, mt,t+j = discount factor and St = government's surplus, including seigniorage.

So, the government determines the debt, money supply, and surplus. The problem noted is that the two equations (1) and (2) are for one variable unknown which is Pt. Therefore, fiscal (B, s) and monetary (M) policies have to be coordinated in order to determine a single price level, given that any equilibrium requires that (1) and (2) be respected, the equilibrium is only defined for a restricted set of (Bt, Mt, st).the most remarkable thing is that the fiscal theory of price level and the quantity theory of money, are not mutually exclusive theories but different aspects of the same theory.

The fact that government always connected to the monetary authority neither it likes it or not, the last crisis (2008) take central bank to new roles by using new methods and policies , even by doing fiscal authority issues . Furthermore, all monetary moves have their financial impacts.

The Algerian Economic Characteristics:

The Algerian economic has been passed through several stages since the independence; each stage has its events which imposed many reforms and changes of policies and strategies to face the new situations especially, regarding the law amendments about the regulation of granting debts, and advances to the treasury of Algeria for facing deficits during crises and critical times of economy.

Many programmes have been launched by Algerian authorities, touched a lot of important economic sectors. Such as, central bank independence and monetary authority like laws 90-10, 03-11 and 17-10 concerning many hubs of the economy:

-some independence was granted by enabling the Bank of Algeria to exercise its powers and authorities.

-separating the bank's management from the monetary and Loan Board, giving more terms of references of the monetary and Loan Board in managing monetary policy and exchange rate policy.

-founding a joint committee between the Bank of Algeria and the Ministry of finance to manage external and indebted balances.

-furthermore to promoting the powers of the Association of banks and financial institutions, as well as the adoption of the Basic Law of this association by the Bank of Algeria.

More than that, many fields' reforms and the investment stimulations, as Bouguessa (2018) argued in her study about Algerian economic reforms, showing the structural reforms and its projects were intended to bring about radical changes in the economic system, and the goal of achieving a rational distribution of resources and the elimination of price distortions. She concluded that the Algerian economic reached good rates of growth in times of the boom in oil prices, however the main sectors have known deflation, and the case of oil depending in the Algerian economy income makes the budget subject to price fluctuations and its consideration Always the only source of reducing tensions .as results, If this worrying situation continues, the state will be forced to use the revenue Control Fund to finance support and investment projects, And cover the Treasury deficit. (Bouguessa, 2018, p. 88)

Chibi et al (2021) reached that the fiscal dominance characterize the Algerian economy, also there is evidence of the non-ricardian fiscal policy and he fiscal theory of the price level implies that inflation, predominantly results from fiscal problems, and not from lack of monetary control. (Chibi et al, 2021, p. 203).

Conclusion:

It is inevitable that the process of interaction and coordination between the financial and monetary policies is influenced by various economic determinants, as well as the goals, especially the concept of determining the price level in the economy, which has a direct relationship to reversing the state of inflation in the economy.

Regarding, the fiscal theory of price level and its existence, and impact on the philosophy of economic policies work. There was a need after the great recession on 1929, and the later crises to face the new situation back there so many studies came to the field each one with different assumptions and models and evidences. So the fiscal theory of price level with its principles of fiscal dominance came with a strong position to understand the reality of the price determination in an actually living economy. Furthermore, it improved its effectiveness side by side with the monetary authority.

As well as, the theoretical studies all had shown that using the fiscal theory of price level means that the economy adopts the fiscal dominance under a non-ricardian concept. That confirms the fact this theory affects the way that fiscal and monetary policies interact and coordinate. And the choice of using it is related with the economy characteristics either politics or economics.

When it comes to the Algerian economic many studies results had shown that the fiscal dominance under non-ricardian regime is the chosen model by decision makers in Algeria. It's very clear that all reforms were taken by Algeria aimed to improve the performance of the economy both in terms of monetary reforms or general economic reforms. The fact is that Algeria has no developed financial markets, which don't give the bank of Algeria or the monetary agents a lot of options to play the big role in the economy .as result the choice made by government to manage the situation using the fiscal theory of price level under fiscal authority dominance is inevitable and the best choice. Also that doesn't mean the abandon of monetary system improve and bank of Algeria independence ameliorating, because the choice of today maybe not given tomorrow.

As recommendations for the study:

- Algeria needs to take developing the financial sector as a primary goal, because it helps the bank of Algeria or the monetary authority intervening in the economy professionally.
- Algeria must creat channels which through it build the main strategies between monetary and fiscal policies helping the economy adopts with the main economic changes and crises.
- The quantitative easing is one of the unconventional monetary instruments used by bank of Algeria since October 2017,it represents the big role of bank of Algeria financing the economy and maintaining the liquidity of Algerian economy after the decline in oil prices, do this advocates the importance of taking care of monetary role .
- It is necessary to adopt transparent and clear economic policies in order to ensure the intervention of all economic agents in a way that helps in the implementation of policies and achieve the desired goals.

However, the contribution of the fiscal theory of price level, it remains necessary to search for new economic models that keep up with the accelerated economic developments. More than that, it should developed the institutional and legal conditions in Algeria to keep up with it.

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