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**This version
November, 2019**

*IESTAC Working Paper Series
Working Paper No 10*

Citation style: Abdul Ghafar Ismail and Wahyu Ario Pratomo (2019) Crowding Out and Waqf Crowdfunding: Do They Create Macroeconomic Imbalances. IESTC Working Paper Series, Working Paper No. 10. Bangi: Organization of Islamic Economic Studies and Thoughts

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Crowding Out and Waqf Crowdfunding: Do They Create Macroeconomic Imbalances

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Abstract

The “crowding- out” effect of government expenditures gains wide-spread attention at two levels. First, at the policy level, public officials have expressed concern, that massive current and projected government deficits will have a deleterious effect on macroeconomic imbalances. Second, at the academic level, “crowding out” is at least one of the issues which helps to distinguish between followers of the two major macroeconomic schools of thought Keynesians and monetarists? Recently, economist has proposed a waqf-based crowdfunding that can be used to finance the government expenditure. However, the discussion on this subject is very limited. This paper will look at both subjects from more of an academic than a practical policy point of view. Policy implications can be drawn from this discussion, first, the controversy at the academic level are traceable from empirical results in many countries. Second, a descriptive analysis of waqf based crowdfunding will be explained in the context of the deficit financing framework. Does it affect the macroeconomic imbalance?

Keywords: crowding out, government expenditure, waqf, fiscal policy, macroeconomic imbalance

JEL Classification: D64, E62, H30, H63, P40

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1. Introduction

Regulation No 1176/2011 of the European Parliament and of the Council of 16 November 2011 on the prevention and correction of macroeconomic imbalances has defined a macroeconomic imbalance as: any trend giving rise to macroeconomic developments which adversely affect, or have the potential to adversely affect, the proper functioning of the economy of a member state or of the Economic and Monetary Union, or of the Union as a whole. As a result, the European Union countries have introduced the macroeconomic imbalance procedure (MIP) indicators.³ The MIP indicators cover external (such as current account balance as percentage of GDP, net international investment position, real effective exchange rate, export market share as percentage of world export) and internal (such as house price index, private sector credit flows, private sector debt and government debt) imbalances, competitiveness positions (such as nominal unit labor cost index), and labor market trends (such as unemployment rate, activity rate, youth unemployment rate).

Most economists normally agree on a set of country-specific recommendations that could boost macroeconomic variables such as growth, job creation, training and education opportunities, research and innovation. A policy recommendation is suggested as a tool to support the early identification and monitoring of imbalances. Specifically, the economists such as Rebelein (2006), Roberts (1984), Altig and Davis (1989), Blanchard (1985), Giavazzi and Pagano (1990) suggest the expansionary of fiscal policy which is aimed to correct the macroeconomic imbalances. However, this policy recommendation has created a crowding out effect and it may create another cycle of macroeconomic imbalances. This policy has also been recognized by country's constitutions. For example, in Malaysia, Brunei and Indonesia, the constitution of those countries provide the provision for issuing debt (or direct borrowing) to support the government budget. These countries also recognize the presence of Islamic revenue to support the government budget. However, the policy recommendation via Islamic revenue, especially through waqf based crowdfunding as policy recommendation has not been discussed extensively as policy recommendation.

In this study, we will demonstrate how waqf based crowdfunding platforms help to mitigate the macroeconomic imbalances. Our article thus contributes to the literature on the private provision of public goods (for seminal works in this area, see Cowen, 1992). Therefore, the aim of this study is to suggest waqf based crowdfunding as opposed to crowding out as policy to overcome the macroeconomic imbalances. This paper is motivated by twofold: waqf as new tools to finance government budget; and as policy instruments.

The remaining discussion of this paper will be divided into five sections. Section 2 will analyze the previous studies that look at the crowding out of debt-financed fiscal policy. Section 3 will discuss the waqf as the sources of financing for government budget. In Section 4, we will touch two main aspects: the classification of waqf in government revenue and the effect of waqf on macroeconomic variables. The conclusion will be presented in Section 5.

2. Empirical Findings from the Studies of Crowding Out

A prominent aspect of the crowding out of debt-financed fiscal policy has undergone substantial analysis in the academic literature and gained widespread attention between government and business communities. The substitutability or complementarity between public and private investment is the key issue. In one side, an increase of government investment may directly and indirectly crowd out private investment. On the other side, public investment can, again directly or indirectly, create favorable conditions for private investment, for instance, by providing infrastructure such as roads, highways, railways, and seaports. Better infrastructures

³ Refer to [http://ec.europa.eu/eurostat/statistics-explained/index.php?title=The_Macroeconomic_Imbalances_Procedure_\(MIP\)_introduced&oldid=266630](http://ec.europa.eu/eurostat/statistics-explained/index.php?title=The_Macroeconomic_Imbalances_Procedure_(MIP)_introduced&oldid=266630)

may increase the productivity of private investment and reduce the cost of production of the private sector, a positive impact on the profitability of private investment. This would result in a “crowding-in” effect on private investment.

The term of crowding out is interpreted into several varied meanings. Economists such as Carlson and Spencer (1975), Blanchard (1985), and Giavazzi and Pagano (1990) have agreed that, if the supply of goods and services is fixed and resources fully employed, the government can contribute more of the economy's output simply by shifting the role of the private sector. On the contrary, if resources are unemployed, by increasing utilization of government spending can encourage investment in productive capacity and in that way, increase real private spending also. Such increases of government spending and response by the increasing of the demand for goods and services which in turn increase private demand for new output sources, has described as “crowding in”. Both these arguments for crowding out or crowding in focus in the first instance on real-sector effects associated with the additional government spending. Indeed, the direction of these effects follows even if the additional spending is financed by taxes.

Basically, the channel of crowding out is a reduction in private investment that occurs because of an increase in government borrowing. If an increase in government spending or a decrease in tax revenues leads to a deficit that is financed by increased borrowing, then the borrowing can increase interest rates, leading to a reduction in private investment. The crowding out also occurs in the market for loanable funds. Government bonds are a form of debt that has risk-free portfolio. When new government bonds are introduced, risk-averse investors are pulled away from other forms of safe income securities. This also raises the rate of interest that competing bonds have to offer. The neoclassical loanable funds theory, as discussed in Voss (2002) and Ganelli (2003), reveals that the equilibrium of savings and investment will be explained by the interest rate mechanism. At the situation of an increase in government spending, interest rates have to increase to bring the capital market into equilibrium, dropping the private investment. In addition, Knot and de Haan (1999) find that the fiscal deficit indeed leads to higher interest rates in five European countries. They identify a positive correlation between Germany's budget deficits and interest rates, implying a crowding out effect of public investment on private investment. In another example, Serven (1996) reveals that, in India, government investment in non-infrastructure projects crowds out private investment in the long run.

On the contrary, the Keynesian scholars view supports the complementary effect. They assume that there is unemployment in the economy and that the interest rate is less sensitive to investment. Thus, expansionary fiscal policy will determine little or no increase in the interest rate and output. In addition, this view assumes that government spending increases private investment due to the positive effect of government spending on investor expectations. Therefore, the expansionary fiscal policy creates a “crowding in” rather than a crowding out effect (see, Aschauer (1989) and Baldacci et al. (2004)). In China, Liu and Ma (2001) state that China's fiscal deficit did not produce a “crowding out” effect, while Dong (2006) finds that fiscal expenditure “crowds out” private investment in the short term, and in the long-term “crowds in” private investment.

The impact of expansionary fiscal policy can be explained through the IS-LM Model.⁴ It can be explained as follows. Increased borrowing by the government generally crowds out private investment in productive capital in the long term. That is because the portion of the amount people save that is used to buy government securities is not available to finance private investment. The result is a smaller stock of capital and lower output in the long term than would otherwise be the case (all else held equal). Two factors offset part of that crowding-out effect. One is that additional borrowing tends to boost private saving, which increases the total funds available to purchase government securities and finance private investment. That response occurs for several reasons: first, additional borrowing tends to raise interest rates, which boosts the return on saving; second, some people anticipate that policymakers will raise taxes or cut spending in the future to cover the

⁴ Carlson and Spencer (1975) explain several critics on crowding out

cost of paying interest on the additional accumulated debt, so those people increase their own saving to prepare for paying higher taxes or receiving less in benefits; and third, the policies that give rise to deficits (such as tax cuts or increases in government transfer payments) put more money in private hands, some of which is saved. However, the rise in private saving is generally a good deal smaller than the increase in borrowing, so greater borrowing leads to less national saving.

The second factor offsetting part of the crowding-out effect is that higher interest rates tend to increase net inflows of capital from other countries - by attracting more foreign capital and inducing savers to keep more of their money at home. Those additional net inflows prevent investment in this country from declining as much as national saving does in the face of more borrowing.

3. Financing Government Budget via Waqf

In this section, we want to deviate from the views that have been discussed in section 2 in relation to the sources of financing for government budget. Here, we suggest religious endowment (or known as waqf) as economic tools for the same purposes. But, before we discuss further, this section would highlight three aspects: (a) how could we classify waqf as economic matters; (b) how does cash waqf work via crowdfunding mechanism; and (c) how does it work in financing the government budget, especially in relation to waqf as Islamic revenue as stated in the state constitution.

Waqf as Economic Matters

In this section, we will argue that waqf as economic matters in two aspects, i.e., definition and legal. Let us look at it from the basic premise, that is the definition. This definition could be divided into two, language and scholar perspectives. From language perspective, as discussed in Ariff (1991), waqf is spelled out as *Wakfun* and formally known as *Wakf-alal-aulad* or religious endowment. The first recorded endowment was a plot of land⁵ devoted for religious or charitable purposes. In the conventional economics, the JEL classification system (as a standard method of classifying scholarly literature in the field of economics) has recognized the keywords of altruism, philanthropy and intergenerational transfer as new field in welfare economics.

Scholar such as Imam Abu Hanifah said that waqf means the detention of specific thing in the ownership of waqif and the devoting of its profit, products or other good objects for the poor. Imam Abu Yusuf and Imam Muhammad said that waqf signifies the extinction of the waqf's ownership in the thing dedicated and detention of all the thing in the implied ownership of God. It shows that its profits may revert to or be applied "for the benefit of mankind". Another scholar, i.e., Kahf (1998), he defines waqf as "holding a *Maal* (property) and preventing its consumption for the purpose of repeatedly extracting its usufruct for the benefit of an objective representing righteousness or philanthropy."

In the legal form, the Islamic banking act of Indonesia, 2008, allows the Islamic banking institutions to accept waqf deposits. In this case, waqf can be tailored with the maturity of deposit. At the maturity date, the depositors will only receive the initial amount that is endowed. However, Islamic banks, as trustee, has the right to get the benefits from the utilization of this deposit. Next, under article 97 (1) of the federal Constitution of Malaysia requires that all revenues received by the Federation shall include in the Federal Consolidated Fund. While article 97 (2) is requiring that all revenue received by the State shall be entered into the Consolidated Fund of the state. Interestingly, article 97 (3) also provide for any Islamic wealth,

⁵ For example, as reported by Ibn Umar that Umar-Ibn-Al- Khattab got land in Khaybar, so he came to the prophet Muhammad SAW and asked him to advise him about it. The Prophet said, if you like, make the property inalienable, and give the profit from it to charity. Refer to hadith Bukhari (2737) and Muslim (no. 1633)

including Baitul-Mal, Zakat, Fitrah and the similar shall be included in a separate fund and only be issued by related law concerned or known as Islamic Law.

Waqf Based Crowdfunding

In economic terms – waqf is property transferred for merit or benefit to others because when ownership of property transferred to Allah and beneficiary (the owner has no ceases to have any claims over it, the property is said belong no one but Allah), could be channeled for public purposes (*waqf al-khayri*) or for children and the family (*waqf al-ahli*).⁶

The property that is to be transferred must have at least two conditions; the property (*al-mawquforal-muḥabbas*) must be ‘continuously usufruct-giving’ and ‘immovable things’. The former means waqf should be identified as the perpetual dedication of benefits of a valuable (as long as its principal is preserved), the value of which is amortized subsequently, and its proceeds or revenue are later spent on welfare of the named beneficiaries. In this perspective, perpetual dedication of benefits does not mean perpetual physical object which is the subject matter of the dedication. It is to be read together with ‘value’ of the benefits. Hence, perpetual dedication of benefits is obtained by amortization of the value of the object. While, the later means that the object of the dedication could be of any kind: Hence, it can be perpetuity or immovable (such as estate). It shows that the property could be identified and hence it is transferable and registered under trustee. In several countries like Malaysia, Singapore, Indonesia and Brunei, the trustee is government agency.

The above conditions show that waqf properties are not only limited to physical assets such as lands and buildings. It also covers cash. At present, countries such as Malaysia, Indonesia, Egypt, Iraq, Syria, Iran, Turkey, India, Pakistan, and Singapore have already accepted and practiced cash as waqf properties. It turns out to be popular because people without much (immovable) property wish to get the benefits of waqf. Furthermore, it is also easier for Islamic financial system to manage it than property or other endowments.

The option to attract the cash waqf can be done via crowdfunding platforms. However, as mentioned in Agarwal et al (2014), most crowdfunding platforms are predominantly for profit businesses. None is created via a reward based platform. A waqf-based crowdfunding platform is suggested as it is a reward based platform and the benefits generated from perpetuated cash waqf could be channeled for public purposes.⁷ Hence, it can be used to promote the provision of public goods, a similar view as suggested by Hudik and Chovanculiak (2017). They argue that the method of funding projects by raising small amounts of money from a large number of people via the internet - have enabled to lower the organization costs and to employ an efficient mechanism that is able to reduce the assurance and free-rider problems.

Sources of Revenue and Expenditure for Trustee

The fact that crowdfunding enables the private funding of various public goods is of great interest to economists, as mentioned Hudik and Chovanculiak (2017). They have recognized several problems in dealing with the provision of public goods. These problems are the organization problem, the assurance problem, and the free-rider problem. The organization problem refers to the fact that it is costly to organize (i.e. design, administer, and promote) a contribution scheme for a public good provision. The assurance problem refers to the possibility that each individual will not contribute to funding the public good because he believes that others will not contribute either (and so he does not waste his effort to contribute) (Sen, 1967; Schmitz, 1987). The free-rider problem refers to the possibility that each individual will not contribute to

⁶ Sabeq (1998), p.267.

⁷ Our view on reward based crowdfunding differs from Kunz (2017) in the sense that there is no direct reward for the platform providers or entrepreneurs

funding the public good because he believes that others will contribute (and so he can consume the public good without contributing) (Samuelson, 1954, 1955; Kim and Walker, 1984).

In addition, as discussed in previous section, the absolute owner of waqf property is Allah, but the trustee is given the mandate to register the ownership on the said property. The trustee is mandated to manage the property for generation of income which later is distributed to beneficiaries. Furthermore, the trustee may also utilize from the benefit for her expenses and may use the benefits for providing public goods and services.⁸

In summary, cash waqf is very much closed to economic in different aspects: (i) it gives the transfer of *ownership* of the said property to a trustee; (ii) the said property is taken from the owner's cash, it reduces the consumption of owner but it create a "transitory" wealth of recipient or it generates benefits of other generation via intra or intergenerational transfer; and (iii) perpetuity concept of waqf remains as long as its asset lasts, hence the accumulation of stocks (or investment) remain with the trustee; and (iv) finally it increases the sources of revenue and expenditure of government.

4. Analysis Waqf Based Crowdfunding on Macroeconomic Imbalance

In this section, first, the analysis will be done to establish the classification of waqf in government revenue. Then, an analysis of waqf based crowdfunding will be extended in the context of the deficit financing framework. Then, we will answer the following question, does it affect the macroeconomic variables?

Waqf in Government Revenue

As noted in the previous section, waqf can be in cash or in kind. Both can generate receipts. Currently, government receipts are divided into two groups – revenue receipts and capital receipts. Government receipts which neither: (i) create liabilities nor (ii) reduce assets are called revenue receipts. These are proceeds of taxes, profit and dividend on government investment, cess and other receipts for services rendered by the government. These are current income receipts of the government from all sources. Government revenue is the means for government expenditure. In the same way as production is means for consumption. Revenue receipts are further classified into tax revenue and non-tax revenue.

While, government receipts which either: (i) create liabilities (e.g. borrowing) or (ii) reduce assets (e.g. disinvestment) are called capital receipts. Thus when government raises funds either by incurring a liability or by disposing off its assets, it is called a capital receipt. Two examples of capital receipts which create liability are borrowing and raising of funds from public provident fund (PPF) and small savings deposits. Borrowings are treated capital receipts because they create liability of returning loans. Similarly, funds raised from PPF, small saving deposits in Saving Banks are treated capital receipts because they increase liability of the government to repay these amounts to PPF holders and small savings depositors.

Therefore, capital receipts may be debt creating or non-debt creating. Net borrowing by government at home, loans received from foreign governments, borrowing from central bank are examples of debt creating receipts. While, capital receipts such as recovery of loans, proceeds from sale of public enterprises (i.e., disinvestment), do not give rise to debt. Therefore, waqf is classified as revenue receipts, hence it does not increase the government debt.

⁸ Sabeq (1998), p. 269.

Waqf and Government Debt

From the findings in Section 2, it shows that the economists agree that the deficit is financed by traditional instruments such as bond, printing money, foreign borrowing, or impose a higher tax. But, there are none of them that discuss the instrument of waqf in financing the government budget or budget deficit. However, in section 3, we have seen that waqf can be used to finance the government budget.

How it could affect the macroeconomic imbalance? In our analysis, we will deviate from the view of Warr (1984), Roberts and Anredoni (1990), and Andreoni and Pyne (2011) who argue that government grants could crowd out voluntary gifts dollar-for-dollar. The findings could have important implications for how government provide grants to non-profit organizations. Such a finding could have important consequences for how governments structure grants to non-profits.

In our analysis, we will use the IS-LM approach in referring to a policy that an increases government expenditures without increasing taxes, or borrowing from the private sector by looking at the contribution of cash waqf from individual. Here, we assume that there is two different time periods used in the analysis. It will show the movement of IS and LM curves at $t=0$ and $t=t+1$.

At $t=0$, the consumption spending of individual is given by:

$$c_t = y_t - (s_t + w_t) \quad (1)$$

Equation (1) shows the income is spent for consumption (c), savings (s) and waqf (w). The savings will bring some return (p) at $t=t+1$. The individual will do the same in the second period, that is, to endow an amount of w to the government (as trustee). Therefore, at $t=t+1$, the consumption spending is given as:

$$c_{t+1} = [y_{t+1} + s_t (1+p)] - [s_{t+1} + w_{t+1}] \quad (2)$$

At $t=0$, the government spend an amount of budget which is equivalent to G_t . Therefore, the government budget is written as:

$$G_t = G_t \quad (3)$$

However, at $t=t+1$, the government budget is financed by the same allocation as the previous year ($G_{t+1} = G_t$) plus the benefits (b) that are generated from the proceeds of initial waqf, w_t . Hence, the government budget can be written as:

$$G_{t+1} = G_t + b \quad (4)$$

While, the savings of individual and the cash waqf transferred to financial system and then, it will be channeled to private sector. Here, in line with the view of Ma'in and Ismail (2013), the investment equation is inversely related to cost of capital (p).

Basically, retracing transactions crowding out in terms of the standard IS-LM model will be useful both to facilitate a discussion of empirical magnitudes and to motivate the subsequent analysis of portfolio crowding out. In linear form, the static equilibrium version of the underlying model includes a goods market consisting of a consumption function, an investment function (without accelerator effects), and a spending-income identity as follows:

At $t=0$; the static equilibrium version of the underlying model is given as follows:

$$c_t = c_0 + c_1 (y_t - (s_t + w_t)), 0 < c_1 < 1 \quad (5)$$

$$i_t = i_0 + i_1 p, i_1 < 0 \quad (6)$$

$$g_t = g_t \quad (7)$$

$$y_t = c_t + i_t + g_t \quad (8)$$

While at $t=t+1$; the static equilibrium version of the underlying model is given as follows:

$$c_{t+1} = c_2 + c_3 ([y_{t+1} + s_t (1+p)] - [s_{t+1} + w_{t+1}]), 0 < c_3 < 1 \quad (9)$$

$$i_{t+1} = i_2 + i_3 p, i_3 < 0 \quad (10)$$

$$g_{t+1} = g_t + b \quad (11)$$

$$y_{t+1} = c_{t+1} + i_{t+1} + g_{t+1} \quad (12)$$

In a money market consisting of a money-demand function, and a market-clearing equilibrium condition:

$$m^d = m_0 + m_1 y_t + m_2 p; m_1 > 0; m_2 < 0; \quad (13)$$

$$m^d = m^s = m \quad (14)$$

when g , s , w , b and m are treated as exogenous, equation (5) through equation (14) suffice to determine c , i , m^d , k , and y . The more compact IS-LM form of the model follows from solving equation (5) through equation (8) and equation (9) through equation (12) into a goods-market equilibrium or IS curve relating y and p , at $t=0$ and $t=t+1$, respectively:

$$y_t = \frac{c_0 + i_0 - c_1(s_t + w_t) + g_t}{(1 - c_1)} + \frac{i_1}{(1 - c_1)} p \quad (15)$$

$$y_{t+1} = \frac{c_2 + i_2 + c_3[s_t(1+p)] - [s_{t+1} + w_{t+1}] + (g_t + b)}{(1 - c_3)} + \frac{i_3}{(1 - c_3)} p \quad (16)$$

And solving equation (13) and equation (14) into a money-market equilibrium or LM curve,

$$y_t = \frac{m - m_0}{m_1} - \left(\frac{m_2}{m_1}\right) p \quad (17)$$

Since the IS curve relates y negatively to p while the LM curve relates Y positively to p , the model yields general equilibrium by the intersection of curves IS and LM. In the absence of benefits (b), the effect on Y of an increase in G would be simply the partial derivative as shown below,

$$\frac{\partial y_t}{\partial g_t} = \frac{1}{(1-c_1)} \quad (18)$$

To find the general equilibrium of the increasing impact of government spending in the IS-LM model can be explained from solving the equation (15) and equation (17) as follows,

$$y_t = \frac{(m_2 c_0 + m_2 i_0 - i_1 m_0) - m_2 c_1 (s_t + w_t) + i_1 m + m_2 g_t}{m_2 (1 - c_1) + i_1 m_1} \quad (19)$$

Thus, the relevant total derivative expresses the effect of G on Y in the absence of benefit (b) as:

$$\frac{\partial y_t}{\partial g_t} = \frac{m_2}{m_2 (1 - c_1) + i_1 m_1} \quad (20)$$

Since the denominator of equation (20) is explicitly negative and the cost of capital elasticity m_2 is also negative, therefore the effect of the government spending to GDP is positive as expected. The total derivative in equation (20) is strictly less than the partial derivative in equation (18) as long as $i_1 \neq 0$ (that is, investment is cost of capital sensitive) and $m_1 \neq 0$ (that is, the money demand depends on income). The steeper of LM curve, that is, a relatively small profit sensitivity of money demand, the larger of the crowding out is likely to be happened with the effect of the underlying fiscal action. If the money demand is relatively less sensitive to profit, it will lead to the decline of capital accumulation and thus reduce the investment motive in economy and the crowding out effect is potentially larger.

In the presence of waqf and the benefit (b), the general equilibrium of increasing impact of government spending in the IS-LM model can be explained from solving the equation (16) and equation (17) as follows

$$y_{t+1} = \frac{(m_2 c_2 + m_2 i_2 - i_3 m_0) - m_2 c_1 [s_t (1+p)] - [s_{t+1} + w_{t+1}] + i_3 m + m_2 (g_t + b)}{m_2 (1 - c_3) + i_3 m_1} \quad (21)$$

Thus, the relevant total derivative expresses the effect of G on Y in the presence of benefit (b) as

$$\frac{\partial y_{t+1}}{\partial g_t} = \frac{m_2 + b}{m_2 (1 - c_3) + i_3 m_1} \quad (22)$$

The impact of waqf in equation (22) is higher than the absence of benefits as revealed in equation (20). The waqf plays an important role in increasing of the government expenditure and the economic growth.

5. Conclusions

The results indicate that waqf could be considered as revenue receipts, hence it does not increase the government debt. Hence, it could reduce the detrimental effects of crowding out on individual income and hence their consumption. But, in our analysis, we have shown that waqf would not create the macroeconomic imbalance.

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