Research Paper
Al-Zakah Foundation and the New Mechanisms for Financing and Development

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Abstract
The research aims to know This paper presents suggested mechanisms for Islamic financing through Al-Zakah foundation. These mechanisms are based on the principle of "loaning for borrowing" in a way that helps to collect Al-Zakah from its payers and encourages saving and investment. The paper also presents a model for analyzing a person's economic behavior under the principle of loaning for borrowing which includes deriving a function of the saving utility. The study comes up with a way of specifying the income level that determines who should pay Al-Zakah and who should receive it and how to use the suggested model in drawing the political policies especially those that wish to eliminate poverty and help individuals improve their living conditions. The study also shows the impact of an individual's behavior on the growth of the country's economy and fulfillment of the society's needs after implementing the suggested financing mechanisms. Finally, the paper sets some general conclusions on the role of Al-Zakah foundation, the possibility of building an Islamic economic theory, the characteristics of the Islamic economic system, and the importance of the economic analysis in jurisprudence.

Keywords:
Al-Zakah foundation, Al-Zakah economies, Islamic economy, Islamic finance, Islamic development.
مؤسسة الزكاة.. نحو آليات جديدة للتمويل والتنمية

إبراهيم أديب الجلبي

كلية الإدارة والاقتصاد / جامعة الموصل

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المستخلص

تقدم هذه الورقة آليات مُقترحة للتمويل الإسلامي من خلال مؤسسة الزكاة، تقوم على مبدأ الإقراض مقابل الإفراط، بشكل يساعد على تحصيل الزكاة من المكلفين بدفعها إلى جانب تشجيع عملئي الأذار والاستثمار. تتضمن الإقراض المقترحة إجراءات للإفراط والتوحش، وتتصور إلى طريقة تحديد مستوى الدخل الذي يسري بين من يستحق الزكاة ومن يجب عليه دفعها، وكذلك الاستفادة من التمديدات المتاحة في نظام السياسات الاقتصادية، لأنها تلك التي تساهم في الحد من الفقر وتكيف القدر من تحسين مستوى المعيشة. وتُبين أثر مساعدة الفرد في قليل لتمديد الالتزامات والتدفق في سد احتياجات المجتمع. فتتبنى جزءًا من الاستنتاجات العامة التي تكمل دور مؤسسة الزكاة بإمكانية بناء نظام اقتصادICAL إسلامي، وممارسة التمويل الإسلامي، وأهمية التحليل الإقتصادي في الاتجاه الثقافي.

الكلمات الرئيسية
مؤسسة الزكاة - اقتصاد إسلامي - اقتصاديات الزكاة.
Introduction
Creating foundations responsible for collecting Al-Zakah and distributing it to those who deserve it (as is the case with Al-Zakah boxes) can be considered a step towards building an economic system that is different in its ideational ground, judicial bases, and political objectives from current economic systems. Al-Zakah is not (as some people think) a kind of income conversion tax, or a way for stimulating consumer demand, or a method for decreasing the difference of income distribution. Yet, it is an economic system with profound developmental dimensions that interacts with the governing rules of economic units, starting from the individual—motivated by his interest—and ending with the government—motivated by the public interest.

This economic developmental dimension demands a basic transformation in dealing with Al-Zakah whether in intentions and goals, mechanisms and policies, or studies and analyses. Hence comes the importance of Al-Zakah foundations as a step towards transformation in dealing with Al-Zakah. So, for this transformation to be complete, Al-Zakah system should use new mechanisms that outpace the current traditional ones, which are dependent on the religious drive, towards using mundane motivations, and that will increase Al-Zakah supplies and serve its purpose.

This paper tries to present a new method of dealing with Al-Zakah from an economic perspective that stems from Al-Zakah purpose as a governing frame for economic, legal, social, political jurisprudences related to Al-Zakah process. Then the paper creates mechanisms compatible with life's economic rules and uses them to achieve Al-Zakah purpose in a way that does not contradict the irrevocable Islamic judgments. The paper finally tries to come up with economic research methodologies in drawing Al-Zakah policies and all related activities of development and investment to achieve its purposes.

The paper is divided into three sections. The first tries to specify the purpose of Al-Zakah from an economic perspective which can serve as a guide for economists in studying the economic effects of Al-Zakah. It also tries to put economic mechanisms and policies for collecting and spending Al-Zakah funds, as well as giving economic preference amongst jurisprudents' opinions regarding disputed Al-Zakah matters. The second section sheds some light on the developmental dimension of Al-Zakah rules and suggests new mechanisms for employing these rules in stimulating financial activities, like loans, and direct them towards achieving the economic purposes of Al-Zakah. The third section, on the other hand, presents models of economic theories on both the micro and macroeconomic levels based on the rules and hypotheses that may stem from having an Islamic economic system in which Al-Zakah foundation plays a critical role in directing and operating it. Finally, the paper concludes with general conclusions.
1. THE ECONOMIC PURPOSES OF AL-ZAKAH

In the past centuries, dealing with Al-Zakah was limited to finding a religious judgment for Al-Zakah funds on which no irrevocable text is given. Jurisprudents depended mainly on analogy with funds on which explicit texts of the minimum amount of money liable to Al-Zakah and its specific amount are available. Yet Al-Zakah is not merely a kind of worship; it has specific political, social, and economic purposes such as reducing poverty, freeing slaves, and gaining the loyalty of new Muslims. Hence comes the necessity of taking into consideration all these dimensions in any jurisprudent, economic, social, legal, or political judgment regarding collecting or spending Al-Zakah; analogy alone will not be sufficient to comprehend all these dimensions.

The purpose-built methodology could be more useful in guiding the jurisprudent in his legal opinion, the legal legislator in adapting cases, and the economist and sociologist in dealing with economic and social problems and cases in a comprehensive way where particulars are gathered under an integrative frame (العلواني، 2010، 13). This methodology can be used in laying Al-Zakah-specific purposes from which all other specializations, including the economic one, can make use of as a guide in making their judgments of this Islamic pillar. In this part of the paper we try to extract several purposes that can serve as a guide for economists in studying the economic effects of Al-Zakah, and put economic mechanisms and policies for collecting and spending Al-Zakah funds, as well as have an economic preference regarding jurisprudents’ opinions of Al-Zakah of funds with no irrevocable text. The most important purposes are:

1. Giving out for having money.
2. Circulating the money and preventing its burial.
3. Eliminating poverty and fulfilling needs.
4. Economic growth through directing resources towards creating productive assets.

1.1 Paying the Zakat of funds.

Allah says "and those in whose wealth is a recognized right. For the (needy) who asks and him who is prevented (for some reason from asking)" *وَالَّذِينَ فِي أَمْوَالِهِمْ حَقٌّ مَّعْلُومٌ لِلسَّائِلِ وَالْمَحْرُومِ* (Al-Ma’arij: verses 24-25). Abu Bakr Al-Siddiq (may Allah be pleased with him) said of the renegades of giving Al-Zakah "I swear by Allah I will fight whoever separates praying from giving Al-Zakah; Al-Zakah is giving back for having money. By Allah if they keep a camel of Al-Zakah that they used to give to the Prophet Muhammad (peace and blessing of Allah be upon him) I will fight them over it" agreed upon (القرضاوي، 2006، 108، 2002). Hence most of the jurisprudents decreed the obligation of Al-Zakah on the money of children and insane people (القرضاوي، 2006، 122)
also denied imposing Al-Zakah on both creditor and debtor because of the duality of giving out Al-Zakah (القرضاوي، 2006، 136).

This purpose is important for two reasons:

First: Al-Zakah aims to cut a specific amount of money, voluntarily or compulsively, whether the money owner wishes or refuses.

Second: Al-Zakah is dependent on financial circulation. Al-Zakah base (the specific amount on which Al-Zakah is imposed) and its percentage vary according to the form of the property; Al-Zakah of gold or silver is different from that of crops, Al-Zakah of crops is different from that of cattle, and Al-Zakah of real estates is also different from that of merchandise. So, as the owner changes his property from one form into another, his position from Al-Zakah will differ to the limit that he might be exempted from it even if the value of his properties hugely exceeded the minimum amount on which Al-Zakah is imposed on other forms of properties. What could seem to some people a kind of Al-Zakah evasion has an important developmental dimension that will be discussed later.

1.2 CIRCULATING THE MONEY AND Hoarding Reduction.

Allah says "What Allah has bestowed on His Messenger (and taken away) from the people of the townships, belongs to Allah, to His Messenger and kindred and orphans, the needy and the wayfarer; so that it may not make a circuit between the wealthy among you"

وَلِلرَّسُولِ وَلِذِي الْقُرْبَى، وَاللَّهِ وَمَلَأِي عَلَيْهِمْ مَّا أَفَاء اللَّهُ مِنْ أَهْلِ يَاء مِنكُمْ (Surat Al-Hashr, verse 7), He also says "And there are those who bury gold and silver and spend it not in the way of Allah. announce unto them a most grievous penalty"  وَالَّذِينَ يَكْنِزُونَ الذَّهَبَ وَالْفِضَّةَ فِي سَبِيلِ اللَّهِ فَبَشِّرْهُم بِعَذَابٍ أَلِيمٍ (Al-Tawba, verse 34), and Omar Bin Al-Khattab (May Allah be pleased with him) says "use orphans' money in trade so it doesn't get eaten by Al-Zakah" (زيدان، 2000، 346).

Looking at the direct effect of Al-Zakah, represented by cutting a small rate of the property and giving it to the Miskeen⁴ (Needy), might make this purpose seem very insignificant, but once we consider the ability of Al-Zakah to stimulate investment, growth, and transference of properties from unprofitable assets to profitable ones, this purpose will seem quite significant. Al-Zakah means growth, Allah (SWT) says "Allah will deprive usury of all blessing, but will give increase for deeds of charity: For He loveth not creatures ungrateful and wicked"

"يَمْحَقُ اللَّهُ الْرَّبَا وَيُرْبِي الصَّدَقَاتِ وَاللَّهُ لاَ يُحِبُّ الْمُعْدَسَةَ وَاللَّهُ لاَ يُحِبُّ الْمُعْدَسَةَ (القرضاوي، 2006، 311)

⁴A poor is defined by jurisprudents as a person who has no sufficient money or appropriate lawful earning. The Miskeen, on the other hand, has an amount of money or an almost sufficient lawful earning to provide for himself and those whom he provides for yet it is not completely sufficient. Cf. (القرضاوي، 2006، 521)
(Al-Baqara: verse 276), and He also says, "That which ye lay out for increase through the property of (other) people, will have no increase with Allah, but that which ye lay out for charity, seeking the Countenance of Allah, (will increase): it is these who will get a recompense multiplied" (Al-Room: verse 39). For growth to be realized through Al-Zakah, we must have economic mechanisms that employ Al-Zakah instead of usury in growing and investing money, and this is the mission of the Muslim economist.

From the economic point of view, if we take into consideration the division proposed by Dr. Al-Qaradawi, according to which the Zakat falls into two types; in the first, Zakat is taken from both its value and its return once a year at a rate of 5.2% such as zakat on cash and trade goods, and in the second zakat is taken from its return only when the return is achieved, at a rate ranging between 2% -11% as zakat on crops (Al-Qaradawi, 2006, 442). The relationship of zakat with economic growth can be explained as follows:

1. The Zakat of the first type is equivalent to 2.5% annually of the value of capital in the Hijri calendar, and about 2,577% in the Gregorian calendar, and this percentage does not differ significantly from the rate of population growth in societies that do not impose legal or cultural restrictions on procreation such as Arab societies, (Using the t-student test, it is possible to compare the annual population growth rates in the Arab world for the period 1960 to 2019 taken from the World Bank data with the ratio of 2,577%, to find out whether there is a significant difference between the population growth rates and the rate specified for zakat, as the result of the test appears upon its implementation In the STATA program that the probability distribution of population growth at the 95% probability level is between 2.53% and 2.75%), this means that zakat is deducted from the funds that were not invested during the year or invested in non-productive activities equivalent to the population growth rate or equivalent to a percentage the growth of the labor force, as this deducted money is directed to groups that lack money through which to raise their productivity. At the macro level, the process of redistributing capital from the categories in which idle capital accumulated to the poor groups that lack capital leads to an increase in the productivity of capital and labor productivity. The category from which zakat is deducted increases the accumulated capital invested in non-productive activities, which makes the returns to capital are low. As for the group to whom zakat is paid, they lack capital and thus have low labor productivity. Thus, the redistribution of capital through zakat increases the overall productivity in the economy and this raises the rates of economic growth.

2. As for the second type of money, its zakat represents a percentage of the achieved product. The opinions of the majority of jurists have varied between 5% or 10%, but what is important about this type of zakat is that it is in kind, meaning that it is paid from the same product, which forces producers to increase production by the same percentage of Zakat, and then employing a larger number of workers, and if we take into account the existence of a natural unemployment rate ranging between 6% and
4% (Case, et al, 2012, 447), then increasing production and employment by 5% at least to pay zakat dues will not cause pressure on wages, but leads to an increase in overall productivity through the employment of unemployed people. Zakat, whether on capital or output, will contribute to increasing economic growth, reducing unemployment, and achieving development. Thus, the linguistic concept of Zakat (growth) coincides with its economic function.

1.3. ELIMINATING POVERTY AND FULFILLING NEEDS.

The effectiveness of Al-Zakah lies in extricating the poor from poverty to the best possible extent to reduce the number of those who deserve Al-Zakah or at least their rate, in addition to fulfilling some other needs stated by Allah (SWT) in the following verse "Alms are for the poor and the Miskeen, and those employed to administer the (funds); for those whose hearts have been (recently) reconciled (to Truth); for those in bondage and debt; in the cause of Allah. and for the wayfarer: (thus is it) ordained by Allah, and Allah is full of knowledge and wisdom" (Al-Tawba: verse 60). Fulfillment of needs can be realized directly through distributing Al-Zakah to those who deserve it, or indirectly through employing Al-Zakah in directing the resources towards fulfilling the society's needs through loaning for example, as will be discussed next.

1.4. Economic Development through directing resources towards creating productive assets.

There are two types of properties on which Al-Zakah is obligatory:

a) Circular capital, which is directly used in the sale and purchase like gold and silver, and trade money, whether consumer goods (clothes, foods, ...etc.) or capital goods (cars, real estates, capital devices, and other goods that can be acquired for selling and not for use). On this type of property, Al-Zakah is imposed on the value of the property.

b) Fixed capital, which is not used directly in sale and purchase, instead, it is used to get the money that is used for sale and purchase such as arable lands that produce crops, barns that produce food products, and factories that produce manufactured goods. For this type of capital Al-Zakah according to The Islamic Fiqh Academy is imposed on returns, not on the value of the plant asset (4). This differentiation in Al-Zakah amount between types of capital will encourage capital owners to continuously transfer their money into productive assets to avoid imposing a large amount of Al-Zakah on their money.
These four purposes will integrate to steer the wheel of economy in a way that realizes a continuous investment of the money, which will change Al-Zakah from being a catalyst in realizing the goals pursued by today's economic and political systems, like reducing poverty and motivating demand, into being the principal motor of economic activities on both institutional and personal levels. Achievement of these purposes might turn into a goal pursued by the Muslim economist by inventing mechanisms inspired by the economic rules of life to employ Al-Zakah in directing the economic behavior of individuals and institutions towards realizing the economic purposes of Al-Zakah, and this will be discussed in the next section. These purposes can be transferred into quantitative measures and digital indicators to be used in mathematical and logical models as functions that can be expanded by controlling the variables included in the mechanisms of Al-Zakah employment as will be explained in the final section of this paper.

2. AL-ZAKAH AND ECONOMIC DEVELOPMENT

Economic growth, as we know, refers to the relative increase in the country's production or the average income per person. Development, on the other hand, refers to the economic growth associated with changes in the distribution of production and economic structure (Nafziger, 2006, 15). From this perspective, it can be said that Al-Zakah motivates economic development (i.e. increasing productive assets) through imposing Al-Zakah on the returns of productive assets, not on the capital, According to the Islamic Fiqh Academy (مجمع الفقه الإسلامي، 1985). Al-Zakah on arable lands, factories, and other capital assets is estimated according to their returns and not on the value of these assets.

From a cost and benefit perspective, the variance in the specific amount on which Al-Zakah is imposed according to the nature of the capital asset means the reduction of the costs of capital directed towards aspects of economic development. If a person, for example, has one hundred thousand dollars invested in commodity trade or pasture, he will have to pay 2.5% of the money, that is 2500$ whether he gains or loses in his investment. Whereas he won't have to pay any of that if he were to invest the money in agriculture, building barns for fattening cows or sheep by feeding, or constructing productive factories as he will only have to pay Al-Zakah on the returns of the farm, barn, or factory in a percentage 2.5 % of the returns according to the Opinion of the Islamic Fiqh Academy (مجمع الفقه الإسلامي، 1985, 115) and 10% of the returns according to the opinion of DR. Al Qaradawi (القرضاوي، 2006، 442). Consequently, Al-Zakah will not be paid unless there are profits, and its amount will be much less, supposing that the value of the profits will represent only a small percentage that might not exceed 10% of the original capital asset.
2.1. AL-ZAKAH FOUNDATION AND THE LOANING PROCESS

The difference of Al-Zakah on capitals according to the investment field can be used in finding mechanisms that depend on the principle of cost and benefit in collecting the money and directing it towards economic development fields. Here we will focus on the topic of loaning and how’s that paying Al-Zakah one time a year According to (الغرياني، 2002، 43) allows the application of a mechanism that motivates individuals to loan money that can be directed towards increasing capital assets provided paying Al-Zakah just once.

This mechanism is based on creating a foundation concerned with collecting zakat funds and distributing them to the beneficiaries, by using lending as an incentive for individuals to pay their zakat to it. The foundation offers individuals to lend their savings and in its return lending those savings to others. As for lenders, after they get their money back, will have a preference in obtaining loans from the foundation, but only after they pay their zakat funds of the money that they lent to the foundation for one year. In this way, the foundation will be able to collect the zakat funds and pay it to whom it is due. This process of lending will activate the economy, increase the level of income by operating idle funds. This increase in incomes itself means increasing the Zakat base, i.e. increasing its resources. And finally, providing loans means the possibility of increasing capital assets that increase the sources of income for individuals and society. These loans take many individuals out of the circle of poverty to the circle of wealth and turn them into payers of zakat after they were receivers, as will be clarified later.

In practice, the foundation can be governmental or has authorization from the government with the community monitoring, whereby individuals lend their funds that exceed their needs to the foundation in the form of a fully paid amount or in the form of periodic payments (monthly or yearly). On the other hand, whoever lent to the foundation an amount of money in the past and recovered his money is entitled to apply for a loan from the foundation if the foundation has funds prepared for lending, where the funds intended for lending are distributed among the applicants to borrow in proportion to their contributions to lending the foundation in the past, i.e. that the amounts of loans that the borrowers will receive may be higher or less than, or equal to what they lent to the foundation, according to the funds available in the foundation. As for the loan, the period may be equal to, less or longer than, the period during which they lent the money to the foundation, this is determined by the period of the current lenders. What is important is that the foundation does not have unspent funds, but rather all funds are invested in a good loan, and priority is given to everyone who made a loan through this foundation and paid zakat for that loan for at least one year. A diagram of the money cycle through the Zakat Foundation can be placed on as shown in Figure 1.
This mechanism will achieve more benefit for individuals both consumers and investors, and will also realize Al-Zakah purposes as explained below:

First- Individual's benefit: through this mechanism, a person can save half the time needed to fulfill any of his basic needs like buying a house, land, a car, or any other possession that costs a large amount that can only be secured through saving for quite a long time. In the case of being an investor, a person can also save half the time needed to expand his capital assets and speed up the increase of returns from his new investment.

Second- advancement in realizing the purposes of Al-Zakah: this mechanism realizes more than one purpose of Al-Zakah such as the following:

1. Giving out of the deposited money to Al-Zakah Foundation. This money usually comes from a person's income gained by working.
2. Fulfilling human needs directly and indirectly. The direct way is represented by giving the poor his share of Al-Zakah cut from that money, for there is no mechanism in Muslim societies that ensure taking the poor's right from the rich. Besides, assets targeted by Al-Zakah have usually buried assets that are hard to estimate and take Al-Zakah out of, so this mechanism can help by itself in increasing Al-Zakah resources. Whereas the indirect way is represented by helping the depositors themselves in fulfilling their needs through offering them loans that could facilitate need fulfillment in half the time needed if they had not deposited their money in the foundation. If a person for example needs a house and has to wait 10 years to save the needed amount, he can now get the house within five years only if the deposits in the foundation for five years, so that he can, after this period, borrow the same amount of the money deposited in the first five years.

3. Operating the money and not keeping it static. Savings deposited in Al-Zakah foundation by individuals will be loaned to another party, be it a person or an organization, to be used in buying capital assets, to speed up gaining the returns of these assets to be used in fulfilling consumer needs and increasing investment revenues.

4. Increasing capital assets represented by real estate, productive machines, and others are considered capital assets. As the nature of these loans mainly serves those who wish to get an expensive and long-term yield commodity that is worth giving up the short-term benefit of the money probably for many years to gain higher future profits. Capital commodities achieve such benefit in two ways: the first is represented by the flow of benefits or new incomes, like housing, real estate returns, and machines' revenues, gained by the money owner after getting the capital commodity and for a period that exceeds the debt payment period. The second is represented by decreasing costs through exempting capital asset value from Al-Zakah especially in countries that oblige their citizens to pay Al-Zakah such as Saudi Arabia, Sudan, and Yemen. Hence, the borrower's advantage lies in investing the loan by increasing his possession of capital assets instead of directing the money towards commodity trade, or increasing his cattle for example, because by doing that the amount of Al-Zakah imposed on the reclaimed and borrowed money will increase after both types were exempted from it.

2.2 Justifications for giving priority to lending those who provided a good loan to the foundation in the past
The justifications for giving priority to lending those who provided a good loan to the foundation in the past are:
1. Guarantee of obtaining the loan back later, because whoever has not lent to the foundation, it is difficult to ascertain his ability to repay because he does not have
a credit history proving his ability to repay the loan. As for those who have lent the foundation before, he has a credit history represented in his saving ability that expresses his ability to repay also.

2. Encouraging community members to save and reduce consumer expenditures.

3. Directing loans towards increasing capital and productive assets that generate returns or savings in costs so that the loan is repaid from the returns or from what has been saved from costs. This requires that borrowers should have financial surpluses for their basic needs and this applies to those who have previously lent to the foundation. As for borrowers who have not previously lent the foundation, their loans may be to meet their basic consumption needs whose current income is not sufficient to meet them, and those people are either poor who deserve zakat and not lending because lending will make them poorer, or maybe wasting all their money without saving anything for the future: and it is not correct to lend them, as they may come under the description of fools who do not behave well in the money.

4. Requiring borrowers to pay zakat on previous funds that they had lent to the foundation as a condition for obtaining a loan, reinforces the importance of restricting lending to those who previously lent to the foundation, as the foundation cannot count the money of those who had not lent it in the past, and therefore it is not possible to oblige them to pay zakat for their funds which remain for more than a year old.

3. AL-ZAKAH PURPOSES AND ECONOMIC THEORIZATION

Every economic theory has two bases: hypothesis and logical analysis. Hypotheses can be divided into two types. The first is related to the current economic system, and the second is related to the individual's psychological tendencies which control his response to economic stimuli.

Al-Zakah purposes can become goals for the Islamic economic system as a start. Al-Zakah rules and regulations of economic procedures like forbidding interest (usury) can represent the type of hypotheses related to the economic system. On the other hand, the psychological bases which control a person's behavior in his endeavor to fulfill his materialistic needs during his life represent the second type of hypothesis which controls the economic theory. Logical analysis is the common factor among economic theories and resembles a measure for deciding theoretically the acceptance or refusal of any relation between economic variables.

Hence, it is possible to work on formulating theories to interpret the behavior of economic units under the Islamic economic system's hypotheses, and hypotheses of individuals' economic behavior. In this part of the paper, a model for theorization on both micro and macro levels will be presented. The micro-level tackles the individual's economic behavior regarding his tendency to save; whereas the macro-level tackles the advancement mechanism in fulfilling the basic needs of the society in general.
3.1. AL-ZAKAH MOTIVE AND THE ECONOMIC BEHAVIOR.

Individuals' stance of Al-Zakah can be divided into two types: those who pay Al-Zakah and those who deserve it. The difference between the two is that Al-Zakah payer has enough income to fulfill his basic needs and save to secure better future living standards. Al-Zakah deserver, on the other hand, doesn't have enough money to fulfill his basic needs let alone save some. Analysis of economic behavior will be limited to Al-Zakah payer under two types of hypotheses:

First: system-related hypotheses, represented by obligating Al-Zakah, forbidding usury, having Al-Zakah foundation that loans money according to the loaning for borrowing mechanism explained earlier, exempting debt from Al-Zakah (According to the opinion of Al Maliki doctrine), and imposing Al-Zakah on a person's saved money considering it surplus to basic needs.

Second: individual's behavior-related hypotheses, represented by Al-Zakah payer's endeavor to fulfill his basic needs and reach economic sufficiency level then work on raising his living standard through saving to get a capital that yields future benefits.

According to this hypothesis, it can be said that an individual divides his disposable income $Y_d$ into consumption $C$ and saving $S$ as illustrated in the following formula:

$$Y_d = C + S$$  \hspace{1cm} (1)

Disposable income is income after cutting off the tax $X$ and zakat $Z$, meaning that:

$$Y_d = Y - Z - X$$  \hspace{1cm} (2)

This shows that consumption and saving are related to the individual's income after paying Al-Zakah and tax provided that the individual is not a poor or a Miskeen. Poverty is expressed by the poverty line calculated in international statistics. Miskeen is being over the poverty line. and the following formulae illustrate income distribution:

$$C = C_0 + cY_d$$ \hspace{1cm} (3)

$$S = -C_0 + sY_d,$$ \hspace{1cm} (4)

Where $c$ and $s$ represent two percentages and can be called respectively 'marginal propensity to consume' and 'marginal propensity to save', while $C_0$ represents the independent income which is not connected to the individual's income as it represents the minimum individual's consumption to stay alive.

Al-Zakah is connected to the amount of saving, that is:

$$Z = 0.025S$$

An individual divides his income between consumption and saving depending on the amount he wishes to borrow and the determined time for borrowing. According to
this, the time needed to get the amount depends on the amount he saves in Al-Zakah foundation of his annual income in a form of free interest loans

For example, It can be assumed that the Zakat foundation can give borrowers loans equal to the sum of the amounts they have lent to the foundation in the past, and the repayment period is equal to the period in which the funds stay in the foundation as loans granted to the Zakat Foundation. The method of repayment is similar to the method they used in providing loans to the foundation (monthly or annual installments or lump sum). It can also be assumed that the foundation requires borrowers to pay 2.5% of the value of the loans they have recovered from the foundation before they apply for borrowing.

Under these assumptions, if a person achieves a surplus in annual income over his basic needs by ten thousand dollars, and wants to buy an apartment for one hundred thousand dollars, he can save this amount within ten years if he saves all the surplus income. But he can also put the surplus of his annual income in the Zakat Foundation, and after about five years and forty-five days (equivalent to 5,125 years), he will have loaned the Zakat Foundation a good loan of 51250$ and in this case, he can recover what he loaned to the foundation and apply for a loan of 50 thousand dollars. After he pays zakat for what he previously loaned to the foundation, which amounts to 1,250$, he would have saved the price of the apartment roughly in half the period required to provide that amount if he did not put his surplus income in the zakat foundation in the form of good loans. However if the person saved three-quarters of his surplus income in the form of good loans At the Zakat Foundation, it will be able to save the price of the apartment within about six years and ten months (equivalent to 6.83 years), and in general, the time required to obtain a targeted loan from the Zakat Foundation can be calculated through the following equation:

\[ T = \frac{A}{S/(1.025)} \]  

(5)

Where \( T \) represents the time required to obtain the target loan, \( A \) is the target loan and \( S \) is the annual savings amount. The amount 1.025 represents the zakat percentage which is deducted once. Table (1) and Figure (2) illustrate the relationship between annual savings and the period required to save to obtain the targeted loan, which, according to the aforementioned example, is equivalent to 50 thousand dollars.
If the person pays zakat after obtaining the target loan, he is supposed to receive returns from this loan. For example, the loan may be spent on buying a capital asset that generates returns on him that continue over the time expected to live and benefit from this asset. For that person has an annual income of ten thousand dollars, if he is at the age of 25, and he is expected to be no more than 100 years old, then he can transfer all this income to the Zakat Foundation for a period of 5 years and 45 days so that he has 51250 dollars, and after paying the zakat amounting to 1250 he can apply to obtain a loan of 50 thousand dollars to buy an apartment worth 100,000 dollars, for example, and its annual rent is 6 thousand dollars, so his annual income will increase by 6 thousand dollars annually throughout his life, meaning that the maximum return that an individual can get if he remains alive up to the age of 100, it can be calculated according to the following formula:

\[ R = r_n - A \]  
\[ n = N - B - T \]  

### TABLE 1

| Annual Savings (S) | 10000 | 9000 | 8000 | 7000 | 6000 | 5000 | 4000 | 3000 | 2000 | 1000 |
|-------------------|-------|------|------|------|------|------|------|------|------|------|
| Lending duration in years (T) | 5.125 | 5.694 | 6.406 | 7.321 | 8.542 | 10.250 | 12.813 | 17.083 | 25.625 | 51.250 |

### Figure (2)

Relationship between annual savings and period in years to get loan of 50000$
Where $R$ represents the maximum return an individual can get from a loan, $r_t$ is the annual return of the loan, $n$ is the maximum number of years during which an individual can receive the loan returns, $N$ is the number of years of maximum life, $B$ is the age of the individual when the savings decision is made, $T$ is the period for which the individual must lend the zakat foundation a certain amount to obtain the right to request the target loan, and $A$ the target loan, and by applying the example shown in Table (1) and Figure (2), the relationship between the annual savings amount and the expected maximum loan returns can be calculated, as shown in Table 2 and Figure 3.

### TABLE 2

The relationship between maximum future returns and amount of annual savings

| Annual savings (S) | Period of returns (n) | Maximum returns (R) |
|-------------------|-----------------------|----------------------|
| 10000             | 69.875                | 369250               |
| 9000              | 69.306                | 365833.3             |
| 8000              | 68.594                | 361562.5             |
| 7000              | 67.679                | 356071.4             |
| 6000              | 66.458                | 348750               |
| 5000              | 64.750                | 338500               |
| 4000              | 62.188                | 323125               |
| 3000              | 57.917                | 297500               |
| 2000              | 49.375                | 246250               |
| 1000              | 23.750                | 92500                |
For a more realistic analysis, the person’s mode of thinking in dividing his income between current and future consumption should be taken into consideration, as several behavioral considerations determine an individual’s decision like the individual’s need of the current income, as it is illogical to say that an individual can save his whole income no matter what the expected future return might be. He may give up the first, second, and third thousand of his income but he would never give up the last thousand anyhow. Once an individual gives up a unit of his income, the next unit will gain more importance, besides, his future consumption units are not guaranteed because even if returns were certain, the individuals being alive to consume that future return is not certain. The longer the time needed to get the future consumption the less the importance it has in the individual’s mind.

If we assume that the loan’s benefit to the individual is equal to the maximum expected returns from the loan multiplied by the possibility of dispensing with the annual savings G and the probability of obtaining the return P and that the possibility of dispensing with any amount saved S equals the correct one minus the proportion of that amount to the total surplus income Y, And that the probability of obtaining the return is the period of obtaining the returns divided by the maximum expected life N, then the benefit achieved by the individual U can be calculated from the expected loan returns, through the following equation:

\[
U = n \times G \times P - A
\]  \hspace{2cm} (8)

\[
G = 1 - \frac{S}{Y}
\]  \hspace{2cm} (9)
\[ P = \frac{n}{N} \] (10)

Returning to Table (2), the benefit achieved from the loan can be calculated as shown in Table (3) and Figure (4).

**TABLE 3 The relationship between saving and saving utility**

| Annual Savings | saving duration | The duration of returns (in years) | Maximum returns of loan | the probability of getting returns | Giving up capability | Loan Utility |
|----------------|-----------------|-----------------------------------|-------------------------|-----------------------------------|----------------------|--------------|
| 10000          | 5.125           | 69.875                            | 419250                  | 0.69875                           | 0                    | -50000       |
| 9000           | 5.694444        | 69.30556                          | 415833.3               | 0.693056                          | 0.1                  | -21180.4     |
| 8000           | 6.40625         | 68.59375                          | 411562.5              | 0.685938                          | 0.2                  | 6461.23      |
| 7000           | 7.321429        | 67.67857                          | 406071.4              | 0.676786                          | 0.3                  | 32447        |
| 6000           | 8.541667        | 66.45833                          | 398750               | 0.664583                          | 0.4                  | 56001.04     |
| 5000           | 10.25           | 64.75                             | 388500               | 0.6475                            | 0.5                  | 75776.88     |
| 4000           | 12.8125         | 62.1875                           | 373125               | 0.621875                          | 0.6                  | 89222.27     |
| 3370.933       | 15.2035         | 72.09                             | 59.7965              | 358779                            | 0.597965             | 0.662907     |
| 3000           | 17.08333        | 57.91667                          | 347500               | 0.579167                          | 0.7                  | 90882.29     |
| 2000           | 25.625          | 49.375                            | 296250               | 0.49375                           | 0.8                  | 67018.75     |
| 1000           | 51.25           | 23.75                             | 142500               | 0.2375                            | 0.9                  | -19540.6     |

From Table (3) it becomes clear that the highest benefit achieved by an individual from saving is achieved when he saves 3,000 thousand dollars of surplus income for approximately 17 years. If we want to define more precisely the optimal level of saving, we can calculate the utility function² and then set the result of the calculus equal to zero. Then we can determine the optimum saving amount at which the

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² The utility function can be written from the data of the above example, namely \( N = 100 \), \( B = 25 \), \( A = 5000 \), \( r = 6000 \), \( Y = 10000 \) according to the following formula:

\[ U = 333625 - 33.75 \times S - 477009375 \times S^{-1} + 157593750000 \times S^{-2} \]
marginal utility\(^3\) is equal to zero and this condition is achieved at the saving level of $3370.93 as shown in Figures (4) and (5).

Maximum saving utility depends on the individual's income (assuming the stability of other factors); the lower the income is the lower the saving utility curve gets until it is

\[ \frac{\partial U}{\partial S} = -33.75 + 477009375 \times S^{-2} - 31518750000 \times S^{-3} \]

By setting this function equal to zero and solving it using the solver instruction in Excel, we can get the amount of saving that brings the most benefit of the savings. In the above example, it is $3370.93.

\(^3\) The marginal utility function can be written according to the data of the above example according to the following formula:

- By setting this function equal to zero and solving it using the solver instruction in Excel, we can get the amount of saving that brings the most benefit of the savings. In the above example, it is $3370.93.
completely in the negative area and then the individual will find no benefit in saving. Available amounts for saving will be very small which means that the person has to wait for a very long time to get the required loan and then he will find that the time left of his life after getting the loan to benefit from the asset returns does not compensate the utility of the saved amount. In such a case, the individual can be considered poor or a Miskeen because he cannot completely cover his needs let alone saving to fulfill basic needs that require saving, such as securing a residence. Once the saving utility curve passes the zero line, the person can be considered rich, as he is capable of saving and will pay Al-Zakah if he is to deposit in Al-Zakah foundation.

The point at which the saving utility curve touches the horizontal axis (where the saving utility equals zero) can be called the Maskana line and it is a line which the person underneath it can be at best considered a Miskeen. In the previous example, the contact point was at 2901.25$ income, as illustrated in Figure 6.

| Annual Savings | saving duration | The duration of returns (in years) | Maximum returns of loan | the probability of getting returns | Giving up capability | Loan Utility |
|----------------|----------------|-----------------------------------|-------------------------|-----------------------------------|----------------------|--------------|
| 2901.25        | 17.6648        | 57.3352                           | 344011.2                | 0.573352                          | 0                    | -50000       |
| 2700           | 18.98148       | 56.01852                          | 336111.1                | 0.560185                          | 0.069367             | -36939.3     |
| 2500           | 20.5           | 54.5                              | 327000                  | 0.545                             | 0.138302             | -25352.4     |
| 2300           | 22.28261       | 52.71739                          | 316304.3                | 0.527174                          | 0.207238             | -15443.6     |
| 2100           | 24.40476       | 50.59524                          | 303571.4                | 0.505952                          | 0.276174             | -7581.68     |
| 1900           | 26.97368       | 48.02632                          | 288157.9                | 0.480263                          | 0.34511              | -2239.69     |
| 1700           | 30.14706       | 44.85294                          | 269117.6                | 0.448529                          | 0.414046             | -21.7148     |
| 1675.711       | 30.58403       | 44.41597                          | 266495.8                | 0.44416                           | 0.422418             | -170215      |
| 1500           | 34.16667       | 40.8333                          | 245000                  | 0.408333                          | 0.482981             | -1681.73     |
| 1400           | 36.60714       | 38.39286                          | 230357.1                | 0.383929                          | 0.517449             | -4236.42     |
| 1300           | 39.42308       | 35.57692                          | 213461.5                | 0.355769                          | 0.551917             | -8085.72     |
| 1200           | 42.70833       | 32.29167                          | 193750                  | 0.322917                          | 0.586385             | -13312.8     |
| 1100           | 46.59091       | 28.40909                          | 170454.5                | 0.284091                          | 0.620853             | -19935.4     |
| 1000           | 51.25          | 23.75                            | 142500                  | 0.2375                            | 0.655321             | -27821.5     |
| 900            | 56.94444       | 18.05556                          | 108333.3                | 0.180556                          | 0.689789             | -36507.6     |

The word 'Maskana' is an origin noun of Miskeen
It is clear from a table (4) that when the highest possible income surplus is 2901.25, the maximum benefit from saving is when the individual saves 1675.711 $ for 30.58 years or about 31 years, and then the maximum savings benefit will be almost zero. This means that for any income Less than $ 2901, the owner will not have any benefit from saving, and this is that the individual will not be able to increase his capital assets that raise his surplus income.

The existence of the zakat foundation and the adoption of the lending and borrowing mechanism described above is necessary to lower the level of poverty. As if we assume the absence of a lending and borrowing mechanism, the individual must wait for a much longer period to obtain the price of the capital asset, which means reducing the period of benefit from the capital asset and this, in turn, will reduce the loan utilization function. Going back to the previous example, if we assume that there is no party providing loans to individuals, then the individual has to save for a longer period to fully save the price of the capital asset and the result is that the income of the poverty level will rise to the level of 5665.89 and the reason is that the saving period will be longer and this leads to a decrease in the probability of benefiting from saving and thus to a decrease in the utility of savings function. That means the mere existence of a lending and borrowing mechanism will contribute to a significant reduction in the number of the needy (as the number of the poor whose income does not exceed 5665.89 will decrease to include only those whose income does not exceed 2903.77, as shown in the table. (5), and (7).
TABLE 5 The relationship between saving and saving utility at Maskana line in the absence of a lending and borrowing mechanism

| Annual Savings | saving duration | The duration of returns (in years) | Maximum returns of loan | the probability of getting returns | Giving up capability | Loan Utility |
|----------------|----------------|-----------------------------------|-------------------------|-----------------------------------|----------------------|--------------|
| 5665.889       | 17.64948       | 57.35052                          | 344103.1                | 0.573505                          | 0                    | -50000       |
| 5099.3         | 19.61054       | 55.38946                          | 332336.8                | 0.553895                          | 0.1                  | -31592       |
| 4589.37        | 21.78948       | 53.21052                          | 319263.1                | 0.532105                          | 0.19                 | -17722.5     |
| 4130.433       | 24.21054       | 50.78946                          | 304736.8                | 0.507895                          | 0.271                | -8056.2      |
| 3717.39        | 26.9006        | 48.09944                          | 288596.4                | 0.480994                          | 0.3439               | -2262.16     |
| 3345.651       | 29.88955       | 45.11045                          | 270662.7                | 0.451104                          | 0.40951              | 0.004291     |
| 3011.086       | 33.21061       | 41.78939                          | 250736.3                | 0.417894                          | 0.468559             | -903.84      |
| 2709.977       | 36.90068       | 38.09932                          | 228595.9                | 0.380993                          | 0.521703             | -4563.06     |
| 2438.979       | 41.00076       | 33.99242                          | 203995.5                | 0.339992                          | 0.569533             | -10499       |
| 2195.081       | 45.5564        | 29.4436                           | 176661.6                | 0.294436                          | 0.61258              | -18136.3     |
| 1975.573       | 50.61822       | 24.38178                          | 146290.7                | 0.243818                          | 0.651322             | -26768.5     |
| 1778.016       | 56.24247       | 18.75753                          | 112545.2                | 0.187575                          | 0.686189             | -35514.1     |
| 1600.214       | 62.49163       | 12.50837                          | 75050.23                | 0.125084                          | 0.71757              | -43263.8     |
| 1440.193       | 69.43514       | 5.564858                          | 33389.15                | 0.055649                          | 0.745813             | -48614.2     |

Figure 7
The relationship between saving and saving utility at Maskana line in the absence of a lending and borrowing mechanism.
The Maskana line is also affected by the rule of imposing zakat and its duration. If zakat is imposed on an annual basis on the loans owed by the zakat foundation this will lead to an increase in the lending period necessary to reach the target lending due to the annual deduction of savings. And this means that individuals whose incomes are relatively low will have to wait for much longer periods to lend the required amount. Thus the period of benefit that they achieved will decrease if they obtain the loan from the Zakat Foundation, and this leads to an increase in the Maskana line. Looking at the aforementioned example, imposing zakat annually on the loans owed by the Zakat Foundation will lead to an increase of the Maskana line to $4020.92, that the number of poor people, which includes everyone whose income does not exceed $2,092.25, also will include those whose income does not exceed $4,020.92, as shown in Table (6) and Figure (8).

**TABLE 6** The relationship between saving and saving utility at Maskana line in the absence of a lending and borrowing mechanism

| Annual Savings | saving duration | The duration of returns (in years) | Maximum returns of loan | the probability of getting returns | Giving up capability | Loan Utility |
|----------------|-----------------|-----------------------------------|-------------------------|----------------------------------|----------------------|--------------|
| 4020.92        | 15.07865        | 59.92135                          | 359528.1                | 0.599213                         | 0                    | -50000       |
| 3800           | 16.15494        | 58.84506                          | 353070.4                | 0.588451                         | 0.054943             | -38584.9     |
| 3600           | 17.27312        | 57.72688                          | 346361.3                | 0.577269                         | 0.104683             | -29069.4     |
| 3400           | 18.56051        | 56.43949                          | 338636.9                | 0.564395                         | 0.154422             | -20486       |
| 3200           | 20.0595         | 54.9405                           | 329643                  | 0.549405                         | 0.204162             | -13024.7     |
| 3000           | 21.82825        | 53.17175                          | 319030.5                | 0.531718                         | 0.253902             | -6929.55     |
| 2800           | 23.94904        | 51.05096                          | 306305.7                | 0.51051                          | 0.303642             | -2518.9      |
| 2600           | 26.54263        | 48.45737                          | 290744.2                | 0.484574                         | 0.353382             | -213.093     |
| 2520.199653    | 27.74773        | 47.25227                          | 283513.6                | 0.472523                         | 0.373228             | 0.100853     |
| 2400           | 29.79461        | 45.20539                          | 271232.3                | 0.452054                         | 0.403122             | -572.595     |
| 2000           | 39.72157        | 35.27843                          | 211670.6                | 0.352784                         | 0.502601             | -12468.7     |
The Maskana line can be considered a basic indication for policies related to imposing and spending Al-Zakah from several aspects such as:

1. This line can be considered a demarcation line between those who deserve Al-Zakah and those who have to pay it.

2. Raising the individual's income level above this line can be a goal for Al-Zakah spending policy. The best way must be chosen to achieve this goal, for example, choosing the best alternative of the following in Al-Zakah spending policies to raise the individual's income rate above the poverty line:
   - First- constantly giving him a sum of money that helps to raise his income above Maskana line.
   - Second- giving him for one time a capital asset to yield profits which will raise his income above Maskana line.
   - Third- loaning him an amount of money to help him get a capital asset that yields him benefits that would enable him to pay back the loan and eventually save.

The first policy takes a relatively long time to get the person out of poverty or Maskana, assuming that part of the given amount will be saved to buy a capital asset that yields benefits to prevent the person from needing Al-Zakah. Whereas the other two policies will have a direct effect in achieving the goal.
3.2. AL-ZAKAH AND ADVANCEMENT IN NEEDS FULFILLMENT.

The previous analysis focused on the economic behavior of Al-Zakah payer which falls under what is known as microeconomics. To get the whole picture we need to move from microanalysis to macro analysis within the frame of what is known as macroeconomics. The aim is to show the effect of loaning for borrowing mechanism through Al-Zakah foundation on fulfilling needs, which is considered of the most important purposes of Al-Zakah, and at the same time, it represents the principal goal of economy.

According to the proposed mechanism helps in need fulfillment in two ways:
The first: the saved money deposited in the foundation to be loaned to another person to use in buying a capital asset that will yield profits that can fulfill some of his needs.
The second: Al-Zakah which is cut from deposited money in the foundation loans. These resources are directed towards fulfilling the needs of those incapable to save which will raise their living standards.

This can be explained by generalizing the previous example on all Zakah payers of the society. Assume there are thirty-one persons whose income is 10000$ per year each; their collective income will be 310000$. The amount of saving that achieves maximum utility for each one is 3371$ per year, which means that the total number of saved money by all thirty-one persons after Al-Zakah cuts is 101130$ per year. This is enough to buy a residential flat that can yield annual profits of 6000 dollars. This means that the savings of the thirty-one persons will lead to a growth in their savings to 316 thousand dollars, that is 1.93% adding to that the amount of Al-Zakah cut which is 2613.3 so the total percent of needs fulfillment is 2.78%.

Here, it is worth mentioning that the gap between saving and investing which by time causes fluctuations in economic growth in capital systems does not exist here. Because all that is saved goes into investment, nothing is saved to be consumed directly by getting usurious benefits. The only resource of income rise and then the consumption is increasing capital assets. This means that growth in the Islamic system— if According to the proposed mechanism was adopted instead of usurious loans— is expected to be stable in the short and long terms.

Along with these positive effects on advancement in needs fulfillment and stability achievement, turning savings through According to the proposed mechanism into capital assets with great returns on the levels of employing economic resources and generating new incomes will help a lot in achieving economic growth and development in a better way than the expected growth rate achieved by saving.

4. CONCLUSIONS:
1. Al-Zakah foundation can become a nucleus for a modern economic system and a motor for the standing wheel of development in many Islamic countries if
innovative mechanisms were used in administrating financial resources. Rules of an individual's economic behavior should be employed in achieving general and personal economic interest in a way that conforms to Al-Zakah purposes and Islamic legal laws in economic procedures.

2. The new rules of the Islamic economic system, which Al-Zakah foundation is a basis for, can form a rich ground for building an Islamic economic theory on the levels of both macro and microeconomic analysis and for finding political tools that distinguish the Islamic economic systems from current economic systems.

3. The Islamic economic systems can be more effective in achieving a stable economic development than current economic systems because it bans usurious transactions (which are considered the main reason for financial crises) and these transactions can be substituted by other mechanisms like According to the proposed mechanism in the process of capital formation which forms the basis of the economic development process.

4. The principle on which the work of Al-Zakah foundation can be based upon in stirring the wheel of growth and economic development is substituting usury for Al-Zakah which conforms with the explicit Quranic indications in the following verses regarding this matter "Allah will deprive usury of all blessing, but will give increase for deeds of charity: For He loveth not creatures ungrateful and wicked" (Al-Baqara: verse 276) and "That which ye lay out for increase through the property of (other) people, will have no increase with Allah. but that which ye lay out for charity, seeking the Countenance of Allah, (will increase): it is these who will get a recompense multiplied" (Arrum: verse 39). This is different from the principle of substituting selling for usury on which Islamic banks are based and which is based on the following verse " but Allah hath permitted trade and forbidden usury" (Al-Baqara: verse 275). This topic requires more detailed research.

5. Islamic economics can be a crucial factor in judging disputed economic matters among Muslim jurisprudents by eliciting related legal purposes and then decide on the most successful opinions in realizing these purposes.

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