A Consumer Model and Social Welfare Based on the Writings of Shibani (750-805 AD, 131-189 AH)

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Abstract

The novelty of Shibani's earning model is its integration of Zakat and other social giving in the social welfare function, which makes the consumer utility a multi-dimensional devotional, material, ethical, social, Shariah-compliant function. In the model, the consumer's income evolves increasingly from imperative earning that covers consumer's basic needs, to recommended earning that covers basic needs of relatives; and to permissible earning that covers the poor's needs. Accordingly, the model has imperative, recommended, and permissible utility. The rich consumer draws additional utility from Zakat spending in favor of the poor consumers. Based on the social solidarity, we show that the marginal earning depends on the first difference between the MPC of lower and upper social groups. The permissible marginal utility is related to the faith interaction and enhances the social utility as social transfer is paid to poor and needy groups.

JEL codes: D1, D6, I3, P46

Keywords: consumer, faith, Zakat, imperative, recommended, permissible, earning, spending, utility.

1. Introduction

After the international financial crisis, there are several academic institutions, such as the Institute for New Economic Thinking (INET 2011), that renew the economic paradigms and exhibit the ethical dimension to understand more the economic and financial behaviors of the individual and groups in the community. Previously, the economic theory of Keynes (1936) involves the animal instincts to explain the individual economic behaviors that are related to the extent of the optimism, pessimism and overconfidence (Pirosca 2011). The ethical utility theory is more relevant to explain some economic behaviors (Khan 2013, Schneider and Krieger and Bayraktar 2011). But, the ethical utility theory needs to be developed knowing that the concept of utility does not adhere to religious teachings (Parada-Contzen and Parada-Daza 2013). We cannot develop ethical dimension and metaphysical faith of human being in economic analysis without considering what is related to the religion which connects the worldly life to the afterlife (Nixon 2007, Barro and McCleary 2006).

Ng and Lee (2015) analyze in details some topics like the cross-cultural consumer behavior and the consumer impulsivity but recognize that there are substantial gaps in the related literature. Such gaps include consumer and faith, consumer and overspending, ethical consumption, and materialism and compensatory consumption that warrant more investigation as traditional topics but with new approaches and renewed concepts. This paper attempts to fill some gaps by analyzing the effects of ethics and Islamic belief holding on the consumer behavior. Despite that the standard economics model attempts to moralize the economic and financial life (Sauer 2003; Sen 1987; Harsanyi 1955), the usual paradigms did only address the materialistic consumer satisfaction subjected to the budget spending constraint, even if the consumer finances his expenses through private banks borrowing.

The society income can be divided into three groups to analyze their consumption efforts by comparing their distinct marginal propensity to consume (hereafter MPC). According to Shibani's (750-805 AD) analysis of the earning, we can model the ethical behavior of the consumer using the Halal utility theory and the layers of earning.[1] Chapra's approach (2000) sets for all layers the ordinal level of imperatives, recommended and permissible needs, instead of multiple layers. The multilayer approach is more appropriate and depends on the income power in Shibani meaning; the layer of needs corresponds to the layer of earning. But, it remains that the variability in satisfying the layer of needs depends on individual layer of earning, time of spending, belief holding and ethics in economic behaviors. Due to the confusion in belonging to the right cluster of income, the consumerism that guides to satisfy the excessive desires, generates selfishness and often leads to frustration and futility of material G&S, because it does not achieve self-welfare.

There are many theoretical papers analyzing the consumer behavior using Islamic economics paradigm as Kahf (1981), Khan (1984 and 1992), Iqbal (1985), Zarqa (1980 and 1992), Ben Jilali and Taher (1989), Mahboub (1991), Zaman (1992), Ben Jilali and Azzamil

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[1] The Halal utility corresponds to lawful utility versus unlawful (Haram) as defined by the Shariah.

(1992), Hasan (2005). For instance, Kahf (1981) included the Zakat[2] rate in the usual utility function. He considered implicitly that the Muslim looks up to maximize his/her worldly life utility and his/her expected afterlife utility functions. Besides, Zarqa (1992) suggested an implicit partial explanation focusing on the comparison between worldly life outcome of the utility function and its afterlife recompense. Hasan (2005) considered the utility function as an analytical tool to measure the expected satisfaction respecting the legal and moral obligations.

By using Shibani classification of earning, we find that the Zakat may increase the overall MPC since it transfers income from lower MPC groups (i.e., rich people) to higher MPC groups (i.e., poor people). Besides, considering the utility function of the wealthy group, we find that the social welfare function and the religious-motivation render the affluent consumer's permissible marginal utility connected to the interaction of his/her belief holding with the change in the utility satisfaction of the poor and middle groups. We show that through the religious faith holding the wealthy group gets not only a unitary value of the elasticity as a limit superior of their asymptotic elasticity of the utility in the worldly life, but also an optimum of the marginal utility with asymptotic elasticity greater than one in the afterlife.

The Zakat effect consists of a redistributive mechanism that increases the income of lower layer of earnings in the society. Such effect works continuously along the time because it depends on the Zakat-period of each member of the wealthy group. The implications of Zakat can be detected in consumption and spending efforts of the lower social groups, meaning that their well-being is improved. The Zakat mechanism, and particularly when it is monitored by government institutions, leads to ameliorate the conditions life of the needy people and it implies economic growth at all. The welfare assistance through Zakat system and voluntary giving reduce the inequalities in earnings and re-initiate the process of satisfaction in all layers of the society, improving thus the quality of life. In Islamic ethical sense, the social solidarity means mutual support that could help to face any economic or financial difficulties at individual or family level. Such solidarity, alimented by emotional bonds, improves the social security system since it is a part of the financial worship system in Islam.

Due to the globalization, the technology processes and the inflation, the Social solidarity has been a priority for both nongovernmental associations and governments to secure the needy people (e.g., Poor Laws in the United Kingdom). According to Bjorvatn (2003, 2006), the effect of globalization on people's disposable income requires increasing redistribution process. The globalization and its social implications, leading to expanded modes of

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[2] Etymologically, the term Zakat means purification in the religious sense because it is a mandatory financial worship. Such purification becomes effective when the income, saving and invested assets reach together a defined threshold, which is determined by the value of 85 grams of pure gold by the current price of the standard gold bar. It consists of transferring money, via government or associations specific channels (or directly if no any channels), to those having incomes below a definite threshold. The Zakat is a soft Islamic-tax because its rate is low varying from 0.025 to 0.10; its system consists of a first re-distribution of the wealth in the economy. For more basic analysis-oriented Islamic economics, the reader can find more details in Hasan (2015), Askari, Iqbal and Mirakhor (2015), and Asutay (2007).

consumption and accelerated growth in credit, exhibit the importance of re-distributional efforts of social community and government through specific programs to reduce the increased inequalities mostly in wealth, education, and housing.

The implemented social solidarity is realized through many mechanisms as Zakat funds, social spending funds (social Infaq) and Waqf[3] funds in addition to other social connections that improve the fraternity between society members whose are individually and collectively responsible. These mechanisms are part of Islamic economics principles. The social solidarity is also subjected to the trust in Islamic government, which can intervene to enhance the poor's through education, health, and infrastructure without impeding economic growth and wealth creation. The institutionalization of Zakat is a State responsibility; however Sadakat and Waqf are running and managed mainly by social foundations and associations.[4]

This paper is organized as follows; by considering Shibani's approach along with the Zakat transfer, the spending model is detailed in Section 2 by analyzing the outcomes of the marginal propensity to spend and the marginal propensity to earn. We also discuss the utility layers depending on the imperative, recommended and the permissible earnings in Section 3, and we conclude in Section 4.

2. Modeling Shibani's Concepts of the Spending

2.1 Concepts of Earning and Spending

If the theoretical economic works of Shibani are not yet explored (Khassawneh 2010, Mustafa 2011), we can explore the Shibani model of spending associated with three levels of earning. The earning includes all Halal sources of income from all Shariah-compliant activities such as the leasing, trade, agriculture and the industry. The theory of consumption remained confined to the conventional economic approach. Shibani's concept of the earning net of the Zakat is much more meaningful than the usual concept of the available income. The Muslim earner may increase his/her attempt in an ethical and worship sense to achieve more self and family expenses. Such consumer behavior is dynamic in its earning processes and connects continuously the worldly life to the afterlife. Besides, Shibani explained the importance of saving, which is fundamental for accumulating capital and increasing wealth, through the permissible abstinence as mentioned in his Kitab AlKassb (The Book of Earning) on page 10: "The decline in spending on the relatives –or blood relationship- leads to his rupture of relations, then the earning is recommended for him to spend for his relatives, after that he can expand his earning and save more money or he can decides that his earn is enough, because among the predecessors -mercy of the Almighty Allah on them- whom saved money and some of them did not save money; then both behaviors are permissible."

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[3] The Waqf is defined as a permanent transfer of any property from personal ownership to ownership of the Almighty Allah. It is managed through a philanthropic sector.

[4] During Omar Ibn Abdulaziz's sovereign (682-720G), the collection of Zakat was effectively implemented by the government in line with prescribed Zakat rules, leading to full satiation of poor groups and an accumulation of Zakat in goods such as cereals, olive oil, dates, etc. (not in money) which could not find poor recipients. This outcome could be more related to the observance of the social and economic justice in Islamic society.

The rationality of the Islamic consumer behavior[5] is augmented by a faith dimension which establishes faith relationships between worldly life and afterlife. There exists a materialistic logic that could conduct to optimal satisfaction in the earthly life. Moreover, if this optimality is based on the afterlife dimension, which is the case for the believers, it will generate augmented afterlife satisfaction too. Such double logic leads to a "dual" utility which can be termed by Falah (i.e. success) used by many Islamic economists. The eternal utility function would apply for the afterlife.[6]

According to Shibani's definition, the concept of earning indicates the acquiring of income through legitimate ways. The earning is one of the most important determinants of spending, as well as the spending on self and family consumption requires self-abstention from the wasteful and the niggardliness to accomplish an accepted spending by the Almighty All-Provider. Also, the social spending of a fraction of the Halal earning is required to maximize the utility in the worldly life and the afterlife. The economic analysis of Shibani makes the consumer utility function a multi-dimensional devotional, material, ethical, social, Shariah-compliant function. There are three layers of earning: (i) the imperative; (ii) the recommended; and (iii) the permissible. Furthermore, Shibani details the self-spending in enlarged meaning which includes the personal spending and the spending for all members of his/her family and his/her parents. Here, the Islamic consumption theory makes progress in the social dimension of the human being compared to the conventional economics analysis in conventional cognitive paradigm, which focuses on the individual selfishness i.e. the egocentricity. According to Shibani, the recommended and permissible earnings of the individual support the implementing of a social spending which improves his/her belief holding or ethical returns. The social spending includes all of the worshipful expenses such as Zakat and others social giving that are allowed and given to the relatives and the other families of the Islamic community.

According to Shibani (750-805), the layers of earning are arranged from imperative earning, recommended earning and the permissible earning, respectively. The imperative earning concerns what meet the basic needs of the individual him/her self, his/her familial dependents and his/her parents through the kindest expenditure. These needs are related to food, clothing, housing, remedy, education and transportation means. The necessary earn helps to settle the previous licit debt, if any, and to make a possible saving effort by deferring a fraction of his/her consumption spending for the coming days.[7]

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[5] The literature in Islamic economics-oriented behaviors is still in its first step as research program about Behavioral Islamic Economics (BIE). There are many complicated issues involving poverty, obesity, charitable giving, increasing faith-holding among others.

[6] As suggested by the reviewer #1, it is relevant to distinguish utility from "Falah" i.e. earthly and heavenly wellbeing, which depend on life, property, faith and intellect.

[7] The utility increases along the three layers of earning. The top social group can satisfy all three levels of utility, but the poorest one i.e. the first layer of earning can face difficulties to meet the first level of utility. Thus, the three groups have access to different G&S to satisfy different needs. The needs of the family have the character of priority, and the imperative needs are not similar between layers of earning.

By requesting the reward from the Almighty Allah and through the recommended earning, the person aspires, in addition to realizing the needs of the individual and his/her dependents, to meet the needs of others members of his/her enlarged family. The marginal income through the recommended earning will be the main financial support of the relatives and the needy of friends who couldn't reach their imperative needs. In Shibani's Kitab AlKassb (The Book of Earning) on page 10: "As for non-parents among blood relationship or Unmarriageable relatives, it is not suggested that the individual increases his/her earning to spend for them. Because their imperative spend is not due on his/her earning except if the wealth of the earner allows such social spending. But, he/she is encouraged to earn more and to spend for them since this behavior fortifies the blood relationship, and the Shariah recommended that." This marginal earning or earning for goodness, serving to spend on the poor and needy groups, is linked to the initial earning that should be basically above the threshold of the Zakat (Nissab). Besides, it should serve to spend for the needy Muslim community to spread the ethics of the social solidarity i.e. organic cohesion of the individual and the family. This solidarity consists of instilling the cooperation and collaboration spirit between the individuals and the families of the Muslim society.

The permissible earning is what expands the earning scope for enlarged spending for him/her self, his/her family and other members of the society. It states the increasing economic responsibility of the individual and his/her family vis-à-vis the Muslim society. Shibani shows that the expansion of the earning stands to be a legitimate request as long as it expands the livelihood of people and leads to the public welfare that develops the community wellbeing. Also, the expansion of the livelihoods through economic investment may shift over time the earning of some needy families to an upper layer of income (second layer). This new income may reach the Zakat threshold, or to earn more to become an affluent family among the families of the third layer of revenue.

The marginal earning, either from recommended or permissible learning, was born from the social solidarity and transferred to the poor and needy group. It is not necessary that it leads to a decline in the MPC of the wealthy group, but may increase even in tiny manner. Assuming that the poor group does not yet cover the essentials needs for a decent living. The transfer of a significant part of the marginal earning to the needy group leads to increase the size of their expenses. Such spending covers food or health or teaching their children or rent housing befitting the number of the family members. If the attempt of marginal earning leads to a marginal increase in the economic growth, it could achieve a better standard life, particularly for the poor group. This attempt is due to the desire of gaining an afterlife reward by the middle and affluent groups of the society. The income transfer to the needy group is equivalent to the sacrifice size by diminishing the recommended utility of the above middle group or/and the permissible utility of the wealthy group. This point will be detailed in section 3. Therefore, the recommended earning or permissible earning distinguishes the growth

system in the Islamic economics and reveals the importance of these variables in explaining the volume change of the consumption spending.[8]

Since the earning is motivated to face the necessities for a decent life leading probably to achieve imperative utilities. The attempt to earn more is explained by the expected dynamic responses to the needs and extra-needs to satisfy the recommended and permissible utilities of the individual and his/her family, respectively. The marginal earning, that drives to a new improved layer, is also a dynamic response to satisfy the necessities of the poor and needy groups and contribute to more social justice. It consists of shifting some purchasing ability from specific groups to lower groups.

The self-control of the consumer depends on the extent of his belief or faith holding which is based on the teachings of Quran and Sunnah. By offering alms, the consumer expects more reward in the hereafter than in the worldly file. The multi-levels of the utility depend on the earning layer and the degree of belief holding. The social responsibility, as outcomes of faith holding, makes the utility function of the wealthy group more sensible to what happens regarding utility for poor (first) and needy (middle) groups. The utility function of the middle social group would depend on the utility of the first layer of earning. The social responsibility increases not only with the earning level but also with the belief holding level. Consequently, the relevant constraints of the optimal utility of the wealthy layer group have both a financial and ethical-religious nature.

2.2 Augmented marginal propensity to consume

Many previous papers, such Khan 1984, Ben Jilali and Taher 1989, Ben Jilali and Azzamil 1992, Mahboub 1991, Khan 1992, Iqbal, 1985, analyzed the impact of Zakat on aggregate consumption function of the Muslim economy. From such models, we can compare the marginal propensity to consumption spending for each earning group in the community. But according to Shibani's model, the attempt to the recommended and particularly permissible earnings has a direct impact on the poor groups. We show that the nominal increase in the gross domestic product ΔY_t increase the value of the MPC.

From the original work of Shibani on the consumer behavior, it appears that the Islamic economics is a pioneer in integrating the ethical dimension in the consumption function. The relevant ethical variables, explaining the consumption, could be summarized successively by the *net earning* of Zakat, *fairness in the consumption* efforts leading to a blessing in the earning, *marginal earning* for getting from the Almighty Allah a reward in this worldly life and afterlife, and the *Zakat* on both the individual earning and its assets. We can formulate the implicit equation of consumption by $C_t = C(Y_t, \Delta Y_t, A_t, Z_t(Y_t, \Delta Y_t, A_{t-1}))$, subjected to the conditions (1a) and (1b) of the ethical consumption, where C_t stands for the private

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[8] I believe that these concepts, especially earning layers, need more analysis that makes them exploitable statistically and then could be testable in the empirical analysis. The renewal in the definition of earning would make a significant contribution to the Islamic economics literature through the classification of data depending on the Islamic economics model.

consumption of the families in Islamic community, Y_t represents the disposable domestic earning (DDE), ΔY_t is the marginal domestic earning of wealthy groups in favor of the needy groups, $Z_t(\cdot)$ indicates the Zakat function, A_t symbolizes the assets value to the end of the current year t. Using the average $\bar{C}$ and the standard semi-standard deviations σ_+, and σ_- of the consumption as follows, we define the overconsumption in the second condition of (1a) and the under-consumption in the second condition of (1b):

$$(1a) \quad \begin{cases} C_{eth+,t} & \text{if } C_{t-1} - (\bar{C} + k\sigma_+) < 0 \\ \\ C_{neth+,t} & \text{if } C_{t-1} - (\bar{C} + k\sigma_+) \geq 0 \end{cases}$$

$$(1b) \quad \begin{cases} C_{eth-,t} & \text{if } C_{t-1} - (\bar{C} - k\sigma_-) > 0 \\ \\ C_{neth-,t} & \text{if } C_{t-1} - (\bar{C} - k\sigma_-) \leq 0 \end{cases}$$

where $C_{eth\pm,t}$ and $C_{neth\pm,t}$ represent the prescriptive and ethical consumption without wasteful or avarice and the unethical consumption with wasteful or avarice in time t, respectively.

All the variables are expressed in constant prices. As a theoretical basis for the spending in the Islamic economy, this implicit consumption function indicates its intrinsic dynamic system over the time. It measures the marginal propensity to reduce the disparity in the gross domestic earning distribution not only through the conventional Zakat mechanism, but also through the marginal earning mechanism which increases directly the purchasing power of the poor and needy groups. To generalize this model of consumption, we expect that the government can implement new economic and social policies encouraging more ethics in the economy.

The religious motivation, based on expected reward in the hereafter, does not require necessarily that such behavior should be generalized among all members of the society. Continuous efforts should be made to correct the individual or family deviations from the behavioral rules as defined by the Shariah's goals.[9] The impact of the individual behavior oriented-faith appears firstly at family and neighbor levels, and also, would be widened around the society area.

In our framework, the individual ethical behavior, leading to ethical redistribution, should also incite the government to have a redistributive motive as an engine of its social and economic policies. Reciprocally, the ethical dimension of the government policies, through anti-poverty programs and smart compensation or/and social security mainly for health, education and housing, would help to develop ethical behaviors at the individual and family levels. The government has to use all available tools to improve the redistribution in the

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[9] The faith holding is a personal decision subjected approvingly to the Almighty Allah, but its construction is implemented with a dynamic interaction with the members of the society. The faith stability of a Muslim economic behavior depends on the effective operationality of the Islamic principles vis-à-vis to all members of the community either with null, lower or higher level of religious practices. Such positive behavior could extend the importance of Islamic faith holding between the members of society, and help for a cooperative connection between them.

society. Nevertheless, within an Islamic political economy framework, the government's economic role as an actor would be at a minimum (Chapra 2014).

The well-being that we propose is based on belief holding that orients the individual optimal utility. It is then different from conventional subjective utility, but it remains related to the social policy in an Islamic economy. The underlying welfare theory has a high moral content and appears similar to the welfare in Pigouvian sense i.e. as ethical concept (Bernheim and Rangel 2009, 2007). By mixing the mind and heart efforts, mobilizing divine revelations and the common reason, jointly they could allow to bring good motivation and bear moral filter that improve the spectrum of the social giving. The approach about ethical consumption is normative and prescriptive, but it does not suppose the predominance of ideal behavior. Also, its implementation is basically related to the intensity of the belief holding. Nevertheless, the leadership of the public at community or society levels should exhibit such ethical behaviors inciting the individuals and families for more cooperative well-being.[10]

According to Shibani's analysis, we assume that the society can be divided into three groups. The third is the richest group; the second is the middle group. The first is the poor group that gets the Zakat and the social giving from the other groups in the community. Hence, when we don't consider the savings and assets of the wealthy group, the macro consumption function in the long-run can be as follows:

$$(2a)\ C_t = cste + \beta_1[(1 - \mu_2 - \mu_3)Y_t + z_1\mu_2 Y_t + z_1\mu_3 Y_t] + \beta_2(1 - z_1)\mu_2 Y_t$$
$$+ \beta_3(1 - z_1)\mu_3 Y_t + \varepsilon_t$$

where the parameter β_i represents the MPC for each group $i = 1, 2, 3$. The parameter μ_2 stands for the share of the middle group in the domestic income, and μ_3 is the proportion of the wealthy group in the domestic income. z_1 is the Zakat rate on the income that exceeds the legal threshold of the Zakat. The unobserved variable ε_t indicates the other factors that affect the consumption behavior. By using the macro consumption function, we can determine the MPC in the long-run:

$$(2b)\quad \frac{dC_t}{dY_t} = \beta_1[(1 - \mu_2 - \mu_3) + z_1\mu_2 + z_1\mu_3] + \beta_2(1 - z_1)\mu_2 + \beta_3(1 - z_1)\mu_3 \coloneqq MPC$$

Whereas and depending on Shibani's approach, if we assume that the marginal earning for the social solidarity, done by the affluent group, is expressed by $\Delta Y_t = (1 - \alpha)Y_t$ with $0 < \alpha < 1$, where $(1 - \alpha) \coloneqq g_Y$ indicates the output growth motivated by the righteous work, then the function of the MPC (2b) is enlarged by the following:

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[10] As indicated by the reviewer #2, the real ethical behavior, oriented by Islamic principles, has been omitted and lost for centuries in many of Muslim countries. But, even if there are many historical shocks and after the globalization that perturb the secondary features on Islamic consumer model, the core element of the ethical behavior persists. It still requires a permanent connection between worldly life and hereafter. The Almighty Allah fully and completely knows the veracity and intensity of such relationship. Such persistence would be running dynamically and independently to the existence or not of an Islamic regime. There is no automatic link between individual or familial beliefs and the government behavior even if this latter defines itself as following an Islamic system.

(2c) $\qquad \dfrac{dC_t^*}{dY_t} = MPC + \beta_1(1-\alpha)[(1-\theta_3) + \theta_3 z_1]\mu_3 + \beta_3\theta_3(1-\alpha)(1-z_1)\mu_3 := MPC^*$

where θ_3 is the share of the benefactors of the marginal increase in the output. Also, we assume that the Zakat is applicable to this marginal income. Then, a significant part of this earning i.e. $(1-\theta_3)$ is transferred to the targeted group. Besides, this group benefits from the Zakat on the marginal income. After that, the marginal net income of the Zakat of the wealthy group is $\theta_3(1-z_1)\mu_3\Delta Y_t$ and the marginal income to the needy group is $[(1-\theta_3)+$ $\theta 3z1\mu3\Delta Yt$. It is natural that the effort of the affluent group, to get an earning more highest than the previous earning, would increase their happiness in this worldly life and improve their reward in the afterlife. We expect that this ethical dimension, engendering the benign effects on the community members, will lead to competition among the members of the wealthy group. Thus, when this competition is activated, there would be a dynamic convergence in the marginal propensities of the consumption of the earning groups in the Islamic economy.

From the MPC function, we define a full integration relationship between the marginal propensities for each group:

(3a) $\qquad \dfrac{\partial MPC}{\partial \beta_1} = 1 - \dfrac{\partial MPC}{\partial \beta_2} - \dfrac{\partial MPC}{\partial \beta_3}$

(3b) $\qquad \dfrac{\partial MPC^*}{\partial \beta_1} = 1 - \dfrac{\partial MPC^*}{\partial \beta_2} - \gamma\dfrac{\partial MPC^*}{\partial \beta_3}$

With $\dfrac{\partial MPC}{\partial \beta_i} > 0$ and $\gamma\dfrac{\partial MPC^*}{\beta_3} = \dfrac{\partial MPC^*}{\partial \beta_3} - g_Y\mu_3$. From the result (3b) in comparison to (3a), we deduce that the marginal income of the rich group leads to an increase in the livelihood of the poor group. So that their contribution is rising in the macro MPC:

(3c) $\qquad \dfrac{\partial MPC}{\partial z_1} = (\beta_1 - \beta_2)\mu_2 + (\beta_1 - \beta_3)\mu_3$

(3d) $\qquad \dfrac{\partial MPC}{\partial z_1} = (\beta_1 - \beta_2)\mu_2 + (\beta_1 - \beta_3)(\mu_3 + \theta_3 g_Y\mu_3)$

The effect of Zakat on the macro marginal propensity is mainly associated with the first difference between the marginal propensities of the poor group and the other group. Also, the activation of the marginal earning, to get more reward from righteous works and goodness, expands the effect of Zakat on the macro MPC by $(\beta_1 - \beta_3)\theta_3 g_Y\mu_3$. In principle, the income of the poor and needy group may not cover the necessities for decent living.[11] Therefore, when this group gets the Zakat, their members can satisfy to some extent the farthermost necessities of eating and drinking, housing, clothing; they can reach the subsistence level. For the middle group, we assume that it has already an earning reaching the Zakat threshold,

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[11] The Zakat system, based on religious purposes, allows some marginal redistribution of earnings intrinsically and leads consequently to increase the macro consumption in the economy. Since that Zakat is not limited to income but touch also the assets, its impact on the aggregate consumption will be amplified and be more than the advocated impact expected by conventional Keynesian theory.

which makes this group able to satisfy the full basic needs and have a decent livelihood. Then, it could attain the sufficiency boundary.[12] On this basis, it can be assumed that $\beta_1 > \beta_2 \geq \beta_3$. Then, for each increase in the rate of Zakat, even a tiny one, it will lead to a rise in the macro MPC.

If we consider that the parameter β_1 is a reflection of the parameters β_3 and β_2 through the determinant variables of the macro consumption, savings and assets that are Zakatable. The MPC cannot be dissociated from the Zakat process because it is influenced by the economic behaviors whether the productive system or consumption system. The conventional theory of consumption has been recently expanded to integrate the impact of the assets, i.e., the wealth effects (See, Metzler 1951). The analyses of the consumer utility and its effects on the consumer behavior have been done only in the late of the 19th century (around 1870) by the first marginalist school (Jevons, Menger, Walras, etc.) and continued to be improved. Also, the contemporary analysis inserts the precautionary saving to beware of surprise in the future (Nocetti & Smith 2011, Kimball & Weill 2009, Carroll 2009, Romer 2006, Campbell & Cochrane 1999, Kimball 1990). In Islamic economics, the consumption function primarily takes into account the effect of the assets on the macro consumption, as Zakat is applicable to both flows and assets when those attain the Zakat threshold. On the other hand, the consumer behavior of the wealthy group, which has an economic responsibility to conduct the investment effort, attempts to face the expected demand for consumption. The members of this group are cautious by adopting saving decisions during a normal environment and in particular for a precautionary purpose.

3. Ethical permissible utility and its asymptotic elasticity

The classification initiated by Shibani considers three earning processes. Each process would generate a corresponding layer of utility. The layer of spending that achieves a specific utility is defined according to the layer of earning. In this framework, the imperative utility corresponds to required G&S for a decent livelihood for each layer in the society and mostly the poor group. The imperative utility (IU) differs between earning layers; the imperative of the wealthy group is related to its social and economic position. But, the recommended utility will be possible through a recommended earning, which allows to achieve some self and family needs of the middle group. The ethical and belief holding behavior of the middle group helps to avoid the keeping up with the Joneses i.e. neighbors. This phenomenon is largely observed in many societies around the world (Luttmer 2005, and Stutzer 2004). Stutzer (2004) finds evidence that the neighbors materialistic aspirations might be shaped by spending models of those around them. Besides, the permissible utility is realizable through the permissible earning. Due to the ethics and belief holding, the wealthy group does not spend for luxury G&S and mostly when there are people in the society who cannot meet the

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[12] The sufficiency boundary is considered as an approximate level of decent living because it depends on the custom and convention of the community and the orientation of the Shariah scholars. It varies across time and social environment.

necessities. Also, even if there is no poor person in the society which is a very weak hypothesis, the wealthy group has to behave following the Shariah, which encourages the fair and equilibrated spending.

3.1 Ethical Permissible marginal utility

We can analyze Shibani's model on the basis of the utility or usefulness by defining the *imperative utility* (IU), *recommended utility* (RU) and the *permissible utility* (PU). There are three groups of families in the community, depending on the layer of earning and the satisfaction levels that are related to also to three layers of the utility. On this basis, the families respond both gradually and successively to necessary utility i.e. IU, needed utility i.e. RU and extra needed utility i.e. PU.[13] The wealthy group can satisfy all layer of utilities, but the poor group tries to meet the first layer of utilities i.e. IU. It is obvious that the first and second layers of utilities depend on the bundles of G&S. This dependence means that the middle (wealthy) group would have different G&S comparing to the poor (middle) group to satisfy the same layer of utilities IU (RU). Also, there is a negative utility, which is more specifically a form of damage that can be divided into two types: the illicit, i.e. not accepted by the Shariah and the hateful disapproved by the Shariah. We observe that the need is regulated and organized according to the legitimate determinants starting from the imperative to the recommended and, lastly, the permissible. It also depends on if this need is Shariah-compliant and respecting the fairness in all the spending process.

If we focus on the wealthy group, we can discuss the impact of their behavior, through the consumer utility U_3, on the consumption utility of the other groups. Mainly, that the wealthy group can satisfy all the layers of the utility from the vector x of G&S: the imperative across x_1, recommended through x_2 and the permissible across x_3. Assuming that the believer wealthy group members will seek to meet the permissible utility totally or partially, if they know that the poor group assured their imperative utilities and that the middle group covered their recommended utilities. As stated in Shibani's Kitab AlKassb (The Book of Earning) on page 6: "What was recognized as generalized utility is better, from the saying of the Prophet Mohammed (PBUH)[14] "The better of the people who gives utilities to people."." Also, he showed the importance of the righteous work on page 12: "That there is no preference for additional earning that implies zero donations." This makes the rich's utility a function of the utility layers of the other groups, and thus the utility program of the wealthy believer is as follows:[15]

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[13] The proposed model includes the initial analysis of Shibani by using the traditional terminology, but appears more sophisticated by its modern cognitive content. Also, the economic analysis is operated deeply using tools of the mathematical economic analysis.

[14] This prophetic saying is a traceable Hadith to son of Omar with a good reference and legally effective by Alalbani (www.alalbany.net/).

[15] We suppose that the utility function is a continuous and increasing, but subjected to the law of diminishing marginal utility when the satisfaction is increased. The utility function is completely almost concave in $\mathbb{R}_+^n$.

$$
\text{(4)} \quad
\begin{cases}
U_3(x_3) = U_3(x_{31}, x_{32}, y_{33}) \\
\text{s.t.} \\
y_{33} = f\big(x_{33}, \Delta U_1(x_{11}, 0, 0), \Delta U_2(x_{21}, x_{22}, 0)\big), 0 < y_{33} < x_{33} \\
p_1 x_{31} + p_2 x_{32} + p_3 \alpha x_{33} \leq B_3(\alpha, p, Y_3), \; 0 < \alpha < 1
\end{cases}
$$

where p_i indicates the price index of the G&S of type i i.e. the imperative, recommended and the permissible. B_3 refers to the budget allocated to the consumption spending of the wealthy group. This budget is related to Y_3 the disposable income net of the due Zakat and ready for the consumption expenses. Our focus is on the spending behavior knowing that $B_3 < Y_3$. It is evident from this model that the utility of permissible G&S is connected to the imperative utility i.e. necessities of the poor group and recommended utility i.e. needs of the middle group. Also, the social welfare utility function[16] $f(\cdot)$, which depends on the self and social usefulness, expresses that the permissible utility, through x_3, is not run by the affluent consumer unless he learns that most of the poor group families successfully managed to meet the marginal necessities i.e. imperatives ΔU_1. And, that most of the middle group families succeeded to satisfy the marginal needs ΔU_2. Thus, the coefficient α, measuring the belief holding of the wealthy group, indicates the *partial activation* of the permissible spending, and α must often be less than one: $\alpha < 1$.

In a formulation due to Karl Weierstrass, the extreme value theorem affirms that a continuous utility function from a compact non-empty space to a subset of the real numbers attains a maximum and a minimum. Moreover, if the $U_3(\cdot)$ is completely quasi-concave, the solution is unique. Assuming the differentiability of $U_3(\cdot)$, we can distinguish the solution y_3^* by the first order conditions of derivative. Hence, there is a Lagrange multiplier $0 \leq \lambda_3$, which allows it to obtain the following partial derivation (Bertsekas 1999, 1982):

$$
\text{(5)} \quad \frac{\partial U_3}{\partial x_{33}} = U_3'(y_{33}) \cdot \frac{\partial f}{\partial x_{33}} - \lambda_3 \alpha p_3
$$

In particular, we can reduce the first order conditions of derivation as follows, where j represents the imperative or the recommended G&S of the wealthy group:

$$
MRS_{j,3} \equiv \frac{\partial U_3(x_3^*)/\partial x_{3j}}{(\partial U_3(y_{33}^*)/\partial y_{33})(\partial f(\cdot)/\alpha \partial x_{33})} = \frac{p_j}{p_3}
$$

where $MRS_{j,3}$ indicates the marginal rate of substitution of the good or service j to get the permissible good or service 3. It means that the wealthy consumer renounces to a particular size of his good or service 3 to get one additional unit of j. The solution y_{33}^* and $(x_{31}^*, x_{32}^*) = x_3^*$ maximize the utility function of a wealthy Muslim. By considering the faith dimension, the affluent consumer does not behave like Quaroon (a very fortunate person that lived during the

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[16] This social welfare utility function is close to the meaning of Harsanyi's social welfare function (1955) which represents the un-weighted mean of the utilities of the individual social environment with an objective quantity. But, if Harsanyi (1955) insisted on individualistic ethics, the system (4) is based on social ethics. Also, in our case, the comparison between utilities or satisfactions is based on the belief holding and the ethics dimension of the members of the wealthy group.

period of the Prophet Moses PBUH), but wishes the approbation of the Almighty Allah (Montasser 1989). In principle, the attempt, towards the highest satisfaction of the utilities from the consumption of permissible G&S, leads to the following:

$$U'_{33} \cdot \frac{\partial f}{\partial x_{33}} = \lambda_3 \alpha p_3$$

This indicates that the permissible marginal utility is correlated to the extent of the interaction of the belief holding of the wealthy consumer with the change in the utilities satisfaction of the other groups or of his social environment through the element $\frac{\partial f}{\partial x_{33}}$. This element is determined by the explicit form of the utility function $f(\cdot)$. By using the theory of the consumer equilibrium, we find an estimation of this element at an equilibrium point that represents the consumer preference:

(6)
$$\frac{\partial f}{\alpha \partial x_{33}} = \frac{p_3}{p_2} \cdot \frac{U'_{32}}{U'_{33}} = \frac{p_3}{p_1} \cdot \frac{U'_{31}}{U'_{33}}$$

If the affluent consumer knows the relative prices of the imperative, recommended and permissible G&S, and he can determine the marginal utilities of the imperative and recommended utilities relative to the permissible utility, then his/her belief holding interaction with the social environment carries him/her to a particular sacrifice by renouncing to a part of its PU. Such behavior contributes to a positive change, particularly in the imperative utility of the poor group and in the recommended utility of the middle group. Assuming that the average price of the permissible G&S exceeds the average price of the recommended and imperative G&S; and if the imperative and recommended marginal utility is greater than the permissible marginal utility; then the faith or the belief holding interaction element is:

(7)
$$\frac{\partial f}{\alpha \partial x_{33}} > 1$$

Consequently, when the effective willpower of the wealthy Muslim consumer's faith is activated, then an overall positive change will occur in the imperative utility of the poor group and recommended utility of the middle group. This positive change is measured at least by the quantity $\left(\frac{\partial f}{\alpha \partial x_{33}} - 1 \right)$, which can be converted into purchasing capabilities towards the targeted group through social and economic security tools. Explicitly, such transfer to the needy group is operated either directly or institutionally organized by specific social associations to manage the distribution of the social fund to targeted families efficiently.

According to Saez and Stantcheva (2016) an additional purchase power matters more for lower income individuals than for higher income individuals. This principle of transfer is the core of Islamic economics principles such that the individual, near relatives, family, neighborhood and community have to organize anti-poverty programs through Zakat funds, Sadakat social giving and Waqf funds oriented by the faith.

If it is possible to rectify the initial acquisition of property according to justice principle, the running of economic re-allocation of resources among people could reduce the inequality

between layers of earning in the society. Even if the injustice is reduced, the inequality will remain due to many factors as the abilities and talents differences in the society.[17] In consequence, the redistribution will have a significant role to shrink more the inequalities and escape the risk of social instability and insecurity. The Zakat system, Islamic social giving, and the Waqf system are better redistribution tools leading to more economic justice and less poverty.

After the activation of social welfare, we expect that the increase in the permissible spends will not lead to depriving the low-income group to achieve a decent livelihood and satisfy the necessary utilities. Further, in case of the highest and deepest belief holding in the society and when the middle group succeeds to self-achieve most of their needs of a decent life, it could be possible that the poor group would fully benefit from the purchasing capabilities transfer. Then, the permissible spending would not adversely affect the process of the economic behavior of the other groups in the community.

3.2 Asymptotic elasticity of the ethical utility

In principle, when we use concave functions, i.e. curving in, we face the problem of homogeneity loss of these concave functions. Thus, we turn to the Δ_2 condition in the Orlicz spaces theory (Krasnosel'skii and Rutickii 1961, Rao and Ren 1991). Such condition replaces the homogeneity property with a minimum limit that allows for determining the limit of the *asymptotic elasticity of the utility* when the permissible spending y_{33} tends to infinity. It can be assumed that the utility function of the wealthy group is subjected to the condition of the reasonable asymptotic elasticity (Kramkov and Scachermayer 1997). We have the following Lemma 1.

Lemma 1: Considering that the utility function U_3 in the system (4) is strictly concave, increasing and having real number values by the variables y_{33}. Then the asymptotic elasticity $AE(U)$ is defined clearly and with $U_3(\infty) = \infty$, we have

(8)
$$0 \leq \lim_{y_{33} \to \infty} \sup \frac{y_{33} U_3'(x, y_{33})}{U_3(x_{31}, x_{32}, y_{33})} \leq 1$$

Proof: Using that U_3' is a monotone and decreasing positive function for all $y_{33} \geq 1$, we have

$$0 \leq y_{33} U_3'(x, y_{33}) \leq (y_{33} - 1) U_3'(x, c) + U_3'(x, c)$$

Considering that there exists some c in an open interval $c \in (1, y_{33})$ and by the mean value theorem, we obtain

$$U_3(x, y_{33}) - U_3(x, 1) = (y_{33} - 1) U_3'(x, c)$$

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[17] In comparison to our model oriented redistribution, Kalecki's model (1942) is more oriented to income distribution between profits and wages. This latter depends on the structure of market imperfections and of markets power. This model has not focus on theorizing redistribution. Nevertheless, by reducing such imperfections, power and biased pricing system, it is possible to increase ceteris paribus the income of the middle and poor groups in the society. But, it remains that in the real world the inflation process, through pricing strategies, could erode the additional purchase power of the needy and middle social groups. Also, taxation falls heavily on wage earners.

Then,

$$0 \leq y_{33}U_3'(x,y_{33}) \leq (y_{33}-1)U_3'(x,c) + U_3'(x,c) \leq [U_3(x,y_{33}) - U_3(x,1)] + U_3'(x,1)$$

Therefore, with $\lim_{y_{33}\to\infty} U_3(x,y_{33}) = \infty$ or $U_3(\infty) = \infty$,

$$0 \leq \lim_{y_{33}\to\infty} \sup \frac{y_{33}U_3'(x,y_{33})}{U_3(x,y_{33})} \leq \lim_{y_{33}\to\infty} \sup \left(1 + \frac{U_3'(x,1) - U_3(x,1)}{U_3(x,y_{33})}\right) = 1 \quad \blacksquare$$

The inequality (8) is similar to the condition Δ_2 in the theory of Orlicz spaces (Biagini and Frittelli 2008). The result (8) of Lemma 1 is deduced from the elasticity of the wealthy group utility to y_{33} i.e. $E(U_3, y_{33})$. Also, the variable y_3 reflects the benefit from the permissible G&S by taking into account the positive change in the imperative utility or lowest necessities of the poor group and recommended utility or highest necessities of the middle group. The asymptotic elasticity includes that when y_{33} tends towards values increasingly to infinity, then the faith dimension of the wealthy group means that this group gets a unitary elasticity as a maximum limit of their utility. It is obvious that the explicit form of the utility function U_3 and the partial utility function $f(\cdot)$ have a significant role in assimilating the meaning of the condition (8).

By the result (8) of Lemma 1 where the wealthy consumer does not neglect the changes in the utilities of the middle and poor groups, it is expected that the relative increase in the income of the wealthy group does not necessarily lead to a rise in its enthusiasm for the permissible and desirable G&S. This outcome differs from what is prevailing in the conventional economic analysis, where the increase in the income of the wealthy people inevitably leads to a substantial increase in obtaining luxury G&S. This widespread idea includes the point that the elasticity of the utility could be greater than the unity i.e. the opposite of what we obtain when belief holding and ethical behavior are jointly activated.

By assuming that the composite utility function $f(\cdot)$ consists of a social welfare function $SU(\cdot)$, which is positive and defined from $\mathbb{R}_+^n$ to $\mathbb{R}_+$ and where the coefficient $(1-\alpha)$ measures the extent of the social altruism (Kolm and Ythier 2006) and the Shariah-compliant abstaining of the wealthy consumer and his/her family. It also shows the range of the thankfulness of the Almighty Allah for the blessing, the beneficence and the renewed kindness. This latter expresses the transfer of a part of the self-permissible utility value to the poor and middle groups, respectively. So that the social welfare function is related implicitly to the imperative G&S of the poor group and recommended G&S of the needy group.

(9) $$y_{33} = \alpha x_{33} - (1-\alpha)h(\Delta SU(x_{11}, x_{22})), \quad 0 < \alpha < 1$$

where $h(\cdot)$ defines the inverted social utility function. We assume that a social welfare function leads to positive change in the imperative utilities of the poor group and recommended utilities of the needy group of people to lift their difficulties and expand their materialistic needs. If the legitimate social altruism disappears after that the Shariah obliged Zakat is performed, then we have $\alpha = 1$. And thus, the wealthy consumer spends on him/her self and his/her family without keeping anything for the poor and the needy people i.e. that

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$y_{33} = x_{33}$. On the basis that the marginal increase in the imperative G&S acts, even partially, to redress the poverty of the first group and thus to increase their imperative materialistic utilities, we assume from the equation (9) that:

(10) $\quad \dfrac{\partial y_{33}}{\partial x_{33}} = \alpha > 0, \qquad \dfrac{\partial y_{33}}{\partial x_{ii}} = -(1-\alpha) \cdot \dfrac{\partial h(\cdot)}{\partial x_{ii}} < 0, \qquad \dfrac{\partial h(\cdot)}{\partial x_{ii}} > 0, \qquad i = 1, 2$

Through the belief holding and ethical behavior of the wealthy group by improving the situation of the poor and needy people and based on the afterlife dimension, a new variable y_{34} can be generated to expand the reward that the Muslim expect to get in particular in the afterlife (Zarqa 1980, Zarqa 1992). In such cases, the members of the wealthy group can enjoy a part of the reward in this worldly life through their thanksgiving, from the evidence mentioned by the Almighty Allah in Chapter 14 Ibrahim (Abraham) in verse 7 "And when your Lord proclaimed: "If you give thanks, I will grant you increase; but if you are ungrateful, My punishment is severe."." This increase occurs before the afterlife in a form of *hidden support*. But, their signs are tangible and perceptible such as the affliction pushing, kindness of the predestination, benediction in spending, benediction in earnings, longevity, and healthy wellness, righteous progeny and others. As well as the psychological satisfaction that is achieved when the social welfare function is activated. Then, many marginal utilities are generated from sacrificing a part of the permissible utility. And then, the utility function is expanded with an otherworldly dimension, it can be termed by a *steady eternal utility* function that can be formulated as follows:

(11)
$$\begin{cases} \tilde{U}_3(x_3) = U_3(x_{31}, x_{32}, y_{33}, y_{34}) \\ \text{s.t.} \\ y_{33} = f(x_{33}, \Delta U_1, \Delta U_2) \\ y_{34} = g(\alpha, \Delta SU(x_{11}, x_{22}), B_3, Y_3) \end{cases}$$

Also, the otherworldly utility is greater and eternal than the constrained worldly life utility according to the Almighty Allah in Chapter 9 Attawbah (The repentance) in verse 38: "O you who believe! What is the matter with you, when it is said to you, "Mobilize in the cause of God," you cling heavily to the earth? Do you prefer the present life to the afterlife? The enjoyment of the present life, compared to the afterlife, is only a little."

Furthermore, the worldly life utilities are subject to the arithmetic and logic rules, while the utility in the afterlife exceeds the mathematical arithmetic and logic.[18] The otherworldly utility is infinite in terms of the enjoying time and the multiple colors and tastes of the good and pure things. Principally, in case of the attempt for righteous works and connecting to the Halal i.e. Shariah-compliant utilities to their otherworldly dimension as the righteous ancestor was doing goodness, it will be more advantageous to use convex utility functions i.e. curving out. We can prove that the elasticity of the utility to the spending in the cause of the Almighty

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[18] The conventional propriety of decreasing marginal utility of materialistic G&S could be tested and appeared to be acceptable in common sense. Meanwhile, I expect that the marginal utility of ethical G&S and money, through giving goods, time and money is not necessarily a decreasing function.

Allah is more than one. By using that $U'(\cdot, y_{34})$ is positive and strictly increasing function, meaning that $U'(\cdot, t) < U'(\cdot, y_{34})$, then with $U(0) = 0$ and $0 < t < y_{34}$, we have

$$U(x, y_{33}, y_{34}) = \int_0^{y_{34}} \frac{\partial U(x, y_{33}, t)}{\partial t} dt < \frac{\partial U(x, y_{33}, y_{34})}{\partial t} \int_0^{y_{34}} dt = \frac{\partial U(x, y_{33}, y_{34})}{\partial t} y_{34}$$

which implies that

$$\frac{y_{34} U_t'(x, y_{33}, y_{34})}{U(x, y_{33}, y_{34})} > 1$$

When y_{34} the spending in the cause of the Almighty Allah tends to infinity, we can determine the limit of the asymptotic elasticity. It can be assumed that a *steady eternal utility* function of the wealthy group indicates an improved condition of the asymptotic elasticity, according to the following lemma 2.

Lemma 2: Considering that the utility function U_3 in the system (11) is strictly convex, increasing and having real number values by the variables y_{33}, then the asymptotic elasticity $AE(U)$ is defined explicitly by

(12)
$$\lim_{y_{34} \to \infty} \sup \frac{y_{34} U_3'(x, y_{33}, y_{34})}{U_3(x_{31}, x_{32}, y_{33}, y_{34})} > 1$$

Proof: Using that U_3' is a monotone, positive and strictly increasing function for all $y_{34} > 1$. Considering that there exists some c in an open interval $c \in (1, y_{34})$ and by the mean value theorem, we have

$$0 \leq y_{34} U_3'(x, y_{33}, y_{34}) > (y_{34} - 1) U_3'(x, y_{33}, c) + U_3'(x, y_{33}, c)$$
$$> [U_3(x, y_{33}, y_{34}) - U_3(x, y_{33}, 1)] + U_3'(x, y_{33}, 1)$$

and therefore, with $U_3(\infty) = \infty$,

$$0 \leq \lim_{y_{34} \to \infty} \sup \frac{y_{34} U_3'(x, y_{33}, y_{34})}{U_3(x, y_{33}, y_{34})}$$
$$> \lim_{y_{34} \to \infty} \sup \frac{[U_3(x, y_{33}, y_{34}) - U_3(x, y_{33}, 1)] + U_3'(x, y_{33}, 1)}{U_3(x, y_{33}, y_{34})} = 1 \quad \blacksquare$$

Also, the result (12) of lemma 2 is deduced by using the elasticity of the wealthy group utility to y_{34} i.e. $E(U_3, y_{34})$. When the sacrifice of a rich group is greater, then the social utility will be improved through a marginal increase in the social welfare in particular for the poor and needy groups. This outcome corroborates with the proposition 1 of Elgin et al. (2013) which indicates that religious-motivated voluntary redistribution provides higher direct satisfaction. Also, a reward for this sacrifice is raised in the worldly life and in the afterlife by Δy_{34} through any marginal increase of the hidden returns of such sacrifice in the earthly life. Such sacrifice is positively reflected on the *marginal steady eternal utility* through an elastic utility, depending on the promise of the Almighty Allah, stating in Chapter 17 Alisraa (The

night journey) in verse 21: "See how we have favored some of them over others; yet the afterlife is greater in ranks and greater in favors."

3.3 Discussion

The classification of Shibani is not similar to the conventional classification of necessities, normal and luxury G&S, but it is deduced from Islamic principles. With pure materialistic behavior, the good luxury spending will be increased if the earning is increased leading to an earning elasticity of spending (EES) greater than one. However, if the earning of the Muslim wealthy group is increased, the permissible spending will be increased leading to an EES lesser than one, since because of the ethical and belief holding incite to transfer a fraction of the change in earning to the needy people. So there is a positive externality on the other group's well-being because the wealthy group members transfer real purchasing power to the poor and needy groups. Hence, these members are willing to augment the imperative and recommended marginal utilities of the needy families. These outcomes are in contradiction with the findings of Luttmer (2005). Luttmer suggests that an increase in the individual income leads to a negative externality on neighbor's well-being that is of the same order of magnitude as the positive effects on individual well-being.

From our modeling, the increasing earnings of the wealthy Muslim improve the well-being of the poor. The conventional neoclassical models lead to the same conclusion through different channel and exerting what is known as a "trickle-down effect", but such effects appear indirectly and take a particular time to improve the economic situations of the needy people. In contrast, the social impact of social Infaq is done directly and enhances the satisfaction of needy people immediately.

According to Bernheim and Rangel (2007, 2009), there is an absence of a general framework for behavioral welfare analysis. I expect that, since the Islamic economics exhibits general principles, the social and ethical dimensions of Islamic economics could renew somewhat the welfare analysis in economic modeling.

The conventional economics is fundamentally based on secular worldview, and then develops its paradigm from the human knowledge; the Islamic economics is based on Quran and Sunnah as divine knowledge and complementary on Fiqh subjected to Quran and Sunnah. Indeed, there is a universal knowledge in economics. Also, as Islamic economics completely integrates the analysis of human wellbeing in its main research goals, such analysis becomes more complex because many factors mobilized social, ethical, political and others qualitative and quantitative determinants.

According to North (1990), the institutional analysis into neoclassical theory requires modifying the existing corpus theory. The insertion of Islamic economics principles and concepts is not only a theoretical construction of the real life but guidance and advice in everything of life that should connect the temporarily stay worldly life to the ultimate destination afterlife. It would improve and promote more deep analysis in economics even that its paradigms are sourced principally from the Quran and Sunnah as divine sources and

secondary from the consensus of Islamic scholars and the analogy methodology. In Islamic economics there are a lot of moral values and humankind fraternity; however conventional economics assumes the predominance of the individual interest behavior. Islamic economics has to exhibit, measure, appreciate and evaluate to what extent the faith and moral values, rules of behavior, and the social and political institutions are observed and applied by the Muslims community.

From the neoclassical perspective, the government intervenes in private markets to correct market failures and address with inequality by redistributing resources (Bernheim and Rangel 2007). If the nominal wage is less than a specified minimum wage, a transfer program for the benefit of the disadvantaged people can be implemented at individual, family, community and government levels. But, practically the administrative cost to manage such programs would be prohibitive. In Islamic society, I expect there will be more private charity management through specific institutions, like the Waqf system, collecting and redistributing social giving, in addition to Zakat managed historically through Islamic government agencies. The redistribution should increase with income inequality.

Shibani's earning theory can justify progressive ethical giving to needy people to correct more the initial distribution. The engine of the progressive ethical religious giving depends on the faith holding intensity and hidden positive returns of financial sacrifice appearing in the earthly life and mainly the afterlife. Additionally, the self-enjoying process is generated when social giving is done with religious fidelity, and the happiness should happen. Such hidden returns could not be revealed intentionally or unintentionally by the individual or family of a wealthy group.

The reward of financial sacrifice, through social spending (Infaq) of individuals and families, generates a high earning from Allah. Also, the Islamic moral well-being leads to that both wealthy and poor gain; whereas in the conventional approach, when the transfer is done, the rich lose and the poor gain. The fairness approach has been clarified through conditional utility which takes into account the utility function of the needy people. The subjective wellbeing or happiness could be generated continuously through Zakat system and mainly the social Infaq (spending) because this latter is operational during all the time of a year and not related to a regular timing as Zakat.

As indicated by Gintis (1998), the needy people care about redistribution processes as well as their outcomes. The redistribution is managed mainly at individual, family, community and society levels. The mechanism serving to correct the economic situations of the needy people should be implemented progressively until that the necessary satisfaction of the first layer of the society is done. The progressivity of social spending requires developing randomized detailed surveys that question targeted population of needy individuals and families about their mental, moral, spiritual and social states (Kuziemko et al. 2015).[19] The generalized weights directly reflect society's concerns for fairness, and can be defined

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[19] It is hard to detect and observe ethical behaviors. Some specific questionnaire from stochastic samples may exhibit the characteristics of some believers when doing social giving.

following a broad set of justice concepts (for more details see Saez and Stantcheva 2016). The generalized weights, through utility functions, can be understood from individual and aggregate features that could lead to fair redistribution. The Waqf system is an excellent real road map of such generalized weighting that contributes to improving the well-being of needy people and correct some remaining inequities.

According to verse 21 in Chapter 17, it is clear that the rich man/women in his/her earning needs the poor earners to achieve the otherworldly reward while the opposite is not true. Also, even if the consumption effort of the wealthy Muslim is considered a worship in its broad meaning, then he/she gets a reward from his/her materialistic imperative and recommended utilities.[20] But, he/she will be rewarded more when he/she reduces his/her permissible utilities to achieve some of the imperative and recommended utilities of the poor and the needy groups, respectively. Also, we will address in a future paper the utility functions to highlight the interaction in the changes of the utility determinants. We will use the decomposition method in Slutsky equation (1880-1948) to analyze more fully the impact of the ethics and the belief holding on the utility. Also, I expect to integrate the multi-utility function by considering the materialistic and faith dimensions in the optimal processes of the consumer behavior simultaneously.

The Almighty Allah has ordered that a Muslim and his/her family have to avoid, from the tradition, heresy, habits and lifestyle, all that is contrary to the Shariah and the legal objectives of the Islamic principles (Shariah Maqasid). The Prophet Muhammad (PBUH) warned in another Hadith narrated by Attabaraani with a good reference attributed to Abdul Rahman bin Auf, that the Messenger (PBUH) of the Almighty Allah said: "the archenemy, May Allah damn him, said: I will tempt the rich/money owners in three ways: to gain money in prohibited ways, to spend it using wrong methods and prevent them giving to the poor."

The protection from some of conventional consumption models is required when such models are in contradiction to the quietude of the human psyche. But, these models are strongly supported by cultural factors, specific media and the internet (for more details, Ng and Lee 2015). Such information technology could excite the desires and pleasures of the human being, and could decay his/her honorable ethics values and causing a dynamic weakness in his/her faith. Many consumers tend to adopt imported consumer behaviors. Therefore, the members of the Islamic community need to establish and install ethical and faith values in the new generation in all aspects of worldly life such as home, school, and market. Such a strategy could protect the individual and his/her family from the evils of all consumption behaviors that cause deviation in his/her appropriate and fair spending behavior. This latter is based on Halal earning, prioritizing Halal spending on good and pure things without lavishness or wastefulness and miserliness or avariciousness. The legitimate controls of the legal objectives of Shariah (Maqasid) are explained in several pioneer contributions about such purposes (Jouini 1028-1085 AD, Ghazali 1058-1111 AD, Shatiby 1320-1388 AD).

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[20] The Muslim praises the Almighty Allah when he/she takes the G&S because his intention is to get more spiritual energy to achieve its legal objectives i.e. work and worship.

They are extended and clarified in some recent papers (Raissouni 1992, Alkhadmi 2001, Almassri 2001). These Shariah controls lead to saving the religion, human being, mind, progeny and money.

4. Conclusions

This paper treats Shibani's (750-805 AD, 131-189 AH) analysis of earning, consumer utility and social spending by using utility modeling. According to Shibani's model, the imperative earning face the spending on necessities, the recommended earning consists of enlarging some needs and the permissible earning expands the *spending scope* to the self, family or the social needs. Shibani considers that the earning is related to the economic activities in every era and that the spending size depends basically on the spending budget that cannot be dissociated from the available income for the expenditure. He considers that the earning and the spending have multi-dimensionally facets related to devotional, material, ethical and social levels. He conceives that the attempt in enlarging earning is similar to the effort in the required worship and the voluntary adoration. For that reason, there are three layers of earning: the imperative, recommended and the permissible. It appears that the fair and upright Muslim consumer has to prioritize his/her spending according to the needs of him/her self and his/her family with respect to the earning layer. Such priorities consist on the imperative spending to get the necessary utility, followed by recommended spending to reach the recommended utility, after that the permissible spending to achieve the permissible utility. This latter spending consists of expanding the extent of needs to enjoy the G&S of the worldly life without exceeding the overspending threshold. Such self-control is based on the afterlife reward as a one of the most significant incentives that regulate and control the individual and the Muslim community behaviors.

The most significant contributions of this paper are firstly that the impact of Zakat on the MPC is mainly related to the first difference in the marginal propensity of the poor group and the marginal propensity of the middle and wealthy groups. In principle, the Zakat system is based on both the flows and the tradable assets that lead to potential returns. So the Islamic consumption function integrates the impact of the assets on the macro consumption. Secondly, we focus on the wealthy group due to its ability to get every layer of utility from the imperative to the permissible. Considering that the believer wealthy group members do not seek to meet the permissible utility completely, but only partially. Because the wealthy utilities function is a function of the utility layers of the other groups through a coefficient that measures the extent of the altruism and the Shariah-compliant abstaining. The social welfare function renders the affluent consumer's permissible marginal utility connected to the extent of the interaction of his/her belief holding with the change in the utility satisfaction of the other groups. Such interaction drives to the transfer of purchasing capabilities towards the targeted group. We find that the faith dimension of wealthy group means that this group gets a unitary value of the elasticity as a limit sup of their asymptotic elasticity of the utility. Also, this belief holding generates new variables related to the afterlife world consisting of the

bestowed reward and hidden support as worldly life reward. Other rewards will be created in the afterlife implying to a *steady eternal utility function* and conducting to an optimum of the marginal utility with elasticity greater than one.

Acknowledgements

5. Appendices

5.1 Biographic information on Shibani

Firstly, we display a brief summary about Imam Muhammad ibn Hassan Shibani (750-805 AD, 131-189 AH) to understand the historical environment in which he produced the concepts of earning and spending. He was born between Kufa and Basra in 131 AH after his father came from the east of Damascus. He has evolved in Kufa, which was an environment of science and scientist. He was a genius and a talented person from his young age. At the age of fourteen years, he joined in a scientific circle of Imam Abu Hanifa (699-767 AD, 80-150 AH). He completed the Fiqh conferences by Judge Abu Yusuf (731-798 AD, 113-182 AH). During his era, he acquired the religious knowledge from many reputed imams of Shariah science in Kufa, Mecca, Medina and Damascus. He was an early scholar (Faqih) of the Iraq, and a young Imam in the Quran, the Sunnah, the Fiqh, the Arabic, the Algebra science and others. He was the teacher of the imams such as Imam Shafii (767-820 AD, 150-204 AH). Also, he was a judge of Arraqa in the period of Abbasid Caliph Harun Alrrashid (763-809 AD, 146-193 AH). He had realized the codification of Islamic jurisprudence and classified this latter using a new approach. He produced the statements in discreetly and clarity manner and addressed the most complicated subjects in the Shariah that mattered to detect the legislation secrets (Nadawi 1994). Shibani has dealt with the financial and economic issues and mainly in unprecedented depth the topics related to earning, saving and spending. He is the pioneer that analyzed the Islamic economics issues with a new approach (Dounia 1998, Eldasoqi 1987). Shibani was among those precursors who addressed the legal objectives of the Shariah (Shariah Maqasid) early before the work of Jouini (1028-1085 AD, 419-478 AH).

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