BOOK CHAPTER

Public Discovery of the Concept of Time Value of Money with Economic Value of Time

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Abstract

Purpose – The purpose of this research is to know the public discovery of the concept of time value of money with economic value of time.

Design/Methodology/Approach – The method of research involved a causal research design in North Sumatera Province, Indonesia. The data used are primary data sourced from questionnaires distributed to 112 random respondents. Data were analyzed using the SEM method with Smart PLS software.

Findings – The results show that the public do not know exactly the application and the concept of "time value of money" and the economic value of time.

Research Limitations/Implications – The limitation of this study is that it was conducted on heterogeneous Medan city samples and did not extend to other cities in North Sumatra with large samples. The study has implications on the socialization of the community's understanding of the concept of time value of money with the economic value of time.

of money and the economic value of time.

Keywords: Time value of money, economic value of time, coal, Public discovery

1. Introduction

The concept of time value of money is needed by financial managers for making decisions on when to invest in an asset and when to determine the source of loan funds to be allocated. If a certain amount of money will be received at a future time, in the present value, then the amount of money should be discounted with a certain interest rate (Zaman and Movassaghi, 2002; Thomi, 2014). If a certain amount of money is currently in value for the future, then the amount of money must be multiplied by a certain interest rate. Limitations that will lead to the public only save money if (for) *apbila* high bank interest rates, because they assume that if the bank's interest is high, then the money they will receive in the future is also high (Syahyunan *et al.*, 2017). The time value of money does not take into account the inflation rate. The question of whether there is any time value of money in Islam has always been asked by many parties – from experts to practitioners. Although the answer to this question will illustrate how the attitude of Islamic economics determine the parameters of investment decisions (Qureshi, 2013), the answer would be one of the benchmarks in differentiating Islamic economics with today's modern economy, especially in the financial sector. Time value of money basically represents a person's time preference in holding money. Based on this theory, an economic actor is assumed to be more inclined to hold current money than the future. According to conventional assumptions that human preference is only driven by human nature, there is nothing wrong in the theory of time value of money. The only question is whether Islamic economics follows the same concept on this issue. In Islamic economic theory, it must be admitted that man has an inherent need according to the traits existing in him. However, to meet that need, he is not free to do anything he wants because he is limited by the law (*sharia*) and the values (*aqeedah*) and morals he believes. In this paper, we discuss this theory on the basis of this philosophy and on the through the theory of economic behavior because it may be that the time value of money differs from the Islamic perspective not solely on the field of application but on the basic assumption of economic behavior. With regard to wealth, in Islamic economics, the crucial question is essentially not "how" or "when" (Khan and Mirakhor, 1989; Haron and Ahmad, 2000; Huda *et al.*, 2008; Karim, 2014), but more important is the question "for what." The economic value of time is a concept whereby time has an economic value, but money does not have a time value. The economic value of time can be interpreted to maximize the economic value of a fund at a periodic time. The basic calculation on the principle of time-based value of money is interest, while the basic calculation of the principle based on the economic value of time is ratio. The first question is how and when, assuming that all human beings have the same preference, is man consistent with the principle or the economic rationality (Mukhtar *et al.*, 2014). In Islamic economics, there is no assumption that some money will provide fixed income because it does not have a fixed pre-determined return concept possessed by conventional finance through an interest-based economy. With the concept of assuring the profit of a certain amount of money, one would be more inclined to hold the present money than later, for there is a definite advantage that he can get from holding that money now. Or if he holds the money, then there must be a compensation for the profit he should get.

2. Methods

This type of research is a comparative study, which is conducted to compare the similarities and differences between two or more facts and the properties of the object in detail based on a particular frame of mind. In this study, the variables are self-sufficient but further study is needed for more than one sample or at different times (Achmad and Muda, 2017; Badaruddin *et al.*, 2017; Nurlina and Muda, 2017; Sirojuzilam and Muda, 2017; Hasan et al., 2017; Honggowati et al., 2017; Muda et al., 2018). A total of 112 respondents were randomly selected for this research for understanding the concept of the time value of money with the economic value of time (Khoir, 2016). The indicators of the questions include rationality, *falah* in the world and the hereafter, the concept of need, and orientation of the balance between consumers and producers.

3.1. Results

3.1.1. Evaluation of the structural model (Inner model).

Inner model evaluation through the bootstrapping menu also generates T-$_{\text{statistics}}$ values that will be used to test the hypothesis. The criteria are T-$_{\text{statistic}}$ > 1.66 (Dalimunthe and Muda, 2017; Ferine *et al.*, 2017; Sirojuzilam and Muda, 2017). If the value of $t_{count} < t_{table}$, then H_0 is accepted and when the value of $t_{count} > t_{table}$ then H_0 is rejected, which means that for the variable in question there is a significant influence (Lutfi *et al.*, 2016; Ferine *et al.*, 2017; Lubis *et al.*, 2017; Marhayanie *et al.*, 2017; Muda, 2017; Sihombing *et al.*, 2017). This means that the independent variables tested have a significant effect on the dependent variable. The result of the T-statistics value in the path coefficients of the table is presented in Figure 1.

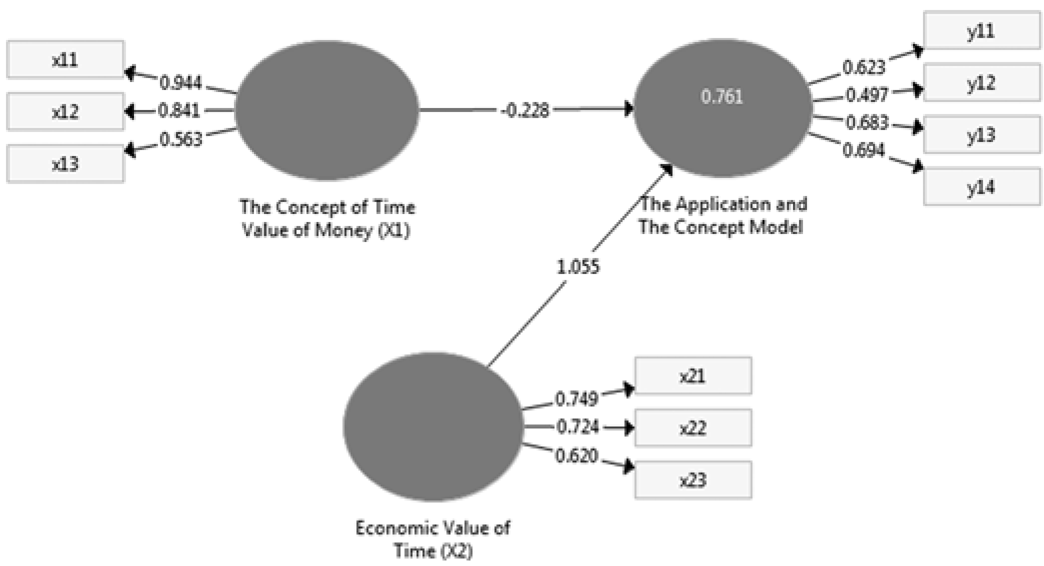

Figure 1. Overall Model with Coefficient

The test effect can be seen in Table 1.

Table 1. The Result of Bootstrapping

	Ori
Economic value of time (X2) -> the application the concept model	0.5
The concept of time value of money the -> the appltheion and the concept model	0.1

If Table 1 provides a coefficient of 0.005, smaller than 1α = 5%, then the decision of the hypothesis testing is to reject H_0 and accept the hypothesis H_a (Asmeri *et al.*, 2017; Hanggowati *et al.*, 2017; Jones *et al.*, 2017; Khoiruman and Haryanto, 2017; Muda *et al.*, 2017; Rahmawati *et al.*, 2017; Suprianto *et al.*, 2017). The results show that the economic value of time is a significant variable on the application and the concept model (*Y*). In addition to testing the hypothesis through the bootstrapping menu, which produces *T*-statistics, inner model evaluation is also done by reviewing the R^2 value (Muda, 2017). The R^2 value generated from the inner model evaluation is presented in Table 2 and Figure 2.

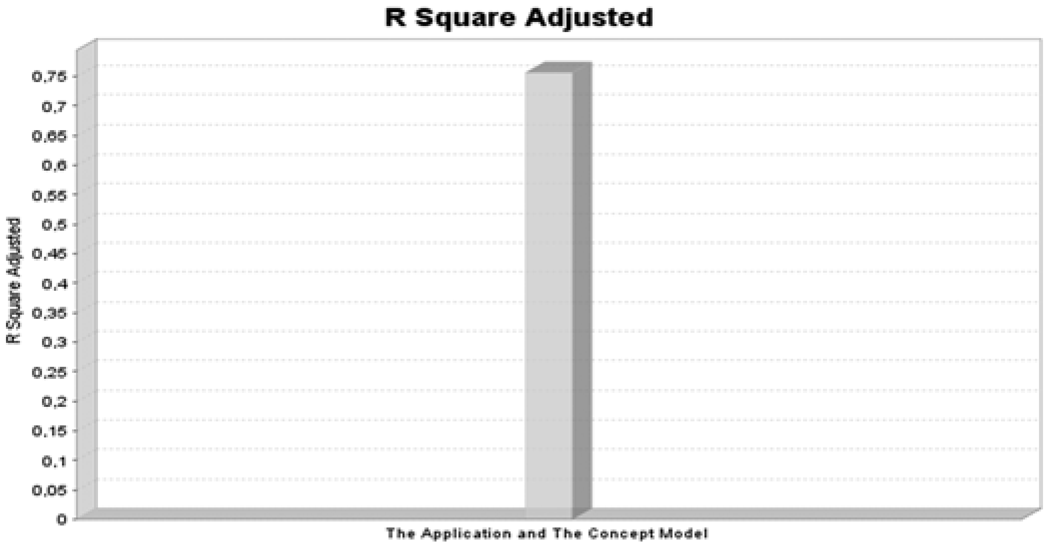

Figure 2. F^2 Value

Table 2. R^2 Value

	R^2	R^2 Adjusted
The application and the concept model	0.761	0.756

The variation of the R^2 value is 75.6%. The economic value of time is a significant variable on the application and the concept model (*Y*).

3.2. Discussion

Islamic economic perspectives are not familiar with the method of time to the addition of value of money which is based only on time value is the category of usury. Islam actually knows the money value of time, that is, time has an economic value. In accordance with Islamic teachings, efficient and fair monetary management is not based on the application of the method of interest. Redeeming the decline in the value of money due to eroded inflation and consumption of time is to make money productive and/or recover the yield that exceeds the rate of inflation. The most effective way is to invest the funds in order to generate returns above the inflation rate so that the value of the existing money is relatively fixed or can even increase.

4. Limitation and implications

The limitation of this study is that it was conducted on heterogeneous Medan city samples and did not extend to other cities in North Sumatra with larger sample sizes. The study has implications on the socialization of the community's understanding of the concept of time value of money with the economic value of time.

5. Conclusions

The results show that the public do not know exactly the application and the concept model of the time value of money and the economic value of time.

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