THE APPROACH OF THE MODERN ISLAMIC ECONOMICS TO THE PROHIBITION OF INTEREST IN THE CONTEXT OF THEORIES OF TIME PREFERENCE AND PRICE CONTROL

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PLAGIARISM

I hereby declare that all information in this thesis has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work; otherwise, I accept all legal responsibility.

Cem EYERCİ

ABSTRACT

THE APPROACH OF THE MODERN ISLAMIC ECONOMICS TO THE PROHIBITION OF INTEREST IN THE CONTEXT OF THEORIES OF TIME PREFERENCE AND PRICE CONTROL

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Interest has been always a part of the humans' daily economic life. Therefore, the concept of interest has attracted an intensive attention, studied and discussed by philosophers, religious scholars, lawmakers, administrators and economists, regarding almost all economical, social, moral and religious aspects. Receiving interest was considered sin, condemned for being dishonorable, disrespectable, uncharitable, unjust, and source of many evils in many societies. For this reason, interest-based lending has been always restricted by the authorities through legislative, administrative and financial arrangements, religion and ethics. In cases where it was allowed, the rules of practicing interest were regulated heavily. However, despite all concerns and regulations, interest has been always practiced.

By the seventeenth century, when the role of interest in economic life became more significant, the scholars began to deal with the concept of interest more systematically and many theories were developed on the nature of interest. Among many others, Böhm-Bawerk's comprehensive time preference theory of interest presented causes for the existence of interest that may be claimed to be inherent.

On the other hand, a controversy emerged on the consequences of interest rate control in the relevant literature. It is claimed that, as a type of price control, prohibiting interest or limiting its rate have undesired distortive effects on the market. If so, the means-ends consistency in regulations may have to be reevaluated.

In this work, we evaluate the responses of the regulation supporters to the causes of time preference asserted by Böhm-Bawerk as the justifiers of interest, and to the claims of the distortive consequences of interest rate control. The concept of interest with respect to its meaning, history and relevant theories is reviewed. The time preference theory and the concept of interest rate control as a type of price control are presented. Considering that the supporters of an interest-free economic system have the most explicit attitude against interest, the works of Muslim economists are scrutinized regarding their approach to the issues of the causes of time preference and the consequences of interest rate control.

Keywords: Interest, Interest rate control, Islamic economics, Prohibition of interest, Time preference

ÖZET

ZAMAN TERCİHİ VE FİYAT KONTROLÜ TEORİLERİ BAĞLAMINDA MODERN İSLAM EKONOMİSİNİN FAİZİN YASAKLANMASINA YAKLAŞIMI

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Faiz her zaman insanoğlunun günlük ekonomik yaşantısının bir parçası oldu. Bu yüzden faiz kavramı yoğun ilgi gördü ve düşünürler, din adamları, kanun yapıcılar, yöneticiler ve ekonomistler tarafından ekonomik, sosyal, ahlaki ve dini yönler başta olmak üzere hemen her yönden çalışıldı ve tartışıldı. Faiz almak birçok toplumda günah kabul edildi, onursuz, itibarsız, merhametsiz, adaletsiz ve birçok kötülüğün kaynağı olduğu için kınandı. Bunun sonucu olarak faiz kullanımı, her zaman, yönetimler tarafından yasal, idari ve finansal düzenlemeler, din ve etik vasıtasıyla sınırlandırıldı. İzin verildiği durumlarda kullanım usulleri yoğun şekilde düzenlendi. Bununla birlikte, bütün kaygılara ve bu kaygıların sonucu yapılan düzenlemelere rağmen faiz her zaman kullanılageldi.

Faizin ekonomik hayattaki rolünün daha belirgin hale geldiği on yedinci yüzyıldan itibaren bilim adamları faiz kavramıyla daha sistematik bir şekilde ilgilenmeye başladılar ve faizin doğasına ilişkin birçok teori geliştirdiler. Başka birçok teorinin yanında, Böhm-Bawerk'in oldukça kapsamlı olan zaman tercihi teorisi faizin varlığına ilişkin fıtri olduğu iddia edilebilecek sebepler sundu.

Öte yandan, ilgili literatürde faiz kontrolünün sonuçları hakkında bir ihtilaf ortaya çıktı. Bir çeşit fiyat kontrolü olan faizin yasaklanması ya da faiz oranının sınırlandırılmasının piyasa üzerinde arzu edilmeyen yıkıcı sonuçlarının olduğu iddia edildi. Eğer öyle ise, bu durum faiz düzenlemelerinin araç-amaç uyumluluğu yönünden yeniden değerlendirilmesini gerektirebilirdi.

Bu çalışmada faiz kontrolü yapılmasını destekleyenlerin Böhm-Bawerk tarafından faizin gerekçesi olarak ileri sürülen zaman tercihi sebepleri ile faiz kontrolünün yıkıcı sonuçlarına ilişkin iddialara tepkilerinin değerlendirilmesi amaçlanmıştır. Faiz kavramı, anlamı, tarihi ve ilgili teoriler yönünden gözden geçirilmiş, zaman tercihi teorisi ile bir fiyat kontrolü çeşidi olarak faiz kontrolü kavramı tanıtılmıştır. Faiz karşısındaki en açık duruşu faizsiz ekonomik sistem destekçilerinin gösterdiği göz önüne alınarak, Müslüman ekonomistlerin çalışmaları, zaman tercihinin sebeplerine ve faiz kontrolünün sonuçlarına ilişkin yaklaşımları yönünden incelenmiştir.

Anahtar Kelimeler: Faiz, Faiz kontrolü, Faz yasağı, İslam ekonomisi, Zaman tercihi

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1. INTRODUCTION

Lending has been a practice of humans' daily life, presumably since the prehistoric ages, well before the beginning of the usage of coin money. The first farmers, that lacked seed at sowing time and could not find a benefactor to receive the seed as gift or aid from, might have borrowed the seed. The lenders could lend to friends, neighbors, relatives or needy people, consentingly to receive back an amount of seed equal to the loaned amount. On the other hand, some of these loans were made in order to receive back more at harvest-time (Homer, 1963). The increment in the quantity of the loaned seed was called *interest* and it had been paid for the other loaned goods and money as well afterwards, almost in all societies.

Even though not complicated as it is in modern times, still surprisingly, the interest-based transactions were not merely composed of ordinary and uniform practices. From the beginning, at least since the third millennium BC, there were standard values (Homer, 1963) used in exchange, and beside the *basic interest*, also *compound interest* was being practiced (Graeber, 2011). The interest rates were changing in time and differentiating according to the place, loaned good, lender, borrower and the purpose of the loan.

1.1. Legitimacy

Along with the practice of interest-based transactions, a debate on the legitimacy of interest had been continued. Since the ancient times, many societies have condemned interest and the authorities regulated interest-based transactions due to various concerns (Durkin 1993, Rougeau 1996, Visser & McIntosh 1998, Sharawy 2001, DeLorenzo 2006, Farooq 2012, Erdem 2018). It has been claimed that interest is an income received without working; is benefiting from the poor people; causes economic instability;

enhances the inequality in distribution of wealth; undermines the spirituality of people; decreases the tendency to entrepreneurship, etc.

From the ancient societies to the countries of modern world, the authorities regulated interest-based transactions in aspects of execution, registration and enforcement. However, the interventions were mostly made in order to limit the rate of interest or to prohibit its practice. The interest rate was controlled by establishing upper limits that was changing in time and varying with type of loan, lender and barrower. In some periods of ancient Greece and ancient Rome, all types of interest-based lending were prohibited (Homer 1963, Visser & McIntosh 1998, Graeber 2011, Olechnowicz 2011).

In regulation of interest-based transactions, many religious and ethical instruments were used beside legal and financial means in the past and being used today as well. Receiving interest is considered sin and regulated almost in all religions (Visser & McIntosh, 1998). In many societies, lending at interest has widely been considered unnatural, ethically disrespectable and dishonorable (Homer 1963, Olechnowicz 2011, Graeber 2011). There have been laws regulating the interest-based transactions since the ancient Babylonia's Code of Hammurabi (Homer 1963, Visser & McIntosh 1998, Graeber 2011, Geisst 2013). Today, in some countries, the interest-bearing loans are fully prohibited by law. In some other countries, including developed ones, ceilings are defined for interest rates (Glaeser & Scheinkman 1994, Reifner, Clerc-Renaud & Knobloch 2010). The interest rates are also being controlled by the use of financial instruments such as lending to needy people at low interest rates or free of interest (Homer, 1963), and regulating the cost of the creditors through the reserve requirement ratios imposed by the central banks (Reifner, Clerc-Renaud & Knobloch, 2010).

1.2. Causes

On the other hand, along with the evolving existence of both the practice of interest and interventions of the authorities, the nature of interest has been thought much by philosophers, religious scholars and lawmakers regarding its economical, moral and

religious aspects since the ancient times. In the seventeenth century, the role of interest in economic life became more significant by the increment in the mobility of money and the need to finance due to the development of trade. In consequence, the supporters of interest-based transactions, including mercantilists, physiocrats and classical economists, came into scene. In the new era, the scholars dealt with the concept of interest more, but particularly with its economic aspects rather than moral and religious aspects this time (Küçükkalay, 2018). It was plausible that a needy borrower who had no other option was consent to pay interest. However, the reason of a lender in thinking that he has the right to receive interest for the loan he gave was not so clear.

Thus, many theories had been developed attempting to explain the cause of the existence of interest. The theories mainly tried to answer the question: Why is there interest? The remaining part of the problem was in the social and political domain of the issue, and about interest's effect, necessity, justice, fairness, usefulness and goodness (Böhm-Bawerk, 1890). The theory of interest had been studied within the scope of the theory of distribution and interest was regarded to be the income received from capital, one of the four production factors.

There were monetary theories of interest, which dealt with the determination of interest rate by considering the quantity and velocity of money, and nonmonetary ones as well. From another aspect, the theories of interest were based on various determinants such as productivity, abstinence, labor, exploitation and time preference (Conard, 1959).

The theories developed on the concept of *time preference* were among the mostly cited theories of interest. Since he is considered the founder of the modern theory of interest (Conard 1957, Potuzak 2016b), Böhm-Bawerk's approach of time preference has a particular importance. After severely criticizing a number of previous theories of interest (Böhm-Bawerk, 1890, 1903), Böhm-Bawerk developed a new theory stating time preference as the focus point of the issue (Böhm-Bawerk, 1930). The essential difference of his methodology from the others' methodologies was the distinction he made between the positive and normative aspects of the concept of interest. He claimed

that the cause of mistakes made in economists' works on theory of interest was the lack of the abovementioned distinction (Böhm-Bawerk, 1890).

Time preference is defined as people's attribution of more value to present goods than future goods with same quality and quantity, and thus *interest* was the difference between the present and future values of a good.

Böhm-Bawerk (1930) specified three causes for valuation present goods higher than future goods that are valid in general. The first two causes were about the preference of more consumption at present. People might prefer to consume more for consumption smoothing or because of underestimation of the future due to the psychological traits of ordinary human. The third cause was not about the preference of present consumption but about the desire of more production in value in the future.

Böhm-Bawerk's theory of interest has been in the focus of many scholars and a number of them criticized the theory in various aspects (Walker 1892, Clark 1894, Fetter 1902, Fisher 1907, Keynes 2013, Mises 2006). However, after more than a hundred years of its assertion, the theory is still being worked on (Olson & Baily 1981, Becker & Mulligan 1997, Hülsmann 2002, Murphy 2003, Frederick, Loewenstein & O'Donoghue 2002, Van Suntum & Neugebauer 2014).

1.3. Consequences of Rate Control

In addition to the debates on the legitimacy of interest-based transactions and the cause of interest, there has been a third controversy about whether prohibiting interest or limiting its rate is serving the purpose or not. Although there are scholars defending regulation of interest (Smith 1776, Keynes 2013, Metwally 1990, Glaeser & Scheinkman 1994, Rougeau 1996, Coco & Meza 2009, Lee 2017, Cheng 2018), most of the economists are opposed to any ceiling on the rate of interest today (Durkin, 1993). The opponents of limitations claim that interest rate controls have distortive effects on the market.

The stance of the regulation-opponents is originating from the consideration of the concept of *price control* that is defined as the restrictions on the price of a good or a service imposed by an authority. High prices over a limit may be prevented by price ceilings as it is done in rent controls, or low prices under a limit may be prevented by price floors as minimum wages (Coyne & Coyne, 2015a). Price controls are imposed for various purposes (Lipsey 1977, Schuettinger & Butler 1979, Bashar 1997, Bourne 2015, Miller 2015, Siebert 2015, Tabakoğlu 2016, Karadağı 2018) such as tackling inflation; protecting the consumers from black-market and exploitation; achieving equity in the workplace; preventing profiteering by property owners and many others.

Although they were widely used in the past and still being used today, there have been doubts about usefulness of price controls and even concerns about their adverse effects. It is claimed that some controls may produce just opposite results to the intention and have undesired consequences, which may be distortive on the market (Schuettinger & Butler, 1979). Shortages; increment in bribery and black-marketing; reduction in investment; worsening in quality of existing properties; reduction in construction of new estates; increment in cost of labor; reduction in labor demand; and increment in unemployment of the less qualified workers are some of the claimed negativities of price controls (Lipsey 1977, Schuettinger & Butler 1979, Booth & Davies 2015, Coyne & Coyne 2015b, Miller 2015, Siebert 2015, Snowdon 2015, Wellings 2015).

Yet another problem caused by price control is about the signaling role of the price in the market (Schmidtz, 2015). Since price is considered a fast and effective transmitter (Sowell, 1980) of a composite signal that is formed by all the relevant information, any control prevents the availability of required information in decision-making and increases uncertainty. Furthermore, the masking effect of price control may prevent to determine the real reasons of economic troubles (Coyne & Coyne, 2015b).

As being also defined as the price of the use of loan, *controlling the rate of interest* is, no doubt, a form of price control. Then, interest rate control may have effects on the market similar to the effects of other price controls. A ceiling on the interest rate that is under the market rate reduces the supply of loan, increases the demand to it, and

causes a shortage. In such a case, although they are ready to borrow at a higher rate, the more needy borrowers fall into trouble in finding loan. Because, they are discriminated by the lenders due to be more risky. Some of the borrowers that lost the opportunity to borrow are guided to usurers, pawnshops and loan sharks (Durkin 1993, Ellison & Forster 2008, Rigbi 2013). On the other hand, the less needy borrowers, who borrow at relatively low interest rate, may not use the loan efficiently.

Regarding the signaling role of price, interest rate control prevents the transmission of some information, and lack of information discourages the new lenders in entering the loan market and distorts the competition.

The interest rate control may also have some macroeconomic negativity. The loss of the attraction of capital ownership may decrease savings and so, the investment may decline. In consequence, the adversely affected output, employment and income may reduce the total wealth (Durkin, 1993).

1.4. The Problem and the Aim of the Work

The legitimacy of receiving interest has been discussed throughout the history. The philosophers, jurists, lawmakers and economists either legitimized interest or objected to it.

The supporters of interest defined it as a necessity, or at least as a right, by asserting causes for its existence, referring to its usefulness in economics and claiming that interest rate controls have distortive consequences in the market. The opponents of interest, on the other hand, raised many reasons for its *evilness*, condemned it and restricted interest-based transactions either limiting interest rates or wholly prohibiting interest. However, despite all concerns about it, whether it was allowed or not, interest has been, more or less, always practiced (Kuran, 1995). As if inevitable, interest-based transactions has been made either legally or using loopholes in regulations or illicitly.

The controversy on interest is partially originating from the normative aspects of the interest-opponents' approaches. However, the opposing economists are increasingly

attempting to justify their assertions in the positive domain. In this context, two interest-relevant issues deserve special attention and clarification, one on the cause and the other on the effect side.

The first ambiguity is about the cause of interest. Among many other claimed causes of interest, time preference seems to be assertive. Particularly Böhm-Bawerk's theory presents an existential problem by its comprehensiveness and specifically by grounding on ordinary human attitude that may be claimed to be inherent.

The second important issue is about the consequences of interest rate control. If prohibition of interest or limiting its rate has undesired distortive effects on the market as it is claimed, means-ends consistency in regulations may have to be reevaluated.

Considering the fact that the supporters of an interest-free economic system have the most explicit attitude against interest, the further success of the system and the interest-free financial instruments they proposed requires plausible interpretations of these two issues. The conclusion may be either refuting, or wholly or partially acknowledging the assertions of time preference as a cause and distortive consequences of price control. Whatever the conclusion is, it would contribute to the accuracy of own arguments and insofar as the conclusion is plausible, their arguments would be convincing for others. Therefore, for financial and social efficiency, any evaluation, judgment or regulation on interest has to consider the coercive demand for interest usage and the consequences of interest rate control.

In this work, the concept of interest in aspects of meaning, history and nature is presented. Then, time preference, an important cause that seem to be inevitable, and the non-negligible consequences of interest rate control are highlighted.

The concept of interest is evaluated within the literature of Islamic economics in the context of time preference theory and price control. The Islamic economic system is preferred as representative of interest-free economic models due to a number of facts. Among many other reasons that distinguish Islamic economics from the conventional systems, prohibition of interest is the most significant one. Although there are some

other interest-free economic models and movements, Islamic economics may be considered to lead the way by its numerous supporters, relatively extensive literature, growing market and actively operating instruments.

1.5. The Content of the Work

The concept of interest is studied in many aspects focusing on its causes and consequences. As being presumably the mostly cited interest-free economic system, the basics of Islamic economics are reviewed. Specifically the prohibition of interest in Islam is focused and Muslim economists' interpretation of time preference and consequences of interest rate control is evaluated qualitatively.

The work is comprised of six chapters. Following the introduction, in the second chapter, meaning of the word interest and definition of it as an economical term are presented. Beginning from the ancient times, the history of interest is reviewed and finally, major theories of interest are summarized briefly.

In the third chapter, the theory of interest based on time preference, specifically Böhm-Bawerk's approach is examined closely. After presenting the arguments of Böhm-Bawerk in developing a theory of interest distinct from the existing ones, his assertion is introduced. Then, the critiques of various scholars on the theory, and the validity of theory in contemporary economic system are reviewed.

The reasons for prohibition of interest or limiting its rate, and the instruments used in regulation are presented in the fourth chapter. After reviewing the concept of price control with regard to its mechanism and consequences, Steven Cheung's price control model, which is applicable to any price control regulation, is introduced.

According to Cheung, for a correct evaluation of the consequences of a price control regulation, the specification of constraints proper to the real market practice should be available. However, the complexity of control regulations does not allow estimating the correct constraints. Cheung's theory attempts to propose a methodology that helps to investigate the relevant constraints of any price control rather than

explaining the implications of a specific control. Lastly, the consequences of interest rate controls in various markets are evaluated.

In the fifth chapter, after summarizing its historical background and its distinctions from conventional systems, basic principles of Islamic economics are presented. Prohibition of interest, the major distinct characteristic of Islamic economics, is reviewed regarding its origins from *Quran* (the holy book) and *Sunnah* (practices of the Prophet). The traditional view of Islam on interest is presented by referring to the approach of *fiqh* (Islamic jurisprudence) to interest. The contrarians of the traditional view are summarized, and the instruments alternative to interest-based transactions and other devious ways used to overcome the prohibition are introduced.

In the last part of the fifth chapter, the Muslim economists' interpretations of time preference and consequences of price control, beginning from the midst of twentieth century, are evaluated in detail and their counter-arguments to the common approach of the conventional economists are scrutinized.

Finally, in the sixth chapter, the content of the previous chapters and the findings of the work are concluded. A chronological bibliography of Islamic economics on the concept of interest is presented in Appendix A.

2. THE CONCEPT OF INTEREST: ITS MEANING, HISTORY AND THEORETICAL DEVELOPMENT

Interest had existed long before the beginning of the efforts to understand and define it. In the first section of this chapter, the literal meaning of the word *interest* is presented and its ascribed meaning as an economics term is scrutinized regarding variations in definition and its types. The history of interest is reviewed beginning from the ancient times in terms of the rates, causes, regulations of interest and the enforcement tools of defaulted loans in the second section. Then, in the last section, basic principles of the major theories of interest are briefly summarized.

2.1. What is Interest?

The word *interest* literally means *to be between* as a combination of two words, *inter* means *between* and *esse* means *to be*. As Online Etymology Dictionary (2019) defined, in the middle of fifteenth century the word *interest* was used in meanings of "legal claim or right; a concern; a benefit, advantage, a being concerned or affected …" (entry of *interest*). The word *interest* was derived from the Latin word of *interesse*, which originally meant a penalty of defaulted or late repaid loan. However, the origin of *interest* was closely related to the meaning of *usury* that was defined in medieval Europe as repayment of a loan exceeding the principal (Persky, 2007). In time, *usury* evolved to mean *excessive interest* in most of the world by the adoption of meaning of *interest* to be the increment in repaid loan at an acceptable rate.

Although the word has been used in some other meanings in the past and today as well, the earliest relevant usage was in sixteenth century (Online Etymology Dictionary, 2019), same as in its present meaning of *payment for the use of borrowed money*.

At present, the relevant meaning of *interest* is defined in Merriam-Webster (2019) dictionary as "a: charge for borrowed money generally a percentage of the amount borrowed, b: the profit in goods or money that is made on invested capital, c: an excess above what is due or expected" (entry of *interest*). The Oxford Advanced Learner's Dictionary (2000) preferred a single definition as "the extra money that you pay back when you borrow money or that you receive when you invest money" (p.625). Even though the dictionaries simply define interest as the increment in money lent, it is clear that, in practice, interest-bearing transactions of goods beside money had been made in the past and is still being partially made today.

However, some scholars used the word *interest* in various meanings as an economics term. Irving Fisher (1930) defined interest as the name of all types of income. Joseph Schumpeter's (1934) definition was narrower than Fisher's was, that named all returns, except the wages, as interest.

Some other scholars regarded interest as it is commonly accepted: *the increment in a loan when it is paid back*, but made some additional specific definitions due to their approaches to the nature of interest. Frank H. Knight, for example, asserted that interest and rent are the same (Conard, 1959). Anne Robert Jacques Turgot (1766) defined interest as the price of the use of loaned money. Adam Smith (1776) called interest as the revenue derived from the stock that lent to others. Nassau W. Senior defined interest as it is received by the lender for his abstaining from present consumption (Medema & Samuels, 2003). As a final example, according to James Mill, interest is the revenue of stored labor that is a form of capital (Conard, 1959).

However the word *interest* is defined, one should possess an asset to be able to lend. Capital, the mentioned asset to be lent, is defined by Böhm-Bawerk (1890) as "… a complex of goods that originate in a previous process of production, and are destined, not for immediate consumption, but to serve as means of acquiring further goods" (p.6). Since the current consumption vanishes before being used as capital and the land is not produced, Böhm-Bawerk excluded these two assets from the scope of capital. Therefore,

Böhm-Bawerk also made an additional definition of interest: *the income that flows from capital is interest*.

On the other hand, there are some forms of interest emerged from various breakdowns. There is a distinction between *gross interest* and *net interest*. Gross interest is the interest paid by the borrower, which also covers all the costs of transaction such as taxes and premiums of risks. The net interest is the true income of capital received by the lender that is obtained after deduction of the costs from the gross interest. This means, if there is a cost, the loan's interest rate for the lender is not equal to the rate for the borrower.

Another breakdown is of *natural interest*, and *contract* or *loan interest*. The value of product increases by using capital for production, with respect to the case in that capital is not used. This increment in value is usually higher than the value of capital used. The excess of increased value than the value of capital is the profit of capital, namely *natural interest*. It is frequent that the owner of capital does not employ it in production himself, but gives it to someone else against a fixed remuneration. When capital given is durable such as building, vehicle or tool, the remuneration is called hire or rent, but when it is perishable as money, grain or another commodity, the remuneration is called interest. Both rent and interest, are called *contract* or *loan interest* (Böhm-Bawerk, 1890).

The distinction between *nominal interest* and *real interest* should also be considered. Nominal interest is simply the interest on a loan or investment. In case of the existence of inflation, the real value of the capital at the lending or investment time, specifically when capital is money, cannot be kept in the end of the lending or investment period. The real interest is the normalized nominal interest by inflation rate.

The interest rate, which is the ratio of the amount of increment to the amount of capital lent, has some determinants that are essential to understand what the rate actually means. The interest rate may change according to the time, maturity, size and legality of the loan, the place where it is lent, the taxability of the interest income, the level of the

reliability of the borrower in terms of the existence of indemnity for the loan, the institutional identity of the lender.

Within the scope of this work, unless otherwise specified, that which is intended by *interest* is *net* and *real interest*, but not the gross, natural, rent based loan or nominal interest.

2.2. The History of Interest

Lending has been utilized in economic life since the prehistoric ages. Although the usage of money as coin had begun at the first millennium BC, lending had existed well before the emergence of money. The Neolithic farmers, who had given seed to others by expecting repayment, might be the first lenders. The quantity of the repayment for the loans to a friend, neighbor or relative could be equal to the loaned quantity. On the other hand, some of these lenders had received back more at harvest-time. Similarly, cattle had been loaned and received with their calves at the repayment time (Homer, 1963). The increment in the quantity of the seed and the calves of the cattle was called *interest*, and this has been demanded for loans of other goods and money as well, in many ancient, medieval and modern societies.

Metals like gold, silver, lead, bronze and copper had begun to be loaned at interest by the development of mining. The exchange of metals had been made by weight before the emergence of money (Homer, 1963).

2.2.1. Mesopotamia

In ancient Sumer, from the third millennium BC to 1900 BC, grain and silver were standard values (Homer, 1963). The Sumerian writings, available today, were mostly about records of commercial transactions and contracts including of the interest-based loans. In the twenty fourth century BC, a Sumerian legal code regulated the loan transactions and freed the people imprisoned for the debt not paid back (Vincent, 2014). The Sumerian people were familiar loans not only at basic interest but also at compound

interest (Graeber, 2011). The customary rate of interest for a loan of barley was 33⅓% and for a loan of silver was 20% (Homer, 1963).

The survived Sumerian financial practices until the Babylonian era took place in the Code of Hammurabi, circa 1800 BC. The Code allowed lending at interest, but a maximum interest rate was defined for each type of loan. It was mandatory to make the loan contracts before an officer and witnesses in Babylonia. If not, the lender could not claim anything. The lender also lost the repayment if an interest rate had been defined over the maximum level. Pledges and sureties were used to protect the lender in such a case of default. People such as wife, concubine, children, and slaves or possessions like land, house, and door could be pledged. The slavery of such people was possible only for three years. The limit on the slavery period was extended later (Homer, 1963).

The loans were usually in grain and silver. Similar to the Sumerian era, the maximum interest rate on loans of grain (one third per annum) was higher than on loans of silver (20% per annum) for more than a thousand years. Although the usual maximum interest rate on loans of silver was 20%, there were also examples as 25% and 12% per annum. The lenders were not only the individuals but also the temples were lending. In order to help the poor people, the temples used lower levels of interest rates such as 20% for loans of barley and 6¼% for loans of silver. Even the temples lent without interest in some cases. The interest rates were higher in the neighboring countries of Babylonia in that era (Homer, 1963).

In the period of 732 to 625 BC, when the Assyrians dominated, the legal maximum interest rate remained same in Babylonia. However, the interest rates in Assyria itself were not same as the Babylonian rates. Although there is no evidence of any interest rate limits used in Assyria in the ninth and eighth century BC, the normal interest rates on grain loans were 30-50% and on silver loans were 20-40% per annum (Homer, 1963).

Then, in the Neo-Babylonian Empire, from 625 to 539 BC, the maximum interest rate on grain loans was reduced to 20% and it became equal to the rate on silver loans. Lending with interest rates higher than the defined maximum level was rarely allowed.

However, usually the rates in loan market were below the maximum rates of interest. There were examples that professional creditors lent at 11⅔% and some others lent at interest rates varying between 16⅔% and 20% (Homer, 1963).

The loans at interest survived for thousands of years in Mesopotamia with the frequent interventions of the authorities. However, the interventions were not only for regulation of lending. For the restoration of justice and equity, for the protection of widows and orphans, or for other similar reasons, the debts were abolished several times in Sumer, Babylonia and Assyria (Graeber, 2011).

2.2.2. Ancient India

The earliest information about the existence of loans at interest in ancient India is of the period of twentieth to fourteenth century BC. It is known more about the loans at interest in the later centuries of seventh to first BC. A Hindu law was made, and lending at interest became forbidden for the upper classes such as priests and the warriors. On contrary, the Hindu temples were allowed and commonly lent at interest. In the second century AD, the Laws of Manu, the Hindu code, defined the interest rates above the legal rate to be usurious and such attempts to be against the law. On the other hand, in the medieval India, the Hindu law emphasized that the one who could not repay a loan, would be reborn as a slave of his lender or his horse or ox. The same attitude was also observed in Buddhism (Visser & McIntosh 1998, Graeber 2011).

The earlier rules limited the interest rate of loans at 15% per annum, except for the commercial loans. Then, various limits were defined for each caste in the range of 24-60% per annum (Graeber, 2011).

2.2.3. Ancient Greece

The population lived around Aegean Sea from 2400 to 1200 BC is known to be reached to a high level of economic activity. However, there is not any information about lending made at interest. On the other hand, the Greek poet Hesiod mentioned the interest-free seed loans, repayable in kind. In this period, cattle were the standard value

at the beginning. Later, metals were begun to use for exchange. In the seventh century BC, the Greeks developed an economic system that was based on trade. The loans at interest were used much in trade (Homer, 1963).

In the beginning of the sixth century BC, the farmers faced huge economic troubles. They were producing but could not keep most of their production. Slavery due to non-repaid loans was allowed and frequently observed. In 594 BC, Solon, a prominent wise man, was empowered by Athens with legislative power for a limited period in order to revise the laws. Solon made radical reforms. Many debts canceled or reduced by the revision of laws. The slaves for unpaid loans were freed. The limits and restrictions on the interest rates were removed. However, personal slavery due to not paid loans was forbidden. Instead, the loans began to be secured by real estate. Bankers that lent to individuals and states were prevalent in the fourth century BC. Various assets such as state revenues, cargoes, pawns and real estate were used to secure the loans. Besides, unsecured loans also made (Homer, 1963).

In the fourth century BC, during the lifetime of Aristotle, it was believed that the loans aiming profit was unnatural and dishonorable. Aristotle classified wealth acquiring in two types. The necessary and honorable one was the household management. The retail trade in which people gain from one another, was regarded to be unnatural. Mostly the trade of money, loans at interest, was hated. Money was for exchange only (Olechnowicz, 2011). Even so, this belief did not annihilate the existence of loans at interest.

In ancient Greece, interest rates highly varied in time. The rates were differed in different cities, and not same for different types of loans. The normal interest rate of loans of silver in Athens in Solon's time (the sixth century BC) was 16-18%. It was 6-10% in the second century BC and 8-9% in the first century AD. The interest rate on the real estate loans varied between 6⅔% and 18% in the period of fifth to second century BC. The interest rate on loans to cities varied between 7% and 48%; on loans to industry and commerce were 12-38%, and the rate, which the endowment funds earned, was 6-16%. There were some other types of loans such as personal and usurious loans. The

interest rates of these types varied in a huge range. For example, 36% in the fifth century BC, various rates from 10% to 9000% in the fourth and 24% in the third century BC (Homer, 1963).

2.2.4. Ancient Rome

The Romans of high status had income from landholding and usury; but the activities of commerce and industry were regarded to be dishonorable and left to the former slaves (Baumol, 1990) and foreigners. This may be the reason of observing less interest rate records in ancient Rome compared to ancient Greece. The first known form of money in ancient Rome was cattle and some other animals. By the fifth century BC, copper and bronze became to be used for exchange. Rome began to use silver coin in the second century BC (Homer, 1963).

Before 443 BC, the loans were secured by slavery and the defaulted debtors were sold in foreign lands. In 443 BC, Twelve Tables codified the Roman law. According to the tables, thirty days were allowed for payment; in case of default, the lender was able to seize and fetter the debtor, but had to feed him. On the other hand, creditor receiving a higher interest than the legal maximum of 8⅓% per annum had to pay a penalty. In 347 BC, the legal interest rate was reduced to 4⅙% per annum and in around 342 BC, it again increased to 8⅓% (Homer, 1963). Once in 340 BC, the loans at interest were totally banned within the Lex Genucia reforms, but this did not prevent the existence of loans at interest and the rules changed back again (Visser & McIntosh, 1998).

In 326 BC, imprisonment of Romans for debt became forbidden for the first time. In 192 BC, the foreigners were also covered by the law. Rome was the financial center of the world by the first century BC (Homer, 1963).

The legal maximum interest rates of Rome were around 12% from the first century BC to the fourth century AD. Besides, the normal interest rates varied in a range of 4-12% in the same period. The interest rates in the Roman provinces were quite different from the ones in Rome (Homer, 1963).

It is generally accepted that the loans were not at interest in Egypt until the eighth century BC. The lending was probably among the neighbors only and it was made without interest (Graeber, 2011). During the Roman domination, in the fifth century BC, the interest rate on grain loan was 100% and on silver loan was 85% in Egypt. In the second century BC, the rates were 5-10% in Egypt and 8-12% in Asia Minor. In the second century AD, the interest rates were 6-50% in Egypt, 6-12% in Asia Minor and 5-12% in Roman Africa (Homer, 1963).

2.2.5. Byzantium

About the era of the Eastern Roman Empire, regarding the interest, only the legal limits are known. According to the Justinian's Code, in the sixth century, the rate of interest was defined to be too high and the legal limit of interest rate was reduced to a range of 4–8%. Bankers were allowed to charge 8% per annum; ordinary citizens were allowed to charge 6% and so on. Maritime loans were limited to 12% per a voyage. Loans of commodities payable in kind were limited to 12%. The interest of the loans to churches and foundations were lower, 3%. In addition, accumulated interest was not allowed to exceed the principal. The legal limits in the seventh and eighth centuries were same as in the sixth century. In the ninth and tenth centuries, the legal limits increased to 8⅓-11⅛% range (Homer, 1963).

2.2.6. The Abrahamic religions

The Abrahamic religions, Christianity and Islam forbade lending at interest totally. However, Judaism defined some exceptions. The Jews were not allowed to lend at interest to other Jews and to non-Jews who believed in the relevant rules of torah, but it was permissible to make interest-based transactions with others (Visser & McIntosh 1998, Küçükkalay 2018).

After the emergence of Christianity, there was an ambiguity about the legitimacy of interest due to various contradicting decrees in old and new testaments. The attempts to overcome the ambiguity resulted against interest and in the fourth century AD, the

Roman Catholic Church prohibited the clergy to lend at interest (Visser & McIntosh, 1998).

Circa 800, during the reign of Charlemagne, the earlier prohibitions were adopted as state law and the interest restriction was extended covering all people (Küçükkalay, 2018). However, Jews were not included in the prohibition and accepted as legal moneylenders by the Church (Geisst, 2013). After about 300 years, in the eleventh century, the scholars examined the usage of interest in detail and it was declared that lending at interest was a form of robbery, so it was a sin. In the twelfth century, Pope Alexander III declared that forward sales at a price above the cash price were usurious. According to the decree, usurers were guilty of being uncharitable and avarice, and of a sin against justice. Therefore, they were excommunicated (Homer, 1963). The decree also widened the coverage of the interest prohibition. The previously legal lending forms similar to interest-bearing loans were prohibited (Küçükkalay, 2018).

The main attitude did not change much until the emergence of the Protestantism in the sixteenth century. Within the thought of Reformation, Luther, Calvin and others asserted that interest should not be condemned, and its prohibition was removed gradually. However, some of the pioneers of the new approach had reservations about the practice of interest. For example, Calvin defined some cases in which interest remained sinful. Even so, he came to be known that he was totally supporting interest. Regardless of any reservations, the sympathy to interest spread out, and by the change of the attitude of the authorities on interest, usury was redefined as interest above the acceptable rate (Visser & McIntosh, 1998).

While interest prohibition was weakening in Protestant countries, the tightness of the Church policies continued until the eighteenth century in Catholic countries. Even though some credit forms such as insurance contracts and state loans were allowed and used along a few centuries, the Catholic Church came to approve new lending forms that were easing the usage of interest, in the eighteenth century (Chown 1996, Homer 1963). In the nineteenth century, it was decreed that everyone was allowed to take interest,

which was not over the defined limit (Homer, 1963). This is still the most common thought of the Church (Visser & McIntosh, 1998).

It should be noted that various prohibitions and regulations regarding interest, made by the Church during many centuries did not merely stem from religious motivations. In some periods, some merchants, who were able to use instruments for evading the Church's regulations, supported the prohibitions. Thus, the others, lacking the abovementioned instruments, were kept away from the market. By the prohibition of interest, an implicit interest rate survived, that was higher than the rate that would be if it were legal; a small group of merchant bankers took the monopoly power; the pawnbrokers that publicly lent at interest emerged. The administrators, privileged merchants and the Church shared the rents originated from the prohibition of interest (Koyama, 2011).

The *acceptable interest rate* that was not exceeding the defined limit has been a much-debated issue all the time and defining it is still an unsolved problem. However today, the Church's decree does not influence the practice of law much in most of the Christian populated countries.

The traditional Islamic view on interest did not become clear during the lifetime of the Prophet, in the early decades of the seventh century. *Riba* that literally means increase, addition or expansion (Chapra, 2006) is definitely prohibited both in *Quran* (the holy book) and in *Sunnah* (practices of the Prophet). However, there had been a long-continued debate on the definition of riba after the Prophet. Despite the existence of many other views, the definition of riba as "any increment in the amount of borrowed money or asset on the repayment day" has been widely accepted. According to this traditional, most common view, riba simply means interest. Since interest is not allowed at any rate, a riba-based or interest-based lending means usury. Although not honored much, there has been various approaches, which differ from the traditional one. Some scholars differentiate the loans for consumption and production, defining increased repayment of the former to be riba and the latter to be interest, claiming that riba is forbidden but interest is not. Some others assert that the simple interest is not implied by

riba, the inhibited action is lending at compound interest. Yet another approach claims that riba is the exorbitant interest or usury, and prohibited, but interest at a plausible rate is not riba and not prohibited.

2.2.7. The Medieval Europe

Despite abovementioned and many other regulations of religious and administrative authorities for the prohibition of interest, the interest-bearing practices always existed in Europe illegally or semi legally. Along with the revival of trade and industry in the eleventh century, the need for the finance of economic activities increased and some new forms of lending developed. The supporters of interest emerged by using some loopholes in the law and contradictions in the Church's arguments (Visser & McIntosh, 1998).

The new instruments helped to meet the need of lending but not directly considered sin. For example, the pawnbrokers, who were Jews in general and often tolerated and licensed through heavy fees, made secured consumption loans at an interest rate in a range of 32½% to 300% per annum. State loans might be another example. Some states forced the wealthy citizens to lend to the state in proportion to their known wealth. The states were defining the date of repayment and annual payments were made to the lenders as gifts. The rate of interest in form of gift was low and nobody was voluntary for making such a loan. In the fourteenth century, a practice developed within the partnerships that one partner was insuring the investor partner against loss. In the sixteenth century, the Church unofficially approved the practice of profit insurance and the interest received from such investments was used to support the needy people and the Church (Homer, 1963).

The records of interest rates became available again, after a long time, in the twelfth century. In England, the Jews were the main lenders. The usual interest rate was changing due to the quality of the security, in a range of 43⅓% to 120% per annum. Since lending was not made for more than a year, interest was often decided at weekly

rates. In the end of the century, the interest rate was between 10% and 16% in the Netherlands, and 20% in Genoa (Homer, 1963).

In the thirteenth and fourteenth centuries, the types of the loans were diversified. There were loans to princes, personal loans, commercial loans, deposits, mortgages and loans to states. The interest rates varied according to the type of the loan and state. For example, the interest rates were in a range of 5% to 40% in the thirteenth century. Only the limits for pawnshops in some states were higher up to 300%. The variation of the interest rates among the loan types and the countries remained similar. A decrease in the interest rates for various loan types was observed in the second half of the seventeenth century. In these years, the short-term commercial loans were made at interest rates of 1¾-4½% in Dutch Republic and 3-6% in England. Short-term deposits had interest rates of 3-4% in Dutch Republic and 4-6% in England, mortgages and other long-term debts were made at interest rates of 3-12½% in Dutch Republic, 4-6% in England and 5-8⅓% in France (Homer, 1963).

2.3. The Theories of Interest

The significant role of interest in lending has always motivated people to think on the nature of interest since the ancient times. The philosophers, wise men, religious scholars and the lawmakers evaluated it economically, morally and religiously well before the modern times. After a while, the mobility of money and the need to finance increased further by the development of trade and industry. Besides, the attitude against the legitimacy of interest weakened in Europe by the widening of Protestantism. The pioneer mercantilist, physiocrat and classical economists took part in the pro-interest movement and asserted that interest was legitimate. These economists studied on the nature of interest as their predecessors did, but this time economical aspects of interest were focused on, rather than its religious or moral aspects (Küçükkalay, 2018). Aiming to understand the role of interest in the economic activities and the cause that generating it, various theories have been developed.

From the beginning, the theory of interest has been studied within the theory of distribution. Traditionally, four factors of production were defined in the economy. The workers, landholders, capital owners and entrepreneurs receive wage, rent, interest and profit respectively. However, there have been some different approaches about the categorization of income. Irving Fisher (1930), for example, asserted that all types of income are interest. On the other hand, Frank H. Knight regarded interest and rent to be the same. As a third example, according to Joseph A. Schumpeter (1934), all returns, except the wages, may be regarded to be a form of interest. He defined interest as a deduction from profit like a tax (Conard, 1959).

The main question that the theories of interest try to answer is: Why the lenders of money request and receive a payment as interest? There is another question accompanied the main one: How the interest rate is determined? In general, these two issues have been regarded as separate fields (Conard, 1959). However, there were some scholars, like Fisher, who contradicted it. Fisher (1930) claimed that the answer of the second question would include also the answer of the first one.

From another point of view, the main theoretical problem in interest studies is about the causes of interest. The question pursues, almost the same as the abovementioned first question does: Why is there interest? The rest of the problem is about the social and political aspects and deals with the effects of interest, discusses on the necessity, justice, fairness, usefulness and goodness of interest and tries to decide whether it should be continued or stopped to use, or modified (Böhm-Bawerk, 1890).

Many economists, including most of the classical ones studied on nonmonetary theories of interest, in which the interest rate was determined without considering the quantity and velocity of money. On the other hand, monetary theories were prominent both before and after the classical economists. The reason for the diversity of the classical economists may be their more theoretical approach to the issue, compared to the pre and postclassical economists who were personally more involved in the economic activities and administration of economy (Conard, 1959).

The manner of approaching to the issue may be another aspect of classification of the theories of interest. Böhm-Bawerk (1890), for example, grouped the theories of interest as productivity theories, abstinence theories, labor theories and exploitation theories.

In the following sections, some of the theories of interest are reviewed briefly. Actually, there are many other theories that are not included in this work such as

- Knight and Schumpeter's theories of interest (Conard, 1959);
- Pure time preference theory of Frank A. Fetter (1914), Ludwig von Mises (2006), and Murray N. Rothbard (2011) (Kirzner 2011, Potuzak 2016a);
- Milton Friedman's monetary theory of interest (Küçükkalay, 2018);
- A relatively new theory of Jörg Guido Hülsmann (2002).

2.3.1. Turgot's theory

The French physiocrat Anne Robert Jacques Turgot was defined as the one who first studied scientifically the issue of interest by Böhm-Bawerk (1890). Turgot described that lending money at interest is a kind of trade in which the use of money is sold by the lender to a buyer that is the borrower. This is same as renting a property in which the use of it is sold and bought, the price of the use of money is the interest (Turgot, 1766).

The lender loses the revenue that might be received by the capital during the loan period, and risks the capital. On the other hand, the borrower can use the capital for profitable investments and make a great profit. However, these are not the main causes that legitimate receiving interest. Without considering these facts, the lender has the right to lend at interest, because the money is the lender's own. The lender can do whatever he wants: keeping the money, lending it by subjecting to any condition or something else. It is just like exchange transactions in which commodities sold (Turgot, 1766). The lender also has the right to request any price for the commodity. Of course, the transaction is possible if a buyer is ready to pay the requested price.

The only and important difference between loan transactions and ordinary exchange transactions is that, in an ordinary exchange transaction, the exchange takes place immediately but in a loan transaction, a present sum of money is exchanged for a promise to pay a sum of money in the future that is more valuable than the present one. The borrower pays the increment in the value of the present money, in the future, because the lender things that "a bird in the hand is better than two in the bush" (p.215) in Turgot's (1769) words and such an increment in the value of the loan convinces him to lend (Groenewegen, 1971).

According to Turgot, similar to the price of other commodities, the price of the money, namely interest rate, should be determined by the market. When there are many borrowers, demand for money increases and the interest rate rises. When there are many lenders, supply of money increases and the interest rate falls (Turgot, 1766). This is the basic postulate of the classical theory of interest, which asserts that the interest rate is determined by the market by balancing the demand for capital and the supply of it.

Turgot compared the income of interest with revenues from some other investments. He asserted that the income from capital lent at interest, should be a little higher than the income from a land purchased at a price equal to the capital lent. Distinctly, the capital invested in agriculture, industry and trade should have higher revenue than the same capital lent at interest (Turgot, 1766).

2.3.2. Productivity and Use theories

A number of theories exhibit a common approach regarding the relation of interest with the productivity. Scholars including Jean-Baptiste Say, Wilhelm Roscher, Thomas R. Malthus and Johann von Thünen developed theories that were not wholly same, but commonly asserted that since the capital was productive; it had to receive some portion of the income (Conard, 1959).

There were various aspects regarding the explanation of the productivity of capital. The most common was that, saving capital instead of consuming today would help to produce more in the future. An angler using a fishing rod may save some of his

income and buy a fisher boat and a net, and then he will be able to fish more. Producing more may be in two distinct forms: one in quantity and other in value. The angler's case is an example for producing more in quantity (Böhm-Bawerk 1890). The increased price of an aged wine, with respect to its price when it was fresh, is producing more in value (Conard, 1959).

The value of the increment in production due to a capital usage is expected to be higher than the used capital. Some part of the defined surplus is the yield of the capital and the owner of the capital has the right to receive revenue or interest for it. However, Böhm-Bawerk (1890) discussed the case in which the abovementioned expectation not met. What if there is no surplus, in other words, the value of the increased part of the product in quantity is not higher than the capital used. Then it would not be possible to receive interest.

As Böhm-Bawerk named (Conard, 1959), the use theories seem closely related to the productivity theories. The theories, in which F.B.W. von Hermann and Carl Menger's ideas are prominent, are an extension of productivity theories but differentiate asserting that the use of capital should be considered independently, beside the substance of capital. When the owner of the capital lends it, he sacrifices both the substance and the use of capital (Böhm-Bawerk 1890). Therefore, the buyer of the capital should pay for both the substance and the use of it (Conard, 1959).

This time, the value of the increment in production due to a capital usage is expected to be higher than the substance of capital used, and the surplus value is the share that falls to the part of the sacrificed use of capital (Böhm-Bawerk, 1890).

2.3.3. Abstinence theories

W.N. Senior defined interest as the payment made to the lender for his abstaining from present consumption up to the end of the term that capital is lent (Medema & Samuels, 2003). Although some others, including Samuel Read, Samuel Bailey, Henri Storch and George P. Scrope proposed abstinence theories of interest (Bacon, 1992);

Senior's theory has been accepted as the most completed classical theory (Bowley, 2003).

Senior (2003) defined abstinence as one of the three instruments of production. Other instruments, labor and natural agents are the primary ones. The efficiency of the labor and the natural agents is provided by the use of abstinence. Abstinence is the action of a capital owner who abstains from the unproductive use of the capital and prefers a better production of future to present outcome. Abstinence is a source of pain for the capital owner, just like the pain of the labor in production, and interest is the reward that corresponds to the pain. According to Senior, abstinence is also the cause of capital accumulation (Küçükkalay, 2018).

Böhm-Bawerk objected Senior's theory by claiming that abstinence could not be dealt with as an independent production factor. Considering the nature of a production factor, only an entity can provide production such as a commodity or a person. Choosing any of the usage of a factor means, it is abstained from the usage of another one. Then, a payment for an activity includes also the payment of abstinence from alternative activities (Conard, 1959).

2.3.4. Labor theories

Similar to the abstinence theory, a distinct production factor was defined by the labor theories. Scholars of labor theories asserted that interest is legitimate revenue paid for labor that was performed previously or the rights of it were obtained. James Mill, a prominent one of the labor theorists, specifically defined the interest as revenue of stored labor in form of capital (Conard, 1959).

James Mill (1844) proposed that the exchange value of a commodity is regulated by the cost of production. According to him, there are two productive instruments, labor and capital, and capital is a form of stored labor. Then, the total cost of production is defined by the labor alone. As a consequent, the regulator of the value of a commodity is labor only.

A question was raised by Böhm-Bawerk (1890) regarding the distinction between the stored labor and current labor. While the present worker is receiving only the current wage, the stored labor, capital, receives more with the addition of an interest. What makes the stored labor more valuable or more profitable than the present one? Unless this question finds a satisfying answer, Mill's proposition of regulation of a commodity's value only by labor, will be refuted.

2.3.5. Exploitation theories

The theorists of the exploitation theory asserted that any product is produced by labor alone but the workers do not receive the entire revenue of the production, owing to the institutionalized rights of private property, and capital owners take some part of the revenue. Therefore, interest is a part of the value of the product, produced by labor that is obtained by exploiting the needy people (Böhm-Bawerk, 1890).

Actually, the thought of measuring the value of the products by the quantity of labor used to produce them, had existed since the times of Adam Smith and Ricardo. As it was, facing such a question was not surprising: Knowing that the cause of the value is labor, why does it not receive all the revenue of the production? The only plausible explanation was that the capital owners, a class of society, take some part of the value produced by the workers alone, as parasites do. Scholars, including the two prominent ones Karl Rodbertus and Karl Marx, studied the problem within the mentioned main frame.

Böhm-Bawerk attempted to refute the Marxian approach in two aspects (Conard, 1959). He denied Marx's argument asserting that the use value does not have any role in the exchange of goods. In fact, considering the role of the utility concept in determination of the exchange value, it is obvious that the use value affects the exchange value, and so, the quantity of labor does not have a proportional effect on the exchange value.

Secondly, showing that the entire value is not produced by labor, he asked if the labor should receive the whole revenue produced or not. He answered that labor should

receive the whole revenue of its products, but the whole revenue is not produced by labor. He defined receiving the whole revenue, as either receiving the entire current value of the product now, or receiving the entire future value of the product in the future. According to him, Rodbertus and the socialists' view regarding this issue was quite different. They meant that the laborer should receive the entire future value of the product now (Böhm-Bawerk, 1890). Böhm-Bawerk focused on the difference of his approach and the exploitation theorists' approach, and asserted that, payment made to labor now for a product that will be ready in the future, has to be naturally different from the value of the product when sold. The increased part of the value during the time between usage of the labor and the selling of the product can be paid to others, and this is not exploitation. The cause of the abovementioned difference is the main research issue of the theory of interest (Conard, 1959).

2.3.6. Impatience theory

The impatience theory of interest is closely similar to Böhm-Bawerk's theory of time preference. The theories have two important differences. Irving Fisher, the founder of the impatience theory, did not agree with Böhm-Bawerk about the distinction between land and capital, and objected Böhm-Bawerk's approach of technical superiority of present goods over future goods (Seager, 1912).

Fisher (1930) defined the rate of interest as the price in the exchange of present goods with the future goods. It is the same as in theory of price, in which any two goods exchanged at a price. Here in the theory of interest, the same good of present is exchanged with of the future, at an interest. It must be pointed out here that, the rate of interest is partly subjective due to the marginal preference of present to future goods. Fisher named this, time preference or human impatience.

According to this theory, the degree of impatience is closely related to the expected income, in aspects of its size, distribution in time, composition and certainty. Regarding the concept of marginal preference, the theory also asserts that the personal characteristic is another determinant of the degree of impatience (Fisher, 1930).

On the other hand, the sole determinants of the degree of impatience are not these two facts. Fisher (1930) claimed that there are also some influences of market rules and investment opportunities on the degree of impatience.

Thus, the degree of impatience, in other words, the interest rate has various determinants. The determinants are not stable in time and some of them are not directly related to economic factors. In Fisher's (1930) words: "Any causes tending to affect intelligence, foresight, self-control, habits, the longevity of man, family affection, and fashion will have their influence upon the rate of interest" (p.305). Presenting such statements regarding the formation of the interest, Fisher (1930) claimed that real interest rate hardly is negative, it is possible in theory, but in practice, the necessary conditions never met.

2.3.7. Liquidity preference theory

John Maynard Keynes (2013) stated that time preference of an individual is constructed by deciding how much of the income will be consumed and how much will be saved for future needs. Decision of the form of saving is the next stage. Will the saving totally or partly be in liquid form that can be used immediately? Keynes defined the liquidity preference as the part of an individual's savings that he keeps as money or equivalent.

According to Keynes (2013), the common mistake made in the previous theories of interest was not considering the liquidity preference. Saving or waiting could not be the source of interest. The determiner of the interest rate is the liquidity preference of an individual that the more an individual consents not to keep his savings liquid, the higher the revenue of interest will be.

On the other hand, the quantity of money also has a role in determination of the interest rate. Because, when the interest rate decreases, people will tend to hold more cash, but when it increases, there will not be any desire to hold cash and there will be a surplus of cash (Keynes, 2013).

2.3.8. Loanable funds theory

The theory, also known as the neoclassical theory of interest, was developed by Dennis Robertson, Bertil Ohlin and others. Ohlin (1937) denied the previous classical approach that the rate of interest is determined by the balancing of the demand for and supply of savings. He also did not agree with idea that the rate of interest balances the planned savings and planned investments. He stated that, since interest rate is the price of loan, it is simply determined by the demand for and supply of loan funds.

The theory does not imply the existence of one single interest rate determined for all types of loans. Regarding the risk and maturity, each loan may have specific demand and supply, and the revenue may differ. The theory defines the demand and supply of loan not as stock quantities only. The demand and supply may be treated as stock quantities at a specific time or as flow quantities offered for a period (Conard, 1959).

3. THE TIME PREFERENCE THEORY OF INTEREST

As being one of the most widely accepted causes of interest, the concept of time preference deserves to be examined closely. The theory of interest based on time preference, specifically approach of Böhm-Bawerk, who is considered as the founder of the modern theory of interest (Conard 1957, Potuzak 2016b), is studied in this chapter.

After introducing some of the critiques of various scholars who also developed their own theories of interest in the second section, the validity of Böhm-Bawerk's theory in the contemporary economic system is reviewed in the last section.

3.1. Böhm-Bawerk's Time Preference Theory

Eugen von Böhm-Bawerk, the founder of the modern theory of interest (Conard 1957, Potuzak 2016b), criticized a number of previous theories of interest (Böhm-Bawerk, 1890, 1903) and developed a new theory based on time preference (Böhm-Bawerk, 1930). He stated time preference to be the origin of the legitimacy of the existence of interest.

Böhm-Bawerk asserted that finding the reason of the capital owner's perpetual income from capital without making any effort would help to find the causes of interest. That was the answer of the question: Why is there interest? This is the main theoretical problem. The social and political factors such as the necessity, justice, fairness, usefulness and goodness of interest; whether it should be permitted or controlled; the mechanism of the formation of interest rate are all about the effects of interest (Böhm-Bawerk, 1890).

3.1.1. The theoretical, social and political problems of interest

The categorization of the problem as theoretical and others is not simply the result of a methodological approach. Böhm-Bawerk (1890) defined the answer of the theoretical question to be positive with the statement of "To the question as to the causes of interest there can be only one answer and its truth every one must recognise if the laws of thought are correctly applied" (p.2) and the answers of the social and political questions to be normative. He overemphasized the importance of distinguishing the theoretical problem of interest from the social and political problems. Actually, these two groups of problems are closely related. Any normative conclusion about interest can be successfully come to by being well informed of the causes of it. However, a scientific approach requires working on the theoretical problem and the rest, separately. Any confusion of the works on these two distinct issues would prevent to find the right answers to the questions, either in positive or normative domain. The normative evaluations are being naturally determined by the beliefs, wishes, passions and predispositions. In case of studying the normative and positive issues together, the theoretical part of the work would be guided by the abovementioned determinants of the normative field. Conversely, the theoretical considerations may wrongly guide the evaluations on the effects of the existence of interest.

As an example, when the two problems not worked on separately, an observation of an increment in production in an interest-existed environment may lead to a thought that the cause of interest is the productivity of capital. Similarly, considering the competition of labor with capital, it may be thought that interest is yielding from exploitation of the laborer. In fact, observation of the good or bad results of the existence of interest does not help to understand the reason of the existence of interest (Böhm-Bawerk, 1890).

Böhm-Bawerk (1890) asserted that due to not considering the importance of working on the positive and normative issues separately, many economists made mistakes in their works on theory of interest. He claimed that none of the theories of interest developed up to his time rightly answered the question on the cause of interest.

After reviewing and criticizing many theories of interest he asked once more:"What really is the problem of interest?" (p.421).

3.1.2. Superiority of the present goods to the future goods

Four years after the publication of Capital and Interest (Böhm-Bawerk, 1890), Böhm-Bawerk (1930) presented his theory of interest in The Positive Theory of Capital in 1888. He put *time preference* in the center of his theory. Time preference was simply defined as *people's attribution of more value to present goods than future goods with same quality and quantity*.

The future goods, namely the goods and services consumed in the future, are being produced, valued, bought and sold, just like the present goods. Considering its role in the concept of time preference, the valuation of future goods deserves a special attention. There is no doubt that the valuation of future goods is made by the marginal utility they will provide in the future as it is in the valuation of goods in general. However, there is a single distinction. Due to the uncertainty of the future, the future goods are valued a little, sometimes farther, under the future marginal utility (Böhm-Bawerk, 1930).

Böhm-Bawerk (1930) introduced three main reasons for the valuation of present goods higher than future goods.

3.1.2.1. Expectation of a lower marginal utility in the future

The difference between the needs for present and future goods is one of the determinants of the valuation of present goods higher than future goods. This may arise from various conditions. People, who have temporary problems, and urgent needs due to problems, prefer to have goods at present, expecting to meet their needs. Similarly, some others, e.g. young professionals, assuming to have higher income in the future may prefer present goods to future ones. For both groups, present marginal utility of a good is higher than the marginal utility of the same good in the future.

On the other hand, there are some opposite cases also. People may worry facing unexpected problems in the future or may think that their income will be lower, e.g. after retirement. Naturally, such people store some present goods, durable ones or money, for the future. However, the opposite direction of the change of the needs does not directly change the valuation of goods to opposite directions. The future goods can be consumed only in the future. Then, the present goods that can be consumed both now and in the future, have superiority to the future goods (Böhm-Bawerk, 1930).

3.1.2.2. Underestimation of the future

Another reason for the valuation of present goods higher than future goods is the general attitude that people underestimate the future. Not only the pleasures but also the pains of the future are less important than the present pleasures and pains. Although not equal for everyone, most of the people, more or less, underestimate the future. Knowing well about the causes of many future health problems does not motivate most of the people to avoid unhealthy foods, or the smokers to give up smoking. Similarly, people tend to postpone their planned tasks to times closer to the deadline. Although it is obvious that a uniformly distributed exertion during the thesis period helps to write a qualified dissertation easier e.g., most of the students work little at the beginning and hardly complete their task by overexertion towards the end. Actually, compared to the future pain, received present pleasure is worth too less in such cases.

Underestimation of the future may be justified not in the field of economy but in psychology. Not being able to imagine completely the future wants is one explanation. Another explanation is about the problem with the will of people. Although they are aware of the consequents of their present decisions, most of the people cannot behave with a strong will that is appropriate to the real value of the future. A third explanation is simply about the finiteness and the uncertainty of the life. There is always a possibility of not living up to a planned future. Moreover, it is known that the future is uncertain and may not be as it is expected today (Böhm-Bawerk, 1930). Then, thinking along the idiom: tomorrow will take care of itself, causes the underestimation of the future.

3.1.2.3. Technical superiority of present goods in production

It is obvious that capital, that is the saved goods instead of consuming, help to produce more in the future. However, the superiority of present goods is not simply the result of the abovementioned physical productivity of capital. Production takes time and with same productive instruments, the process that takes more time yields more, compared to the process that takes less time. Then, the earlier possessed goods may be employed in longer production processes in which the production is more not only in quantity but also in value. The availability of using in longer production processes makes the present goods technically superior to the future goods.

In any case relevant to the former two reasons for the preference of valuation present goods higher than future goods, the present goods are preferred for consumption. In a case relevant to the last reason, the preference of present goods is not for consumption at present but for more production in value in the future. Although the first two reasons may be effective cumulatively for an individual, the third reason does not have a role with the first two reasons concurrently. An individual has to decide to consume a preferred present good or to employ it in production expecting more in the future (Böhm-Bawerk, 1930).

3.1.3. Time preference and interest

Böhm-Bawerk's (1930) justification of the existence of interest began with pointing out that the cause of interest in any form, type or appearance, is the difference between the present and the future values of the same good.

The abovementioned difference is apparent in the loan process in which present goods are simply exchanged for future goods. Since the present goods are valued higher than the future goods in general, the borrower pays back the loan with an increment, in other words with interest, in the future. Of course, loans are also made not at interest in some rare cases. This type of lending is a form of selling a good under the market price and is made to specific groups due to personal reasons such as charity and friendship.

It is clear that the superiority of present goods is not apparent only in the formation of interest in lending. A more complex and important role of interest is in the profit of the capital owner's entrepreneurship. An entrepreneur buys machines, raw material, use of land and labor; manages the production process (Böhm-Bawerk, 1930); may also work personally and supervise the process intellectually (Böhm-Bawerk, 1890). The production obtains a gain that is called profit, surplus value or natural interest on capital.

The complexity is about defining the source of this gain. It is simply the surplus of the value of the produced good with reference to the cost of production. However, production takes time, forming a lag between the time of cost and the time of outcome. This is just as paying the price of a future good at present, and it is possible by means of availability of capital. The question is if all the profit is bearing of the capital or not. If not, some part of the profit is the result of the entrepreneur's will and initiative. An approach, answering the question, advises to calculate the capital's share as if it was lent in the market at an interest rate of a safe loan. The remainder of the profit is the entrepreneur's share. On the other hand, some others regard such a division to be unreasonable due to the homogeneity of the entire profit (Böhm-Bawerk, 1890).

The appearance of time preference in the labor market is a little different. Since production takes time, payment of the labor is made by previously reserved capital in most of the production processes. Whoever the employer is, an own-account worker or an entrepreneur employing others, some capital has to be used, for self-subsistence, or wages of hired workers, until the completion of the product. The present value of labor, the wage paid today, is naturally under the future value of the product of labor. This fact enables the formation of a surplus value (Böhm-Bawerk, 1930).

3.2. Critiques of Böhm-Bawerk's Theory of Interest

As Böhm-Bawerk was regarded to be the founder of the modern theory of interest, many scholars studied on the issue considering his theory. There were scholars both agreed with and opposed to Böhm-Bawerk's approach. Some of the critiques of his

theory were raised during his lifetime and he found the opportunity to reply (Böhm-Bawerk 1895a, Böhm-Bawerk 1895b, Böhm-Bawerk 1896).

Francis A. Walker (1892) was one of the first critics, raised some points, which he differed from Böhm-Bawerk's theory. After criticizing Böhm-Bawerk's way of evaluation of the old theories, he objected Böhm-Bawerk's approach in which he defined labor and land to be the two main production factors, and capital to be a secondary factor derived from the main factors. He stressed on the fact that whether capital is a main production factor or not, its role on the existence of interest on capital would not change. Böhm-Bawerk (1895b) agreed with Walker, but reminded that his work was not only about the source of the interest, it was also about the origin of capital.

A more important criticism was on Böhm-Bawerk's basic principle of the people's undervaluation of the future compared to present. Walker (1892) asserted that a community, with members widely undervaluing the future goods, would not grow and be weaker and poorer. Because, any opportunity found such as usurious borrowing would be used to consume at present. However, according to him, the explanation was made by the productivity theory of interest, which proposes that the reason of interest on capital is the productivity of capital.

Walker finally pointed out his disagreement with Böhm-Bawerk's one-sided conception of the source of the value. Although he accused Böhm-Bawerk for claiming that the value is formed on the side of consumption, Böhm-Bawerk (1895b) refuted it, and explained that solely production does not form the value but it comes from the market, wherein the producer faces with the consumer.

John B. Clark (1894) objected the conception of people's valuation of present goods higher than the future goods with same kind and quantity. Actually, his objection was about the fact of the sameness of the present and future goods in kind and quantity. He asserted that for the validity of the conception, such a comparison should be made in all respects, but the capital owners cannot do it. Instead, it may be possible to compare the true capital of present with that of future. True capital as the amount of productive wealth and easier to value compared to the concrete capital goods. Böhm-Bawerk

(1895a) replied Clark by accepting that he had mistaken in mentioning solely concrete capital goods although he treated them as identical with true capital. Indeed, Clark's elaboration was nothing short of Böhm-Bawerk's intention.

This time, after declaring that he agreed with Böhm-Bawerk on the nature of the capital owner's behavior, Clark (1895) reviewed Böhm-Bawerk's (1985a) example of money as capital to be compared. He reminded that the thing to be measured should be the subjective value, and asserted that comparing present money itself with future money would not serve the purpose. Actually, according to him, the compared thing is not money but the sum of wealth, which is connected to money.

The critiques of Böhm-Bawerk's theory mostly focused on his approach in explaining the technical superiority of present goods in production as a cause of interest (Murphy, 2003).

Frank A. Fetter (1902), who was introduced by Rothbard (Fetter, 1977) as the first economist to define time preference as the mere cause of interest, accused Böhm-Bawerk for contradictions such as turning back to productivity theory, after demolishing the old productivity theories. Fetter asserted that interest would emerge as long as a future service exists notwithstanding the absence of a production process, and presenting roundabout process as a cause of interest makes the theory a productivity theory of interest. However, Robert P. Murphy (2003) refused the accusation of the contradictions in Böhm-Bawerk's approach and claimed that Böhm-Bawerk did not change his opinion from a solely time preference based interest conception to a productivity based interest conception. Indeed, he first defined interest as a gain based on the higher valuation of present goods than future goods, and then defined technical superiority of present goods by roundabout processes as one of the causes of interest.

Fisher (1907) also raised an objection about the role of technical superiority of present goods in production. He did not agree with Böhm-Bawerk's assertion that the first two reasons, expectation of a lower marginal utility in the future and underestimation of the future, of interest cannot be effective with the third one, technical superiority of present goods in production, simultaneously. He claimed that, contrary to

this, the effectiveness of the third cause depends on the existence of any of the first two causes. When the first two causes do not exist, the technical superiority of present goods cannot alone produce interest.

In spite of accepting that some time consuming or roundabout processes are more productive, Keynes (2013) presented opposite cases in which shorter processes produce more. For example, a shorter, risky process may produce more than a longer, safe one. Such a consideration may be regarded to be needless, because, although not clearly emphasized by Böhm-Bawerk, the short and long time consuming processes mentioned and compared by him were assumed almost same processes except the length of the production time.

Mises (2006) clearly defined time preference as a necessity of human action. He noted that Böhm-Bawerk was the first to make a right explanation of the problem correcting the mistakes of the productivity theories of interest, and was the first to stress on the role of the time taken, in production. However, he claimed that Böhm-Bawerk had fallacies that did not allow him entirely to avoid overestimating the role of productivity in time preference, although he previously refuted.

An important fallacy is about grounding time preference on psychological explanations. Such a justification is not satisfactory for widely acceptance of the validity of time preference, because, since psychology can explain some or maybe many persons' attitude, a universal rule has not to be based on psychological evidences. Actually, according to Mises, time preference is essentially in the nature of human.

3.3. The Validity of Böhm-Bawerk's Theory in Present Economic System

Böhm-Bawerk's time preference theory of interest is still a subject of study for scholars, more than a hundred years after its assertion. Actually, there were many other theories of interest developed after Böhm-Bawerk's theory such as Fisher's (1930) impatience theory; Fetter (1914), Mises (2006), and Rothbard's (2011) pure time preference theory; Keynes' (2013) liquidity preference theory; Robertson, Ohlin (1937) and others' Loanable funds theory; Knight and Schumpeter's theories of interest

(Conard, 1959); and Freidman's monetary theory of interest (Küçükkalay, 2018). Some of these, such as impatience theory and pure time preference theory are based on closely similar concepts with Böhm-Bawerk's theory.

Even in the beginning of 1980's Böhm-Bawerk's description was considered the clearest understanding of the concept of positive time preference up to time (Olson & Baily, 1981). However, as it is briefly reviewed in previous section, Böhm-Bawerk's theory was criticized from various aspects, particularly, for the asserted third cause of interest, the technical superiority of present goods in production. Murphy (2003) attempted to refute the claims by answering the major questions of critics and contributed in the survival of Böhm-Bawerk's theory of interest.

On the other hand, Hülsmann (2002) asserted a new theory of interest that is built on Böhm-Bawerk's conception but claimed that his approach used realist cases originated from human action, rather than imaginary fictions.

The causes of interest presented by Böhm-Bawerk have been studied in various works. The *discount factor*, a widely used ratio in present economic analysis and models referring to intertemporal marginal rate of substitution was defined as a measure of *time preference* and *impatience*, and the relation of the discount factor with the lack of imagination of the future was evaluated by use of a model (Becker & Mulligan, 1997).

In another model-based work, it was found that Böhm-Bawerk's real and Keynes' monetary causes of interest jointly determine the interest rate. This implied that Böhm-Bawerk's theory of interest is consistent with Keynes' theory. More importantly, it was observed that Böhm-Bawerk's causes of interest are still valid in today's economic theory (Van Suntum & Neugebauer, 2014).

The emergence of negative real interest rate in developed countries raised another question on Böhm-Bawerk's theory regarding its nature of positive time preference explaining the cause of positive interest rate. A discounted utility model (Frederick, Loewenstein & O'Donoghue, 2002) was used to evaluate the convenience of Böhm-Bawerk's theory to the new situation and it was observed that the theory is able to

explain the case of negative interest rate. Particularly, Böhm-Bawerk's first cause of interest, the difference between the present and future marginal utilities, is best in explaining the case.

Böhm-Bawerk's third cause, the technical superiority of present goods in production, is also effective in the explanation of the negative interest rate situation. In a case that capital is misallocated or consumed, the productivity is being adversely affected. The failure in allocation or diminishing of capital is somehow related with recession of economy in which the interest rate may be very low or negative (Potuzak, 2016b). However, it must be noted that such a meltdown of capital that is affecting productivity is not a case of usual situation, but may be faced under an unusual condition of a recession.

4. INTEREST RATE CONTROL

Long before the beginning of the efforts in order to understand and explain the reason of interest, probably as old as the existence of interest itself, a debate had emerged on the legitimacy of it. Since the ancient times, many societies have condemned interest, and administrative and religious authorities have regulated the practice of interest by either limiting its rate or prohibiting it wholly.

There were various upper limits of interest rate, changing in time by type of loan, lender and barrower, in Sumer, Babylonia, Assyria, ancient India, ancient Greece, ancient Rome, Eastern Roman Empire and Medieval Europe. There were also some periods in ancient Greece and ancient Rome, during which all the types of interest-bearing activities were prohibited (Homer 1963, Visser & McIntosh 1998, Graeber 2011, Olechnowicz 2011).

From the beginning, the religions have had considerable effects on the existence of the interest-bearing practices. Hinduism and Buddhism regulated interest-based lending while Christianity and Islam forbade it. Unlike them, although forbidding interest-based transactions among Jews, Judaism allowed its believers to lend non-Jews at interest (Visser & McIntosh, 1998). However, in Christian practice, first the Protestant authorities, then, the Catholic Church removed the prohibition gradually and allowed people to take interest up to a defined limit that is acceptable (Visser & McIntosh 1998, Chown 1996). The Church's decree of the acceptable rate does not influence much the Christian world, including Europe, today. However, there are still legally defined limits on interest rates of various types of loans and transactions in many countries (Coco & Meza 2009) including most of the states of United States (Homer 1963, Levison 1999) and almost all members of European Union (Reifner, Clerc-Renaud & Knobloch, 2010).

Although there are scholars, including some eminent pro-interest ones (Smith 1776, Keynes 2013), defending regulation of interest (Metwally 1990, Glaeser &

Scheinkman 1994, Rougeau 1996, Coco & Meza 2009, Lee 2017, Cheng 2018), most of the economists do not support any ceiling on the rate of interest today (Durkin, 1993). The opponents of interest rate regulation justify their stance by warning about various undesired results of the interest rate control that have distortive effects on the market. However, in practice, interest is still being widely regulated directly or implicitly all over the world.

In the first section of this chapter, the reasons for prohibiting interest or limiting its rate, arising from various motivations, are presented. The legal, financial, religious and ethical instruments used in the regulation of interest rates are briefly introduced in the second section.

In the third section, the concept of *price control* is shortly reviewed. The mechanism of price control is presented and its various consequences are reviewed. Since Steven Cheung's (1974) price control model is applicable to any price control regulation, in order to evaluate the probable effects of interest rate regulation on the market, this model is also presented in the third section.

Finally, the implications of interest rate regulations in various markets, on the individuals and the whole economy are evaluated in the last section.

4.1. The Motivation for Prohibiting and Limiting Interest

All the abovementioned and probable many other regulations had been made for various reasons such as religious belief, ethics or protection of needy. The regulations were not only based on legal ground, but also religious and ethical enforcements were in use (Visser & McIntosh, 1998).

The regulations made for limitation and prohibition of interest in history and today as well, arose from a number of common concerns and claims. According to the regulation supporters, there are many reasons for being against to interest. Some frequently asserted reasons are:

- Interest is an income received without working;
- It is double billing;
- It is benefiting from the poor people;
- It is a cause of economic instability;
- It is discounting the future (Visser & McIntosh, 1998);
- It is a cause of wealth transfer from borrowers to lenders (Rougeau, 1996);
- It is enhancing the inequality in distribution of wealth (Visser & McIntosh, 1998);
- It inspires people selfishness, inhumanity and avarice (Farooq, 2012);
- It causes a problem of unequal bargaining power;
- It overburdens consumers with debt;
- It is unfair with high rates (Durkin, 1993);
- It causes a form of slavery (Erdem, 2018);
- It undermines the spirituality of people (DeLorenzo, 2006) and makes them more materialistic;
- It decreases the tendency to entrepreneurship (Sharawy, 2001);
- It transforms money to a purpose itself rather than being a medium of exchange.

Some of more economics related claims of these are briefly elaborated below.

4.1.1. An income received without working

Interest was considered as an income received without working by various religions, political, social and ethical thoughts. The Church defined interest as an income received from a barren source without working and taking any risk, and it was accepted that living without working was unnatural as it was asserted by Aristotle in ancient Greece (Visser & McIntosh, 1998).

A similar approach was raised by Islam defining trade to be different from interest in which a non-guaranteed profit is obtained by initiative and working, while interest is fixed (Visser & McIntosh, 1998). Interest is prohibited because the wealth gathered by interest-bearing activities is not based on working (Sharawy, 2000) and this

contradicts with the principle of work and productivity of Islam (Choudhury & AbdulMalik, 1992).

4.1.2. Benefiting from the poor people

The needy people usually borrow for consumption, and charging interest to the loans of needy people prevents them to get better. Although the poor people use the loans for financing their daily necessities rather than luxury goods, they pay more interest than others do (Caskey 1994, Visser & McIntosh 1998). This is so, because since lending to poor people, who do not have any alternatives, is more risky for the lenders, they are charged higher interest (Levison, 1999).

Although not widely accepted, a marginal Islamic view on interest asserted that the forbidden riba is only the interest on loans borrowed for consumption purposes (Visser & McIntosh, 1998). Such an approach might aim to protect the poor people from exploitive effects of interest by forbidding interest-based loans for consumption purposes, while allowing loans at interest for productive purposes.

An objection to interest, regarding its exploitive character was raised by the theorists of the exploitation theory of interest. According to them, although production is made by labor alone, the workers share the income with capital owners. Paying the interest, a part of the value of the product produced by labor, to the capital owner is exploitation of the needy people (Böhm-Bawerk, 1890).

4.1.3. Enhancing the inequality in distribution of wealth

The thought that interest helps the rich to be richer and it causes the poor to be poorer, is prevalent. An example for the case is from Germany. In 1982, each of the 10% of German households with highest income had net interest revenue of 34,200 Marks, while each of the 10% of households with lowest income paid 1,800 Marks in net as interest. The total net interest payment of each household in the group of 80% of households with lower income was 35.900 Marks. In other words, the interest revenue of

2.5 million highest income households was paid by the 20 million lower-income households (Kennedy, 1995).

An argument supporting this approach asserts that the existence of interest reduces the total utility of the society. Since the marginal utility of the rich people is less, at average, than the marginal utility of the poor people, the utility gained from the received interest by the lender rich people is far less than the utility lost for the paid interest by the borrower poor people. Thus, the mechanism evolves to a wealth transfer from the poor to the rich with losses and the overall utility decreases. Unless it is showed that the interest-based transactions are economically efficient and increase the overall utility, interest will be accused of promoting tyranny (Visser & McIntosh, 1998).

The wealth transfer from the poor to the rich is one of the reasons for that also Islam forbids interest. Such a transfer causes the accumulation of wealth and political power in hands of a group and this violates the principle of distributive equity (Choudhury & AbdulMalik, 1992).

A different approach objecting interest claims that the accumulation of capital similar to monopoly due to the existence of interest-based transactions, would not allow establishing competition in the market (Visser & McIntosh, 1998).

4.1.4. A cause of economic instability

A reason for objection to interest is about its being one of the causes of the economic instabilities. It is claimed that the interest has a specific role in the emergence of the economic crises (Visser & McIntosh, 1998).

A sign of this apprehension was observed in Keynes' (2013) assertion. Although Keynes is a theorist of monetary system based on interest, he indicated that interest rate is not adjusted automatically by the system to the most efficient level for the society but instead, it has a propensity to increase too much. Thus, an authority should keep it at an acceptable level by taking legal measures or using customs and enforcement of social norms.

Another point of view, regarding the relation of interest and the stability of the economy may be raised basing on Adam Smith's assertion of the need to limit the interest rate. Smith (1776) claimed that the loans at high interest rates might not be of good quality. When the interest rates are high, the wasteful people will borrow much of the loan instead of the conscious ones. Unlike to the wasteful ones, the conscious borrowers use the loan for effective purposes and have more tendencies to bay back the loan.

4.1.5. Discounting the future

The role of interest in discounting the future is another reason asserted for objection to interest-based transactions. Due to the attractive yield of capital invested at compound interest, people prefer having the capital at present than having it in the future. People, with such an attitude, overuse the natural resources. Thus, as the discount rate, which is partially related to the interest rate, increases, the resources are depleted faster. That means not considering the needs of future generations and exploiting the future for the wealth of present generation (Visser & McIntosh 1998, El Diwany 2011).

4.2. The Instruments Used in Regulation of the Interest Rates

The prohibition of interest and limiting the interest rate are not only being made through legal means, but also some religious beliefs, social norms of ethics and financial instruments are being used.

4.2.1. Religious beliefs

The oldest and most prevalent regulations of interest rates were presumably made by religions. The eastern religions of Hinduism and Buddhism, and the Abrahamic ones of Judaism, Islam and Christianity condemned, forbade, scorned and limited the practice of interest by various approaches (Visser & McIntosh, 1998).

In the last centuries BC, Hindu law forbade lending at interest for the upper classes and allowed it for Hindu temples. The Laws of Manu declared legal limits for interest rates and defined lending above the legal limit to be usurious and outlaw, in the second century AD (Visser & McIntosh, 1998).

Interest-based loans were totally forbidden by Christianity and Islam. According to the traditional and widely accepted Islamic view, interest is still a sin and definitely prohibited. This was so among the members of Judaism but lending to others was allowed for the Jews (Visser & McIntosh, 1998).

In the fourth century, the Roman Catholic Church prohibited the clergy to lend at interest (Visser & McIntosh, 1998). In the eleventh century, lending at interest was declared sin due to its being a form of robbery. In the next century, forward sales at a price above the cash price were declared usurious by Pope Alexander III. Since usury was uncharitable and avarice, the usurers were excommunicated for being guilty of committing a sin against justice. Saint Thomas Aquinas, in the thirteenth century, defined usury to be evil. Following the evolution in Protestant countries, in the nineteenth century, the Catholic Church allowed everyone to lend and borrow at interest. However, the interest rate could not be over the maximum level defined by the Church (Homer, 1963).

Until the twelfth century, usury was condemned and prohibition enforced variously in different countries and regions. Despite the lack of standard enforcement, the fear of the sin of usury was effective on the religious and administrative leaders, merchants and bankers (Homer, 1963). The Church was organizing sermon campaigns and sending priests to travel and warn the usurers that unless they repented and gave the received interest back to the borrowers, they would go to hell. In the twelfth century, it was instructed that all known usurers were to be excommunicated (Graeber, 2011).

4.2.2. Social norms of ethics

The ethical norms of the societies are effective in enforcing the regulations of the interest rates. Lending at interest has widely been considered disrespectable.

In the fifth century BC, for example, lending at interest was considered dishonorable by the Iranians (Homer, 1963). In Ancient Greece, during the lifetime of Aristotle, lending for profit was hated, and considered unnatural and dishonorable (Olechnowicz, 2011).

The consideration of usury is quite similar today. According to Graeber (2011), any lender that charges interest, would not be approached with sympathy all over the world. The lenders' image might be the worst among all professionals, even bad as the executioners. However, unlike the others, usurers are interestingly in the group of the richest and most powerful people.

4.2.3. Legal arrangements

The ancient Babylonia's Code of Hammurabi is the oldest known legal arrangement that established a rule regarding interest practice, in the second century BC. The Code defined a legal upper limit for the interest rate and stated that any lender, who lends at an interest rate over the legal limit, cannot claim any repayment for the loan (Homer, 1963). In some cases, the authorities of ancient Mesopotamia intervened to the interest-based transactions sharper. For instance, the debts of widows and orphans were abolished several times in Sumer, Babylonia and Assyria (Graeber, 2011).

Twelve Tables of ancient Rome defined a legal upper limit for the interest rate and a penalty for the lenders that receive higher interest than the legal limit (Homer, 1963). The wholly prohibition of loans at interest in 340 BC by the Lex Genucia reforms did not take long (Visser & McIntosh, 1998).

In the era of the Eastern Roman Empire, there were legal upper limits for interest rates and accumulated interest was not allowed to exceed the principal (Homer, 1963).

During the reign of Charlemagne, the Church's earlier prohibitions of interest were adopted as state law but the Jews were not included and accepted as legal moneylenders, in the end of eighth century (Geisst, 2013).

Today, there are legal arrangements for regulation of the interest rates all over the world. In some of Muslim populated countries, interest-bearing loans and transactions are fully prohibited by law. In many other countries including the developed economies, there are ceilings legally defined for interest rates of various transactions (Glaeser & Scheinkman 1994, Reifner, Clerc-Renaud & Knobloch 2010).

The interest rate ceilings are determined by either the criminal law of the country or a private law for different types of loans. There are also regulations defining rates for default interest. The ceilings may be at an absolute rate or at a relative rate based on a reference rate. The supervision of the regulations is made by various institutions. Reduction in the amount of the principal and the interest of the loan, the loss of the license of the lender, imprisonment and fines are used as sanctions for the violation of the law (Reifner, Clerc-Renaud & Knobloch, 2010).

4.2.4. Financial instruments

In the ancient Babylonia, the temples had a great wealth and often lent to the poor people at low interest rates. These rates were well below the market rates such as one-half or one-third of the legal limit. Even sometimes, the loans made to poor people were free of interest (Homer, 1963). Since poor people pay more interest due to desperation, the interventions of the temples should have lowered market interest rates.

The financial instruments are being widely used in regulation of interest rates beside other instruments today. The cost increasing fees of insurance, broker, account holding and maintenance have regulatory impacts on the interest rates. The arrangements on the amount, number and the period of the installments, and the restrictions on the duration and the total amount of the loan are also effective on the interest rates (Reifner, Clerc-Renaud & Knobloch, 2010).

The restrictions on the credit card usage are also used in regulation of interest rates. When the debt of a credit card, used for purchase, is not paid on the due date, an interest is charged. The interest rate of delayed payment is being limited. The amount of the preapproved credit available to get by the credit card and the rate of the interest

charged for it are also limited. Limiting the interest rate of the delayed payment of the debt, and the amount and the interest rate of the credit has an impact on the market's interest rates (DeMuth, 1986).

Another example is the influence of the reserve requirement ratios of the central banks on the market rate of interest. The reserve requirement ratios are among the determinants of the cost of the bank credits. The interest rates of the loans in the market are influenced by the reserve requirements ratio through the cost it imposed (Montoro & Moreno, 2011).

4.3. The Price Control and Cheung's Model

The restrictions on the price of a good or a service imposed by the authority is termed *price control*. The restriction may be a price ceiling, which the prices above the ceiling are not allowed such as rent control, or a price floor, which the prices below the floor are not allowed as in the wage floor (Coyne & Coyne, 2015a). The subject of control is not always the prices of the goods and services, and the wages. There are some other control areas such as rent control and agricultural subsidies. As being the price of loaned capital, interest is also a subject of price control. The limitations on the interest rates are among the sorts of price ceilings.

Price controls, including wage controls, are being implemented in order to

- Tackle inflation (Lipsey 1977, Schuettinger & Butler 1979, Miller 2015);
- Overcome shortages (Schuettinger & Butler, 1979);
- Protect the consumers from black-market and exploitation (Karadağı, 2018);
- Prevent monopoly (Tabakoğlu, 2016);
- Achieve equity in the workplace (Siebert, 2015);
- Prevent profiteering by property owners (Bourne, 2015);
- Prevent price wars;
- Ensure fair returns to the factors of production;
- Eliminate the cost of information;

- Stabilize the market during emergency;
- Ensure equitable distribution of benefits and costs of exchange (Bashar, 1997).

Price controls have always been used prevalently since the ancient times. In ancient Egypt, fixed levels were decreed for each price. Contrary to the modern times, there were ceilings on wages that were enough to keep the workers alive. In ancient Mesopotamia, the wages and prices were controlled by the authorities. Specifically in Babylonia, by the Codes of Hammurabi, wages of many types of workers, prices of various goods and rents were explicitly determined (Schuettinger & Butler, 1979).

In ancient China, the Confucian doctrine asserted that the intervention of authority in the economy was required in order to keep competition at minimum. Accordingly, many issues of economic life, including the prices, were regulated in detail and the mechanism of the supervision of the regulations determined by the government (Huan-Chang, 1911).

In ancient Athens, the shortage of grain was frequent and at such times, the raised price due to shortage was being set to a just level that was defined by the government. The prices of the goods, like bread or meal, produced by using grain, i.e. barley and wheat, were also fixed to a proportion of the price of the grain itself (Schuettinger & Butler, 1979).

In various periods of the long life of Roman Republic and Empire, the prices and wages were controlled by ceilings and floors. In the following times, in medieval Europe, the concept of *just price* emerged as a religious belief. Stockpiling and excessive profit from trade were condemned. Not only were the prices of the goods but the wages also controlled. An example was in England, in 1348. After the Black Death, half of the population died and a shortage of workers emerged, and the wages extremely rose. The government limited the wages by law, but many workers refused to work at lowered wages (Schuettinger & Butler, 1979).

Price controls were implemented in Muslim world, specifically in Ottoman Empire. Actually, the original approach of Islamic thought refused any control on prices

and left the formation of price to the market. However, afterwards, the rejection of price control was reevaluated and redefined to be valid at least in the perfect competition markets. For the imperfect markets, specifically in case of monopolies, the price control considered the sole remedy (Bashar 1997, Tabakoğlu 2016). For example, although he was supporting a free market based economic system, a prominent medieval Muslim scholar Ibn Taimiyah did not oppose imposing price control in some situations such as imperfect markets and disasters. Even so, he warned against excessive controls in order not to undermine the people's profit motive (Ghazanfar & Islahi, 2003).

In the early times of the American Colonies and in France after the Revolution, the controls were in use. During the two World Wars, the price and wage controls were active almost in all warring countries (Schuettinger & Butler, 1979). The United States Government established the Office of Price Administration as a regulatory body during the Second World War, for a primary task of price control. Afterwards, some other tasks were carried out by the office such as rationing. Rationing was considered critical in the success of price control (Galbraith 1946, Bronfenbrenner 1947). Wage and price control policies were being carried out by United States and United Kingdom governments still in the 1970s (Coyne & Coyne, 2015a).

4.3.1. The mechanism and consequences of price control

Price controls were used in the past and are still being widely used today to prevent emergence of some problems in the market or to solve the already emergent ones. However, it is also widely realized that the controls have undesired consequences, some of which have distortive effects on the market. Even, in some cases, the controls cause permanent damages (Schuettinger & Butler, 1979) to the market.

Interestingly, some controls were claimed to cause results opposite to the intention. The efforts to tackle inflation are given as such an example. In order to fight inflation, fixing or limiting the prices of goods has been a measure often taken. Although these controls decrease the inflation for a short time, they have negative effects in long run (Schuettinger & Butler 1979, Miller 2015). Long-continued control policies cause

price stickiness and consequently the price ceilings tend to become price floors (Booth & Davies, 2015).

Masking of the real reasons of the economic troubles is another undesired influence of price control. Repressing inflation by price control, for example, may be a result of neglecting the role of monetary policy in the fight against inflation. Similarly, a minimum wage policy may prevent to observe the effects of low productivity that is a result of an inappropriate education system (Coyne & Coyne, 2015b).

The distinction between the short run and long run, regarding the effects of the price control in fighting inflation is generalized to all other types of controls by some scholars. It is asserted that, the short run benefits of the controls are small and transitory, but the long run costs are large and persistent (Lipsey, 1977).

Even so, there are scholars either supporting or against price controls. Besides, a third group makes distinction, in evaluating price controls, between the temporariness and continuity of the controls. The needs to and benefits from controls may not be same in a perfectly competitive market and in an imperfect market (Bronfenbrenner 1947, Vandenbrink 1982, DeMuth 1986, Tabakoğlu 2016). In case of existence of a monopsony in a labor market, a price floor for wages may be essential. In case of a disaster such as hurricane or earthquake, price ceilings may help to prevent excessive prices (Schmidtz, 2015).

In some cases, price controls may help to postpone the problems and thus, may help to find time for the preparation of the solutions. It may be possible to reduce the inflationary expectations for a short time that is useful in fighting inflation. A delay in price movement may also be useful to make structural changes in the economy (Lipsey, 1977).

Price ceiling and price floor are the two types of price controls that have similar mechanisms working in opposite directions.

4.3.1.1. Price ceiling

The supply-demand curve in case of a price control as price ceiling is illustrated in Figure 1. The market-clearing price is P_M with an exchange amount of Q_M when there is not any price control. It is clear that a price ceiling over the market price has no effect on the market. With a price ceiling as it is showed by P_C in the figure, the exchange cannot be made at a price over the ceiling and the exchanged quantity (Q_S) is defined by the supply side. Q_S is below the exchanged quantity (Q_M) at market-clearing price. On the other hand, since the ceiling price (P_C) is lower than the market-clearing price (P_M), the quantity of demand (Q_D) is higher than Q_M. Thus, a shortage will emerge due to the difference of the quantity of demand and the quantity of supply at ceiling price (Q_D - Qs).

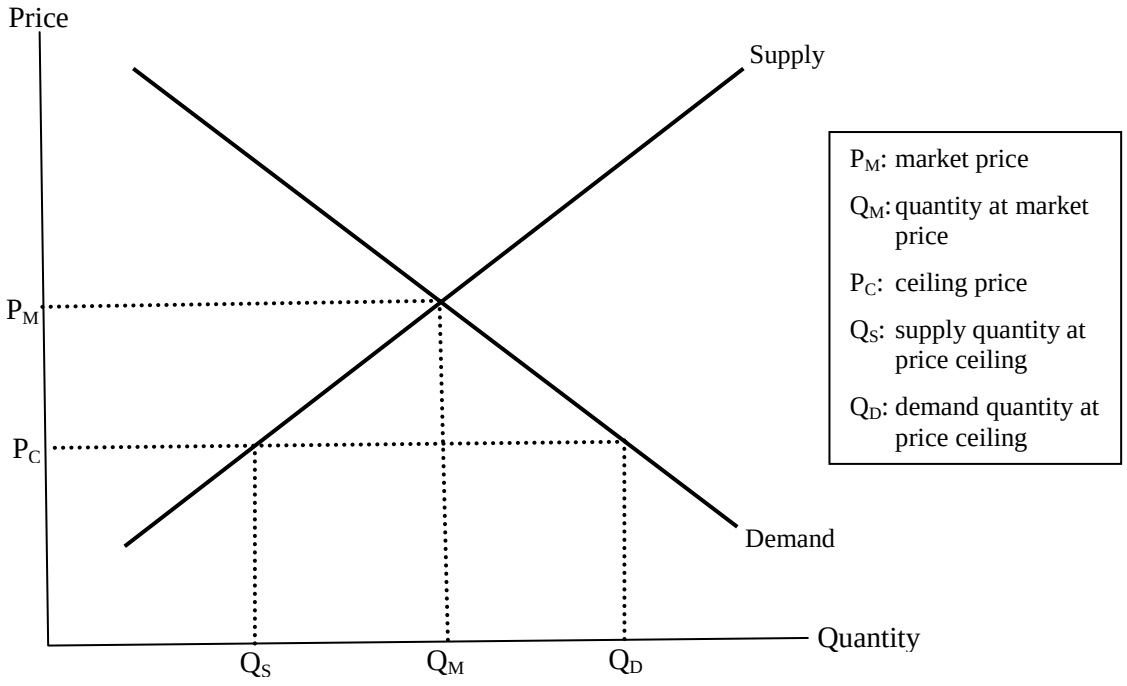


Figure 1. The Supply-Demand Curve with Price Ceiling

Although some demanders are willing to pay more than the ceiling price, the control regulation does not allow it and the shortage continues. The price ceiling reduces

the quantity of exchange transactions causing a consequent decrease in the quantity of supply. Thus, the total welfare decreases.

The price ceilings reduce the incentive to invest in the goods that have controlled prices. For the same reason, the existing producers do not have any incentive to improve the quality of the goods they produce. Moreover, the effects of price control may not be observed in short run and when observed the reason of the negativity may not be correctly determined due to the time passed. Thus, the problem will not be resolved (Coyne & Coyne, 2015b).

On the other hand, because the demand is higher than the supply, there are problems in the determination of the demanders that have the opportunity to be met by the supply. The transaction cost of such an exchange, no doubt, increases.

A control on the price of the ticket of a show, for example, will cause queues in front of the tollbooths at which the first come first served. The ones who are late or not want to wait may seek for alternative solutions. They may bribe to the officers in order to have the ticket or they may buy it from black-market at a higher rate.

In the case of a rent control that does not allow rent an estate at a rate over the ceiling, the quantity of the rental estates decreases by causing a shortage. If the control is on the low-rated estates, the owners may enhance the qualifications of their properties and be excluded from the range of control (McKenzie & Lee, 2010). If the control includes all rate levels, the owners will decrease the expenditure for the maintenance of the estate and the quality of the existing properties gets worse. In long run, the construction of new estates will reduce (Lipsey, 1977). The destructive effect of rent control may be too high, so that it is described as being a most efficient known way to destroy a city, except bombing (Bourne, 2015).

The price control on fares of services provided through fixed infrastructures, have some other implications. A price ceiling imposed on rail fares, for example, causes an increment in the demand. The effect of the increased demand is similar to the shortage emerged in the abovementioned cases. Some routes of train become

overcrowded at some hours by the increased number of the passengers. That is a cost for both passengers and operators. Whereas, being able to arrange the fares with respect to the routes and hours could help to use the existing capacity in a better way (Wellings, 2015).

4.3.1.2. Price floor

Similar to price ceiling, the supply-demand curve in case of the existence of price control in form of price floor is illustrated in Figure 2. P_M is again the market-clearing price and Q_M is the exchanged quantity without any price control. This time, there is no need to think on a price floor that is lower than or equal to the market price. P_F, the price floor is the minimum level of price at which exchanges can be made. Thus, the exchanged quantity (Q_D) is defined by the demand side. Q_D is below the exchanged quantity (Q_M) at market-clearing price. Again, this time, since the floor price (P_F) is higher than the market-clearing price (P_M), the quantity of supply (Q_S) is higher than Q_M. The difference of the quantity of supply and the quantity of demand at floor price (Qs - Q_D) is the excess supply.

In the case of minimum wage as a price floor, by implementation of a control regulation, the demand for labor will decrease but, on contrary, a new group of candidates, who would not be willing to work for the market wage before the regulation will emerge and the supply of labor will increase. Then, in a labor market of excess supply, some workers who are contented to work at lower wages will have to compete with others who would not be their rivals for the lower market wages. Presumably, in such a case, the less qualified workers will not be able to find job, or if they are employed, they will have the risk to lose their jobs (Siebert, 2015). While expecting the wage control to prevent the workers, specifically the less qualified ones, from the exploitation of the employers, it may have a very adverse effect causing some workers to be unemployed.

Regarding the fortunate employed ones, the payment made by the employer to some overqualified workers will be higher than the payment that would be made to the

sufficiently qualified workers if it could be possible. Although equity in the workplace is aimed by wage floor (Siebert, 2015), the variously qualified workers will receive the same wage, what it conversely means inequity. On the other hand, the overqualified workers will not be satisfied with their jobs, their productivity will decrease and a high turnover rate of the workers will be observed, implying many further problems.

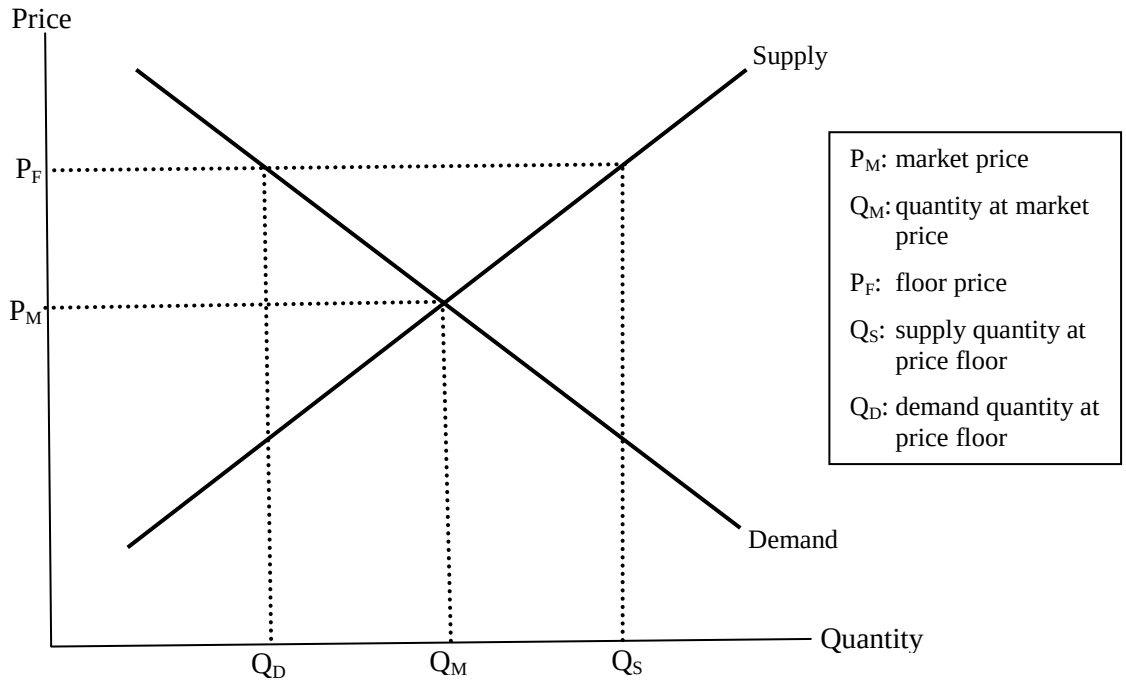


Figure 2. The Supply-Demand Curve with Price Floor

Besides, the minimum wage enforcement increases the cost of labor, specifically in the unskilled-worker intensive sectors. The increased cost may cause to employ fewer workers or the high level of the cost may make the employer stop activity. Either of these will reduce the employment further.

The price floors are also being used by defining minimum prices for some goods, with the intention of making the availability of the goods costly. For example, in order to prevent excessive drinking, a price floor is being imposed on the prices of the alcoholic beverages. However, it is claimed that the benefits of the minimum unit price for

alcoholic beverages are not much as it is estimated for the high-income heavy drinkers, but conversely, the cost of the regulation for the remaining drinkers are more than estimated. On the supply side, the regulation of minimum pricing may lead the producers to sell expensive products more and to spend more for marketing (Snowdon, 2015).

4.3.1.3. Price's role of information transmission

In addition to many case specific implications, price control has also some common consequences due to price's implicit role in the market. Any efficient decision made in the market requires too much and detailed information. To make a decision of a production, for example, one must answer many questions such as which product is demanded by the consumers, what quality of the product will be marketable, at what cost the production will be profitable, how much must paid to labor, which raw material is worth to use etc. Actually, all the individuals in a market have too many questions that are possible to answer with too much information.

However, although it is not possible to have all information needed for each individual, everyone makes his own decision of what to product and consume, in other words what to sell and buy. The mentioned coordination is not made centrally by an authority, but it emerges spontaneously by the signaling role of price (Schmidtz, 2015). Price does not explicitly tell anything about the needed information but it transmits a composite signal that is formed by all the relevant information. Thus, price is considered important for being a fast and effective transmitter of information (Sowell, 1980) that is crucial in the coordination of the market activities. There is a continuous and rapid change in the structure of the relations within the economy and price makes available to follow the change (Lavoie, 1985).

Under a price control policy, there will be a lack in transmitting and receiving signals about the changes in the economy affecting the prices. This will lead not to use the resources, appropriate to the real changes in the economic situation resulting in a welfare loss (Coyne & Coyne, 2015b).

4.3.2. Cheung's price control model

Steven N.S. Cheung's (1974) price control model is applicable to any price control regulation including the interest rate regulations. The model is appropriate for the evaluation of the probable effects of interest rate regulation on the market.

Cheung stated that the correct evaluation of the results of a price control requires specification of constraints proper to the real market practice. However, any effective control is complex and it is hard to estimate the correct constraints. In order to specify the constraints, it is needed to analyze the real world situation. On the other hand, such an analysis can be made within a theoretical framework. The framework helps to determine the relevant and significant constraints. Even so, since the effective price controls vary by time and place, the relevant constraints are still many to be considered in the evaluation of the implications of price control. Simplification would help, but the more simplification causes the less appearance of the implications.

Therefore, as a solution of the abovementioned problem, Cheung (1974) developed a theory of price control, which is not explaining the implications of any specific control, but asserting some propositions about the investigation method of constraints relevant to any price control. The propositions are conformed to the economic principles.

Since the price controls are restrictions on the income that yield from private contracts, the asserted propositions are closely relevant to property rights and contracting. Defining an asset as private property requires the owner of the asset to have three rights. At first, the owner of the asset should have the right to use, to decide how to use and to prevent others to use the asset. Second, the owner of the asset should have the right to receive income from the use of the asset by others. Thirdly, the owner should have the right to transfer the ownership of the asset to any other individual by selling or granting, using any type of contract preferred.

A restriction on the exercise of any of these three rights by affecting the income received has implications on the exercise of the other two rights. Since a person tries to

receive the highest utility from the private property, the property may be used by the owner himself if the usage is considered the most valuable choice, or the usage or the ownership may be transferred to another person by a contractual agreement. Either a restriction on the most valuable use of the property or a legal constraint on the transferability of usage or ownership to others causes a decrease in the value of the property. Basing on the presented framework, Cheung (1974) developed two propositions.

According to his first proposition, while controlling a price, when a party's income is taken away and the right of diverted income is not exclusively assigned to someone else, it tends to dissipate. This may occurred in three ways. First, the form of the usage or production of the good may change and this may cause a decrease in the good's value. Secondly, the contractual behavior may change and this may cause an increase in the cost of drawing up or enforcing contracts. Finally, the two may occurred together.

An example may be helpful to show the mechanism of the emergence of nonexclusive income due to price control. When the monthly market rent of $100 of an estate is reduced to $60 by law, $40 that was received by the owner of the estate before the establishment of the control is generally not become an exclusive income of a specific party. Some part or the total of the $40 may or not be received by the renter.

Exclusively assigning a part of the physical area of the estate to the renter, corresponding to $40 rent, will prevent the dissipation. The owner's remaining portion will receive a $60 income appropriate to the defined limit. Another solution may be exclusively assigning a portion of the rent taken from the owner to the renter. Either solution, by causing an additional cost, will make the original owner of the estate and the renter joint owners of the estate. Thus, the estate would be used as if there is not a control. If the law, however, prevents the renter to be a joint owner, exclusively assigning the rights of a portion of the estate to the renter would not be simply realized.

A well-prepared legal arrangement may help the renter in exclusively claiming for the portion of the rent. However, when the law is not complete enough, the competition of the contracting parties will cause the nonexclusive income to dissipate.

The second proposition claims that in case of the existence of nonexclusive income that tends to dissipate, the parties try to minimize the dissipation. For this, alternative usage or production of the good is sought in order to lower the decrease in its value, or alternative contractual arrangements are drawn up in order to lower the increase in the transaction costs. The combination of the two actions is a third way for minimization of the dissipation of nonexclusive income.

The dissipation of income that is not exclusively assigned to an individual is regarded as waste by the contracting parties. However, with the existence of the dissipation, there is also an effort to minimize it. In other words, the observed situation is not only about the reaction to the dissipation of income not exclusively assigned but also an attempt to minimize the dissipation. Observing and specifying the constraints by which the minimization of dissipation is achieved will help to predict the attitudes that cause dissipation and help to minimize it. Thus, the implications of price control may be explained.

In a case as in the abovementioned example, in order to assign the $40 rent to the renter exclusively, without making him a joint owner of the estate, an enforcement of a complete legal arrangement is needed. Such an arrangement must state that the owner of the estate can never dispossess the renter, define the obligations of the parties about the maintenance and repair of the estate clearly, assign exclusive use rights to the renter, as he is the owner, and grant the right to sublet the estate partly or wholly to the renter. Lack of any item will prevent to assign income to the renter exclusively.

Although the owners, whose estates are still rented when a complete and detailed legislation of control takes effect have to obey the regulation, the owners of not rented estates have the opportunity to exclude the renters who claim to contract in accordance with the regulated conditions. The latter group may prefer to use the estates themselves, sell the estates or rent them to others that are considered more appropriate. However, any

alternative decision will bring more transaction costs compared to the case before the legislation took effect, in which a monthly $100 rent income was received.

The owner of such an estate weighs the value of using the estate himself less than $100 in general. On the other hand, he can make an alternative contractual arrangement at a higher transaction cost. There will be income dissipation in both cases.

If the owner weighs the value of using the estate himself less than $60, he would prefer to rent it to the first claimant renter at a monthly rate of $60. Then, the candidate renters will compete to be the first applicant by spending time and effort. However since the owner has the right to exclude some candidates and to choose whoever he wants as the renter, the candidates will try to offer a least costly arrangement that maintains the least dissipation for the income of the owner. If the law allows, a solution of the problem may be the competition of the candidate renters in buying the estate instead of renting. If this is not allowed or its arrangement costs much, the candidates may compete in paying a key money to the owner that will be a rate less than $40. If the second option is also prevented in some way, the furniture used in the estate may be rented or sold to the renter at an overvalued rate. It is clear that each alternative has distinct transaction costs and as the alternative arrangement is restricted more by the supervision and enforcement provisions of the law, the transaction costs of the arrangement will be higher.

After evaluating the responses of the parties of a transaction exposed to price control in various situations, Cheung (1974) asserted that price control redistributes the wealth as any other regulation of market transactions. Then, he sought the way of regulation of private contracts not affecting the resource allocation, and proposed two conditions to be met for the solution in line with Coase's (1960) theory. Firstly, the redistributed income rights among the parties should be assigned clearly and exclusively to them. Secondly, making alternative contracts and the enforcement of the regulations should not emerge extra costs.

4.4. The Consequences of Interest Rate Control

Interest rate control is probably the oldest form of price control as it was amply exemplified in the relevant sections above. Since interest rate is also defined as the price of the use of loan, unsurprisingly interest rate control has some effects on the market, similar to the market distortive consequences of other price controls. Due to various undesired consequences, most of the economists object to interest rate ceilings.

A price ceiling on the interest rate that not allowed to be exceeded reduces the supply of loan and increases the demand to it. Just as any other price control policy, such an intervention causes a shortage. Beside the decrease in the total supply of loan, the diversity of the products also reduces (Booth & Davies, 2015). The increased demand for loan cannot be met by the decreased supply of loan and the borrowers may not be able to find fully appropriate loan products.

In markets of mortgage, for example, where interest rate ceilings were below the market rates, it was observed that the quantity of the mortgages was less and the term of credit was shorter than the ones in not controlled markets. The effect of the rate ceiling on the credit volume and term was similar in nonmortgage credit markets (DeMuth, 1986).

The shortage of loan has some different effects from the shortages of other goods or services that lead to queues, bribes, black markets etc. In case of a loan shortage, the lender discriminates the risky borrowers from others and the more needy ones lose the opportunity to borrow. The cheap loan attracts some less needy borrowers who would not borrow at a higher interest rate and the needier and risky borrowers, who are ready and able to borrow at a higher interest rate cannot find any lender at the controlled rate (Durkin 1993, Ellison & Forster 2008, Rigbi 2013).

The less needy borrowers, who find the opportunity of relatively cheap loan may not act rationally and not use the capital efficiently. Although one of the aims of interest rate control is preventing or at least reducing profiteering of people, the borrowers may tend to be profiteers by the perception of easy income.

The shortage of loan may guide the desperate borrowers, who are excluded from the ordinary loan market, to usurers, pawnshops or loan sharks (Rigbi 2013, Booth & Davies 2015). These may be legal but are mostly illegal, unlicensed (Ellison & Forster, 2008) lenders similar to the black markets of other controlled goods.

On the other hand, the cost of loan for the low-income needy borrowers, who find chance to borrow at controlled rate, may not be low as it was in a freely operating market (Ellison & Forster, 2008). In credit card market, for example, when the interest rate of the credit used by credit card is limited below the market interest rate but the lump-sum fees are not controlled, the lenders attempt to cover the loss for limited rate by increasing the yearly lump-sum card fee (DeMuth, 1986). Compared to the unregulated case, the new cost may be more harmful for the financially weak card users.

The interest rate ceilings are also expected to protect the low-income borrowers from over-indebtedness. Unfortunately, it is observed that the rate control may increase the debts of low-income borrowers and may lead them to manage the loan by rolling over the debt (Ellison & Forster, 2008). Paradoxically, although the interest rate control is aiming to protect the low-income consumers and financially weak, small businesses with a motivation of justice, the consequences of the control policy may be far from fairness (Schmidtz, 2015).

The signaling role of price in conveying information (Sowell, 1980) promotes entering the market. The new agents are mostly innovative and effective in the transformation of the market (Booth & Davies, 2015). Thus, the new agents enhance the competition (Durkin, 1993). However, any control of interest rate prevents the transmission of information. The lack of information discourages the new lenders to enter the loan market and distorts the competition in the market.

Since price control enhances the concentration of the market and harms its competitiveness (Lipsey, 1977), a more competitive loan market requires deregulated interest rates or, at least, not too low interest rate ceilings (Vandenbrink, 1982).

Not being able to receive the relevant information, the investors in capital market are challenged by significant problems in investing. The funds may be received by the borrowers that should not survive under conditions in which the interest rate is not controlled, but not by the proper ones (Schuettinger & Butler, 1979).

As Cheung (1974) proposed, a ceiling on interest rate below the market rate causes the income from the loan to dissipate. The dissipation may be the result of using the capital for a purpose rather than lending or a change in contractual behavior in loan transaction.

The lenders' preference of using the capital for less effective purposes, consuming it for example, causes the value of the capital to decrease. A shortage of loan emerges due to the capital owners' unwillingness in lending. By the loss of the attraction of capital ownership, the potential lenders stop to save. The decreased savings keep the investment low. The low level of savings and investment with respect to the case that interest rate is not controlled; cause a decline in wealth via effecting output, employment and income negatively. (Durkin, 1993).

In the case of interest rate control, the dissipation of rent due to the change in contractual behavior is about the emerged extra costs. The control regulations motivate the parties in the market to find ways in order to overcome the constraints. However, new costs are emerging such as bribes, operating fees and additional banking charges by the actions taken to overcome the limitations (Chen, Jiang & Yu, 2015). Both the additional costs of the parties of an exchange and the enforcement costs of the regulations are wasting the resources (Durkin, 1993).

5. ISLAMIC ECONOMICS, TIME PREFERENCE AND PRICE CONTROL

An economic system is the way of organization of production, distribution and consumption of goods and services by individuals, establishments and governments. It is possible to classify the economic systems in various ways. However, the mostly cited classification of economic systems is based on the relative effectiveness of markets in economics related decision-making with respect to the effectiveness of governments. According to their way of deciding what and how to produce, and how to allocate the output, the systems are defined as traditional, market, mixed market, mixed socialist or planned economies (Askari, Iqbal & Mirakhor, 2015).

Islam emerged in a society, which highly benefited from an economics system that was mainly based on trade (Hamidullah, 1980). Arabs had a well-organized trade system operating on an enormous route between Europe, India China and Korea with huge caravans up to 2500 camels. Trade was not a big business only in length of the routes and size of the exchanges, but it was complex in many aspects, such that, Arabs were considered the inventors of world trade (Koehler, 2014).

By the emergence and prevalence of Islamic belief, some rules of economic activities were modified according to Islamic principles, but the trade-based economic system went on performing actively. Although Schumpeter (1986), one of the most prominent intellectuals of twentieth century in economics, claimed that almost nothing produced relevant to economic thought, in the five centuries until the thirteenth century, in the “great gap” as he called; there were many Muslim scholars worked on economics-related issues and contributed in the economic thought with an Islamic perspective (Ghazanfar, 2003). However, the efforts did not remain comprehensive theories. From the seventh to the fifteenth century, Muslim world, in the region from Spain to Central and South Asia, benefited from one of the world’s largest and most successful market economies. The economy mainly based on long distance trade associated with a stable currency of gold and silver, and yielded many innovations. Some of the innovations such

as bills of exchange, limited partnerships and checks were closely related to the economic system (Grassie, 2010).

Muslim scholars of various disciplines such as jurists, historians and philosophers, continued exerting on economic thought until the fifteenth century but at a decreasing intensity. Then, thought disappeared almost in all fields including economics in the Muslim world for centuries (Chapra, 2000).

The reemergence of Islamic economic thought as *Islamic economics* (Grassie, 2010) is after the Second World War. While Muslim countries were constructing their economies after independence, the Islamic approach of economics began to reappear (Chapra, 2000). During the last few decades, applications of Islamic economics, specifically in finance and insurance, became prevalent in Muslim countries. The financial sectors in Muslim and non-Muslim countries as well, were motivated to develop interest-free instruments in accordance with the capital owners' preferences by the attraction of the accumulated capital in Muslim countries (Cohen, 2017). In consequence, although its share in total world financial assets is still about 1%, Islamic finance assets has grown from $1.22 trillion in 2012 (Cohen, 2017) to $2.44 trillion in 2017, almost at an annual rate of 15%. It is estimated that Islamic finance assets will reach to a volume of $3.81 trillion in 2023 (Thomson Reuters, 2018).

Among other economic systems, Islamic economic system is considered distinct by many Muslim scholars (Khan, 2013). The distinction was manifested in the definitions of Islamic economics made by scholars (Hasanuzzaman 1984, Khan 1984, Arif 1985, Haneef 2005, Hasan 2016) in various ways (Chapra 1996, Kahf 2014). However, almost all definitions focused on the fact that in Islamic economics, the economic activities are guided not only by the desires and experiences of human but also by the basic principles of the Islamic law (Azid, 2010).

The role of institutions in reducing uncertainty and lowering transaction costs is considered highly important (North, 1991) because, since Coase, it has been accepted that the transaction costs are the main obstacle for economic growth (Karayiannis & Hatzis, 2010). Similar to other economic systems, institutions such as property rights,

contracts, trust, markets, wealth accumulation and utilization, business ethics, and competition and cooperation are also take place in Islamic economics with some distinctive features mainly aiming to attain social justice (Askari, Iqbal & Mirakhor, 2015).

In the first section of this chapter, the basic principles of Islamic economic system that differ it from the conventional systems are briefly presented.

The relevant issues to the prohibition of interest are reviewed in the second section. The pre-Islamic riba is introduced and the origins of the prohibition in *Quran* (the holy book) and *Sunnah* (practices of the Prophet) are briefed. Finally, the approach of *fiqh* (Islamic jurisprudence) to riba and interest is shortly reviewed and the emergent traditional view is presented.

In the next section, some of the contrarians of the traditional view are briefly summarized. The fourth section is on the instruments alternatively developed to interest-based transactions and other devious ways used to overcome the prohibition of interest.

In the last sections of the chapter, beginning from the midst of twentieth century, the interpretation of Muslim economists on the concept of time preference and on the consequences of interest rate control within the frame of price control phenomena as well, are reviewed in detail.

5.1. The Basics of Islamic Economic System

The principles constructing the Islamic economic system and differentiating it from the conventional systems, ground on Quran and Sunnah. Then, it should be noted that a considerable part of the content of Islamic economics is normative (Khan 1994, Zarqa 2003, Haneef & Furqan 2011). Within this framework, some specific institutions emerged in Islamic economic system.

Islamic economics, a market-based system, considers markets as the most efficient organization in the distribution of the resources in production and consumption. However, the efficiency of markets requires the protection of the parties such as

employee, entrepreneurs, investors and customers by rules and enforcement mechanisms (Askari, Iqbal & Mirakhor, 2015).

Social justice is one of the foremost objectives of Islamic economics (Azid, 2010). A just society can be maintained by economic justice and for economic justice there should be equality in opportunity for all members of the society. The equality implies access to resources including natural resources, education and technology. Secondly, the system requires justice in exchange in order to protect parties of any transaction. Finally, a just distribution is essential for economic justice. Actually, the equality in the distribution of wealth that is earned by people's efforts and abilities using their own labor or capital is realized by equality in opportunity. However, Islamic approach aims to secure justice in distribution of transferred and inherited wealth from its producers (Askari, Iqbal & Mirakhor, 2015). Muslim wealth holders are charged a wealth tax, *zakat* that is 2.5 percent of the liquid accumulated wealth and various rates for wealth in other forms (Choudhury & AbdulMalik, 1992). Moreover, people are encouraged to help the needy people by transferring some wealth to them in various ways. On the other hand, the cannons of inheritance are clearly defined in detail.

Risk sharing became a more prevalent and effective organizational form in Islamic economics compared to the conventional economic systems by the prohibition of all types of interest-based transactions. It is expected that risk sharing would distribute the risk among all relevant parties in the market instead of burdening the risk on the borrowers only (Askari, Iqbal & Mirakhor, 2015). On the income side, the absence of interest-based transactions gives rise to cooperation of entrepreneurs and investors by *profit-sharing* (Choudhury & AbdulMalik, 1992). A relevant issue is about the existence of debt. Since it is considered unjust, exploitative and inequitable, debt-based economy is not legitimated in Islamic economics (Azid, 2010).

The role of state is regarded as inevitable in achieving social justice in traditional Islamic approach. A state should ensure the compliance to the principles of social and economic justice. In order to fulfill this requirement, the state (Askari, Iqbal & Mirakhor, 2015)

- Realizes the equality in opportunity for everybody in access to resources;
- Supervises and enforces the markets in order to maintain the justice in exchange;
- Coordinates the transfers to the needy people and enforces the implementation of inheritance laws for the sake of distributive justice that is considered vital in fighting against poverty.
- Above all, guarantees the existence and operability of a judicial system and costless accessibility of each member of the society to it.

5.2. Prohibition of Interest

As being, presumably, the most significant reason that distinguishes Islamic economics from the conventional ones is the *prohibition of interest*, or *riba* as it is originally called, and it has always attracted attention and been studied in many aspects thoroughly. It must be noted in advance, there is no doubt, the Muslim scholars agreed that riba is explicitly prohibited (Khan, 2013) both in Quran and in Sunnah. The controversy is about the meaning and nature of riba (Ahmad 1978, Farooq 2007). Riba literally means increase, rise, addition, expansion or growth (Uludağ 1988, Chapra 2006), and it is defined to be a source of injustice, an economic ill, an obstacle for spirituality and a threat to welfare (DeLorenzo, 2006). More specifically, it is claimed that, riba worsens the gap of wealth distribution; causes tendency to inflation; is an unjust income; causes to discount the future; causes economic volatility and has a negative impact on motivation of entrepreneurship (Lawal, 2016); corrupts society; causes negative growth; and diminishes human personality (Siddiqi, 2004).

5.2.1. The pre-Islamic riba

When it was prohibited in seventh century, riba was not a newly developed instrument. It was an on-going pre-Islamic practice. While prohibiting, it was not defined, because the prohibited action was known well (Ahmad, 1978). *Riba al-jahiliyya*, as it is called afterwards, was the exorbitant increment in the debt, doubling or tripling for example, when it was not paid on the date of maturity (Uludağ, 1988). The origin of the debt might be a borrowed loan, or another liability due to a previously

buying for account or a similar transaction (Gül, 2017). However, regarding the borrowed loan, the method of lending at the beginning is highly controversial (Ahmad, 2007). According to some scholars, lending was being made free of interest for the first term. On the other hand, others claimed that the first lending was also being made at interest and in case of default, predetermined interest was increasing (Rahman, 1964). The pre-Islamic riba, at least the mostly referred component of it, was the same as today's penalty for delay, or interest of default. In other words, it was different from credit interest (Ahmad, 1978).

On the other hand, regarding riba, there was not a predetermined reasonable increment rate by an authority or the market, and the co-determinants of the rate were the severity of the debtor's needs and the fairness of the claimant (Erdem, 2018). Although some cases were also reported in which the debts were originated from borrowing of the merchants who used the capital in trade, the debtors were mostly the needy people (Gül, 2017). As might be expected, the practice was causing inevitable troubles and misery for the needy people who borrowed for vital reasons (Ahmad, 1978).

5.2.2. Riba in Quran

In accordance with the methodology of Quran's gradual approach for the adaptation of the society (Erdem, 2018), riba was not prohibited instantly; instead, extending over time, the verses first implied riba's negativities, then condemned practicing it, and finally prohibited it explicitly.

Chronologically, the first verse in the Quran concerning riba (sure 30, verse 39) declares that loans given at riba for an increment in possessions is not of value in the sight of God, but instead praises giving in charity. The following relevant verses (sure 4, verses 160-161) are recalling how the previous societies, specifically Jews, treated due to receiving riba that was banned. However, riba is not yet being definitely prohibited.

The prohibition of riba is clearly stated afterwards, by explicitly decreeing not to take the folded riba, referring to the pre-Islamic practice (sure 3, verse 130). In another

verse (sure 2, verse 275) the ones considering trade to be same as riba, are replied by stressing that trade is licit but riba is illicit. Finally, the believers are ordered to give up the riba that not yet received (sure 2, verse 278).

The following verses of the abovementioned three ones inform about the awards for respecting the prohibition such as mercy of god and divine gift, and about the punishments for receiving riba such as being sent to hell. Receiving riba is defined as fighting against God and Prophet. The current lenders are ordered to grant a delay to the borrowers that are in trouble, and favorably recommended to renounce for the reason that it would be more propitious for them.

5.2.3. Riba in Sunnah

Riba in Sunnah appears in a number of *hadith*s (the statements, actions and approvals of the Prophet). Some of the hadiths did not decree on riba but discredited and condemned it by informing about its moral and religious consequences. Within the last sermon in Mecca, the Prophet recalled the decree of Quran regarding the abolition of pre-Islamic riba (Chapra, 2006). Before this, in many other hadiths, he declared that (Uludağ, 1988)

- Riba is a big sin;
- The parties of a riba transaction, its witnesses and registrars as well, are damned;
- All the yield from riba will be lost soon;
- When riba becomes prevalent in a society, that society deserves to be punished;
- Insisting on practicing riba is similar to being an idolater, etc.

Some other hadiths were not explicitly about the evilness of riba but these ones praised giving alms, aiding, easing debt and similar alternatives of riba (Uludağ, 1988):

- The aid made for God’s sake is multiplied in the sight of God;
- The ones who aid without taunting will neither worry nor sorrow;
- The aid made for God’s sake is actually made to the aider himself;

- Postponing the loan of the borrower that is in trouble until he eases is advised. Renouncing the loan is more propitious for the lender.
- The lender who wants God to ease his troubles on the Day of Judgment shall ease his borrower or discount the loan, etc.

A third group of hadiths described riba in addition to the description in Quran (Uludağ 1988, Chapra 2006). Some hadiths in this group were about commercial transactions. A widely cited hadith is about the trade of some commodities. This and some of other trade-relevant hadiths were informing that

- The commodities, gold, silver, wheat, barley, date and salt can be exchanged in kind, but at same quantity and not deferring. Any excess on one side is defined to be riba;
- On the other hand, exchanging two different commodities of any quantities is licit but only if the transaction is not deferred;
- There is no riba in spot selling and buying;
- Deferred livestock trade is not prohibited, etc.

The remaining hadiths of the third group were about the loans at riba, mentioning the issues of (Chapra, 2006)

- Any benefit yielding loan is riba;
- The lender shall not accept any gift from the borrower;
- There is no riba except deferred transactions, etc.

Sunnah is highly important as evidence for Islamic jurisprudence, but of course, in being evidence, it was not considered as absolute as Quran. Thus, with regard to its extent and interpretation, Sunnah was variously approached by Muslim jurists (Ahmad, 1978). Furthermore, the reliability of some hadiths on riba is not satisfactory enough. While some of these are reported to be authentic, there are also weak ones. Even some fabricated ones are cited in riba literature. On the other hand, although the reliable hadiths are used as evidence in decreeing on riba by most of the jurists, due to being *khabar al-vahid* (report of one person) they are not considered to be absolute evidences in economics by some other jurists (Uludağ, 1988).

5.2.4. Riba in fiqh (Islamic jurisprudence) and the traditional view of Islam

As mentioned above, there was no doubt that the pre-Islamic riba was prohibited. However, the thought of jurists diversified about the interpretation and the scope of riba mentioned in Quran and in Sunnah as well. The differences were not only about the conception of the hadiths. Differences of methodologies of the jurists in making analogies resulted in the emergence of various decrees for the same issue.

In order to make an analogy, the cause of the existing decree, which might be a verse or a hadith, was being defined. The differences in the specified causes by the jurists were another source of diversification. Unfortunately, the cause of the prohibition of riba was one of the highly debated issues in Islamic Jurisprudence and expectedly, it was not agreed on (Deniz, 2006). For example, the abovementioned hadith about the prohibition of the exchange of six commodities in kind with an excess, interpreted variously by different schools and scholars (Uludağ, 1988).

A group asserted that the prohibition of exchange in kind with excess was valid for any commodity similar to these six ones. A subgroup defined the similarity according to the commodity's measurement unit: gold and silver were measured in weight and all the commodities measured in weight were similarly decreed as gold and silver; other four ones were measured in volume, thus all other commodities measured in volume were decreed as these four commodities. Other commodities that were not measured in weight or volume, but measured in number, length or area were not in the scope of this prohibition.

Another subgroup excluded gold and silver from any analogy and kept apart, but, considering the remained four commodities were food products, defined all foodstuffs to be in the scope of the prohibition.

A third subgroup agreed with the former approach but limited the scope with the storable foods and excluded the perishables. There were a number of further considerations of the hadith in this group, which differentiate in detail.

On the other hand, some others approached the issue distinctly, and claimed that the prohibition was exclusively for the mentioned six commodities and any other good was not subject to the prohibition.

As it is exemplified, the variety in the interpretation of riba was observed, more or less, for many other relevant issues. The divergence of the jurists on the riba-related issues in details, and sometimes in basics, is plausible to some extent. Even so, for some cases, the ampleness of divergence prevents to make a conclusion on the prohibition of riba with a mind at peace. Specifically the challenges of modern times deepen the trouble in conception of riba. Therefore, the need for a continuous clarification of the interpretations, in compliance with the ever-changing world and conditions is increasing.

Despite the existence of different approaches, the most common interpretation of the evidences in Quran and Sunnah dominated others and a mainstream thought on riba was emerged. According to mentioned most common interpretation that became the traditional view of Islam afterwards, *riba is the addition to the principal that is paid by the borrower to the lender for either the loan or an extension in the loan's maturity* (Chapra, 2006). The prohibited riba has some specifications (Askari, Iqbal & Mirakhor, 2015):

- Its rate is defined in advance and positive;
- It is valid for an amount of loan for a fixed term;
- Its payment does not depend on the success or profitability of the activity for which the loan used;
- An authority enforces its payment.

This traditional definition regards riba simply same as interest that is described in conventional economics. Within this frame, any interest is prohibited:

- Whatever its type, simple or compound interest;
- Whatever its rate, low or high;
- Whoever it is paid by, poor or wealthy people;
- However it is arisen, from credit or from deposit;

- Whatever the purpose of loan it is paid for, consumption or production;
- Wherever it is practiced, in lending or in trade.

5.3. Contrarians of the Traditional View on Interest

The approaches of mainstream scholars that formed the traditional view on riba were, actually, not uniform. There were many minor and some larger distinctions among the assertions of the scholars of traditional view. However, there have also been other scholars, who differed from the traditional approach on major issues (Farooq, 2007). There are also some contemporary Muslim economists asserting diversified thoughts similar to the older contrarians (Kamla & Alsoufi, 2015). A brief review of some of those scholars' arguments would present how the thought on interest in Islam is diversified.

Abdullah ibn Abbas, one of the Prophet's cousins, is among the first contrarians of the common view. He asserted that the prohibition was only for the pre-Islamic riba and interest on commercial transactions could not be regarded as in the scope of prohibition. A fourteenth century prominent jurist Ibn Qayyim's thought was similar to Abdullah ibn Abbas. However, he claimed that the prohibition of interest on commercial transactions was an implicit prohibition in order to prevent the tendency to pre-Islamic riba (Khalil, 2006).

Zayd ibn Ali, the great-grandson of Prophet and an eminent jurist of eighth century, allowed the difference between the forward and spot prices of a good in an exchange. Such a contract was valid as long as there were a mutual consent of the seller and the buyer. The amount of the difference depends on the length of the time passed from the sale to the payment. An asset received without paying at sale time is productive that may be benefited or used in trade (Siddiqi, 1982).

Sir Syed Ahmed Khan was one of the contrarians of the traditional view in nineteenth century. According to him, the prohibited riba was only about the loans given to needy people at excessive rate of interest. The interest on the loans borrowed by wealthy people and the interest received from the bank deposits were not prohibited.

After a few decades, Mulana Iqbal Ahmed, one of the initiators of the Saud Mand Movement, asserted that not all increments were riba, but the prohibited riba was the increment due to a default of a debt arose from a deferred sale (Aziz, Mahmud & Karim, 2008).

In the beginning of twentieth century, Muhammad Abduh, scholar and the mufti, the highest religious authority of Egypt, declared that the interest received from the saving deposits was legitimate. However, some others asserted that Abduh's permission was valid only if the savings were utilized in accordance with the rules of mudarabah. Following him, his student Rashid Rida defined the prohibited riba as the compound interest. Ahmad Al Sanhuri was another dissented jurist, who was active in midst of the century. He considered the pre-Islamic riba as the only directly prohibited interest and equated it with the contemporary compound interest. According to him, the prohibition of other types of interest was in order to reduce the tendency to prohibited riba. Thus, the pre-Islamic riba could be permitted only for severe necessities but other types of interest may be received in case of a slight need (Khalil & Thomas, 2006).

Another contrarian of the early twentieth century was the Turkish scholar İzmirli İsmail Hakkı. He claimed that the prohibited riba was the pre-Islamic riba that is just the folded debt due to default as it is worded in Quran (Uludağ, 1988).

Among many others, Fazlur Rahman (1964) has been, presumably, the mostly cited scholar, regarding his view of the distinction between riba and interest. After reviewing the riba-relevant hadiths in various aspects along with Quran, he concluded that the prohibited riba is the exorbitant increment in loan due to a postponement of its payment date, and this has to be prevented by use of law. According to him, the prohibition was expanded in hadith literature and the inconsistencies within this literature caused the rigidity of the prohibition to increase. He stated that the alternative of riba is sadaqah, a form of cooperation and mutual consideration of individuals, and this would help to overcome the problem with riba. However, unless the society practices a sadaqah based system efficiently, abolishing interest would undermine the economic welfare of the society. He asserted, on the other hand, that in an economy,

where wealth and capital increases to a point that supply of and demand for capital are nearly equalized, the interest rate would decrease almost to zero, but such an economic development requires existence of higher interest rates.

A contemporary example was the approach of Muhammad Sayyid Tantawi, another mufti of Egypt. In 1989, he announced that the interest-bearing financial instruments beneficial for each party of the transaction were religiously allowed (Grassie, 2010).

Imad-ad-Dean Ahmad (1993) asserted that the term riba in Quran explicitly means usury and it was practiced by receiving an exorbitant interest from the needy borrowers. According to him, the scope of riba was extended by hadith to all types of exchanges made at exorbitant prices. He referred to the legitimacy of difference between spot and forward prices in sale as the evidence of interest and riba not being same. Ahmad also raised the issue of depreciation of loaned money due to inflation and claimed that any loss in the value of loan is unfair and not acceptable according to principles of Quran.

Balala (2011) stressed on the important issue that efficiency and equity in market stated by Quran and any decree would not contradict with these principles. She asserted that there is no evidence in Quran and hadiths to consider all the interest-based transactions as riba. According to her, interest in non-commercial transactions is prohibited and commercial lending at a just interest rate determined by the market is allowed.

Rauf Azhar (2019) scrutinized the prohibition of riba in detail in his book of 2010 and redefined riba as the folded increase in debt in case of default. He stated that, in this aspect, riba is neither interest nor usury.

Lastly, presumably the most comprehensive approach, apart from the traditional view, was brought by Akram Khan. In his book (Khan, 2013) that was defined by himself as an effort to departure from the mainstream thought, the concept of Islamic economics was reviewed, evaluated and explicitly criticized in almost all aspects. Then,

Khan (2018) proposed a definition for riba as the increment in (i) loans given to poor people, (ii) loans given to friends and relatives, and (iii) debt in case of default. In accordance with the definition, he listed the transactions that are not prohibited:

- Difference between the forward and spot price in a sale transaction,
- Penalty for delayed debt payment for the first time,
- Loan for production purposes,
- Interest paid for deposits,
- Loan interest not more than the loss in the real value of principal,
- Extra payment made by the debtor voluntarily as a gift or similar,
- Using interest for discounting in project evaluation and budgeting,
- Voluntarily made reduction by the lender due to early repayment of loan,
- Reduction in the principal not more than the rate of deflation,
- Voluntarily made reduction in the principle by the lender as a gift or similar,
- Voluntarily made increment or reduction in the quantity of repayment by the debtor due to a change in the quality of the loaned commodity,
- Revaluation of the principle agreed by the debtor and lender due to variation of the market price of commodity or foreign exchange rate.

Despite the fact that the supporters of the traditional view have a vast majority, the agreement on the equivalence of riba and interest is not observed dominantly in all cases. Scrutinizing the various translations of the term *riba* in Quran into English gives an idea of the perceptions or considerations of the translators regarding the meaning of riba. The word *riba*, with its conceptual meaning relevant to economics, is used eight times in six verses of four sures in Quran. As it is listed in Appendix B., 19 translations of Quran into English (Hasenat, 2019), including of almost all eminent translators, the word *riba* was translated as *interest* 35 times, but as *usury* 111 times (Table 1.). The word *interest* was used alone 14 times and used in a group with *riba*, *usury* and other words 21 times. Since *interest* is considered to have the widest and inclusive coverage in meaning, whether it is used alone or with other words, both translations must be regarded to mention *interest*.

The term in the verse (sure 3, verse 130) by which the prohibition of riba explicitly stated is translated into *usury* by 15 translators and into *interest* by four

translators only. On the other hand, 14 translators used the word *usury* more than four times, while four translators used the word *interes*t more than four times in their translations (Table 2.).

Table 1. The Words Used for *Riba* in Nineteen Translations of Quran into English, by Verse

(frequency)

	Translated as					
Sure : Verse	***Interest***		***Riba***	***Usury***	Others	**Total**
	Interest alone	with ***Riba***, ***Usury*** or other words				
2 : 275-a	3	3		13		19
2 : 275-b	2	2	1	14		19
2 : 275-c	3	1	1	14		19
2 : 276	1	3		15		19
2 : 278	2	2	1	14		19
3 : 130	1	3		15		19
4 : 161		4		15		19
30 : 39	2	3		11	3	19
Total	14	21	3	111	3	152

Whether in accordance with the traditional view or not, the approaches of the scholars, worked on riba and interest, were classified by Uludağ (1988) in four groups with respect to their perception of the issue. The first group supports the prevailing view that is objecting to riba and interest on one hand, but on the other hand, implicitly legitimates interest by permitting some devious instruments used to evade the prohibition. The second group considers riba and interest to be the same, explicitly refuses both of them and regards any devious instrument as illicit. The third and forth groups allow interest while they are severely objecting to riba regarding it as usury. The third group stays in the frame of fiqh, the Islamic jurisprudence, but allows interest by glossing the relevant decrees. The last group does not remain within the frame of fiqh and allows interest by reevaluating the verses of Quran and relevant hadiths.

Table 2. The Words Used for *Riba* in Nineteen Translations of Quran into English, by Translator

(frequency)

	Translated as					
Translator	***Interest***		***Riba***	***Usury***	Others	**Total**
	Interest alone	with ***Riba***, ***Usury*** or other words				
Abdul Majid Daryabadi				7	1	8
Abdullah Yusuf Ali				7	1	8
Ali Quli Qara				8		8
Amatul Rahman Omar	1	7				8
Faridul Haque				8		8
Hajj Abdalhaq and Aisha Bewley				8		8
Hamid S. Aziz				8		8
IFTA Committee				8		8
M. Hilali and Muhsin Khan				7	1	8
M. J. Ahmed and Samira Ahmed		8				8
Muhammad Abdel Haleem				8		8
Muhammad Asad				8		8
Muhammad Habib Shakir				8		8
Muhammad Mahmud Ghali		5	3			8
Muhammad Marmaduke Pickthall				8		8
Sheikh Muhammad Sarwar	7			1		8
Syed Vickar Ahamed	2	1		5		8
Thomas B. Irving	4			4		8
Wahiduddin Khan				8		8
Total	14	21	3	111	3	152

5.4. The Alternative Instruments to Interest and Devious Ways

In the absence of interest-based transactions in Muslim societies, on one hand, the alternative ways of capital utilization in investment advanced and on the other hand, some alternative instruments used in lending emerged. Some of the methods and instruments are still used in Islamic finance sector.

Actually, the alternative lending instruments were mostly used to evade the prohibition of interest. These instruments were not wholly allowed and supported by all jurists of traditional approach. Some scholars defined them as cheating. Even, it was claimed that the interest rates of loans in such devious instruments might be well above the rates of explicit lending (Uludağ, 1988). However, a considerable number of scholars legitimate them. In consequence, these instruments were commonly practiced.

5.4.1. Profit sharing instruments

Among a number of contract types, *mudaraba* and *musharaka* (Askari, Iqbal & Mirakhor, 2015) are the mostly mentioned models that based on profit sharing. Mudaraba operates by the partnership of an investor and an entrepreneur. The investor is the capital owner and the entrepreneur is a specialized agent in the operations of invested real sector. The contract of mudaraba is usually made for a limited time and in the end of the term, the profit is shared according to the agreement within the contract.

A similar partnership model, *musharaka* provides the partnership of two or more parties who gather their capital and labor, if they want, with same rights and liabilities. The profit is shared according to their agreement at the beginning but any loss is shared in proportion of each partner's capital in the total investment.

5.4.2. Instruments based on forward sale

Salam, a contract of an exchange in which the payment is made in advance but the delivery of the good is made in the future, is used for this purpose. The farmers, who are financially in trouble, may sell their crops that not grew yet, a few months in advance. The merchants pay the price of the crops cheaper than the probable price of the crops at harvest time (Uludağ, 1988). The difference in price, no doubt, is an interest determined due to the time between the payment date and expected harvest date. It is not surprising to observe that, in case of the farmers' severe troubles, the implicit rate of interest tends to increase to usurious levels.

Delivering a good at present and receiving its payment in the future is an exchange model that is reverse of salam. In general, the forward price of the good is higher than its spot price. The difference of the spot price and the forward price of the good is, this once, determined according to the time between the delivery date and the payment date (Uludağ, 1988).

The forward sale is not only an exchange model. It is widely utilized in lending contracts. There are various types of the use of forward sale model. In a direct model, a borrower buys an item at a forward price of $120, for example, and becomes indebted to the seller of the item. The loan will be paid back at the agreed date in the future. Then, the borrower sells the item in the market at the spot price of $100 or sometimes under the spot price due to the urgency of the need.

In a transaction, called *double sale*, a lender sells an item to a borrower at $120 forward price to be paid one year later, for example. The borrower sells back the item he bought to the lender at a spot price of $100 and the lender pays $100 to the borrower. Now, the borrower has a debt of $120 that is the borrowed $100 at 20% interest rate, to be paid one year later (Khalil, 2006).

In a triple sale model, same as in double sale, a lender sells an item to a borrower at $120 forward price to be paid one year later, but this time the borrower does not sell back the item directly to the lender. Instead, it is sold to a third party at a spot price of $100 and the new buyer sells the item to the lender, who is the first seller of the item, at a price of $100. Thus, the third party receives nothing in net and the borrower has again a debt of $120, to be paid one year later.

There are a number of alternative models using forward sale. As a final example, a lender lends $100 at free of interest for one-year period, besides, sells a pencil to the borrower at a $20 of forward price to be paid again one year later. The actual transaction is same as the previous models: a debt of $120 due to a $100 loan at 20% interest rate (Uludağ, 2008).

The usage of the difference between the forward and spot prices in this way, as it is being practiced by the Islamic banks today, is regarded as charging interest by indexing the time-value of money (Al-Masri 2004, Grassie 2010) by some scholars.

5.4.3. Sale with promise to repurchase

An owner of a property, who needs to borrow, sells his property to a capital owner with an agreement to repurchase it for the same price at a predetermined date. The buyer of the property rents it to the seller and the seller continues to use it by paying a monthly rent. At the predetermined date, the property is sold back and the capital owner receives the price he previously paid. The monthly-received rent is the profit of the capital invested similar to the interest of a loan (Calder, 2016).

5.4.4. Sale of the right to use

Ijara, an instrument similar to *leasing* in conventional economics, is the sale of the right to use of a good for a previously determined period. The lesser buys and rents an asset to the demander. The applied rental fee includes both the actual rental and the deferred price of the asset. In the end of the period, when the planned payment is completed, the possession of the asset is transferred from the lesser to the lessee (Mirakhor & Zaidi, 2007).

5.4.5. Cash waqfs

Despite the prohibition of interest, there had been illegal lending at interest in Muslim world (Calder, 2016), and expectedly, the interest rate of illegal lending had been usuriously high. It was reported that, in Ottoman Empire in the sixteenth century, there was illegal lending up to an annual interest rate of 50%. Even in a case, 30% monthly, that is 360% annual rate of interest was observed. Actually, the allowed annual rate with legal instruments, including for the loans of the cash waqfs, was 15% (Uludağ, 2008). In Istanbul, in seventeenth and eighteenth centuries, the allowed interest rate of lending was changing in a range of 15-20% and the interest rate of the loans of the waqfs

were 4 percentage points lower than the rate of the loans of the non-waqf lenders at an average (Kuran & Rubin, 2016).

The *cash waqf* was another instrument used in lending, particularly in Ottoman Empire. The waqfs, namely trusts established for various charitable purposes, were being actively operated since the beginning, in Muslim societies. In general, the endowed assets were real properties and movables accompany those properties. However, in eighth century, the legitimacy of the establishment of waqfs by endowment of money had been widely discussed. Although a consensus on the issue was not achieved, some scholars of the Hanafi school of Islamic Jurisprudence legitimated the establishment of cash waqfs that based on endowment of money (Dumlu, 2015).

The cash waqfs became prevalent in Ottoman Empire in fifteenth century and their legitimacy was debated once again a few decades later, in sixteenth century. This time, there were active waqfs and their operations were effected from the state interventions due to the course of the debates (Mandaville 1979, Dumlu 2015). Besides, although the cash waqfs were initially supposed to use the capital in supporting the entrepreneurs via investing in their activities as in mudarabah and utilize the income for charity purposes, in time, they transformed into creditors that lend at interest by using prohibition-evading instruments (Okur, 2005). The existence of interest free loans of the cash waqfs was also reported, but these were not common (Dumlu, 2015).

5.4.6. Instruments in Christianity and Judaism

It must be noted that the cannon evading instruments were not pertain to the prohibition of interest in Islam. In medieval Europe, for example, many instruments were developed in order to overcome the prohibition of interest in Judaism (Cornell, 2006) and in Christianity (Koyama 2011). As it was listed by Calder (2016), the instruments used in Judaism and Christianity were highly similar to the ones in Islam (Table 3.).

Table 3. The Alternative Instruments to Interest in Abrahamic Religions

Instrument	Islam	Christianity	Judaism
Difference of spot and forward prices	✓	✓	✓
Partnership with insurance		✓	✓
Pawn broking	✓	✓	✓
Penalty for late payment		✓	✓
Sale with promise to repurchase	✓	✓	
Sale-leaseback	✓	✓	✓

In Christianity, *commenda*, a type of partnership (Koyama, 2011), was almost same as mudaraba in Islam. Another instrument, *contractum trinius* was formed of three contracts, one for investment, one for profit sale and one for insurance. In brief, the lender was making an investment and paying an amount equal to loan to the borrower. The borrower was insuring the investment against any loss and the lender was selling the rights on the profit of the investment to the borrower at a price of a fixed percentage of the investment that was the guaranteed income of interest (Henning, 2007). By a *discretionary deposit*, a lender who deposited to a banker did not receive any interest but the banker gave a gift to the depositor at a value that was equal to an agreed rate of the amount that deposited (Koyama, 2011).

In Judaism, *iska* was same as the contractum trinius in Christianity. Besides, the difference of the spot and forward prices of goods was utilized in lending just same as it is practiced in Islam (Cornell, 2006).

5.5. Time Preference in Islamic Economics Literature

The concept of *time* in Islamic economics has been studied in various aspects. The role of time in forward sale and lending (Saadallah, 1994) and the *value of time* (Ahmad & Hassan 2006, Batcha 2009, Siddique & Rahim 2015) were discussed by many scholars. The relations among the concepts of *discount rate*, *interest rate*, *rate of return* and *time preference rate* were also evaluated for various situations (Zarqa 1983, Khan 1991, Siddiqui 2006).

There is a distinction between the concepts of time value of money and time preference. However, the two concepts are frequently evaluated together and considered highly relevant. Therefore, Muslim economists' interpretations of time value of money are relevant to their view on the role of time preference in the existence of interest.

5.5.1. Time value of money

A group in Muslim economists does not accept that the time has a value. M. Umer Chapra (2015), for example, explicitly notes that, according to Islam, the time passed in a loan transaction does not deserve any compensation by itself. According to Mohamed Fairooz Abdul Khir (2013), the major reason for Muslim Economists' not legitimizing the validity of the time value of money is its role as a financial phenomenon of conventional economics in justification of interest in lending. It is thought that legitimizing it causes legitimizing the validity of interest also.

Another group of Islamic economics accepts the existence and importance of time value of money but claim that it is only valid in commercial transactions (Ahmad & Hassan 2006, Batcha 2009, Ayub 2009, Askari, Iqbal and Mirakhor 2015, Siddique & Rahim 2015). There are some other stipulations asserted for the acceptance of time value of money (Khan 1991, Kahf 1994). A third group of Muslim scholars legitimate the validity of time value of money without the abovementioned stipulations (Al-Masri, 2004, El-Gamal 2006).

Abu Umar F. Ahmad and M. Kabir Hassan (2006) accepted the existence of time value in pricing assets and the legitimacy of selling a commodity at a higher price than its spot price. Nevertheless, they claimed that a loan transaction could not include an increment in debt for time value.

According to Azah Atikah B. A. Batcha (2009) there is a general acceptance on the issue that forward price of a commodity may be higher than its spot price, implying the validity of the time value of money. However, he also noted that since money is not a commodity but a medium of exchange in Islam, the interest received from lending is not possible to be considered as the difference of spot and forward prices of capital.

Similarly, Muhammad Ayub (2009) wrote that the validity of time value is recognized in Islam but only in trade transactions, mentioning the difference in the spot and forward prices. According to him, it is not possible to value the time in loan transactions.

Askari, Iqbal and Mirakhor's (2015) assertion was very similar to others that Islam accepts the concept of time value of money with some limitations. Although time value is legitimated in sales contracts, time does not deserve any compensation in loan transactions. Time alone does not produce anything but has a productive role in investment. Then, capital used in economic activity receives some part of the income. They noted, on the other hand, that interest may inevitably be the result of time value of money but this does not mean it is fair.

Muhammad Abubakar Siddique and Memoona Rahim (2015) also considered time value to be legitimate in trade but refuse its validity in loan transactions. Differently from the previous scholars, they introduced the concept of time value of commodity referring to the difference of spot and forwards prices, and stated that time value of money is not valid, but time value of commodity is acceptable.

A different stipulation for the acceptance of time value was asserted by Fahim Khan (1991). He stated that Islam accepts the validity of time value of money but constraints it to a case that the value is not previously defined. Monzer Kahf (1994) also agreed in the thought of Islam's recognition of the existence of time value of money, but differently, he stressed on the issue that the emergence of value is about investment, but it does not arise from postponing the present consumption.

A quite different approach to the concept of time value of money was showed by Rafic Yunus Al-Masri (2004). He pointed out that, in a deferred sale, the difference of spot and forward prices is the time value of money and it is allowed in Islamic economics. According to him the origin of the time value of money and interest are same, and they are both legitimate in Islamic law and plausible in economics. Moreover, he highlighted a problem raised by the approach of Muslim economists. Although they are similar, the time value is called profit in deferred sale but called interest in loan. In neither Islamic nor conventional economics, profit is not limited, but, on the other hand,

interest is controlled either by administrative arrangements or by using financial instruments such as central bank interventions. Thus, neglecting the importance and usefulness of time value and allowing it to be considered as profit in deferred sale would cause very high, usurious interest rates.

An approach, similar to Al-Masri (2004), was showed by Mahmoud A. El-Gamal (2006) who stated that while major schools of jurisprudence accepted the validity of the time value of money, many Muslim economists did not accept this. He pointed out that, actually, the existence and validation of instruments based on difference of spot and forward prices validate the time value of money.

5.5.2. Time preference

In evaluation of the Muslim economists' interpretations of the time preference concept, the first observed issue is the highly diversified approach of the scholars. So much that, an overview is not so easy.

The second issue, which has to be remarked, is the absence of a comprehensive scrutinizing of the concept of time preference, either proving or refuting, from an aspect of traditional Islamic economics. Actually, there are a number of scholars touched on the issue and some of them dealt with it in a detailed way. However, on one hand, the major distinction of Islamic economics from the conventional ones is its being an interest-free system and, on the other hand, there are theories of interest aiming to legitimize the validity of interest. Therefore, it is expected that the theories of interest, particularly the time preference theory as the most assertive one, would be scrutinized in detail. Unfortunately, the relevant works are not comprehensive enough to help in building an opinion on whether time preference can be the cause of interest or not.

Thirdly, it may be worthwhile to note that, in more than half of the works dealing with time preference from an Islamic economics view, Böhm-Bawerk is not referred or mentioned. This is so for either the references of this work or the entire relevant literature.

Finally, regarding the approach of the scholars to the causes asserted by Böhm-Bawerk, there might be a misconception or undervaluing of the causes. In some of the reviewed below works citing to Böhm-Bawerk, the claimed causes of time preference were partially referred.

The approaches of Muslim economists to the concept of time preference are grouped according to whether they accept the validity of time preference or not. Some scholars do not accept the generality of positive time preference (Qureshi 1946, Ahmad 1975, Zarqa 1983, Kahf 1994, Siddiqui 2006, El Diwany 2011) or refuse any cause-effect relation between positive time preference and positive interest rate (Zarqa 1983). On the other hand, some others such as Sultan Abu Ali (Zarqa, 1983), Ziauddin Ahmed (Zarqa, 1983), Fahim Khan (1991), El-Gamal (2006), Ayub (2009) and Abdul Khir (2013) consider positive time preference as a common human attitude.

Mahmud Ahmad and Iqbal Qureshi were two of the earliest Muslim scholars that commented on the theories of interest. In a relatively early time, in 1946, Mahmud Ahmad (1975) reviewed the theories of interest up to time and attempted to refute them all. He specifically cited Böhm-Bawerk's assertion of people's attribution more value to present goods than future goods, and claimed that Böhm-Bawerk's approach was underestimation of a universal reality. According to him, people's savings are made as rainy day funds without expecting any profit from them, on contrary, anybody under the subsistence level is unable to save, any high interest rate cannot help to recover and only in such a case, present goods may be preferred to future goods.

Concurrently with Mahmud Ahmad, another Muslim economist Iqbal Qureshi (1946) studied particularly on the issue of interest and evaluated the theories of interest in detail. He stated that the important contribution Böhm-Bawerk made to the theory of interest was the concept of time-consuming characteristic of production and the role of capital in this long process. He introduced the time preference theory and accepted the technical superiority of present goods in production. However, he refused the validity of the psychological subjective causes asserted by Böhm-Bawerk. Qureshi claimed that most of people save for future needs as a provision thinking that the needs, for example,

for their children's education and marriage or for old ages, will be greater than present needs.

Contrary to other Muslim economists who mostly considered the consumption-relevant causes of time preference to be invalid, Muhammad Uzair (1976), interestingly, highlighted Böhm-Bawerk's third cause, the technical superiority of present goods, and defined it to be a formidable assertion. He accused Böhm-Bawerk that his explanation of capital formation and the roundaboutness of production are account for the accumulation of capital goods in a primitive society, but not provide any rationale for charging interest in usage of the capital.

If it was not a mistake due to inattention, or not arisen from consciously ignoring the first to causes, claiming that Böhm-Bawerk's definition for the cause of time preference solely by the technical superiority of present goods is clearly a misconception of Uzair. On the other hand, more importantly, aside from the accuracy of the evaluation on the role of roundaboutness that is confined to the accumulation of capital goods in a primitive society, it seems that Uzair overlooked the importance of the availability of capital goods at present, regarding the role of capital in time-consuming production. The abovementioned role had never been important as it is at today due to ever-increasing large-scale production.

Since discounting the future is assumed closely related to the interest rate, a thought of zero interest rate policy is accompanied with questions regarding how discounting would be affected. While attempting to clarify the situation caused by the abovementioned questions, Anas Zarqa (1983) examined the nature of time preference in detail and asserted that the existence of positive interest rate does not require a positive time preference. According to him, despite the lack of positive time preference, the productivity of capital would be enough to cause a positive interest rate. Besides, he claimed that the existence of time preference would not cause a positive interest rate unless it is permitted in the society.

Zarqa objected to the assumption of the generality of positive time preference and attempted to show that non-positive time preference is also a rational human attitude

by presenting a number of examples for various cases. He concluded that, being not dominantly positive, time preference is not the cause of discounting future benefits and losses every time.

A misconception on the concept of time preference may have caused Zarqa to consider productivity of capital distinct from time preference. However, the reasons for time preference were defined to be relevant preferring either to consume more at present or to employ the capital in production in order to consume more in the future (Böhm-Bawerk, 1930). In other words, not only preference of consuming more at present but also the productivity of capital is in the scope of time preference.

On the other hand, in a case which time preference technically tends to cause a positive interest rate, it would not be realistic to claim that the existence of interest rate can be fully prevented in the society by law or any other instrument.

Omar Zubair, one of the discussants (Zarqa, 1983) of Zarqa's assertion, supported Zarqa's view and stated that, in Islam, there is no pure time preference. He stressed that approving its existence means accepting riba and time has a role only in the in the productivity of capital.

A distinct assertion was made by Monzer Kahf (1994) that time preference might be plausible for the saver whose capital is used for investment and the income's valuation can be only made at the end of the investment period when the outcome is acquired.

The condition set by Kahf for the plausibility of time preference is hard to rationalize for two reasons. Firstly, such a distinction between savings used for investment and lending may be significant in legitimizing the income of the capital, but dependence of the existence and plausibility of time preference on how the savings used is untenable. Secondly, although it is right that the income from an investment becomes evident when the outcome is acquired, it is not possible to decide whether to save or not in advance without a prediction of return rate.

While reviewing the theories of interest from the aspect of factors of production in his work, Shamim Siddiqui (1996) cited Böhm-Bawerk's theory by stating that it was sophisticated, and emphasized the subjectivity of Böhm-Bawerk's first two causes and the objectivity of the last cause of producing more in the future due to roundabout process. However, he did not make any further comment about the validity of the causes.

After ten years, Siddiqui (2006), this time, reviewed the literature regarding the relation of time preference with interest rate. While summarizing the major theories of interest, he only considered the second reason of Böhm-Bawerk, the underestimation of future, as the reason of time preference and kept the other two reasons apart. Siddiqui examined the claimed reason of people's underestimation of the future deeper, presented scenarios and stated that people's preference may change due to the conditions of certainty, security of savings, inflation, change in needs, expectation of future income, and investment opportunities. He concluded that positive time preference, of course only about the second reason, is not a general human attitude. He refused Böhm-Bawerk's assertion of people's lack of future imagination or weakness of will, and claimed that people are generally rational in valuing their future. Maybe not for the preference of present consumption, but even so, a present income may be preferred to a future income. According to Siddiqui, however, this cannot be a justification for an income of loan interest.

Tarek El Diwany (2011) objected the concept of the underestimation of future in Böhm-Bawerks theory. He did not comment in detail regarding the decrease in marginal utility in the future and the technical superiority of the present goods in production. He also did not refer to some details of the causes of underestimation of future such as the lack of imagination of the future, the lack of will and uncertainty of the future, but he stated that individuals prefer future pleasure to the present in many cases. He asks why anybody should prefer money to use in present consumption rather than for a future consumption, if he does not have a coercive reason to prefer present consumption.

Sultan Abu Ali (Zarqa, 1983), one of the discussants of Zarqa's (1983) assertion objected to Zarqa's approach to time preference. He accused Zarqa for disregarding time

existence preference. He claimed that time preference was a reality, even in Muslim societies, and abolishing interest would not cause to abolish time preference. Similarly, Ziauddin Ahmed (Zarqa, 1983) stated that, since Islam is based on inherent attitudes, human being could have positive time preference and believing in positive time preference is not wrong.

One of the Muslim economists who attempted to exhibit the connection between the time value of money and the time preference, Fahim Khan (1991), did not only stated the connection of these two concepts, he also evaluated their relevance to other two concepts of interest rate and rate of return. According to him, the assumption of a zero time preference in many works of Muslim scholars on the investment attitude of people was not justified, and the existence of a positive time preference is plausible. Assuming the present consumption is always preferred to future consumption; future values are discounted with respect to the present values by using interest rate as a proxy of discount rate. Then, interest rate may be a measure of time preference, which is determined in advance. The interest rate is used by consumers in utility maximization by making a choice between consuming now and postponing the consumption for investment.

Khan pointed out that a problem would emerge in the absence of interest, and sought a solution for the case that neither an interest rate nor a predetermined time value of money is permitted to use in justification of a previously determined time preference rate. A proposed measure to use as a proxy for the time value of money is capital's average rate of return that is not possible to determine exactly in advance due to uncertainty. The ex-post rate of return that is also including the time-relevant risk may be a measure for the time preference rate.

Regarding the validity of time preference, El-Gamal (2006) asserted that the findings in Loewenstein and Prelec's (1992) work about discounting the future benefits and losses were consistent with the human behavior described by many verses in Quran. He underlined the observation within the abovementioned work that time preference is

not only a determiner of the choice between present and a future time, but it also determines the choice between two distinct times both in the future.

Ayub (2009) also showed an approach similar to Al-Masri (2004) and asserted that there is not any justification for the claim of the existence of zero time preference is common in Islamic economics, contrarily; positive time preference is the common attitude of human.

After stating that the time value of money is based on the concept of time preference, and positive time preference is used in justification of interest in conventional economics, Abdul Khir (2013) emphasized that Islam's prohibition of interest does not mean the existence of positive time preference is rejected.

The most remarkable criticism against Böhm-Bawerk's theory is about the validity of the causes of time preference he asserted. Although there are objections to each three causes, the first two causes are attempted to refute more. Specifically the second cause, underestimation of the future, is mentioned. However, but it must be noted that in some works, any distinction between the first two causes is not made.

The controversy is on the generality of the first two causes that refer to the preference of present goods to future goods either for consumption smoothing or due to underestimation of the future. It is claimed that, there are many cases, which cause to negative or zero time preference.

It seems that there is a misconception about the first two causes of time preference. Actually, by the theory it is not claimed that each individual always has a reason to value present goods more than future goods. There may be many cases, in which present goods are saved for the future without any expectation of increment in the value. Even in some cases, a payment may be done for postponement of consumption to future, which means negative time preference.

However, the existence of individuals with specific cases that have negative or zero time preference does not affect the attitude of other individuals that have positive time preference. Each individual makes his own decision whether to consume a good

now or to save it. The necessary condition to save for an individual with positive time preference is a convincing increment in the amount of the saving due to waiting. The increment may be either a profit or an interest.

On the other hand, when the amount of the savings of the individuals with zero or negative time preference increases much and the savings are put on the loan market at a low price, the individuals with positive time preference would give up saving due to the decreased income from the saved capital. However, this does not mean that their preference of present goods to future goods changes. Above all, the domination of zero or negative time preference causing a non-positive interest rate is an unusual case that is only a consequence of recessions.

Lastly, it is observed that the legitimacy of Böhm-Bawerk's third cause of time preference, technical superiority of present goods, is accepted more widely by Muslim economists compared to other causes. Although the third cause is not a form of productivity theory of interest, being considered simply in this way might be the reason for the acceptance. Since the positive role of an earlier possessed capital in production is widely approved, it is easier to justify the preference of present goods for production compared to the other two reasons. Moreover, in Islamic economics, there is a valid, plausible and even encouraged tool used in capital utilization that legitimizes the expectation of a reward from the employment of a capital that is saved by postponing consumption: profit-loss sharing.

5.6. Consequences of Interest Rate Control in Islamic Economics Literature

The response of Muslim economists to the assertive time preference theory that is implying the inevitableness of interest is not satisfactory enough as it is mentioned in the previous section. However, the issue of the consequences of interest rate control has received far less attention compared to the concept of time preference among Muslim economists.

Price control as an economic conception has been worked on to an extent in Islamic economics, both by the old jurists and the contemporary Muslim economists

(Kamali 1994, Bashar 1997, Ghazanfar & Islahi 2003). From the beginning, intervention of the authorities in the price formation within the market has remained on the agenda and discussed in many aspects. Not only its legitimacy and the conditions that it becomes useful or necessary, but also the results of price control were also studied.

The unfairness of fixing or limiting price for the seller unless there is a plausible reason was one of the first raised issues. It was presented that the shortage, a result of price control, distorts the market and guides people to black-market; the sellers are discouraged to stay in the market and the quantity of exchange decreases (Bashar, 1997). The decision makers were warned about the undermining effect of excessive controls on people's profit motive (Ghazanfar & Islahi, 2003).

However, the scope of the works on price control has not been extended enough, covering the controls on price of capital, namely interest rate control. Many Muslim economists studied and wrote on the implications of abolishing interest, but almost all of them mentioned only the feasibility and positive effects of abolition.

Among a few Muslim scholars dealt with adverse effects of interest rate control on the market, Fazlur Rahman's evaluation was the most extensive one. Although he did not scrutinize the issue in detail in all aspects, Rahman (1964) touched on many market distortive effects of abolishing interest by referring to the approach of conventional economics. He pointed out that since interest rate is a price, it operates according to the same mechanisms that price has. He described the emergence of shortage due to zero interest rate, limited supply of, and infinite demand for capital and stressed on the problem of rationing the available capital to be loaned in a society with nepotism and corruption. Rahman asserted that, with interest at market rates, namely when capital is neither too cheap nor too expensive, the loan would be received by appropriate borrowers. He did not agree with the economists claiming the possibility of equating interest rate to zero by an administrative regulation, and pleaded that the interest rate would decrease near to zero itself in an economy only if wealth and capital increases enough to a point, where supply of and demand for loan are almost equalized.

Anas Zarqa (1982) cited Samuelson's assertion of the conditions for zero interest rate. In case of a perfect certainty, zero interest rate is possible only if capital is saturated. In a real case of uncertainty, interest rate may decrease to zero due to recession. However, Zarqa claimed that when a zero interest rate ceiling is established by an authority, the interest-based loan market would be eliminated, but an active equity market would be an alternative. Zarqa mentioned nothing about any adverse consequences of prohibition of interest but he asserted that the rate of return within the equity market as price signal would be used in allocation of capital. According to him, there is no need to concern about the efficiency of market and about growth due to the absence of interest. Because, as he claimed, interest-free allocation improves the efficiency and the absence of interest has no adverse effect on savings, investment and innovation, so on growth.

Then, Zarqa (1983) evaluated the role of discounting in economics and the relation of interest with discount rate. He stated that discounting is needed for an efficient investment and discount rate is considered dependent to the interest rate in conventional economics. He stressed on the raised problem of defining discount rate in the absence of interest, and proposed to the rate of return on equity to be used as discount rate.

A few more scholars, although not profoundly analyzed the consequences of the prohibition of interest, focused on the required conditions for successfully abolishing it. Syed Nawab Haider Naqvi and Asghar Qadir (1986) discussed the implications of abolition and stated that if the capital is not saturated, it is not possible to abolish interest by regulations unless alternative instruments that would take over the role of interest are established. They showed that in such a case the capital would depreciate due to its consumption.

The findings of Naqvi and Qadir were presented again by Naqvi (2013) but this time more extensively. He stated that according to Islamic ethical principles, any regulation made in economic system has to consider efficiency and equality. Therefore, a regulation such as abolition of interest should not adversely affect the total wealth and

not make the income distribution worse. In addition, any instrument established as an alternative to interest-based instruments should not remove the small investors from the market. In this frame, he claimed that abolishing interest at once without establishing an alternative would not be an appropriate solution because the capital with a zero price, namely the capital in a market with zero interest rate, would be consumed. This is so because in such a case, the marginal utility of consumption exponentially increases implying that the marginal utility of saving decreases to minimum.

6. CONCLUSION

The concept of *interest* has been a reality of human life throughout almost all known history. At the beginning, presumably at the time of the first farmers, it was an issue of the ones, who needed seed at sowing time but could not borrow from a relative or a friend on charity or cooperation basis. The alternative was borrowing from someone else and paying back more at harvest time. Afterwards, the scope of lending was widened to the loans of other goods, to the loans of commodities used as money, and finally, loans of money.

The word *interest* was used literally in various meanings previously in Europe, but it refers to almost same thing in English since the sixteenth century (Online Etymology Dictionary, 2019): *payment for the use of borrowed money*. At the times, that interest was not allowed to practice, all interest-bearing loans were defined to be usurious. The distinction between the meanings of usury and interest-bearing lending was made after the removal of the prohibition of interest at rates not exceeding a defined limit in Europe.

On the other hand, regarding its term meaning in economics, although interest is defined as an income received from capital as a factor of production, some scholars preferred to differentiate its coverage. According to Fisher (1930), all types of income are interest, and Schumpeter (1934) defined it as the name of all returns except wages. Of course, however it is defined, interest always exists with capital. Therefore, Böhm-Bawerk (1890) preferred the definition as *the income that flows from capital is interest.*

It would not be wrong to state that the role of interest in economy has never been as extensive as its role during the last century, specifically the last few decades. Evolved economic life due to the new characteristics of all relevant fields on both production and consumption sides of economy, and the financialization of the societies made the

concept of interest one of the focused issues of daily life. Today, interest is not only a simple phenomenon of ordinary loan transactions. Beside the numerous types of sophisticated and exhaustive loan transactions, it is utilized in many other fields such as commercial transactions, planning activities, discounting in budgeting and project evaluation.

However, it must be also admitted that interest has attracted an intensive attention, which it exceedingly deserved. Although not achieved consensus on many relevant issues, the concept of interest has been thought, studied and discussed by philosophers, religious scholars, lawmakers, administrators, and of course economists, regarding almost all economical, social, moral and religious aspects. The effort to decide whether interest is good or bad; beneficial or harmful; required or unneeded; legitimate or illegitimate, licit or illicit; honorable or dishonorable; respectable or disrespectable; charitable or uncharitable; should be lawful or illegal; should be freed, limited or prohibited has been always disputed. Each scholar, who studied on the issue of interest, attempted to justify his assertion within his personal interest or proficiency. Any assertion on interest was originated from religious beliefs, ethical principles, social needs or economical considerations, or a combination of these.

The legitimacy of interest-based lending was one of the points that debates concentrated on. Interest was considered sin (Visser & McIntosh, 1998), condemned for being dishonorable, disrespectable, uncharitable and unjust (Homer 1963, Olechnowicz 2011, Graeber 2011). Because it was thought that interest is source of many evils (Durkin 1993, Rougeau 1996, Visser & McIntosh 1998, Sharawy 2001, DeLorenzo 2006, Farooq 2012, Erdem 2018) such as earning without working, exploiting the needy, causing economic instability, guiding people to materialism, decreasing the tendency to entrepreneurship. Almost all the claimed negativities of interest are concerns of more than one source of motivation. Exploiting the needy is a religious, ethical, social and economical problem for example. Earning without working is a sin and not ethical. Similarly, inequality in wealth distribution is not desired in both religious and economics.

Therefore, interest-based lending has been always regulated by the authorities. Many laws and administrative arrangements were used in regulations since the ancient times such as Sumerian legal code (Vincent, 2014), Code of Hammurabi in Babylonia (Homer, 1963), Laws of Manu in ancient India (Visser & McIntosh, 1998), Solon's Laws of ancient Greece, Twelve Tables of ancient Rome, and Justinian's Code of Byzantium (Homer, 1963).

In various societies, lending at interest was entirely prohibited in some periods. However, the more prevalent arrangement was allowing interest with limited rates. The allowed interest rates were highly diversified due to various factors that are still the determiners of modern interest rates, such as the time, place, maturity, size, legality of the loan; the reliability and the neediness of the borrower; the identity of the lender; and the existence of indemnity for the loan. The interest limits for standard loans were in a range of 20-33⅓% per annum in ancient Mesopotamia (Homer, 1963); 15-60% in ancient India (Graeber, 2011); 4⅙-48% in ancient Greece; 4-12% in ancient Rome (Homer, 1963). There were loans made at an interest rate well below the limits in all societies but also there were examples exceeding the legal limits up to usurious levels, 9000% in ancient Greece for example (Homer, 1963).

It is interesting to observe that there could be distinction among the interest rates in lending of different goods. In ancient Mesopotamia, for example, barley was lending at an interest rate of 33⅓% per annum but the interest rate for a loan of silver was 20% (Homer, 1963). Presumably, the reason of the distinction was the expectation of a natural decrease in price of barley at the harvest time.

The legal arrangements did not only regulate the interest rates by defining limits. Many rules were established and executed in order to regulate the issues about the registration of the loans, the consequences of not obeying the relevant rules, the assets to be used for indemnity, the enforcement methods in the execution of loan contracts, and the sanctions in case of default.

Along with the regulations effective for long terms, in extraordinary cases, the authorities made ad-hoc interventions to the interest-based lending transactions. For

various social reasons such as providing justice and equity, and protecting the widows and orphans, the imprisoned or slaved people for not paid debt were freed and the debts were cancelled or reduced several times in various societies (Homer 1963, Graeber 2011, Vincent 2014).

The regulations of interest have been survived until the modern days. Even today, lending at interest is fully prohibited by law in some countries, and in some others, there are interest rate ceilings (Glaeser & Scheinkman 1994, Reifner, Clerc-Renaud & Knobloch 2010) aiming to prevent usurious transactions.

In the regulation of the practice of interest, the used instruments were not only the laws and administrative decisions. The financial arrangements have been also effective in the regulation of interest. The authorities themselves or other institutions such as temples lent to needy people at lower than market rates, even free of interest (Homer, 1963). The interventions of the central banks through the reserve requirement ratios are a contemporary example (Reifner, Clerc-Renaud & Knobloch, 2010) for financial instruments.

On the other hand, religious and ethics were not only the origin of the thoughts on interest but were also providing some instruments used in the enforcement of the relevant regulations. The consideration of the religions that interest is sin and the societies' view of ethically inconvenience of interest helped to enforce the regulations to an extent. Christianity, Islam, and with some exceptions Judaism prohibited lending at interest at the beginning (Visser & McIntosh 1998, Küçükkalay 2018).

However, the most clearly observed change in the view of authorities on the legitimacy of interest was in Christian Europe. After surviving for centuries with minor changes in its scope and its enforcement and sanctioning ways (Homer 1963), in the sixteenth century, the prohibition of interest was relaxed gradually by the emergence of Protestantism. A century later, the increased need for finance due to the development of trade made the role of interest in economy more significant, and finally, usury was redefined in the non-Catholic regions as lending at interest higher than the acceptable rate (Visser & McIntosh, 1998). The Catholic Church's adoption of the new approach

came in the nineteenth century. As it is still the Church's view (Visser & McIntosh, 1998), taking interest not more than the defined limit was allowed for everybody (Homer, 1963). However, it must be noted that the concept of *acceptable interest rate* is a much-debated issue, not clear and there is not a consensus on it.

Another controversial field within the debate of the legitimacy of interest was about its nature. Although it was not a new issue, this time by the eighteenth century, the debaters were mostly the economists and they dealt specifically with the economical aspects of interest in a more scientific manner. The scholars tried to understand the nature of interest, namely the reason of its existence first; then, its effect, necessity, fairness, usefulness and goodness (Böhm-Bawerk, 1890). Many economists developed either monetary or nonmonetary theories of interest those had similarities and discrepancies, focused on various aspects of the issue and particularly tried to present the cause of the existence of interest.

Among all other scholars, Eugen Böhm-Bawerk, who was introduced as the founder of the modern theory of interest (Conard 1957, Potuzak 2016b), had an outstanding approach for a number of reasons. The striking assertion he made was the distinction between the positive and normative aspects of the concept of interest. He did not use the words *positive* and *normative*, but he claimed that the cause of the existence of interest, which is an issue of positive domain, should be worked apart from the all other normative aspects of the social and political fields. He explicitly criticized the theories up to him (Böhm-Bawerk, 1890, 1903) and claimed that the main reason of the fallacies in those works was not making the abovementioned distinction (Böhm-Bawerk, 1890).

Then, Böhm-Bawerk presented his comprehensive theory of interest (Böhm-Bawerk, 1930) that was integrated with a theory of capital. The emphasis he made on the vital role of capital in time-consuming production processes is another important contribution he made to the literature (Qureshi, 1946). The abovementioned role of capital is not only considered in the evaluation of the cause of interest. It is also

considered in the interpretation of profit (Böhm-Bawerk, 1890), and the valuation of the product of labor (Böhm-Bawerk, 1930).

There have been always concerns about the harmfulness of interest, and many legislative and administrative regulations prohibiting interest or limiting its rate have been in effect, almost all over the world historically. However, whether it was allowed or not, interest-based transactions were, more or less, always existed (Kuran, 1995). The existence of interest-bearing lending, despite its prohibition in Europe and Muslim world was either through loopholes in the law or illegal ways (Visser & McIntosh, 1998).

Following the controversies on the issues of the legitimacy of the existence of interest and the cause of interest, a further disagreement is about whether interest rate control, namely prohibiting interest or limiting its rate, is serving the purpose or not. In spite of the fact that regulations of interest are highly prevalent and there are many scholars supporting the necessity and usefulness of interest rate control; in theory, most of the economists are opposed to any prohibition or limitation of interest (Durkin, 1993) considering its distortive effects on the market.

As being a form of price control, interest rate control may have similar undesired consequences as price control have in general. Shortages or excess supply, queues, bribing, black-markets, reduction in economic activity and total welfare, reduction in the incentive to invest and to improve the quality of products are common implications of controls that may be observed.

Moreover, the probable adverse results of the controls, opposite to the intention should be considered well. Inflationary effects may be faced due to price control that established to tackle inflation (Schuettinger & Butler 1979, Miller 2015). Wage floors, on the other hand, may make to find job impossible for the less qualified workers, contrary to its purpose of preventing workers, specifically the less qualified ones, from the exploitation of the employers. Similarly, although wage floor aims equity in the workplace, it causes to pay same wage to variously qualified workers (Siebert, 2015).

The adverse effects in loan market due to interest rate control may be more disturbing compared to the ones in other price controls. In case of a loan shortage, the lenders discriminate the risky borrowers from others and the needier ones, who are also risky, cannot borrow. Although interest rate control is established to protect the low-income consumers and weak businesses aiming justice, the control policy may be a source of unfairness (Schmidtz, 2015).

Coming back to the issue of the legitimacy of interest-based lending, it may be purposeful to evaluate the response of the opponents of interest to the assertions on the cause of interest and consequences of controlling it. It is obvious that there are many reasons claimed for the harmfulness of interest and there is a great demand to control it by prohibiting it or limiting its rate. On the other hand, others consider interest useful for economy, present the cause of its existence as an inevitable and inherent human attitude, and warn about the distortive consequences of controlling interest in the market.

Although some of reasons for objecting to interest are originating from normative approaches, the relevant economists are increasingly attempting to justify their assertions in positive domain. Therefore, interest opposing economists' approach to the abovementioned two ambiguous issues would help in clarification. Since it is assertive and comprehensive, the implications of Böhm-Bawerk's time preference theory of interest on the economists are an appropriate indicator in evaluating their stance about the claimed cause of interest. The interpretation of the consequences of interest rate control by the interest-opponent economists is also important. Refuting the claimed distortive effects of controls or accepting their validity has different implications on thought of economics.

Among many others supporting interest rate controls, the economists demanding an interest-free economic system exhibit the most explicit attitude against interest. There is no doubt that the success of the proposed interest-free system and the instruments developed within this system as well, depends on the persuasiveness of their interpretations of these two issues to some extent.

In order to scrutinize the abovementioned interpretations, instead of assessing the assertions of the scholars from all interest-free economic systems, it is focused on the approach of Islamic economics. Studying on Islamic economics as a representative of interest-free systems might not be wrong because the major distinction of Islamic economics from the conventional ones is the prohibition of interest. Moreover, Islamic economics has active supporters among administrators, scholars, financial service providers and receivers; an ever-increasing literature; a growing market; and actively operating interest-free instruments.

The society, in which Islam emerged, had a well-organized trade system operating on a huge geography from Europe to Korea (Hamidullah 1980, Koehler 2014). The economic system based on trade had been active also after the emergence of Islamic belief with some modifications made according to Islamic principles. Along with the economic life, many Muslim scholars of various disciplines continued working on economic thought until the fifteenth century. Then, thought disappeared almost in all fields including economics in the Muslim world for centuries (Chapra, 2000).

An Islamic approach of economics reappeared by the independence of new Muslim countries after the Second World War (Chapra, 2000) and particularly in the last few decades, applications of Islamic economics became to take place in the market. Although the share of Islamic finance assets in total world financial assets is only about 1% (Cohen, 2017), its annual growth is 15% at average (Thomson Reuters, 2018).

Islamic economic system is considered distinct from other economic systems (Khan, 2013). Among a number of differences that mainly ground on Quran and Sunnah, prohibition of interest is presumably the most significant one. Actually, the prohibition is made for riba and there is no doubt it is prohibited (Khan, 2013) both in Quran and in Sunnah. However, there has been a controversy on the meaning and nature of riba (Ahmad 1978, Farooq 2007) and its equivalence to interest.

Riba was a pre-Islamic practice and defined as the exorbitant increment in the debt, doubling or tripling for example, when it was not paid on the date of maturity (Uludağ, 1988), similar to today's penalty for delay or interest of default. There were not

any rules or limitations for the rate of the increment and the arbitrarily defined rate by the lender (Erdem, 2018) frequently put the needy borrowers in misery.

Although not defined it, Quran explicitly prohibited riba, referring to its folded characteristic. The case in Sunnah is same for the prohibition of riba, but its scope is highly controversial. There are hadiths seem to be contradictory which may be due to the lack of information of their contexts. On the other hand, some of the reported hadiths, including weak and even fabricated ones, were not reliable enough (Uludağ, 1988).

The issue becomes more complicated in fiqh due to diversified thoughts of jurists about the interpretation and the scope of riba. There are differences in the conception of the hadiths and in methodologies of the jurists in making analogies. Above all, the lack of a uniformly accepted cause for the prohibition of riba (Deniz, 2006) gives rise to further diversifications in analogies made.

After all, the most common interpretation of the evidences in Quran and Sunnah dominated other different approaches, and the emergent mainstream thought define riba as *the addition to the principal that is paid by the borrower to the lender for either the loan or an extension in the loan's maturity* (Chapra, 2006). Thus, riba is considered as interest, and disregarding its type, purpose, size and identity of the parties, interest is prohibited.

Although the mainstream approach to riba has been the major regulator of the economic life, there have been also contrarians of the traditional view. Just from the beginning, some of the jurists, economists and others approached to the issue differently and made various definitions for riba that mostly excluding some of the interest-based transactions from its scope.

Since the interest-based transactions were prohibited in Muslim societies, alternative instruments for capital utilization in investment were advanced. The major alternatives were based on the principle of profit-loss sharing and renting. On the other hand, in order to evade the prohibition of interest, although not legitimized by all jurists, some devious instruments were frequently used. It is remarkable that most of these

devious instruments were also used in Christian and Jew societies when interest was prohibited.

The approach of Muslim economists to the concept of time preference is scrutinized. It was observed that, beside evaluation of time preference, the Muslim economists worked on the role of time (Saadallah, 1994) in economic life and on the concept of time value of money (Ahmad & Hassan 2006, Batcha 2009, Siddique & Rahim 2015). The interrelations among the concepts of discount rate, interest rate, rate of return and time preference rate were also evaluated (Zarqa 1983, Khan 1991, Siddiqui 2006).

Although there are scholars refusing the time value of money, some others regard it to be valid, but mostly constraint its validity only to sale transactions. According to them, time has no value in lending. There are some scholars also legitimatizing the time value of money without stipulations.

The approaches of Muslim economists to the concept of time preference are highly diversified. However, although many scholars of Islamic economics studied on time preference or relevant issues, the need for a comprehensive scrutinizing of the concept of time preference from an aspect of traditional Islamic economics is not met.

Another remarkable issue within the works of Muslim economists is that there may be a misconception or undervaluing of the causes asserted by Böhm-Bawerk for time preference. Actually, in more than half of the works of Muslim economists on time preference, Böhm-Bawerk is not referred or mentioned.

Many scholars accept the validity of time preference but most of them refuse its generality of being positive. On the other hand, some others consider positive time preference as a common human attitude.

Böhm-Bawerk's theory is mostly criticized for the validity of the first two causes he asserted. Specifically the second cause, underestimation of the future, is attempted to refute. The main objection is to the generality of the two causes that refer to the preference of present goods to future goods.

Actually, the theory does not state that each individual always has a reason to prefer present goods. There may be cases for any individual in which future goods are preferred or valued equal to present goods. However, the existence of individuals with zero or negative time preference does not make any change in the attitude of the individuals with positive time preference. Each individual makes his own decision whether to consume now or to save for an increment.

The legitimacy of Böhm-Bawerk's third cause of time preference, technical superiority of present goods, is accepted more compared to other causes. Although it is not, being considered as a form of productivity theory of interest might be a reason for the acceptance of the third cause. Since the positive role of an earlier possessed capital in production is widely accepted, it is easier to justify the preference of present goods for production compared to other two reasons. Moreover, as a valid, plausible and encouraged instrument in Islamic economics, profit-loss sharing is an appropriate way of capital utilization that legitimizes saving with expectation of a reward from the employment of a capital.

Although the response of Muslim economists to the asserted causes of time preference theory is not satisfactory enough, the issue of the consequences of interest rate control has received far less attention.

The concept of price control has been worked on to an extent, both by the old jurists and the contemporary Muslim economists (Kamali 1994, Bashar 1997, Ghazanfar & Islahi 2003). Not only its legitimacy and the conditions in that it becomes useful or necessary, but also the results of price control were also studied. However, the works on price control in Islamic economics has not been extended enough covering the implications of interest rate control.

Many Muslim economists studied on the consequences of abolishing interest, but almost all the work done was about the feasibility and beneficial effects of abolition. A few Muslim scholars dealt with the adverse effects of interest rate control on the market. Except Rahman (1964), who presented many undesired distortive effects of controls, others attempted to define the required conditions that would prevent the emergence of

adverse effects such as depreciation of capital (Naqvi & Qadir, 1986), decrease in total wealth, worsening in income distribution and exclusion of small investors from the market (Naqvi, 2013) when interest is abolished. Zarqa presented the problems of difficulties in capital allocation (Zarqa, 1982) and discounting (Zarqa, 1983) in case of abolishing interest and proposed to use rate of return on equity instead of interest both in allocation of capital and discounting.

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APPENDIX B. THE TERM *RIBA* IN QURAN'S ENGLISH TRANSLATIONS

		Sure:Verse							
	Translation	**2:275-a**	**2:275-b**	**2:275-c**	**2:276**	**2:278**	**3:130**	**4:161**	**30:39**
1	**Abdul Majid Daryabadi**	usury	usury	usury	usury	usury	usury	usury	gift
2	**Abdullah Yusuf Ali**	usury	usury	usury	usury	usury	usury	usury	lay out
3	**Ali Quli Qara**	usury	usury	usury	usury	usury	usury	usury	usury
4	**Amatul Rahman Omar**	usury and interest	usury and interest	interest	usury and interest	usury and interest	usury and interest	interest and usury	interest and usury
5	**Faridul Haque**	usury	usury	usury	usury	usury	usury	usury	usury
6	**Hajj Abdalhaq and Aisha Bewley**	usury	usury	usury	usury	usury	usury	usury	usurious intent
7	**Hamid S. Aziz**	usury	usury	usury	usury	usury	usury	usury	usury
8	**IFTA Committee**	usury	usury	usury	usury	usury	usury	usury	usury
9	**M. Hilali and Muhsin Khan**	riba (usury)	riba (usury)	riba (usury)	riba (usury)	riba (usury)	riba (usury)	riba (usury)	gift
10	**M. J. Ahmed and Samira Ahmed**	growth /interest /usury	growth /interest /usury	growth /interest /usury	growth /interest /usury	growth /interest /usury	growth /increase /interest	interest /usury	growth /increase /interest
11	**Muhammad Abdel Haleem**	usury	usury	usury	usury	usury	usurious interest	usury	usury
12	**Muhammad Asad**	usury	usury	usury	usurious gain	usury	usury	usury	usury
13	**Muhammad Habib Shakir**	usury	usury	usury	usury	usury	usury	usury	usury
14	**Muhammad Mahmud Ghali**	riba (interest or usury)	riba	riba	riba (interest or other unlawful)	riba	riba (usury, interest)	riba (usury and other unlawful)	riba (usury and other unlawful)
15	**Muhammad Marmaduke Pickthall**	usury	usury	usury	usury	usury	usury	usury	usury
16	**Sheikh Muhammad Sarwar**	interest	interest	interest	interest	interest	interest	usury	interest
17	**Syed Vickar Ahamed**	interest	usury	usury	usury	usury	usury	interest (usury)	interest
18	**Thomas B. Irving**	interest	interest	interest	usury	interest	usury	usury	usury
19	**Wahiduddin Khan**	usury	usury	usury	usury	usury	usury	usury	usury

APPENDIX C. CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name	Eyerci, Cem
Nationality	Turkish
Date of Birth	6th January 1969
Place of Birth	Adana
e-mail	eyercicem@hotmail.com

EDUCATION

Degree	**Institution**	**Year of Graduation**
PhD	Yıldırım Beyazıt University – Economics	2019
MS	Çukurova University – Electrical and Electronics Engineering	1999
BS	Hacettepe University – Electrical and Electronics Engineering	1992

PROFESSIONONAL EXPERIENCE

Year	**Place**	**Enrolment**
2016 - Currently	Central Bank of the Republic of Turkey (CBRT)	Advisor
2015-2016	CBRT– Banknote Printing Plant	Executive Director
2012-2015	CBRT– Human Resources Department	Executive Director
2011-2012	CBRT– Statistics Department	Deputy Exec. Director
2010-2011	Turkish Statistical Institute (TURKSTAT)	Statistics Advisor
2008-2010	The Statistical, Economic and Social Research and Training Centre for Islamic Countries	Senior Researcher
2005-2008	TURKSTAT – Department of Business Statistics	Head of Department
2004-2005	State Institute of Statistics (SIS) - Department of Agricultural and Industrial Statistics	Head of Department
2003-2004	SIS – Regional Office of Adana	Regional Manager
2002-2003	SIS – Regional Office of Adana	SIS Expert
1993-2002	SIS – Regional Office of Adana	SIS Assistant Expert

FOREIGN LANGUAGE

English – fluent

PUBLICATIONS

Eyerci, C. (2001). Determination of correlation dimension and some applications. State Institute of Statistics, Expertness Thesis.

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APPENDIX D. TURKISH SUMMARY

ZAMAN TERCİHİ VE FİYAT KONTROLÜ TEORİLERİ BAĞLAMINDA MODERN İSLAM EKONOMİSİNİN FAİZİN YASAKLANMASINA YAKLAŞIMI

1. Giriş

Borç alıp verme, muhtemelen, metal paranın kullanılmaya başlanmasının çok öncesinden, tarih öncesi çağlardan bu yana günlük insan hayatının bir parçası oldu. Ekecek tohumu olmayan, kendisine hediye veya yardım olarak tohum verecek bir hayırsever de bulamayan ilk çiftçiler ihtiyaçlarını başkalarından borç tohum alarak karşılamış olmalılar. Arkadaş, komşu, akraba veya ihtiyaç sahibi başkalarına borç tohum verenlerin bir kısmı, borcu, verdikleri miktardaki tohumu geri almak üzere veriyorlardı. Bununla birlikte biliniyor ki borçların bir kısmı da hasat zamanı daha fazla miktarda tohum geri almak üzere verilirdi (Homer, 1963). Geri alınan borcun, verilen miktara göre artan kısmı *faiz* olarak isimlendirildi ve faiz sonraları hemen her toplumda başka ürünlerin, para yerine kullanılan malların ve paranın borç verilmesinde de alınmaya başlandı.

Önceleri değişik anlamlarda kullanılmış olmakla beraber *Faiz* (interest) kelimesinin İngilizcede ifade ettiği anlam on altıncı yüzyıldan bu yana hemen hemen aynı kaldı (Online Etymology Dictionary, 2019): *borç alınan para için yapılan ödeme*. Faiz kullanımına izin verilmediği dönemlerde faizle yapılan tüm borç vermeler *tefecilik* olarak kabul ediliyordu. Tefecilik ve faizli borçlanma arasındaki anlam ayrışması, belirli bir sınırı geçmeyen orandaki faizin Avrupa'da yasak kapsamından çıkarılması ile gerçekleşti.

Faiz, ekonomik bir terim olarak *bir üretim faktörü olan sermayeden elde edilen gelir* şeklinde tanımlansa da, bazıları kapsamına ilişkin farklı tanımlamalar yapmayı tercih ettiler. Fisher'e (1930) göre tüm gelir tipleri faiz iken, Schumpeter (1934) ücret dışındaki tüm gelirleri faiz olarak tanımladı. Tabii ki, nasıl tanımlanırsa tanımlansın, faiz her zaman sermaye ile birlikte var oldu. Bu sebeple, Böhm-Bawerk (1890) şu tanımı tercih etti: *faiz sermayeden akan gelirdir*.

Faizli işlemler bugünkü kadar karmaşık olmasalar da, ilginç şekilde, geçmişte de sadece basit ve tek düze uygulamalardan oluşmuyorlardı. Başlangıçtan itibaren, en azından MÖ üçüncü bin yıldan bu yana, işlemlerde kullanılan standart değerler vardı (Homer, 1963) ve basit faizin yanında bileşik faiz de işletiliyordu (Graeber, 2011). Faiz oranları, zaman içinde değişiyor, yer, borç verilen ürün, borç veren, borç alan ve borcun alınma amacına göre farklılaşıyordu.

Yine de, faizin ekonomideki rolünün tarihin hiçbir döneminde, son yüzyılda, özellikle son 40-50 yıldaki kadar büyük olmadığı söylenebilir. İktisadın, gerek üretim ve gerekse tüketim yönünden, hemen her alandaki yeni yapısına ve toplumların finansallaşmasına bağlı olarak değişen ekonomik hayat, faiz kavramını günlük hayatın ilgi alanlarından biri haline getirdi. Bugün artık faiz sadece basit borç işlemlerinin bir unsuru değil. Birçok gelişmiş ve kapsamlı kredi işleminin yanında, ticari işlemler ile planlama, bütçeleme ve proje değerlendirme gibi pek çok alanda faizin kullanımı söz konusu.

Bununla birlikte, faiz mefhumunun fazlasıyla hak ettiği yoğun bir ilgi gördüğü de kabul edilmelidir. İlgili birçok konuda mutabakat sağlanamasa da faiz kavramı düşünürler, din adamları, kanun yapıcılar, yöneticiler ve tabii ki ekonomistler tarafından ekonomik, sosyal, ahlaki ve dini, hemen tüm yönlerden düşünülmüş, çalışılmış ve tartışılmıştır. Faizin iyi mi, kötü mü; faydalı mı, zararlı mı; gerekli mi, gereksiz mi; meşru mu, gayri meşru mu; helal mi, haram mı; onurlu mu, onursuz mu; saygıdeğer mi, itibarsız mı; yardımcı mı, merhametsizce mi; serbest mi bırakılmalı, sınırlandırmalı mı, yasaklanmalı mı olduğu hususları sürekli tartışma konusu olmuştur. Faiz konusunda

çalışan her bir bilim insanı, görüşünü, kendi ilgi ve uzmanlık alanında gerekçelendirmeye çalışmış, faize ilişkin her bir görüş, bir dini inanç, ahlaki kural veya ekonomik değerlendirmenin, ya da bunların bir karışımının sonucu olarak ortaya çıkmıştır.

2. Faizin Meşruiyeti

Faizle borç vermenin meşruluğu, tartışmaların üzerinde yoğunlaştığı noktalardan birisi olmuştur. Faiz günah kabul edilmiş (Visser & McIntosh, 1998), onursuz, itibarsız, merhametsiz ve adaletsiz olduğu için kınanmıştır (Homer 1963, Olechnowicz 2011, Graeber 2011). Çünkü faizin çalışılmadan elde edilen bir gelir olması, ihtiyaç sahiplerinin sömürülmesi, ekonomik istikrarsızlığa sebep olması, insanları maddiyatçılığa yönlendirmesi, ortaklık yapmaya eğilimi azaltması gibi birçok kötülüğün kaynağı (Durkin 1993, Rougeau 1996, Visser & McIntosh 1998, Sharawy 2001, DeLorenzo 2006, Farooq 2012, Erdem 2018) olduğu düşünülmüştür. Faizin iddia edilen olumsuzluklarının hemen tamamı birden fazla sebebe dayanıyordu. Örneğin ihtiyaç sahiplerinin sömürülmesi dinen, ahlaken ve ekonomik yönden arzu edilmeyen bir durumdu. Çalışılmadan gelir elde edilmesi ise hem günah hem de ahlak dışı kabul edilmişti. Benzer şekilde, gelir dağılımındaki dengesizlik hem dinen hem de ekonomik yönden istenilmezdi.

Bu sebeple, faizle borç verme işlemleri yönetimler tarafından her zaman kontrol altında tutulmuşlardır. Bunun için, antik çağlardan bu yana birçok yasal ve idari düzenleme kullanılmıştır. Sümerlerin kanunnameleri (Vincent, 2014), Babilin Hamurabi (Homer, 1963), antik Hindistan'ın Manu (Visser & McIntosh, 1998), antik Yunan'ın Solon, antik Roma'nın On İki Tablo ve Bizans'ın Jüstinyen (Homer, 1963) kanunları yapılan düzenlemelere örnek olarak verilebilir.

Bazı toplumlarda faizle borç verilmesinin tamamıyla yasaklandığı dönemler olmuştur. Bununla birlikte, daha çok, faizin sınırlandırılmış oranlarda kullanımına izin veren düzenlemelerle karşılaşılmıştır. İzin verilen faiz oranları, bugün de hala faiz

oranlarının belirlenmesinde rol oynayan borcun zamanı, yeri, vadesi, büyüklüğü, yasallığı, borçlananın güvenilirliği ve muhtaçlık durumu, borç verenin kimliği ve teminat varlığı gibi çeşitli faktörlere göre değişmekteydi. Standart borçlar için belirlenen faiz oranı üst sınırları antik Mezopotamya'da yıllık %20-33⅓ (Homer, 1963); antik Hindistan'da %15-60 (Graeber, 2011); antik Yunan'da %4⅙-48; antik Roma'da %4-12 (Homer, 1963) aralığında değişmekteydi. Tüm toplumlarda belirlenen üst sınırların epeyce altındaki oranlarda verilen borçlarla da karşılaşılabiliyordu. Ancak, aynı zamanda üst sınırların çok üstüne çıkan oranlarda faizle verilen borçlara da rastlanılabiliyordu. Örneğin antik Yunan'da yıllık %9000'lere varan faizler kaydedilmişti (Homer, 1963).

Faiz uygulamalarında dikkat çekici bir husus, aynı dönemde farklı malların farklı faiz oranlarıyla borç verilebilmesiydi. Örneğin antik Mezopotamya'da, arpa yıllık %33⅓ ile borç verilirken, gümüş borçlarına %20 faiz isteniyordu (Homer, 1963). Muhtemelen bu farkın sebebi, hasat döneminde arpa fiyatının düşüyor olmasıydı.

Tahmin edilebileceği gibi, faiz düzenlemeleri sadece faiz oranlarının üst sınırlarını belirlemiyordu. Borçların kaydedilmesi, nelerin teminat olarak gösterilebileceği, borç sözleşmelerinin uygulanma yöntemleri, kurallara uyulmamasının sonuçları ve ödenmeyen borçlara ilişkin yaptırımlara ilişkin konular da söz konusu düzenlemelerin kapsamındaydı.

Sürekli yürürlükte kalan düzenlemelerin yanında, sıra dışı durumlarda yönetimler faizli borç verme işlemlerine bir defalık müdahalelerde de bulunabiliyorlardı. Adalet ve eşitliği sağlamak, dul ve yetimleri korumak gibi çeşitli sosyal sebeplerle, çeşitli toplumlarda defalarca ödenmemiş borçlardan dolayı hapis yatanlar ile köleleştirilenler serbest bırakılmış, borçlar silinmiş veya azaltılmıştı. (Homer 1963, Graeber 2011, Vincent 2014).

Faize ilişkin düzenlemelerin yapılması günümüze kadar devam etmiştir. Bugün bazı ülkelerde yasalar faizli borç işlemlerini tamamıyla yasaklamakta, başka bazı

ülkelerde ise çok yüksek faizli işlemleri engellemeyi amaçlayan faiz oranı tavanları kullanılmaktadır (Glaeser & Scheinkman 1994, Reifner, Clerc-Renaud & Knobloch 2010).

Faiz uygulamalarına ilişkin düzenlemeler sadece yasalar ve idari kararlar ile yapılmamaktadır. Finansal araçlar da faiz düzenlemelerinde etkin şekilde kullanılmaktadırlar. Geçmişte, yönetimlerin kendileri, tapınaklar ve benzeri çeşitli kuruluşlar ihtiyaç sahiplerine piyasanın altındaki faiz oranlarıyla, hatta faizsiz borç vermişlerdi (Homer, 1963). Bugün, merkez bankalarının zorunlu karşılık oranları üzerinden yaptıkları düzenlemeler de finansal araçlara örnek olarak gösterilebilir (Reifner, Clerc-Renaud & Knobloch, 2010).

Öte yandan, din ve ahlak sadece faiz konusundaki düşüncelere kaynaklık etmemekte, aynı zamanda ilgili bazı düzenlemelerin uygulanmasında kullanılan araçlar da sunmaktadırlar. Dinlerin faizi günah kabul etmeleri ve toplumların faizin ahlaki olarak uygunsuzluğuna ilişkin görüşleri yapılan düzenlemelerin uygulanmasına, bir noktaya kadar katkı yapmaktadır. Zira başlangıçta, Hristiyanlık, İslam ve bazı istisnalarla Yahudilik faiz ile borç vermeyi yasaklamıştı. (Visser & McIntosh 1998, Küçükkalay 2018).

Bununla birlikte, yönetimlerin faizin meşruluğuna ilişkin görüşlerinin değişimi en açık şekilde Hristiyan Avrupa'sında gözlenmiştir. Yüzyıllarca, kapsamı ile uygulama ve yaptırım yöntemlerinde meydana gelen küçük değişikliklerle devam eden (Homer 1963) faiz yasağı, on altıncı yüzyılda Protestanlığın ortaya çıkmasıyla tedricen gevşemeye başladı. Yaklaşık yüz yıl sonra, ticaretin gelişmesine bağlı olarak artan sermaye ihtiyacı, faizin ekonomideki rolünü daha belirgin hale getirdi ve sonunda Katolik olmayan bölgelerde tefecilik kabul edilebilir oranların üstündeki bir faiz oranı ile borç verme şeklinde yeniden tanımlandı (Visser & McIntosh, 1998). Katolik Kilisesi bu yeni yaklaşımı ancak on dokuzuncu yüzyılda benimsedi. Hâlihazırda Kilisenin görüşü olan bu yaklaşıma göre (Visser & McIntosh, 1998), herkesin belirlenen sınırın üstünde olmayan oranda faiz alacak şekilde borç vermesi yasak olmaktan çıkarıldı

(Homer, 1963). Bununla birlikte, vurgulanması gerekir ki kabul edilebilir faiz oranı kavramı çokça tartışılan, açık olmayan ve üzerinde mutabakat sağlanamamış bir kavram olmaya devam etti.

3. Faizin Sebepleri

Faizin on yedinci yüzyıldan itibaren ekonomik hayatta daha görünür hale gelmesi ile birlikte, merkantilist, fizyokrat ve klasik ekonomistlerin de aralarında bulunduğu birçok bilim insanının konuya olan ilgisinde artış oldu. Faizin doğasına ilişkin yeni olmayan tartışma, on sekizinci yüzyıla gelindiğinde, bu kez dini ya da ahlaki yönlerden çok, ekonomik yönden yürütülmeye başlandı (Küçükkalay, 2018). Başka bir seçeneği olmayan çaresiz ihtiyaç sahiplerinin faiz ödemeye razı olması anlaşılabilir olsa da, borç verenlerin, verdikleri borçlar için faiz almayı hakları olarak görmelerinin sebebi çok açık değildi.

Bilim insanları faizin doğasını, yani öncelikle varlık sebebini, sonra etkilerini, gerekliliğini, adilliğini, faydalılığını ve iyiliğini anlamaya çalıştılar (Böhm-Bawerk, 1890). Birçok ekonomist konunun çeşitli yönlerine odaklanan ve özellikle faizin varlık sebebini sunmaya çalışan, parasal olan veya olmayan, benzerlikleri ve farklılıkları olan faiz teorileri geliştirdiler.

Diğer bilim insanlarının yanında, modern faiz teorisinin kurucusu olarak anılan (Conard 1957, Potuzak 2016b) Böhm-Bawerk, birkaç sebepten dolayı dikkate değer bir yaklaşım ortaya koydu. İleri sürdüğü çarpıcı görüşlerinin birisi faiz kavramının pozitif ve normatif yönleri arasında yaptığı ayrım ile ilgiliydi. Bu kelimeleri kullanmadıysa da, pozitif nitelikteki faizin varlık sebebinin, geri kalan sosyal ve politik alanlardaki normatif değerlerden ayrı çalışılması gerektiğini ileri sürdü. Böhm-Bawerk kendi zamanına kadar geliştirilmiş faiz teorilerini açık şekilde eleştirdi (Böhm-Bawerk, 1890, 1903) ve o çalışmalarda yapılan hataların esas olarak söz konusu ayrımın yapılmamış olmasından kaynaklandığını iddia etti (Böhm-Bawerk, 1890).

Böhm-Bawerk (1930), dört yıl sonra, 1888 yılında bir sermaye teorisi ile bütünleşmiş kendi kapsamlı faiz teorisini sundu. Bu çalışmasında yer alan, sermayenin uzun süreli üretim süreçlerindeki hayati rolüne ilişkin vurgusu, iktisadi düşünceye yaptığı önemli bir katkıydı (Qureshi, 1946). Sermayenin söz konusu rolü sadece faizin varlığına ilişkin sebeplerin açıklanmasında değil, kâr kavramının incelenmesinde (Böhm-Bawerk, 1890) ve işgücünün değerlendirilmesinde de (Böhm-Bawerk, 1930) etkin şekilde kullanıldı.

Böhm-Bawerk'in teorisini üzerine kurduğu *zaman tercihi*, insanın şimdiki bir mala gelecek zamanda sahip olunacak aynı miktar ve kalitedeki bir maldan daha fazla değer biçmesi şeklinde tanımlandı. Bu durumda faiz de malın şimdiki ve gelecekteki değerleri arasındaki fark anlamına geliyordu.

Böhm-Bawerk (1930) şimdiki mala gelecektekinden daha fazla değer biçilmesine, genelde geçerli, üç sebep sayıyordu. İlk iki sebep bugün yapılan tüketimin gelecekte yapılacak tüketime tercih edilmesi ile ilgiliydi. İnsanların bugünkü tüketimi tercih etmeleri, tüketimin en fazla faydayı sağlayacak şekilde zaman içinde düzenlenmesi veya ortalama insan psikolojisinin bir sonucu olarak geleceğin küçümsenmesi sebebiyle olabilirdi. Üçüncü sebep bugünkü tüketimin tercih edilmesi değil de gelecekte tüketilmek üzere daha fazla değer üretilmesi arzusuydu.

Böhm-Bawerk'in teorisi birçok bilim insanının ilgi alanında oldu ve teori bunlardan bazılar tarafında çeşitli yönlerden eleştirildi (Walker 1892, Clark 1894, Fetter 1902, Fisher 1907, Keynes 2013, Mises 2006). Sunulmasının üzerinden yüzyıldan daha uzun süre geçtiği günümüzde teori hala çalışılmaya devam ediyor (Olson & Baily 1981, Becker & Mulligan 1997, Hülsmann 2002, Murphy 2003, Frederick, Loewenstein & O'Donoghue 2002, Van Suntum & Neugebauer 2014).

4. Faiz Kontrolünün Sonuçları

Faizin meşruiyeti ve varlık sebeplerine ilişkin tartışmaların yanında bir başka ilgili ihtilaf alanı, faiz kontrolünün, yani faizin yasaklanması veya oranının sınırlandırılmasının, bunun yapılma amacına hizmet edip etmediği ile ilgiliydi. Faiz düzenlemelerinin çok yaygın olması ve birçok bilim insanının bunu gerekli ve faydalı bulmasına rağmen (Smith 1776, Keynes 2013, Metwally 1990, Glaeser & Scheinkman 1994, Rougeau 1996, Coco & Meza 2009, Lee 2017, Cheng 2018), bugün ekonomistlerin büyük kısmı piyasadaki olası yıkıcı etkileri sebebiyle faizin yasaklaması veya faiz oranının sınırlandırılmasına karşı çıkmaktadırlar (Durkin, 1993).

Faiz düzenlemelerine karşı olanların çıkış noktası yönetim tarafından bir mal veya hizmetin fiyatına getirilen sınırlandırma şeklinde tanımlanan fiyat kontrolü ile ilişkilidir. Fiyat tavanları kira kontrollerinde olduğu gibi belirli bir sınırın üstündeki fiyatlarda işlem yapılmasını engellerken, asgari ücret uygulamalarında kullanılan fiyat tabanı belirli bir sınırın altındaki fiyatlara izin vermez (Coyne & Coyne, 2015a). Fiyat kontrolleri çok değişik amaçlarla uygulanır (Lipsey 1977, Schuettinger & Butler 1979, Bashar 1997, Bourne 2015, Miller 2015, Siebert 2015, Tabakoğlu 2016, Karadağı 2018). Bunlar arasında enflasyonla mücadele, tüketicilerin karaborsa ve sömürülmekten korunması, işyerinde eşitliğin sağlanması ve mülk sahiplerinin vurgunculuk yapmasının önlenmesi sayılabilir.

Fiyat kontrolü, bugün yaygın şekilde başvurulan bir araç olmakla beraber faydalılığı konusunda şüpheler de dile getiriliyor. Fiyat kontrolüne yönelik yapılan bazı müdahalelerin piyasa bozucu, arzu edilmeyen etkiler doğurduğu iddia ediliyor (Schuettinger & Butler, 1979). Kıtlıklar, rüşvet ve karaborsada artış, yatırımda azalma, emlak stokunda nitelik bozulması, yeni emlak inşasında azalma, işgücü maliyetinde artış, işgücü talebinde azalma ve düşük nitelikli çalışan işsizliğinde artış fiyat kontrolü iddia edilen olumsuzluklarının bazılarıdır (Lipsey 1977, Schuettinger & Butler 1979, Booth & Davies 2015, Coyne & Coyne 2015b, Miller 2015, Siebert 2015, Snowdon 2015, Wellings 2015).

Fiyat kontrolünün bazı durumlarda amaçlananın tam tersi sonuçlar verebildiği ileri sürülmekte, bu duruma örnek olarak enflasyonla mücadele için yapılan müdahalelerin uzun vadede enflasyonist etkilere sahip olması gösterilmektedir. (Schuettinger & Butler 1979, Miller 2015). Benzer şekilde, asgari ücret uygulamaları çalışanları işverenin sömürüsünden koruma amacıyla yapıldıkları halde, daha düşük nitelikli çalışanların iş bulmasını imkânsız hale getirebilmektedir. İşyerinde eşitliği sağlamayı amaçlayan asgari ücret uygulaması sayesinde farklı nitelik düzeylerine sahip çalışanların aynı ücreti aldığı durumlarla karşılaşılabilmektedir (Siebert, 2015).

Fiyat kontrolünün yol açtığı bir başka olumsuzluk fiyatın piyasadaki sinyal iletim rolü ile ilgilidir (Schmidtz, 2015). Fiyat, piyasadaki ilgili bilgilerin bileşiminden oluşan işaretlerin hızlı ve etkili bir ileticisi olduğundan (Sowell, 1980), üzerindeki herhangi bir kontrol karar almada ihtiyaç duyulan bilginin elde edilmesini engeller ve belirsizliği arttırır. Dahası, fiyat kontrolünün maskeleme etkisi ekonomik sorunların gerçek sebeplerinin tespitinin engelleyebilir (Coyne & Coyne, 2015b).

Faiz, alınan borcun kullanım fiyatı şeklinde tanımlandığından, faiz kontrolü de şüphesiz bir fiyat kontrolüdür. Bu durumda, faiz kontrolünün de piyasa üzerinde fiyat kontrolününkine benzer etkileri olabilir. Faiz oranları için piyasa oranlarının altında belirlenen bir tavan borç arzını azaltıp, borca olan talebi arttırarak kıtlığa yol açar. Bu durumda, daha yüksek oranlardan borç almaya hazır oldukları halde gerçek ihtiyaç sahipleri borç bulmakta güçlük yaşarlar. Çünkü başkalarından daha riskli olduklarından borç verenler tarafından tercih edilmezler. Borç alma imkânı kalmayan bazıları tefeci ve rehincilere yönelirler (Durkin 1993, Ellison & Forster 2008, Rigbi 2013). Öte yandan, daha az ihtiyaç sahibi olduğu halde, görece daha düşük faiz oranlarıyla borçlananlar aldıkları borcu etkin şekilde kullanmayabilirler. Faiz kontrolü, adaletin sağlanması amaçlanarak, düşük gelirli tüketiciler ile ekonomik yönden zayıf iş sahiplerini korumak için uygulandığı halde adaletsizliğin kaynağı haline gelebilir (Schmidtz, 2015).

Fiyatın sinyal iletim rolü yönüyle, faiz kontrolü bilginin bir kısmının iletimini engeller ve eksik bilgi yeni sermaye sahiplerinin borç piyasasına girme cesaretlerini kırarak rekabetin bozulmasına yol açar.

Faiz kontrolünün makroekonomik olumsuzlukları da görülebilir. Sermaye sahipliliğinin çekiciliğini kaybetmesi tasarrufu azaltabilir ve bunun sonucu olarak yatırımlar geriler. Çıktı, işgücü ve gelirin bu durumdan olumsuz etkilenmesi sonucu toplam varlık azalır (Durkin, 1993).

5. İslam Ekonomisi, Zaman Tercihi ve Faiz Kontrolü

Faiz destekçileri faizin varlık sebeplerini açıklayıp ekonomideki faydalarına atıf yaparak ve faiz kontrollerinin piyasa bozucu sonuçları olduğunu iddia ederek faizi bir gereklilik, en azından bir hak şeklinde tanımladılar. Öte yandan faizin zararları konusunda her zaman var olan kaygılar sebebiyle, tarih boyunca, dünyanın hemen her yerinde faizi yasaklayan veya faiz oranlarını sınırlandıran pek çok yasal ve idari düzenleme yapıldı.

Her ne kadar faizli işlemler, faizin yasak olduğu dönmelerde bile, düzenlemelerdeki açıkların kullanılması yoluyla veya yasa dışı olarak (Visser & McIntosh, 1998), az ya da çok, her zaman varlıklarını sürdürdülerse de (Kuran, 1995), faiz karşıtları ile taraftarları arasındaki ihtilaf canlılığını korumaya devam etti.

Faize ilişkin birbirinin tersi bu iki temel yaklaşım arasındaki farkın tamamı değilse bile bir kısmı faiz karşıtlarının normatif yaklaşımlarından kaynaklanmaktadır. Bununla birlikte faiz karşıtı ekonomistlerin görüşlerini pozitif yöntemlerle ortaya koyma çabaları artarak devam etmektedir. Bu çerçevede, faize ilişkin, birisi sebep diğeri sonuç tarafında yer alan iki konu, farklı yönleriyle açıklığa kavuşturulmak üzere özel ilgi beklemektedir. Çünkü faizle ilgili yapılacak herhangi bir değerlendirme, muhakeme veya düzenlemenin finansal ve sosyal yönden etkin olabilmesi için faiz kullanımına

yönelik zorlayıcı talep ile faiz kontrolünün sonuçlarının göz önünde bulundurulması gerekir.

Faizin varlığının gerekçesi olarak ortaya konulan birçok sebep arasında zaman tercihi görece iddialı bir konuma sahiptir. Özellikle Böhm-Bawerk'in faiz teorisi oldukça kapsamlı olması ve fıtri olduğu iddia edilebilecek ortalama insan tutumunu esas almasıyla, faize karşı olanlar için çözülmesi gereken önemli bir problem ortaya koymaktadır. Ekonomistlerin bu teoriye ilişkin yaptıkları değerlendirmeler, onların faizin iddia edilen sebepleri karşısındaki tutumları hakkında fikir verebilir.

Öte yandan, faize karşı olan ekonomistlerin faiz kontrolünün sonuçlarına ilişkin yorumları da önemlidir. Faiz kontrolünün, ileri sürüldüğü şekilde piyasa bozucu etkilerinin varlığının kabul ya da reddedilmesinin, ekonomiye genel yaklaşım üzerinde farklı yansımaları olacaktır. Zira faizin yasaklanması ya da faiz oranının sınırlandırılmasının arzu edilmeyen piyasa bozucu etkileri varsa, faiz kontrolü düzenlemelerinin araç-amaç uyumu yönünden yeniden gözden geçirilmesi gerekebilir.

Faiz kontrolünün birçok destekçisi arasında faiz karşısındaki en açık tutumu ortaya koyanlar faizsiz bir ekonomik sistem talebinde bulunanlardır. Şüphe yok ki önerilen herhangi bir faizsiz sistemin başarısı ile bu sistem içinde geliştirilen araçların faydalılığı, bir noktaya kadar, söz konusu ekonomistlerin yukarıda bahsedilen iki konudaki değerlendirmelerinin ikna ediciliğine bağlıdır.

Bahsedilen değerlendirmeleri irdelemek amacıyla bütün faizsiz sistem yaklaşımlarını ele almak yerine İslam ekonomisinin duruşuna odaklanılmıştır. İslam ekonomisinin konvansiyonel ekonomilerden ayrıldığı en önemli noktanın faizin haram olması, yasaklılığı oluşu sebebiyle faizsiz sistemleri temsil etmek üzere İslam ekonomisinin incelenmesi yanlış olmayacaktır. Dahası, İslam ekonomisinin, yönetici, bilim insanı, finansal hizmet sağlayıcı ve alıcıları arasından etkin destekçileri, sürekli genişleyen literatürü, büyümekte olan bir piyasası ve hâlihazırda işleyen faizsiz araçları vardır.

İslam'ın ortaya çıktığı toplumun Avrupa'dan Kore'ye uzanan çok büyük bir coğrafyada faaliyet gösteren ve iyi işleyen bir ticaret sistemi vardı (Hamidullah 1980, Koehler 2014). Ticarete dayalı ekonomik sistem İslami ilkeler çerçevesinde yapılan bazı düzenlemeler ile İslam inancının etkinliğini arttırmasından sonra da varlığını sürdürdü. Ekonomik hayat devam ederken iktisadi düşünce üzerindeki çalışmalar, farklı disiplinlerden birçok Müslüman bilim insanı tarafından on beşinci yüzyıla kadar sürdürüldü. Ancak daha sonra, ekonomi de dâhil hemen tüm alanlardaki düşünce üretme faaliyetleri yüzyıllar süren bir duraklama dönemine girdi (Chapra, 2000).

İkinci Dünya Savaşından sonra yeni Müslüman ülkelerin bağımsızlıklarını kazanmalarıyla İslami bir ekonomik yaklaşım yeniden ortaya çıktı (Chapra, 2000) ve özellikle son yarım yüzyılda İslam ekonomisi uygulamaları piyasalarda yer almaya başladı. Her ne kadar tüm dünya finansal varlıklarının sadece %1'ni oluştursa da (Cohen, 2017) İslami finansal varlıklarının büyüklüğü yıllık %15'lere varan bir hızla artmaya devam ediyor (Thomson Reuters, 2018).

İslam ekonomik sisteminin diğer ekonomik sistemlerden farklı olduğu kabul edilmektedir (Khan, 2013). Kuran ve Sünneti temel alan çeşitli farklılıklar arasında faiz yasağı muhtemelen en kayda değer olanıdır. Aslında söz konusu yasak riba içindir ve ribanın gerek Kuranda ve gerekse Sünnette haram olduğundan şüphe yoktur (Khan, 2013). Bununla birlikte ribanın anlamı (Ahmad 1978, Farooq 2007) ve faizle aynı şey olup olmadığı konularında ne geçmişte ne de bugün tam bir mutabakat sağlanmış değildir.

Riba İslam öncesinden kalma bir uygulamaydı ve vadesinde ödenmeyen borcun iki, üç katına çıkması gibi fahiş şekilde artması şeklinde tanımlanıyordu (Uludağ, 1988). Bugünün gecikme cezası veya temerrüt faizine benziyordu. Söz konusu artış oranı bir kural veya sınırlamaya tabi değildi ve bu artışı alacaklıların keyfi şekilde (Erdem, 2018) belirliyor olmaları, ihtiyaç sahibi borçluların sıklıkla sefalete düşmelerine yol açıyordu.

Kuran, tanımını yapmamış olmakla beraber, katlanarak artan niteliğine atıf yaptığı ribayı açık şekilde haram kılmıştır. Ribanın haramlığı Sünnette de çok açık görülmekle birlikte, bu alanda ribanın kapsamıyla ilgili bir ihtilaf ortaya çıkmıştır. Rivayet edilen hadisler arasında, aktarılan olay ya da sözlerin bağlamlarına ilişkin bilgi eksikliğinden kaynaklanabilecek tutarsızlıklar görülebilmektedir. Dahası, rivayet edilen ilgili hadisler, bazıları zayıf, hatta mevzu olduklarından, yeterli düzeyde sıhhatli değildirler (Uludağ, 1988).

İslam fıkhının faize ilişkin hükümlerine bakıldığında, konu, fakihlerin ribanın kapsam ve yorumuna yaklaşımlarının birbirlerinden oldukça farklılaşmasının bir sonucu olarak çok daha karmaşık hale gelmektedir. Fakihlerin gerek hadisleri algılayışları ve gerekse kıyas yaparken kullandıkları usuller arasında ciddi farklılıklar bulunmaktadır. Hepsinin ötesinde, ribanın yasaklanmasının illetine, yani sebebine ilişkin standart bir kabul oluşmamış olması (Deniz, 2006), yapılan kıyaslardaki çeşitliliği daha da arttıran bir unsur olmuştur.

Birçok farklı görüş ve yorumun varlığına rağmen, Kuran ve Sünnetteki delillerin yorumlanmasında en yaygın olarak kullanılan yaklaşım hâkim olmuş ve ribaya ilişkin ana akım düşünceyi oluşturmuştur. Bu yaklaşım ribayı *bir borç veya borcun vadesinin uzatılması için borçlu tarafından alıcıya anaparaya ek olarak ödenen fazlalık* şeklinde tanımlamaktadır (Chapra, 2006). Buna göre, türüne, veriliş amacına, büyüklüğüne ve tarafların kim olduğuna bakılmaksızın bir borç işlemindeki her türlü faiz riba olarak kabul edilmektedir ve yasaklanmıştır.

Her ne kadar ribaya ilişkin ana akım yaklaşım ekonomik hayatın esas düzenleyicisi olmuşsa da, her zaman geleneksel görüşten farklı düşünenlerle de karşılaşılmıştır. En başından itibaren bazı fakih ve ekonomistler konuya farklı yaklaşmış ve faizli işlemlerin bir kısmını riba kapsamı dışında tutan çeşitli tanımlar yapmışlardır. Bunlardan bazıları sadece işleme tefecilik niteliği kazandıran fahiş yüksek faizleri yasak kapsamında tanımlarken, başkaları tüketim için kullanılmak üzere verilen faizli

borçlardan, bileşik faizli borçlardan, fakir ihtiyaç sahiplerine verilen faizli borçlardan veya borç vadesinde ödenmediğinde alınan fazlalığı riba olarak kabul etmişlerdir.

Müslüman toplumlarda faizli işlemlerin yasaklanmış olması sebebiyle sermayeden, yatırım yoluyla faydalanmak için alternatif araçlar geliştirildi. Belli başlı alternatifler kar-zarar ortaklığı ve kiralama usullerini kullandılar. Öte yandan, faiz yasağından kaçınmak için fakihlerin bazılarınca meşru kabul edilmeyen bazı hileli yollar da sıklıkla kullanıldı. Bu hileli yolların, faizin yasak olduğu dönemlerde Hristiyan ve Yahudi toplumlarda kullanılan yöntemlerle olan benzerlikleri çok dikkat çekiciydi.

Zaman tercihi kavramına Müslüman ekonomistlerin yaklaşımları incelendiğinde ekonomistlerin zaman tercihini değerlendirmenin yanında *zaman* kavramının ekonomik hayat içindeki rolü (Saadallah, 1994) ve *paranın zaman değeri* (Ahmad & Hassan 2006, Batcha 2009, Siddique & Rahim 2015) konularında çalışmalar yaptıkları görülmektedir. Bazı çalışmalarda *ıskonto oranı*, *faiz oranı*, *getiri oranı* ve *zaman tercihi* kavramlarının birbirleri ile ilişkileri ayrıca değerlendirilmiştir (Zarqa 1983, Khan 1991, Siddiqui 2006).

Paranın zaman değeri olduğunu reddeden Müslüman ekonomistler bulunmakla beraber bunu kabul edenler de vardır. Ancak paranın zaman değerini kabul edenlerin çoğunluğu bu geçerliliği sadece alım satım işlemleriyle sınırlamaktadırlar. Bunlara göre zamanın borç vermede hiçbir değeri bulunmamaktadır. Öte yandan, söz konusu şartın varlığına katılmayan başka bilim insanları da herhangi bir şarta bağlı olmaksızın paranın zaman değerine sahip olduğunu ileri sürmektedirler.

Müslüman ekonomistlerin zaman tercihi kavramına yaklaşımları oldukça çeşitlilik göstermektedir. İslam ekonomisi alanında birçok bilim insanı zaman tercihi ve ilgili konuları çalıştıkları halde, zaman tercihi kavramı üzerine geleneksel İslam ekonomisi bakış açısıyla yapılmış kapsamlı bir incelemeye olan ihtiyaç hala giderilebilmiş değildir.

Bir başka dikkat çekici konu, Müslüman ekonomistlerin çalışmalarında Böhm-Bawerk tarafından ileri sürülen zaman tercihi sebeplerinin ya yanlış anlaşılmış ya da

önemsenmemiş olduğudur. Müslüman ekonomistlerin zaman tercihi kavramını ele aldıkları çalışmaların yarısından fazlasında Böhm-Bawerk'e atıf yapılmamış veya kendisinden bahsedilmemiştir.

Birçok bilim insanı zaman tercihinin geçerliliğini kabul etmekte, ancak çoğu insanların genelinin pozitif zaman tercihine sahip olduğu fikrine katılmamaktadır. Öte yandan, tam tersine, pozitif zaman tercihinin yaygın insan tutumunun bir sonucu olduğunu savunan Müslüman bilim insanları da bulunmaktadır.

Böhm-Bawerk'in teorisi çoğunlukla ileri sürdüğü ilk iki sebebin geçerliliği yönünden eleştirilmektedir. Özellikle geleceğin küçümsenmesi ile ilgili ikinci sebep çürütülmeye çalışılmıştır. En fazla karşı çıkılan nokta, bugünkü malın gelecekteki mala tercih edilmesini esas alan ilk iki sebebin insanların geneli için geçerli olduğuna ilişkin varsayımdır.

Aslında Böhm-Bawerk'in teorisi her bir ferdin her zaman mevcut malları tercih etmesi için bir sebebi olacağını iddia etmemektedir. Herhangi birinin gelecekteki malları bugünküne tercih edeceği veya her ikisini aynı değerde göreceği durumlar söz konusu olabilir. Bununla birlikte, sıfır veya negatif zaman tercihine sahip bireylerin varlığı, pozitif zaman tercihine sahip başkalarının tutumunu değiştirmez. Her birey şimdi tüketmekle, elindekinde bir artış sağlamak üzere tasarruf etmek arasındaki tercihe ilişkin kararını kendisi verir.

Böhm-Bawerk'in zaman tercihi için ileri sürdüğü üçüncü sebep, yani mevcut malların teknik üstünlüğü, diğer iki sebebe göre daha çok kabul görmektedir. Her ne kadar bu üçüncü sebep faizin verimlilik teorisinin basit bir formu değilse de, öyle zannedilmesi daha fazla benimsenmesine katkı sağlıyor olabilir. Daha erken sahip olunan sermayenin üretimde pozitif role sahip olduğu görüşü yaygın olarak kabul gördüğünden, daha fazla üretim için mevcut malların gelecektekilere tercih edilmesini diğer iki sebebe göre gerekçelendirmek daha kolay olmalıdır. Ayrıca İslam ekonomisinde, geçerli, makul ve özendirilen bir araç olarak kar-zarar ortaklığının

varlığı, sermayenin kullanımından elde edilecek bir getiri beklentisiyle tasarruf yapmayı meşrulaştırmaktadır.

Müslüman ekonomistlerin, beklenen ayrıntıda olmamakla beraber, zaman tercihinin ileri sürülen sebeplerine ilişkin değerlendirmeleri bulunuyorsa da faiz kontrolüyle ilgili çalışmaları neredeyse yok denecek düzeydedir.

Fiyat kontrolü kavramı bir noktaya kadar gerek eski fakihler ve gerekse günümüz Müslüman ekonomistlerince ele alınmıştır (Kamali 1994, Bashar 1997, Ghazanfar & Islahi 2003). Fiyat kontrolünün sadece meşruluğu, hangi şartlarda işe yarar veya gerekli hale geldiği değil, sonuçları da çalışılmıştır. Bununla birlikte, fiyat kontrolü üzerine yapılan çalışmalar faiz kontrolünün sonuçlarını da kapsayacak şekilde yeterince genişletilmemiştir.

Birçok Müslüman ekonomist faizi kaldırmanın sonuçları üzerine çalışmış olmakla beraber, çalışmaların tamamına yakını faizi kaldırmanın olabilirliği ve faydalı etkileri hakkındaydı. Faiz kontrolünün piyasa üzerideki olumsuz etkileriyle sadece birkaç Müslüman bilim insanı ilgilenmiştir. Sınırlamaların arzu edilmeyen bozucu etkilerini sıralayan Rahman'ın (1964) dışındakiler, faiz kaldırıldığında, sermayenin tükenmesi (Naqvi & Qadir, 1986), toplam zenginliğin azalması, gelir dağılımının kötüleşmesi ve küçük yatırımcıların piyasadan dışlanması (Naqvi, 2013) gibi olumsuz etkilerin ortaya çıkmasını engelleyecek gerekli şartları tanımlamaya çalışmışlardır. Konuya bir başka açıdan yaklaşan Zarqa, sermayenin paylaşımı (Zarqa, 1982) ve ıskonto (Zarqa, 1983) işlemlerinde kullanılan faizin kaldırılmasının sorun olacağının iddia edildiğini hatırlatmış ve bu soruna çözüm olarak her iki işlemde de faiz yerine reel yatırımlardaki getiri oranının kullanılmasını önermiştir.