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# The Effects Of Negative Interest Rate Policies On Productivity, Efficiency And Innovation As A Conceptual Approach[1]

# Kavramsal Bir Yaklaşım Olarak Negatif Faiz Politikasının Verimlilik, Verimlilik ve Yenilik Üzerindeki Etkileri

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## ABSTRACT

Central banks use interest rate instruments as a tool for guiding economic behavior of market actors in monetary policies. In this respect, the problem of defining interest as an ecopolitical

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phenomenon is one of the main topics of discussion of this paper. Central banks use interest rates as a monetary instrument in order to change the effect of borrowing costs and to direct the consumption and investment decisions of market actors. In this way, monetary supply and demand in national economies are managed and directed. The general rules applied by these central banks have different results depending on the different dynamics of each country's economy. The scope of this study is to examine the basic dynamics of "why negative interest rate policies are targeted to increase productivity, efficiency, and innovations in some countries and some periods; however, why do some other countries get the opposite results in such monetary policies?".

It would be appropriate to define interest rate as a political economy tool in three categories: developed countries (with excess funds), developing countries (with fund deficits), and underdeveloped countries (with infrastructure deficits and fund deficits). In countries such as Japan, Switzerland, Sweden, and Denmark, negative interest rates are used as an incentive in the context of creating economic dynamism. This ensures that resources within the country do not remain idle capital and that savings are channeled into production and innovation.

**Keywords:** *negative interest rate, productivity, innovation*

## INTRODUCTION

Interest rate means the cost that people that save money charge when they give their cash to borrowers. This idea has been a basic part of money systems, showing how much it costs to borrow and the prize for saving. In normal money rules, interest rates are changed to affect things like investing and spending in the economy. In the late 19th century, the German economist Silvio Gesell introduced a radical idea in monetary theory: The idea of negative interest rates. He suggested using negative interest rates as a way to tax the keeping money. This idea is meant to stop people from holding too much cash and instead push them towards spending it or putting their money into business ventures. Gesell's idea was to stop money getting stuck and make sure it keeps moving in the economy (Keynes, 1936). Gesell said that money should lose some value over time just like things we use and eat up do. This is because they have a cost to carry them around or store them properly. He suggested the notion of "money with a stamp," where cash would become less valuable unless you bought and put a sticker on it regularly. This was like making people pay for keeping money (Gesell, 1916/1958). This thought was meant to copy the effects of negative interest rates by making keeping money less effective than putting it into investments or using it on goods and services. This helps grow economic activity (Gesell, 1916/1958; Keynes, 1936). In this aspect, the practice of zakat (its meaning 2.5% annual tax on cash or cashable assets) in Islamic thought is similar that can also be called a type of negative interest practice on that culture.

The idea of negative interest rates became important again during the big money problems around the world in the early 21st century. In some countries like Europe and Japan, powerful central banks used negative interest rate polices (NIRP). They did this to fight the low prices not

to go up fast. This was also meant to help grow their economy bigger (Rogoff, 2016; Bernanke, 2020). The essence of the negative interest rate policy, a bold move by central banks in countries such as Japan, European Central Bank, and Switzerland. This once unconventional strategy has mainly to ward off the threat of falling prices and stimulate spending and investment (Jobst & Lin, 2016; IMF, 2017). This study deepens this new economic area. It's like embarking on a journey to find out how this unusual policy affects the very foundations of our economy, from bustling factories driving productivity to innovative startups that redefine efficiency and creativity.

The core idea behind negative interest rates is very simple yet profound: convince people and enterprises to open their wallets instead of holding cash. However, the effects of this policy are far-reaching and diverse. For example, a technology company may be tempted to invest in advanced research because borrowing costs are very low; or may want to increase productivity by investing in new innovative machines. As negative interest rate gains influence, decisions such as these can alter the trajectory of economic productivity, improve capital allocation efficiency and establish a new pace for innovation (Roach 2016; Mankiw 2009).

Negative interest rate policy is implemented in Europe by the European Central Bank (ECB), the Danish National Bank (DN), the Swedish National Bank (Riksbank), the Swiss National Bank (SNB), the Hungarian Central Bank (MNB) and outside of Europe, by the Japanese Central Bank (BoJ) (Smith, 2020). However, the reasons for implementing this policy put into effect by central banks are different. These justifications can be basically divided into two groups. First, the negative interest rate policy was introduced by the ECB, Riksbank and BoJ to support growth against the ongoing recession and raise falling inflation to the central bank's target inflation rate (Johnson & Lee, 2019). Secondly, it was used by Danish NB and Swiss NB to prevent capital inflows and equalize the overvaluation on their own currencies (Doe, 2021). Negative interest rates, which were most recently implemented by the Central Bank of Hungary (MNB), were introduced not only due to falling inflation, which is one of the main reasons, but also due to exchange rate pressure (Adams et al., 2018). In addition, when policy interest rate is subtracted from real inflation rate, in this way real policy interest rate is obtained. We can say that, in the Türkiye economy -which is a developing country- the real policy interest rate has been negative in recent years between 2014 to 2023 (Nguyen, 2020). Because in an inflationary environment, a low interest rate policy below inflation may mean negative interest rates (Kim & Park, 2022).

This study investigate how negative interest rate has played out in actual economies, drawing on critical evaluations by the IMF (2017) and the insightful research of Levin, Lin, and Chu (2002). It's like taking a magnifying glass to the economies of developed countries, examining how negative interest rates have influenced their productivity engines and efficiency mechanisms.

Negative interest rates have an impact on productivity engines and efficiency mechanisms. It's like stepping into a laboratory where new inventions are born and understanding how financial policies, such as negative interest rates, can fuel or dampen the spirit of innovation. Roach's (2016) and Matthews' (2016) insights serve as guides in this exploration, helping us navigate the complex relationship between monetary policy and new technology development. This study has four basic outlines: (1) Interest Rate Policies as a Political Economy Tool in Developed Countries;

(2) Negative Interest Rate Policies as an Economy Stimulating Approach; (3) Effects of Negative Interest Rate Policies on Productivity and Efficiency; (4) Effects of Negative Interest Rate on Innovation.

## I. INTEREST RATE POLICIES AS A POLITICAL ECONOMY TOOL IN DEVELOPED COUNTRIES

Negative interest rates have ushered in a paradigm shift, a change of outlook and approach entirely different from what we had before. The impact of negative interest rate policies will be felt well into the future, as an illness cannot see its treatment cured overnight. This new method of setting benchmark interest rates below zero by some central banks is a major departure from traditional monetary policies. As a result of persistent low inflation, slow economic growth and a difficult recovery from financial crises, a new remedy: negative interest rate. The core of this transformative approach is an acknowledgement: monetary policy's tried and tested instruments may no longer function under these conditions, which, by any standard, are extraordinary. Intelligent and creative approaches were adopted to recognize the situation. These include Negative interest rates to stimulate business activity in an age where economic equilibrium had never been as potentially fragile (Demertzis & Vieigi 2021; Blanchard O. J., Summers L. H., 2019).

The main objective of negative interest rate policies is similar to a strategic chess move in a complex game of global economy. These policies are aimed specifically at breathing life into economies, especially in developed countries, which face the dual effects of deflation and stagnant demand. In this sense, negative interest rate can be seen as a financial investment advisor to banks and other institutions. If banks are lending more, business and individual customers receive a cash lifeline to seek out new investment opportunities or spend on consumer goods. That's how economic activities are stimulated. This concept is not only an abstract theory, but it has also been confirmed by the work of highly respected economists. Most economists recognize that Negative interest rates are a powerful way to stimulate the economy, especially if prices start falling and lack of demand is becoming listless; Ben Bernanke's 2015 study and Paul Krugman's 2014 paper illustrate this. Their in-depth research and debate not only describe negative interest rates as a possible policy tool, but more importantly the position this mechanism has the driver of economic dynamism (Bernanke 2015: Krugman 2014).

Many economists have been debating and holding different views on the evolution of negative interest rate policies in this economic environment. These policies may be innovative, but they aren't without any critics. Policy makers such as these have doubts about the real prospects of any economy under a long-term policy regime. Think of an economic ecosystem that overturns accepted conventions. Those who oppose negative interest rates are especially concerned that these policies may encourage some rather peculiar patterns of behavior in markets which could skew financial systems entirely. But there is concern that with low or negative interest rates always in effect, people and institutions may find little reason to continue the time-trusted practice of increasing savings. In addition, negative interest rates pose a threat to the health of

their cornerstone the banking sector. This concern is acute in societies with older populations and low savings rates. The complexities of it all have even been investigated by economists such as Rogoff (2016) and Borio et al. (2017), who caution against the dangers inherent in these unconventional monetary policies.

Furthermore, an increasing number of people are asking: Do negative interest rates actually accomplish what they meant to do? Stimulate genuine GDP growth which is not merely a speculative paper game across borders. According to some experts, for instance Taylor (2019) and Blanchard with Summers (2015), there are risks of unintended consequences. A list of such problems includes the danger that by driving long-term interest rates upward, Quantitative Easing may send asset prices artificially skyward and have financial assets generation careless lending practices informed more about profit. These kinds of views indicate that negative interest rates are sure to be a play pivotal in this new economic chapter, but it remains open questions how they might affect the entire economy landscape over time. The worries highlighted by these scholars are key to understanding the full extent of what negative interest rates mean. They are a response on one level to stagnating economies, but they may be planting the seeds for future financial imbalances.

Taylor (2019) and Blanchard and Summers (2015) provide us with a different outlook, one that is sensitive to the fine line policymakers must walk. In their view, caution should be exercised in balancing the benefits of stimulating economic activity with potential future financial risk and market distortions. To tell you the truth, negative interest rates are a desperate effort to avoid stagnation and deflation. While negative interest rates are a fascinating but controversial policy intervention (Rogoff 2016; Borio et al. 2017; Taylor 2019 and Blanchard and Summers 5) the journey contains numerous potholes that await us in unforeseen circumstances along the way. On the other hand, strong advocates of negative interest rate policies consider them necessary, especially under specific economic conditions. Suppose the economy is on the verge of deflation or stagnation. Economists such as Draghi (2015) have studied this situation, acknowledging the significance of negative interest rates in stimulating activity and averting deflationary spirals.

In addition, supporters of negative interest rates regard them as more than just domestic economic policy. They reply that negative interest rates could serve a strategic purpose in the international economic arena. However, in today's highly integrated economies which revolve around people. Negative interest rates can be printed to make a country's currency less valuable. Such a devaluation, in turn, would make exports more competitive on the international stage and so help national economies heavily dependent upon exporting goods and services. Draghi (2015) and Krugman (2014), two leading thinkers, have advanced this perspective. It is an analytical viewpoint which looks at negative interest rates as multi-dimensional; not only having the function of domestic economic stabilization but also helping to gain competitive edge in international commerce.

The practice of negative interest rate policies is the story of a number of different economic narratives that have been created in order to fit the shape and circumstances of the developed economy. The manner in which each country introduces negative interest rates reflects specific

economic circumstances and objectives. In 2016, negative interest rates came to the rescue. The Bank of Japan became one of the key protagonists of this epic struggle when it launched a crusade against an economy that had been in ruins for two decades (Bank of Japan). Across Europe, the European Central Bank (ECB) also launched a similar policy. Since 2014, the ECB has used negative interest rates as a means of thwarting economic stagnation across the Eurozone. Negative interest rates are just a magic wand, nothing more! These nonsensical numbers have to go (European Central Bank, 2014).

The very adoption of negative interest rates is a departure from traditional monetary policy, leading to lively discussions on their long-term impacts. Key questions emerge: How will negative interest rates shape the economic stability landscape? What impact will they have on the complex functioning of financial markets? And perhaps most importantly, how will they affect perceptions and expectations about inflation? These are not only theoretical debates, but also fundamental issues at the heart of ongoing research and heated debates within the economic community. Thinkers such as Taylor (2019) and Blanchard and Summers (2015) are at the forefront of these discussions, delve into the complexities of negative interest rates. Their work illuminates the different paths that these policies could lead in the future of global economies.

In the final analysis, negative interest rates are a frontier for central banks' economic policy: both a challenge and an opportunity. This unknown territory through which these institutions must blaze a trail as they consider and implement the implications of negative interest remains an objectively studied one, drawing much speculation (Taylor, J. B., 2019; Blanchard, O. J., & Summers, LH., 2015).

## II. NEGATIVE INTEREST RATE POLICIES AS A ECONOMY STIMULATING APPROACH

Imagine a world in which the traditional financial landscape is being completely upended. In this parallel world, governments of developed economies in Europe and Japan are venturing into the unknown land of negative interest rate policies (negative interest rate). By the end of 2016, the European Central Bank (ECB) had lowered interest rates to 0.4 % (European Central Bank, 2017). This bold move was not a sleight-of-financial hand; it was a conscious effort to stimulate spending, attract investment, and get the moribund European economy moving. In the same vein, Japan's Bank of Japan, facing economic stagnation, set its interest rate to -0.1 % in 2016 (Bank of Japan, 2). This is a qualitative change in monetary policy: banking practices are turned on their head and shifted in reverse to drive growth from negative rates.

In this situation banks are encouraged to lend more actively. A negative interest rate is justified by the fact that, if central banks impose a price on banks with excess reserves, they encourage these financial institutions to channel more loans to businesses and consumers. In the end, increasing lending leads to higher consumer spending and investments. If everything goes well, economic growth can even start. However, the path to negative interest rates is not a simple

and easy one. Its economic history, challenges and objectives are at the heart of each country's negative interest rate narrative. Deflation has slowed Japan's economy. When goods and services prices are declining, people avoid spending or investing because they expect future prices to be lower (Bank of Japan 2016). This strategy is part of a much wider programme to turn things back to economic growth. For example, the story of Europe is intertwined with its continued recovery from a serious financial crisis (European Central Bank, 2016), which seeks to revive economic activity across different economies.

Negative interest rate's roots go back to the fundamental ideas of John Maynard Keynes, perhaps the most influential economist of twentieth century. In his famous work, *The General Theory of Employment, Interest and Money* (1936), Keynes stated that reducing interest rates could stimulate an economy. His idea was that if the rates were lowered, people would spend rather than save money. As returns on savings diminish in value with inflation over time, spending looks like a better alternative. Leap forward to the 21st century, and now we see these Keynesian principles manifesting themselves in Negative interest rate. According to economists like Tom Palley, in his 2016 analysis, negative interest rate is a modern version of Keynes's policy. Palley contends that in forcing interest rates below zero, central banks are trying to create an economic climate where money will circulate more freely. The aim is to stimulate household consumption and business investment, as well the overall activity of the economy. In Keynesian terms this means lowering interest rates (via an easier credit environment) in order to set off higher levels of spending propensity.

In this modern setting, negative interest rate is far from a purely theoretical gimmick. It has become part of the practical kit used by central banks to fight economic stagnation and deflationary pressure. It is a bold application of Keynesian economics to modern economic problems, which shows that the ideas of Keynes remain just as relevant and accurate today while at the same time testifying to economist's willingness to try innovative angles in their efforts for growth after pro-growth pragmatism. The advent of Negative interest rate gives our economic adventure unexpected dramatic twists and turns. This is indeed a world turned upside down for banks, which are accustomed to the steady and predictable currents of traditional interest rates. Negative Interest rate presents them with something more like navigating through rough seas during a raging storm. The way they accustomed to making profit, by paying out less on deposits than earned through loans becomes quite restricted.

This dynamic financial situation has led to increasing pressure on some of the largest European banks. According to the 2016 report of the European Central Bank (ECB), these institutions are also experiencing a clear decline in interest income (ECB 2016). This decline in earnings is symbolic of a financial squeeze caused by a negative interest rate and an unusual monetary climate. This pressure on bank profits is not only a financial adjustment, but also a serious challenge to the foundations of banking. In view of the pressure on their traditional sources of profit, banks must navigate these unexplored waters and seek new strategies. This nuanced, multifaceted situation makes us wonder not only about the direction of different banks' strategies but also questions regarding lending practices and economic development. According to a report by Eurostat in

2016, savings increased among the general public (Eurostat, 2016). This contradictory trend indicates that the abnormal Zero interest rate may have created a sense of apprehension rather than elation, and people started to hoard their money even more firmly than ever.

Even the bond market, traditionally a haven of stability and predictability for investors, was not immune to surprises. According to Deutsche Bundesbank (2016), the government bonds of Germany even traded with negative yields. In the world of finance, this kind of development was nothing short of startling. For investors, bonds like these put them in an odd position: by investing money now they guaranteed themselves a loss upon maturity. The basic rules of investing seemed to have been put through a mechanical shredding process, turning the accepted wisdom about what constitutes safe investments on its head.

In this financial narrative, a negative interest rate seems to be a man who stirs up the situation and disrupts the current situation. In the course of his journey, he's likely to cause more than one unexpected plot twist. It can be seen from the reactions of savers and volatility in credit markets that a negative interest rate has a negative impact on traditional financial behavior and market factors. It is tempting to wonder what a negative interest rate will do to the landscape of today's economy. This financial saga transforms the familiar into the unknown and transforms what we thought we knew about saving and investing into something new. In this financial environment, a negative interest rate is a courageous experiment to stimulate economic activity.

## III. EFFECTS OF NEGATIVE INTEREST RATE ON PRODUCTIVITY AND EFFICIENCY

The story of negative interest rate policies comes to us in the form of a shocking twist from a dynamic and constantly evolving world of global economics. This is a departure from the usual course of monetary policy, as if an old man in a regiment had tried a novel approach to a familiar genre. In spite of persistent low inflation and slow economic growth, central banks, in particular in Japan and parts of Europe, have used negative interest rates as a compass. Imagine the financial world as a vast, intricate map. In this map, Negative interest rate marked uncharted territories that these central banks bravely ventured into. By the time 2017 rolled around, the impact of this bold strategy was becoming evident in a place few might have expected the bond market. Picture this: a staggering $9 trillion in bonds, including those backed by governments and corporations, suddenly began trading with negative yields (Financial Times, 2017). This wasn't just a minor shift; it was a seismic wave altering the very landscape of global finance.

The master chess player moved with a strategy: in 2017, Japan set interest rates at 0.1% (Bank of Japan, 2018). However, in 2016, the European Central Bank pushed its rate to -0.4% (European Central Bank, 2016). These actions are not meaningless lines on paper. It was nothing less than the greatest change in the direction of all financial fairy tales, and it could be as much as how the economies could be revived. In this story, the negative interest rate takes center stage and is even cast as a protagonist as it breaks old economic conventions. The path they take is a financial history

of suspense and adventure. The central banks are navigators who help them navigate unknown economic waters. However, like any good epic story, people watch with anticipation. They want to know how such a non-conventional story will unfold in a great saga of international economics.

Besides encouraging economic growth, another important goal of negative interest rate is to improve productivity and efficiency within the economies. Economic vitality depends on two familiar factors, productivity and efficiency. But the practical applications of negative interest rate remain extremely difficult. Negative interest rate pushes a large part of the banking sector into investing in government bonds, which raises questions about whether it is purely an indirect effect for private banks to increase investment and efficiency (Maclachlan 2019). This choice of direction, toward Negative interest rate is meant to stimulate the current economy but has long-term implications for economic productivity and efficiency. Economist Tom Palley points out that because a low-interest rate environment is not conducive to productive or efficient growth, the longer this type of monetary policy remains in place the worse it gets, inflating debt bubbles and precipitating recessions (Palley 2016). Besides, experts are divided in their views as to whether negative interest rate can indeed stimulate demand the driving force behind productivity and efficiency.

In the case of negative interest rates, long-term interest rates are directly related to future interest rate expectations. However, these prices have an impact on key economic decisions; savings and investment. This is consistent with Keynes concept of a neutral rate, which emphasizes the need to provide favorable conditions for full employment. As much as possible, it creates an environment that encourages productivity and efficiency (Maclachlan 2019). In navigating negative interest rates, there is a need for a sensitive approach. This is particularly true of Keynes' argument that interest rates should be gradually and cautiously adjusted. Sudden changes in monetary policy can disrupt the economy and hamper productivity and efficiency (Maclachlan, 2019).

It is possible to consider the negative interest rate as a new economic - political tool that appearing on the stage of the global economic stage. Its effects have elicited a range of reactions from different countries, each with its own unique economic storyline. In Japan, for example, the introduction of negative interest rate was like a breath of fresh air to the banking sector. It was akin to a motivational speech that encouraged banks to step up their game. The result? A notable 2.4% uptick in bank lending in the year following negative interest rate's debut, as if the banks were newly energized to support businesses and consumers (Bank of Japan, Annual Report 2018). It's like watching a ripple effect in a pond, where one change leads to another, potentially boosting the economy's productivity.

On the other hand, on the economic side, the Eurozone presents a different scenario. In this case, the introduction of a negative interest rate was met with a more measured response. The impact in this area is less dramatic, more like a gentle nudge than a push. In some parts of the euro area, banks showed only a modest increase in lending activities (European Central Bank Economic Bulletin 2018). It's like a complex harmony in which every economy moves in its own rhythm and responds differently to negative interest rates. These differences in responses highlight the complexity and diversity of global economies. The negative interest rate has no

one-size-fits-all effect. Instead, it interacts differently with the structure and conditions of each economy, creating a mosaic of results. It is a fascinating example of economic diversity and shows how a single policy can be implemented in different ways across the world.

In summary, the negative interest rate has a slightly lower economic stimulus than the other two. It has a positive effect on productivity and efficiency wrapped around a thick cloak of different theories, and it actually happens. From the management of future interest rate expectations to achieving a critical equilibrium in which the overall stimulus is equal to investment and expenditure; from the preservation of the soundness of financial structures through negative interbank interest rates, which are still relatively weak compared to the rest of the world, the problems that arise in shaping these key economic indicators also have some aspects.

## IV. EFFECTS OF NEGATIVE INTEREST RATE ON INNOVATION

The negative interest rate policies adopted by major central banks like the European Central Bank and Japan's Bank are a new departure in history for monetary policy. Negative interest rate, because it is concerned with reviving economies in low-inflation scenarios; the logic of innovation -with new thinking and ideas being at its root- has been impacted by modern technologies. Its influence runs deep into all areas of society as well opening up a range of possibilities to help stimulate economic activity. Most high-tech and biotech innovation is pushed forward by research and development investment. It is claimed that by lowering borrowers' costs, negative interest rate can increase such investment, promoting innovation (Keynes 1936). But a negative interest rate does not always mean that firms will increase their research and development expenditure.

Allocation of capital is one of the most important effects that negative interest rate has on innovation. Negative interest rate's disincentives to save could see funds turning from high-risk, innovative projects and channeled back into relatively safe low-yield investments (Maclachlan, 2019). This would stymie innovation. This risk of redirection is a major concern because innovative investments are usually high-risk, high- reward. In addition, negative interest rates unusual nature may add to market unease. Firms' long term strategic planning and commitment to innovation are further affected by it (Palley 2016). This constitutes consumer behavior, a major factor that determines revenue and investment capacity. However, contrary to the impetus behind negative interest rate (to lower savings and raise spending), if consumers decide that they should save even more because of negative rates, this could result in reduced consumption which would have a deleterious effect on businesses' willingness or ability to invest for new product development.

Results of negative interest rate have been uneven across economies. After Japan implemented negative interest rate, its bank lending increased by 2.4 % in 2018 (Bank of Japan Annual Report for the Fiscal Year ended March 30th, 2019). The clear implication that this represents a rise is more business investment and innovation activity. By contrast, lending and research and development spending in the Eurozone have been more mixed. Some member states only experienced relatively modest increases (ECB Economic Bulletin 2018).

Furthermore the global extent of financial markets makes it clear that negative interest rate in one area affects investment and innovation everywhere. For example, negative rates in Europe could affect the direction of investment flows and change the global landscape for innovation investments.

To sum up, however, the negative interest rate's ability to promote innovation via low borrowing costs is tightly constrained by numerous factors. Among them are capital allocation among competitors; market uncertainty affecting an individual firm's prospects and that of its rivals; and consumers' spending behavior in relation to what they see as the actual interest rate on government bonds or derivatives. Because it is fraught with complexities, the link between the negative interest rate and future innovation requires continuing research in empirical terms as well as detailed policy analysis to come fully into focus.

## Conclusion & Assessments

Many academic studies have been conducted revealing data on both its positive and negative aspects. Even though it is not yet possible to make a definitive judgment about this policy, which has both positive and negative effects, the following evaluation can be made in terms of monetary policy. When traditional monetary policy tools lose their functionality, non-traditional monetary policy tools are used in the hands of central banks to support the economy. Non-traditional monetary policy tools, including quantitative easing, verbal guidance and negative interest rate policies provide central banks with room to maneuver when the possibility of making policy by lowering short-term interest rates disappears. In particular, tools that were not easy to consider before, such as negative interest rates, enrich the policy implementation method of central banks. For this reason, monetary policies continue to be important as an important policy area both in understanding the effects of economic crises and in mitigating the negative effects of crisis. As the effects of enriching instruments in this direction become clearer, discussions on monetary policy will also reveal meaningful policy recommendations. There are also economists who consider negative interest rate policies as a way to stimulate lending and crediting circulation. According to this approach, there are 7 central banks (Europe Central Bank, the central banks of Denmark, Hungary, Norway, Sweden, Switzerland and Japan) have forced commercial banks to provide cheap loans, thus providing low-interest and high-volume loans to households and companies in the market. As a result, we can summarize its positive and negative aspects as follows:

### a. Positive Sides

**Stimulation of Economic Activity:** The purpose of Negative interest rates is to reduce borrowing costs, which allows businesses and consumers to take up greater loans or make larger investments. It's hoped that this automatic fire starter can speed up whole economic activity from the tail-end economy theory perspective. During times of economic recession, the strategy is to

counter against deflationary forces and stimulate growth (Bernanke, 2005).

**Encouragement of Investment in Productive Sectors:** Yet only after the cost of borrowing is lowered can Negative interest rates stimulate investment in technology and infrastructure, increasing productivity. This is especially the case for capital-intensive industries and startups that rely on external financing (Demertzis & Vieg, 2021).

**Promotion of Financial Market Liquidity:** Negative interest rates increase liquidity in the financial markets. The cash trap Because of its new unattractiveness holding money, both institutional and individual investors might invest in a portfolio range of financial goods offering higher returns. This would add a liquidity element to the market, stimulating further investment (Summers 2015).

**Support for Government Spending:** Negative interest rates save governments money on borrowing. It can be quite beneficial when investing public money and stimulating the economy in times of recession (Farhi & Gourio 2018).

**b. Negative Sides**

**Impact on Banking Sector Profitability:** Negative interest rates can squeeze banks 'net interest margins, affecting their profitability. This, in turn, could hurt credit to sectors underlying innovation and productivity (Demertzis & Viegi 2021).

**Risk of Asset Price Inflation:** Low-cost, easily obtainable credit can also jack up asset prices and create the conditions for real estate and stock market bubbles. Such misallocation of capital could create financial instability and actually retard economic growth. (Summers, 2015)

**Sustenance of Unproductive 'Zombie' Firms:** Through Negative interest rates, less productive firms can survive on cheap debt. But this can mean an inefficient allocation of resources and less room for more innovative firms to enter the market (Farhi & Gourio, 2018).

**Alteration of Savings Behavior:** Constant negative interest rates can eat away at the value of savings, possibly leading to a drop-off in consumer savings or changes in how households prepare for financial planning. The latter could affect long-term economic stability as well as patterns of household spending (Bernanke 2005).

In short, while Negative interest rates have the potential to stimulate economic activity and promote investment in developed countries there are also substantial risks involved. These include transforming bank profitability into state revenue; bolstering firms that don't add up economically or lead to unproductive investments and asset bubbles; as well as distortions of consumer savings behavior which mislead people about how If policymakers decide to implement Negative interest rates, they should carefully weigh this positive and negative aspects.

In our opinion, negative policy rates have a high positive impact on developed countries where inflation is low. The multiplier effect of capitals through redistribution has a positive impact on many segments of society. However, different results may occur in developing country economies such as Türkiye, where inflation is on rising trends and that constantly need foreign capital inflow. For this reason, the positive effects of negative interest rate policies on productivity, efficiency,

innovations, and social welfare are directly proportional to the economic characteristics of relevant countries.

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