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The Study of Tax Policies Applied by A Government during An Economic Crisis Period

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Abstract

When evaluating the economic measures or policies applied by governments since the past, the main goals are explored. These primary objectives include guaranteeing economic growth and development, maintaining price stability, reaching the highest level of employment, guaranteeing income distribution fairness, and, most significantly, promoting regional peace and security through the achievement of these objectives. Nevertheless, the policies that are adopted may not provide the anticipated effects sometimes. Economic collapse hinders the correct performance of policies and destabilizes economic equilibrium, both because of fundamental issues in states and external forces such as industrialization, capital mobility, etc.

The purpose of this study is to examine to what extent tax policies are incorporated and the usefulness of tax policies that are implemented through recessions. The applied areas of tax policies in the evolving economic system with the influence of globalization have been evaluated by comparing the crisis processes experienced in various places and periods in this study, which deals with the economic crises that appeared after 1990 in the world and Turkey. Examples of crises are examined, particularly under the influence of global and liberal economies, variations between developing and developed countries, their impacts, and implemented tax policies.

Tax policies, which have been proven to be successful in many aspects of socioeconomic development, are crucial instruments in resolving current or potential economic disparities. Taxes may have a big impact on a country's capital, reserves, and supply-demand equilibrium. During economic crisis periods, it is unavoidable for governments to turn to tax measures to mitigate the impact of the crisis and revive markets.

TABLE OF CONTENTS

List of Tables

List of Figures

I. ECONOMIC CRISIS AND ITS SCOPE

1.1 Definition of Crisis

An economic crisis is defined as a sudden occurrence with negative consequences for the economy. The causes of a country's crisis and what should be done after it, rather than the crisis's effects, are the essential aspects of the crisis. These concerns must be thoroughly investigated to expedite the crisis process and avoid a repeat. A comprehensive review of these issues is critical to promptly resolving the crisis and preventing a repeat of the scenario.

External causes, including the economic systems and internal difficulties of countries, can cause economic crises. The rate of contact between countries' economic challenges has been increasing in recent years, owing to the effects of globalization. This condition intensifies the crisis's spread and makes countries vulnerable to future problems.

Crises have varying impact areas depending on the sector or market in which they occur, and they can happen in various ways. As a result, countries' policies in response to economic crises differ, and choosing the most appropriate approach is critical in terms of crisis management. Many crisis models have been proposed to reduce the adverse implications of crises in-country crisis management and better evaluate crises. Essential studies on economic policies have been conducted in this area. P. Krugman created the foundations for the first-generation crisis models, and M. Obstfeld produced the second-generation crisis models, claiming that the first-generation model is insufficient, and these are just a few of them. Aside from the models, the policies that were envisioned to be enacted in times of crises were primarily centered on Orthodox and Heterodox policies.

The notion of economic crisis will be studied from many angles and analyzed within its causes and effects in this section of the research. In this framework, an evaluation will be performed on the different sorts of crises, the crisis models suggested, and what policy instruments these models might have. The policies' effects on the country's economy and their relevance in economic crisis times will be considered while evaluating them.

1.2 The Concept of Economic Crisis

The origin of the concept of crisis is based on the Greek word "krisis". Another meaning of crisis, which has implications such as critical, difference, and contradiction as a word, is to decide. Because crises express a new situation, and therefore a new position requires a new decision moment. The future result depends on the moment of the decisions made at present. This initial beginning process is quite painful, and these pains result in crises.

This is just one of many interpretations of the word crisis. The term "crisis" is widely used, particularly in medical science, and often refers to "a symptom of a disease that develops abruptly" or "a sickness that has progressed to a very advanced stage." In the social sciences, the terms "developing in the direction of a sudden deterioration," "severe anguish," "depression," and "depressed mood" are frequently used interchangeably. In this definition, the word crisis is defined as "an unexpected and unforeseen point that challenges existing means, aims and plans that develop swiftly," which is closer to its French etymological origin.

According to this perspective, an economic crisis is a stop, and even a contraction, in economic life following a lengthy period of expansion and development. In short, rapid and negative changes in the cyclical structure might be seen as a warning sign of impending crises.

Following the explanations, the next is how the economic crisis is conceptualized: An economic crisis is defined as "sudden and unexpected developments in the economy that severely upset the country's economy in macro terms and the businesses in micro terms".

To put it another way, the economic crisis is described as "severe fluctuations in any goods, services, production factors, or financial markets above an acceptable level of change in prices and quantities".

The primary characteristics of crises based on the definitions can be listed as follows:

- Unpredictable
- It creates both a threat and an opportunity for individuals and organizations
- Short or long term
- Having a contagion effect

It is hard to predict crises and take preventative actions before they occur. Because many countries get caught unprepared when a crisis hits, although this circumstance poses a threat to some institutions, it also gives opportunities for individuals and groups to gain from the situation. The length of the crisis varies depending on the cyclical structure and the efficiency of the countries' measures. However, a sector-specific crisis always has an impact on the economy.

Another characteristic of crises is their duration, which can be brief or protracted. The intensity of the crisis is the decisive element. Sudden events induced by economic causes with a low level, but the substantial negative impact may not be considered an economic crisis. Even if they are, the repercussions are expected to be short-lived.

Another common trait of economic crises is that they have harmful and adverse effects for individuals, businesses, and governments, such as threats, problems, uncertainty, and insecurity. Economic crises, on the other hand, can bring both possibilities and problems. In this regard, a crisis as a term should not always be evaluated as "unfavorable". It's also possible to transform a situation into an opportunity.

Economic crises differ in terms of the causes of their occurrence as well as the industries they affect. However, crises do not have a single-sector impact. By starting from the first sector, economic crises influence other units and sectors of the economy. It also demonstrates that the crisis has a spreading influence.

After revealing the conceptual framework of economic crises, the causes and effects of economic crises can be highlighted now.

1.3 Causes of Economic Crises

Crises can be caused by disruptions in the system, structural, and process elements of a country's economy. There is a contradiction between the operation of the market and the central government in such economies, particularly in developing nations, because the economic structure is not fully formed. Internal causes of crises are common. Economic, political, and socio-cultural forces outside of a country's internal dynamics, on the other hand, can have an impact on its economies. These are the external factors that cause crises.

Excess supply or a decline in demand in the real and financial sectors are the most common causes of economic crises. The onset of both the supply and demand crises can be caused by cyclical factors outside and inside the business.

Financial crises in developing nations are triggered mainly by financial waste, incorrect exchange rate policies, foreign financial shocks, rushed and ineffective financial liberalization, and domestic banking sector vulnerabilities. Money and foreign currency market difficulties rarely spread to domestic financial markets in developed countries. Still, domestic financial problems do not always lead to foreign exchange and balance payments crises. One of the most prominent causes of crises in developing countries appears to be external influences. External variables that precipitate crises include significant economic changes in industrialized countries, globalization of investments, and increased capital markets integration.

Attention is called to current account imbalances, which have reached significant dimensions, as the beginning point of numerous economic crises. Furthermore, unsustainable financial imbalances are considered one of the primary drivers of crises.

In addition to economic variables, rapid developments in political, technological, and ecological domains can play a role in forming crises. For example, government crises, military coups, and political instability in the political arena can all lead to crises, as they harm financial markets. Besides economic changes such as globalization, regionalization, and liberalization, environmental disasters, such as earthquakes, floods, and other natural disasters and climatic disruptions, can also cause crisis conditions in the economy.

1.4 Effects of Economic Crises

Symptoms and outcomes of economic crises include an increase in unemployment, a decline in growth rate, a worsening in the balance of payments, an increase in debts, a degradation in income distribution, and a reduction in social welfare. It is primarily related to the fact that the economic crisis has shifted the economy's balance to a lower level of GDP. As a result, people's well-being declines, and all market balances shift. However, as crises are influenced by the circumstances of the period in which they occur, they take on distinct features depending on the situation of the period in which they appear. As a result, it is impossible to speak about the impacts of a crisis in a way relevant to every type of economic crisis.

It is quite difficult to foresee the implications of economic crises and to develop a standard damage estimate, in addition to counting common features for their effects. It is quite difficult to foresee the implications of economic crises and to develop a standard damage estimate, in addition to counting common features for their effects. As a result, whatever the cause, the negative consequences of the crisis on the country's economy reveal a pattern that persists for a short or long period, depending on the severity and duration of the crisis.

- The effects of the economic crises are as follows under general headings:
- Unemployment, poverty, and increasing hunger,
- A Deceleration in growth or a contraction in the economy,
- A balance of trade, the balance of payments, and foreign investment negative effect on
- Decrease in the level of foreign direct investments,
- Exchange rate fluctuations,
- Increase in budget deficits and decrease in tax revenues,
- A decline in world trade, a significant decline in exports,
- Sharp reductions in domestic prices and tourism revenues,
- Private sector portfolio investments leaving the country and the emergence of the problem of funding the economy in developing countries,
- Difficulty in obtaining credit and financing trade,
- Decreased confidence in financial instruments.

When the impacts of economic crises are analyzed, they have a considerable and negative influence on the real economy. On the one hand, these macroeconomic consequences result in a loss of production, and on the other hand, they spread fast from crisis-affected countries to other countries.

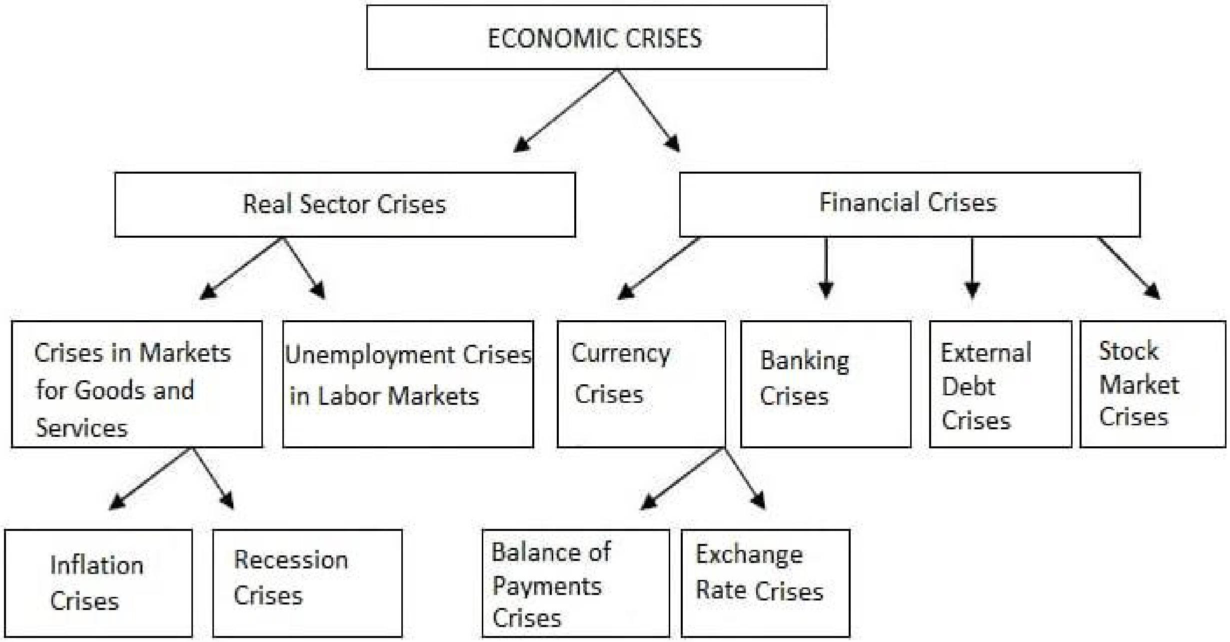
These impacts only demonstrate the general aspects of economic downturns. Undoubtedly, the effect of economic crises ranges depending on the type of crisis. At this stage, it's a good idea to go over the different sorts of economic crises one by one.

1.5 Classification of Economic Crisis

Economic crises can be classified into two types based on the industries they affect: real sector crises and financial sector crises. While actual crises are marked by major reductions in production or employment, financial crises are characterized by market crashes that have disastrous consequences for the real economy and impair the efficient functioning of markets.

Aside from this fundamental distinction, economists differ on the forms of economic crises. Economic and financial crises will be investigated in this study using the distinctions below.

Figure 1. Types of Economic Crisis



1.5.1 Real Sector Crises

Variation in the quantities of goods-services and labor markets are the most common manifestations of real sector crises. As a result, goods-serviced crises and labor-market crises are two main forms of real economic crises. Throughout these times, there are significant reductions in production and employment.

There are two main ways as inflationary and deflationary crises to deal with in the goods-services market. But, defining "inflation", which is an upward trend in the general level of prices, and "deflation", which is a downward trend in the general level of prices, as crises would be incorrect. Unexpected and negative price increases, on the other hand, might be regarded as a crisis, which is known as hyperinflation. The same is true for deflation, and while deflation is not considered as a crisis, depression can be seen as a real crisis.

1.5.2 Financial Crises

Financial crises are characterized as "major economic problems caused by extreme price swings in financial markets such as foreign currency and stock markets, or an excessive growth in non-performing loans in the banking system". Financial crises have some determinants. These are the following factors:

- Weak macroeconomic indicators and faulty economic policies
- Inadequate financial infrastructure
- Moral risk and asymmetric information phenomenon

- False feelings and hunches of creditors and international financial institutions in the market,
- Some unexpected events or coincidences, such as a political assassination or terrorist attack

A reduction in foreign exchange reserves, high real interest rates, low overall growth rate, as well as a decline in stock values are all signs of a financial crisis. Financial crises can be classified into these main categories: currency crises, banking crises, stock market crash and debt crises.

1.5.2.1 Currency Crisis

Particularly in fixed exchange rate systems, these are the crises that occur as a result of the depletion of the foreign currency reserves of the central bank, as a result of the sudden shift of the demands of the market participants from the assets denominated in local currency to assets in foreign currency. A currency or currency crisis occurs when a speculative attack on a country's currency results in a devaluation or severe depreciation, or when the central bank is forced to protect the currency by selling large amounts of reserves or raising interest rates significantly.

When a currency crisis develops, economic units tend to behave in similar ways. Countries that seek to get out of debt and financial difficulties either start selling their goods cheaply in overseas markets or borrow at high-interest rates from foreign markets to generate foreign exchange. However, because of the high interest load, this condition may pull the countries into a financial crisis or render them vulnerable to external political pressures.

1.5.2.2 Banking Crisis

Banking crises, also known as liquidity crises, occur when commercial banks run out of cash and go bankrupt as a result of their inability to extend the maturity of their debts or fulfill the demand for a quick withdrawal from demand deposits.

Banking crises can be caused by a variety of factors. The late revisions, however, are the key factors underlined. While weak management is often assumed to be the source of a single bank's crisis, if the crisis affects multiple banks, a structural problem can be identified. Currency or balance of payments crises can arise as a result of banking crises.

1.5.2.3 Stock Market Crisis

The term "stock market crisis" refers to a sharp and often unexpected fall in stock values. A stock market crash can occur as a result of a significant disaster, economic crisis, or the bursting of a long-term speculative bubble. Public hysteria in response to a stock market crisis can also play a role, resulting in panic selling that drives prices even lower.

1.5.3 Debt Crisis

The foreign debt crisis is one of the most critical problems that governments face. Debt crises arise when borrowers are unable to pay their debts, or when lenders attempt to repay existing loans while refusing to offer new loans due to the risk of default. Private or public debt can trigger these crises. Perceptions of risk that the public sector will not be able to meet its repayment obligations could lead to a sharp decline in private capital inflows and a currency crisis.

There are repayment issues in the external debt crisis due to the factors such as the inability to use borrowed debts in productive areas and the usage of these debts to finance consumption or long-term investments with a risk of return.

The country ratings of credit rating organizations, as well as the amount of loan withdrawn from the International Monetary Fund, are two concerns that are frequently discussed during debt crises. As a result, a credit rating agency's announcement that a country is unable to meet its debt obligations, or a country's withdrawal of 100 percent of its IMF quota, signifies that the country's financial crisis has begun.

Crises differ from one another in terms of the causes of their occurrence, the sectors they touch, and the issues they generate in economies, as well as the strategies that should be used to address them. As a result, it will be beneficial to explain the causes of crises as well as the policies and models that will be applied.

1.6 Crisis Models

About economic crises, various crisis models have been proposed. However, none of them can clearly describe the crisis phenomenon, and each is only concerned with one aspect of the event. Because each crisis occurs at a different time, on a different ground, and with different facts than the others. The theoretical models, where the mentioned studies are primarily combined, can be classified as follows:

I. First generation models
II. Second generation models
III. Third generation models

Figure 2. Crisis models

	First generation models	**Second generation models**	**Third generation models**
Main creators	P. Krugman; P.Garber; R.Flood.	M. Obsfeld; A. Calvo; A. Rose; A.Velasco; S. Morris.	A.Rose , B.Eichengreen, M. Obstfeld.
Main economic indicators	Fiscal deficit/GDP; Real money quantity; M1 balance surplus.	Export; Import; Real exchange rate; Trade terms; Production; Real interest rate.	Domestic credit/nominal GDP M2/ international reserves; M2 multiplier; Share prices; Deposits; Banking crises.
Main properties	Focus on long run; Unique equilibrium; Government deficit monetarization is the cause of speculative attack against the national currency.	Focus on short run; Multiple equilibrium; Currency crisis largely depends on speculators expectations.	These models already allow to establish how monetary policy can impact the currency crises and to explain the causes why crises spread across the countries.

1.6.1 First Generation Economic Crisis Models

A strict financial expansion, according to Paul Krugman's First-Generation Crisis model, underpins financial catastrophes. In addition to this expansion, the crisis is based on insufficient supervision, hidden and explicit deposit guarantees, and a lack of transparency in the banking sector.

Governments, according to the concept, cover their budget deficits by borrowing domestically or printing more money. Printing money to finance expansionist fiscal policies leads to inflation, negative expectations, and capital outflow, resulting in a balance of payments deficit. In this circumstance, governments that want to keep the fixed exchange rate system in place should employ Central Bank reserves and open the markets to speculators. As a result, the central bank, which has limited funds, is forced to act.

Because the exchange rate system cannot be maintained continually, the money is either devalued or left fluctuating.

Krugman used these models to show how unsustainable economic practices opened the stage for speculative attacks and the link between monetary growth and economic crises under the fixed exchange rate regime.

Because the beginning of the crisis is frequently accompanied by market participants' expectations that the government will loosen the exchange rate anchor. Economic players aim to transfer their native currency values into foreign currencies based on this anticipation. When the central bank's reserves to meet this demand run out, a crisis occurs, and the prevailing exchange rate system collapses.

First-generation crises are limited to currency crises and have been criticized for failing to adequately explain current crises. The government, which follows the fixed exchange rate policy, is being criticized for funding the budget deficit through monetary expansion, even knowing that this will result in a financial crisis. On the other hand, while this model has been criticized for failing to accurately depict the events of real-world crises, another critique is that it based currency crises solely on foreign exchange reserves and budget deficits.

The following model, dubbed "Second Generation Crisis Models," was established to solve the inadequacies of the first generation of crises.

1.6.2 Second Generation Economic Crisis Models

Following the failure of existing models to explain the European economic crisis of 1992, Obstfeld began developing second-generation models based on his research in 1994. These models show that, even if monetary and fiscal policies are consistent, speculative threats on a country's currency and structural imbalances can lead to economic crises.

Unlike first-generation models, second-generation models view the collapse of the fixed exchange rate system as a political decision rather than an unavoidable outcome of an economic process.

It is believed that the higher the cost of maintaining a fixed rate, the worse the private sector's confidence in the market will be. The self-fulfilling of expectations and the creation of crises are triggered by this condition.

1.6.3 Third Generation Economic Crisis Models

First-generation and second-generation crisis models were unable to explain the crises of the 1990s. As a result, the third-generation crisis model (also known as the spillover effect model) was created. There are three ways that crises can show the contagion effect. The first is big multinational financial institutions' cross-border linkages, as well as financial connections resulting from international lending limits. The second is the real reliance that arises from countries' mutual commercial ties or competitive attitudes in third markets, and the third is the growth in investor incentives to undertake joint investments as markets become more globalized.

Another criticism raised by economists working on this model is the financial fragility produced by unrestricted foreign currency borrowing. A rapid change in market expectations causes panic and herd behavior, resulting in catastrophic capital flight. On the other hand, this circumstance produces liquidity issues and a debt crisis, as well as destabilizing the currency rate.

II. APPLICATION OF POLICIES AGAINST ECONOMIC CRISES

2.1 Stability Policies Against Economic Crises

Basic macroeconomic indicators such as employment volume, general price level, exchange rates, and interest rates in an economy are all negatively affected by economic crises. Economic actions are applied to mitigate the negative impacts of previous economic crises on national economies and avoid emerging problems. Stability programs can be characterized as sets of policies implemented by governments undergoing an economic crisis to tackle the crisis and maintain economic balance.

2.1.1 Objectives of Economic Stability Policies

The principal goal of stabilization measures is to minimize economic imbalances and restore a long-term balance. Inflation, unemployment, and balance of payments deficits and surpluses are the key sources of economic instability. As a result, these programs are geared towards specific goals, such as boosting growth, lowering inflation, and addressing capital flight and current account deficits.

It can also be claimed that the major goal of stabilization policies implemented by both developed and developing countries to overcome crisis processes is to provide full employment in a developing economy without inflation. While some governments are successful in implementing policies on time, others fall short of their policy objectives. It's worth noting at this point that the policy's timing, as well as the determination of its goals, are crucial. The general objectives of the countries in their stabilization policies can be listed as follows:

- To reach full employment,
- To maintain price stability,
- Ensuring the balance of payments,
- To increase the growth rate adequately,
- Ensuring fairness in income distribution.

It is vital to measure the success of these initiatives in terms of economic growth and income distribution in order to determine if they achieve their objectives. Programs that do not accomplish their objectives or provide stability are deemed failed.

2.1.2 Types of Economic Stability Policies

Demand-side and supply-side stability measures have been adopted to ensure economic equilibrium. The goal of demand-side policies is to reduce ultimate demand, whereas supply-side policies aim to boost real goods and service production. One of the most significant distinctions between supply-side and demand-side policies is that supply-side policies are often microeconomic in nature and consider sectoral priorities. On the other hand, demand-side policies have macroeconomic aspects.

In terms of both their viewpoints on the problems and the treatment approaches for these problems, stability programs are divided into two categories: Orthodox and Heterodox.

2.1.2.1 Orthodox Economic Stabilization Policies

The IMF's orthodox stabilization initiatives, which have been available to developing countries suffering from hyperinflation since the 1970s, are known as orthodox stabilization programs. The term "orthodox" is used in this context to mean "classical" or "traditional."

Traditional stabilization policies include medium- and long-term structural measures aimed at balancing supply and demand in the goods and money markets, as well as preventing the recurrence of issues. As a stabilization measure, it prefers fiscal and monetary policies that are both tight. The major goal is to improve the balance of payments, eliminate government deficits, and lower inflation.

One of the most essential characteristics of traditional stabilization programs is that they focus on demand management rather than wage-price restrictions. Orthodox policies, which prioritize fiscal policy adjustments, seek to limit the public's use of the central bank and delay the increase of the money supply.

2.1.2.2 Heterodox Economic Stabilization Policies

The word Heterodox is used as an antonym of Orthodox, which symbolizes traditionalism.

Heterodox programs are income policies that involve wage and price controls, and it desires to use the income policy only for a limited duration. It differs from Orthodox plans in this regard.

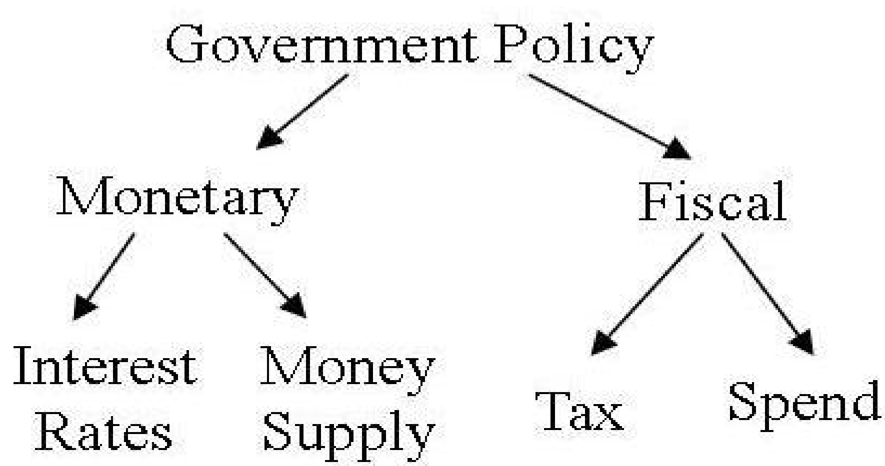
Heterodox strategies tend to avoid hyperinflation by applying rapid and shock policies rather than medium and long-term policies. Wage freezes and price restrictions are applied in the first term of the policies, to break inflationary expectations. Tight fiscal policies are permitted in the first stage, while expansionary monetary policies are permitted in the second.

2.1.3 Economic Stability Policy Tools

The harmony between policy tools and objectives is one of the most significant factors to consider when developing economic strategies. Furthermore, the efficiency of the tools and the economic system in which they operate is critical in achieving the objectives. The main stabilization policy tools can be divided into two categories at the present point.

◊ Monetary Policy
◊ Fiscal Policy

Figure 3. A Government's monetary and fiscal policies' flowchart



2.1.3.1 Monetary Policy

It refers to the decisions taken to affect the availability and cost of money in order to achieve goals such as economic growth, employment increase and price stability. The institutions responsible for its implementation are central banks.

2.1.3.1.1 Monetary Policy Tools

Monetary policy objectives have changed greatly over time, and it can be said that their general purpose is to protect the value of money and to ensure price stability.

Apart from these, monetary policy has many objectives such as full employment, economic growth, balance of payments, interest stability, stability in financial markets.

The applicability of monetary policies is given to the responsibility of the Central Bank as mentioned above. The Central Bank has various monetary policy instruments such as open market operations, credit ceilings, rediscount rates, required reserves, special deposits, and controls on stock and bond purchases, in particular interest rate policies and exchange rate policies.

2.1.3.1.1.1 Central Bank Policies

Direct and indirect monetary policies are the two types of monetary policies adopted by the Central Bank. Rediscount rates, open market operations, and required reserves are examples of indirect monetary policy measures. Interest rate restrictions, credit ceilings, stock and bond purchase controls, consumer credit controls, and private deposits are all examples of direct instruments.

The differences between the direct and indirect monetary instruments used by the central bank in monetary policy applications can be shown as follows.

- While direct instruments impose restrictions by intervening in interest rates or deposit and loan amounts, indirect instruments are used in a way that affects supply-demand conditions in the market.
- While direct instruments target the balance sheets of financial institutions, indirect instruments target the central bank balance sheet.

2.1.3.1.1.2 Interest Policies

One of the most significant responsibilities of the Central Bank is to control the amount of money in money markets, or the interest rate, which determines the price of money. The policies implemented by the Central Bank when it wants to control the interest rate, not the money supply, is called interest policy. The Central Bank leaves the shaping of the money supply to the money demand in the market with such policies.

With its interest policies, the Central Bank can control banks' and other financial institutions' deposit and loan interest rates, as well as drive the market. It can allocate resources by applying lower interest rates to loans granted to industries that should be encouraged by using various interest rates for different sectors.

2.1.3.1.1.3 Exchange Rate Policies

Exchange rate policies are the type of monetary policy and are indeed a crucial tool throughout the period. By estimating the rate of change between national currencies or the price of a foreign currency in terms of national currency, exchange rate systems enable pricing and cost comparisons between countries. In different economic periods, various exchange rate policies can be used.

Free-floating, supervised fluctuation, fluctuation within range, slippery range, directed fixed parity, directed fixed parity, and adjustable fixed exchange rate systems are just a few examples of exchange rate systems.

Exchange rate regulations are crucial if they reduce speculative movements in the economy and create a secure capital market. However, if the exchange rate anchor is perceived as a stabilizing element for the national currency, the situation is reversed, and foreign currency borrowing and significant exchange rate risk result.

2.1.3.1.2 Economic Effects of Monetary Policies

The aims of monetary policy and the tools to attain these goals are affected by economic trends. Similarly, monetary measures used to restore market equilibrium have a considerable impact on the economy.

The impacts of monetary policy instruments vary depending on whether they are direct or indirect. While direct monetary policy tools affect either prices or quantities, indirect monetary policy instruments affect supply and demand conditions in the market.

While direct tools, which require direct intervention, target the balance sheets of market institutions, indirect tools, which are market-based instruments, target the Central Bank's balance sheet.

Expansionary and contractionary monetary policies both demonstrate the effectiveness of monetary policies. For example, whereas expansionary monetary policies are used when the economy is experiencing high unemployment, contractionary policies aiming at controlling monetary aggregates are used when the economy is experiencing high inflation.

The Central Bank's use of short-term nominal interest rates is similarly helpful in restraining demand. As a result of sticky pricing, real interest rates will shift, and consumption and investment will fall as a result. Domestic aggregate demand will be reduced as a result of this.

Monetary policies have a significant impact on economic growth as well. It will be easier for enterprises in the banking and capital markets to obtain regular operational revenue to the degree that the Central Bank can create a stable and sustained growth process with its monetary policy tools. However, it is vital to pay attention to interest rate swings at this time. Foreign competition and the development of consumption and savings that will occur over time as a result of the current account deficit, in other words, both consumers and producers, are affected by real exchange rate transactions, which are another monetary policy tool.

2.1.3.1.3 Applicability of Monetary Policies in Economic Crises

In terms of the effects of economic crises, the policies that should be used to resolve these crises may differ. Fiscal policies are more effective in the long run compared to monetary policies, which yield results in the short run. For example, Tight monetary policy is generally implemented to minimize speculative attacks and avoid the quick depletion of foreign exchange reserves.

In times of crisis, monetary policy can be implemented in a variety of ways. One of these methods is to maintain the exchange rate steady or to enable the domestic currency to appreciate against foreign currencies to keep the internal value of money from falling too much. Aside from that, the capital inflows experienced throughout specific periods, as well as the monetary policies used to achieve them, are crucial. Domestic nominal interest rates fall when capital inflows boost liquidity, resulting in higher domestic spending. However, inflationary pressures in the economy can be triggered by unfavorable exchange rate assessments resulting from spending on internationally traded goods, a growing trade imbalance, and capital inflows.

In times of crisis, instruments like the required reserve ratio, rediscount rate, open market operations, interest rate, and foreign currency market activities, all of which are decided by the Central Bank's priority, are extremely effective. These measures are critical for minimizing market swings during a crisis period, ensuring real GDP growth, and controlling money supply by minimizing inflation. As a result, one may argue that economics is one of the most significant decision-making sectors.

Interest rates are another effective instrument in times of crisis. Interest rate changes in open economies have an impact on the real exchange rate, therefore affects imports and exports. On the other hand, The Central Bank employs the interest rate as a weapon to affect real and legal individuals' savings-consumption preferences. These measures are critical for minimizing market swings during times of crisis, ensuring real GDP growth, and controlling money supply by minimizing inflation. As a result, one may argue that the economics is one of the most significant decision-making sectors.

In a deflationary environment, it lowers the interest rate and promotes the economy's actors to consume more, whereas, in an inflationary situation, it raises the interest rate and encourages the economy's actors to save.

During temporary crises, the Central Bank should effectively employ indirect monetary policy measures to manage the size and prices of deposit loans. The financial markets must be sufficiently developed, or the Central Bank must be technically competent in deploying indirect monetary policy instruments, for efficiency to be achieved.

In times of crisis, it is often recommended to adopt restrictive monetary policies to enact monetary policies. When these actions aren't properly examined, however, they become a threat to the crisis's worsening rather than a solution.

2.1.3.2 Fiscal Policy

It is possible to define fiscal policy as a set of policies that interfere with the functioning of the economy with public expenditures, taxation and public debt instruments.

2.1.3.2.1 Fiscal Policy Tools

Fiscal policy's primary goal is to maximize social welfare and economic growth. The state budget and its relevant parts are covered by fiscal policy instruments. The most critical tools for accomplishing fiscal policy goals are public revenues and public expenditures, which are at the forefront of these factors.

2.1.3.2.1.1 Borrowing Policy

There have been changes in the resources utilized in public finance as a result of changes in public duty and the meanings assigned to the state. When tax revenues and other sources of money are insufficient to meet governmental obligations, borrowing is employed.

Government loans are classified by maturity or source, and the biggest reason for the government's borrowing is a lack of tax income. In this regard, public debts constitute a temporary source of money in addition to the state's main and permanent revenue.

The country's existing financial and capital market arrangements are strongly linked to government borrowing options. In terms of government borrowing chances, in addition to the country's economic statistics, liquidity, and investment trend, the efficiency of financial institutions and the variety of loans issued by these institutions are also highly significant.

2.1.3.2.1.2 Public Expenditure Policy

Public expenditure, in a wide sense, refers to all expenditures made by the government to fulfill public needs. Individually financed public needs may be insufficient (such as education, defense, health, justice).

The state is tasked with regulating, directing, and actively carrying out these expenditures on behalf of the public. As a result, the state meets its social state responsibility. However, in case if the private sector is insufficient in the economic area, the state not only provides social needs such as health, law, and education but also realizes economic expenditures and infrastructure investments, which are also classified as public expenditures.

2.1.3.2.2 Economic Effects of Fiscal Policies

Fiscal policies' effectiveness has shifted throughout time. Because the state was viewed as a consumer entity during the classical period, fiscal measures were fairly limited as a result of the assumption that taxes and expenditures should be neutral. However, with the 1929 crisis, and within the framework of John M. Keynes' General Theory, the state was given key roles in guiding economic life. Important objectives such as ensuring economic growth and development, ensuring economic stability, and guaranteeing equitable income distribution are among these functions. Since that time, fiscal measures have been more important.

The neo-classical approach, on the other hand, believed that fiscal policy tools have little long-term influence on economic growth and that fiscal policies should be restricted. On the other hand, endogenous growth theories claim that fiscal policy tools have an impact on economic growth.

There is no doubt that the weight allocated to fiscal measures has shifted in response to changing circumstances. As a result, the economy's efficacy and applicability of fiscal measures have fluctuated greatly.

Although financial instruments have identical goals, how they affect the economy is not the same. While public investment expenditures and current expenditures serve to realize development, fiscal policy can alter the volume of savings and generate money for the state through borrowing and tax policy.

The study's emphasis on the consequences of taxes on the economy is also distinct from one another. As a result, at this stage, the structure of taxation is just as essential as the level. Direct taxes may be defined as taxes on factor earnings and wealth when taxes are categorized as direct and indirect taxes. Income taxes, corporation taxes, and wealth taxes are among them.

Increases in income taxes, which are utilized by the government to fund development, have a considerable impact on individual savings and investments. This effect is frequently manifested as a reduction in purchasing power. Tax increases, on the other hand, have a negative impact on capital accumulation.

Taxes are typically paid from money put aside for consumption; but, if tax rates are raised or additional taxes are imposed on the same topic, consumers will opt to pay the tax out of their savings. This circumstance may have a detrimental impact on savings and investments. As a result, when adjusting tax rates, income and savings impacts on taxpayers should be addressed.

The taxpayer's disposable income has decreased as a result of the increase in tax rates.

Taxpayers may want to work harder in their spare time in order to preserve their previous earning levels. The income effect refers to the effect of the tax on the taxpayer's income as it rises. However, in the face of a tax hike, some taxpayers may decide to relax rather than work hard and pay taxes.

The substitution effect of tax refers to the preference of taxpayers to listen rather than work. Furthermore, for a country to achieve economic growth, the savings rate must be increased. However, because taxes on values such as interest, dividends, and capital gains raise the cost of saving, it has a negative impact on individual preferences. The government's taxation of an item, service, or factor will have an impact on the market's equilibrium pricing. In this instance, the tax will be perceived as a cost increase by the producer, and market supply and demand will adjust appropriately.

A tax cut that lowers the cost of saving boosts capital accumulation and can lead to an enhancement in production, national income, and aggregate demand. The following are some of the most significant economic consequences of tax reduction.

- It boosts the return on investment by raising disposable income and lowering the cost of the investment by lowering taxes.
- It makes investment financing easier by guaranteeing that funds reserved for taxation are withdrawn and transferred into investments.
- It increases the amount of money invested.

The corporate tax, which is a sort of direct tax, has short and long-term effects that are significantly different. Corporate tax has an effect when it lowers or raises the return on investments in specific industries. Investments are discouraged by corporate taxes. However, as a result of globalization, significant changes in country tax systems, particularly corporate tax, have begun to emerge in recent years. Indeed, increased capital and investment mobility, as well as developments in the financial sector, drive governments to lower tax rates and remove tax obstacles. Corporate tax has begun to be effective in shifting the direction of investments across nations under the new system. Furthermore, it is critical for a country's tax policy to stimulate investment. Investment discounts, tax exemption or reduction for a specified term, VAT exemption, and special VAT refunds for exporters, for example, have a beneficial impact on investments and hence growth.

The impact of wealth taxes, which are a type of tax, on economic decisions is difficult to discern. Each of the wealth taxes, which include property tax, inheritance and gift tax, and motor vehicle tax, has a varied impact on the economy, and their returns are modest compared to other tax categories.

The most significant impact of wealth taxes is a reduction in the rate of return on savings, real estate, and accumulated capital. Wealth taxes have the advantage of not being affected by cyclical swings right away. This characteristic is extremely beneficial in times of economic crisis since it prevents a drop in tax collections at the start of the crisis.

Taxes on goods and services are known as indirect taxes. Although indirect taxes affect the relative costs of goods and services, they can disrupt the guiding function of prices in the economy and lead to inefficiencies in resource allocation.

Tax policies are one of the most important financial instruments used to achieve fiscal policy objectives. Taxes are the economic values that the state obtains from the people and institutions that make up society to fulfill public expenditures according to their ability to pay, based on its sovereign power. By considering all of these, it will worthily be interiorized deeply tax concept and its policies later.

2.1.3.2.3 Applicability of Fiscal Policies in Economic Crises

In times of economic crisis, fiscal policy measures may be quite successful. Fiscal policy, on the other hand, may not be sufficient in dealing with crises. When these measures are combined with monetary policy, price, wage, and foreign trade policies, they are more successful.

Increased consumption and investment expenditures may be used to produce additional demand in times of crisis, and the high level of national income and employment can be maintained by boosting consumption and investment spending.

The following are some examples of financial policies that can be used during a crisis:

- With long-term growth, it is feasible to successfully respond to the financial crisis.
- The settlement of the financial crisis has always served as a model for dealing with macroeconomic issues.
- If the financial crisis has extended to companies and people, fiscal incentives can be highly beneficial.
- When fiscal policy is designed with specific characteristics of the crisis in mind, it has a strong impact on aggregate demand.

To maintain financial stability, fiscal policy procedures must be decided within the framework of specific norms and standards. Under some circumstances, these laws should be able to cover tax rate adjustments, reducing countercyclical borrowing and preventing financial market vulnerabilities. This improves the effectiveness of fiscal policy in dealing with economic downturns.

Fiscal Policy can be applied in two different ways:

1. Self-activation of automatic stabilizers

2. Implementation of discretionary policies

In economies, there are several automatic stabilizers. Progressive taxation and unemployment insurance are automatic fiscal policy stabilizers. Changes in government spending, borrowing, and tax rates are all examples of discretionary policy. However, the view of discretionary fiscal measures enacted at the close of the twentieth century is beginning to shift. Following the investigations, it was determined that these policies, when implemented in an invasive manner, increase the speed of cyclical swings, create output fluctuations, and limit economic growth. The effectiveness of the countercyclical discretionary fiscal policy, particularly in developing nations, is relatively low. These measures are ineffective because they cause delays and are insufficient in averting long-term collapse. Discretionary measures have been tried in developed nations to curb excessive debt buildup in recent years, despite their perceived ineffectiveness. It regained prominence after the global financial crisis of 2008, and the concept of the interventionist state was reintroduced.

Fiscal policies, as previously said, have varied application areas depending on the cyclical structure that has evolved through time. Public spending, borrowing policies, and tax policies have all been affected by the state's view on economic flows and the impacts these flows have had on the economy. The key question here is how successful fiscal policy tools are during economic downturns, which is strongly linked to countries. The applicability of additional fiscal policy tools, particularly tax policies, in crisis situations will be examined in this section of the research.

2.1.3.2.3.1 Public Expenditure Policies Against Economic Crises

Public expenditures are one of the most significant fiscal policy instruments, and they are effective in times of crisis. It is useful, for example, in decreasing government spending during inflationary periods, preventing budget deficits, and minimizing the demand rise induced by expenditures. In terms of economic balances, regulations governing the quantity of public spending and the regions to which they are directed are critical. In deflationary periods, it is feasible to impact the supply-demand balance by directing demand-reducing and supply-increasing expenditures, just as it is possible to change the supply-demand balance by directing demand-reducing and supply-increasing expenditures in inflationary periods.

Aside from that, fiscal stability may also be achieved by austere government spending measures. Reducing government spending, on the other hand, is a good way to attain a balanced budget and maintain fiscal discipline.

2.1.3.2.3.2 Borrowing Policies Against Economic Crises

In order to combat inflation, the borrowing strategy relies on the removal of surplus liquidity from the market. The effectiveness of debt policy in the battle against the crisis is determined by several elements. These include the borrower, the type of debt securities to be issued, the debt securities' maturity, interest rates, and the debt management administration's efficiency.

Borrowing policies undertaken during inflationary periods are intended to have the effect of reducing overall demand by removing money swelling in the economy and bringing idle cash into the system. Furthermore, the borrowing policy can be effective during an economic recession as well.

2.1.4 Tax Concept and Tax Policy

2.1.4.1 Definition of Tax

The economic values in the form of money that the state and other public institutions authorized by the state receive from real and/or legal persons compulsory, gratuitous, and based on sovereign power are called taxes. The main reason for levying taxes is to finance public expenditures or public borrowing.

There would be less need for the government if we as a society could live without problems while enjoying forests, beaches, roads, schools, hospitals, and other commons. However, this is neither easy nor possible. The state must allocate (share) resources and maintain their continuation for common goods to be used in a way that optimizes the benefit of the entire society (through law, police, military). Musgrave refers to this duty of the state as the "allocation function," which is the first of three justifications for government intervention in the economy. The state is obligated to make public expenditures as a result of this duty.

The state must collect taxes to finance public expenditures. For us to live collectively and with minimal problems, we need public expenditures made by the state. In return, taxes must be paid to the state. Taxes are the price we pay for living in a civilized society.

The state, according to current definitions, is a political institution established by individuals to live in social harmony. To maintain and sustain this political entity known as the state, several expenditures must be made.

States continually offer public goods, semi-public goods, and private goods to meet the common needs of their society. As a result of privatization policies, the type of private goods offered by the states has decreased considerably and keeps declining.

Goods in which no one is excluded from their utility and where there is no competition in consumption are called public goods. Since no one can be excluded from the benefit of public goods, it is not possible to receive a price from those who benefit from public goods. On the one hand, the state must provide a public good, yet it is difficult to obtain a price that covers the expense from the recipients. As a result, the government must collect taxes to fund the expense of the public good.

2.1.4.2 Classification of Taxes

It is easy to establish broad generalizations regarding the financial, economic, and social impacts of tax groups thanks to tax categorization. The type of tax impacts how the tax affects the economy's functioning. This sort of tax influences how families and businesses make decisions. Another advantage of tax categorization is that it helps policymakers to keep track of taxes. An assessment can be conducted, for example, by looking at whether the ratio of income taxes to total taxes is decreasing. New policies might be established and adopted because of these evaluations.

Another advantage of tax categorization is that it allows countries to compare their tax systems because they all use the same tax classification technique. The results of national tax categorization may be compared to those of other countries, and new tax policies can be implemented based on the findings. Tax harmonization measures can be established based on the outcomes of these comparisons.

In public finance records, several tax classes have been created. These categorization techniques differ in various ways, but they are fundamentally the same. The gap in one categorization is filled by the difference in another. There are no mutually exclusive tax categories. Income tax, for example, is classified as a tax on income in the subject classification but can also be classified as a direct tax in the indirect-direct tax classification. In the table below, the types of tax have been classified:

Table 1. Classification of Taxes

Classification	***Tax type***	***Sample tax****
Tax by subject	Consumption Income wealth	Value-added tax Income tax Property tax
Indirect-direct	Indirect Direct	Value-added tax Income tax
According to their affects	Compensatory Supervisory Regulatory Complementary	Value-added tax Inheritance tax Special consumption tax Corporation tax
Objective-subjective	Objective Subjective	Value-added tax Income tax
Personal property	Person Goods	Head tax** Tithe**
Ad valorem-specific	Ad valorem Specific	Income tax Excise tax
Central-local **Central**	Central Local	Income tax Property tax

*There are also taxes other than the examples given.

**Not applicable today.

2.1.4.3 Tax Policies

Tax policies are one of the financial instruments used to achieve fiscal policy objectives. Taxes are the economic values that the state gets from the individuals and institutions that make up society in order to fulfill public expenditures based on their ability to pay, based on its sovereign power.

With the emergence of the state phenomenon, taxes, which are the shares of people to contribute to public spending, have evolved. Taxation is the focal point of economic and social activities and movements, and it is a constitutional obligation and power. Taxes imposed for economic, financial, political, and social reasons elicit different reactions depending on how they are implemented, managed, and governed by the law.

It is possible to categorize taxes in a variety of ways. In practice, indirect-direct taxes, specific ad valorem taxes, personal objective taxes, and taxes on income-wealth-expenditures are the most prevalent categories.

2.1.4.3 Tax Policies for Economic Crises

Tax policies are one of the most significant weapons of fiscal policy in times of crisis. Tax not only serves as a tool for fiscal policy, but it also serves as an indicator of economic performance. Tax policy and crises have a strong bond.

While tax policy has an indirect impact on the crisis before, during, and after it occurs, it is also impacted by it. The tax system altered after the crisis, and the percentage of indirect taxes in overall tax collections rose.

There are issues such as a rise in the tax burden, a drop in the intended and actual tax collection rates, a degradation in income distribution, and an increase in the tax administration's load.

Tax administration, tax legislation, and jurisdiction are all part of the tax system. All of the parts must operate well together for the system to function properly. In this regard, it is critical to address the shortcomings of these three aspects in a country's tax policy, as well as administrative and financial changes, to avoid or eliminate crises. The efficiency of the tax policy to be implemented is increased by evaluating economic policies and actions in conjunction with global trends. 'Tax rates' are at the top of the list of adjustments that need to be made to tax policies in order to avoid economic crises and revive markets.

The tax rate varies in terms of tax rate, tariffs and socio-economic impacts. Some taxes function as automatic stabilizers in times of crisis, while others can be implemented freely. For example, although progressive tariff taxes function as automatic stabilizers, discretionary measures such as altering tax rates can also be helpful.

Fiscal authorities strive to modify the tax to satisfy public budget limitations in the case of a currency crisis. To battle inflation and maintain price stability, an aggressive monetary policy is required in this situation. On the one hand, price stability is guaranteed; on the other, the public debt excess that arises in the first stage is brought under control, and a budget balance is attempted.

Increased tax rates are likely to be applied during inflationary periods. This will limit the amount of money available for disposable income.

During an economic crisis, it is a correct practice to increase taxes, or rather to increase the gross tax burden, to reduce the usable income of taxpayers, and to create a budget surplus. However, in recessions periods, lowering tax rates rather than increasing them is a more appropriate tax policy. Because the reduced tax rates will show itself in the increase in consumption expenditures.

In addition to the tax policies that countries enact for their own national policies, IMF-supported policies may also come into play during times of crisis. However, the IMF's approach to tax policy may not necessarily coincide with that of individual countries. Tax hikes, subsidy cuts, and higher prices for public goods and services are all part of IMF-style schemes to boost government income. Similarly, IMF-style initiatives attempt to lower aggregate demand and the need for public borrowing. The IMF, on the other hand, believes that tax rates have little impact on economic development and argues higher tax rates, higher in income.

In addition to all of this, there are a few concerns that should be considered while implementing tax policies to maintain economic stability. The first is taxpayers' reaction to the rise in their tax loads and the resulting changes in their economic conduct. Aside from this, key questions include what sort of tax system innovations will emerge, which social strata will alter in the national income distribution as a result of the crisis and whether indirect or direct taxes will be given more weight.

Considering these, several tax measures enacted during times of crisis have been criticized.

- Changes in taxation may have an impact on this business life.
- Making the tax system flexible without transferring authority to the government may cause political issues.
- Tax system changes, modifications, and harmonization
- Mistake in the time selection.
- Budgetary balance can be avoided.

Despite the negative press, tax laws are still in place to maintain financial stability, particularly during crisis periods. The effectiveness of the tax system determines how well tax policies are implemented.

However, as a result of globalization, both the tax structure and the efficacy of taxes in the economy have changed. For example, parallel to globalization, it has begun to appear on the agenda of international meetings that taxes on commercial and industrial profits would be phased out in favor of higher taxes on consumption and salaries.

In summary, the tax system should be cyclically adaptable, i.e., tax policies should have a structure that balances supply and demand throughout periods of economic boom and recession.

III. EXAMPLES OF THE ECONOMIC CRISIS AFTER 1990 IN THE GLOBAL WORLD AND THE APPLIED TAX POLICIES

When we look at the history of the international economy, we can see that numerous economic crises have been resolved. Although the forms, implications, and outcomes of crises vary, these characteristics have always constituted a threat to governments.

As we attempted to explain in the preceding section, crises arise for a variety of causes, and their domains of effect change depending on the market or conjuncture. When looking at the crises that occurred after 1990, it can be stated that globalization and attempts to transition to a free-market economy were successful, particularly in the formation of crises in developing nations. Developing and underdeveloped countries must finish their economic development and adjust to changing economic conditions. They suffered economic problems as a result of the measures they took in trying to achieve this. It may be stated that, in addition to the countries' fundamental issues, the dangers of the free-market economy play a role in the formation of these crises. Economic collapses impact nations of all types, not only those that are impoverished or developing. When the previous two global economic crises are analyzed, the global consequences of both crises are significant, and the number of nations affected by the crisis is considerably more than in a regional crisis. Another essential aspect of these crises is that countries with sophisticated economies are among the countries affected.

The origins and impacts of the post-1990 economic crises in the global economy, as well as the tax policies used to address these crises, are covered in this section of the research. Even though tax policies are the primary focus of research, countries differ in terms of the types and structures of tax policies imposed during times of crisis. It is conceivable to claim that while some nations strive to solve crises using stronger monetary measures, others try to employ both policy tools. In the study, it will be examined in depth to see how much weight governments give to tax policies during times of crisis, which economic impacts of taxes are attempted to be exploited, and if the policies' intended goals are met or not. In this framework, we will look at the 1997 Asian crisis, which extended to many countries, the 1998 Russian crisis, and the 2008 US mortgage crisis, which had the biggest worldwide consequences. Finally, the European debt crisis will be examined, which is still ongoing and has spread among the members of the European Union, which is one of the world's most powerful economic organizations.

3.1. 1997 Asian Crisis

In this part, information on the region's economic state prior to the crisis was provided, as well as the impact of the crisis, in order to better comprehend the causes of the Asian crisis in 1997. The most pressing issue at this point, however, is the policies enacted during times of crisis. As a result, tax measures enacted during times of crisis will be scrutinized closely.

3.1.1 Economic Situation of Asian Countries Before The Crisis

South Korea, Hong Kong, Taiwan, and Singapore are examples of East Asian countries that created a name for themselves in the 1990s. Due to their quick and agile expansion in the global economy, these countries are often known as the "Four Tigers." Aside from these countries, Japan, Malaysia, Indonesia, and Thailand are examples of tiger economies that have seen rapid growth in a short period. The major reason they are known as Asian Tigers is that they attract international investments and put them to good use in productive areas of the economy, resulting in a significant rise in domestic investments, employment, foreign commerce, and national revenue.

Particularly, following WWII, several East Asian countries cut their military spending and implemented industrial, incentive, and export programs, resulting in fast economic expansion and the use of cheap labor. The Asian Miracle was built on the backs of these nations, which improved their economic competitiveness.

When looking at Asian countries before the crisis, there are no substantial macroeconomic imbalances. Economists, on the other hand, have been surprised at how Asian countries have progressed from a terrible economic condition and high levels of poverty to an average of 8-9 percent growth.

State assistance is a key factor in Asian countries' fast development. During pre-crisis periods, bureaucrats played a key role in the growth of businesses, providing tax breaks and monetary incentives to the favored industries. In addition, with the help of the government, bank loan rates to the private sector rose. In Asia, the ratio of private sector deposit bank loans to GDP was 151 percent in the Philippines, 58 percent in Thailand, 31 percent in Malaysia, 10% in Indonesia, and 11 percent in Korea from 1990 to 1996. Although the rapid expansion of private-sector loans has highlighted the need for some economic statistics to shift, these indications were not regarded adequate to anticipate a severe catastrophe. The mentioned indications include a growth in the private sector's indebtedness to banks, a real-term overvaluation of national currencies, and an increase in the current account deficit.

The strong capital flows that countries like Indonesia, South Korea, Malaysia, the Philippines, and Thailand experienced in the years leading up to the crisis progressively pushed them to the edge of disaster. The process of opening began with the granting of permits to key industries, which resulted in a rise in short-term capital flows. Financial fragility increases in these nations when financial liberalization is not done in the proper order, especially when there is no efficient regulatory structure. Indeed, both Western and Japanese capital flowed to these countries, which largely fixed their currencies in the US Dollar, and such a large inflow of capital first resulted in a drop in productivity due to financial system speculation and manipulations, and then in an overinflation of real estate prices. Following these bad occurrences, the financial crisis that began in Thailand in May 1997 and quickly spread throughout the region turned this success story into a case study in a societal breakdown.

The crisis, which began with a loss of trust in the capital markets, progressed to the devaluation of countries' currencies, resulting in a catastrophic financial currency crisis.

3.1.2 The Reasons Triggering The Asian Crisis and The Development of The Crisis

The reasons of the Asian crisis may be divided into two categories: internal and external sources. Internal factors combine to the point where the relevant nations' financial markets are far from having the structure that would allow them to function successfully within the framework of the free-market mechanism and supply market players with comprehensive and accurate information on time. External factors include international financial institutions continuing to provide cash to these countries notwithstanding the general direction of their economy.

It is known that the Southeast Asian crisis occurred mostly as a result of financial system vulnerabilities and managerial failures, rather than macroeconomic imbalances. Because one of the primary causes of the crisis is structural vulnerabilities in the banking industry. In addition to all of this, issues such as decreased exports owing to rising costs of export products in nations, significant current account deficits, and a surge in bank bad loans prompted countries to devalue their currencies relatively fast.

In practice, it can be shown that the first trigger of the Southeast Asian crisis was China's 30% devaluation of the Yuan in 1994, as well as these countries' quick loss of competitiveness as a result of the dollar's rapid appreciation since 1995. The crisis began on July 2, 1997, with the depreciation of the Thai Baht. Following the expansion of speculative movements to other nations, Indonesia, Malaysia, the Philippines, and South Korea were drawn into a crisis.

Thailand got its first IMF bailout package of 17 billion dollars on August 11, as all currencies began to fall, but the Thai government resigned on November 3 after failing to reverse the crisis's path.

Other countries' experiences with the crisis were similar. Speculator George Soros has been officially indicted by Malaysian Prime Minister Mahathir. Following that, several currencies were depreciated and permitted to fluctuate, particularly the Indonesian Rupee. S. Korea had to shut down the operations of five banks at the end of June. During this crisis, the IMF planned a large rescue package, allocating $114.2 billion to South Korea, Thailand, and Indonesia. Some economists, however, believe that the IMF's lending policy encouraged nations and the private sector to take additional risks, resulting in budgetary indiscipline. Because of the IMF's borrowing strategy, the private sector and its investment projects have been pushed out of proportion.

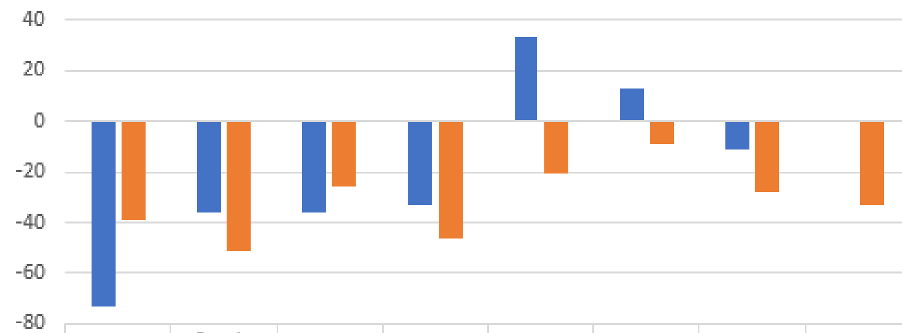
When we look at the situation, the crisis factors in the area are once again feeding each other. With the devaluation of currency rates, the fear, which expressed itself in the departure of foreign money from the nations, exacerbated the outflow of funds from these countries. The interest rates rose as a result of the liquidity deficit created by capital withdrawals; this scenario harmed many successful businesses.

When we look at the Southeast Asian crisis in general, the influence of the financial market panic, which expanded by obtaining a global character, was significant owing to the overvaluation of the country's currency, the increase in demand for foreign currency, and the quick outflow of foreign money.

3.1.3 The Economic Effects of The Asian Crisis and Its Size over Countries

The Asian crisis, which began in the financial sector and subsequently expanded to other sectors, manifested itself in nearly every nation as speculative fluctuation in exchange rates, causing the currencies of the countries involved to suffer significant losses versus foreign currencies. The decrease in Asian nations' currency rates and stock market indexes throughout the crisis may be observed more clearly in the graph below.

Figure 4. Depreciation in Exchange Rates and Stock Indices in Asian Countries in Crisis (1997 - 1998)



	Indonesia	South Korea	Thailand	Malaysia	Philippines	Taiwan	Singapore	Hong Kong
Cumulative Change in Exchange Rate	-73	-36	-36	-33	33	13	-11	0
Cumulative Change in Stock Index	-39	-51	-26	-46	-21	-9	-28	-33

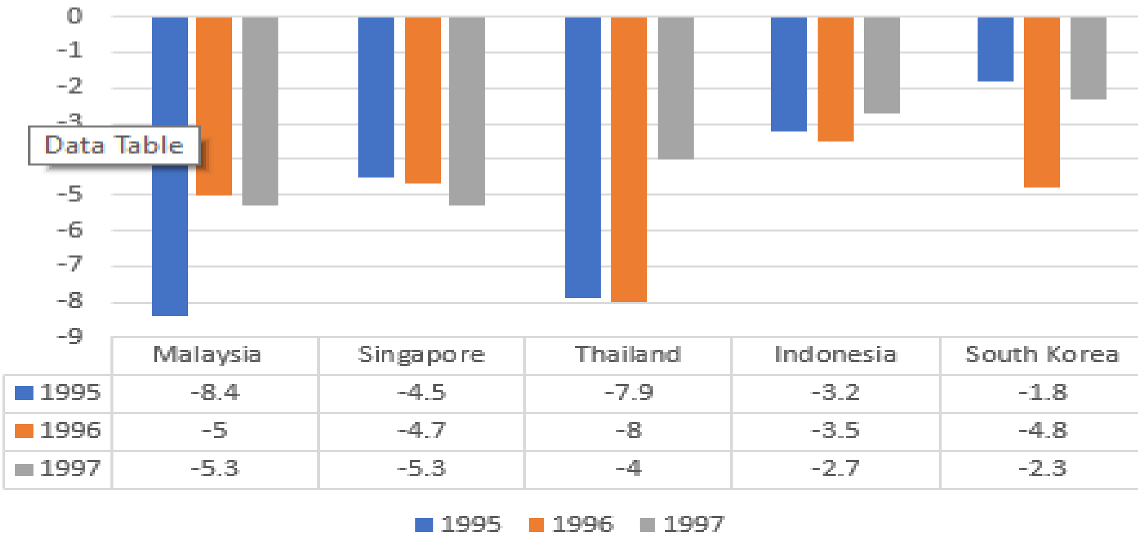
As it is seen from the chart, Indonesia faced the most drastic shift in exchange rates, with a rate of -73.8. With 30 percent changes, it is followed by South Korea, Thailand, Malaysia, and the Philippines. South Korea, Malaysia, and Indonesia are the first three countries in the stock market experiencing a negative move.

The credit ratings of nations witnessed substantial and quick reductions in the six months following the start of the crisis. Thailand's credit rating dropped by four points, Indonesia's credit rating dropped by almost five points, and South Korea's credit rating dropped by more than nine points, according to the three major rating agencies.

Between 1979 and 1996, the average growth rate for Indonesia, Malaysia, South Korea, and Thailand was 6.8%, 7.4%, 8.4%, and 7.5 percent, respectively. In 1998, these nations' average growth rates were 4,7%, 6,5% and 7,0%, respectively. At a rate of 4.7, 6.5, and 7.0 percent, they began a phase of significant contraction.

The international trade imbalance was another issue brought on by the overvaluation of the country's currencies. The graph below shows the ratio of a country's international trade deficit to its GDP.

Figure 5. Current Account Deficit/GDP of Countries During the Crisis % (1995-1997)



By looking at the current account deficits of the countries during the crisis, we can see that Malaysia has been exposed to the largest deficit. The international trade deficit fell from -8.4 in 1995 to -5.3 in 1997. When we look at the statistics from 1997, Singapore, Thailand, Indonesia, and South Korea come in second, third, and fourth, respectively.

Overall, the Asian crisis, which began in July 1997, resulted in the contraction of economies, the collapse of stock markets, an increase in unemployment

, the rapid decline of international credit flows, the bankruptcy of companies and banks, the rapid rise in interest rates in national and international markets and caused a reduction in international trade volume.

3.1.4 Tax Policies Applied Towards the Crisis

The IMF recommended joint banking sector reform initiatives to countries including South Korea, Indonesia, and Thailand, which were the most hit by the crisis.

Closure of bankrupt financial institutions, restructuring of financial institutions that can continue to operate, and improving financial supervision and laws are all part of the structural reform portion of the plans.

The IMF's proposals for resolving macroeconomic imbalances and resolving the Asian crisis were typical stabilization package. The main goal of the policies prioritized by the IMF was to help handle budgetary discipline. These policies are closing budget deficits, reducing public expenditures, and increasing taxes. However, although it is recommended to switch to direct taxes because they cause deviations in the price system, the IMF has given weight to indirect taxes in order to get quick results from the programs.

With the crisis, the rethinking of capital movements became more prominent, in addition to the increase in tax rates. Income from mobile portfolio investments would be taxed under this system.

Furthermore, the program covers broad objectives such as bringing financial institutions up to international standards through audits and laws, as well as ending strong ties between the government and the private sector.

By evaluating the causes and effects of the Asian crisis, the applied tax policies can be summarized as follows:

Table 2. An Overview of the Asian Crisis

Type of Crisis	Causes	Effects	Tax policies
Financial Crisis Currency crisis	Weakness of countries in transition to market economy Uncontrolled capital transfers	Exchange rate and stock market indices declined Country currencies depreciated Credit notes have been reduced Unemployment has increased Trade volume has dropped	Strict tax policy has been implemented More Focus on indirect taxes New taxes have been introduced for the taxation of capital movements.

As it is seen from the table that the tax measures introduced were primarily chosen to address the crisis's causes and effects. It's worth noting that unchecked capital movements, which are one of the key causes of the crisis, will be subjected to new tax charges.

3.2 1998 Crisis in Russia

In terms of the influence of crisis periods and the experiences of policies planned to be applied, the Russian crisis, in general, is critical. Thus, Russia Crisis has been analyzed in this section.

3.2.1 Economic Situation of Russia Before the Crisis

While the global economy was shaken by the Southeast Asian Crisis, Russia began to face a fresh financial crisis in August 1998, when the Ruble was devalued, and a moratorium was declared.

The Russian economic crisis, which began in 1998 with the fall of the ruble, is a classic currency crisis. The exchange rate collapsed as a result of unsustainable increases in governmental and private sector spending, and Russia had its second currency crisis, following the currency crisis of

1994. In its current form, the Russian crisis is one of the types of crises discussed in the first chapter, and it is typically financial crisis. At the same time, it can be said that there is also a debt crisis along with the currency crisis.

In the pre-crisis economic period, the Russian economy was perceived to be undergoing significant structural and political changes. Important economic changes were carried out during the liberalization and democratization process that began with the breakup of the Soviet Union in 1991, however, the economic system could not be fully organized. Because the closure of numerous industries and small enterprises in Russia during the 1991 crisis resulted in production shortages, particularly in vital commodities. In addition to inflationary pressures, growing obligatory imports resulted in large rises in foreign debt. As a result, Russia was grappling with existing structural issues while also attempting to implement a new economic system throughout this period.

Since 1992, all prices in the economy have been liberalized, particularly exchange rates and interest rates; the Russian Ruble has been made convertible; the private sector has been allowed to operate in the banking system, and foreign investors have been allowed to transact in Russian financial markets. The state's efficacy in the economy was reduced in the second stage of the transition to a market economy, and privatization initiatives were launched. Small and medium-sized enterprises in the agriculture, service and industry sectors were given to private entrepreneurs in the first stage of the privatization process, which lasted from 1992 to 1995, while the management of some large and profitable state-owned enterprises was sold to banks in exchange for loans to finance budget deficits in the second stage, which began in 1996. State-controlled companies were placed up for sale one by one following certain preliminary steps in the third phase, which began in 1997. According to estimates, over 80% of Russia's total companies were privately owned as of the end of 1997.

The lowering of the high inflation rate has been the most notable success of the measures undertaken since 1992. Following the 1991 financial crisis, the yearly inflation rate soared to 2500 percent. The annual average inflation rate was lowered to 131 percent in 1995, 22 percent in 1996, and about 10% in 1997 because of the liberalization of international commerce and other economic reforms enacted. However, the scale of the informal sector, low budget receipts, and the financial structure's fragility remained major issues.

The government in power began discussions with the IMF in 1995, and a stand-by agreement was reached in 1996, with the IMF's assistance for structural changes. Targets including raising tax collections, lowering inflation, cutting subsidies, and closing the budget deficit were not fulfilled, thus it was attempted to be completed by open domestic borrowing. In addition, the returns on government notes held by foreign investors during the pre-crisis period dropped. Russia's banking institutions have also expanded their holdings of government bonds and borrowed in foreign currency from overseas.

In short, when we look back at the pre-crisis period, we can see that the economic players were inadequate to cope with the fundamental changes that the Russian economy was undergoing. Speculative attacks on the Russian economy were undoubtedly intensified by the effects of the Asian crisis a year ago.

3.2.2 The Reasons Triggering The Crisis and The Development of The Crisis

The economic troubles that occurred in Russia in the 1990s, started to get worse in July 1998. After the ruble was devalued, capital movements in foreign currency were restricted, and a 90-day moratorium was declared on August 17, 1998. Thus, these laid the groundwork for the economic catastrophe.

Despite all the negatives, the Russian government fought to maintain the Ruble's value and sought to reassure the markets by issuing remarks on the subject. The Central Bank intended to avert the collapse of the Ruble by boosting government bond interest rates even in the face of massive inflows of foreign capital beginning in early 1997, but the IMF did not deem this situation appropriate for economic growth and budget deficit.

Aside from the impacts of the transition, several issues emerging from Russia's internal dynamics are also the other factors that have triggered the crisis. The following are the key categories for these issues.

- Dissolution of the Soviet Union
- Inflation Rate,
- Informal economy,
- The unsupervised banking system,
- The ineffective tax system,
- Foreign trade and current account balance.

In addition to internal issues, the Asian crisis prompted a drop in global commodity prices of oil, wood, and gold which were the leading income resources for Russia caused significant economic losses. Corruption in the tax system, inconvenient tax collection, individual tax evasion, a lack of discipline in the use of budget money, and the delayed execution of structural adjustment plans, and reforms are the sources of the Russian Crisis' financial issues.

The failure of the Russian government to implement the necessary reforms promptly to address these structural issues and restore the market economy, the low level of foreign exchange reserves, and the lack of any government program to boost economic growth and industrial production are all factors contributing to the crisis's severity.

Following all these issues, financial markets were chaotic, and firms and banks began to fail one after another. On the other hand, the Russian government's decision to raise customs barriers resulted in significant reductions in the volume of imports. Moreover, following the devaluation, Russia's limitations on imports had an adverse impact on production and investments, raising worries about social issues such as unemployment.

3.2.3 Economic Effects of The Crisis and Its Size over The Country

The crisis that erupted in 1998 had a profound impact on the Russian Federation's financial structure as well as financial markets.

The entire debt burden is one of Russia's most pressing issues now. Russia owed about $200 billion in overall debt, with 140 billion dollars in international debt and 70 billion dollars in treasury bills. The total debt to GDP ratio is about 42%, and the major issue is the high number of short-term obligations. The Russian government had to make additional borrowings of roughly $6 billion each month due to debt deadlines that were usually stretched over 11 months. Furthermore, it is believed that foreign investors own roughly $20 billion worth of bond shares.

Inflation rates were one of the issues that concerned the administration the most in the years leading up to the crisis. However, the crisis had an impact on economic growth and unemployment rates. The Russian Federation's growth and inflation rates for the years 1994-1998 are shown in the table below.

Table 3. Russian Federation Growth and Inflation Values (1994 - 1998)

Years	1994	1995	1996	1997	1998
Current GDP (Billion US$)	277	357	440	450	434
Real GDP (% Growth)	-12.6	-4.0	-2.8	0.8	-1.0
Inflation	224	131	22	11	6.8
Unemployment rate	7.0	8.8	9.1	9.3	9.5

When comparing Russia's growth rates before the crisis and during the crisis year, the growth was negative. The unemployment rate is another sign that is worsening every single year. The unemployment rate, which had been approximately 7% in 1994, had risen to around 10% in 1998.

During the 1991 crisis, Russia had shortages of essential commodities, and once prices were released in early 1992, the rate of inflation increased to 2500 percent per year. The annual average inflation rate was lowered to 131 percent in 1995, 22 percent in 1996, and about 10% in 1997 because of the liberalization of international commerce and other economic reforms enacted.

Even though Russia's part of global commerce and economy is lower than that of Southeast Asian countries, the crisis had a negative impact on all developed and developing economies throughout the world. Russia had a nuclear weapon which was a globally potential threat for western countries, especially for the USA and Germany. Therefore, it caused the crisis to move to a political dimension as well.

3.2.4 Tax Policies Applied Towards The Crisis

In the quest for a solution to the Russian crisis, two phases consisting of fiscal and financial policies were anticipated to control the crisis. The plan's financial cornerstones were requiring businesses to pay their debts and taxes, assist local manufacturers and exporters, impose a 20% income tax, and establish a governmental monopoly in the alcohol industry.

In addition to these fundamental steps, the existing tax legislation's structure is critical throughout the crisis. Several firms received excessive exemptions and discounts, either directly or indirectly, and insufficient audits made it easy for many companies to avoid paying taxes.The fact that just half of the tax owed in Russia can be collected, according to estimates, demonstrates the issues.

Increased tax rates were the option for governments looking to restore the Russian economy, which had shrunk by 53% in real terms per year from 1990 to 1997. However, increasing tax rates from 13% to 60% did not have the desired impact; instead, the economy shifted more informally, and tax revenues swiftly fell.

It is clear from experience that the issue with the tax system is not low tax rates. Russia urgently requires a new tax system that would lower tax rates while also covering virtually all areas of the economy, i.e., expanding the tax base, treating all taxpayers equally, and so imposing the least burden on the Russian economy.

Figure 6. General Public Revenues and Ratio of Public Expenditures in National Income in Russia

	1994	1995	1996	1997
Public Revenues %	34.6	31.9	32	33
Public Expenditures %	45	37.8	41.6	40.5

Public Revenues % Public Expenditures %

As shown in the line graph, there was a significant disparity between Russia's governmental earnings and expenditures before the crisis. This demonstrates the significance of the country's fiscal imbalance.

The government failed to raise tax collections, had also found a solution this time by cutting spending. To cover its budget deficits and get through the economic crisis, Russia borrowed money from financial institutions such as the IMF and the World Bank, from other countries as well.

It's conceivable to argue that, in moreover to the causes and effects of the crisis, the state of the financial system influenced the tax policies applied to respond to the crisis. The origins of the crisis, their impacts, and the adopted tax policies are all listed in the table below.

Table 4. An Overview of the Russian Crisis

Type of Crisis	Causes	Effects	Tax policies
Currency Crisis Debt Crisis	The effects of the transition process Policies applied to protect the value of the ruble Financial and political problems	Debt load has increased Unemployment has increased Policies implemented to prevent inflation and ensure growth have been disrupted	Strict tax policy has been implemented Companies forced to pay tax debts Income tax rates have been changed; tax rates have been increased Efforts have been made to improve the tax system

When glancing at the tax policies listed in the table, research to enhance the tax system has been conducted to strengthen the financial system and make the policies more successful, and stringent tax policies have been enacted aiming at closing the growing budget deficit and debt load.

3.3 US Mortgage Crisis

The crisis, which has had a significant impact on America, has engulfed the entire world.

Every stage of the procedure has been attempted to be explained. Because the mortgage issue affects every country, it will be beneficial to learn from the measures that have been adopted.

3.3.1 Pre-Crisis Economic Situation of US

The difficulties in the US mortgage industry are at the root of the crisis, which took on a worldwide scale in the second half of 2008. The real estate sector's difficulties began five years ago, when certain banking institutions offered loans to persons with poor credibility, putting the financial segment in danger.

By the pre-crisis period, America's financial system was booming as it had never been before. In the year 2006, financial institutions received 40% of overall business earnings in the United States. However, sixty years ago, this percentage was just approximately 2%.

The fact that maintaining interest rates low for nearly five years by Federal Reserve, provided the ideal setting for the US housing bubble. Banks collected short-term debts at a low-interest rate and converted them to long-term debt, especially property loans, during the cycle.

The mortgage system, which is the most prominent real estate financing system in industrialized countries, is a system that seeks to own a property as if it were rented, and it works by displaying the house acquired with a long-term and low-interest rate mortgage as a mortgage. The creditor has the right to sell the mortgaged real estate and collect the debt if it is not paid within the set periods.

When looking back at the years leading up to the crisis, the global economy was in serious decline. The global economy, which expanded by 4.4 percent in 2005, continued to rise in 2006 but began to contract in 2007 as a result of the crisis.

3.3.2 Reasons Triggering The Mortgage Crisis and The Development of Crisis

One of the most significant causes of the global crisis has been the unstable banking sector. The recession was experienced across the world as a result of events that evolved into a financial crisis through banking and then immediately affected the actual economy. The financial market crisis extended to the products and services markets, resulting in a global economic crisis.

The major causes of the 2008 US financial crisis were the degradation of mortgage loan frameworks, the impropriety of interest structures, housing price inflation, tightness in securities funding, the expansion of credit derivative markets, and difficulties in the credit rating process.

A crisis emerged after the bubble burst owing to the rise of the stock market and the mortgaged housing market. China, Japan, and oil-exporting countries bought dollar bills to support the US current account deficits. However, after they fled from the dollar, it intensified the crisis.

Credit rating firms played a significant role in this process as well. Rating agencies continued to back the system since they included growing house prices in their assessments. Banks, on the other hand, have been pushed to lend excessive amounts of money to clients who cannot afford to buy houses. With this consideration, banks used their loan receivables as collateral and created real estate bonds, which they then sold to hedge funds, who primarily seek large returns from risky assets at higher interest rates than their market equivalents.

In addition, new mortgages were issued on mortgaged real estates in response to rising real estate prices, and the volume of loans without actual money rose as a result of the new loans.

While the same credit rating agencies recently gave these bonds favorable ratings, their downgrades have cast doubt on the system. The values of these investment instruments have plummeted significantly as a result of the abrupt selling pressure in the secondary markets, and billions of dollars of money have lost value, exacerbating the liquidity problem.

The crisis was not caused solely by the banks and non-bank financial sector's excessive lending. A variety of government policies and international laws have also created the appropriate atmosphere for banks and non-bank financial institutions to provide additional loans and employ innovative financial strategies.

3.3.3 Economic Effects of The Crisis and Its Size over Country

As a result of the economic crisis, growth rates in some developed countries have declined, expansion in many developing countries decelerated, international trade strained, unemployment rates rose, and the government started to become more involved in the economy to mitigate the crisis's negative effects.

The impact of the global financial crisis on international economies surfaced rapidly and destructively since the last quarter of 2008. The credit mechanism was hampered by the rising level of uncertainty, which constrained real-world borrowing possibilities and resulted in a large increase in borrowing rates.

Table 5. Global Trade Volume %

Years	**Global Trade volume**	**Export**		**Import**	
		Developed countries	Developing countries	Developed countries	Developing countries
2005	7,6	6,0	11,1	6,3	12,0
2006	9,3	8,4	11,0	7,5	14,7
2007	7,2	5,9	9,5	4,5	14,2
2008	2,6	-0,1	5,6	-2,2	7,2
2009	4,1	2,5	7,4	1,1	10,5

We can see through the table that the world trade volume has dropped significantly since 2007. This contraction, which coincided with the shrinking, was felt in both rich and developing nations, and export rates in both categories went negative.

The impact of the crisis was not confined to the volume of trade. Unemployment in the United States increased from 4.9 percent in January 2008 to 8.9 percent in April 2009, with the number of jobless reaching 6.66 million in May 2009. The number of businesses that filed for bankruptcy as of March 2009 was 130,831. This statistic represents a 46 percent rise-up over the same period last year and an 81 percent increase over 2007. While 25 banks went bankrupt between January and April of 2009, there were 168 as of January 2010. These figures demonstrate how the crisis had become catastrophic in the United States alone.

Around the end of 2008, the financial crisis began to damage the economy of the surrounding countries.

While the periphery countries, which entered the crisis in a state of external balance, current account surplus, and modest external debt, were unaffected by capital movement standstill, the impact of the collapse in western economies on exports was more severe. This has resulted in a drop in growth rates rather than a contraction of these economies.

The US economy expanded by 2.2 percent in the second half of 2008, but the rate of expansion started to decline comparatively. The United States was not the only country whose economic development halted. In both rich and emerging nations in the European area, economic expansion has turned into a deficit.

3.3.4 Tax Policies Applied Towards The Crisis

Because of economic contracting in the US, several governments began to adopt steps. Some governments tried to implement monetary policy while others took fiscal policy actions.

In addition to the actions taken by central banks, governments, particularly in industrialized countries, have enacted complete financial packages that include tax cuts and increased government spending.

America, on the other hand, first attempted to resolve the crisis by cutting interest rates, lowering the banking sector's borrowing costs, and relieving the issues related to housing loans. When these policies failed to provide the intended effects, other packages containing financial policies were created. Financial measures such as tax cuts, increased social spending, and infrastructure project initiatives were included in the packages. With these packages, the US realized it couldn't control the crisis alone through monetary policy and instead turned to fiscal policy.

America used several fiscal measures in the past when it struggled through recessions. Increases in personal income were observed as a result of the tax reductions enacted with the "Economic Growth and Tax Reduction Reconciliation Law" issued in 2001. The money generated through these discounts was intended to be reflected in expenditures.

Although, Tax cuts raised personal income by 1.9 percent while personal expenditures grew by just 0.2 percent, based on the research.

The United States of America had to implement fresh tax measures to deal with the issue about 7-8 years following these reforms. To begin with, it applied to a variety of SCT rates and income tax reductions, as well as an increase in current discount amounts. The tax cuts enacted in this manner were designed to boost a person's disposable income by lowering direct tax rates, which was followed by lowering indirect tax rates and providing tax incentives to investors. The initiatives were designed to enhance these groups' net disposable income after taxes, with the expectation that these funds would be used for private spending.

The IMF stressed the need for fiscal measures as a means of overcoming the crisis. Because the financial crisis has hampered money transmission channels, many nations have already exhausted their monetary expansion options, and central banks' space for interest rate reduction has shrunk significantly. Fiscal policies are the only policies that can be implemented at this time. Because market compression is one of the most major causes of economic crises, increasing consumer wealth is the best method to expand consumer markets. With such measures, it is feasible to enhance consumer earnings, increase the minimum wage, reduce taxes on salaries and low income, and so on.

The US government planned a 342 billion $ tax relief package for businesses and individuals in response to the economic recession. Tax savings of $500 for single individuals and $1,000 for married workers for those who had a yearly income of less than $200,000 were included in this package. Individuals with an annual gross income of less than $75,000 and married couples with an annual gross income of less than $150,000 are eligible for the tax discount. Individuals received a 10% tax deduction for the first $6,000 of their income, while married couples received a 10% deduction for the first $12,000 of their income. A tax deduction of $300 per kid, on the other hand, was applied to married couples who qualified for the deduction.

Different deductions in corporation tax were established and the deduction amounts were raised, various exclusions and exemptions were added, and future loss deduction periods were extended. Furthermore, the transfer period for prior year losses was extended from two to five years, and tax incentives for investments in internet infrastructure and renewable energy resources in rural regions had been created. The primary goal was to create new investment possibilities and reduce unemployment, and for that reason, 50 percent of the equipment purchased during the year was eligible for a tax break.

- The following programs are included in the tax packages available to individuals and companies:
- The tax taken from unemployment benefits for the first $2400 has been temporarily eliminated.
- For families with at least three children, including for educational expenses, tax benefits have been provided.
- Housing receivables are eligible for a tax credit of $7500 from January 1 to July 31, 2009.
- Until 2009, 50% of the earnings from the sale of small enterprise shares held for more than 5 years was tax-free, but this rate was raised to 75%.

Tax policies were given priority in the battle against the crisis after the election, and several priority objectives were defined. New tax exemptions for people who had low- and middle-income, government contributions to the pension funds of married couples who had an annual salary of less than $75,000, $3,000 in tax benefits for each company that hired new workers in the 2009-2010 period, and the total elimination of unemployment insurance taxes are among these goals.

The United States was not the only country to adopt a post-crisis tax policy. For financial help to consumers, Canada and France had implemented direct income tax reductions, while Brazil, India, and Turkey had performed sales tax reductions for some items such as automobiles, energy, groceries, etc.

Aside from all these tax policies, additional comprehensive actions are necessary to stabilize financial markets and encourage global economic development. In order to accomplish these goals:

- Efforts to take the necessary steps to stabilize the financial markets should be sustained.
- Household consumption should be boosted through fiscal policies, and monetary policy aid should not be overlooked.

In fact, the government's support for large companies by stepping forward, ensuring the progression of financial transactions by issuing money to the market without disruptions, and avoiding unnecessary acceleration of money flows between countries by putting financial transactions under relative control are all intended to keep the financial crisis at bay and preventing its expansion.

When looking at the tax policies that were considered during the crisis, measures targeted at reducing market stagnation were adopted. To extend the declining trade volume, raise overall demand, and assure economic development, expansionary tax measures have been introduced.

Table 6. An Overview of the US Mortgage Crisis

Type of Crisis	Causes	Effects	Tax policies
Real Sector Crisis / Recession Crisis	Unstable banking sector Disruption of the structure of mortgage loans Swelling in house prices Problems in the credit rating process	International trade volume shrank Decreasing Growth rates Declining Aggregate demand Unemployment increased Confidence in markets decreased	Expansionary tax policy applied Consumption tax rates have been reduced Exemptions and exceptions have been expanded Increased tax incentives Special tax deductions were made for low-income groups

Even though the financial policies and packages put in place by the US government did not entirely stabilize the financial services sector but kept the markets from crashing.

3.4 The European Union Economic Crisis

In terms of its range of impact, the European Union's economic problem is extremely broad. Because the European Union's member nations were affected by the crisis. As a result, tax policies before and after the crisis have been explored in this section.

3.4.1 Economic Situation of the European Union Countries Before The Crisis

The financial crisis that started in the United States in the second quarter of 2008 extended around the world, resulting in a catastrophic financial and real-estate catastrophe. The issues that arose in the financial system as a result of the global crisis and the rising level of uncertainty, harmed investor and consumer confidence.

Without a doubt, the crisis had a severe influence on the European Union, which began a major recession period in 2009, shrinking by 4.1 percent. Even among the EU's strongest economies, GNP fell by -3.8 percent in the first quarter of 2009 compared to the previous quarter in Germany, -2.4 percent in Italy, -1.9 percent in the United Kingdom, and -1.9 percent in France. -1.2 % drop.

In addition to the economic declines, EU nations' budget deficits have grown dramatically. On the one hand, public spending grew as a result of measures made to mitigate the impact of the crisis in EU nations, while tax receipts dropped as a result of market stagnation. As a result of this scenario, budget deficits and borrowing expanded. Belgium, the Czech Republic, Germany, Italy, the Netherlands, Austria, Portugal, Slovenia, and Slovakia were among the first nations to start running deficits in their budgets. Greece was the country worst hit by the crisis.

The financial crisis's cyclical recession, combined with a smaller tax base that prevented the accomplishment of planned tax collections, as well as rising unemployment rates, resulted in a rise in social transfer expenditures.

Furthermore, tax cuts in several Eurozone nations and other cyclical policies, diminished government income. Furthermore, it has been found that in certain member nations, the rate of rising in public spending is faster than the growth rate in GDP. However, according to the EU Maastricht Treaty, member state's budget deficits should not exceed 3% of GDP; however, the abovementioned governments disregarded this guideline during the financial crisis.

The crisis had an impact on more than just government spending and income. Many European banks' holdings included US financial industry equities and derivatives. The fact that their value fell as a result of the crisis, with some even falling to zero, left the country's banks in a serious financial crisis.

All governments have issued a list of emergency measures in response to the global crisis and have taken quick action. The G20 summit was organized in this process, and the actions to be done to combat the crisis were put on the agenda. The following are some of the crisis-resolution initiatives proposed during the summit.

- Reforming the financial system and promoting development
- Making accounting records fully transparent and compliant
- Reducing system-related risks and reviewing the salaries of corporate executives while strengthening markets.
- Accelerating the functioning of the IMF and the World Bank

At the November 2008 and April 2009 sessions, it was anticipated and endorsed that each state was supposed to develop measures tailored to its unique circumstances. Measures for public financing and monetary policies for financial markets have been adopted in this context. While virtually all nations boosted expenditure on social security, housing assistance, and infrastructure, they also incorporated tax cuts, exemptions, and incentives in income-related measures.

Many European states took steps to avert or at least minimize the financial catastrophe that they were experiencing. To alleviate the stagnation, steps such as strengthening the deposit guarantee for the banking sector, creating relief funds, and nationalization were implemented, in addition to tax measures to promote consumption and an increase in social spending and public investments.

At this moment, we can conclude that European countries were concentrating their efforts on stable public finance policies in order to alleviate the impacts of the crisis. For example, under the stated program, the Portuguese government chose to raise income tax, corporation tax, value-added tax, and capital gains tax rates beginning in mid-2010, while the Irish government provided steps to address insecure tax collections.

Despite the measures that were adopted and attempted to be implemented, the crises' impacts were felt strongly in several countries. Iceland, Ireland, and Greece have been hit the worst by the crisis, while credit ratings for nations like Italy, Estonia, Hungary, Latvia, and Lithuania have been reduced, putting them on a list of countries to avoid for investors.

3.4.1.1 Greece and The Economic Crisis Process

Failure to execute structural changes that have been on the table for a long time and an inability to properly employ the financial resources given by foreign borrowing, combined with the negative impacts of the global crisis, plunged the Greek economy into a catastrophic crisis.

The newly elected government of Greece revealed in November 2009 that financial statistics had been manipulated, marking the formal start of the Greek economic crisis.

The new administration, which took office in the fall of 2009, stunned EU authorities and investors when it announced that the budget deficit to national income ratio had risen to 12.7 percent.

Because this rate was nearly double the previous government's budget deficit. The fact that economic development is based on external debt is the cause for the budget deficit reaching such a critical level. Although the country's public debt stock has risen by 100% in the previous ten years, to about 300 billion Euros, its national income has not grown at the same pace, and tax revenues have dropped to 19% of GNP in 2009. As a result, Greece's overall public debt has risen to about 125 percent of its national revenue.

The followings are Greece's economic indices from 2006 to 2010.

Table 7. Economic Indicators of Greece (2006-2010)

	2006	*2007*	*2008*	*2009*	*2010*
Growth	5.2	4.3	1.0	-2.0	-4.5
Government Debt	115.5	113.0	117.6	135.5	130.4
Budget Deficit	-5.95	-6.71	-10.18	-15.15	-11.29
Interest rate	4,07	4.5	4.8	5.17	9.09

In recent years, Greece breached the Maastricht Criteria, which were required for EU membership, as can be seen in the table. This economic downturn was expected to persist throughout 2011 and 2012. According to a recent IMF statement, Greece's economic recovery was expected to begin in 2013 at the earliest.

Along with the economic challenges, the quest for answers to the crisis's fundamental causes continues. This large divergence in the Greek budget deficit, according to Kouretas, is attributable to three primary reasons:

- The "economic cycle" effect resulting from the economic downturn and a larger-than-expected decline in real GDP
- The “election or political cycle” effect resulting from the laxity of revenue collection mechanisms and high spending,
- The “structural” impact from widespread structural inadequacies and shortcomings in collecting taxes, controlling expenditures and recording data.

The recent financial slack in Greece, as well as the inability to implement planned structural changes and an unanticipated drop in GDP, have exacerbated the situation.

Despite efforts to hide the situation with statistical data, the Greek government was forced to seek international financial assistance due to issues such as the country's unsustainable fiscal policies, inflexible labor, and commodity markets, lowered competitiveness, and rising external debt burden.

Although it opposes the transfer of resources to "extravagant members" that do not adhere to budget discipline, particularly Germany and Greece, and the EU's largest economies, if Greece is bailed out, Ireland, Portugal, and Spain, which have comparable qualities, would follow suit and would look for support. Furthermore, it was expected that with the aid guarantee, the countries mentioned above may stop following fiscal discipline.

Because Greece's financial problem, which sprang from its budget deficit and huge public debt stock, impacted countries with particularly poor economies, such as Spain, Portugal, and Ireland, with which it has a credit connection, the issue landed on the European Union's agenda.

In response to Germany's stance, the European Commission made official on May 2, 2010, that it had reached an agreement with the IMF and the European Central Bank on a financial assistance package totaling 110 million Euros, and that the IMF and Greece had signed a 30-million-euro stand-by agreement. The goal of this deal is to maintain stability in the Greek economy, enhance competitiveness, and restore confidence in the market, thereby lowering the public budget deficit to 3% of GDP in 2014.

Greece is unable to lessen its debt burden by depreciating its currency or decreasing interest rates since it is a member of the European Union and is bound by the Maastricht Criteria. Although it will be difficult for Greece to get its economy back on track with the strict monetary and fiscal policies it will follow by the European Union, the possibility that the measures imposed would elicit popular outrage and cause social unrest emerges as a different issue.

Greece is going through a social crisis as well as economic challenges throughout the crisis. Strikes and protest rallies in reaction to the worsening of the Greek economy and Prime Minister George Papandreou's economic measures to decrease the budget deficit demonstrate that the crisis has reached a level that leads to societal despair.

Greece, which is dealing with economic and social issues, has announced fresh steps to address the crisis and is looking for ways out. Greece, which had received 110 billion Euros in aid from the EU and the IMF at the time, opted to raise indirect taxes (such as VAT increases on items such as gasoline, cigarettes, and alcohol) and lower or freeze public employee pay as a result of the crisis.

3.4.1.2 Ireland and The Economic Crisis Process

Following Greece, Ireland faced the possibility of failing on its debts in the fall of 2010. Ireland, which had a budget surplus before the 2008 financial crisis, saw real estate values fall as a result of the crisis, leading to a rise in bad loans and a fast outflow of money. The Irish economy continued to deteriorate as a result of issues in the property market, the banking sector being shaken by the crisis, the nation losing its labor pricing advantage during the 2000s, and a tax structure centered on supporting growth.

After significant budget deficits, banking sector losses, and large deposit outflows, the Irish government asked for help from the European Union and the International Monetary Fund (IMF) in late 2010. According to Ireland's request for assistance, 50 billion Euros of the total 85 billion Euros of financial help will be used to lower the budget deficit to the 3% limit until 2015, with the remaining 35 billion Euros going to the banking sector, with a rescue package in the works.

The table below depicts the changing economic structure of Ireland between 2006 and 2010, as well as the consequences of the crisis.

Table 8. Economic Indicators of Ireland (2006-2010)

	2006	2007	2008	2009	2010
Growth	5,3	5.6	-3.5	-7.6	-1.0
Public Debt	27.7	27.5	47.6	67.8	83.7
Budget Deficit	2.78	0.27	-7.03	-13.87	-32.12
Interest rate	4,07	4.5	4.8	5.17	9.09

The table demonstrates that Ireland, like Greece, drifted away from the Maastricht Criteria. The Irish government, which initially refused EU and IMF aid, eventually concluded that it could not solve the crisis on its own and requested assistance in 2010. Ireland continues to grapple with the issue despite the preparation of a rescue package.

3.4.1.3 Portugal and The Economic Crisis Process

Portugal's public budget issues, while not as severe as those in Greece and Ireland, had lasted for a long period. The Portuguese economy's long-term stagnation had rendered strengthening government finances even more challenging.

Table 9. Economic Indicators of Portugal (2006-2010)

	2006	2007	2008	2009	2010
Growth	1.4	2.4	0.2	-2.5	1.3
Public Debt	83.0	80.5	84.5	97.6	105.7
Budget Deficit	-4.18	-2.90	-3.70	-9.87	-11.40
Interest rate	3.91	4.42	4.52	4.21	5.40

By analyzing the statistics in the table, it can be stated that Portugal's economic position is better to that of Greece and Ireland. Portugal, like the other governments, breached the Maastricht Criteria of the European Union. Portugal, like other countries, sought help and enacted policies aimed at lowering fiscal deficits.

Although the countries damaged by the economic crisis are not restricted to these, the effects of the crisis on developed and developing countries were distinctive. Because, although nations with budgetary discipline are more likely to weather the storm, those that lack financial discipline are hit harder.

Iceland was one of the countries most hit by the crisis as well. After the bank collapses, the Icelandic government resigned as a result of the crisis, and the political instability created a lack of confidence. This opened the way for the worst-case scenarios to emerge in a crisis.

Spain was the other one which was most damaged by the worldwide economic crisis. The Spanish government, which was dealing with debt stock and budget deficits, also adopted several steps, the majority of which were aimed at reducing the budget deficit and maintaining fiscal discipline.

3.4.2 The Development and Economic Effects of The Crisis

Greece's and other European Union countries' financial difficulties were felt throughout the bloc. To begin with, about 90% of Greece's government debt, as of 2009, was made up of borrowings from foreign financial institutions, primarily European banks. French banks account for 36% of the government debt load, German banks for 21%, and other European banks for 32%. Non-European banks account for 11% of the total. As a result, late or unpaid debt payments would harm the financial systems of EU lending countries.

In addition, Greece's "frugality" in submitting the essential macroeconomic statistics to EU officials to become a member of the Eurozone greatly weakened the Eurozone's credibility, and the Euro began to devalue against the Dollar. The economic crisis resulted in severe declines in the financial markets in addition to the currency devaluation. The key stock market indexes in Germany, England, and France all dropped by approximately 1%, and market confidence plummeted.

Similar issues emerged in other member countries as a result of the debt crisis in Greece, and budget deficits worsened day by day, surpassing the allowed 3%. The European Union, on the other hand, develops policies to supply and safeguard economic conditions in countries. These policies are preventive and deterrent tactics, and their foundation is the Stability and Growth Pact's regulations. The Prevention Strategy requires member states' budget deficits to be identified and preventative actions to be proposed to address budget deviations before they surpass the 3 percent of GDP limit. Corrective actions are done as part of the deterrence strategy to guarantee that member states do not violate the 3% limit or, if they do, that they quickly remedy the problem. Even though the early warning procedure and the excessive deficit procedure had been used multiple times for many countries, no sanctions were imposed on any of the nations, including Greece, that consistently failed to reach the set limitations. However, if the European Union's authorized authorities had imposed the appropriate penalties ahead of time, Greece could have been able to take several steps before the debt crisis worsened.

Not just in terms of financial market management, but also in terms of other measures enacted during the crisis, Eurozone countries fell short of expectations. The Euro Zone's long-term failure to handle budget deficits is significant evidence of this, particularly in the context of Greece's government debt crisis. Furthermore, although some member nations, such as Portugal and Italy, are grappling with huge public debts, others, such as the United Kingdom, have introduced measures such as pay adjustments and productivity increases in addition to strict budget rules. This circumstance demonstrates a lack of cooperation in the union's policy implementation.

As a result, the crisis had various consequences in each state. When we look at the economic growth rates in European Union countries, we can see that the growth that existed until 2006 is now on the decline. With a drop of -4.2, 2009 was the worst year in the European Union. Indeed, 2009 was the year in which EU nations' GDP turned negative and the crisis was most acutely felt.

Table 10. Growth Rates in European Union Countries Compared to the Previous Year (2005-2011)

	2005	2006	2007	2008	2009	2010	2011
European union	2	3.3	3.2	0.3	-4.2	2.1	1.5
Belgium	1.8	2.6	2.9	1.1	-2.7	2.3	1.8
Bulgaria	6.5	6.6	6.5	6.3	-5.6	0.5	1.8
Czech Republic	6.7	7.1	5.6	3.2	-4.6	2.6	1.7
Denmark	2.5	3.5	1.7	-0.9	-5.9	1.4	1.1
Germany	0.8	3.6	3.2	1.1	-5.1	3.6	2.9
Ireland	5.2	5.2	5.2	-3.1	-7	-0.5	0.7
Greece	2.3	5.4	3	-0.2	-3.2	3.4	-6.8
Spain	3.7	4.1	3.6	0.8	-3.6	-0.1	0.7
France	1.7	2.4	2.2	-0.1	-2.8	1.6	1.7
Italy	0.8	2.3	1.7	-1.3	-5.5	1.8	0.4
Holland	1.9	3.3	3.8	1.9	-3.6	1.6	1.3
Austria	2.3	3.6	3.9	1.5	-3.8	2.3	3.2
Poland	3.7	6.3	6.8	5.1	1.7	3.8	4.2
Portugal	0.9	1.5	2.4	0.1	-2.8	1.4	-1.5
Romania	4.3	7.8	6.4	7.2	-6.7	-1.6	2.5
Finland	2.8	4.5	5.2	0.4	-8.3	3.7	2.9
Sweden	3.1	4.2	3.2	-0.6	-5.1	6.1	3.8
England	2.2	2.7	3.4	-1.2	-4.5	2	0.7
Iceland	7.1	4.7	5.9	1.4	-6.7	-4	3.2

Although economic growth projections were decreased in 2012, the EU and Euro Area budget outcomes were usually expected to be achieved by the autumn forecasts, according to the available statistics on public finances. The fact that the outlook for public finances has not changed in general, the economic slowdown, and the negative impact of poor financial performance on the budget, can all be attributed to the compensation of additional budgetary measures taken in some member countries following the autumn forecast.

Changes in the labor structure are one of the detrimental consequences of economic crises on countries. With the crisis, jobless rates have risen in most EU nations, while employment rates have fallen. The table below illustrates the changes in EU nations' unemployment rates from 2005 to 2011.

It's difficult to tell if the crisis has had an impact on labor markets in economically developed nations; but, when we look at unemployment rates in relatively poor countries, we can see that there has been a considerable increase in the previous three years. In 2011, the unemployment rate in Spain was 21%, in Greece it was 17%, and in Ireland, Portugal, Bulgaria, and Hungary it was above 10%.

Table 11. Unemployment Rates in European Union Countries (2005-2011)

	2005	2006	2007	2008	2009	2010	2011
European union	9	8.4	7.2	7.1	8.9	9.7	9.6
Belgium	8.6	8.3	7.5	7.1	7.8	8.2	7.3
Bulgaria	10.1	9	6.9	5.7	6.8	10.1	11.1
Czech Republic	7.8	7.2	5.2	4.5	6.7	7.3	6.8
Denmark	4.9	3.8	3.7	3.5	6	7.5	7.6
Germany	11.3	10.2	8.6	7.5	7.9	7.2	5.9
Ireland	4.4	4.6	4.7	6.3	11.9	13.6	14.4
Greece	9.9	8.8	8.2	7.8	9.6	12.5	17.7
Spain	9.1	8.5	8.3	11.2	18	20.1	21.7
France	9.2	9.1	8.5	7.7	9.5	9.7	9.8
Italy	7.8	6.8	6.1	6.8	7.7	8.5	8.4
Holland	5.3	4.5	3.6	3.1	3.6	4.5	4.4
Austria	5.1	4.9	4.4	3.8	4.8	4.5	4.2
Poland	17.7	13.9	9.6	7.2	8.2	9.7	9.8
Portugal	8.6	8.7	8.9	8.5	10.7	12	12.9
Romania	7.3	7.2	6.4	5.8	6.9	7.4	7.5
Finland	8.4	7.6	6.9	6.5	8.2	8.4	7.8
Sweden	7.7	7.1	6.1	6.2	8.3	8.5	7.8
England	4.8	5.4	5.3	5.6	7.5	7.8	8
Iceland	2.6	2.9	2.4	3.1	7.2	7.6	7.1
Hungary	7.2	7.5	7.4	7.7	10	11.2	10.9

Inflation rates have risen across Europe, especially in developed countries, by looking at the rates of change in inflation. Iceland, Romania, Poland, and Greece were the countries that experienced the highest inflationary pressures in 2008. Many governments' inflation rates went up in 2011 compared to the previous year.

Inflation in the EU and Euro Area was more resistant than expected in the autumn projection due to the delayed impact of rising oil prices in the first half of 2011. Thus, the EU's annual inflation rate reached 3.1 percent at the end of the year.

Table 12. Annual Rates of Change in Inflation in European Union Countries (2005-2011)

	2005	2006	2007	2008	2009	2010	2011
European union	2.2	2.2	2.3	3.7	1	2.1	3.1
Belgium	2.5	2.3	1.8	4.5	0	2.3	3.5
Bulgaria	6	7.4	7.6	12	2.5	3	3.4
Czech Republic	1.6	2.1	3	6.3	0.6	1.2	2.1
Denmark	1.7	1.9	1.7	3.6	1.1	2.2	2.7
Germany	1.9	1.8	2.3	2.8	0.2	1.2	2.5
Ireland	2.2	2.7	2.9	3.1	-1.7	-1.6	1.2
Greece	3.5	3.3	3	4.2	1.3	4.7	3.1
Spain	3.4	3.6	2.8	4.1	-0.2	2	3.1
France	1.9	1.9	1.6	3.2	0.1	1.7	2.3
Italy	2.2	2.2	2	3.5	0.8	1.6	2.9
Holland	1.5	1.7	1.6	2.2	1	0.9	2.5
Austria	2.1	1.7	2.2	3.2	0.4	1.7	3.6
Poland	2.2	1.3	2.6	4.2	4	2.7	3.9
Portugal	2.1	3	2.4	2.7	-0.9	1.4	3.6
Romania	9.1	6.6	4.9	7.9	5.6	6.1	5.8
Finland	0.8	1.3	1.6	3.9	1.6	1.7	3.3
Sweden	0.8	1.5	1.7	3.3	1.9	1.9	1.4
England	2.1	2.3	2.3	3.6	2.2	3.3	4.5
Iceland	1.4	4.6	3.6	12.8	16.3	7.5	4.2

Tax collections were undoubtedly one of the most significant consequences of the economic crisis. The crisis's strain on government spending not only raised the ratio of these expenditures to GDP, but also caused large reductions in tax collections. For example, in Ireland, one of the highest-income nations in the EU and one of the most hit by the crisis, the three major taxes (income tax, value-added tax, and sales tax) fell from 30% in 2006 to 27% in 2007 and 20% in 2008. In 2008, tax receipts in Ireland fell by 14%.

The table below depicts the rate of change in tax receipts in European Union nations during the last several years. In 2009, the income level in the EU, which was about 40%, fell to 39%, according to the data. However, in countries such as Ireland, Greece, Spain, England, Portugal, Poland, and Iceland, the decline was more significant. When looking at the year 2011, most governments' tax collections have improved slightly. It may be stated that the tax policies enacted in response to the crisis were successful in this regard.

Table 13. Ratio of Tax Revenues to GDP in European Union Countries (2005 - 2010)

	2005	2006	2007	2008	2009	2010	2011
European union	40.2	40.7	40.65	40.41	39.71	39.56	39.32
Belgium	43.36	43.22	42.92	43.59	42.7	42.88	43.51
Bulgaria	31.3	30.7	33.3	32.3	29	27.4	26.9
Czech Republic	34.23	33.84	34.1	33.3	32.09	32.23	33.02
Denmark	48.01	46.46	46.42	44.77	44.96	44.76	44.79
Germany	34.42	34.94	35.38	35.84	36.68	35.53	36.09
Ireland	30.06	31.41	30.83	29.02	27.97	27.66	28.38
Greece	31.87	31.05	31.8	31.8	30.75	32.04	33.64
Spain	35.24	36	36.41	32.1	29.68	31.28	31.19
France	42.9	43.27	42.55	42.33	41.53	42.15	43.33
Italy	39.05	40.46	41.56	41.6	41.97	41.7	41.64
Holland	35.01	36.05	35.69	35.95	34.94	35.66	35.44
Austria	41.01	40.41	40.55	41.39	40.98	40.96	41.12
Poland	32.96	33.61	34.62	34.12	31.2	31.36	31.8
Portugal	30.83	31.33	31.81	31.69	29.92	30.46	32.34
Romania	28.5	29.21	29.79	28.75	27.66	28.02	28.21
Finland	42.04	42.09	41.4	41.09	40.77	40.56	41.79
Sweden	46.69	46.08	45.09	44.14	43.87	43.06	42.13
England	37.6	38.29	37.85	39.46	36.7	37.49	38.1
Iceland	39.41	40.13	38.59	34.52	31.18	32.3	33.34

The crisis was causing chaos on tax collections. The consequences of financial and economic crises on tax collections have been notable since 2007 when looking at the trajectory of tax revenues over this period. While the ratio of tax revenues to GDP in the EU has fallen by 1% to 39.3% since 2006, the same ratio has decreased by 2% in the EA, to 40.2%. This demonstrates that tax revenues in both the European area and the European Union have dropped in during that period.

3.4.3 Tax Policies Applied Towards The Crisis

When it comes to the unification of European monetary and fiscal policies, the common customs policies also have had some success, and monetary policy has been taken under the control of the European Central Bank with the monetary union. The economic measures left to the governments, on the other hand, are referred to as the "soft belly" of the unification process.

Even though governments created fiscal policies to fulfill their political aims, they began to stray from budgetary discipline as the unification process progressed, as seen by the global financial crisis of 2008. In times of crisis, it is typically suggested to adopt tight monetary and fiscal policies to execute monetary and fiscal policies. These policies are based on raising taxes, cutting government spending, and tightening liquidity, especially during inflationary periods.

In this context, some of the measures taken by the EU Commission regarding tax revenues are as follows.

- Increasing the general VAT rate from 21% to 23%, increasing the reduced VAT rate from 10% to 11%
- Transition to general VAT rate in public institutions, restaurants and hotels subject to low VAT rate
- Increasing the special consumption tax on gasoline, cigarettes and tobacco products and obtaining a rate structure in line with the EU acquis
- Higher valuation of real estate, imposing a temporary crisis tax on companies with high profitability
- Placing taxes and fees on unlicensed buildings and institutions
- Tax increases for gambling businesses and license fees

When we look at the basic characteristics of the tax policies that the nations in this process have enacted, we can see that they favor measures that influence the tax base above actions that modify the tax rates. Income and corporation taxes were cut in this case, while VAT and SCT rates were raised.

Since the mortgage crisis in the United States, tax policies have undoubtedly become more important. Many countries have begun to develop financial policies in response to their crises requirements as a result of this process. In this process, Greece, on the other hand, favored an income strategy over an expenditure policy in its budget policy against the crisis, and instead of raising consumer taxes, it proposed a new tax regulation known as the crisis tax. Although this crisis tax is directed at high-income taxpayers, it is expected to raise roughly 250 million Euros. Apart from additional taxes, altering tax rates, and adopting financial measures have all come to the fore in the crisis process, in which tax policies play an essential role. At this time, the tax measures contained in the European Commission's package for Greece to save 4.8 billion Euros on March 5, 2010, are as follows.

- VAT rate will be increased to 21%
- Taxes on fuel, cigarettes and alcoholic products will be increased.
- A tax reform law will be enacted, aiming to overcome the tax evasion problem and to levy more taxes from high income earners.

With the economic crisis, EU Member States' tax policies were re-examined. Alternative fiscal policies have emerged as a result of this process. Struggling with rising financial debts on the one hand and desiring to encourage spending on the other, countries are attempting to manage their tax systems in such a manner that they contribute to GDP development while also maintaining economic stability.

The determination of the areas of influence of the fiscal policies to be executed by the countries is one of the problems to be examined here. Because the "austerity measures" that governments are attempting to implement contain tax hikes and expenditure cuts, they will elicit societal responses and recessionary impacts in the short term, perhaps worsening the current recession.

The necessity for income-generating initiatives influenced the decision to implement tight tax policies throughout the crisis. Austerity measures were required as a result of the debt burden and budget deficits that fueled the crisis, and tax policies were established in this context.

Table 14. An Overview of the European Union Crisis

Type of Crisis	Causes	Effects	Tax policies
Debt Crisis	The effects of the US mortgage crisis Recession in credit markets External debt burden Budget deficits	The banking system has been adversely affected Confidence in the markets has decreased Euro depreciated	Strict tax policy has been implemented Policies aimed at widening the tax base are envisaged. Consumption tax rates have been increased Additional and temporary wealth taxes have been introduced Reforms to prevent tax evasion have been taken

Despite this, as the crisis worsened, the EU Commission agreed to a second bailout package for Greece in December 2012, totaling 130 billion euros. Greece, which received funding from the European Union, passed a law raising taxes, as promised as part of the bailout package, and it was estimated that the additional levies would bring in 2.5 billion Euros to the state's coffers. Companies and people with above-average income would pay higher tax rates under the new law, which also eliminates several tax exemptions. In addition, it has been agreed to continue collecting the interim emergency property tax.

IV. ECONOMIC CRISES IN TURKEY AND APPLIED TAX POLICIES

When looking at the Turkish economy's development, it's feasible to conclude that the 1980 policies played a big role. With these measures, Turkey has started the process toward becoming a free market economy. As a result, the study will focus on the crisis times that occurred after 1980 and had a substantial impact on the Turkish economy.

Turkey has endured economic downturns periodically, like in other countries. The crises have appeared most importantly in a very short time. This caused the economy to face additional challenges before it was able to recover, and the policies implemented to lose effectiveness. The essential issue here is a good study of crises and steady preservation of the policies that are judged suitable. Indeed, the endeavor to transition to a robust economy has resulted in Turkey today; a secure and balanced framework has been supplied to both financial markets, the banking system, and the money markets.

The causes and effects of the crises for the Turkish economy that emerged in 1994, November 2000, and February 2001, and the tax policies used to tackle the crises, will be examined in this section of the research. Based on statistical data, the study will look at the application of taxes in Turkey and the efficacy of these policies throughout crises.

4.1 1994 Economic Crisis, Its Effects and Applied Tax policies

The economic crises that Turkey has faced will be compared to the economic crisis that began in 1994. In this part, which focuses on Turkey's economic difficulties, the consequences of the 1994 recession, and the country's applied tax policy will be examined.

4.1.1 Economic Situation Before 1994 Crisis

The difficulties that Turkey has faced are strikingly like those that other developing countries have encountered. Following the conclusion of Turkey's fiscal reform, financial crises became increasingly common. Turkey, like many other developing countries in the 1990s, began to suffer difficulties in 1994. One of the most striking characteristics of Turkey's crises is that they occurred during a period of foreign financial openness.

With liberalization increasing interest rates, real exchange rate developments, and legal reforms on capital transfers, Turkey boosted capital inflows after 1989. Since then, the unrestricted movement of capital has spurred hot money, import, and consumption.

With the real value of money rising by more than 20% in the 1989-90 era, significant shortfalls in imports and the foreign trade balance began to emerge. The economy's competitiveness has been harmed by real currency depreciation and high real labor costs. From 1989 to 1993, the public sector revenue and spending balancing deteriorated, the public sector borrowing rate and interest burden increased, and public spending increased, all indicating the pre-crisis era. State economic enterprise deficits, infrastructure spending, fast pay and salary rises, agricultural subsidies, Gulf war, and counter-terrorism expenditures are all based on public increases. Moreover, the rapid flight from TL has been intensified by domestic and foreign imbalances, such as high inflation, large current account, and budget deficits.

The fast-growing public deficits, several difficulties created by import-dependent growth, and financial-market volatility have profoundly disturbed the country's economic balances. Moreover, a major component in the crisis is the maladministration of the public debt before the crisis, and the attempt to maintain domestic interest rates below balance interest rates in order to finance budget deficits cheaply.

4.1.2 Causes and Development of The 1994 Crisis

financial and structural. The state's inability to borrow money is one of the underlying reasons for the problem. The increased borrowing demand for the public sector has progressively transformed into a domestic debt management issue. The public borrowing requirement increased the interest rate differential between the United States and other countries, encouraging short-term capital inflows. Even though this scenario has accelerated the entry of capital mobility, market participants have lost faith in the measures that have been adopted. Thus, the financial crisis in Turkey in 1994 was triggered by budget deficits and external deficits, known as double economic deficits.
The crisis in 1994 may therefore be described as a crisis that obstructed not just financial or monetary, but also all economic sectors.

4.1.3 The Effects and Economic Dimension of The 1994 Crisis

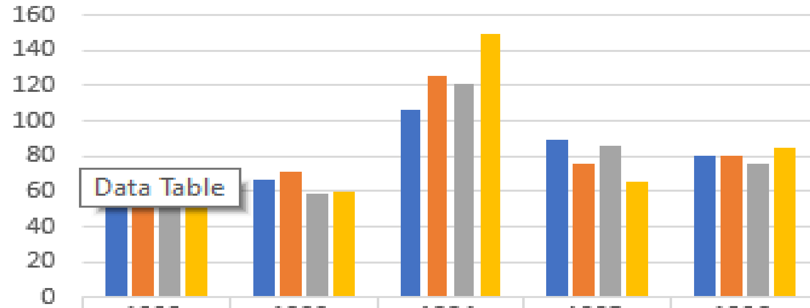
Under the effects of the Persian Gulf war in 1990 and early elections in 1991, Turkey joined the crisis phase. Turkey suffered rising government sector deficits, inadequate tax revenues, and unpaid domestic obligations throughout the whole period.

Table 15. Some Economic Indicators Before and After the 1994 Crisis (1992-1993)

	1992	1993	1994	1995	1996
GDP Growth Rate	5,98	8,04	-5,45	7,19	7,00
GDP	1.469.755	2.664.116	5.200.119	10.434.647	19.857.343
Dollar exchange rate on avg.	0,007	0,011	0,030	0,046	0,081
Year-end Dollar Rate	0,009	0,014	0,038	0,061	0,108
Imports	22.871	29.428	23.270	35.709	43.627
Exports	14.715	15.345	18.106	21.636	23.225
Export/ Import %	64,3	52,1	77,8	60,6	53,2
Export-Import dif.	-8.156	-14.083	-5.164	-14.073	-20.402
Current Account Balance	-9.74	-6.433	2.631	-2.339	-2.437
Net International Reserve	15.252	17.761	16.514	23.317	24.966

When the economic repercussions of the 1994 collapse are analyzed, all values have changed significantly. The economic growth rate fell into a deficit during the year and was recorded as -5.45 percent. The average and year-end dollar exchange rates climbed significantly, and this trend persisted in the years after the crisis. When looking at the years leading up to the crisis, several economic indicators might be seen as warning signs. While both before and after the crisis, the current account balance and the export-import coverage ratio were negative, it is feasible to claim that the growth rate increased slightly after the crisis.
Furthermore, investments stopped in 1994 and company closures raised the unemployment rate. In 1993, the rate of unemployment climbed to 7.6%, and in 1994 it rose to 10.5%. In 1994 there were 662 closed businesses, which is 203.7 percent higher than in 1993.
There was a significant effect of the crisis on inflation as well. By analyzing the graph below, inflation values were tripled which depicts the severity of the crisis.

Figure 7. Inflation Changes Before and After the 1994 Crisis (1992 - 1996)



	1992	1993	1994	1995	1996
CPI* 12-Month Average	70.1	66.1	106.3	89.1	80.4
CPI Year-end	66	71.1	125.5	76	79.8
PPI**12-Month Average	62.1	58.4	120.7	86	75.9
PPI Year-end	61.4	60.3	149.6	65.6	84.9

CPI* 12-Month Average CPI Year-end PPI**12-Month Average PPI Year-end

**Consumer price index*
***Producer price index*

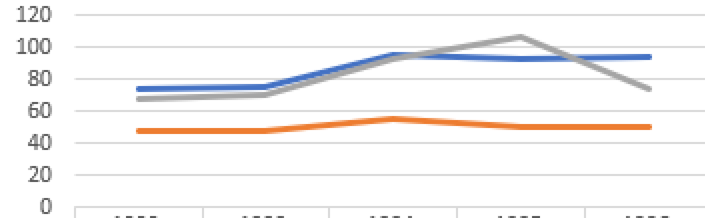
The consumer price index had a year-end value of 125.5 percent, while the producer price index had a year-end value of 149.6 percent, as shown in the diagram. Even though inflation rates dropped to double digits during the crisis, they have remained high. The following are budget realizations before and after the 1994 economic crisis.

Table 16. Budget Realizations Before and After the 1994 Crisis (1992 - 1996)

	1992	1993	1994	1995	1996
Cons. Budget Expenses	225.398	490.438	902.454	1.724.194	3.961.308
Cons. Budget Revenues	178.070	357.333	751.615	1.409.250	2.727.958
Tax Revenues	141.602	264.273	587.760	1.084.350	2.244.094
Primary Surplus	-7.030	-16.635	147.445	261.172	264.051
Domestic Debt Stock (Central Government)*	194	357	799	1.361	3.149
Public Sector Borrowing Requirement/GDP	7.9	7.7	4.6	3.7	6.5

When comparing pre-crisis and post-crisis budget realizations, it becomes clear that the gap between public revenue and spending has widened with each consecutive year. Tax receipts, which account for most of the total budget income, were likewise inadequate to meet public spending. Because of the rising debt burden at this time, earnings were split, and the primary surplus began to rise following the crisis. Furthermore, high real interest rates have exacerbated the public sector's borrowing requirements, revealing a debt-interest infertile loop that leaves Turkey in a worsening scenario day after day.

Figure 8. Change in Interest Rates Before and After the 1994 Crisis (1992 -1996)



	1992	1993	1994	1995	1996
Savings Deposit Interest Rate %	74.2	74.8	95.6	92.3	93.8
CBRT* Rediscount Interest Rate %	48	48	55	50	50
Interbank Overnight Interest Rate %	67.8	69.9	92.1	106.6	74.3

**Central Bank of Turkey*

Interest rates, which were one of the main causes of the crisis in 1994, had risen substantially since that time. The savings deposit insurance fund rose to 95.6 percent during the period, the Central Bank rediscount interest rate rose to 55 percent, and the overnight interest rate rose to 92.1 percent. Interbank overnight interest rates continued to rise the next year, reaching a high of 106.6 percent.

The debt principal and interest payments were one of the most significant consequences of the economic crisis. The impact of loan principal and interest payments on tax collections was as follows in the crisis year.

Table 17. Relation of Consolidated Budget Tax Revenues and Debt (At Current Prices)

	Debt principal payments/tax revenues (Percentage change)	**Debt interest payments/tax revenues (Percentage change)**	**Debt principal payments + interest payments/tax revenues (Percentage change)**
1993	79.0	44.1	123.1
1994	99.8	50.7	150.5
1995	122.3	53.1	175.4
1996	142.4	66.7	209.1
1997	68.2	48.0	116.2
1998	100.0	66.9	166.9
1999	110.5	72.4	182.9
2000	75.9	77.1	153.1
2001	160.4	103.3	263.7
2002	146.2	87.0	233.2
2003	138	69.5	207.5
2004	137.9	56.9	194.8
2005	124.6	39	163.6

When the debt principal and interest charges are compared to tax receipts, the tax income to debt payments ratio is not particularly high. This condition, however, becomes more apparent during and after the crisis period. It may be argued that there were severe issues with loan principal and interest payments, particularly in 1994. The lessening effect of the crisis on tax collections appears to have contributed to the rate hike. This upward trend persisted in the years following the crisis. Since 1997, this negative image has been on a declining trend, and it has been at an average level until the 2001 catastrophe.

While, for instance, the interest was paid by 32 TL of all 100 TL of fiscal income received in 1990, the amount was raised to 72 TL in 1999. The state was unable to devote sufficient resources for its basic duties including education, health, and justice as a result of such changes. This demonstrates clearly how borrowing imposes a tax cost.

The main variables impacting tax income are not simply debt or interest payments. Inflation also has a corrosive impact from time to time on tax collections. The following table demonstrates the connection of tax and inflation in the years leading before and following the crisis.

Table 18. Comparison of Tax Revenues with Wholesale Price Index (1992 - 1996)

	Wholesale Price Index Increase %		Difference Between Tax Revenues Collection Increase and Payroll %	
	Increase Compared to the Same Month of the Last Year	Twelve-Month Average Increase	Increase Compared to the Same Month of the Last Year	Twelve-Month Average Increase
1992	61.4	62.1	18.7	18
1993	60.3	58.4	26.3	28.2
1994[1]	149.6	120.7	-47.2	-18.3
1994[2]	149.6	120.7	-27.2	1.7
1995[1]	64.9	86.0	37.8	16.7
1995[2]	64.9	86.0	19.6	-1.5
1996	84.9	75.9	22.1	31.1

When the data in the table is reviewed, it becomes clear that inflation rates increased significantly throughout the crisis. In comparison to the same month the previous year, the inflation rate in 1994 grew by 149.6 percent, with a twelve-month average rise rate of 120.7 percent. Even though the inflation rate dropped to double digits in the following years, the rate remained high. Given the rise in fiscal receipts, it may be said that the crisis hits tax collections seriously. The rate of growth in taxes became negative as a result of the 1994 crisis and was -47.2 percent in 1994 compared to the same month last year, while the average of 12 months was -18.3 percent. Inflation can be considered to have a corrosive impact on income from taxes.

4.1.4 Tax Policies Applied Towards The Crisis

The failure of public income to match public spending in the early 1990s exacerbated the need for public sector borrowing, and social security institutions began to run deficits in addition to the budget deficit. Inflationary pressures were exacerbated by the TL's appreciation. Inflation hit triple digits at this time, and yearly interest rates soared to unprecedented amounts of 400 percent. On April 5, 1994, several steps had to be introduced in order to restore economic stability.

With the 5 April resolutions, Turkey implemented policies in order to attain the stability and intensified the efforts in this direction. The project's primary structure is as follows.

- The major goal of these actions was to maintain financial market stability, halt TL flight, and erase the anticipation of an increase in exchange rates in order to avert a stock market fall.
- To stabilize the economy, price rises must be halted.
- To achieve the earnings balance of the public sector and reduce public borrowing
- Minimizing balance-of-payments deficits
- Priorities such as the privatization of state economic enterprises were determined.

While these efforts bolstered foreign exchange inflows, they also promoted dollarization and were unable to avoid the imbalances that existed before the crisis from persisting.

Various tax measures have been proposed to boost revenues to balance the budget. In the beginning, oil product prices were raised, and the portion of the fuel usage tax that remitted to the budget was raised from 50% to 70%. Taxpayers who were not wage earners had to pay extra taxes on the tax bases they disclosed in 1994. For only a short period, a low rate of net wealth tax was combined with an extra property tax.

During the period while the imbalances persisted, Turkey began working with the IMF on a new stabilization plan, and on July 8, 1994, a new stand-by agreement was signed. Nevertheless, the arrangement expired on September 26, 1995, and the economic inequalities were not resolved. The 17th Stand-by took place from 1999 to 2002, after a four-year break. The fact that the instabilities worsened because of the earthquake on August 17 was crucial in reaching a deal.

To meet the 2000 objectives, several reforms in the income policy were implemented in tandem with this program. With the approval of an extra tax bill by the Turkish Grand National Assembly on November 26, 1999, it was expected that meeting budget objectives would be simpler. This tax package was also known as earthquake taxes.

- Additional income and corporate tax payments,
- Additional annual motor vehicle tax payments,
- Additional property tax payments,
- From mobile phone conversations,
- It consists of the additional taxes to be collected from the transfers of the income surpluses to be created by the boards such as Istanbul Stock Exchange, Capital Markets Board, Radio and Television Supreme Council.

With this tax package passed, there is a good chance that the goals stated will be reached. A withholding tax was levied on public documents produced before December 1, 1999, in addition to the tax package. It is hoped that by implementing the reforms, incomes will rise by 2% of GNP in 2000. In addition, the following revenue initiatives are expected to be adopted:

- By increasing the withholding tax on real estate capital gains and self-employment earnings from 15% to 20%, increasing the withholding tax rate applied to interest and repo incomes by 2%, and tax brackets for wage and salary earners, and limiting the increase in special exemption amounts to the targeted inflation rate, direct tax revenues will be increased by 0.3% of GNP.
- In terms of indirect taxes, the usual 15% VAT rate, which is relatively low in comparison to other European nations, will be raised by 2% to generate 0.5 percent of GNP. Furthermore, in 2000, Treasury permission will be required to establish gasoline rates, and charges will be automatically

adjusted depending on changes in fuel prices to guarantee that budget savings targets (about 0.4 percent of GNP) are fulfilled independent of fuel price movements.

- Other policies, such as the increased VAT rate on cigarettes and alcoholic drinks, educational cutbacks, and salary and fee increase, are anticipated to produce 0.4 percent of GNP in revenue."

Finally, the tax break for the Marmara earthquake-affected districts was extended after December 31, 1999, but only for Bolu and Sakarya, which were the worst hit by the latest earthquakes.

The failure to restore economic balances following the 1994 crisis demonstrated the need of implementing stable and consistent tax policy. However, while attempting to alleviate the consequences of the crisis, the earthquake has prompted the development of new tax policies. When we look at the situation, we get the following image.

Table 19. An Overview of the 1994 Crisis

Type of Crisis	Causes	Effects	Tax policies
Debt Crisis Currenc y crisis	Increases in the public sector borrowing requirement Imbalance in domestic and foreign interest rates Problems brought by import-based growth Increasing public deficits	Growth turned negative Overnight interest rates increased Inflation reached triple digits A number of Companies closed and unemployment increased	Strict tax policy has been implemented The rates of consumption taxes such as VAT-SCT have been increased The share allocated to the budget from Fuel Consumption Tax has been increased Additional and temporary taxes have been added under the nam e of earthquake taxes Withholding rates have been increased for some taxes

As seen in the table, public sector borrowing requirements and budget deficits, as well as the consequences of the foreign exchange and debt crises, all demanded tight tax measures.

A few steps have been implemented to combat the crisis, including government programs and IMF policies, with income-increasing initiatives targeted at reducing the budget deficit given priority. The tax policies being considered are aimed at increasing the percentage of tax receipts in overall government revenues. When comparing the period before and after the crisis, the proportion of tax receipts in overall government revenues has shifted.

Table 20. Public Revenues in Turkey Between 1992 - 1996 (Thousand TL -%)

	General Budget Revenues		Tax Revenues		Non-Tax Revenues		Special Revenues and Funds	
	TL	%	TL	%	TL	%	TL	%
1992	174.150.046	100	141.602.094	81	7.648.647	4	24.899.305	14
1993	350.845.430	100	264.272.936	75	17.636.112	5	68.936.381	20
1994	742.499.135	100	587.760.248	79	48.365.288	7	106.373.599	14
1995	1.387.759.990	100	1.084.350.504	78	86.043.516	6	217.365.971	16
1996	2.684.968.310	100	2.244.093.830	84	159.990.519	6	280.883.961	10

As seen in the table, tax receipts accounted for 81 percent of total income in 1992. However, by 1993, the percentage had dropped to 75%. Particularly, economic volatility, which began to worsen in 1993, had a negative impact on tax collections, which persisted in 1994 and 1995. In 1996, the percentage of tax receipts surpassed 80 percent for the first time, and in 1996, it was 84 percent. It would not be incorrect to suggest that post-crisis tax policies influenced this growth.

Turkey's tax rates were raised in the 1990s, but tax receipts did not rise fast enough. The explanation for the low tax collections is that taxpayers in Turkey are increasingly opting out of the system. The tax base could not be increased as a result of this trend, tax collection was insufficient in comparison to the increase in tax rates, and the tax burden was unfairly divided.

Table 21. Share of Income, Corporate and Value Added Taxes in General Budget Tax Revenues (1990-1996)

	Tax revenue collection	Income tax collection	Its share in tax revenues %	Corporate t ax collection	Its share in tax revenues %	VAT collection	Its share in tax revenues %
1990	45.399	18.609	41,0	4.637	10,2	12.371	27,2
1991	78.643	33.355	42,4	7.063	9,0	22.832	29,0
1992	141.602	60.056	42,4	10.078	7,1	42.088	29,7
1993	264.273	106.661	40,4	19.132	7,2	81.877	31,0
1994[1]	534.888	181.884	34,0	43.976	8,2	176.742	33,0
1994[2]	587.760	181.884	30,9	43.976	7,5	176.742	30,1
1995	1.084.350	329.795	30,4	103.241	9,5	354.980	32,7
1996	2.244.094	676.017	30,1	189.338	8,4	743.026	33,1

As shown in the table, income tax accounted for 41.0 percent of total tax receipts at the start of the 1990s. While VAT has the second-largest proportion of 27.2 percent, corporation tax has the third-largest share of 10.2 percent. The percentage of income and corporate taxes fell in 1994, the year of the crisis, while the VAT rate rose. It may be stated that the burden of taxation has shifted from direct to indirect taxes as a result of this process. It would not be inaccurate to argue that during the crisis year, tax rules concentrated on indirect taxes, which could be applied more quickly.

Although indirect taxes are not prevalent in Turkey, the inability to develop a declaration-based tax system, as well as the prevalence of tax exemptions, exemptions, and tax expenditures, may be effective. Furthermore, the informal economy's significant prevalence hampered the effective execution of tax regulations.

4.2 November 2000 Economic Crisis, Its Effects and Applied Tax Policies

The Russian crisis hit Turkey hard in 1999, and the country's growing foreign trade deficit and debt stock sparked a new crisis. The Turkish economy was severely impacted by the financial crisis that began in November 2000. As a result, the November 2000 crisis, which is another crisis that Turkey has faced, will be discussed in this section of the study.

4.2.1 Economic Situation Before The November 2000 Crisis

The negative consequences of the Asian crisis persisted in 1999, and the crisis in Russia, our most significant economic partner, intensified. The major concerns of 1999 are rising interest rates following the Russian crisis, uncertainty induced by the early election choice, increased demand, and output decline.

For these issues, the government at the time devised a plan that was backed by the IMF and the World Bank. Within 9 months, the initiative, which began in December 1999, had won the trust of the general public and was on a favorable track.

The economy began to recover in the second quarter of 1999, when the decrease in private spending ceased and industrial production rose, albeit little. However, the earthquake in the Marmara area hampered the economy's recovery, with industrial production falling by 12.7 percent in August and 9.7 percent in September compared to the same months last year.

In the 2000s, GDP growth in real prices was 5.6 percent in the first quarter, 5.8 percent in the second quarter, and 7.4 percent in the third quarter, all within the scope of the program executed to restore economic stability and growth.

4.2.2 The Reasons Triggering The November 2000 Crisis and The Development of The Crisis

The liquidity crisis that erupted in the final days of November was influenced by several issues. The problems in the banking system, delays in privatization, and market distrust are at the root of these issues. As a result, the overnight withdrawal of more than $7 billion by a German bank and a US bank was effective in the crisis.

The removal of $3 billion from the CBRT in the first two days of the crisis resulted in TL shortages in the markets, a 200 percent overnight repo rate in the interbank money market, and a liquidity difficulty for the banks. So much so that on December 1, the overnight repo rate rose to 1700 percent for the first time in Turkey's financial history, while the ISE index fell 26% to 7,977.

The CBRT announced that it could only consider giving TL in exchange for foreign exchange and requested assistance from the IMF to deal with the foreign currency shortage, but the anticipated help did not arrive on time. The fact that the Banking Regulation and Supervision Agency had to transfer Turkey's fifth-largest privately-owned bank to the Savings Deposit Insurance Fund of Turkey due to a lack of funds demonstrates the severity of the crisis.

The November 2000 crisis in Turkey is said to have been caused by the banking sector's frail structure. Interest rates rose as the banking system's open positions grew larger and public banking's duty losses grew larger, raising concerns about debt sustainability. According to the types of crises we looked at in Figure 1, the crisis that occurred in 2000 was a banking crisis, which is a financial sector crisis.

4.2.3 Effects and Economic Dimension of The Crisis

To alleviate the liquidity problems, Turkey reached an agreement with the IMF on 18 December 2000, submitting a new letter of intent that covers fundamental changes such as income, spending, monetary, and privatization policies. In November, international credit rating agencies Moody's and later S&P chose to retain Turkey's credit rating at the same level, or put it on hold, due to the crisis. Despite the absence of a crisis, these two organizations were anticipated to boost Turkey's credit ratings. The crisis, on the other hand, fell short of these expectations.

Before the 2000 crisis, Turkey's economic balances had shifted dramatically as a result of the 1999 economic and social crises. The following are changes in some economic indices before the 2000 crisis in Turkey, which underwent two crisis periods with extremely short intervals:

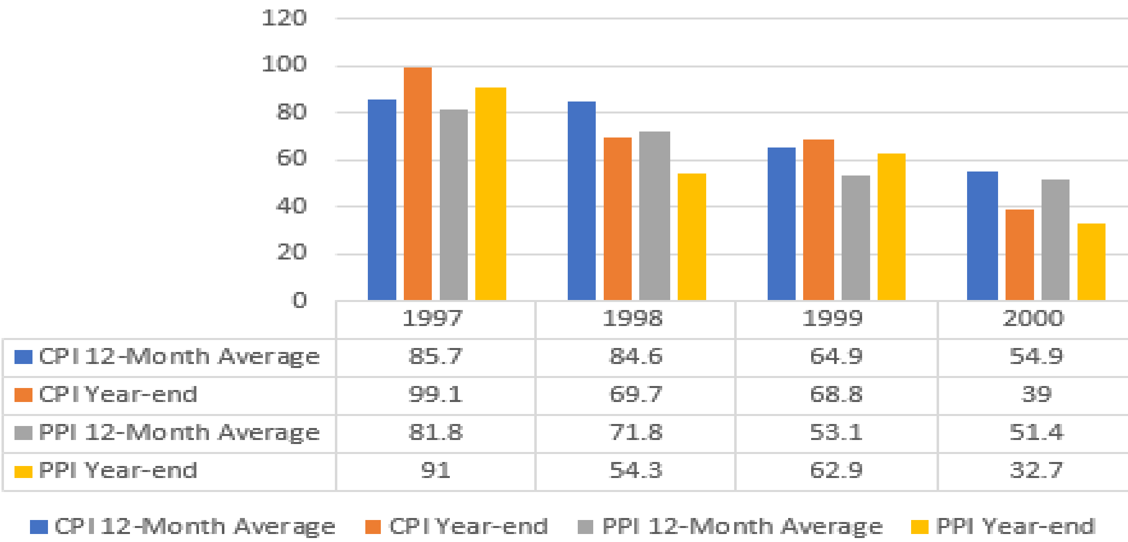
Table 22. Some Economic Indicators Before and During the Crisis of 2000 (1997 - 2000)

	1997	1998	1999	2000
Growth Rate GDP	7,52	3,09	-3,36	6,77
GDP	38.762.506	70.203.147	104.595.916	166.658.021
Avg. Dollar exchange rate	0,152	0,261	0,420	0,624
Year-end Dollar Rate	0,205	0,313	0,540	0,672
Imports	48.559	45.922	40.671	54.503
Exports	26.261	26.973	26.587	27.775
Export/Import	54,1	58,7	65,4	51,0
Export-Import	-22.298	-18.949	-14.084	-26.728
Current Account Balance*	-2.638	2.000	-9,25	-9.920
Net International Reserve	27.138	29.499	33.751	34.159

As can be seen in the table, the growth rate began to decrease in 1998 and reached a low of -3.36 in 1999. The currency rate is one of the key indicators that has altered as a result of the crisis. The average dollar rate and the year-end dollar rate both increased significantly. In addition to this rise, the crisis had a negative impact on imports and exports; while imports dropped in 1999, exports did not alter significantly. Imports grew dramatically in 2000. However, one might argue that exports did not rise at the same rate. The difference between exports and imports widened as a result of this scenario, and the current account deficit became increasingly apparent.

The inflation rate, which has not been lowered since the 1994 crisis and is a significant economic concern, remained effective during the 2000 crisis. Before the 2000 crisis, inflation rates were as follows, which became one of the primary causes for the policies implemented.

Figure 9. Changes in Inflation Before and During the 2000 Crisis (1997 - 2000)



Inflation rates were extremely high in 1997, 1998, and 1999, as well as the year-end averages of both CPI and PPI, before the 2000 crisis. Although there was a considerable drop in inflation rates in 2000, the rates were still high when the crisis period was considered.

The currency rate anchor was adopted in the Economic Participation Program, which went into force in 1999, to decrease inflationary expectations and real interest rates. The daily values of the currency rate basket consisting of 1 USD + 0.77 Euro were released in this regard, and they were in accordance with the inflation objective. This approach resulted in the economy reviving and the GNP ratios improving.

When budget realizations are compared before and after the 2000 crisis, annual public deficits have risen, and the public sector borrowing demand has risen, particularly in the previous two years. The table below shows other budget realizations.

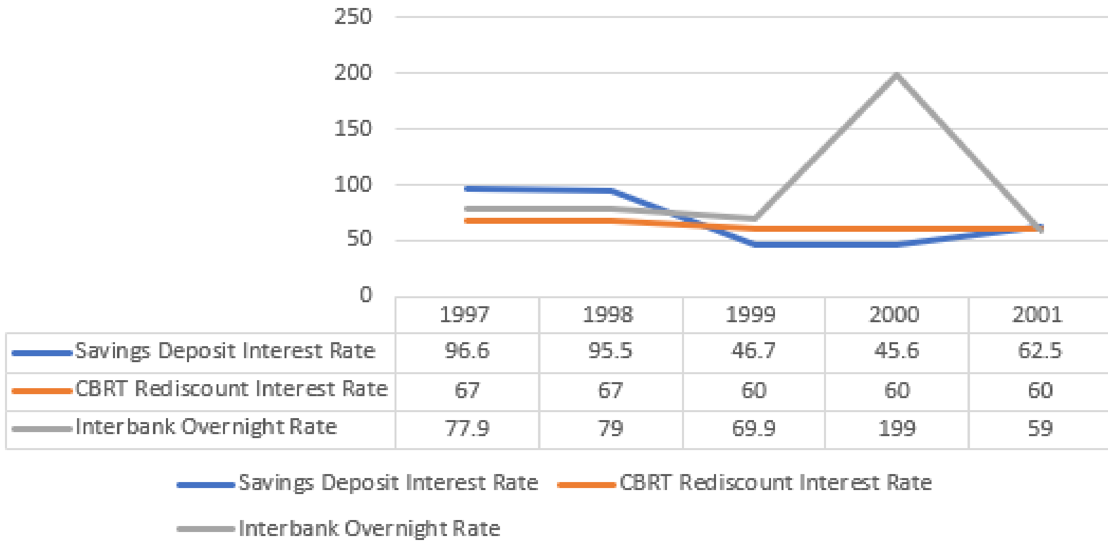
Table 23. Budget Realizations Before and During the 2000 Crisis (1997 – 1999)

	1997	1998	1999	2000
Cons. Budget Expenses	8.050.252	15.614.441	28.084.685	46.705.028
Cons. Budget Revenues	5.815.099	11.811.065	18.933.065	33.440.143
Tax Revenues	4.745.484	9.228.596	14.802.280	26.503.698
Primary Surplus	42.764	2.373.219	1.569.220	7.174.977
Domestic Debt Stock (Central Government)	6.283	11.613	22.920	36.421
Public Sector Borrowing Requirement/GDP	5,8	7,1	11,6	8,9

As seen in the table, the foreign interest rate peaked at about 7,174,977 TL in 2000, the year of the crisis. This situation demonstrates that throughout the crisis year, the domestic debt stock rose, debt interest payments climbed every year, and most budget resources were diverted to debt principal and interest payments.

Interest rates witnessed one of the most significant swings throughout the crisis. Interest rate volatility both before and after the crisis aided in the development of the crisis and made the crisis more unpleasant to endure. The interest rate fluctuations between 1997 and 2001 are shown in the diagram below.

Figure 10. Interest Rates Between 1997 – 2001



	1997	1998	1999	2000	2001
Savings Deposit Interest Rate	96.6	95.5	46.7	45.6	62.5
CBRT Rediscount Interest Rate	67	67	60	60	60
Interbank Overnight Rate	77.9	79	69.9	199	59

When interest rate fluctuations are analyzed, they were at an all-time high in 1997 and 1998. Despite a drop in rates the year before the crisis, there was a significant surge in overnight interest rates in 2000, reaching 199.0%.

4.2.4 Tax Policies Applied Towards The Crisis

A three-year plan was implemented to address the economic imbalances that emerged as a result of the crisis and to permanently lower inflation.

Within the program's parameters, a strict fiscal policy was desired, although attempts were made to execute substantial structural changes and decrease inflation expectations. For this, exchange rates were set based on the desired inflation rate and published ahead of time, while monetary policy tied liquidity expansion to foreign resource inflows.

Despite the program's implementation, Turkey's working zones have shrunk, and national income distribution has deteriorated. The projected decrease in inflation occurred gradually, but the required changes in the exchange rate anchor could not be implemented. Imports were more appealing than exports due to the overvaluation of the TL.

Efforts were made with the program to adjust the technique of financing budget deficits to economic values. Because the year 2000 saw a record international trade deficit and current account deficit, as well as a growth in foreign loans. Real interest rates become negative when the domestic debt was replaced with external debt, and the budget deficit progressively grew.

An "Additional Letter of Intent" dated 18.12.2000 was given to the IMF in the middle of November 2000, after the crisis caused by the cash bottleneck. In addition to the steps that went into effect in September 2000 and are projected to save 1/4 percent of GNP on an annual basis, the policies to be implemented, particularly in the tax area, are detailed in the letter of intent addressed to the IMF (IMF Letter of Intent, 2000).

- "In terms of direct taxes, the system of quarterly advance payment of income and corporate taxes will be extended to 2001, with the advance corporate tax rate increased from 20% to 25%; withholding tax rates on deposit, repo, and investment appropriations will be increased; income tax brackets will continue to be indexed to targeted inflation, and advance income tax will be re-applied (based on living standards). These initiatives are projected to generate 1.2 percent of GNP after the end of tax deferral in earthquake zones.

- The term of special communication and special transaction taxes will be extended to include 2001-2002 by doubling the rate of special transaction tax; VAT rates on telephone services and natural gas will be raised; motor vehicle tax rates and levels will be raised, as will taxes on cars that use LPG, as well as other levies. This package is estimated to generate 1.2 percent of GDP. Furthermore, the monthly rise in gasoline consumption tax will be calculated to be at least equivalent to the CPI inflation goal.
- Education contributions will be extended to 2001-2002 from non-tax income; contributions from the Istanbul Stock Exchange and other boards will be prolonged, and charges on domestic and import loans will be raised (Resource Utilization Support Fund). These initiatives are projected to produce 0.7 percent of GNP in revenue."

In light of the tax measures outlined in the letter of intent issued in 2000, it may be concluded that the measures to be implemented are targeted at steadily rising tax collections. Furthermore, messages were sent out stating that the policies that will be adopted are not temporary, that they would be prolonged through 2001 and 2002, and that they can be amended based on the demands of the situation.

The table below illustrates how much the tax policies enacted in this framework affected revenue receipts following the crisis.

Table 24. Share of Income, Corporate and Value Added Taxes in General Budget Tax Revenues (1997 - 2003)

	Tax revenue collection	Income tax collection	Its share in tax revenues %	Corporate tax collection	Its share in tax revenues %	VAT collection	Its share in tax revenues %
1997	4.745.484	1.500.245	31,6	396.238	8,3	1.561.562	32,9
1998	9.228.596	3.481.752	37,7	748.383	8,1	2.725.083	29,5
1999	14.802.280	4.936.551	33,3	1.549.525	10,5	4.164.334	28,1
2000	26.503.698	6.212.977	23,4	2.356.787	8,9	8.379.554	31,6
2001	39.735.928	11.579.424	29,1	3.675.665	9,3	12.438.860	31,3
2002	59.631.868	13.717.660	23,0	5.575.495	9,3	20.400.201	34,2
2003	84.316.169	17.063.761	20,2	8.645.345	10,3	27.031.099	32,1

Although different tax policies were implemented during the crisis, indirect taxes saw the most significant rise in tax rates. As a result of these actions, indirect taxes now account for a larger percentage of tax receipts than direct taxes, particularly after 2000. High inflation contributed to a drop in general tax collections in 1998 and 1999, and the crisis and earthquake that occurred during this time had a negative influence on tax revenues. Even though tax revenue collection in 2000 remained low, the tax revenue collection rates in the following years grew marginally as a result of the tax measures implemented during this time. However, the frequent occurrence of economic crises makes it difficult to properly execute tax policy. Turkey has been through several crises since 1994, and its tax policies have altered as a result. Although the types and reasons of the crises varied, the overall strategy that was to be executed remained the same, and a rigorous tax policy was enforced during the crisis.

Table 25. An Overview of the November 2000 Crisis

Type of Crisis	Causes	Effects	Tax policies
Financial Crisis/ Banking Crisis	Increasing open positions of the banking system Increasing duty losses of public banks Slow progress of privatizations A large amount of hot money coming out of the country	Foreign trade deficit widened Inflationary pressures continued The banking system has collapsed	Strict tax policy has been implemented The rate of prepaid corporate tax has been increased Income tax brackets are indexed to inflation Consumption tax rates have been increased MTV segments have been rearranged and their rates have been increased

When looking at the tax policies in the table, it's clear that the application is based on all sorts of taxes. Income-enhancing policies for income, wealth, and expenditure taxes, which make up the three parts of tax, were given priority during the crisis.

4.3 February 2001 Economic Crisis,Its Effects and Applied Tax Policies

The February 2001 situation is covered in this section. Another crisis in which Turkey was involved, the February 2001 crisis, and its consequences, were investigated in depth.
3.3.1. Economic Situation Before February 2001 Crisis Turkey escaped the November 2000 crisis with high-interest rates, a large loss of foreign exchange reserves, and a 7.5 billion dollar IMF loan. However, its ability to defend against a similar attack in the future has been significantly diminished.

The November crisis exacerbated the system's fragility by causing harm to the banking system's financial structure, particularly public institutions. The existing exchange rate regime's viability was further endangered by the fact that the interest rate remained relatively high in comparison to the increase in the exchange rate basket.
The initiative, which went into force in 2000, reduced borrowing rates, however, this resulted in a rise in individual consumer demand. This increasing consumer demand prompted imports, widening international trade imbalances while also fuelling inflation.
The domestic debt cycle has also become more difficult to sustain as a result of these changes. The rising debt stock, the non-falling inflation rate, the overvaluation of the TL, the unsustainability of the exchange rate anchor are among the economic developments before the 2001 crisis.

4.3.1 Economic Situation Before February 2001 Crisis

Turkey escaped the November 2000 crisis with high-interest rates, considerable losses in foreign exchange reserves, and a 7.5 billion dollar IMF loan. However, its ability to defend against a similar attack in the future has been significantly diminished.

The November crisis exacerbated the system's fragility by causing harm to the banking system's financial structure, particularly public institutions. The existing exchange rate regime's viability was further endangered by the fact that the interest rate remained relatively high in comparison to the increase in the exchange rate basket.

The initiative, which went into force in 2000, reduced borrowing rates, however, this resulted in a rise in individual consumer demand. This increasing consumer demand prompted imports, widening international trade imbalances while also fuelling inflation.

The domestic debt cycle has also become more difficult to sustain as a result of these changes. Before the 2001 crisis, economic dynamics included a growing debt stock, non-falling inflation, overvaluation of the TL, and the insufficiency of the exchange rate anchor.

4.3.2. The Reasons Triggering The February 2001 Crisis and The Development of The Crisis

The events that unfolded in late February, just before the Treasury auction, sparked fear in the markets, which were already in a state of flux, and shattered trust in the system. The public banks' payments system was shut down as a result of the CBRT's liquidity restrictions. The CBRT's foreign exchange reserves fell by about $6 billion as a result of these developments. The overnight interest rate in the interbank money market reached 6200 percent on February 21 and averaged about 4000 percent.

While the November crisis had passed, three months later, on February 19, 2001, a conversation between the Prime Minister and the President triggered a second speculative attack, this time resulting in a currency crisis. The application of the band, which will be passed in July 2001, has been put on the agenda to relieve the pressure on the exchange rate; however, at the time, the economic management and political authority did not favor this alternative, fearing that such an initiative would further erode trust in both the government and the program.

The banking sector is another significant problem in the February crisis. Public banks were among the primary players in the February 2001 financial crisis. The February crisis was caused by a delay in the restructuring of public banks, their worsening situation, and their increased demand for foreign currency.

The failure of this program is attributed to several causes, including the inability to perform structural changes, delays in corrective exchange rate adjustments, failing to restrict short-term capital inflows, and delays in banking sector rules.

The large public debt burden, high inflation statistics, the Central Bank's and banking sector's unpreparedness and inadequacy in the face of crises, the international trade imbalance, and political uncertainty and instability are all factors that contributed to the February crisis.

4.3.3 Effects and Economic Dimension of The February 2001 Crisis

Although attempts to mitigate the impacts of the crisis, both in government programs and in stabilization strategies presented to the IMF after 1999, resulted in some improvements, they were not enough to avert the 2001 catastrophe.

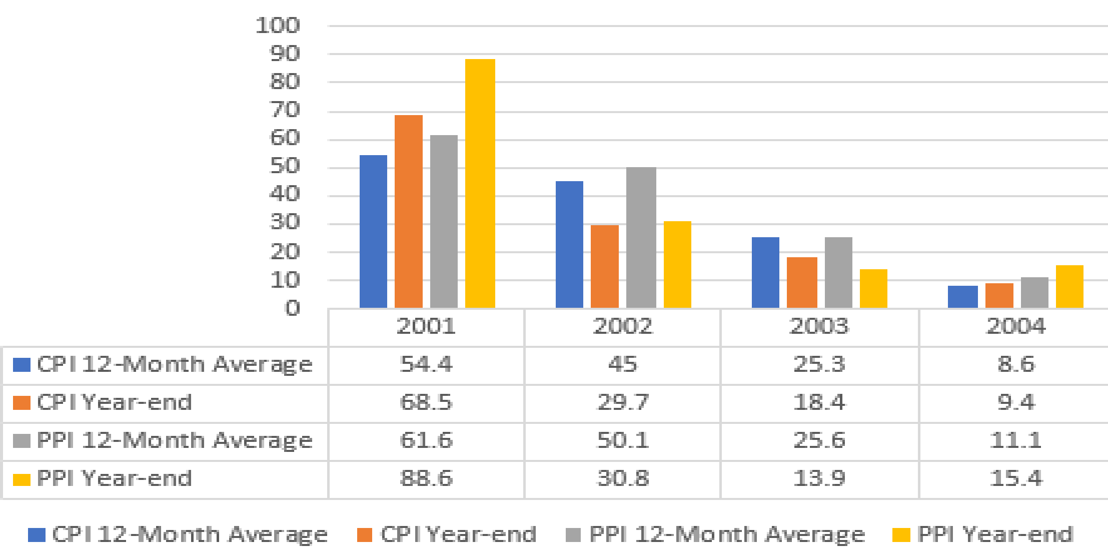
The impacts of the 2001 financial crisis on the economy, which lasted later, were measured using the following economic indicators:

Table 26. Some Economic Indicators of the 2001 Crisis and After (2001 -2004)

	2001	2002	2003	2004
Growth Rate GDP	-5,69	6,16	5,26	9,36
GDP	240.224.083	350.476.089	454.780.659	559.033.026
Avg. Dollar exchange rate	1,225	1,506	1,493	1,422
Year-end Dollar Rate	1,440	1,635	1,396	1,342
Imports	41.399	51.554	69.340	97.540
Exports	31.334	36.059	47.253	63.167
Export/Import	75,7	69,9	68,1	64,8
Export-Import	-10.065	-15.495	-22.087	-34.373
Current Account Balance*	3.760	-626	-7.515	-14.431
Net International Reserve	30.192	38.051	44.957	53.785

The 2001 crisis revealed itself primarily in the pace of economic growth and the amount of GDP, as seen in the table. In 2001, the economic growth rate was -5.69 percent; nevertheless, it began to climb considerably in subsequent years. The GDP amount was at its lowest point in the four-year period in the table currently. The export-import ratio and the current account balance had the most important influence in the post-crisis years.
After 2001, inflation rates, which had been one of the most serious issues throughout the 1990s, began to decline. The following are the inflation rates during the 2001 crisis and the three years that followed.

Figure 11. Changes in Inflation Rates during and After the 2001 Crisis



	2001	2002	2003	2004
CPI 12-Month Average	54.4	45	25.3	8.6
CPI Year-end	68.5	29.7	18.4	9.4
PPI 12-Month Average	61.6	50.1	25.6	11.1
PPI Year-end	88.6	30.8	13.9	15.4

The domestic debt stock grew as a result of the negative impacts of the 2001 economic crisis on interest rates and borrowing maturities. The contribution of the special domestic debt securities transferred to The Savings Deposit Insurance Fund banks and public banks that incur duty losses is included in this.

Table 27. Budget Realizations During and After the 2001 Crisis

	2001	2002	2003	2004
Cons. Budget Expenses	80.579.065	115.682.350	140.454.842	141.020.860
Cons. Budget Revenues	51.542.970	75.592.324	100.250.427	110.720.859
Tax Revenues	39.735.928	59.631.868	84.316.169	90.076.861
Primary Surplus	12.026.131	11.780.633	18.404.748	26.188.489
Domestic Debt Stock	122.157	149.870	194.387	224.483
External Debt Stock	55.754	92.795	88.420	92.046
Public Sector Borrowing Requirement/GDP	12,1	10,0	7,3	3,6

The failure of this program is attributed to several causes, including the inability to perform structural changes, delays in corrective exchange rate adjustments, failing to restrict short-term capital inflows, and delays in banking sector rules.

The large public debt burden, high inflation statistics, the Central Bank's and banking sector's unpreparedness and inadequacy in the face of crises, the international trade imbalance, and political uncertainty and instability are all factors that contributed to the February crisis.

4.3.4 Tax Policies Applied Towards The Crisis

Tight monetary and fiscal policies were more important after 2001, according to the new economic thinking that began to be recognized internationally. In this context, several fiscal policy changes were undertaken. As a result, laws such as raising indirect taxes more than direct taxes, cutting spending, and speeding up privatizations came to the forefront.

Public spending and revenue peaked in 2001, after which they began a mild decreasing trend. It is feasible to explain the growth in government income by making some temporary taxes, which were put in place briefly during crisis periods, permanent afterward, and by giving continual increases in indirect taxes, which are easier for governments to implement.

The reorganization of banks, which have been severely harmed by the crisis, is a critical problem. Banks and corporations were given tax benefits in this context by exempting all papers, negotiable instruments, contracts, and guarantees from taxes, duties, fees, and funds.

57. The government's assessment of the nature of the economic crisis, as well as its tax policy responses, were as follows: The Nature of the Crisis, according to the 57th Government: The major causes of the crisis are based on two main factors, according to the Economic Program, which is characterized as "Turkey's Program for Transition to a Strong Economy" and claimed that it is only essential for "restructuring, not stability."

- The formation of an unsustainable domestic debt dynamism,
- The unhealthy structure and other structural issues in the financial system, particularly in public institutions, have not been permanently remedied.

Some major tax policy decisions were made as part of the “Transition to a Strong Economy Program,” which was undertaken following the 2001 Crisis. New rules on the use of tax delay increases and tax identification numbers were included in the program, as were modifications to the tax rates on bank loans and fuel oil.

The following is a list of the tax measures included in the Economic Program dated 14.04.2001.

- The implementation of the tax revenue-raising initiatives announced at the end of 2000 will continue.
- The automated gasoline price mechanism will be maintained, the Fuel Consumption Tax will be adjusted at least to the level of planned inflation, and ATV collection will account for 2.8 percent of GNI.
- To increase the tax base, the usage of tax identification numbers will be increased.
- Tax audits will be expanded in order to reduce tax evasion and loss.
- Tax delay interest and penalties will be increased in accordance with inflation to boost tax collection.
- Individual demand for public papers will be boosted if individual investors' earnings from public papers are excluded.
- Aside from these steps, the tax structure has been streamlined and thoroughly examined, and an effective auto-control mechanism has been established. The government has taken the following steps in order to achieve the primary surplus objective for 2001.
- Decreasing the declaration period from 6 months to 3 months, as in the second half of 2000, in the advance tax application for income and corporate tax.
- Raising the corporate tax rate from 20% to 25% in advance tax
- Linking the increase in income tax brackets to the targeted inflation
- Reintroducing the standard of living within the scope of income tax
- Extension of special communication and special transaction taxes until the end of 2002 and doubling of special transaction tax rates
- Increasing telephone services and natural gas VAT rates
- Increasing the rates and levels of the motor vehicle tax, increasing the taxes on vehicles using LPG fuel.

Some benefits are granted to companies that employ at least 10 people to promote employment in the Priority Development Regions to generate jobs and stimulate investment. Exemption from income and corporate taxes, state payment of employer's part of insurance premiums, deferral of income and stamp duty for employed employees, exemption from taxes, charges, and fees, and free distribution of Treasury lands to investors are only a few of the benefits.

When looking at the tax policies that were supposed to be enacted during the February 2001 crisis, it can be seen that it has a distinct structure from earlier crises. In this procedure, Turkey intends to mitigate the consequences of the crisis, maintain the tax policies established during the 2000 crisis, and implement the initial forms of future structuring. The tax policy during the 2001 financial crisis can be described as follows.

Table 28. An Overview of the February 2001 Crisis

Type of Crisis	Causes	Effects	Tax policies
Financial Crisis Currency Crisis	Distrust in the markets The effect of the CBRT's reduction in liquidity on the payments system of public banks Political crisis triggering speculative attacks	Growth rate has decreased Inflationary pressures increased Interest rates increased Confidence in the markets further decreased	Strict tax policy has been implemented Measures were taken to expand the tax base Transfer of tax identification number has been expanded Special exceptions have been granted to banks and companies Indirect tax rates have been increased Tax delay interest and increase rates have been changed

The most significant element of the tax policies that will be enacted following the 2001 crisis is the economy's reorganization, which will go beyond providing stability. In this regard, tailored tax policies have been implemented to avert future financial/economic difficulties and/or to mitigate their consequences. The consequences of global crises that have occurred in the previous ten years on the Turkish economy and implemented tax policies will be examined in the next part in order to properly assess the established objectives.

4.4. Global Economic Crises in The Last Decade and Turkey

Finally, an evaluation of the crises that Turkey has been affected by, apart from the one-to-one crises, has been made. In this section, it will be seen that Turkey has been more or less affected by various global crises.

4.4.1 Mortgage Crisis and Its Effects on Turkey

The Turkish economy was impacted by the global financial crisis of 2008 in four ways. These pathways resulted in a drop in international demand, a drop in foreign credit, a contraction in domestic credit, and a drop in economic confidence. The table below depicts the changes in a number of economic indices before to and during the global financial crisis.

Table 29. Some Economic Indicators Before and After the Global Crisis (2005 - 2009)

	2005	2006	2007	2008	2009
Growth Rate GDP	8,40	6,89	4,66	0,65	-4,82
GDP	648.931.712	758.390.785	843.178.421	950.534.251	952.558.579
Avg. Dollar exchange rate	1,341	1,431	1,302	1,293	1,547
Year-end Dollar Rate	1,343	1,413	1,165	1,512	1,506
Imports	116.774	139.576	170.063	201.964	140.929
Exports	73.476	85.535	107.272	132.028	102.143
Export/Import	62,9	61,3	63,1	65,4	72,5
Export-Import	-43.298	-54.041	-62.791	-69.936	-38.786
Current Account Balance*	-22.309	-32.249	-38.434	-41.959	-13.991
Net International Reserve	68.744	90.824	108.258	114.611	109.212

When looking at the global crisis process, Turkey's economic growth rate and international trade volume have both decreased significantly. In 2005, the rate of increase was 8.40 percent; in 2009, it was about -4.82 percent. The current account balance, on the other hand, had its worst year in 2008, with a deficit of -41,959. However, the current account balance was -13,991 in the year after the crisis. The table below shows the impact of the global crisis on inflation and budget realizations.

Table 30. Some Economic Indicators in Turkey Before and After the Global Crisis

	2005	2006	2007	2008	2009
CPI* 12-Month Average	8,2	9,6	8,8	10,4	6,3
CPI Year-end	7,7	9,7	8,4	10,1	6,5
PPI12-Month Average**	5,9	9,3	6,3	12,7	1,2
PPI Year-end	2,7	11,6	5,9	8,1	5,9
Cons. Budget Expenses	146.097.573	178.126.033	204.067.683	227.030.562	268.219.185
Cons. Budget Revenues	137.980.944	173.483.430	190.359.773	209.598.472	215.458.341
Tax Revenues	106.929.227	137.480.292	152.835.111	168.108.960	172.440.423
Primary Surplus	37.562.903	41.320.106	35.044.981	33.229.215	440.050
Internal Debt Stock (Central Government)*	244.782	251.470	255.310	274.827	330.005
Foreign Debt Stock (Central Government)**	86.738	93.580	78.175	105.493	111.503
Public Sector Borrowing Requirement/GDP	-0,1	-1,9	0,1	1,6	5,1

Turkey's inflation rates surged in 2008, the year when the crisis' impact was felt most acutely; the CPI year-end rate was over 10%, while the PPI year-end rate was approximately 8%. The domestic

and external debt stock expanded in tandem with the public budget deficit. In reality, the ratio of public sector borrowing requirements to GDP in 2009 was 5.1 percent, up significantly from the previous year.
The crisis also had an impact on tax collections. Turkey's tax revenues are mostly made up of products and services, indirect import taxes, and income tax withheld from employees. The stagnation of the economy, the drop in imports, the rise in the number of jobless, and the reduction in real earnings all contributed to the rise in the budget deficit by lowering tax revenues considerably.
Tax collections fell by 0.8 percent in the first 10 months of 2009. When tax receipts are broken down by kind, it can be observed that domestic V.A.T. grew by 20.4 percent, special consumption tax increased by 1.4 percent, income tax increased by 1%, corporation tax fell by 2.5 percent, and VAT on imports decreased by 18.9 percent.
While the growth rate was negative at this time, unemployment rose, manufacturing industry production fell, and foreign trade volume fell sharply. Despite these concerns, increasing Turkey's credit rating by two notches during the crisis might be viewed as a sign of economic and financial stability.

4.4.2 Tax Measures Taken in Turkey Against The Mortgage Crisis

Although raising taxes is not the favored strategy for decreasing budget deficits in Turkey, the size of the budget deficit and the load of public debt have made it imperative to do so.
The letter of intent for the 19th stand-by agreement, signed in 2005, also addressed tax measures. As a result, it was planned to merge the tariffs subject to declaration with payroll employees, decrease the number of taxable income divisions, and reconfigure the "Expense deduction" system through Income Tax reform. The following are the tax regulations in general.

- After discounts on education, health, and some food goods, the VAT policy, rates, and scope will not be modified during the program time.
- Corporate tax rates will be streamlined in three years, the tax base will be increased, and the rates will be aligned with the EU.
- Financial intermediation taxes will be phased out if the Banking and Insurance Transactions Tax reaches revenue objectives in 2005. If situations allow, BSMV will be phased out till 2006, and the Resource Utilization Support Fund will be phased down within three years.
- The Securities Tax has been set at 15%, with profits from securities, bank deposits, and other financial assets subject to a single tax rate since 2006.
- Taxes will be unchanged in 2005 and SEE prices will be consistent with the 2005 program projections. To put it another way, taxes on cigarettes, games of chance, and SEE prices will all be raised at least at the rate of inflation.

short-term aim; It was preferable to lower tax rates rather than increase public spending while implementing fiscal policy, which is to encourage investments by allowing sectors with a strong consumption inclination to spend more. The tax cuts enacted in this manner were designed to boost a person's disposable income by lowering direct tax rates, which was followed by lowering indirect tax rates and providing tax incentives to investors.
Some private sector-oriented efforts were implemented to mitigate the negative impacts of the crisis and to stimulate output and demand. VAT, SCT, fees, and fund reductions were made in various industries, such as automotive, housing, white goods, electricity electronics, and furniture,

to encourage economic activity. Furthermore, tax obligations were adjusted, and "Asset Peace" was implemented in an attempt to attract assets from other countries into the economy.
Turkey has implemented the following set of steps to help mitigate the consequences of the crisis through tax relief.

- The validity period of the Asset Peace application, which aims to bring the assets abroad and includes tax reductions and exemptions, has been extended until September 30, 2009.
- The 10% withholding tax applied to domestic investors on stock earnings has been reduced to zero.
- Tax debts before September 1, 2008 can be paid in installations with 3% interest for eighteen months.
- BITT (Banking and Insurance Transactions Tax) exemption has been introduced for the incomes of the Securities Investment Funds and Securities Investment Trusts due to their transactions in the capital market.
- Resource Utilization Support Fund deduction rate in loans extended to real persons was reduced from 15% to 10%.
- Special Communications Tax for wired, wireless and mobile internet service provision was reduced from 15% to 5%.
- Tax and penalty amnesty has been introduced for 1979 or older model motor vehicles that will be deregistered and scrapped by 30 June 2010.
- Income and corporate tax exemption has been introduced until 31.12.2014 for the gains arising from the disposal of product bills regulated under the Agricultural Products Licensed Warehousing Law.
- In order to encourage SME (Small and medium-sized enterprises) mergers, SMEs that merged until 31.12.2009 will be able to benefit from corporate tax exemption and reduced corporate tax of up to 75%, provided that they meet the conditions specified in the law.

The "Decision on Determination of the Value Added Tax and Special Consumption Tax Rates to be Applied to Certain Goods", which was published in the 1st Duplicate Official Gazette dated 16 June 2009, was taken. In order to stimulate domestic demand, the rates of the temporary SCT reduction applied until 15.06.2009 in some sectors were re-determined and its duration was extended until 30.09.2009. According to this;

- The SCT rate, which was reduced from 37% to 18% for cars with an engine cylinder volume not exceeding 1600 cm3, was changed to 27%.
- SCT rate reduced from 10% to 1% for commercial vehicles with a covered body,
- increased by 3%.
- The SCT rate, which was reduced from 4% to 1% for open box commercial vehicles, was increased to 2%.
- It was decided that the SCT rate, which was reduced from 4% to 1% in tow trucks, midibuses, special-purpose vehicles and trucks, and the SCT rate that was reduced from 1% to 0% in buses, would remain the same.
- The SCT rate, which was reduced from 9% to 2% in minibuses, was updated to 4%.
- The SCT rate, which was reduced from 22% to 11% for motorcycles not exceeding 250 cm3, was increased to 16%.

- The SCT rate, which was reduced from 6.7% to 0% in white goods, was determined as 2%.
- The duration of the VAT rate, which is expected to be applied as 8% instead of 18% until 30.06.2009 on furniture and computers, has been extended for another 3 months.

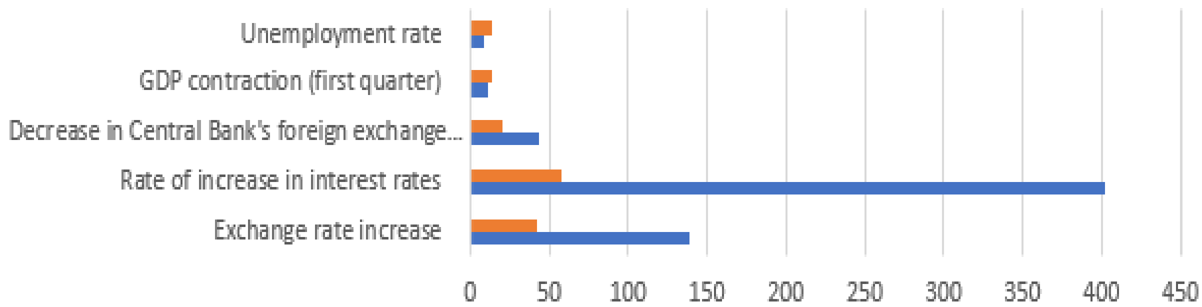
Many tax policies have been proposed and attempted to be adopted in order to mitigate the impacts of the global crisis and to alleviate market stagnation, as indicated above. Its goal is to reactivate the markets, notably with the decreases in VAT and SCT. The following shows the allocation of income, companies, and VAT in general tax receipts, as a result of the most recent tax measures:

Table 31. Share of Income, Corporate and Value Added Taxes in General Tax Revenues (2004 - 2010)

	Tax reven ue collection	Income tax collection	Its share in tax revenues %	Corporate tax collectio n	Its share in tax revenues %	VAT collection	Its share in tax revenues %
2004[1]	101.038.904	19.689.593	19,5	9.619.359	9,5	34.325.208	34,0
2005[1]	119.250.807	22.817.530	19,1	11.401.986	9,6	38.280.429	32,1
2005[2]	131.948.778	26.849.808	20,3	13.583.291	10,3	42.263.650	32,0
2006[2]	151.271.701	31.727.644	21,0	12.447.354	8,2	50.723.560	33,5
2007[2]	171.098.466	38.061.543	22,2	15.718.474	9,2	55.461.123	32,4
2008[2]	189.980.827	44.430.339	23,4	18.658.195	9,8	60.066.230	31,6
2009[2]	196.313.308	46.018.360	23,4	20.701.805	10,5	60.169.248	30,6
2010[2]	235.686.590	49.384.949	21,0	22.854.839	9,7	75.649.445	32,1
2011[2]	284.490.017	59.885.000	21,0	29.233.725	10,3	95550.463	33,6

When the proportion of income, corporate, and value-added tax in general tax receipts is examined as of 2004, it is clear that value-added tax has the greatest share. While the percentage of income tax collected fell each year, it was 21.0 percent in 2011, and the corporation tax system was very unpredictable. As of 2011, the corporation tax, which had been at its lowest rate of 8.2 percent since 2006, contributed 10.3 percent of tax collections. The VAT proportion, on the other hand, has not dipped below 30% in the previous 10 years, hitting a high of 33.6 percent in 2011.
Every year, the percentage of indirect taxes in overall tax collections rises. Growing tax losses as a result of increased informality, as well as high-income people's inclinations not to raise their tax burden, are both effective in this.
In reality, countries that have been through a crisis before having an edge over those that have never been through one. When the data from 2001, 2008, and following crises in Turkey are examined, there are some discrepancies between the post-crisis statistics.

Figure 12. Some Economic Indicators after 2001 Crisis and 2008 Crisis in Turkey (%)



	Exchange rate increase	Rate of increase in interest rates	Decrease in Central Bank's foreign exchange reserves	GDP contraction (first quarter)	Unemployment rate
After 2008 Crisis	41.7	58	20	14.3	14
After 2001 Crisis	138.8	401.5	43	11.8	8.4

After 2008 Crisis After 2001 Crisis

As the bar graph shows, there are significant variations in economic indices in Turkey following the past two crises. The rate of growth in the exchange rate after the 2001 crisis nearly got close to 150%, while the rate of increase in interest rates was 400%. The rate of growth in exchange rates was 41.7 percent following the 2008 crisis, while the rate of increase in interest rates was 58 percent. While the Central Bank's foreign exchange reserves fell by 43 percent during the 2001 crisis, they only fell by 20 percent during the 2008 crisis. During the 2008 financial crisis, unemployment and GNP were the two areas where Turkey was most affected and lost. While the first quarter of the 2001 crisis had an 11.8 percent drop in GDP, the first quarter of the 2008 crisis saw a 14.3 percent drop. While the jobless rate rose to 8.4% during the 2001 financial crisis, it soared to 14% during the 2008 financial crisis.

During the global crisis, Turkey's risk indicators outpaced those of other emerging countries, as seen in this chart.

In terms of the overall crisis, Turkey was impacted by the global recession, with higher unemployment rates and problems boosting savings rates. However, the crisis did not have the same severe consequences in the United States as it did in other nations because of major actions done in the areas of banking and financial discipline following the 2001 crisis.

4.4.3 The European Union Crisis and Its Effects on Turkey

Many nations are still concerned about the European debt crisis, which began in Europe with Greece and extended to the union's member countries with relatively weak economies. Despite the nations' austerity policies and the cooperative initiatives that have been attempted to be implemented within the union, the crisis effect remains. Without a doubt, Turkey is attempting to remain as unaffected as possible by the crisis and to take preventative steps.

Turkey's minimal economic and financial ties with Greece, Spain, and Portugal kept the crisis' direct consequences to a minimum at this stage. Turkey gives confidence to investors owing to the rebound in growth in this process, where concerns about the sustainability of loans are increasing, thanks to the low public debt stock and relatively minimal financial deterioration throughout the crisis.

In the table below, certain economic statistics accomplished in Turkey during the European crisis are included.

Table 32. Some Economic Indicators in Turkey During the European Crisis (2010 - 2012)

	2010	2011	2012 G.T
GDP Growth Rate	9	8.5	3.2
GDP *	1.103.749.801	1.298.062	1.434.712
Dollar exchange rate on avg.	1,500	1,670	1,735
Year-end Dollar Rate	1,546	1,907	1,774
Imports	185.544	240.834	248.700
Exports	113.883	134.971	148.500
Export/ Import %	61,4	56,0	59,7
Export-Import dif.	-71.661	-105.863	-100.200

When looking at the previous three years in Turkey, it is feasible to conclude that there have been no substantial changes in economic indices. However, the rate of economic growth, which was 9% in 2010, fell to 8.5 percent in 2011. In 2011, the export-to-import ratio and the current account balance both increased significantly. Although it decreased in 2012, it is clear that export rates remain low.

When it comes to inflation and budget realizations in Turkey throughout the crisis, there was some volatility in 2011, but overall, Turkey drew a solid structure. The following are data on inflation and budget realizations.

3.4.4. Tax Measures Taken in Turkey Against the European Union Crisis

While the European debt crisis continues to have an impact, Turkey strives to maintain fiscal discipline and caution in its policies. In addition, efforts to strengthen the public financial management system structurally continue to include regulations that will increase transparency, accountability, and efficiency in the medium term, as well as numerical fiscal adjustment targets. The 2011 - 2013 income policies outlined in the pre-accession economic program are as follows:

- "Arrangements will be made to ensure simplicity and stability in tax legislation and practices.
- Efforts to increase voluntary tax compliance and expand the tax base will be continued.
- Implementation of tax policies aimed at accelerating the entry of foreign direct investments into the country, supporting investments and R&D activities, increasing employment and reducing interregional development disparities will continue.
- Fixed taxes and fees will be updated considering general economic conditions.
- Calculation of tax expenditure amounts due to exceptions, exemptions and deductions will continue.
- Inspections aimed at preventing tax loss and evasion, especially on highly taxed products, will be increased.

- Studies on strengthening the audit and enforcement capacity of the tax administration will continue.
- Arrangements for increasing the own revenues of local administrations will be implemented. In increasing the own revenues of local administrations, the increase in the value of the assets after the zoning and infrastructure services will be benefited more.
- The immovable properties belonging to the Treasury, which are idle, will be brought into the economy through projects to be developed in coordination with the relevant public institutions and organizations.
- By applying the cost-based pricing method, it will be ensured that energy SEEs reach their determined financial targets".

The fundamental goal of income policy, as stated in the program, is to develop a clear and stable tax framework. Aside from that, policies and programs to minimize tax loss and evasion, assure successful tax audits, and enhance tax awareness have been identified, as well as income-enhancing policies and initiatives.

In the Pre-Accession Economic Program, which includes the targets for 2012 - 2014, similar income policies were discussed, and it was envisaged that these policies would be implemented. Some of the revenue policies that include the 2012 targets are as follows:

- "Works on simplifying the tax legislation and rewriting it as needed will continue. In this context, the revision of the Income Tax Law and the Tax Procedure Law will be completed.
- Tax policy will be used effectively, when necessary, in the fight against the factors that threaten the sustainability of the growth environment, especially inadequacy of domestic savings and current account deficit.
- Fixed taxes and fees will be updated considering general economic conditions.
- In the determination and implementation of tax policies, priorities for combating climate change and saving energy consumption will also be considered.
- Measures will be taken to encourage individual and corporate savings and to encourage capital accumulation.
- Necessary measures will be taken for the effective, economic and efficient use of public immovables and for bringing them into the economy".

When looking at the Pre-Accession Economic Program, which determines the objectives for 2012-2014, efforts to reform the tax system are included in addition to policies that continue the previous program. It has been argued in this regard that attempts would be made to streamline tax legislation and to examine the current tax rules. Tax policies can be utilized to the degree necessary in areas such as raising savings, maintaining growth, stimulating investments, and guaranteeing capital accumulation, in addition to the tax system. These goals suggest that tax policies will be applied in government programs if the economy permits.

4.5. Comparison and Evaluation of Tax Policies Applied during Economic Crisis

Economic crises may strike both rich and developing countries at any time and for a variety of causes. The causes for its formation change depending on market conditions and country structures at the time, as do the strategies to be used in the event of a crisis.

When we look at the crises that hit developing countries in the 1990s, we can see that they were primarily caused by transition economies. To attract capital to their own countries throughout the transition to a market economy, developing countries have adopted various strategies. Regulations to remove tax obstacles and lower tax rates are at the forefront of these practices. However, this scenario had a impact on the financial structures of the countries, and economic crises began to arise after the other.

The Asian economic crisis of 1997 had a significant role in the globalizing world's rising capital mobility. The financial markets collapsed in the pre-crisis period as a result of the quick and intensive flow of cash to Asian nations as a result of speculative movements. One of the most striking aspects of the Asian crisis is that it defined conventional economic crisis models. The first and second-generation economic crisis models could explain many of the crises that arose in the 1990s, but they were unable to explain the Asian crisis. The Asian economic crisis of 1997 had a significant role in the globalizing world's rising capital mobility. The financial markets collapsed in the pre-crisis period as a result of the quick and intensive flow of cash to Asian nations as a result of speculative movements. One of the most striking aspects of the Asian crisis is that it defined conventional economic crisis models. The first and second-generation economic crisis models could explain many of the crises that arose in the 1990s, but they were unable to explain the Asian crisis.

When we examine the Asian and Russian crises, we can observe that they both arose in emerging nations and during the process of economic liberalization. On the other hand, whereas the Russian crisis was caused by poorly executed government policies, as in second-generation crisis models, a new economic model for the Asian crisis was established, and the crisis was caused by the private sector, not the public sector .

In addition, the weight and direction of tax measures used in times of crisis vary. Following the Asian financial crisis, nations implemented tax policies that restricted capital flows and raised tax rates on portfolio investments. when we look at Russia, which has a poor financial structure, we can see that raising tax rates does not affect the crisis; in fact, it worsens the financial structure and lowers tax collections by increasing informality.

Economic crises do not only affect emerging or impoverished nations. The most recent examples of this are the crises that have erupted in the United States and European Union member countries. The real sector crisis, which began with the collapse of the United States' mortgage system, resulted in global market stagnation. In reaction to the Asian and Russian crises, the United States expanded its tax policy. To begin with, tax rates were lowered, new tax incentives were added to enhance low-income groups' disposable income, and the scope of exemptions and exemptions was enlarged.

Unlike the United States, strict tax policies were viewed as a key instrument towards the end of the crisis in the European Union. So much so that the EU Commission's crisis packages tended to favor raising tax rates, introducing new levies, and cutting spending.

There are many factors for the crises faced in Turkey in the post-1990 period. When we examine the evolution of the crises, we claim that the 1994 economic fits the first and second-generation crisis models, while the financial crises of 2000 and 2001 fit all three models.

Following the 1994 financial crisis, tax laws were restructured to focus more on growing income. During this period, the government, which had a significant budget deficit, adopted stringent fiscal measures to maintain fiscal discipline, and it was determined to raise current consumption tax rates.

Aside from that, extra and temporary taxes on wealth aspects were introduced to reduce inflation and close the budget deficit. The earthquake in 1999 raised costs and caused the authorities to levy new levies. On the one hand, the detrimental impacts of the 1997 Asian and 1998 Russian crises on the country's commerce precluded meaningful outcomes from the policies enacted in the aftermath of the natural disaster in 1999. Economic growth stagnated, and even though inflation rates were no longer in the triple digits, they were unable to be reduced, and the budget and current account deficits persisted.

The tax policies established in Turkey during the economic crisis of 2000 and 2001 differ significantly from those implemented in 1994. Tax policies were adopted following the introduction of new taxes and increases in the rates of current taxes, just as they were during the previous crisis era . When looking at the overall state of the economy after the policies were adopted, it can be claimed that tax revenues rose consistently. When tax categories are broken down, however, it can be seen that the percentage of spending taxes has progressively grown during the 1990s, while the share of income tax has declined. This circumstance might be seen as a sign that the tax structure favors indirect taxes. The data in Table 26 and Figure 11 show that the economic data developed positively after the crisis. The measures enacted following the 2000 crisis, in particular, guaranteed that inflation was consistently lowered to single digits and that economic growth continued to improve after 2001.

With the global financial crisis in 2008, Turkey's strict budgetary policies began to shift. In fact, the mortgage crisis that erupted in the United States had an impact on Turkey as well as the whole world. In this process, the government lowered consumer taxes such as VAT and SCT, gave taxpayers ease in tax payments, provided capital inflows to the country with Wealth (tax) peace, and introduced tax incentives for investments to alleviate market stagnation.

Unlike previous crisis periods, the state, which strives to adopt expansionary fiscal policies, has incorporated measures that decrease tax rates and add tax advantages and conveniences in this crisis era. In the post-2008 crisis era, Turkey did not face major issues in areas such as interest rates, exchange rates, or foreign currency reserves, according to the economic statistics in Figure 12; nonetheless, economic growth has slowed, and unemployment rates have risen. The majority of the actions done and tax policies activated were targeted at boosting the markets.

Finally, during the European Union's economic crisis, tax measures were implemented to protect the present financial structure and avoid potential dangers.

Table 33. Global Crises and Applied Tax Policies

Countries	Types of Crisis	Applied Tax policies
1997 Asian Crisis	Financial Crisis / Currency Crisis	• Strict tax policy has been implemented. • Indirect taxes were emphasized. •New taxes were introduced for the taxation of capit al movements (portfolio investments).
1998 Russian Crisis	Currency Crisis + Debt Crisis	• Strict tax policy has been implemented. • Companies were forced to pay their tax debts. • Income tax rates have been changed. • Efforts were made to increase public revenues by increasing tax rates. • Studies to improve the tax system has begun.
2008 US Mortgage Crisis	Real Sector Crisis / Recession	• Expansionary tax policy was implemented. • Consumption tax rates have been reduced. • Exemptions and exceptions have been expanded. • Tax incentives were provided. • Special tax reductions are foreseen for low-income groups.
2010 European Union Crisis	Debt Crisis	• Strict tax policy has been implemented. • Measures were taken to widen the tax base. •The rates of income and corporate taxes were reduc ed, while the rates of consumption taxes were increa sed. • Additional and temporary wealth taxes were introduced. • Reforms have been made to prevent tax evasion.

Table 34. Crises Emerged in Turkey and Applied Tax Policies

Turkey	Types of Crisis	Applied Tax policies
1994 Turkey Crisis	Currency Crisis + Debt Crisis	• Strict tax policy has been implemented. • The rates of consumption taxes such as VAT – SCT have been increased. • The share transferred from ATV to the budget has been increased. • Additional taxes have been added to many tax types under the name of earthquake taxes. • Withholding applied to some elements of income tax rates have been increased.
November 2000 Turkey Crisis	Financial Crisis / Banking Crisis	• Strict tax policy has been implemented. • The rate of prepaid corporate tax has been increased. • Income tax brackets are indexed to inflation. • In addition to the increase in private communication and private transaction tax rates, VAT rates for telephone and natural gas services were increased. • The rates of the motor vehicle tax were increased by rearranging.
February 2001 Turkey Crisis	Financial Crisis / Currency Crisis	• Strict tax policy has been implemented. • Measures were taken to expand the tax base and the use of tax identification numbers was expanded. • Special exceptions have been granted to banks and companies. •Tax default interest and interest rates have been adjusted by indexing to inflation. • Indirect tax rates were increased primarily to increase tax revenues. • General tax measures envisaged in 2000 continued to be implemented.

Tax policies are among the programs should be done by in times of crisis, as seen in the table. However, the policies that are adopted differ depending on the countries' degree of development and the sort of crisis that has occurred. When we consider the situation in general, we can see that the crisis in Russia, Turkey, and Asian nations that have not yet reached the end of their growth is a financial currency crisis. In response to such situations, stringent tax measures are implemented. Even if the sort of crisis is the same, the impact on the nations and the execution of the countries' tax systems varies. While the priority in the tax policies implemented after the currency crisis in

Asian countries was to increase the indirect tax rates, new practices were envisaged for the taxation of capital movements. The process proceeded a little differently in Russia, which had a currency crisis a year after the Asian crisis. Because Russia's issues with the tax system and the debt crisis it has faced, as well as the currency crisis, set it apart from the Asian catastrophe. Although Russia favored tight tax laws and adopted measures to raise tax rates, the policies failed to have the desired impact, and the economy drifted more toward the informal economy. Turkey is another emerging country that has been through comparable reviews. Following a series of financial crises, Turkey has typically adopted stringent tax laws. During the crisis, known as the twin deficit in 1994, he moved to tax revenue-raising initiatives. Increases in tax rates and the introduction of extra and temporary levies were at the forefront of the measures, which were also attempted to be imposed during the November 2000 and February 2001 crises. Furthermore, steps have been done to broaden the tax base.

When we look at the crises that have hit the United States and Europe, we see real sector or debt problems rather than financial crises. This demonstrates that industrialized nations' financial markets and institutions are superior to those of emerging countries. However, tax policies change due to the various types and impacts of both crises. While the United States has implemented expansionary tax policies to combat the recession, Europe has implemented tight tax policies to address the deficit generated by the debt crisis.

As it is seen, tax policies change depending on the kind and impact of the developing crisis, but they have certain common features. The incorporation of IMF-supported measures in tax policies and other rescue packages is a frequent element of policies activated following the crisis. During the crisis, it is feasible to argue that the IMF aided developing countries. Countries employ various tax systems in response to the many crises that they have encountered. The efficacy of the proposed tax policy varies depending on the nations' degree of development and market circumstances.

CONCLUSION

Economic crises have differences in terms of both the reasons for their emergence and the effects they have on the economies. In this respect, the measures to be taken and the policies to be implemented for economic crises also differ according to the type of crisis. When the crisis periods experienced in the world with the effect of globalization and the transition to the free market economy after 1990 are examined, it is seen that various policies are implemented by the countries. The common point of the policies implemented was that monetary and fiscal policies were tried to be implemented in a coordinated manner.

The economic crisis experienced by the countries known as the Asian Tigers in 1997 caused a great shock effect in the world. The development trend of the countries in the pre-crisis period started to follow in the opposite direction and serious collapses were experienced especially in the financial markets. During the crisis, when the money depreciated excessively, the exchange rate was left to fluctuate and the confidence in the markets was shaken, countries gave more place to their monetary policies. In particular, the IMF-supported stabilization policies were based on monetary policies that would revitalize the markets and reduce demand. In the crisis, in which fiscal policies were left in the background, some measures were taken to tax passive investments. When it comes to the Russian crisis of 1998, the fundamental causes may be traced back to the country's political and economic framework. During the pre-crisis period, Russia raised tax rates to eliminate the budget deficit, which was one of the country's most pressing issues, and to enhance tax collections. However, the increase in tax rates did not increase the revenues as expected, on the contrary, it decreased it further. However, in a developing economy, it is appropriate to reduce

tax rates to expand the tax base and increase tax revenues. Russia, which could not find what it was looking for in tax policies, went to borrow and aimed to reduce the effects of the crisis with the stability packages it prepared.
Aside from the developing nations that faced crises during the liberalization process after 1990, the crises that occurred in rich countries throughout the 2000s, when globalization was effective, are equally noteworthy. The globalization effect was visible in the US Mortgage Crisis, which erupted in 2008 with the collapse of the real estate market and impacted the whole world. Because of the worldwide rather than regional nature of the measures enacted in response to the crisis. Fiscal policies aimed at ensuring fiscal discipline, as well as monetary policies, were implemented by both the US government and other nations impacted by the crisis. The tax policies envisioned by the countries participating in this process all pointed to lower tax rates. Expenditure taxes, such as VAT and SCT, which stimulate consumption, and income taxes, such as corporation tax, which encourage investment, have both been cut, with numerous exemptions and exclusions given. As a result, the market's stagnation was attempted to be overcome.
Although the debt crisis that Greece has been experiencing in recent years is similar to that of other nations, the crisis's consequences have gone beyond Greece and have impacted the whole European Union. Because the crisis experienced by one of the member countries of the Union threatsens the economic and monetary union of the union and carries the risk of spreading the crisis to other member countries.
The fact that the majority of Greece's loans come from EU member states, as well as the union's trade connections, increases the possibility of the crisis extending even further. In this regard, the European Union, in addition to providing financial assistance with the IMF to other member nations in crisis, such as Greece, Spain, Portugal, and Ireland, also seeks to advise countries on how to execute policies.
Union member countries using a common currency have little chance of implementing monetary policy in times of crisis since the European Union's Central Bank has the authority to implement monetary policy. In this respect, countries have primarily turned to fiscal policies and tried to ensure fiscal discipline. Because it can be said that contractionary fiscal policies were given weight in the bailout packages envisaged by the European Union. Governments have primarily turned to measures to reduce the budget deficit, have adjusted in the salaries of employees and pensions, which are seen in excess in the budget, reduced expenditures, and prepared social reforms. One of the tools preferred by countries in this process has been tax policies. Because the economic crisis caused a decrease in national income by causing erosion in tax revenues. For this reason, during the crisis, indirect tax rates were increased primarily to increased income, and it was observed that income and corporate tax rates were decreased to expand the tax base. At this point, it can be said that tax rates are increased from time to time and decreased from time to time during the crisis. In addition, some measures have been taken to prevent tax loss and evasion and to register the economy.

Tax policies have frequently been incorporated in policies to tackle the crisis, both in government programs and in IMF letters of intent, when we look at the economic crisis processes that Turkey has gone through. In order to eliminate the instability experienced in 1994, Turkey put into practice a series of measures on April 5, 1994. However, these decisions did not have the expected effect, and the rise in interest rates and inflation, which existed in the pre- crisis period, and the problems experienced in domestic borrowing continued after the crisis. In this period, Turkey went to an agreement with the IMF and began to regulate its policies in this direction. Turkey, on the other hand, has had a difficult time overcoming the crisis. While the economic balances could not be entirely accomplished, the earthquake in 1999 boosted public spending, even more, resulting in a widening of the budget deficit and a high level of public sector borrowing. During this time, the IMF was brought up again, and tax packages were drafted to boost public revenues, maintain fiscal discipline, and mitigate the consequences of the earthquake. The frequent economic crises, on the other hand, hampered the effective execution of tax policy.

Tax policies were stressed during Turkey's crises between November 2000 and February 2001. In 2000, the banking and reduced foreign exchange markets experienced a crisis, which market confidence and led interest rates and inflation rates to rise. The administration of the time embraced IMF-backed tax changes and took steps to boost tax collections. Some tax rates were increased, and consumption and wealth taxes were controlled. As a result, it was designed to boost government income, decrease budget deficits, and lower interest and inflation rates. In the short term, positive outcomes were achieved, but the atmosphere of market confidence could not be fully built, and the political crisis that arose during this process led to the February 2001 crisis. The two primary sources of the problem, domestic debt, and public bank liquidity shortages prompted the government to take fresh steps in 2001. Measures have been made in this context to enhance audits in order to decrease tax losses and evasion, boost tax revenues, and recover tax obligations on schedule. While the rise in income tax brackets is linked to inflation, the late interest and late fee rates are also expected to act as a deterrent. Apart from that, consumption and wealth tax rates were changed and increased as in 2000. As a result, tax policies have an important place in times of economic crisis. However, the implementation of tax policies alone is not enough. Monetary and fiscal policies should complement each other, and these policies should be determined following the economic and social goals of the country. In addition, the limit of tax rates should be well defined in times of crisis. Beyond that, the policies to be should bring long-term solutions chosen that strengthen the economic structure rather than short-term solutions.

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