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A BRIEF STUDY OF THE IMPACT OF THE FINANCIAL CRISIS OF 2008 ON THE FISCAL POLICY OF THE USA

Ameer S. Muhammed

Assistant Lecturer at Department of Economics/College of Administration and Economic/Salahaddin University/Erbil ameer.s@gmail.com

Dr. Mohamed S. Mohamed

Assistant Professor at Department of Economics/ College of Administration and Economic/ Salahaddin University/ Erbil

Mohammed.m@yahoo.com

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ABSTRACT

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Keywords:

Financial crisis, The financial crisis of 2008, Fiscal policy tools, Budget balance, Structural budget balance, Output gap.

This study aimed to evaluate the impact of the financial crisis of 2008 on the fiscal policy of the USA from 2004 to 2012. The study found that this crisis had a significant effect on the USA fiscal policy. More clearly, the USA budget balance as an indicator of fiscal policy and its structural budget balance as an indicator of discretionary fiscal policy had changed seriously during this period. The study also reveals that during the years (2007-2012), the USA government used a countercyclical and an expansionary fiscal policy as a whole and as discretionary measures.

To face such crisis and mitigate its effects, the study recommends that with the using of the fiscal policy and discretionary measures, it is better for the USA government to activate automatic stabilizers measures. In addition, to use other policies especially monetary policy and with the fiscal policy in the same direction.



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1. INTRODUCTION

The world has gone through many financial crises, most of them were the crisis that occurred in the United States in 2008 that extend its implications to other countries of the world, whether directly or indirectly. To face the financial crisis of 2008 and to reduce its severity pushed many countries in the world for taking many and different economic policies (including fiscal policy) with different tools and trend from what they have taken before this crisis, which means that the quality of the tools of fiscal policy followed in those countries have changed clearly.

The study problem:

This study seeks to answer the following questions:

- 1. Is the financial crisis of 2008 has any effect on the fiscal policy adopted by the USA government?
- 2. What is the type of fiscal policy adopted by the USA government during the 2008 financial crisis years? Is it expansionary or contractionary? Is it pro-cyclical or countercyclical?

2. The study objectives:

The aim of this paper, therefore, is to evaluate the impact of the 2008 financial crisis on the fiscal policy adopted by the USA, by using data for the period (2004-2012).

3. The study hypotheses:

Based on its problem, the study offers the following assumptions:

- 1. The financial crisis of 2008 has a significant effect on the fiscal policy adopted by the USA.
- 2. During the financial crisis of 2008, the fiscal policy adopted by the USA is expansionary and countercyclical during the financial crisis of 2008.

4. The study design:

This paper organized as follows; Section one, which related to the study introduction. Section two dedicate for the conceptual framework of the study, which contains the fiscal policy and all about it, a brief about the financial crisis, the financial crisis of 2008. Section three analyzes the methodology of the study, which includes the study area, type, and source of the study data, defining the variables of the study. Section four is devoted to present the



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findings and empirical results of the study. Section five summarizes the conclusions and recommendations.

2. CONCEPTUAL FRAMEWORK

1. Fiscal policy:

The fiscal policy defined in a different way by economists, but in general line, all of these definitions are same. According to Ugwunta (2014: 12), fiscal policy is the term associated with the use of taxation and public expenditure to influence economic activities. Audu (2012: 143) point out that the fiscal policy is one of the most important mechanisms used by governments to achieve economic stability in most developing countries. Nichita (2012: 8) defines the fiscal policy as an instrument which used to collect resources for the state budget and adjust expenditures in order to monitor and influence the national economy. On the other hand, fiscal policy has defined by Macek and Janků (2015: 2) as a part of state's economic policy used to stimulate the economic growth through changing the amount or structure of government spending and taxes. Mankiw (2008: 471) assert that the fiscal policy refers to the government's choices about the level of government purchases and taxes. By this definition, Mankiw examined how fiscal policy influences economic variables like saving, investment, and growth. From the above definitions, we can conclude that fiscal policy is one of the economic policies used by the government and consists of several measures and tools to control the economy and to achieve a variety of economic and social objectives such as achieving a high level of economic growth, reduce unemployment and inflation.

Concerned to objectives of the fiscal policy, Horton and El-Ganainy (2009: 52-53) categorized these objectives into short-term and long-term goals as follows:

- 1. In the short term; governments focus on macroeconomic stabilization such as; stimulating a weak economy, combating rising inflation and reduce external vulnerabilities.
- 2. In the longer term; Governments aim to; enhance sustainable growth and reduce poverty.

Fiscal policy conduct by governments through many of tools, most of these tools are:



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- 1. Government spending: According to Mbemba (2010: 102), government spending includes government consumption, public investment, transfers, and debt service. In addition, the provision of subsidies to the private sector, welfare programs, and public sectors employees' salaries are another type of government spending (Mbusi, 2016: 33).
- 2. Taxation: Taxation is the other obvious instrument, which comprises at least four potential and separable instruments, such as the level of taxation, the structure of taxation, tax expenditures and tax incentives (Bunea- Bontas and Petre, 2010: 48-67).

Fiscal policy has several types, which can classify to the following categories:

- 1. Types of fiscal policy in terms of implementation:
 - Automatic stabilizers fiscal policy: As showed by Mankiw (2008: 481)
 Automatic stabilizer is a changing of fiscal policy tools to stimulate aggregate demand in a recession without taking any deliberate action by policymakers.
 - Discretionary fiscal policy: Discretionary fiscal policy defined by Zhattau (2013: 282-298) as the conscious changes of government in its spending and taxes to create expansionary or contractionary effects on output.
 - 2. Types of fiscal policy in terms of its dealing with the crisis:
 - Counter-cyclical fiscal policy: AbdulKareem (2011: 87) define counter-cyclical fiscal policy as policy taken by the government to achieve economic stability through combating business fluctuations or to curb the effects of booms.
 - Pro-cyclical fiscal policy: Göndöra and Özpençeb (2014: 975-984) point
 out that, the pro-cyclical fiscal policy is a policy which is expansionary
 in time of boom and contractionary in time of recession, regardless of
 their damage for well-being.
 - 3. Types of fiscal policy in terms of its impact on aggregate demand:
 - Expansionary fiscal policy: Cooper and John (2012: 683) define expansionary fiscal policy as increases in government purchases or reductions in the tax rate.
 - Contractionary fiscal policy: Contractionary fiscal policy is a government policy action aims to decrease aggregate demand through



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decreasing government spending and increasing taxes (O'Sullivan et al., 2012: 207).

2. Financial crisis:

Based on Tucker (2010: 7-23) financial crisis is a situation when the demand for money quickly increases relative to the supply of money. This lead to a loss of confidence in a country's currency or other financial assets causing international investors to withdraw their funds from the country. According to Portes (1998: 2), the financial crisis often to denote either a banking crisis, or a debt crisis, or a foreign exchange market crisis, these triple crisis, in which the interactions are the key to causality, depth, and persistence

On the other hand, Kindleberger and Aliber (2005: 35) show that the financial crisis involves a number of critical elements: speculation, monetary expansion, and an increase in the prices of securities or real estate or commodities followed by a sharp fall and a rush into money. Nik et al., (2016: 25-40) indicate that financial crisis is the efficiency loss and disrupt in financial markets and, also an imbalance in the financial sector due to occurring sudden and strong changes in price and quantity of financial instruments such as foreign exchanges, stocks, promissory notes. Percic et al., (2013: 77-88) point out that, financial crisis is a situation in which institutions or financial assets suddenly lose a significant part of their value, which leads to the lack of confidence in the financial system, a reduction of the volume of stock exchange, a dysfunction of market mechanisms.

3. The financial crisis of 2008:

According to Wright (2012: 278), the financial crisis of 2008 began in 2007 as a non-systemic crisis in subprime mortgages, or risky loans to homeowners in the United States. Then the crisis turned it into the most severe systemic crisis in 2008. Precisely, as showed by Hadj (2009: 2), the crisis started, when home prices rose at unprecedented rates until 2006 and then declined sharply, with the rising of the interest rate, the dropping of the stock market, and the movement in oil prices. In spite of all these, Jickling (2010: 4) assert that the volume and variety of negative financial news, and the weakness of



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policy responses, has triggered number questions about the origins of these crises.

Conversely, Abreu et al., (2009: 2) state that the origins of the financial crisis 2008 are now well known, they include; the bursting of the housing and oil price bubbles, extremely low interest rate policies, huge trade surpluses in some countries and trade deficits in others and savings rates that are too low in some economies and high in other. Moreover, Essers (2013: 61-83) indicate that in the years preceding the crisis, housing prices rapidly rose in the US, this led to the rapid vastness of lending to subprime borrowers, regardless of their sources of income. Then risky subprime mortgage loans pooled into packages (such as collateralized debt obligations or CDOs) by new mortgage brokers and associated banking institutions and then selling securities backed by those packages to interested financial investors.

3. **METHODOLOGY:**

1. Study sample, data type, and its sources:

The sample of the study focuses on the United States of America because it is a country where the financial crisis of 2008 occurred. In addition to availability and easy access to the data required to the study. The study examines the financial crisis of 2008. The study also focuses on the fiscal policy especially its discretionary type and the extent of its adjusting after the financial crisis of 2008. To reach what mentioned above, the study uses time series data on the fiscal policy tools, budget balance, structural budget balance and the output gap in the USA for the period (2004-2012), which obtained from USA and international institution official websites.

2. Definition of the variables of the study:

To assess the fiscal policy as a whole and discretionary fiscal policy particularly, which adopted by USA government, the study will use some variables, such as public revenue, public expenditure, budget balance, structural budget balance and output gap for the period (2004-2012), as shown below:

1. **Public revenues:** Public revenues consist of the value of all types of income that governments receive from its business activities (Sufaj, 2016: 52-71), such as; taxes, social contributions and other revenues such as the value of sales of goods and services, fines and penalties (UNEP, 2014: 15).



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Vol. (4), Issue (4), Fall 2019
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- 2. **Public expenditures:** Public expenditures represent the value of all government spending on public services and on all government institutions, such as; compensation of employees, the value of purchased goods and services, consumption of fixed capital, interest payable to other units, subsidies, and grants and benefits (UNEP, 2014: 18-19).
- 3. **Budget balance (Actual budget):** Budget balance is the difference between public revenue and public expenditure. This balance expresses the overall fiscal policy of the country and does not distinguish types of this policy. The budget balance divides to structural budget balance and cyclical budget balance (Cajner, 2005: 39-47).
- 4. **Structural budget balance:** Structural budget balance is the difference between budget balance and cyclical budget balance. Clearly, this balance is the actual balance after avoidance of the effect of the economic cycles on economy equilibrium (Hansen and Knudsen, 1999: 37-52). It means the structural balance expresses the discretionary fiscal policy of the country (Çebi and Özlale, 2012: 1).
- 5. **Output Gap (%GDP):** The output gap is the difference between the real output of a country and its potential output. The economies output decline during bad times, while it increases at good times (Jahan and Mahmud, 2013: 38-39). Therefore, the output considered the best indicator to determine an expansion or recession in an economy (Ferreiro et al., 2013: 577-592).

Base on theoretical concept of our study and according to the literature, we can distinguish between types of fiscal policy in terms of its impact on aggregate demand as well as its dealing with crises by taking the final result of the budget balance (%GDP) and comparing it with the output gap (%potential GDP), as shown in table 1:

Table (1): Types of fiscal policy

Types of fi	scal policy	Budget Balance (%GDP)	Output Gap (% potential GDP)
Countousualisal	Expansionary	-	-
Countercyclical	Contractionary	+	+
Pro-cyclical Expansionary		-	+



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
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Contractionary	+	-
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Source: Researcher, depending on:

- 1. AbdulKareem, O.C. (2011), Public Finance, University of Calicut Education, p 87.
- 2. Göndöra, M. and Özpençeb, Ö. (2014), An Empirical Study on Fiscal Policy in Crises Time: Evidence from Romania and Turkey, Emerging Markets Queries in Finance and Business Conference, Elsevier B.V, Procedia Economics and Finance, No. 15, pp 975-984.
- 3. Cooper, R. and John, A. A. (2012), Theory and Applications of Macroeconomics, www.lardbucket.org, p683.
- 4. O'Sullivan, A., Sheffrin, S. M. and Perez, S. J. (2012), Macroeconomics: Principles, Applications, and Tools, 8th Edition, Pearson Education Inc., p 207.
- 5. Sabir, S. and Zahid, Kh. (2012), Macroeconomic policies and Business cycle: The Role of Institutions in SAARC Countries, Pakistan development review, Vol. 4, No. 51, pp 147-158.
- 6. Mesea, O. E. (2013), The Analysis on the Cyclical Behaviour of Fiscal Policy in the EU Member States, International Economic Conference of Sibiu 2013: Post Crisis Economy: Challenges and Opportunities, Procedia Economics and Finance, Vol. 6, pp 645-653.

Table 1 shows that when the budget balance is negative, this is evidence of an increase in public expenditures compared to public revenues (the first is greater than the latter). In contrast, when the budget balance is positive, this indicates that the public expenditure is low compared to public revenues (the first less than the latter).

On the other hand, to determine the type of fiscal policy in terms of dealing with a crisis, we will compare the budget balance (as a percentage of the GDP) with the output gap (as a percentage of potential the GDP). If they change in a different direction, the fiscal policy is pro-cyclical, but if they change in the same direction, the policy will be countercyclical.



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Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

In this study, we used a descriptive method for describing the effects of the financial crisis of 2008 on the economy of the USA fiscal policy by reviewing these tools, which used by the selected country in during the period of 2004-2012 and reveal the extent to which these instruments changed during this period.

4. FINDINGS AND EMPIRICAL RESULTS

Based on the data obtained from the different sources, we will analyze the fiscal policy of USA for the period (2004- 2012) to evaluate the change in this policy after the financial crisis of 2008. For this, we will analyze the changes that occurred in each of the public revenue, the public expenditure and the budget balance as a percentage of the GDP of the USA separately during this period, as below:

1. USA public revenue for the period (2004-2012):

In this section, we demonstrate the evolution of the public revenues of the USA government during the period (2004-2012) by determining the extent to which it was change, as listed in table 2:

Table (2): Change of public revenues as a share of GDP in the USA for the period (2004-2012)

Years	Public Revenues (%GDP)	Change of Public Revenues (%GDP)
2004	15.32	-1.03
2005	16.45	7.38
2006	17.37	5.59
2007	17.74	2.13
2008	17.15	-3.33
2009	14.6	-14.87
2010	14.45	-1.03
2011	14.84	2.7
2012	15.17	2.22

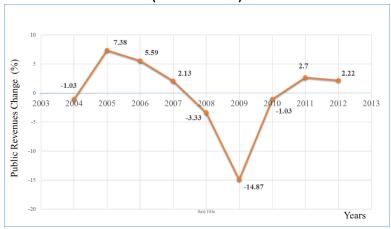
Source: Researcher, depending on data from Appendix 1.



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019

ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

Figure (1): Change of public revenues as a share of GDP in the USA during (2004-2012)



Source: Researcher, depending on table 4.1.

Table 2 and figure 1 show that the public revenues of USA as a percentage of GDP in the years 2005, 2006 and 2007 increased by (7.38%), (5.59%) and (2.13%) respectively. While from 2008 to 2010, the public revenues decreased gradually by (-3.33%), (-14.87%) and (-1.03%) in these years. Thereafter, from 2011 to 2012, the public revenues improved to a certain extent, where increased by (2.7%) and (2.22%). As shown above that the largest drop in the public revenues was in 2009, due to the decrease in tax revenues, which declined by (-12.23%) in this year, as stated in Appendix 2.

2. USA public expenditures for the period (2004-2012):

In this section, we will determine the change that happened in the USA public expenditures during the period (2004-2012) as shown in table 3:

Table)3(: Change of public expenditures as a share of GDP in the USA for the period (2004-2012)

Years	Public Expenditures (%GDP)	Change of Public Expenditures (%GDP)
2004	18.68	-0.43
2005	18.88	1.07
2006	19.16	1.48
2007	18.85	-1.62



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019

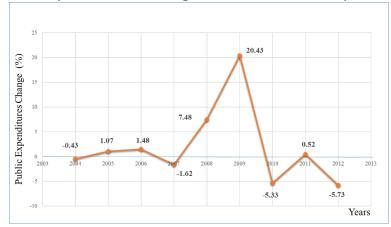
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ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

2008	20.26	7.48
2009	24.4	20.43
2010	23.1	-5.33
2011	23.22	0.52
2012	21.89	-5.73

Source: Researcher, depending on data from Appendix 1.

Figure (2): Public Expenditures Change in the USA for the period (2004-2012)



Source: Researcher, depending on table 4.2.

As shown in table 3 and figure 2, the USA public expenditures (%GDP) increased by (1.07%) and (1.48%) during the years before the crisis (2005-2006). However, the public expenditures (%GDP) decreased by (-1.62%) in 2007, then increased significantly by (7.48%) in 2008, and reached to the highest level in 2009 which rose by (20.43%). In the years after the financial crisis of 2008 the public expenditure (%GDP) fall by (-5.33%) in 2010, then rose by (0.52%) in 2011, and decline again by (-5.73%) in last year of the study period. Obviously, as we referred above, the highest rise in public expenditures was in 2009. This rise in public expenditure is due to the adoption of some financial stimulus packages by the USA government to face the financial crisis of 2008, most of them are (Auerbach, 2005: 3):



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

- 1. Economic Stimulus Act of 2008 (its total cost was \$152 billion) containing one-time tax rebates for households and temporary accelerated depreciation for businesses.
- American Recovery and Reinvestment Act of 2009 (its total cost was \$787 billion), which enacted to save existing jobs and create new ones, to provide temporary relief programs for those most affected by the recession and invest in infrastructure, education, health, and renewable energy.

3. USA budget balance for the period (2004-2012):

Through this section, we will analyses the USA budget balance (%GDP) as an indicator of overall fiscal policy during the period (2004-2012) to identify the changes that occur in it, as shown in table 4:

Table)4(: Change of budget balance as a share of GDP in the USA during (2004-2012)

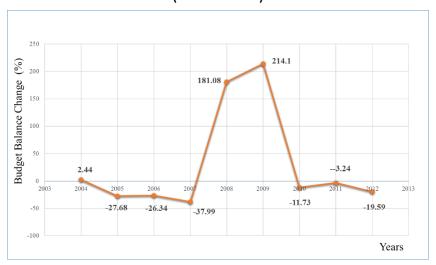
Years	Budget Balance (%GDP)	Budget Balance Change (%)
2004	-3.36	2.44
2005	-2.43	-27.68
2006	-1.79	-26.34
2007	-1.11	-37.99
2008	-3.12	181.08
2009	-9.8	214.1
2010	-8.65	-11.73
2011	-8.37	-3.24
2012	-6.73	-19.59

Source: Researcher, depending on data from Appendix 1.



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Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

Figure (3): Change of budget balance as a share of GDP in the USA during (2004-2012)



Source: Researcher, depending on table 4.3.

Table 4 and figure 3 show that in all the years of the study period (2004-2012), the USA budget balance experienced deficits at different levels. However, the budget deficit as a percentage of GDP declined from (-3.36%) in 2004 to (-2.43%) in 2005, to (-1.79%(in 2006 and to (-1.11%) in 2007. However, the deficit increased to (-3.12%) in 2008 and then dramatically increased to (-9.8%) in 2009. Concerned to the years after the crisis period the deficit began to decline gradually from (-8.65%) in 2010 to (-6.73%) in 2012. In the pre-crisis period (from 2004 to 2007), the deficit in the USA budget balance dropped by (2.44%), (-27.68%), (-26.34%) and (-37.99%). The largest change in the USA budget deficit occurred in the years 2008 and 2009, where the deficit increased by (181.08%) and (214.1%) respectively. In the post-crisis years (2010-2012), the budget deficit narrowed by (-11.73%), (-3.24%) and (-19.59%).



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

The greatest change, which occurred in the budget balance of the USA during the years of the financial crisis, especially in the years 2008 and 2009, is reflected the significant changes in fiscal policy (both discretionary and automatic stabilizers), represented by both public revenues (decreased) and public expenditure (increased), as discussed in sections 4.1 and 4.2.

4. USA structural budget balance for the period (2004-2012):

Through this section, we will analyses the USA structural budget balance as an indicator of discretionary fiscal policy during the period (2004-2012) to determine the changes, which happened in this policy adopted by this country as explained in table 5:

Table)5(: Structural budget balance in the USA for the period (2004-2012)

Years	Structural Budget Balance (%GDP)	Structural Budget Balance Change (%)
2004	-4.66	0.41
2005	-3.85	-17.38
2006	-3.18	-17.4
2007	-4.01	26.1
2008	-5.88	46.63
2009	-7.59	29.08
2010	-9.45	24.51
2011	-8.07	-14.6
2012	-6.15	-23.79

Source: Researcher, depending on:

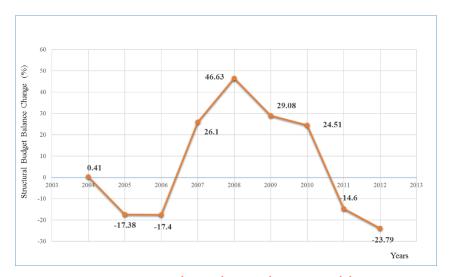
IMF (2015), http://www.economywatch.com.

Figure (4): Structural budget balance in the USA for the period (2004-2012)

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A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)



Source: Researcher, depending on table 4.4.

As shown in table 5 and figure 4 that the USA structural budget as a percentage of GDP experienced a deficit over the years of study's period (2004-2012). However, the remarkable thing is that in the years before the crisis (2004-2006), the deficit in this budget gradually decreased from (-4.66%) in 2004 to (-3.18%) in 2006. In the years of the financial crisis (2007-2009), the country's structural budget deficit increased significantly from (-4.01%) in 2007 to (-5.88%) in 2008 and then to (-7.59%) in 2009. In contrast, in the years after the financial crisis (2010 -2012), the deficit in the structural budget increased again from (-9.45%) in 2010 to (-8.07%) in 2011 and then dropped to (-6.15%) in 2012.

Related to the change in the structural budget (%GDP) of the United States of America, during the years before the financial crisis of 2008 (2004-2006), the deficit in this balance fell by (0.41%), (-17.38%) and (-17.4%) respectively. About the years of financial crisis, the deficit increased significantly by (26.1%) in 2007, then doubled dramatically and increased by (46.63%) in 2008 and rose by (29.08%) in 2009. The deficit in the structural budget continued to increase even until 2010, then decrease by (-14.6%) and (-23.79%) in 2011 and 2012 respectively.

The biggest change in the USA structural budget in the years of the financial crisis, especially in 2008, suggests that the discretionary fiscal policy measures of the country have increased (such as increased public spending and reduced taxes and revenues in general) to tackle the financial crisis and its most important effects. For this, USA has implemented several financial



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

stimulus programs, such as (Economic Stimulus Act of 2008 and American Recovery and Reinvestment Act of 2009, which cost \$152 billion and \$787 billion respectively) as we mentioned in sections 4.1 and 4.2. In addition, the tax revenues decreased by (-2.23%) in 2008 and by (-12.23%) in 2009 as stated in Appendix 2.

5. USA budget balance output gap for the period (2004-2012):

Based on table 1, which concerned to the type of fiscal policy as whole in any country, we will determine the type of this policy that adopted by the USA in terms to its impact on aggregate demand and its dealing with to crisis during the study period (2004-2012), through final result of the budget balance as percentage of GDP and comparing it with the output gap as a percentage of potential GDP as explained in the table 6:

(Table 6: Budget balance and the output gap in the USA for the period) (2004-2012)

	Budget	Output Can (0)	Types of fiscal policy			
Years	Balance (%GDP)	notential GDP) 100 au		It's impaction on aggregate demand		
2004	-3.36	1.396	Pro-cyclical	Expansionary		
2005	-2.43	2.339	Pro-cyclical	Expansionary		
2006	-1.79	2.664	Pro-cyclical	Expansionary		
2007	-1.11 2.189 P		Pro-cyclical	Expansionary		
2008	-3.12	-0.339	Countercyclical	Expansionary		
2009	-9.8	-4.963	Countercyclical	Expansionary		
2010	-8.65	-3.733	Countercyclical	Expansionary		
2011	-8.37	-3.413	Countercyclical	Expansionary		
2012	-6.73	-2.74	Countercyclical	Expansionary		

Source: Researcher, depending on:

- 1. Office of Management and Budget (2018), Historical tables, www.whitehouse.gov.
- 2. IMF (2015), http://www.economywatch.com.

As shown in table 6 and figure 5, the USA budget balance (%GDP) faced the deficit over the years of the study period (2004-2012), indicating that the fiscal



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

policy adopted by that country was expansionary in that period. Because public expenditures exceed public revenues in all years of the study as explained in Appendix 1. This relates to the type of fiscal policy in terms of its impact on aggregate demand.

With regard to the type of fiscal policy in terms of dealing with financial crisis, it is shown in table 4.5, that the USA fiscal policy was a pro-cyclical policy in the years before the crisis, exactly from the first year (2004) of the study period until 2007. Considering that the budget balance (%GDP) as an indicator of fiscal policy and the output gap (%potential GDP) as an indicator of the existence and absence of the crisis changed in a different or opposite direction. Where the budget balance faced the deficit, while the output gap was positive, which refers that the USA economy is going through a period of boom, because the real output of USA exceeds its potential output (it is an evidence of the absence of a crisis).

In contrast, the fiscal policy of USA changed to countercyclical fiscal policy with the beginning of the financial crisis of 2008 until the last year of the study period (2012), because the budget balance (%GDP) and the output gap (%potential GDP) changed in the same direction. The budget balance witnessed continuous levels of deficit during these years, while the output gap was negative (lack of real output of the USA relative to its potential output, this an evidence to the existence of the crisis), indicating to that, the USA economy is going through a financial crisis (financial crisis of 2008) and continued to later years.

6. USA structural budget balance and output gap for the period (2004-2012):

According to what set in table 1, which related to the type of fiscal policy adopted by country, we will indicate to the type of discretionary fiscal policy that pursued by the USA in terms to its impact on aggregate demand and its dealing with crisis during the study period (2004-2012), by taking the final result of the structural budget balance as percentage of GDP and comparing with the output gap as a percentage of potential GDP, as shown in table 7:



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

Table 7: Structural budget balance and the output gap in the USA during (2004-2012)

	Structural	Outrant Cara	Types of 1	fiscal policy		
Years	Budget Balance (%GDP)	Output Gap (% potential GDP)	It's dealing with crises	It's impaction on aggregate demand		
2004	-4.66	1.396	Pro-cyclical	Expansionary		
2005	-3.85	2.339	Pro-cyclical	Expansionary		
2006	-3.18	2.664	Pro-cyclical	Expansionary		
2007	-4.01	2.189	Pro-cyclical	Expansionary		
2008	-5.88	-0.339	Countercyclical	Expansionary		
2009	-7.59	-4.963	Countercyclical	Expansionary		
2010	-9.45	-3.733	Countercyclical	Expansionary		
2011	-8.07	-3.413	Countercyclical	Expansionary		
2012	-6.15	-2.74	Countercyclical	Expansionary		

Source: Researcher, depending on:

- 1. Office of Management and Budget (2018), Historical tables, www.whitehouse.gov.
- 2. IMF (2015), http://www.economywatch.com.

Table 7 shows that the structural budget of the United States of America (as a percentage of GDP) faced a continuous deficit in the years of study (2004-2012) and at various levels as mentioned earlier. This is evidence that the discretionary fiscal policy adopted by the USA government was expansionary in terms of its impact on aggregate demand during the study period, so as to exceed the public expenditure of the USA its public revenue in each year of this period, as shown in Appendix 1.

On the other hand, and about the type of discretionary fiscal policy pursued by the United States in terms of dealing with financial crisis, it is shown in the same table that this policy was a pro-cyclical policy in the period before the crisis exactly until 2007. During this period, the structural budget (%GDP) as an indicator of the discretionary fiscal policy and the output gap (% potential GDP) as an indicator of the existence and absence of the crisis



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

changed in an opposite direction. Where the country's structural budget has experienced deficit over these years, while the output gap is negative, indicating that the USA real output exceeds its potential output (it is an evidence to the absence of a crisis), or it seems that USA economy is in a boom period.

By contrast, with the onset of the financial crisis of 2008 and beyond (2008-2012), the discretionary fiscal policy of USA turned into a countercyclical policy. From 2008 to 2012, the structural budget (%GDP) and the output gap (% potential GDP) has changed in the same direction. The structural budget has suffered a constant deficit, as for the output gap, it has been negative during this period (the real output of the USA is less than its potential output), which indicates that the American economy is in a crisis (which is the financial crisis of 2008). This is perfectly consistent with the historical reality of USA fiscal policy types, which has been counter-cyclical, which means that government spending rises during periods of economic recession and declines during expansions. With regard to tax revenues, the opposite is true (Lucking and Wilson, 2012: 1).

3. **CONCLUSION AND RECOMMENDATIONS:**

This study analyses the impact of the financial crisis of 2008 on the fiscal policy adopted by the USA for the period (2004-2012).

The study concluded that there is a significant impact of the financial crisis of 2008 on USA fiscal policy during the study period. For example, in all the years of the study period (2004-2012), the USA budget balance (%GDP) and structural budget (% GDP) experienced deficits. The deficit in these two balance respectively increased by (214.1%) in 2009 and by (46.63%) in 2008 as the highest change. The biggest change in the USA budget balance and its structural budget in the years of the financial crisis, suggests that using the fiscal policy as a whole and its discretionary measures have increased (such as increased public spending and reduced taxes and revenues in general) to tackle the financial crisis of 2008.

The study found that as both of the USA budget balance (%GDP) and structural budget balance faced the deficit over the years of the study period, indicating that the fiscal policy and its discretionary type which adopted by this country was expansionary in that period. While these two policies were



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

pro-cyclical in the years before the crisis. In contrast, the two policies changed to countercyclical policy with the beginning of the financial crisis of 2008 and above.

Based on its findings and empirical results, to face such these crises and mitigate their effects, the study recommends that, with the using of the fiscal policy and discretionary measures, USA government will activate automatic stabilizers measures. In other words, it's necessary to use all other policies especially monetary policy and exchange rate with the fiscal policy in the same direction.

REFERENCES

- AbdulKareem, O.C. (2011), Public Finance, School of Distance, University of Calicut Education.
- Abreu, M. P. Agarwal, M., Kadochnikov, S., Mia Mikic, Whalley, J and Yongding, Y. (2009), The Effect of the World Financial Crisis on Developing Countries: An Initial Assessment, The Centre for International Governance Innovation (CIGI) Task Force on Developing Countries, http://www.cigionline.org.
- Audu, N. P. (2012), The Impact of Fiscal Policy on the Nigerian Economy, International Review of Social Sciences and Humanities, Vol. 4, No. 1, 2012, www.irssh.com.
- Auerbach, A. J. (2005), American Fiscal Policy in the Post-War Era: An Interpretive History, Paper presented at the Federal Reserve Bank of Boston's conference on The Macroeconomics of Fiscal Policy, June 2004, and also presented at the second annual Berkeley-Vienna Conference on the U.S. and European Economies in Comparative Perspective, September 2005.
- Bunea-Bontas, C. A. and Petre, M. C. (2010), Fiscal Policy during the Current Crisis, Romanian Economic and Business Review, Vol. 5, No.
- Cajner, T. (2005), Cyclically adjusted budget balances in Slovenia, Prikazi in analyze Prikazi in analize, Vol.7, No. 2, November 2005.
- Çebi, C. and Özlale, Ü. (2011), Structural budget balance and fiscal stance in Turkey, Central bank of the Republic of Turkey working paper, No. 11/11.
- Cooper, R. and John, A. A. (2012), Theory and Applications of Macroeconomics, <u>www.lardbucket.org</u>.



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

- Essers, D. (2013), Developing country vulnerability in light of the global financial crisis: Shock therapy? Review of Development Finance, Vol.3, Issue 2, April–June 2013.
- Ferreiro, J., Gómez, C. and Serrano, F. (2013), Mistakes in the Fiscal Policy in Spain before the Crisis, Panoeconomicus, Vol. 60, No. 5, 2013.
- Göndöra, M. and Özpençeb, Ö. (2014), An Empirical Study on Fiscal Policy in Crises Time: Evidence from Romania and Turkey, Emerging Markets Queries in Finance and Business Conference, Elsevier B.V, Procedia Economics and Finance, No. 15.
- Hadj, B. (2009), Implications of the Current Global Financial Crisis on Algerian economy: What are the lessons? Scientific Forum on The International Financial and Economic Crisis and Global Governance, 20-21 October 2009, Ferhat Abbas University, Setif, Algeria.
- Hansen, N. L., and Knudsen, D. (1999), Measurement of Fiscal Policy, Monetary Review 4th Quarter, Denmark's National Bank, 1999.
- Horton, M. and El-Ganainy, A. (2009), What Is Fiscal Policy? Finance & Development, Vol. 46, No. 2, June 2009.
- IMF (2015), http://www.economywatch.com.
- Jahan, S. and Mahmud, A. S. (2013), What Is the Output Gap? Finance & Development, Vol. 50, No. 3, September 2013.
- Jickling, M. (2010), Causes of the Financial Crisis, Congressional Research Service Report for Congress, 7-5700, www.crs.gov.
- Kindleberger, C. P. and Aliber, R. Z. (2005), Manias, Panics, and Crashes: A History of Financial Crises, John Wiley & Sons, Inc., 8th ed.
- Lucking, B. and Wilson, D. (2012), U.S. Fiscal Policy: Headwind or Tailwind? FRBSF Economic Letter, No. 20, July 2012, www.frbsf.org.
- Macek, R. and Janků, J. (2015), The Impact of Fiscal Policy on Economic Growth Depending on Institutional Conditions, JEL classification.
- Mankiw, N. G. (2008), Principles of Macroeconomics, 6th Edition, South-Western, Cengage Learning, Mason, USA, <u>www.cengage.com</u>.
- Mbemba, A. (2010), Fiscal Policy in Selected African Countries: The CFA Franc Zone, International Journal of Economics and Finance, Vol. 3, No. 2; May 2011.
- Mbusi, E. Th. (2016), Influence of Monetary and Fiscal Policies on Construction Output Levels in Kenya, A thesis submitted in partial



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

fulfillment for the degree of Master of Construction Project Management of the Jomo Kenyatta University of Agriculture and Technology.

- Mesea, O. E. (2013), The Analysis on the Cyclical Behaviour of Fiscal Policy in the EU Member States, International Economic Conference of Sibiu 2013: Post Crisis Economy: Challenges and Opportunities, Procedia Economics and Finance, Vol. 6.
- Nichita, R-M. (2012), The Analysis of Taxpayers' Behavior under the Impact of Fiscal Policy Changes, A Summary Ph.D. Dissertation, Faculty of Economics and Business Administration Babeş-Bolyai University Cluj-Napoca.
- Nik, P. A., Jusoh, M., Shaari, A. H. and Sarmdi, T. (2016), Predicting the Probability of Financial Crisis in Emerging Countries Using an Early Warning System: Artificial Neural Network, Journal of Economic Cooperation and Development, Vol. 37, No.1.
- O'Sullivan, A., Sheffrin, S. M. and Perez, S. J. (2012), Macroeconomics: Principles, Applications, and Tools, 8th Edition, Pearson Education Inc.
- OECD (2018), Details of Tax Revenue United States, https://stats.oecd.org.
- Office of Management and Budget (2018), Historical tables, www.whitehouse.gov.
- Percic, S., Apostoaie, C-M. and Cocriş, V. (2013), Early Warning Systems for Financial Crises: A Critical Approach, CES working paper, Vol. 5, No. 1, 2013.
- Portes, R. (1998), An Analysis of Financial Crisis: Lessons for the International Financial System, IMF Conference, Chicago, 8-10 October 1998.
- Sabir, S. and Zahid, Kh. (2012), Macroeconomic policies and Business cycle: The Role of Institutions in SAARC Countries, Pakistan development review, Vol. 4, No. 51.
- Sufaj, D. (2016), Explaining Total Revenue in terms of Capital Expenditure, Current Expenditure and Value Added Tax: Albanian Case, Journal of European Social Research, Vol. 1, No. 2, 2016.
- Tucker, J. (2010), Financial Crises: A Culture of Complacency, Journal of Organizational Transformation and Social Change, Vol. 7, No. 1.
- Ugwunta, D. O. (2014), Effect of Fiscal Policy on Economic Growth in Sub-Saharan Africa, A Ph.D. Thesis Submitted to the Department of Banking and



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

Finance at the University of Nigeria in Partial Fulfilment of the requirements for the Award of a Doctor of Philosophy (Ph.D.) degree in Banking and Finance.

- UNEP (2014), Green Economy Fiscal Policy Scoping Study, Ghana.
- World bank (2018), World development indicators, data.worldbank.org
- Wright, R. E. (2012). Finance, Banking, and Money, http://2012books.lardbucket.org.
- Zhattau, V. S. (2013), Fiscal Policy as an Engine of Economic Growth in Nigeria, AFRREV IJAH, An International Journal of Arts and Humanities, Vol. 2, No. 2, May 2013.

APPENDICES

Appendix 1: Fiscal policy Tools and GDP in the USA for the period (2003-2012)

	Fiscal	Policy	Tools							Bud
Ye ar s	Total Reve nues (B\$)	Tot al Exp end (B\$)	Bud get Bala nce (B\$) (- /+)	GDP (B\$)	Total Reve nues (%G DP)	Chan ge of Total Reve nues (%G DP)	Total Expen ditures (%GDP	Chang e of Total Expen ditures (%GDP)	Bud get Bal anc e (%G DP)	get Bal anc e Cha nge (%)
20	1782	215	-	1151	15.4		18.76		-	
03	.31	9.9	377	0.67	8				3.2	
			.59						8	
20	1880	229	-	1227	15.3	-1.03	18.68	-0.43	-	2.4
04	.11	2.8	412	4.93	2				3.3	4
		4	.73						6	
20	2153	247	-	1309	16.4	7.38	18.88	1.07	-	-
05	.61	1.9	318	3.72	5				2.4	27.
		6	.35						3	68



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq Vol. (4), Issue (4), Fall 2019

ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

20	2406	265	-	1385	17.3	5.59	19.16	1.48	-	-
06	.87	5.0	248	5.89	7				1.7	26.
		5	.18						9	34
20	2567	272	-	1447	17.7	2.13	18.85	-1.62	-	-
07	.99	8.6	160	7.64	4				1.1	37.
		9	.7						1	99
20	2523	298	-	1471	17.1	-3.33	20.26	7.48	-	181
08	.99	2.5	458	8.59	5				3.1	.08
		4	.55						2	
20	2104	351	-	1441	14.6	-	24.4	20.43	-9.8	214
09	.99	7.6	141	8.74		14.8				.1
		8	2.6			7				
			9							
20	2162	345	-	1496	14.4	-1.03	23.1	-5.33	-	-
10	.71	7.0	129	4.38	5				8.6	11.
		8	4.3						5	73
			7							
20	2303	360	-	1551	14.8	2.7	23.22	0.52	-	-
11	.47	3.0	129	7.93	4				8.3	3.2
		7	9.6						7	4
20	2449	353	-	1615	15.1	2.22	21.89	-5.73	-	-
12	.99	6.9	108	5.23	7				6.7	19.
		5	6.9						3	59
			6							

Source: Researcher, depending on:

- 1. Office of Management and Budget (2018), Historical tables, www.whitehouse.gov.
- 2. <u>World bank (2018), World development indicators, data.worldbank.org</u>

Appendix 2: Tax revenues in USA during (2003-2012)

Year	Tax Revenues (M \$)	Change (%)
	2808.5	
2004	3022.4	7.62



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

2005	3395.6	12.35
2006	3694.3	8.8
2007	3867.4	4.69
2008	3781.2	-2.23
2009	3318.7	-12.23
2010	3515.8	5.94
2011	3708.7	5.49
2012	3888.5	4.85

Source: Researcher, depending on:

OECD (2018), Details of Tax Revenue - United States, https://stats.oecd.org.

الملخص:

استهدف هذا البحث تقييم تأثير الأزمة المالية لعام 2008 على السياسة المالية للولايات المتحدة الأمريكية من عام 2004 الى عام 2012. وقد وجدت الدراسة بأن هذه الأزمة لها تأثير كبير على السياسة المالية للولايات المتحدة. وبشكل أكثر وضوحاً، فإن موازنة الولايات المتحدة الأمريكية كمؤشر على السياسة المالية التقديرية قد تغيرا بشكل كبير خلال على السياسة المالية وموزانتها الهيكلية كمؤشر على السياسة المالية التقديرية قد تغيرا بشكل كبير خلال هذه الفترة. وتكشف الدراسة أيضاً أنه خلال السنوات (2012–2007)، استخدمت حكومة الولايات المتحدة الامريكية سياسة مالية مضادة للدورة الاقتصادية وتوسعية، كسياسة مالية عامة وكسياسة مالية تقديرية.

لمواجهة هذه الأزمة وتخفيف آثارها، توصي الدراسة بأنه من الأفضل، مع استخدام السياسة المالية والتدابير التقديرية، من الافضل لحكومة الولايات المتحدة الامريكية القيام بتفعيل إجراءات التثبيت التلقائي. بالإضافة الى استخدام السياسات الأخرى وخاصة السياسة النقدية مع السياسة المالية بنفس الاتجاه.

پوخته:

ئامانجی ئەم توێژینەوەیە ھەلسەنگاندنی كاریگەری قەیرانی دارایی ساڵی 2008 ە لەسەر سیاسەتی دارایی ویلایەتە یەكگرتووەكانی ئەمریكا لە ساڵی 2004 تاكو 2012. توێژینەوەكە ئەوەی دۆزییەوە كە ئەم قەیرانە كاریگەرییەكی



A Scientific Quarterly Refereed Journal Issued by Lebanese French University – Erbil, Kurdistan, Iraq
Vol. (4), Issue (4), Fall 2019
ISSN 2518-6566 (Online) - ISSN 2518-6558 (Print)

بهرچاوی ههبووه لهسهر سیاسهتی دارایی ویلایهته یه کگرتووه کان. به شیوه یه کی زور روونتر بودجهی ویلایهته یه کگرتووه کانی ئه مریکا وه ک پیوه ریک بو سیاسه تی دارایی و بودجه یی پیوانه که وه ک پیوه ریک بو سیاسه تی دارایی پیوانه کراو به شیوه یه کی فراوان گوراون له و ماوه یه دا. ههروه ها تویژینه وه که نه وه میالانی (2012-2007) ، حکومه تی ویلایه ته یه کگرتووه کانی ئه مریکا سیاسه تی دژه خولانه وه کاره یابووری و فراوانکاری به کاره یناوه ، چ وه سیاسه تی دارایی به گشتی و سیاسه تی دارایی پیوانه کراو.

بۆ رووبهرووبوونهوه ئهم قهیرانه وکهمکردنهوه که شوینهواره کانی، تویژینهوه که راسپارده ک ئهوه ده کات که له گه ل به کارهینانی سیاسه تی دارایی و ریوشین و پیوه ره کانی دو به کاراکردنی ریوشوینه کانی چه سیاندنی خویی. زیده باری به کارهینانی سیاسه ته کانی دیکه به تایبه تی سیاسه تی نه ختینه یی له گه ل سیاسه تی دارایی به هه مان ئاراسته.