

The Impacts of Fiscal and Monetary Policies on Service Sector Employment: A Study of Thailand from 1986-2011

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Abstract. Employment is one of the key economic indicators. Schools of economics have different perspectives toward the policies to stabilize employment. Keynesian states that deficiency of aggregate demand cause unemployment, so the use of fiscal and monetary policies to increase aggregate demand can increase employment level. Classical, Monetarist, and Real Business Cycle theories state that employment is generated from supply side factors and nonintervention markets. Employment is also affected by the socio-economic factors such as labor force growth, urbanization, economic growth, and industrialization. This research aims to study whether the increase in service sector employment in Thailand is affected by monetary and fiscal policies or if the effect comes from other policies. The multiple regression analysis was applied in the study. The result shows that the supply side policies and socioeconomic factors affect employment of service sector in Thailand rather than fiscal and monetary policies. Trade openness, and industrialization have positive relationship while minimum wage rate has positive impact to service sector employment.

Keywords: Employment, Monetary Policy, Fiscal Policy, Keynesian Theory, Classical Theory, Monetarist Theory, Real Business Cycle, Socioeconomic Factors.

1. Introduction

Employment is a situation that the government sector gives importance to. Many countries include the employment rate as part of macroeconomic growth variables. Employment of many countries, especially open countries, decreases significantly when a nation faces economic downturn or crisis. Governments implement both fiscal and monetary policies with the targets of increasing the employment rate and stabilizing the economy.

The employment structure in Thailand has been changed during the past two decades from the agricultural sector absorption to more of industrial and service sectors absorption. The service sector has increased the labor absorption with the highest degree and become the important sector at the present. This is in line with the GDP generation from each production sector. Service sector has been generating highest value in GDP which is about 45-50 percent during the past 2 decades.

Government uses monetary and fiscal policies to stabilize the economic activities and employment. Bank of Thailand uses policy interest rate to maintain price stability, and then consumption and investment rates can also be stable to benefit the employment level. Tax policy is also used to support the employment generation for example tax exemption or reduction. Government usually uses the budget deficit to increase the government spending with the objective to stimulate the consumption and investment to benefit the employment (Leeatham, 2000).

The other policies have been also used to increase and stabilize the employment level. The development of skills training and education has been the focus from the government. Social Security System has been developed to increase the benefits coverage and unemployment insurance for participants. The development of infrastructure and technology has also been emphasized to increase the competitive advantage of production sectors, and also to facilitate the openness in Thailand. Employment is also affected by the socioeconomic factors which are labor force growth, economic growth, urbanization, and industrialization.

The research aims to study if the macroeconomic policy or the other policies and factors which affect service sector employment in Thailand. This study is expected to contribute to the effectiveness of the government's policies to stabilize service sector employment.

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There are different points of view in the schools of economists regarding the policies or factors causing employment. According to Keynes' theory, high unemployment is the result of a deficiency in aggregate demand. Keynes advocates using monetary and fiscal policies to regulate aggregate demand. Keynesian theory highlights the potential of fiscal policy to solve macro problems such as using fiscal stimulus to step up government spending, tax cuts, and increase transfers to create employment (Schiller, 2006). Reynolds (2001) found that mixing between fiscal and monetary policy can fine tune the GDP, unemployment, and stock prices. For stimulus the economic growth, fiscal and monetary policies need to be coordinated.

The classical, monetarist, and business cycle theories state that the effects of the increase in government spending and reduction in taxes do not increase employment. The increase in government spending creates an increased demand for loanable funds as the government sells bonds to the public. The interest rate will increase by enough to "crowd out" an equal amount of private expenditure on consumption and investment (Froyen, 2009). If government finances its spending and reduction in tax revenue by printing new money, the quantity of money is changed and the price level will change proportionately. In classical system and real business cycle, the source of increase in the money supply does not increase output and employment (Froyen, 2009).

Government also implements monetary policies to influence the employment. Keynesian theory states that money affects income via interest rates. An expansionary policy lowers the interest rate and in turn increases the consumption and investment in aggregate demand, which can increase the employment. For classical economists, money was a "veil" that determined the nominal values by which we measure such variables as the level of economic activity, but had no effect on real quantities (Froyen, 2009). Monetarists believe that expansionary monetary policy can only temporarily move the unemployment rate below the natural rate. The unemployment rate will gradually return to the natural rate and the lasting effect of the expansionary policy will be a higher inflation rate (Froyen, 2005).

Classical, monetarist, and real business cycle economists believe in the importance of real or supply side factors in determining the "wealth of nations" and stress the optimizing tendencies of the free market in the absence of state control. Government intervention affects the shape and position of the aggregate supply curve (Schiller, 2006). Minimum wage laws are one of the most familiar forms of factor market regulations. Wage-employment studies indicate that wages higher than equilibrium reduce employment in the formal sector (Nafziger, 1997). The other government regulations which are social security system and unemployment insurance increase the production cost to employers, so they tend to hire fewer employees (Nissim, 2007). Roed and Zhang (2003) studied of the Norwegian unemployment found that reduction in unemployment benefits increases in the escape rate from unemployment.

The growth of an economy is also the result of the developments of production factors and advances in technique of production. Among those forces, the following policy options have been emphasized: Human Capital Investment, Infrastructure and Technology Development, and Trade and Financial Openness (Schiller, 2006).

Employment is also affected by other socioeconomic factors, apart from public policies, which include labor force growth, economic growth, urbanization, and industrialization. The increasing growth rate of labor force cannot be absorbed by industry, resulting in increased unemployment (Nafziger, 1997). Migration to urban areas where there are rapidly growing demand of workers are increasing (Sussangkarn, 1991). Harris-Todaro explains that migrants respond to urban rural differences in expected rather than actual earnings. Employees expect higher probability to earn income in urban areas (Nafziger, 1997).

Employment grows along with the potential national outputs as firms hire more workers to produce growing output. Okun's law states that for each percentage point by which unemployment rate is above the natural rate, real GNP is 3 percent below potential GNP (Hall and Taylor, 1991). As an economy proceeds to ever higher paths of development, there is further structural transformation as even more workers shift from the secondary sector towards the industrial and service sectors (Cypher and Dietz, 2004).

2. Research Method

The model analysis was divided into three models, with the objective of studying the policies/factors that have a significant impact on service sector employment. Multiple Regression analysis is applied to analyze the relationship of independent variables to dependent variable. The first model includes the monetary and fiscal policies as the independent variables. The second model includes monetary policy, fiscal policy, and the supply-side policies. The third model includes all independent variables, which are monetary and fiscal policies, supply-side policies, and socioeconomic factors. The relationship of each independent variable to the dependent variable following the review of the literature is presented here.

Model 1:

$$\text{EMPLOY}_t = a + b_1\text{MSGDP}_{t-(t-1)} - b_2\text{TAXGDP}_{t-(t-1)} + b_3\text{EXPGDP}_{t-(t-1)} + b_4\text{BUDGDP}_{t-(t-1)}$$

Model 2:

$$\begin{aligned} \text{EMPLOY}_t = a + b_1\text{MSGDP}_{t-(t-1)} - b_2\text{TAXGDP}_{t-(t-1)} + b_3\text{EXPGDP}_{t-(t-1)} + b_4\text{BUDGDP}_{t-(t-1)} \\ + b_5\text{HDGDP}_{t-(t-1)} + b_6\text{INFRAGDP}_{t-(t-1)} - b_7\% \Delta\text{MINWAGE} - b_8\% \Delta\text{SOCIAL} \\ + b_9\text{TRADE}_{t-(t-1)} + b_{10}\text{FIN}_{t-(t-1)} \end{aligned}$$

Model 3:

$$\begin{aligned} \text{EMPLOY}_t = a + b_1\text{MSGDP}_{t-(t-1)} - b_2\text{TAXGDP}_{t-(t-1)} + b_3\text{EXPGDP}_{t-(t-1)} + b_4\text{BUDGDP}_{t-(t-1)} \\ + b_5\text{HDGDP}_{t-(t-1)} + b_6\text{INFRAGDP}_{t-(t-1)} - b_7\% \Delta\text{MINWAGE} - b_8\% \Delta\text{SOCIAL} \\ + b_9\text{TRADE}_{t-(t-1)} + b_{10}\text{FIN}_{t-(t-1)} - b_{11}\% \Delta\text{LABOR} - b_{12}\text{URBAN}_{t-(t-1)} + b_{13}\text{GDP} \\ + b_{14}\text{IND}_{t-(t-1)} \end{aligned}$$

Where:

- EMPLOY is service sector employment rate at time t.
- MSGDP is money supply as a percentage of GDP
- TAXGDP is tax revenue as a percentage of GDP
- EXPGDP is government expenditures as a percentage of GDP
- BUDGDP is budget deficit as a percentage of GDP
- HDGDP is government expenditures on human capital development as a percentage of GDP
- INFRAGDP is government capital expenditures on infrastructure and technology as a percentage of GDP
- % Δ MINWAGE is a percentage change in minimum wage rate.
- % Δ SOCIAL is percentage change in the amount of social security contributed by the private sector.
- TRADE is trade openness.
- FIN is financial openness.
- % Δ LABOR is percentage change in labor force.
- URBAN is urbanization.
- GDP is Gross Domestic Product.
- IND is industrialization.
- t is time period.

The researcher used a 95 percent level of confidence. The standardized coefficient was used to interpret the relationship between the independent variables and the dependent variable. The adjusted R square measures the determinant degree of each model. The Durbin-Watson value was used to identify if there was an autocorrelation among the independent variables. The Durbin-Watson value of the first model with 4 independent variables should be 1.767 to 2.233. The second model of the 10 independent variables had to have a value of 1.440 to 2.560, and the third model with a total of 14 independent variables had to have Durbin-Watson value of 0.881 to 3.119 for non-autocorrelation.

3. Results of Study

Model 1 shows the significant effect of macroeconomic policies on the service sector employment rate. The model has a coefficient of determinant of 95.5 percent, with a Durbin-Watson value of 1.768. Changes in monetary policy exhibited a significant negative relationship to service sector employment. Fiscal policy has no significant relationship to employment rate.

The negative relationship between monetary policy and service sector employment rate confirms monetarists theory. Expansionary monetary policy reduces service sector employment. The impact of expansionary monetary policy may reduce unemployment only for the short term. The long run effect of the increasing the money supply level tends to increase price-level expectations. Employees will perceive that real wages become lower from the inflation rate, so they demand a higher nominal wage. If employers do

not have the capacity to increase the nominal wages of every employee, employers may decrease the employees' level.

The negative relationship of money supply to service sector employment may be caused by the liquidity trap. A liquidity trap results when demand for money becomes infinitely elastic so that further injections of money into the economy will not serve to further lower interest rates therefore, fail to stimulate the economy in terms of increasing aggregate demand. The corporations in service sector will face difficulty in raising funds to finance their business during an economic downturn, and some will have to exit the business or scale down in size, and this causes higher unemployment.

Table 1: The results of the study

Independent Variable	Model 1	Model 2	Model 3
Constant	32.842	16.362	12.292
Money Supply as a % of GDP	-0.147 (-3.150) ***	-0.113 (-1.151)	-0.177 (-1.634)
Tax Revenue as a % of GDP	-0.036 (-0.628)	-0.111 (-1.550)	0.013 (0.172)
Expenditure as a % of GDP	-0.070 (-1.144)	-0.057 (-0.592)	-0.078 (-0.832)
Budget Deficit as a % of GDP	0.077 (1.577)	0.086 (1.118)	0.013 (0.178)
Infrastructure and Technology Development		-0.020 (-0.234)	0.057 (0.682)
Human Capital Development		-0.004 (-0.041)	0.044 (0.478)
Trade Openness		0.804 (9.829) ***	0.440 (2.844)***
Financial Openness		0.186 (2.396)***	-0.133 (-0.900)
Minimum Wage		-0.143(-1.872)	-0.173(-2.325) ***
Social Security		0.037 (0.620)	0.019 (0.314)
Labor Force Growth			0.087 (1.052)
Urbanization			-0.087 (-1.565)
Economic Growth			-0.275 (-1.968)
Industrialization			0.420 (2.097)***
Adjusted R ²	0.955	0.934	0.956
F-Sig	0.000	0.000	0.000
Durbin Watson	1.768	1.980	2.433
Note: *** Significance at 95 Percent Confidence Interval Level Number in Parentheses is t-value			

From the first model, the Keynesian theory of fiscal policy is rejected. Fiscal policy has no significant independent effect on service sector employment. This result tends again to confirm classical and monetarist theories. The Thai government usually finances its spending by issuing bonds or by borrowing which increases demand for loanable funds. The interest rate will increase and then consumption and investment will decrease. Investment declines because fewer projects appear profitable with the higher borrowing costs.

The second model includes the effect of macroeconomic policies combined with supply-side policies. The model had a significant impact on service sector employment with a coefficient of determinant of 0.934, with the Durbin-Watson value was 1.980.

The result of this model shows that monetary and fiscal policies play no role in increasing service sector employment. Trade openness has a strong positive effect on employment in the service sector. If the value of exports and imports increase by 1 time more than the GDP, the service employment rate will increase by 0.804 percent. Financial openness also affects positively service sector employment. Other factors have no independent effects on service sector employment. This in line with the study of Jansen and Lee in 2007 which stated that trade liberalization is expected to lead positively to overall employment effects, in terms of quantity of jobs, wages earned, or a combination of both.

The third model is the study of macroeconomics, supply-side policies, and socioeconomic factors together. The model showed a coefficient of determinant of 0.956 which is a very high explanation level. The Durbin-Watson value was 2.433. The model again showed the effect of supply-side policy and socioeconomic factors on service sector employment rather than monetary and fiscal policies. Trade openness and industrialization have a significant positive relationship with employment, and the minimum wage rate has a negative effect on service sector employment. Trade openness affects employment rate positively to the highest degree. A one degree increase in trade openness increases the service sector employment rate by 0.440 percent.

If the government enforces the increasing minimum wage rate, this negatively affects service sector employment. A one percentage change in minimum wage rate decreases the service sector employment rate by 0.173 percent. This result confirms the nonintervention by the government concept of classical and monetarist theories.

The higher degree of the industrialization has a significant positive effect on service sector employment. A one percent increase in industrialization level increases the service sector employment rate by 0.420 percent. Thailand has a higher degree of industrialization as well as a higher value of the GDP deriving from the service sector. These two sectors tend to support each other.

The results from the second and third models confirm the studies of classical, monetarist, and real business cycle schools of thought that supply-side factors affect employment and reject the belief in the effectiveness of fiscal policy and monetary policy in reducing unemployment from the Keynesian school of economics.

4. Conclusion and Recommendation

From the study of all of the independent variables, macroeconomic policies were seen to have no role in increasing service sector employment. Trade openness and industrialization affect positively, and minimum wage rate affects negatively to service sector employment.

Most employed persons in the service sector are working in the formal sector. The increase in the minimum wage rate has also brought about a lower level of employment. Employers may not be able to support a greater burden from increases in the minimum wage rate.

The service sector receives benefits from trade openness. Tourism and hospitality are main subsections generating income. Government should promote attractive places, and also find new markets for the tourism and hospitality sector. The government should also enforce rules and regulations to provide safety to tourists and also to preserve the natural environment for sustainability in the tourism and hospitality sector. The increase in international trade is also a benefit to the logistics and transportation subsectors of the service sector. The government should also improve the basic infrastructure in different regions in the country and also across the countries to serve the increase in international trade.

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