

# **Unemployment Orthodoxy: Fiscal or Monetary Policy? Case Study of France**

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## **Abstract**

France's economy has suffered from an unprecedented unemployment rate of above 10% over the past decade. The topic is widely debated among economists; while monetary economists argue contractionary monetary policy and austerity plans are the roots of high unemployment rate, New Keynesians believe fiscal policy and high corporate tax rates are the roots of problem. Lucas critique conjectures that monetary policy has only short term effects on real variables including unemployment. This study tests the hypothesis whether fiscal policy plays a more important role than monetary policy in shaping unemployment in France. The paper implements several econometric models to find out which group of policy variables is more effective in combating unemployment. Indeed, the study tests the hypothesis whether New Keynesian models have a better prediction power in explaining unemployment rate than New Classical models. Implementing quarterly data for the period of 1980-2015 and using OLS and GMM techniques the study finds out fiscal policy variables are the most important factors in shaping unemployment rate in France, supporting New Keynesian proposition.

**JEL Classifications:** E24, J23, C20, C50

**Keywords:** Fiscal policy, monetary policy, new Keynesian model, classical theory of unemployment, wage stickiness, unemployment benefit, Lucas critique

## **1. Introduction**

### **1.1. Introduction to the Problem**

The financial recession in 2007 has led to stagnation and persistent unemployment in several European economies. Despite low levels of short term interest rates, many economies in Europe still suffer from

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unprecedented high unemployment rate, which has made policy makers to rethink of alternative solutions including fiscal policy tools. However, the effectiveness of fiscal policy is widely debated among economists. This paper tries to answer the question of how important fiscal policy is compared to monetary and trade policy in reducing unemployment rate in France.

### **1.2. Importance of the Topic**

The effects of monetary policy shocks on output gap and unemployment has been widely cited among economists. The reaction of unemployment to monetary policy, however, has not been supported in several European countries, particularly in periphery countries such as Greece, Spain, Italy, and France. Several economists (Rendahl, 2016; Alexius & Holmlund, 2008; Bassanini & Duvall 2006) argue monetary policy can be significantly impotent for persistent unemployment, which is coupled with a liquidity trap. As Delong, Summers, and Ball (2014) argue the liquidity trap intensifies the impact of fiscal policy on real economy and employment. When the economy experiences a liquidity trap, changes in interest rates will not lead to higher GDP and employment; however, fiscal policy can have significant effects on raising the total demand and lowering unemployment rate.

Indeed, one of the main economic challenges that French policy makers face today is the growing level of government debt, which has jumped from 89.5% GDP in 2012 to 96% GDP in 2016. As many economists have argued a level of debt higher than 85% of GDP can be a significant drag to economic recovery. Lack of fiscal-monetary policy coordination to keep the debt at a manageable level has had severe consequences for the job market and unemployment rate. Sluggish economic growth and uncertainty in the private sector has also contributed to this trend (International Monetary Fund [IMF], European Dept. 2016). The unemployment rate, although considerably lower than in Italy and Spain, remains relatively high especially among youth (24.6% in April 2016). France with total 10% unemployment rate stands after Spain and South Africa in the third place in 2013 (U.S. Bureau of Labour Statistics, 2013). All of these worrying signs emphasize the necessity of using appropriate policy tools.

### **1.3. Research Questions**

This study attempts to determine the roots of unemployment in France; does fiscal policy play a more important role than monetary policy in shaping unemployment? Does lowering corporate tax rate leads to lower unemployment rate? To respond these questions, this paper implements several regression models where unemployment rate is a function of macro-economic fundamentals including: fiscal, monetary, and trade policy variables. The results of this study have important policy implications as it can help reduce unemployment rate by emphasizing on the appropriate policy tools.

This study attempts to recognize which of the three main categories of policies (fiscal, monetary, and trade policy) is the most effective in reducing unemployment rate in France. Using quarterly data for the period of 1980-2015 we test the hypothesis that fiscal policy plays a more important role in shaping unemployment rate in France. The effect of fiscal policy has been emphasized by several authors including: Dolado and Jimeno (1997), Jacobson, Jansson, Vredin and Warne (2002), Fatas and Mihov (2001), Burnside, Eichenbaum and Fischer (2004), Cavallo (2005) and Gali, López-Salido and Valles (2007) who find positive effects of government spending shocks on employment. We use two different techniques OLS and Generalized Method of Moments (GMM) to find out what are the deriviers of unemployment in France.

The rest of paper is organized as follows. Section 2 reviews the literature on unemployment rate in different regions. Section 3 discusses methodology, data and model specification. Section 4 represents the estimated results. And finally, section 5 concludes and provides policy discussion.

## **2. Literature Review**

Keynesian and Classical unemployment models have been used to investigate unemployment in four OECD countries including: United States, Germany, United Kingdom, and Austria (Coen & Hickman,

1987). The authors find aggregate demand has been the main source of unemployment, while monetary policy never played an important role. They find that the sharp increase in unemployment rate during 1973-75 was induced from tight monetary policy. However, the steady rise in unemployment during 1975-79 in several OECD countries was attributed to wage stickiness. The existence of large demand gaps in the 1980s indicates that tight monetary and fiscal policies were the roots of unemployment in these countries. Finally, they conclude that if there is an element of hysteresis in the natural rate of unemployment as shown in the insiders-outsiders model of Blanchard and Summers (1986), a demand expansion that reduces actual unemployment would also reduce the NAIRU as well.

Lucas Jr. and Rapping (1969) use time series data for the period of 1930-65 and find that unemployment rate is positively correlated with its lagged values. They find that the long-run elasticity of labor supply to wages is almost close to zero, which supports the neoclassical growth model of zero labor supply elasticity. Furthermore, they find that the Keynesian assumption of a relatively elastic short-run supply curve is confirmed. They also find that the effect of inflation on real wages is negative and statistically significant.

Lombard (1994) investigates the unemployment rate in France and the factors that have contributed to persistent rise of unemployment since 1970. He argues three theories have dominated the debate on unemployment: the neoclassical approach of inappropriate real wages, the Keynesian aggregate demand deficiency, and the natural rate theory of monetarist and the New Classical model that encompasses structural and frictional factors such as technological change, unemployment benefit, and hiring and firing rules. Using data for three decades he finds out there is little evidence of structural and frictional support for unemployment. Labor market rigidities such as hiring and firing rules and the generosity of unemployment benefit have little contribution to unemployment in France, while there is ample evidence that France's poor unemployment performance has been assisted by her lackluster economic growth. Indeed, low economic growth has been the main determinant of poor labor market performance, which has been the result of restrictive fiscal and monetary policy that started 20 years ago to stifle inflation following the first oil price shock.

Spanish unemployment rate has been investigated using a VAR structural model by Dolado and Jimeno (1997). The results of the study indicate the mixture of different shocks can satisfactorily explain the dismal performance of Spanish labor market during the past two decades. They conclude that the main root of unemployment in Spain is productivity shocks with a share of 37%, while labor supply shock and demand shocks accounts for 25% each.

Jacobson, Jansson, Verdin and Warne (2002) find that labor demand shocks have negligible effects on unemployment in Scandinavian countries, while Gambetti and Pistoiesi (2004) emphasize the effects of demand shocks, particularly monetary policy shocks on unemployment in Italy.

Fortin (2001) investigates unemployment rate in Canada's economy during the 1990s to find out why they did poor in the job market. He attributes the dismal performance of job market to the stance of tightening monetary conditions by Bank of Canada. He argues higher interest rate appreciated the dollar, and depressed aggregate spending and output and, as a result, led to higher unemployment rate. Actual output kept falling below potential output because of the impact of interest rate and exchange rate on aggregate spending and consumption. The lack of fiscal-monetary policy coordination to keep the debt to GDP ratio at a manageable level contributed to the fiscal crisis that lasted till 1996. He concludes, a major cause of persistent high unemployment rate during the 1990s was the very low inflation rate targeted by the Central Bank of Canada.

DiPrete, Goux, Maurin, and Tablin (2001) investigate unemployment in France and Sweden and find that contrary to standard predictions derived from welfare state theory, the unemployment in France does not support the classic insider outsider model of Blanchard and Summers (1986). Instead, France has a flexible two tier labor market that creates high entry rate to employment along with strong age and educational gradients in exit rates. One of the main differences between the two countries is active labor

market policy reform during the Swedish recession in early 1990s, which contributed to lower unemployment rate in this country.

L'Horty and Rault (2003) use a VAR-ECM model to investigate the unemployment rate in France. Using quarterly data for the period of 1970-1996; they conclude that the rise in unemployment can be attributed to the rise in tax, the slowdown of labor productivity and deterioration of job security measured by downsizing. The term of exchange accounts for a small part of the rise in unemployment and the effect of real interest rate performs through changing labor productivity. Their study also indicates the importance of skill mismatch and of the employment protection system.

Linzert (2004) examined the effect of macroeconomic shocks on unemployment in Germany. Using data from 1969 to 1998 with a structural Vector Error Correction Model he found out that technology and wage shocks are of minor importance to unemployment in Germany, while demand shocks and labor supply shock appear to be the main determinants of unemployment in medium term. While macroeconomic shocks are able to explain a large portion of variability in unemployment rate; such changes are hard to be reconciled with a pure micro based explanation of unemployment.

Junankar and Madsen (2004) use panel data for twenty two OECD countries to investigate the explanatory power of unemployment models over the past two decades. The simulation of their model indicates that direct taxes have contributed 0.97 percent points to unemployment rate in the average OECD country for the period of 1973 to 1993. They conclude that the only supply side factor that is important for labor market is the real wage gap. They argue the Phelps model doesn't add to understanding of unemployment in OECD countries. Contrary to several studies that attribute unemployment to institutional factors, the authors indicate that different models were unstable during the time; therefore, it is important to focus on structural changes.

Analysis of Philips curve has been expanded to include the real interest rate in addition to inflation and real wages (Gentle, Paudel, & Upadhyaya, 2005). The authors use an Error Correction Model with U.S. annual data from 1948 to 1996; their estimated results indicate that the coefficient of real interest rate on unemployment is negative, because a higher interest rate leads to less investment and higher unemployment rate, in turn. They show that inclusion of real interest rate in addition to real wages and inflation increases the explanatory power of the Philips curve by more than 25%. The F statistics also indicate that the model with the inclusion of interest rate performs better than the traditional Philips curve.

The effects of higher labor taxes have raised the unemployment rate in OECD countries (Bassanini & Duvall, 2006). Using pooled cross country-time series data they examine the effects of policies and institutions on unemployment rate. They use four types of shocks, total factor productivity (TFP), terms of trade shocks, real interest rate shocks, and labor demand shocks. Their estimated results indicate that tax hikes and long lasting unemployment benefits lead to higher unemployment rate. On average it is estimated that a 10% reduction in tax rate and a 10% reduction in unemployment benefit lead to 2.8 and 1.2 percentage point lower unemployment, respectively. They also find that total factor productivity shocks, deterioration in terms of trade, increase in long-term real interest rate, and negative labor demand shocks, all lead to a rise in aggregate unemployment.

The Swedish unemployment rate was explained by three types of demand shocks: monetary policy, fiscal policy and foreign demand shocks (Alexius & Holmlund, 2008). Using quarterly data from 1980:1 to 2005:1 with a structural VAR model, the results indicate contractionary monetary policy increases unemployment rate; expansionary fiscal policy is associated with lower unemployment rate; and foreign demand shocks lead to lower unemployment. The results of their variance decomposition technique indicate that fiscal policy and technology shock have minor effects on unemployment, as they account for 10-20% of fluctuations in unemployment rate. However, domestic demand shocks and labor market shocks account for 48% of short term fluctuations in unemployment. Also, foreign demand shocks have a minor effect on unemployment and doesn't exceed 9% at all horizons. The authors attribute the unemployment in Sweden economy to macroeconomic shocks, particularly to contractionary monetary

policy and a fixed exchange rate regime. They find that between 22-35% of changes in unemployment were caused by monetary policy shocks.

A New Keynesian model and a Bayesian econometric technique with quarterly data from 1984 to 2009 and variables such as inflation rate, Federal Fund Rate (FFR), log difference of real GDP growth, real consumption, real investment, and real wages were used to explain unemployment fluctuations in the U.S. economy (Casares, Moreno, & Vazquez, 2014). The estimated results indicate that fluctuations in unemployment are mainly driven by wage push shock (33%), by demand side shocks such as risk premium disturbances (35%), and by monetary policy shocks (21%), while technology shock plays a very little role (2%).

The effectiveness of fiscal policy will increase during the periods of low nominal interest rates and high persistent unemployment rate, and a fiscal policy shock such as an increase in government spending will boost economic activity and reduce unemployment rate, in turn (Rendahl, 2016).

Cahuc, Carcillo, Rinne, and Zimmermann (2013) investigate unemployment rate in France and Germany as two polar cases. In contrast to France, youth unemployment has been on continuous decline in Germany for several years, and hardly affected by great recession. Interestingly enough, the output decline in France was weaker than Germany since great recession; however, the recovery was earlier and stronger in Germany than in France. As a result adult unemployment has been declining in Germany while in France it has been close to the average European Union. The resilience of German labor market to great recession was remarkable and exceptional. Indeed, there are substantial differences between labor market institutions and labor market policies in two countries. Germany is not faced with a labor market segmentation that is as strong as in France and national statutory minimum wage has not been introduced as in France. The authors highlight the importance of labor market institutions and policies in reducing unemployment. Historically, the increasing use of fixed term contracts in France has coincided with rising youth unemployment rate. The French unemployment is characterized by a high unemployment wage and a strong segmentation, which hampers school to work transition and leads to higher unemployment rate.

The effect of fiscal policy on unemployment in Greece has been investigated by using a VAR model with quarterly data from 2000 to 2012, and variables such as log of real government spending, change in real taxes, change in log of real GDP and change in log of number of unemployed (Tagkalakis, 2013). The estimated results suggest that following a government spending shock unemployment falls by about 1.3%. He also finds both output and unemployment respond in a significant and persistent manner following a tax hike.

The effectiveness of fiscal policy to eliminate unemployment in the long-run, for a number of OECD countries, has been the subject of a study by Battaglini and Coate (2016). They estimate an econometric model on the relationship between public debt to GDP ratio and unemployment during 2006-2010 and find that the larger an economy's pre-existing debt level, the higher the unemployment rate will be. They also find a positive significant relationship of 0.07 between debt to GDP ratio and unemployment rate. They conclude unemployment can be mitigated by tax cuts and an increase in public spending. They also use other independent variables such as openness and corporate bond rate; while openness doesn't play an important role in shaping unemployment rate, corporate bond rate has a positive significant effect on unemployment rate.

### **3. Data and Methodology**

#### **3.1. Macroeconomic Variables and Data**

Following Alexius and Holmlund (2008) we assume unemployment is shaped by a large number of policy variables including fiscal policy variables (corporate tax rate, and income tax rate, budget deficit ratio to GDP), monetary policy variables (inflation, and real short term interest rate), international trade variables (oil shocks, terms of trade, currency rate, and openness), and labor market variables (hourly wages, unemployment benefits, and labor productivity). The list of variables is presented in Table 1.



**Table1.** Data definitions and labels

<b>Fiscal Policy Variables</b>	
t	Corporate tax rate
in	Income tax rate
BD	Budget Deficit ratio to GDP
<b>Monetary Policy Variables</b>	
$\pi$	CPI Inflation rate
r	Real short-term interest rate
<b>International Trade Variables</b>	
Oil	Oil shocks
T	Terms of Trade
E	Currency rate (Euro versus dollar)
Open	Openness (instrument for GMM)
<b>Labor Market variables</b>	
W	Hourly wage rate
B	Unemployment benefit
P	Labor productivity

We use quarterly data for the period of 1980-2015 to estimate the unemployment rate in France. The data has been retrieved from European Central Bank, Bank de France and OECD websites.

### 3.2. Methodology

#### 3.2.1. OLS Technique

Based on our discussion in Section 2 and following several economists (Alexius & Holmlund, 2008; Rendahl, 2016; and Tagkalakis, 2013) we use an econometric model where unemployment rate is a function of monetary policy, fiscal policy, trade policy, and labor market shocks.

The following model is used to measure the effects of fiscal policy variables, monetary policy variables, trade policy variables, and labor market variables on unemployment rate. The estimated results will help us to find out what are the main determinants of unemployment in France.

$$u = f(t, in, BD, \pi, r, Oil, T, E, W, B, P)$$

It is expected that corporate tax rate and income tax rate have a negative impact on unemployment rate because they reduces investment and consumer spending, which in turn, lead to lower employment. Budget deficit is expected to have a negative impact on unemployment rate, because it raises aggregate demand, which leads to lower unemployment rate. Within the Philips curve inflation is expected to have a negative impact on unemployment rate. It is also expected that real interest rate have a negative impact on unemployment rate because with a rise in interest rate investment will fall, leading to higher unemployment rate. Deterioration in terms of trade and oil shock is expected to have a positive impact on unemployment. It is also expected that exchange rate has a negative impact on unemployment rate; the more depreciated the currency, the higher exports and GDP, leading to lower unemployment rate. The coefficient on wages and unemployment benefits are positively correlated with unemployment rate. And finally, productivity shocks seem to have a negative impact on unemployment as emphasized in the literature.

$$U = a_0 + a_1 t + a_2 in + a_3 BD + a_4 \pi + a_5 r + a_6 Oil + a_7 T + a_8 E + a_9 W + a_{10} B + a_{11} P$$

### 3.2.2. IV and GMM Method

Lucas Jr. (1977) questioned the efficiency of macroeconomic models due to the fact that people will alter their behavior based on their expectations. To account for this change in behavior we allow for the lagged values of unemployment rate to be included in the estimated model. To address the potential endogeneity problem in the above model we use Generalized Method of Moment (GMM) technique and use an instrumental variable that is correlated to unemployment and may affect the results, the openness of the economy. The choice is motivated by some empirical studies (Alexius & Holmlund, 2008; Battaglini & Coate, 2016), which show more open economies have experienced lower unemployment rate; therefore, we use the openness as an instrumental variable. A lagged unemployment variable is included among explanatory variable to account for Lucas critique and a change in behavior of labor supply to government policy.

## 4. Results and Discussion

### 4.1. Estimated Results with OLS Technique

We use augmented Dickey Fuller and Phillips Perron test to investigate whether data is stationary. Both tests indicate that all of data are non-stationary in level form. Therefore, the same tests were performed on the first differences. The test results are reported in Table 2 and suggest that all series are stationary in the first difference level (integrated of order one). We use Johansen approach to explore long-run relationship between the variables. The null hypothesis of no cointegration is rejected, leading us to conclude that there is a long-term relationship between these variables as observed in Table 3.

**Table 2.** Unit root test of first order

Variable	ADF	Phillips Peron
t	7.31 (3.65)*	6.14 (2.13)*
in	3.14 (2.19)*	4.28 (3.26)*
BD	4.78 (2.96)*	6.52 (2.35)*
$\pi$	6.35 (2.76)*	5.78 (3.14)*
r	3.78 (1.96)*	4.12 (2.15)*
Oil	6.34 (2.45)*	5.75 (3.16)*
T	4.25 (3.15)*	6.17 (4.21)*
E	4.17 (2.23)*	5.87 (2.37)*
W	4.15 (2.67)*	6.14 (1.96)*
B	3.15 (2.14)*	3.98 (1.87)*
P	4.12 (2.13)*	3.79 (2.46)*

\*Rejection of null hypothesis of the presence of unit root

**Table 3.** Johansen's co-integration test for variables

H0	Eigenvalue	Likelihood ratio	5% critical value	1% critical value
r=0	0.541	69.46*	62.99	70.5
r<1	0.478	65.17**	58.9	60.2
r<2	0.421	48.13*	47.56	49.35
r<3	0.387	40.17*	39.87	41.24
r<4	0.321	39.96**	37.14	39.25
r<5	0.278	34.05*	32.56	34.49
r<6	0.231	31.53**	27.87	29.56
r<7	0.198	24.16*	23.82	25.41
r<8	0.174	25.76**	21.33	22.41
r<9	0.153	22.17**	18.64	19.75
r<10	0.146	17.01*	16.45	17.89
r<11	0,129	18.32**	14.23	16.17

\*Rejection of hypothesis at 5% significance level, \*\* rejection of hypothesis at 1% significance level.

The estimated results with OLS technique are reported in Table 4. Equation 1 represents fiscal policy variables (F), Equation 2 represents monetary policy variables (M), Equation 3 represents external sector and foreign demand variables (E), and Equation represents labor market variables (L); and finally Equation 5 represents all variables together in the same equation. The R-squared results suggest that fiscal policy variables in sum are able to explain a higher percentage of changes in unemployment rates than other equations. Indeed, 72% of changes in unemployment are explained by fiscal policy variables, while monetary policy variables and foreign trade shocks explain only 43% and 39% of changes in unemployment rate, respectively. The labor market variables are only able to explain 27% of changes in unemployment rate and among the independent variables in this model, only hourly wage is statistically significant. However, with the inclusion of all related variables in one equation, the explanatory power of the model increases to 91% (Equation 5). As seen in Equation 5, corporate tax rate has a statistically significant role in shaping unemployment rate. Indeed, a one percent increase in corporate tax rate leads to 0.31 percent higher unemployment rate. As it can be seen in this equation only fiscal policy variables, inflation, oil shocks and real wages are statistically significant at 99% level of confidence and of the expected signs.

The labor market variables are only able to explain a minor share of changes in unemployment (27%), emphasizing the impotency of labor market reforms in solving unemployment problem. The results here are in accordance with those of (Bassanini & Duvall, 2006) who find higher tax rates raise the unemployment rate, emphasizing the role of fiscal policy variables in shaping unemployment. Our findings are also consistent with those of (Linzert, 2004) who argue while macroeconomic shocks are able to explain a large share of fluctuations in unemployment; such changes are hard to be reconciled with a pure micro based explanation of labor market institutions and labor market variables such as productivity shocks.



**Table 4.** Estimated results for unemployment rate for three models

Variables	Equation 1(F)	Equation 2(M)	Equation 3(E)	Equation 4(L)	Equation 5
t	0.27** (0.01)				0.31** (0.01)
in	0.13** (0.02)				0.12** (0.01)
BD	-0.09** (0.02)				-0.08** (0.02)
$\pi$		- 0.14** (0.03)			-0.14** (0.07)
r		- 0.32** (0.04)			-0.04 (0.03)
Oil			-0.17** (0.04)		0.05** (0.02)
T			- 0.05 (0.03)*		-0.01 (0.01)
E			-0.05 (0.06)		-0.01 (0.02)
W				0.08** (0.03)	0.03** (0.01)
B				0.06 (0.04)	0.03 (0.02)
P				-0.07 (0.05)	-0.01 (0.01)
R-squared	0.72	0.43	0.39	0.27	0.91
F- Statistic	56.13	48.19	26.87	20.34	127.14
D.W.	1.95	1.72	1.89	1.76	1.92

**Note:** Numbers in parenthesis are standard errors; \*\*significant at 1% level,\* significant at 5% level.

#### 4.2. Estimated Results with GMM

The estimated results for GMM model presented in Table 5 suggest that only corporate tax rate, budget deficit, and oil price have statistically significant impact on unemployment rate and are of expected signs. The finding emphasizes the role of fiscal policy variables and business cycles. The results are in accordance with those of Alexius and Holmlund (2008) who find external shocks, terms of trade, and exchange rates have trivial impacts in shaping unemployment rate. Also, our results suggest that lagged unemployment rate is statistically significant for explaining unemployment rate, supporting Lucas critique. In other words unemployment rate seems to be persistent as suggested in staggering models.

**Table 5.** IV and estimated GMM results for unemployment

Variable	IV	GMM
t	0.03 (0.067)	0.11** (0.02)
in	0.04 (0.06)	0.016 (0.01)
BD	-0.12** (0.03)	-0.15** (0.03)
$\pi$	0.015 (0.01)	(0.003) (0.002)
r	0.012 (0.011)	0.003 (0.002)
Oil	-0.08* (0.04)	0.03** (0.01)
T	0.01 (0.02)	0.001 (0.01)
E	0.013 (0.011)	0.004 (0.01)
W	0.04 (0.06)	0.01 (0.03)
B	0.03 (0.05)	0.025 (0.02)
P	0.02 (0.03)	0.04 (0.05)
U(t-1)	-	0.035** (0.012)

**Note:** Numbers in parenthesis are standard errors; \*\*significant at 1% level,\* significant at 5% level. Instrumental variable is measured by openness of the economy.

## 5. Discussion and Policy Implications

Unemployment orthodoxy has been widely debated among economists for a long period of time. While New Keynesians models have emphasized on the role of fiscal policy variables and government spending shocks, New Classical economists have focused on the role of monetary policy variables including real interest rate and inflation. In the meantime, a small group of economists have paid particular attention on the role of labor market variables and institutions, calling for labor market reforms.

To find out which set of policy variables play a more important role in shaping unemployment rate this study implemented different models and techniques. The estimated results through OLS and GMM techniques suggest that fiscal policy variables, particularly corporate tax rate and budget deficit, are the most important variables in shaping unemployment rate in France. Our findings are consistent with those of (Bassanini & Duvall, 2006) who find fiscal policy variables are the most important variables in shaping

unemployment rate in OECD countries. The power of fiscal policy calls for corporate tax reform and government spending to encourage investment. The results also suggest that external trade variables have trivial role in shaping unemployment; therefore, protectionism is incapable of reducing unemployment rate in France.

France's economy has suffered from unprecedented levels of unemployment rate for decades now; missing the roots of problem may mislead policy makers in adopting correct policy tools. Indeed, lack of fiscal reforms and over emphasize on the role of labor market reforms may lead to higher unemployment rate and more resistance from labor unions. To achieve a one digit unemployment rate, the government needs to focus on corporate tax reforms. Unemployment can only be reduced by a substantial tax reform that guarantees a tax cut for corporate and individuals.

Though labor market reforms and reducing unemployment benefits could reduce market frictions in the long run, it may bring more tensions to the labor market in the short run. The results of this study suggest that fiscal policy deserves more attention than hitherto. Economists are actively debating how much unconventional monetary policy such as quantitative easing has contributed to the recovery of Eurozone. The most straight forward solution to stimulate demand and reduce unemployment rate when there is a liquidity trap is expansionary fiscal policy. Our analysis casts doubts on the role of labor market flexibility and micro foundation of unemployment as emphasized by several authors including Linzert (2004) and Casares *et al.* (2014). The labor market reforms and micro institutions that have recently been proposed and are going to be reinforced by the new elected centrist government seem to be incapable of reducing unemployment rate in the long-run.

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