The Relationship between the Financial Performance of Government Trust Fund, Flexible Financing Scheme, Discretion and Political Party: A study of US Unemployment Insurance Trust Fund

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Abstract

The government requests the trust fund to be financially self-supported so that the flexible financing mechanism can prevent the trust fund from the crisis of finance deficit. Taking federal-state mode of US unemployment insurance (UI) as an example, this paper discussed the US unemployment insurance trust fund and policy design (including the real unemployment tax rate, the nominal UI tax rate, the UI tax base), discretion (substitution rate, time of payment, actual receiving rate), political party structure, and regional effects. The evident results showed that, firstly, the phenomenon of the flexible financing scheme mechanism (e.g. the substantial taxation rate, the nominal UI, the recipiency rate), shown in both taxation and recipiency at the same time, however, the phenomenon that breaches the financing flexibility mechanism (e.g. the tax base, the receiving rate) is also present. It indicates that financial performance is not just the only goal of the UI trust fund. Secondly, in the political party structure, when the majority party of the House and the Senate is the Republican, the financial performance is better, which complies with its comparatively conservative image. But when the State Governor is a republican, the financial performance is worse, which did not reach the significant level at 10%. This situation also accords with the candidates in small voting area of bi-party system, where the policy usually favors the median voter. Thirdly, generally there is a difference between the UI financial performance in the states in different areas. Finally, in terms of variable control, unemployment rate obviously relates with the loan and the unemployment insurance trust fund that the state government borrows from the federal government.

1. Introduction

The independently operating fund set by the government for social welfare system, is mainly for avoiding the social welfare system from the political interfering and being able to independently operate to achieve the purpose established, and furthermore maintaining self-supported financing operation. The main aim of UI is to provide the involuntary unemployment with basic life necessaries. The financial source of fund is the premium. The UI benefit is its main payout. Owing to the involuntary unemployment being resulted from economic prosperity circle, when the situation turns better, the premium received in current period is more than UI payout leading to finance surplus, however, when the situation turns reversely, the finance deficit easily occurs. If the government collects more premiums when in boom for using in reimbursement when in bad situation, then the fund possesses the “saving mechanism”. However, unbalance of finance often happens in saving mechanism, so in order to avoid unbalance of finance and maintain the minimum fund balance, the flexible financing mechanism stresses the system design. However, when the fund balance is higher than the safe-benchmark of deposit, the premium is decreased, when the fund balance is lower than the safe-benchmark of deposit, the premium is increased, in this way to maintain an appropriate fund balance. In spite of the policy-designed adjustment mechanism, the operation of independent fund possibly adjusts its fund balance via the discretion in administrative procedures, and the political party structure may influence the criterion of safe-benchmark and alarm-benchmark of deposit.

This paper takes the US UI fund as the research object, discusses whether the independent trust fund set up by the government for the purpose of social insurance, possesses flexible financing mechanism and whether the financial performance is affected by administrative discretion and political party structure. The main reasons of adopting US UI fund as the research object in the research are, firstly, the US UI has a history of over 60 years since 1938, the fund operation has matured already, there is sufficient information to check the effects of financing adjustment mechanism and administrative discretion; secondly, the US UI is the only “federal-state” operating fund in social welfare system, i.e. the federal government stipulates the parent law and the state government stipulates the bylaw, and differences exist between the bylaws in different states, being able to exam the relationship between administrative discretion and financial performance; finally, the US politics possesses the nature of bi-party system, the financial viewpoints of Democratic Party and Republican Party are different, being able to exam the influence to the fund operation derived from the discrepancy of political party structure.

The structure of this paper is as follows, Section 1, Research Purpose; Section 2, Survey of US UI System; Section 3, Literature Review; Section 4, Research Design; Section 5, Reference Sources, Summary of Variable Statistics; Section 6, Evident Results, finally, Section 7, Research Conclusion and Limitation

2. **Survey of US UI Trust Fund**

The implement of US UI system is according to the Social Security Act (1935), the main purpose is to provide the involuntary unemployment with basic life necessaries to achieve a stability mechanism function of anti-prosperity-circle.

Because the US UI system is federal-state type, the federal government designs the system (law legislation) and the state government stipulates the detail rules (e.g. coverage, premium decision, benefit standard), the differences in UI policy between each state exist to a certain extend, under the circumstances of setting up independent operating fund, the financing operation of fund needs to be self-supported. But the federal government is able to influence the government's UI policy through "deductible system" and "loan cost", carries out quality control. [1]

The financial source is the "State Unemployment Tax" (State Unemployment Tax Act; SUTA, hereinafter referred to as "Unemployment Premium") and "Federal Unemployment Tax" (Federal Unemployment Tax Act, FUTA), both paid by employer, it suggests that employer should be responsible for involuntary unemployment. It may avoid dismissing employee by employer at discretion. The premium collected by state government used in UI benefit and extended unemployment benefit at a half level, and the tax base of UI is not allowed to be lower than that stipulated by the federal government (currently that is the first USD7000. of employee's salary). The premium collected by federal government is used in personnel expenses of staff in federal and state government who implement the UI program, extended unemployment benefit at a half level and offering loan to state government.

In this section, issues like UI fund operation frame, UI premium, UI benefit, measuring index of UI trust balance and tendency of fund in raising money in the near future, are to be explained in succession.

2.1 UI Fund Operation Frame

The US Treasury set up "UI trust fund accounts of U.S. Treasury", including "FUTA account" and "unemployment trust fund"

The federal unemployment tax paid by employer is transmitted into "UI trust fund accounts of U.S. Treasury", which is used in personnel expenses of staff in federal and state government who implement the UI program, extended unemployment benefit at a half level and offering loan to

[1]The deductible system is implemented for deducing the federal unemployment tax rate paid by employer..

state government. Besides, the US Treasury manages the interests income of state government derived from UI trust account, premium transfer between states' government and reimbursement the unemployment benefit applied by staff of non-profit institution and government.

The "unemployment premium" paid by employer to state government, is transmitted into the "unemployment trust fund account" (hereinafter referred to as "unemployment trust fund".). Nowadays there are totally 53 unemployment accounts of 50 states and District of Columbia, Puerto Rico, and Virgin Islands. The unemployment premium collected by state government is deposited in "clearing account" of state government in advance, and then submitted to the unemployment trust fund of Treasury. The benefit reimbursed to unemployment is allocated to the "benefit payment account" of state bank from unemployment trust fund account and then paid to unemployment accordingly.

The UI program of state government is implemented by the "state employment security agencies" (SESA). The duty of agency includes collecting UI premium, taking in application of UI benefit, reviewing application and reimbursement of unemployment benefit. The agency decides the appropriate premium rate for employer and the reviewing conclusion of application case (whether or not to reimburse, benefit amount and duration).

2.2 UI Premium

The tax base of federal unemployment tax collected by federal government is the first USD7000 of employee's wage. The tax rate at present is 6%. When the provision stipulated by the state where a company bases conforms to the federal criterion, there is a tax-deducted rate of 5.4%, i.e. the real tax rate is 0.8%.

The tax base of UI premium collected by state government is decided by state government at discretion subject to its conformability with tax base stipulated by federal government as its lower-limit. Under such tax base policy with the existing federal tax rate as its lower-limit, some states adopt the federal tax base (e.g. California, New York), or adopt tax base index on the basis of average wage level (e.g. Hawaii, Minnesota). Whenever the tax base needs to be adjusted, a renewal legislation procedure in those states adopting the federal tax base needs to start. The tax base index will adjust automatically according with the average wage level. In terms of UI tax rate, the experienced premium rate is determined as per the record of employer's dismissal experience in the past 1 to 3 years. The more the dismissal cases happen, the higher the premium rate becomes, nevertheless no high-and-lower limit rate is fixed in premium rate. There are two methods in identification of dismissal level, i.e. the "reserve ratio" and the "benefit ratio". 1. Reserve Ratio Method, each employer opens an individual "bank account", the UI premium paid

by employer is deposited into and the unemployment benefit is drawing from that account. The reserve ratio is the quotient obtained by account balance dividing average wage in the past 3 years. The higher the reserve ratio is, the lower the adopted premium becomes. 2. Benefit Ratio Method, the benefit ration is the quotient obtained by unemployment benefit of dismissed employees in the past 3 years dividing the wage payable for tax. The positive correlation exists between the reserve ratio and the benefit ratio.

2.3 UI Benefit

Only that unemployment covered by UI, who accord with the unemployment benefit stipulation of state government, is entitled to draw the benefit. There are two provisions in general, the "monetary provision" and the "non-monetary provision". The benefit duration in each state is different. The longest duration is normally 26 weeks.

In terms of monetary provision, it is required the jobless has employment experience before unemployment, the standard in each state is different, but the relevant measuring concepts are: before unemployment, 1) time length of employment; 2) working weeks, hours and payment; 3) total working weeks and total payment in basic period. Besides, allocation requirement and seasonal restriction is also applied to getting rid of seasonal labors (e.g. tour industry in Minnesota and food processing industry in Iowa) or informal employer. The common standard used in measuring employment history includes the multiple of high-quarter wages, the multiple of weekly benefit amount, the flat amount method and the weeks or hours of work, etc. For saving length of this paper, these subjects will not be discussed in detail. Anyone interested may refer to *Ho 2003, Ke-shing Chin 2005*.

In terms of non-monetary provision, the jobless is requested not to be liable for his/her unemployment. The common standard used in checkup includes, 1) Applicant's dismissal reason: unemployment resulted by legal dismissal, excluding voluntary dismissal, jobless' misbehavior or breaching the labor law and regulations, employment contract and work rules, or dismissal for being involved in labor dispute; 2) during the period of drawing UI benefit, the applicant should be acknowledged as having working capability and working desire. Besides, the voluntary jobless are provided with proviso, if he/she is able to present reasonable explanation (e.g. sexual harassment, constrained retirement, illness, joining the army), he/she is still entitled to draw the UI benefit. As to the unemployment caused by labor dispute, those dismissed for strike or own defect is not allowed to draw UI benefit, but if for shutdown, the applicant accords to the non-monetary provision.

2.4 UI Trust Fund Balance Measuring Index

The UI fund balance is affected by prosperity fluctuation, so linking fund balance with premium rate may decrease such impacts. The UI trust fund balance index is introduced in this chapter. The commonly used indexes are “reserve ratio” and “high cost multiple” (hereinafter referred to as HCM).

Firstly, reserve ratio calculation is fund balance at specific time point (normally the period end) dividing the annually wage of employee covered by UI. The annually wage includes dividend in cash and accommodation supplied by company, etc. The “Interstate Conference of Employment Security Agencies” (ICESA) suggests that reserve ratio be used to scale fund balance. Hereby, some states are in a position to utilize reserve ratio to decide next year’s premium rate table, i.e. higher premium rate table is adopted when lower reserve ratio appears. For example, Montana has fixed a reserve ratio of 2% in fund balance standard since 1989.

Secondly, calculation of HCM is dividing the highest “reimbursement ratio” since January 1958 by reserve ratio. The reimbursement ratio is the proportion of UI benefit during 12 sequential months accounting for the total wage of employees covered by UI. Therefore, HCM is the duration that unemployment fund is afforded even if in the period when not any premium is collected and the most serious unemployment is sustained. Advisory Council on Employment Compensation (ACEC) proposes that appropriate fund balance should be 1, whereas the General Accounting Offices (GAO) proposes the HCM should be 1.5.

2.5 Current Financial Tendency of Fund in Raising Money

The UI fund balance is greatly influenced by prosperity fluctuation, so in order to avoid financial deficit, it is necessary to cumulate fund balance in ordinary time to prepare for the benefit demand when unemployment increases. If the quick response mechanism of fund balance is established, the fund balance demand decreases, therefore each state now prefers to adopt HCM or other similar index to measure fund balance.

Although high fund balance reduces the possibility of financing bankrupt, the marginal cost of over-high fund balance usually overtakes the interests income, moreover, over-high fund balance will often be embezzled under requests and needs to confront political pressure, hence, state government trends to adopt the “flexible financing” mechanism. The flexible financing mechanism is such a financing tool that automatically adjusts premium income and benefit reimbursement according to the fund balance fluctuation.

The impacts from which flexible financing mechanism influences UI tax and benefit reimbursement are: 1) UI tax: when prosperity situation turns worse, the UI benefit climbs up, it makes the fund balance falls to the alarm-level, the experienced premium design will heighten the premium rate. Therefore, when HCM reduces, the real UI tax rate will increase, vice versa. It is normally used adopting more sensitive premium table, tax base index or changing the experienced premium rate to benefit rate. 2) Unemployment benefit: when the prosperity situation turns worse, HCM decreases, the SESA implements stricter checkup via administrative discretion to cut down the numbers of unemployment who draws benefit and deduce benefit amount and duration, or adopts the solution, i.e. “solvency tax” declines along with reserve ratio to decrease benefit reimbursement and to mitigate the fund balance drop.

The flexible financing maintains the advantage of low reserve ratio and declining financial deficit possibility, but it breaches the tenet of establishing UI to provide the unemployment with salvation and life necessities and depresses the economic stability mechanism, and furthermore, the flexible financing mechanism is unable to prevent financial deficit from happening. The executive force of state government is frequently affected by the voters’ pressure. It makes flexible financing mechanism unable to exert an influence.

According to the survey of US UI financing mechanism, the characteristics of flexible financing mechanism are as follows: 1) adopting HCM to measure financing flexibility; 2) a negative correlation exists between HCM and deferred phase 1 of real tax rate, and between nominal tax rate and tax base as well; 3) a negative correlation exists between deferred phase 1 of benefit rate, also between weekly benefit rate and reimbursement duration; 4) a positive correlation exists between HCM and current period economic growth rate; 5) a negative correlation exists between HCM and current period unemployment rate; 6) a negative correlation exists between HCM and current loan amount; 7) the design of real tax rate, nominal tax rate and tax base derives from policy design; 8) flexible financing of UI benefit derives from both the policy design and administrative discretion.

3. Literature Review

The past research on UI mainly focuses on the relationship between UI benefit and economic justice, between economic growth and social stability. In term of financial research on UI trust fund, it stresses the possibility of financing crisis when the serious economic recession occurs, and its influencing factors, taking into consideration in policy design.

Lackman and Valz (1988) adopted the econometric projection model to imitate UI trust fund in Virginia state. There are two procedures in the said model: “econometric projection program”

forecasting imitating economy and policy, and “financial forecast program” forecasting fund balance, income and reimbursement. It is discovered that issues about excess repayment capability, unemployment exceeding repayment capability and excessive fluctuation of total UI tax always relates to legislation. The solution is to expand the high-and-lower limit of current unemployment tax rate.

Goss and Knudsen (1999) adopted Logit regression to set up financial deficit projection model, taking tax base, tax rate, benefit duration as independent variable, conforms to the proportion of unemployment benefit accounting for unemployment covered by UI, and ratio between unemployment benefit and wage paid in for coverage, to discuss the possibility of financing crisis happening under the UI fund operation of state government at present when meeting with the recession similar to that in 1970’s. The research shows the financial standard was too conservative at that time. The data indicates the possibility of financing crisis happening is still below 1% even if the recession continued for 100 months. Goss and Kundsen (1999) adopted HCM as measuring index, when HCM is 1.3, the possibility of fund stopping working is nearly zero, but when HCM is 1.0, such possibility increases dramatically, in case HCM falls below 0.7, the possibility of fund insufficient to reimburse reaches 99%. Hereby, it is understood that HCM is a suitable index of fund balance.

Vroman (1996) established UI trust fund model in Washington State, the UI financing mechanism in Washington State includes a workable mechanism with tax base and high unemployment benefit index and 7 premium-rate tables. It is discovered via imitating analysis that short-term recession does not considerably depress UI trust fund financially, i.e. keeping the premium rate table unchanged and maintaining stable unemployment benefit for several years, the fund balance still remains in the same level. If meeting with continuing recession for 10years and above, the UI trust fund is in a position to borrow money from outside. This financing mechanism possesses such function as promptly complementing fund balance to safe deposit level. The effect of such function is significant in the unemployment benefit in the first 5 years in recession.

Wander and Stengle (2000) pointed out the recipiency rate of real number of employment received unemployment benefit accounting for total unemployment decreases year by year. Wander and Stengle (2000) suggested that the cause of low recipiency rate is many unemployment do not forward their applications for benefit, because they regard themselves not qualified to apply for benefit, or they believe they would find a new job in short time, especially when the application qualification set by government turns increasingly strict, the number of unemployment who do not apply increases.

Vroman (2001) investigated 9 of the states where the recipiency rate is comparatively high or low,

using regression analysis to find out the two factors leading to low benefit rate in different time point and location is “state labor market” and “UI program administration”, The economic factor leading to differences in labor market includes unemployment rate and the union force, etc. The difference of UI program is affected by UI administrative activities, related law and bylaw and benefit application method, etc. Vroman (2001) discovered: 1) the channel affecting unemployment benefit includes UI law and administrative management activities; 2) the cause affecting UI benefit includes “pass rate of checkup” and “benefit duration”, the former affects the result more than the later; 3) the low unemployment benefit shows regional learn effect, e.g. high pass rate and short benefit duration exists in Southwest states; 4) the pass rate is affected by “ratio of unemployment benefit applicant accounting for total unemployment”, “ratio of re-applicant of unemployment” and “pass ratio of first-time unemployment benefit applicant ”, these three variables are affected by misfeasance decision rate; 5) the benefit duration is affected by several factors, such as “proportion of receiving unemployment benefit period accounting for real unemployment period ”, “longest benefit duration”, “unemployment benefit rate”, “misbehavior and voluntary dismissal” and “qualification re-checkup rate”; 6) pass rate and benefit duration is affected by administrative procedure, e.g. pass rate is affected by the UI management bureau’s decision on misfeasance, benefit duration is affected by the qualification re-checkup times of unemployment received benefit.

Vroman (2003) researched the financing mechanism of UI trust fund in Montana state, this state start reform since 1970’s, including tax base (80% of average wage), maximum benefit index (fixed proportion of original wage) and 10 premium rate tables, the reserve ratio set by state government of Republican in 1989 is 2% of covered wage. The research points out the UI program in Montana State links trust fund premium income with unemployment benefit and state-wide average wage level for interaction, in this condition, the state UI fund is able to maintain appropriate UI trust fund balance even if in recession period, when unemployment and individual unemployment benefit increases.

After synthesized analysis of UI trust fund, it makes conclusions as follows: Firstly, the most appropriate forecast model (Lackman and Valz 1988; Vroman 1996, Vroman 2003) established focuses on research on policy (e.g. tax base, premium rate and unemployment benefit, etc.) and financing bankrupt to avoid loan demand because of insufficient reserve ratio. The relevant research shows the financial flexibility is improved by adopting tax base index and premium rate table with more specific grades. Secondly, the research on unemployment benefit shows the unemployment is affected by pass rate and benefit duration, and the pass rate and benefit duration is affected by the diversity in law, administrative procedure and collective economy (Vroman 2001) to the checkup pass rate and benefit duration is affected by the administrative discretion on misbehavior and qualification. Such information is obtained from collection via specific research

program and not from public domain. Thirdly, the HCM is closed connected with the possibility of deficit crisis in UI trust fund (Goss and Knudsen 1999). Fourthly, the financial view-point of Republican is comparatively conservative, the financial performance of UI trust fund is comparatively good (Vroman 2003). Fifthly, the decrease of application rate of unemployment leads to the real number of unemployment receiving unemployment benefit, the cause of application rate decrease is the strict stipulation of law, the unemployment believe they would find a new job within a short period (Goss and Knudsen 1999). Finally, the similar unemployment benefit and duration ordinarily occurs in neighboring states (Vroman 2001).

Based on the previous research, this research possesses the following features: Firstly, this paper adopts HCM to measure the financial performance of trust fund; Secondly, in view the lack of benefit rate in the past, in spite of adopting the two variables, i.e. the ratio of unemployment receiving benefit for the first time accounting for insured unemployment and that of insured unemployment accounting for total unemployment, it establishes a new variable. Thirdly, it exams the financial performance and law and relationship of administrative discretion at the same time. Fourthly, it considers the relationship between political party structure and financial performance of UI trust fund. Finally, it controls the collective economy situation (unemployment rate, economic growth rate and borrowing).

4. Research Design

This section will firstly introduce the financial performance index in measuring UI trust fund, then, explain the research thesis, and research the relationship between the thesis and financial performance index as the basis of establishing evident model.

4.1 Financial Performance Index of UI Trust Fund

The UI trust fund balance shows its financial condition. The “current period balance” ($BALANCE_t$) calculation equation is “previous period balance” ($BALANCE_{t-1}$) plus “total income of current period UI premium” ($PREMIUM_t$), “previous period interests income” ($INTEREST_{t-1}$), “total inter-state transfer amouint ” ($TRAMSFER_t$) and “total premium of staff in government and non-profit institution” ($REMITTED_t$), minus “total UI benefit” ($BENEFIT_t$), i.e.

$$BALANCE_t = BALANCE_{t-1} + PREMIUM_t + INTEREST_{t-1} + TRAMSFER_t + REMITTED_t - BENEFIT_t \quad (1)$$

Eq. In (1), positive correlation exists between premium income ($PREMIUM_t$) and benefit ($BENEFIT_t$), and between current period total premium income and current period fund balance,

which is most closed to financing mechanism, because the premium income is affected by tax base and tax rate, therefore, a positive correlation also exists between current period tax base and current period insurance tax rate and current period fund balance. The negative correlation exists between current period total unemployment benefit and current period fund, because total unemployment benefit is affected by average benefit amount, benefit duration and number of beneficiary, so there is negative correlation between the current period average benefit amount, current period benefit duration and current period number of beneficiary and current balance.

The safe balance of UI trust fund is affected by several factors, such as workable population insured by UI, wage level of coverage and maximum benefit duration, etc. when adopting reserve ratio (RR_t) to measure the comparative capability of fund in bearing financial deficit, RR_t is the quotient of total wage paid in covered employment ($TWCE_t$) divided by current period fund balance ($BALANCE_t$), i.e.

$$RR_t = BALANCE_t / TWCE_t \quad (2)$$

Besides, adding into the data of past highest unemployment benefit, the reasonable financial condition index of UI trust fund can be established. The UI trust fund commission proposes HCM should be the suitable index in measuring financial performance, HCM is the quotient of "rate of maximum benefit in the past accounting for fund balance (high cost rate)" (HCR), i.e.

$$HCM_t = RR_t / HCR_t \quad (3)$$

HCR_t is the maximum rate of unemployment benefit in the past sequential 12 months accounting for balance since the establishment of UI fund. HCM should be understood as the sustainable period of fund using existing fund balance when meeting with the most serious unemployment benefit in the past. Goss and Kundsen (1999) also regarded HCM as the suitable index to forecast possibility of UI fund deficit. According to Eq. (1), (2), (3), HCM may be re-written as Eq. (4):

$$\begin{aligned} HCM_t &= RR_t / HCR_{t,} = [BALANCE_t / TWCE_t] / HCR_t \\ &= [(BALANCE_{t-1} + PREMIUM_t + INTEREST_{t-1} + TRAMSFER_t \\ &+ REMITTED_t - BENEFIT_t) / TWCE_t] / HCR_t \end{aligned} \quad (4)$$

Total UI premium income ($PREMIUM_t$) and total UI benefit ($BENEFIT_t$) is the main source and usage of UI trust fund, and the focus of flexible financing mechanism design. Therefore the $PREMIUM_t / TWCE_t$ and $BENEFIT_t / TWCE_t$ in Eq. (4) is split out for research purpose. Firstly, in terms of UI tax, real UI tax rate (($RTAX_t$, hereinafter referred to as "reai tax rate") is $TWCE_{t.}$ divided by. $PREMIUM_{t,}$ i.e. $RTAX_t = PREMIUM_t / TWCE_t = (PREMIUM_t / TWRE_t) * (TWRE_t / TWCE_t)$. The first item is UI nominal tax rate (NTAX, hereinafter referred to as "nominal tax

rate"), i.e. $NTAX_t$ = $PREMIUM_t$ /$TWRE_t$; the second item is tax base index (TXBA, hereinafter referred to as "tax base"), i.e. $TXBA_t$ = $TWRE_t$/ $TWCE_t$, expressing real tax rate is affected by nominal tax rate and tax base.

Secondly, in terms of UI benefit, total Ui benefit ($BENEFIT_t$) divided by total wage for insuring UI ($TWCE_t$), i.e. $BENEFIT_t$ /$TWCE_t$ = (WB * NERB * DURATION) / (WP * NECU * 52),thereinto WP is weekly payment, WB is weekly benefit, NERB is "number of employment received unemployment benefit", NECU is "number of employment covered by UI", and DURATION is "UI benefit weeks", 52 is the total weeks within one year. After that, $BENEFIT_t$ / $TWCE_t$ can be further arranged into $BENR_t$ * $WBIE_t$ * $DURATION_t$ * (1/52). The first item $BENR_t$ is "UI benefit rate" (hereinafter referred to as "benefit rate"); the second item "weekly benefit total insured employee" (WBIE) is $NERB_t$, divided by $NECU_t$, i.e. $WBIE_t$ =($NERB_t$/$NECU_t$), hereinafter referred to as "recipiency rate"; the third item DURATION is "UI benefit weeks" (hereinafter referred to as "receiving weeks"); the fourth item is the reciprocal of 52 weeks in one year, it is a constant.

As per the reasoning above, HCM masy be re-written into the reduced form of UI benefit and UI premium income and simplify the remains as other factor (OF) as blow:

$$HCM_t = f(NTAX_t, TXBA_t, BENR_t , WBIE_t, DURATION_t, OF_t) \qquad (5)$$

From Eq. (5), it is understood that positive correlation exists between HCM_t and $NTAX_t$, $TXBA_t$ or $RTAX_t$, negative correlation exists between HCM_t and $BENR_t$ and $WBIE_t$ and $DURATION_t$,.

4.2 Research Thesis

When possessing flexible financing mechanism, UI trust fund may influence the financial performance of fund via policy design and administrative discretion, modifies over-high or over-low financial performance, so according to the previous period HCM, current period real tax rate and real benefit may response reversely because of policy design and administrative discretion, i.e. $NTAX_{t+1}$, $TXBA_{t+1}$ or $RTAX_{t+1}$ and HCM_t shows negative correlation, $BENR_{t+1}$ and $WBIE_{t+1}$ and $DURATION_{t+1}$ and HCM_t shows negative correlation.

Firstly, in terms of UI policy design, the design focuses on UI tax adopting design of experienced rate (according to previous period financial performance, reversely adopting appropriate nominal premium rate table) and tax base index, adjusting tax rate and tax base according to previous period result. Therefore, through UI law, premium table and tax base and flexible financing mechanism design for UI trust fund, when the current period financial performance improves, the next period nominal tax rate, tax base and real tax rate may decrease, lower the over-high fund

balance. Contrarily, when current period financial performance declines, next period nominal tax rate, tax base and real tax rate may increase, accumulating fund balance for use when necessary. Therefore, under flexible financing mechanism, negative correlation exists between the financial performance of fund and next period nominal tax rate, tax base and real tax rate. Hereby, the contrastive thesis 1is as follows:

> Thesis 1: The policy design of UI trust fund possesses flexible financing mechanism, thus negative correlation exists between the financial performance of UI trust fund (HCM_t) and UI tax received.
> Thesis 1A: The policy design of UI trust fund possesses flexible financing mechanism, thus negative correlation exists between the financial performance of UI tax base ($TXBA_{t+1}$) and UI tax received.
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> Thesis 1B: The policy design of UI trust fund possesses flexible financing mechanism, thus negative correlation exists between the financial performance of UI nominal tax rate ($NTAX_{t+1}$) and UI tax received.
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> Thesis 1C: The policy design of UI trust fund possesses flexible financing mechanism, thus negative correlation exists between the financial performance of UI real tax rate ($RTAX_{t+1}$) and UI tax received.

Secondly, in terms of administrative discretion, when SESA claims the fund financial performance or balance is over-high or over-low, it may, through administrative discretion, change the strict level in checkup of UI application (e.g. misbehavior identification or benefit duration), affects UI benefit, and further change fund balance. The channel affecting benefit scope (benefit duration, benefit amount and number of beneficiary) includes: weekly benefit is affected by past wage and replacement rate, during benefit duration, by SESA"s identification on work desire and high limit of benefit, the beneficiary number is affected by identification of misbehavior. Naturally, the response of benefit scope may be resulted by law modification and policy design. In terms of law modification, it consumes much time resources and its response speed is slow. In terms of policy design, only the benefit amount is affected by replacement rate and benefit duration is affected by high limit of benefit duration, whereas they do not change with the same pace of financial performance. So the benefit scope is more affected by administrative discretion.

According to Eq. (5), when SESA adopts administrative discretion to affect total benefit amount, the next period UI benefit (benefit rate, recipiency rate and duration) may move in positive direction as per current period fund balance, i.e. benefit rate ($BENR_{t+1}$), recipiency rate ($WBIE_{t+1}$)

and duration ($DURATION_{t+1}$) may response to previous period HCM_t positively, i.e. HCM_t and $BENR_{t+1}$, $WBIE_{t+1}$ and $DURATION_{t+1}$ shows positive correlation. But the response speed of administrative discretion is much fast, it is possible to adopt reaction even within the current period, i.e. HCM_t and $BENR_t$, $WBIE_t$ and $DURATION_t$ have positive correlation. This section proposes that adjustment of benefit scope may postpone the further adjustment to next period. The relevant contrastive hypotheses are as follows:

> Hypothesis 2: When the SESA adopts administrative discretion to adjust financial performance, the financial performance of UI trust fund (HCM_t) moves in the same direction of direction of financial discretion adjusted by administrative discretion.
> Hypothesis 2A: When the SESA adopts administrative discretion to adjust financial performance, the financial performance of UI trust fund (HCM_t) shows a positive correlation with benefit rate ($BENR_{t+1}$).
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> Hypothesis 2B: When the SESA adopts administrative discretion to adjust financial performance, the financial performance of UI trust fund (HCM_t) shows a positive correlation with recipiency rate ($WBIE_{t+1}$).
> Hypothesis 2C: When the SESA adopts administrative discretion to adjust financial performance, the financial performance of UI trust fund (HCM_t) shows a positive correlation with duration ($DURATION_{t+1}$).

Thirdly, In terms of political force, the political organ of state includes state government, state Senate and state House, in tradition, the financing attitude of Republican is comparatively conservative, so when the Republican comes into power in the political organs, the financial representation of UI trust fund is comparatively conservative and HCM is high. This paper adopts dummy variable (the Republican is 1, the Democracy is 0.) to point out the number of which political party exceeds the half in the Senate and the House, and the political party membership of the governor. In terms of force, the governor occupies most of the administrative resources, the number of representative is decided accordion to the population, and the number of senator is decided according to the region number. So the governor's force is the greatest, that of the House is just next to it, and that of the senate is the weakest. The relevant contrastive hypothesis is as follows:

> Hypothesis 3 : Under the political organ dominated by the Republican, the financial performance of UI trust fund is comparatively conservative.
> Hypothesis 3A: When the Republican is the majority party in the Senate, the financial performance (HCM) is comparatively better.
> Hypothesis 3B: When the Republican is the majority party in the House, the financial

performance (HCM) is comparatively better.

Hypothesis 3C: When the political party membership of governor is the Republican, the financial performance (HCM) is comparatively better.

Fourthly, in terms of region, regional learning effect appears in neighboring states, so the financial performance in same geographic location is normally similar, e.g. Vroman (2001) discovered that the benefit level is similar in neighboring states. According to geographic location, this paper divides the whole US into 8 regional segments, such as Southeast, Southwest, Pacific Coasts, the Rocky Mountains, New England, Atlantic Coasts, Lake States, and Midwest Plains, points out the location for each state via dummy variable. Hereby, the relevant contrastive thesis is as follows:

Hypothesis 4 : The regional learning effect appears in neighboring states. The financial performance (HCM) of states in different location is different.

Finally, this paper adopts unemployment rate, economic growth rate and dummy variable of loan borrowed from federal government by UI trust fund to discuss the financial performance of UI trust fund. The relationship of controlling variable and UI trust fund is as below: firstly, the higher the unemployment rate is, the more the benefit demanded needs, so negative correlation exists between unemployment and financial performance of UI trust fund.; secondly, the higher the economic growth is, the more the average wage is and the more the UI premium income is. Therefore, positive correlation exists between economic growth and financial performance of UI trust fund; finally, when the balance of UI trust fund is insufficient to reimburse UI benefit, state government may borrow loan from federal government, so negative correlation exists between the dummy variable of borrowings of UI trust fund from federal government and the financial performance of fund.

5. Data structure, Variable Definition and Statistic Summary

5.1 Data Structure

The data source of this paper includes: (1) relevant variable of UI: ET Financial Data Handbook 394 of U.S. Department of Labor Employment & Training Administration; [2] (2) in terms of political variable: data from the Senate: The Book of the States; data of governor: Congressional Quarterly's Quick Fact Finder American Political Leaders 1789-2000; [3] (3) economic variable:

[2] http://www.ows.doleta.gov/unemploy/content/hdbk394_99/home.asp
[3] The Book of the States is published by the Council of State Governments (Lexington, Kentucky).

Current Population Survey. [4]

The US comprises 50 states and 3 special administration districts. This paper excludes 1) Alaska, Hawaii, Puerto Rico, and Virgin Islands for not locating in the main land of US. 2) District of Columbia: District of Columbia is the capital of US where the federal government locates. The majority of employment serves in government departments, so it is unsuitable to be used to compare with the other states nationwide. Moreover, this paper is lack of the data of political parties in district parliament, and 3) Nebraska: only one parliament exists in Nebraska deferring from other states where both the Senate and the House exists. After all, there are only 47 samples within this paper. The duration of the data lasts from 1977 to 1997, totally lasting for 20 years. The reason of cancellation of the data before 1977 is to assort with the limitation of HCM (which was published since 1971) and political variable.

5.2 Variable Definition

This section explains the variable definition, survey of variable statistic. Please refer to Table 1 for the relationship among variables, to Table 2 for the Pearson correlation coefficient.

5.2.1 High Cost Multiple (HCM)

HCM is the quotient of reserve rate (RR) divided by high cost rate (HCR). Please refer the relevant definition to clause 4.1. HCM may be understood as the operational duration of fund balance under the circumstance that no income pours in when meeting with the most severe unemployment benefit in the past.

Since 1971, each UI trust fund has been requested to offer its annual HCM. The reserve rate is the net fund after minus the borrowings from federal government. The HCR is the highest UI unemployment benefit rate in sequential 12 months since 1958 the state ever confronted.

The deficit appears in HCR in three periods of time, such as respectively the recession before 1971, around 1975 and in 1982. Therefore, this is the reason that so many people propose the safe-level of HCM should lower down. What deserves people's attention is HCM may be intermitted at the point of zero, so the Tobit Censored Regression is adopted in further analysis.

5.2.2 Relevant Variable of UI Income

The "real UI tax rate" (RTAC) is the quotient of total wage paid by employer divided by total

[4] http://www.bls.census.gov/cps/cpsmain.htm

premium submitted by employer. The numerator is the state UI tax paid by employer. The denominator is the real total wage paid-out by employer. The wage excludes the wage of staff in government department and the third department who is not covered by UI.

The “nominal Ui tax” (NTAX) is the total wage divided by the premium paid by employer. The numerator part is the same as real UI tax rate; the numerator is used to present total taxable wage, i.g. so-called “tax base” (TXBA). [5]

5.2.3 Correlation Variable of UI Benefit

The “UI benefit rate ” (BENR) is the quotient of average weekly wage of total insured unemployment divided by weekly unemployment benefit received by unemployment. The BENR is the “replacement rate” of social safety system.

The “UI benefit duration” (DURA) is the average receiving weeks of UI beneficiary, the longest is normally 26 weeks, decided by SESA on the basis of the applicant information, therefore excluding such case as the unemployment finds a new a job, or is under waiting period, or is not qualified or has already received UI benefit for 26 weeks.

The “UI weekly benefit recipiency rate” (WBIE) is the quotient of the number of unemployment receiving benefit divided by total insured employee. The WBIE is affected by qualification standard and strict level of administrative checkup. The stricter the checkup is, the less the pass rate is and the lower the WBIE is. When the SESA adjusts fund balance via administrative discretion, the lower the HCM is, in order to reduce benefit, the stricter the checkup is, the lower the WBIE is, so positive correlation exists between HCM and WBIE.

There is no public data about WBIE, so “ratio of insured unemployment accounting for total unemployment” (IUTU) is adopted in some researches. It is understood from IUTU definition that IUTU measures the strict level of benefit standard in design. If such standard is too strict, the IUTU becomes stricter, but the number decreased owing to strict checkup is unable to measure. Aiming at this variable, this paper adopts 3 variables in stead, narrating as below:

The first substitute variable, “ratio of unemployment receiving benefit for first time accounting for

[5]The adjustment of federal tax base is, $3,000 for 1938-1971,$4,200 for 1972-1977, 1978-1982 for $6,000, $7,000 for after 1983. The UI tax base of state government is requested to take that of federal government as its lower limit and to be regulated at own discretion.

total unemployment" (FBTU), the numerator of FBTU is the number of unemployment who receives benefit for the first time, excluding those qualified but not applying for benefit and those applied but not passing the checkup. The Denominator is total number of unemployment. When financial performance decreases, the SESA may adopt stricter checkup to reduce benefit, the pass rate declines and FBTU becomes lower, therefore, positive correlation exists between HCM and FBTU. The disadvantage of adopting FBTU is the numerator of TBTU is the number of unemployment who receives benefit for the first time, not the number of unemployment who has received benefit in WBIE definition.

The difference between IUTU and FBTU is: qualified but not applied, applied but waiting for checkup, applied but not matching the waiting period requirements, application rejected, finding a new job while in waiting period and receiving UI benefit but not for the first time. To these differences, only the beneficiary but not for the first time, and the qualified but not applied needs to be further explained. Firstly, the beneficiary but not for the first time has no connection with the present decision and the future, but depends on the checkup procedure in previous period. Secondly, In terms of the qualified but not applied, Wander and Stettner (2000) pointed out the causes in turn of benefit application rate on the low side is: the unemployment regards himself/herself as unqualified, the unemployment optimistically believe ha/she is able to find a new job in short time, or the unemployment is recalled for work by employer, or the qualified unemployment regards himself/herself as unqualified owing to the high reject rate of government in the past. This research supposes the applicant is the unemployed who is not expected to find a new job in a short period, so the difference between WBTU and IUTU is mainly derived from the strict checkup of administration staff. Hereby, this research lodges two extra substituent variables.

The second substitutent variable of WBIU, the UI "application pass rate" (WBIU) is the proportion of number of unemployment receiving benefit for the first time dividing total unemployment insured, i.e. WBTU dividing IUTU.

The third substituent variable, "decline rate" (ADMN) is the portion that is unable to be illustrated in WBTU. Because WBTU is the portion of IUTU aggregation, so these two variables may be re-written as EQ. (6):

$$IUTU = c_0 + c_1 WBTU + e \qquad (6)$$

Of which, $c_0 + c_1 WBTU$ is the portion of IUTU which may be illustrated by WBTU, the remnant (e) is the factors in IUTU which is neither able to illustrated by WBTU, nor able to control. In this research, the remnant is attributed to number decrease of beneficiary owing to administrative discretion. When the financial performance turns worse, the SESA may adopts stricter checkup standard to reduce the number of beneficiary, thus the ADMN increases, so negative correlation exists between HCM and ADMN.

5.2.4 Political Party Structure:

This paper adopts dummy variable to express the party membership of governor, the majority party in the Senate and the House. SENR=1, when Republicans occupy more than a half in the Senate, otherwise, SENR=0. REPR= 1, when Republicans occupy more than a half in the House, otherwise, REPR=0. GOVR= 1, when the governor is a republican, otherwise, GOVR=0..

5.2.5 Region Variable

This paper, according to geographic location, divides the whole US into 8 regional segments, such as Southeast (RGSE), Southwest (RGSW), Pacific Coasts ((REPF), the Rocky Mountains (RGRK), New England (RGNG), Atlantic Coasts (RGAL), Lake States (RGGL), and Midwest Plains (RGMW). Please refer to Table 3 for relevant segment, adopting dummy variable to express region, e.g. RGSE = 1, when state belonging to Southeast segment, otherwise, RGSE = 0.

5.2.6 Controlling Variable:

In order to control the fluctuation of UI trust fund, the controlling variables adopted in this paper includes economic growth (ECGR), unemployment rate (UEPR) and the dummy variable of whether loan is borrowed from federal government by state government (LOAN) to control the performance of HCM.

5.3 Evident Model

The data in this paper falls into the scope of panel data, including the data in 1977-1997 in 47 states in US, but is truncated when HCM is zero.

$$\begin{aligned} HCM = f(&NTAX(t), NTAX(t+1), TXBA(t), TXBA(t+1), BENR(t),\\ &BENR(t+1), DUAR(t), DUAR(t+1), WBIE(t), WBIE(t+1),\\ &GOVR(t), SENR(t), REPR(t), ECGR(t), UEPR(t), LOAN(t),\\ &GRSW, RGPF, RGRK, RENG, RGAL, RGGL, RGMW) + e \end{aligned} \quad (7)$$

In Eq. (7), 1. The period of independent variable is indicated in bracket, (t) is current period, (t+1) is next period. 2. In terms of sensitivity analysis, RTAX is adopted to replace NTAX and TXBA, and FRTU, WBIU and ADMN to replace WBIU. 3. The region is divided into 8 segments, in order to avoid co-linearity, adopting Southeast (RGSE) as the basic segment, which is omitted from the evident model.

6. Evident Result

This research adopts the panel data of US UI trust fund in 47 states in 1979-1999 and Tobit censored regression method in analysis. The statistic survey of variable is listed in Table 2, the Pearson correlation coefficient of variable is listed in Table 3. Please refer to section 5 for relevant variable definition explanation. In order to review the financing mechanism of UI trust fund, this paper offers two variable options, firstly, the income variable of UI tax, in addition to nominal tax rate (NTAX) and tax base (TXBA), real tax rate (RTAX) is adopted as well to measure real unemployment tax income. Secondly, the substituent variable of UI recipiency rate, three variables, such as FBTU, WBIU and ADMN, are adopted respectively. Therefore, it leads to 6 regression conclusions. The relevant regression results are listed in Table 4, 5, 6, and 7.

6.1 Complete Regression Model

The regression results adopting nominal tax rate (NTAX) and nominal tax base (TABA) as UI tax variables are listed in table 4, 1st ,2nd and 3rd column, adopting FBTU, WBIU and ADMN as the substituent variables of recipiency rate. The regression result in Table 4 is: Firstly, in terms of UI tax: 1. The coefficient direction of nominal tax rate (NTAX) in next period (t+1) accords with Thesis 1A, the coefficient shows significant negative correlation, and all the three regression-formulas reach a significant level of 3%. 2. The coefficient direction of nominal tax base (TABA) in next period (t+1) accords with thesis 1B, however, only the regression-formula in 2nd column reaches a significant level of 10%. Secondly, in terms of UI benefit: 1. When UI benefit rate (BENR) in next period accords with thesis 2A , but it does not reaches a significant level as a whole, Thesis 2A may not be rejected. 2. When the regression coefficient of UI benefit duration in next period is positive, it accords with thesis 2C, and reaches at least a significant level of 10%. 3. The regression coefficient direction of UI recipiency rate (WBIE), adopting FBTU as substituent variable, accords with Thesis 2C, but all may not reject the null thesis for a significant level of 10%. Thirdly, in terms of political party structure: 1. The coefficient of governor's party membership (GOVR) is all minus, not according with thesis direction, but only the result in 1st column may reject the null thesis about "financial performance of UI trust fund when state governor is a Democracy" for the reason that two-tailed (one-tailed) level is a significant level of 20% (10%), it is opposite to the thesis deduction. 2. The coefficient of majority party membership in Senate (SENR) is all positive, may reject null thesis for the reason of a significant level of 10%, supporting Thesis 3B. 3. The coefficient of majority party membership in the House (REPR) is all positive (a significant level of 5%). It points out that when the Republican is the majority party both in Senate and House, the financing of UI trust fund is comparatively conservative. Fourthly, in terms of region variable, the financial performance in Atlantic Coasts, the Rocky Mountains,

New England, Lake States, and Midwest Plains is obviously different with that in Southeast (basic segment). It points out the financial performance in most of segments is different, supporting Thesis 4. Fifthly, in terms of controlling variable, the coefficient of unemployment and the borrowings from federal government (dummy variable) is significant anything but zero, and the coefficient of economic growth rate is never able to reject any null thesis but zero.

The regression result adopting real tax rate (RTAX) as UI tax variable is listed in Table 5. The regression coefficient result is: Firstly, in terms of tax variable: 1) The coefficient direction of real tax rate (RTAX) in next period (t+1) accords with thesis 1C, the coefficient shows negative correlation, and the three regression-formulas all reach a significant level of 1%. Secondly, in terms of unemployment benefit: 1. The unemployment benefit rate (BENR) in next period occurs with Thesis 2A, but not reaches a significant level, so may not reject Thesis 2A. 2) The regression coefficient of unemployment duration (DURA)in next period is positive (according with Thesis 2B), but may not reject null thesis with a significant level of 10%. 3) In terms of political party structure: 1) The coefficient of governor's party membership is all minus, may not reject null thesis with a significant level of 10%. 2) The coefficient of majority party in the Senate is all positive, coefficient in column 1 and 2, may reject null thesis with a significant level of 10% (one-tailed test), supporting Thesis 3B and pointing out the financial performance of UI trust fund is comparatively conservative when the Republican is the majority party both in the Senate and the House. 4) In terms of region variable, the most of coefficients of region variable may reject null thesis with a significant level of above 10%, pointing out the financial performance in different region is most regional segments and supporting Thesis 4. 5.) In terms of controlling variable, the coefficient of unemployment rate and borrowings from federal government (dummy variable) is significantly not zero, and the economic growth rate may not reject null thesis, which is not zero.

From the results in Table 4 and 5, the conclusion may be reached as below: 1) In terms of UI tax variable, Thesis 1 is supported significantly, pointing out flexible financing mechanism exists in UI tax and experienced premium rate may adjust tax income along with fund balance. 2) In terms of UI benefit, excluding the regression of adopting nominal tax rate and tax base in benefit duration, the coefficient of neither unemployment benefit rate nor recipiency rate may reject null thesis of zero, pointing out UI trust fund does not adjust benefit along with fund balance, however, whether the motion accords with the goal that UI stabilizing employment's income, this issue needs to be discussed elsewhere. 3) In terms of political party structure, when the Republican is the majority party in both the senate and the House, the financing disposal is comparatively conservative, i.e. fund balance may be high. 4) In terms of region, the dummy variable of most segments is different from zero, pointing out the fund balance in different segments is significantly different. 5) In terms of controlling variable, the unemployment rate and borrowings from federal government closely connects with fund balance.

6.2 Deferred Response Model

Among the regression results, most variables in terms of UI benefit are not significant. From table 3, it shows that the correlation coefficients of UI benefit rate, benefit duration and recipiency rate in two sequential periods are high, most possibly because the co-linearity declines the significant level of coefficient. In the purpose of review whether UI trust fund possesses flexible financing mechanism, this paper deletes current period tax rate and benefit variable, only adopts nest period tax rate and benefit variable. The related regression results are listed below. The related regression results are listed in Table 6 and 7.

The regression results adopting nominal tax rate (NTAX) and nominal tax base (TXBA) as UI tax variable are listed in table 6. Firstly, in terms of Ui tax income: 1. the coefficient direction of nominal tax rate (NTAX) in next period (t+1) accords with Thesis 1A, the coefficient shows significant negative correlation, and the three regress-formulas reach a significant level of 1%. 2. The coefficient direction of nominal tax base (TXBA) in next period (t+1) disobeys Thesis 1B, and the three regress-formulas reach a significant level of 1%. Secondly, in terms of UI benefit: 1. The coefficient direction of UI benefit rate (BENR) in next period accords with Thesis 2A, but all does not reach a significant level and may not reject Thesis 2A. 2. The variable regression coefficient of benefit duration (DUAR) in next period accords with Thesis 2B, but all does not reach a significant level of 10%. 3. The regression of UI recipiency rate (WBIE) accords with Thesis 2C only when adopting FBTU as substituent variable, but does not reach a significant level. The regression adopting WBIE and ADMN as substituent variables rejects, with a significant level of 5%, the null thesis about that “negative correlation exists between financial performance and recipiency rate”, it not only does not support the direction of thesis 2C, but also show negative correlation, pointing out it does not possess flexible financing mechanism in terms of benefit, such situation decreases the worry about benefit decline owing to financial factors, but further inspection may still be necessary. Thirdly, in terms of political party structure: 1. The coefficient of governor’s party membership is opposite to the thesis, it rejects the null thesis about “financial performance of UI trust fund is comparatively conservative when the governor is a Democracy” for the reason of reaching a significant level of 10% (5%) (one-tailed (two-tailed) test) in 1st and 2nd (3rd) column, and is opposite to the thesis deduction. 2. The coefficient of majority party in the Senate is all positive, may reject the null thesis for the reason of reaching a significant level of 10% (one-tailed test), supporting Thesis 3B. 3. The coefficient of majority party membership in the House is positive (a significant 5%), accords with Thesis 3C, pointing out the financial performance of UI trust fund is comparatively conservative when the Republican is the majority party both in the Senate and the House. 4. In terms of region, the most dummy region variable is anything but zero, pointing out fund balance of states in different region is significantly different.

5. In terms of controlling variable, the unemployment rate and borrowings from federal government closely links with fund balance.

The regression results, adopting real tax rate (RTAX) as UI tax income variable, are listed in Table 7. The regression results are: Firstly, in terms of tax variable, 1) The coefficient of real tax rate (RTAX) in next period (t+1) is significantly minus, according with Thesis 1C, all reaches a significant level of 1%. Secondly, in terms of unemployment benefit: 1) The unemployment benefit rate (BENR) in next period accords with Thesis 2A, supporting Thesis 2A with a significant level of 1%. 2) The regression coefficient of benefit duration in next period is significantly minus (disobeying Thesis B), but may not reject null thesis with a significant level of 10%. 3) The regression of recipiency rate, adopting WBIE and ADMN as substituent variable, reject the null thesis about "negative correlation exists between financial performance and recipiency rate" with a significant level of 1%, not only does not support the direction of Thesis 2C, but also shows negative correlation, pointing out it does not possess flexible financing mechanism in terms of benefit, such situation decreases the worry about benefit decline owing to financial factors, but further inspection may still be necessary. Thirdly, in terms of political party structure: 1) The coefficient of governor's party membership is all minus, not according with the thesis direction, may not reject the null thesis with a significant level of 10% (two-tailed test). 2) the coefficient of majority party membership in the House is significant positive (1%), according with Thesis C3, pointing out when the Republican is the majority party in both the Senate and the House, the financial performance is comparatively conservative,. Fourthly, in terms of region variable, most coefficient of region variable may reject null thesis with a significant level of above 10%, pointing out the financial performance in most segments is different, supporting thesis 4. Fifthly, in terms of controlling variable, the coefficient of unemployment rate and borrowings from federal government (dummy variable) is significantly not zero, and the economic growth rate may not reject null thesis, which is not zero.

From the results in Table 6 and 7, the conclusion is as follows: 1) In terms of UI tax income, the real tax rate and nominal tax rate may significantly support Thesis 1, pointing out UI tax income possesses flexible financing mechanism, experienced premium rate may adjust taxation with fund balance (same), but the regression coefficient of tax base support the thesis about "positive correlation exist between financial performance and tax base" with a significant level of 1%, being opposite to the forecast of flexible financing mechanism (different). 2) In terms of UI benefit, recipiency rate shows significant negative correlation with HCM (different), pointing out the performance of recipiency rate does not accord with the operating direction of flexible financing mechanism. In the regression formula adopting real tax rate (table 7), unemployment benefit rate is significantly positive, supporting flexible financing mechanism (different). In terms of UI benefit scope, the response of different index shows different of even opposite performance,

revealing that SESA does not utilize every possible means to pursue better fund performance, but whether it accords with the goal that UI stabilizes employee's income, the further research may still necessary. 3) In terms of political party structure, when the Republican is the majority party in both the Senate and the House, the financial process of UI trust fund is comparatively conservation, i.e. high fund balance is obtained. In the regression adopting nominal tax rate, the financing of UI trust fund is comparatively conservative, when the governor's party membership is a Democracy (different). 4) In terms of region, the most dummy region variable is anything but zero, pointing out fund balance of states in different region is significantly different. 5) In terms of controlling variable, the unemployment rate and borrowings from federal government closely links with fund balance.

Considering it as a whole, firstly, the index performance in UI tax collecting scope and benefit scope is different. Meanwhile, the phenomenon according with flexible financing mechanism appears (e.g. real tax rate, nominal tax rate and benefit rate), but that disobeying flexible financing mechanism also appears (e.g. tax base, recipiency rate), showing UI trust fund possesses flexible financing mechanism, but not maintaining financing sources via all channels, so it is understood that the operation of UI trust fund has other goals except financial performance, e.g. providing the unemployment with life necessaries, but further analysis may be needed. Secondly, in terms of political party structure, when the Republican is the majority party in both the Senate and the House, the financial performance is comparatively conservative, according with the traditional image of Republican. The regression coefficient of the House is bigger than of the Senate, the reason is the election of House representative depends on the population of voter, whereas the election of the Senator depends on administration region. Besides, governor is the administration chief, occupies largest force in law against UI trust fund, but the regression coefficient is just opposite to forecast, and many of them do not reach a significant level, this is attributed to the theory that the candidate inclines to meddle voter in small electorate (median voting theory). Thirdly, in terms of region, it is discovered that the UI financial performance of state in different region is generally different, showing the same learning effects in same geographic location, so that is different in different segment. Finally, in terms of controlling variable, the unemployment rate and borrowings from federal government by state government closely links with UI trust fund.

7. Research Conclusion and Limitation

7.1 Research Conclusion

The society establishes the independent operating fund for the social welfare system, mainly for avoiding social welfare system from political interfere, lets it independently operate to maintain self-supported in financing. More premiums are collected when in boom period, more is used in

benefit when in slump period, so the fund possesses “saving mechanism’. However, financial unbalance normally happen, in order to avoid financial unbalance and maintain the fund balance in lower-limit, flexible financing mechanism is stresses. This paper takes the US UI fund as the research object, discusses whether the independent trust fund established by government possesses flexible financing mechanism, and whether the financial performance is affected by administrative discretion and political party structure, the reason of which is: firstly, the US UI has a history of over 60 years, and the fund operates maturely, having sufficient data to analysis. Secondly, The US UI is the sole federal-state fund for the social welfare system, may inspect the relationship between administrative discretion and financial performance. Finally, through the bi-party system in US, the impact on financial performance applied by the financial viewpoint of different party may be inspected.

This paper adopts the data of 47 states in US from 1977 to 1997, totally 230 years. The research result includes: firstly, the phenomena appears that the index in UI collection scope and benefit scope is different, meanwhile the phenomena of breaching flexible financing mechanism also appears (e.g. tax base, recipiency, etc.), showing that UI trust fund possesses flexible financing mechanism, but does not maintain financing source via all channels, thus it is understood that the operation of UI trust fund has other goals except financial performance, e.g. goal of maintaining unemployment’s life necessaries, but further analysis may be necessary. Secondly, in terms of political party structure, when the Republican is the majority party in both the Senate and the House, the financial performance of UI trust fund is comparatively conservation, according with the Republican traditional image. The impact of the House is bigger than that of the senate, that because the election of House representative depends on the population of voter, whereas the election of Senator depends on the administration region. Besides, the governor’s force on UI trust fund, as the administration chief, is greatest in law, but the regression coefficient is just opposite to forecast, and many does not reach a significant level. It is attributed to the viewpoint of candidate in small electorate normally inclines to median voting theory. Thirdly, in terms of region, it is discovered that the UI financial performance of state in different region is generally different, showing the same learning effects in same geographic location, so that is different in different segment. Finally, in terms of controlling variable, the unemployment rate and borrowings from federal government by state government closely links with UI trust fund.

7.2 Research Limitation

This research is affected by the following limitation: Firstly, this research discusses the UI trust fund in a viewpoint of flexible financing mechanism, but the main purpose of establishing UI trust fund is to maintain the voluntary unemployment’s life necessaries, therefore, the further research should use multi-viewpoint to discuss the operational performance of UI trust fund. Secondly,

under the viewpoint of flexible financing mechanism, when the variable of tax rate, tax base, benefit rate, recipiency rate and benefit duration in two sequential period, reaches the fund high- and lower-limit, such variable in two periods may show reverse performance. Under the circumstance of lacking of high- and lower-limit of trust fund, this research only reviews the whole tendency. If the high-limit of safety-deposit and the lower-limit of alarm-deposit may be divided into different samples, it would further be helpful to discuss the financing mechanism of UI trust fund. Finally, as to the operation viewpoint of UI trust fund, besides the flexible financing mechanism viewpoint, it is worthy further discussing, such as the saving mechanism concentrating on the anti-direction motion against prosperity circle, on which whether all the states hold the same viewpoint, or adopt different practice under different circumstance, or adopt the both.

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Table 1: Variable statistic Survey

Variable	Average	Standard Tolerance.	Min.	Max.
HCM	0.6394	0.4720	0	2.17
NTAX	2.3447	1.0018	0.22	7.08
TXBA	8637.49	3115.24	4200	22800
RTAX	1.0240	0.4841	0.1	3.36
BENR	0.3719	0.0478	0.239	0.5
DUAR	13.6277	2.5550	5.4	21.9
FBTU	0.2914	0.0943	0.1124	0.6444
ADMN	-0.0002	0.0249	-0.1142	0.0916
WBIU	0.8541	0.0723	0.6252	1.1667
ECGR	0.0746	0.0438	-0.1381	0.3037
LOAN	0.1601	0.3669	0	1
UEPR	6.4234	2.0446	2.4	18
GOVR	0.4154	0.4930	0	1
SENR	0.3536	0.5131	0	1
REPR	0.3141	0.4981	0	1

Note:
High Cost Multiplier(HCM)=Reserve Rate(RR)/High Cost Rate(HCR).
Real UI Tax (RTAX)=Premium Submitted by Employer/Total Compensation Paid out by Employer.
Nominal UI Tax Rate (NTAX)=Premium Submitted by Employer/Total Wage Paid in Covered Employment.
Tax Base (TXBA)=Total Wage Paid in Covered Employment..
Benefit Rate (BENR)=Weekly Benefits Reimbursed to Unemployment/Weekly Compensation of Total Insured Employees
Weeks of Reimbursement Duration (DURA)=Average weeks of Reimbursement to Unemployment.
Receiving Rate of Weekly Benefit Total Insured Employee (WBIE)=Number of Employment Receiving UI Benefit /Number of Employment Covered by UI.
FBTU=Number of First-time Benefit Receivers/Number of Total Unemployment.
Pass Rate of Weekly Benefit of Insured Unemployment (WBIU)= Number of First-time UI Benefit Receivers/Number of Unemployment Covered by UI.
Decline Rate (ADMN)爲IUTU= $c_0 + c_1$ WBTU + e,
Remaining Balance of Regression Analysis (e), of which IUTU is ratio of total unemployment covered by UI/total unemployment. SENR=1, when Republicans occupy more than a half in the Senate, otherwise, SENR=0. REPR= 1, when Republicans occupy more than a half in the House, otherwise, REPR=0. GOVR= 1, when the governor is a republican, otherwise, GOVR=0. ECGR is economic growth.
UEPR is unemployment rate. LOAN is dummy variable of loan loaned from federal government..
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Table 3: Pearson Correlation Coefficient

	HCM	NTAXt	$NTAX_{t+1}$	TXBAt	$TXBA_{t+1}$	RTAXt	$RTAX_{t+1}$	BENRt	$BENR_{t+1}$	DUARt	$DUAR_{t+1}$	FBTUt	$FBTU_{t+1}$	ADMNt	$ADMN_{t+1}$	WBIUt	$WBIU_{t+1}$
HCM	1																
NTAXt	-0.5364	1															
$NTAX_{t+1}$	-0.6279	0.9005	1														
TXBAt	0.2402	-0.0981	-0.1086	1													
$TXBA_{t+1}$	0.2167	-0.0686	-0.0872	0.9857	1												
RTAXt	-0.405	0.8573	0.7541	0.1222	0.1625	1											
$RTAX_{t+1}$	-0.5039	0.7739	0.8581	0.0855	0.1477	0.9037	1										
BENRt	-0.0941	0.1038	0.1455	0.3152	0.3447	0.2947	0.3317	1									
$BENR_{t+1}$	-0.0648	0.0874	0.1047	0.3113	0.3342	0.2771	0.3009	0.9448	1								
DUARt	-0.32	0.4577	0.5287	0.1515	0.1766	0.3215	0.3974	0.1108	0.0732	1							
$DUAR_{t+1}$	-0.2671	0.3894	0.4625	0.1306	0.1465	0.2545	0.3267	0.1164	0.1149	0.8432	1						
FBTUt	-0.2858	0.4197	0.4736	0.1745	0.1786	0.4022	0.4506	0.2584	0.2392	0.3616	0.4235	1					
$FBTU_{t+1}$	-0.2089	0.4151	0.4154	0.173	0.1833	0.4099	0.4001	0.227	0.254	0.2422	0.3587	0.8795	1				
ADMNt	0.0631	-0.0428	-0.0626	-0.0371	-0.021	0.1484	0.1341	0.0713	0.0903	-0.206	-0.1493	0.0011	0.017	1			
$ADMN_{t+1}$	0.0722	-0.0256	-0.0629	-0.0079	0.0118	0.1598	0.1275	0.0507	0.0716	-0.1786	-0.2053	-0.0481	0.0029	0.8718	1		
WBIUt	-0.2421	0.2845	0.3268	0.1287	0.1209	0.1239	0.1595	0.0901	0.0686	0.334	0.3168	0.5121	0.4456	-0.818	-0.7469	1	
$WBIU_{t+1}$	-0.2118	0.2751	0.3028	0.1048	0.0945	0.1281	0.1456	0.0939	0.0896	0.252	0.3329	0.5045	0.517	-0.7057	-0.8131	0.9011	1

Note:
High cost Multiplier (HCM)= Reserve Rate (RR)/High Cost Rate (HCR).
Real UI Tax Rate (RTAX) = Premium Submitted by Employer/Total Compensation Paid out by Employer.
Nominal UI Tax Rate (NTAX) = Premium Submitted by Employer / Total Wage Paid in Covered Employment.
Tax Base (TXBA) = Total Wage Paid in Covered Employment.
Benefit Rate (BENR) = Weekly UI Benefit Received by Unemployment;/ Weekly Wage of Total Insured Employment
Weeks of Reimbursement Duration (DURA) = Average weeks of Reimbursement to Unemployment..
Receiving Rate of Weekly Benefit Total Insured Employee (WBIE) = Number of Employment Receiving UI Benefit /Number of Insured Employment
The numerator of FBTU is Number of First-time Benefit Receivers/Number of Total Unemployment.
Pass Rate of Weekly Benefit of Insured Unemployment (WBIU)= Number of First-time UI Benefit Receivers/Number of Insured Unemployment
Decline Rate (ADMN) is IUTU= $c_0 + c_1$ WBTU + e; Remaining Balance of Regression Analysis (e), thereinto IUTU is ratio of total unemployment covered by UI/total unemployment.

Table 2: Regional Segmentation

Region	Code	State(s)
Southeast	RGSE	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West-Virginia
Southwest	RGSW	Arizona, New Mexico, Oklahoma, Texas
Pacific Coasts	REPF	California, Nevada, Oregon, Washington
The Rocky Mountains	RGRK	Colorado, Idaho, Montana, Utah, Wyoming
New England	RGNG	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Atlantic Coasts	RGAL	Delaware, Maryland, New Jersey, New York, Pennsylvania
Lake States	RGGL	Illinois, Indiana, Michigan, Ohio, Wisconsin
Midwest Plains	RGMW	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

Table 4: Full Regression Analysis Model: UI = Nominal UI Tax Variable

	Coefficient	t-value	Coefficient.	t-value	Coefficient.	t-value
NTAXt	0.1025	(3.34) ***	0.1037	(3.46) ***	0.1044	(3.46) ***
$NTAX_{t+1}$	-0.3130	(-8.53) ***	-0.3047	(-8.57) ***	-0.3159	(-8.91) ***
TXBAt	0.0001	(2.00) **	0.0001	(2.12) **	0.0001	(2.23) **
$TXBA_{t+1}$	-0.0001	(-1.52) +	-0.0001	(-1.57)	-0.0001	(-1.72) *
BENRt	0.2332	(0.26)	0.1090	(0.13)	0.0781	(0.09)
$BENR_{t+1}$	0.0361	(0.04)	0.1845	(0.22)	0.1653	(0.20)
DUARt	-0.0184	(-1.64) *	-0.0196	(-1.71) *	-0.0190	(-1.70) *
$DUAR_{t+1}$	0.0194	(1.72) *	0.0224	(2.05) **	0.0202	(1.91) **
FBTUt	-0.3409	(-1.04)				
$FBTU_{t+1}$	0.2962	(0.89)				
WBIUt			-0.4263	(-0.98)		
$WBIU_{t+1}$			-0.2023	(-0.45)		
ADMNt					0.3587	(0.34)
$ADMN_{t+1}$					0.8469	(0.77)
GOVR	-0.0393	(-1.49) +	-0.0376	(-1.44) +	-0.0353	(-1.34)
SENR	0.0568	(1.91) *	0.0535	(1.82) *	0.0582	(1.98) **
REPR	0.0682	(2.08) **	0.0751	(2.30) **	0.0766	(2.33) **
ECGR	-0.0566	(-0.17)	-0.0942	(-0.29)	-0.0615	(-0.19)
UEPR	-0.0306	(-2.80) ***	-0.0352	(-3.38) ***	-0.0315	(-3.06) ***
LOAN	-0.8399	(-14.45) ***	-0.8290	(-14.28) ***	-0.8354	(-14.36) ***
RGSW	0.0232	(0.40)	-0.0030	(-0.05)	0.0197	(0.36)
RGPF	0.1163	(1.93) **	0.1164	(1.97) **	0.1079	(1.81) *
RGRK	-0.1696	(-2.64) ***	-0.2040	(-3.15) ***	-0.1961	(-3.01) ***
RGNG	-0.1167	(-2.01) **	-0.1225	(-2.2) **	-0.1333	(-2.37) **
RGAL	-0.0224	(-0.35)	0.0002	0.00	-0.0090	(-0.14)
RGGL	-0.1380	(-2.35) **	-0.1416	(-2.43) ***	-0.1426	(-2.44) **
RGMW	-0.1892	(-3.24) ***	-0.1999	(-3.43) ***	-0.1960	(-3.35) ***
CONS	1.1580	(7.28) ***	1.6446	(7.14) ***	1.1577	(7.31) ***
sigma_u	0.0000	(.) .	0.0000	(.)	0.0000	(.) .
sigma_e	0.3384	(39.06) ***	0.3369	(39.07) ***	0.3379	(39.07) ***
Log likelihood	-283.4250		-279.5437		-281.8650	

Note:
In the bracket, t-value. ***, **, * and + indicate reaching the obvious level of 0.01, 0.05, 0.1 and 0.2 (two-tailed test).
High Cost Multiplier (HCM)=Reserve Rate (RR)/High Cost Rate (HCR).
Real UI Tax Rate (RTAX)=Premium Submitted by Employer/Total Compensation Paid out by Employer.
Nominal UI Tax Rate (NTAX)=Premium Submitted by Employer / Total Wage Paid in Covered Employment.
Tax Base (TXBA) = Total Wage Paid in Covered Employment.
Benefit Rate (BENR) = Weekly UI Benefit Received by Unemployment;/ Weekly Payment of Total Insured Employment
Weeks of Reimbursement Duration (DURA) = Average weeks of Reimbursement to Unemployment.
Receiving Rate of Weekly Benefit Total Insured Employee (WBIE) = Number of Employment Receiving UI Benefit /Number of Employment Covered by UI..
FBTU=Number of First-time Benefit Receivers/Number of Total Unemployment..
Pass Rate of Weekly Benefit of Insured Unemployment (WBIU)= Number of First-time UI Benefit Receivers/Number of Unemployment Covered by UI.
Decline Rate (ADMN) is IUTU= $c_0 + c_1$ WBTU + e,
Remaining Balance of Regression Analysis (e), thereinto IUTU is ratio of total unemployment covered by UI/total unemployment. SENR=1, when Republicans occupy more than a half in the Senate, otherwise, SENR=0. REPR= 1, when Republicans occupy more than a half in the House, otherwise, REPR=0. GOVR= 1,when the governor is a republican, otherwise, GOVR=0. ECGR is economic growth.
UEPR is unemployment rate. LOAN is dummy variable of loan loaned from federal government..
Regional Dummy Variable: RGi, i = Southeast (SE), Southwest (SW), Pacific Coasts (PF), the Rocky Mountains (RK), New England (NG), Atlantic Coasts (AL), Lake States (GL) and Midwest Plains (MW).
ECGR is economic growth; UEPR is unemployment rate; LOAN is dummy variable of loan loaned from federal government.

Table 5: Full Regression Analysis Model: UI = Real UI Tax Variable

	Coefficient.	t-value		Coefficient.	t-value		Coefficient.	t-value	
PTAXt	0.3110	(4.35)	***	0.3006	(4.33)	***	0.3023	(4.31)	***
$RTAX_{t+1}$	-0.5744	(-6.83)	***	-0.5708	(-7.14)	***	-0.5976	(-7.45)	***
BENRt	-0.0063	(-0.01)		-0.0118	(-0.01)		-0.0429	(-0.05)	
$BENR_{t+1}$	0.9211	(1.00)		1.0433	(1.18)		1.0122	(1.14)	
DUARt	-0.0217	(-1.84)	*	-0.0217	(-1.81)	*	-0.0209	(-1.79)	*
$DUAR_{t+1}$	0.0072	(0.59)		0.0108	(0.91)		0.0069	(0.60)	
FBTUt	-0.3684	(-1.04)							
$FBTU_{t+1}$	0.2542	(0.73)							
WBIUt				-0.4335	(-0.94)				
$WBIU_{t+1}$				-0.3644	(-0.77)				
ADMNt							0.5294	(0.47)	
$ADMN_{t+1}$							1.0824	(0.92)	
GOVR	-0.0231	(-0.83)		-0.0216	(-0.79)		-0.0192	(-0.69)	
SENR	0.0542	(1.74)	*	0.0477	(1.54)		0.0542	(1.75)	*
REPR	0.0910	(2.64)	***	0.0975	(2.84)	***	0.1011	(2.92)	***
ECGR	-0.2603	(-0.69)		-0.3495	(-0.94)		-0.2897	(-0.78)	
UEPR	-0.0401	(-3.11)	***	-0.0440	(-3.72)	***	-0.0384	(-3.27)	***
LOAN	-0.9164	(-15.02)	***	-0.9027	(-14.83)	***	-0.9098	(-14.90)	***
RGSW	0.0961	(1.60)	*	0.0613	(1.06)		0.0912	(1.60)	*
RGPF	0.2258	(3.69)	***	0.2372	(3.95)	***	0.2230	(3.71)	*
RGRK	-0.0775	(-1.18)		-0.1117	(-1.69)	*	-0.1056	(-1.59)	+
RGNG	-0.2004	(-3.29)	***	-0.2021	(-3.48)	***	-0.2187	(-3.74)	***
RGAL	-0.1194	(-1.78)	*	-0.0842	(-1.26)	+	-0.0997	(-1.49)	+
RGGL	-0.2316	(-3.82)	***	-0.2269	(-3.79)	***	-0.2328	(-3.87)	***
RGMW	-0.1889	(-3.05)	***	-0.2030	(-3.3)	***	-0.1970	(-3.19)	***
CONS	1.1545	(6.42)	***	1.7527	(7.13)	***	1.1209	(6.34)	***
sigma_u	0.0349	(1.48)		0.0269	(0.99)		0.0269	(0.99)	
sigma_e	0.3554	(38.46)	***	0.3534	(38.44)	***	0.3549	(38.46)	***
rho	0.0095			0.0058			0.0057		
Log likelihood	-324.5230			-318.5975			-321.8260		

Table 6: Regression Analysis Model Deferred Phase 1: Nominal UI Tax Rate

	Coefficient.	t-value		Coefficient.	t-value		Coefficient.	t-value	
$NTAX_{t+1}$	-0.2286	(-10.84)	***	-0.2160	(-10.63)	***	-0.2253	(-11.20)	***
$TXBA_{t+1}$	0.0000	(2.71)	***	0.0000	(3.13)	***	0.0000	(2.90)	***
$BENR_{t+1}$	0.2448	(0.73)		0.3215	(0.97)		0.2514	(0.76)	
$DUAR_{t+1}$	0.0027	(0.34)		0.0084	(1.14)		0.0060	(0.83)	
$FBTU_{t+1}$	0.1318	(0.62)							
$FBIU_{t+1}$				-0.5920	(-2.81)	***			
$ADMN_{t+1}$							1.3725	(2.39)	**
GOVR	-0.0376	(-1.41)	+	-0.0379	(-1.43)	+	-0.0348	(-1.31)	**
SENR	0.0565	(1.89)	*	0.0495	(1.67)	*	0.0547	(1.84)	**
REPR	0.0644	(1.96)	**	0.0727	(2.22)	**	0.0743	(2.25)	**
ECGR	0.0745	(0.23)		0.0585	(0.18)		0.0097	(0.03)	
UEPR	-0.0378	(-3.52)	***	-0.0460	(-4.54)	***	-0.0418	(-4.20)	***
LOAN	-0.8532	(-14.72)	***	-0.8381	(-14.48)	***	-0.8433	(-14.55)	***
RGSW	0.0154	(0.27)		-0.0258	(-0.47)		-0.0037	(-0.07)	
RGPF	0.1012	(1.68)	*	0.1085	(1.82)	*	0.1009	(1.69)	*
RGRK	-0.1766	(-2.73)	***	-0.2133	(-3.28)	***	-0.2088	(-3.21)	***
RGNG	-0.1396	(-2.42)	**	-0.1362	(-2.43)	***	-0.1455	(-2.58)	***
RGAL	-0.0382	(-0.60)		-0.0202	(-0.32)		-0.0208	(-0.32)	
RGGL	-0.1144	(-1.95)	**	-0.1184	(-2.03)	**	-0.1200	(-2.05)	**
RGMW	-0.2110	(-3.67)	***	-0.2267	(-3.96)	***	-0.2204	(-3.85)	***
CONS	1.2145	(8.11)	***	1.6687	(7.57)	***	1.2270	(8.21)	***
sigma_u	0.0000	(.)	.	0.0000	0.00		0.0000	0.00	
sigma_e	0.3428	(39.04)	***	0.3413	(39.05)	***	0.3419	(39.05)	***
rho	0.0000			0.0000			0.0000		
Wald chi2(18)	844.69			856.95			850.22		
Log likelihood	-294.5560			-290.8125			-291.9000		

Table 7: Regression Analysis Model Deferred Phase 1: Real UI Tax Rate

	Coefficient.	t-value	Coefficient.	t-value	Coefficient.	t-value
$RTAX_{t+1}$	-0.3025	(-6.32) ***	-0.2908	(-6.52) ***	-0.3212	(-7.27) ***
$BENR_{t+1}$	0.9783	(2.68) ***	1.1014	(3.06) ***	1.0388	(2.90) ***
$DUAR_{t+1}$	-0.0131	(-1.53) +	-0.0050	(-0.63)	-0.0085	(-1.12)
$FBTU_{t+1}$	0.0974	(0.43)				
$WBIU_{t+1}$			-0.8055	(-3.65) ***		
$ADMN_{t+1}$					1.9701	(3.22) ***
GOVR	-0.0279	(-0.99)	-0.0280	(-1)	-0.0252	(-0.90)
SENR	0.0469	(1.48) +	0.0369	(1.17)	0.0430	(1.37) +
REPR	0.0923	(2.67) ***	0.1002	(2.92) ***	0.1041	(3.01) ***
ECGR	0.0074	(0.02)	-0.0957	(-0.27)	-0.1533	(-0.46)
UEPR	-0.0444	(-3.37) ***	-0.0544	(-4.52) ***	-0.0487	(-4.34) ***
LOAN	-0.9308	(-15.29) ***	-0.9118	(-15.03) ***	-0.9176	(-15.10) ***
RGSW	0.0933	(1.56) +	0.0396	(0.69)	0.0684	(1.22)
RGPF	0.2181	(3.57) ***	0.2340	(3.89) ***	0.2234	(3.71) ***
RGRK	-0.0783	(-1.18)	-0.1205	(-1.82) *	-0.1177	(-1.77) *
RGNG	-0.2241	(-3.67) ***	-0.2168	(-3.71) ***	-0.2327	(-3.98) ***
RGAL	-0.1416	(-2.14) **	-0.1091	(-1.66) *	-0.1151	(-1.75) *
RGGL	-0.2089	(-3.45) ***	-0.2064	(-3.45) ***	-0.2121	(-3.53) ***
RGMW	-0.2048	(-3.30) ***	-0.2261	(-3.69) ***	-0.2191	(-3.61) ***
CONS	1.1246	(6.51) ***	1.7530	(7.31) ***	1.1316	(6.77) ***
sigma_u	0.0304	(1.19)	0.0205	(0.64)	0.0000	(.) .
sigma_e	0.3618	(38.48) ***	0.3595	(38.51) ***	0.3609	(39.05) ***
rho	0.0070		0.0032		0.0000	
Wald chi2(17) =	638.43		665.12		707.41	
Log likelihood	-338.4400		-331.9082		-333.6450	