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EFFECTS OF TAX SHOCKS ON UNEMPLOYMENT RATE IN THE US: TRENDS COMPARISON ACROSS STATES, AGE AND GENDER GROUPS

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ABSTRACT

responses to the state tax shocks for the period of 1998 to 2018. The four groups are split into two age groups (16-34 and 35-64), and then into two gender groups, which is an innovative part of this study. The aim of the research is to detect trends, which could be used in future research to assess the effectiveness of the state-tax policy and its impact on unemployment rates and thus improve policy. The Vector Autoregression (VAR) and impulse response functions (IRFs) are used to evaluate specific responses for the nine US states (California, Connecticut, Georgia, Iowa, Louisiana, Massachusetts, Nebraska, New Jersey and Utah). The findings show that young female groups are more resilient to state-tax shocks if compared to young male groups, while this trend reverses for older age groups.

Keywords: VAR, state tax, the US, age and gender groups, unemployment rate, shocks.

INTRODUCTION

Fiscal policy, especially taxation, is the core tool in government's disposition to balance the economy. According to the Keynesian economic theory, fiscal policy affects the aggregate demand and consequently economic activity within a country. The changes in economic activity have a high negative correlation with unemployment rates. However, there are different taxation systems (i.e. progressive, regressive, flat-rate tax, etc. or more complex), as the result defining the tax systems and measuring their varying impacts on unemployment rates and thus economic activity is significant.

In general, Keynesians are in favor of progressive taxation, because it is believed to reduce the income inequality between households (Birol and Gencer, 2014). The discussions on income inequality started in the 1950s (Kuznets, 1955), and it has steadily transformed into the battle for gender income equality. In particular, the gender pay gap has not actively been narrowing in more and less developed countries over the last decades. The European Commission (2017) underlined that there is still a gender gap pay in the European countries, where female employees received 16% less per hour than their male counterparts. In the US, the gender gap stood at 15% difference between wages of men and women (Graf et al., 2019). A major concern is that this gender gap might be even worse in less developed countries. This fact also implies that female groups might be a more vulnerable group to tax shocks. Similarly, as it is commonly believed that the youths are more sensitive to tax changes, as they may not have stable income.

Certainly, fiscal policy is an inevitable tool for economic activity stabilization, and it is closely related to unemployment indicators. The aim of the governments is to keep unemployment rates close to their natural levels. However, the challenge is that governments might not be aware of all dimensions how their policies might contribute to the increased unemployment.

Therefore, this study estimates how tax shocks in the US impact the unemployment rates across two age and two gender groups as well as US states in the period of 1998-2018. Investigating state-level is motivated by the fact that every state has its own legislative and executive powers in the US. There are several states that have no state tax. New Hampshire and Tennessee have income tax on dividends and interest rates only, while the remaining states are categorized by those that adopted flat-rate tax or graduated-rate income taxes. Importantly, Gerber et al. (2018) attests that abnormally high taxes may demotivate the labor force to aim for high income. So, it is necessary to verify the states with these high taxes for relevant conclusions, for example California's state tax accounts for roughly 12.3% (Federation of tax administrators, 2020). Thus, the taxation systems differ and are expected to bring diverse effects on unemployment rates across above defined groups.

The data is collected from the Current Population Survey (CPS), which provides possibilities to generate necessary macro-data for this research. The Vector Autoregression (VAR) estimation techniques together with impulse response functions are employed to test how state-tax shocks affect unemployment rates.

This paper has the following plan. First, the relevant literature on the topic of taxes and unemployment rates is presented and discussed. The next section elaborates on the estimation methodology and data description. Consequently, the findings are depicted and followed by their interpretations. And finally, the study ends with a conclusion, bibliography and appendix.

1. LITERATURE REVIEW

There is an established relationship in the literature between fiscal policy, particularly taxes and how they influence a number of economic indicators (Burriel et al., 2010; Tenhofen et al., 2010; Hayo and Uhl, 2015; Yücel and Taylor, 1996). In detail, Hayo and Uhl (2015) aimed at exploring how federal tax shocks impact the state-level income by applying VAR methodology. The findings depicted that tax changes made on a federal level have heterogeneous effects on the state-level outputs.

On the other hand, Ferraro and Fiori (2020), Unal (2015) investigated in more detail how tax changes influenced unemployment rates. For instance, Ferraro and Fiori (2020) researched the impact of age composition on the changes in unemployment caused by federal tax shocks. For the given

research CPS data was used. Moreover, authors divided sample population into age groups in order to define whether age is the catalyst of tax shocks. It was found that the unemployment rate response of the young is roughly twice as large as that of the old. This paper concentrates instead on state-tax level and innovatively verifies the patterns of tax shocks on unemployment rates among age groups in addition to gender groups.

Similarly, Anderson et al. (2015) also divided the sample into age groups, however the research question investigated how monetary shocks affected consumption among the population on the state level. The findings clearly demonstrated the differences across age groups responses following monetary shocks. This approach of age groups is adopted in this paper and further extended.

To turn to Unal (2015), the author researched the impact of fiscal shocks on unemployment, GDP and consumption in the Netherlands, by applying the VAR method. He found that unemployment rates increase when fiscal contraction and falls after a fiscal expansion respectively. This establishes the causal relationship between fiscal policy shocks and unemployment rates.

Importantly, Yücel and Taylor (1996) highlighted that for forecasting regional employment responses to fiscal shocks, the estimates cannot be national. In addition to this, federal government spending has a redistributive nature across the whole country, therefore, the employment responses across states are easily predictable. The key findings of the paper are that national responses are not closely followed by the state responses to the fiscal shocks, in contrast to monetary shocks, which are causing similar employment responses at both state and national levels. Given these results, it is reasonable to estimate fiscal policy shocks at a state level.

To the best of our knowledge, there is no prior research that investigates unemployment rate responses to state tax rate shocks at the gender- and age-group dimensions. In addition, state-level taxation is not as often researched as federal-level, due to the fact that the latter has an identical system in all states.

Based on the literature presented above, the following hypotheses have been formulated:

Hypothesis I: *The youngest group would be the most sensitive to the tax shocks.*

Hypothesis II: *At a young age, female unemployment rates would tend to react to tax shocks more dramatically if compared to male.*

2. DATA

The data is collected from the Current Population Survey (CPS), which provides possibilities to generate necessary macro-data for this research, e.g. labor force, unemployment rates, participation rates, numbers of employed and unemployed, population classified by age gender and state groups. According to the Federal Reserve Bank of Kansas City, weight in the CPS "allows researchers to aggregate the sample up to match macro numbers representative of the U.S. population" (n.d., para 2).

The detailed description of how the key variables of unemployment rate, state average tax rate and participation rate are generated is detailed below.

First of all, all observations for those who are younger than 16 were dropped. Secondly, six age-gender groups were generated:

- I & IV - females and males aged 16-34 correspondingly;
- II & V - females and males aged 35-64;
- III & VI - females and males aged 65 and over.

Next the general unemployment rate needs to be created for every US state, age-gender group and year. The population variable is defined by sorting data by state, age-gender group and year and then the values are summed up with the final weight of the sample. Afterwards, the final weight is multiplied by the dummy for the unemployed, which produces a total number of unemployed for each state, age-gender group and year. Similarly, the number of people that are not in the labor

force is produced by using the respective dummy. Having those key variables generated, the labor force is found by subtracting the number of those not in the labor force from the total population for each state, age-gender group and year observed respectively. Thereafter, the unemployment rate is generated by taking the number of unemployed over the labor force and multiplied by 100. Last but not least, the participation rate is generated as a ratio of the labor force and the total population multiplied by 100.

Next the state tax rate is generated by dividing the state taxed amount before credits over the established taxable income. The reason for choosing state tax amount before credits rather than after credits is first due to significant data gaps and secondly, the amount difference for the available instances between the two was negligible. Once the state tax rate was created, it is necessary to sort the state taxes rates by state, year and age-gender groups, which allows creating average state tax rates for the estimated groups.

Finally, the id for the estimated groups are created, when aggregating them by state and age-gender. The males and females 65+ age-gender groups are dropped due to insufficient observations.

The Table A in Appendix contains the short names of the variables, their descriptions and their summary statistics.

In order to validate the reliability of the generated rates and later findings, the general state unemployment rates are calculated and compared with the published macro data from the FRED economic research database. The same approach for creating unemployment rates, the sole difference is that all new variables are sorted by state and year only.

The Appendix Table B matches FRED and CPS weight generated values for the years of 1998, 2009 and 2018 for the researched US states, namely California, Connecticut, Georgia, Iowa, Louisiana, Massachusetts, Nebraska, New Jersey and Utah.

The CPS generated data resembles the data collected from the FRED database closely. The error is up to 2% of the unemployment rates in the sample. This is negligible error given the value of the complexly generated data on unemployment rates, state tax and participation rates for each age, gender, state and year. This detailed data cannot be easily collected from macro databases and thus findings are reliable and noteworthy.

3. ESTIMATION METHODOLOGY

Keynesian economic theory argues that fiscal policy changes are powerful enough to affect the aggregate demand and consequently economic activity. In this paper the demand changes are not measured, but a change in taxation is identified as the trigger shock that in the end impacts economic activity, which is highly correlated with the unemployment rates.

Turning to the research method, the VAR model together with impulse response functions is adopted to demonstrate the responses of unemployment rates to the tax shocks, which are commonly used for such estimations (Mertens and Ravn, 2012). The reason behind is that VAR proves the impact of all the endogenous variables on each other. Thus, this approach detects the direct and indirect effects of policy shocks on employment (Yücel and Taylor, 1996). And thus, implies its effect on unemployment.

The analytical form of the econometric VAR model is presented below:

$$\ln\_urate_t = \alpha + \sum_{i=1}^{k} \beta_i \ln\_urate_{t-i} + \sum_{j=1}^{k} \gamma_j \ln\_part\_rate_{t-j} + \sum_{m=1}^{k} \varphi_m \ln\_av\_taxrate_{t-m} + e_{t1}$$

$$\ln\_part\_rate_t = \theta + \sum_{i=1}^{k} \beta_i \ln\_urate_{t-i} + \sum_{j=1}^{k} \gamma_j \ln\_part\_rate_{t-j} + \sum_{m=1}^{k} \varphi_m \ln\_av\_taxrate_{t-m} + e_{t2}$$

$$\ln\_av\_taxrate_t = \epsilon + \sum_{i=1}^{k} \beta_i \ln\_urate_{t-i} + \sum_{j=1}^{k} \gamma_j \ln\_part\_rate_{t-j} + \sum_{m=1}^{k} \varphi_m \ln\_av\_taxrate_{t-m} + e_{t3}$$

Where α, θ *and* ϵ are constants and β_i, γ_j *and* φ_m are respective p-1 lagged polynomial. k is the optimal VAR lag length for the model, where it normally for annual data takes value 1 or 2 (p=2 or p=3) The optimal lag is determined for every group, using the *varsoc* test. This VAR equation is estimated for each age-gender and state groups separately. In other words, the values of unemployment rate, participation rate and average state tax rate are age, gender and state specific in year t. The sample of annual observations is used for the time period from 1998 to 2018.

4. EMPIRICAL RESULTS

In the first place, it is important to note that states with no income tax were omitted. In the sample there are states with flat and graduated tax systems.

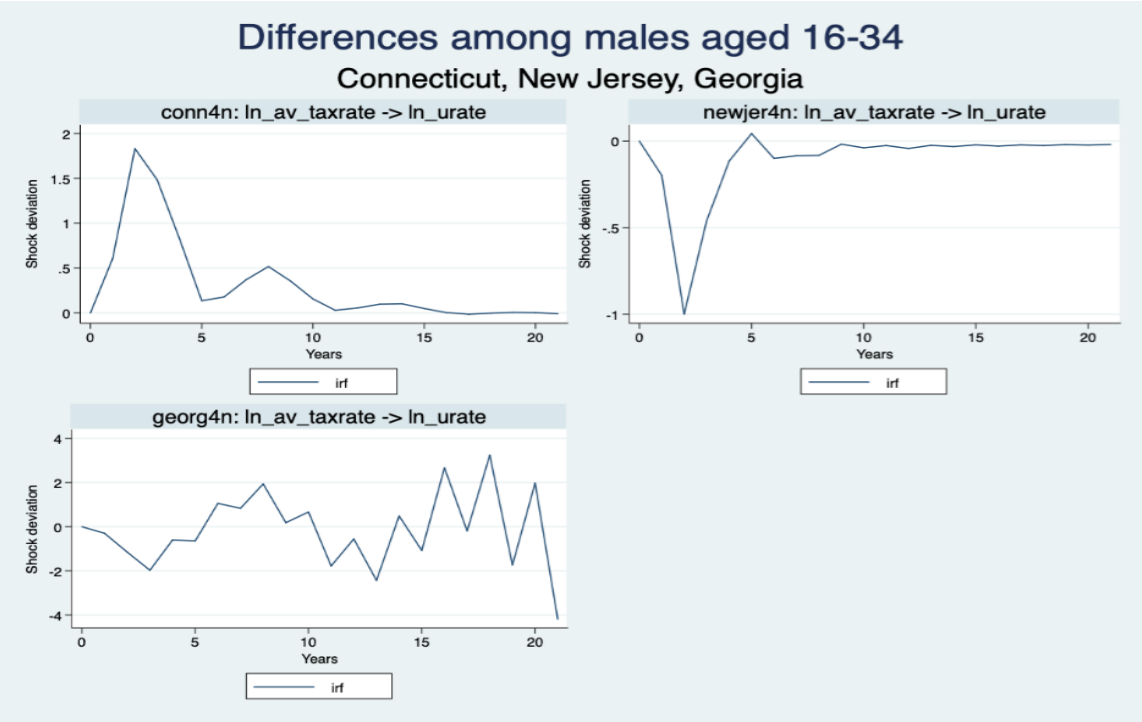
Massachusetts is the only state with a flat tax rate that is significant in the age-gender group I: females aged 16-34. The average tax has a negative effect on the unemployment rate at 10% significance level. Similar results for the group I were obtained for Georgia. Likewise, Nebraska had an unemployment rate negatively affected, but at 5% significance.

In contrast, the tax shocks have a positive impact on the unemployment rate in Connecticut. It is significant at 5%, this is demonstrated by Figures 1 and 2 below. Moving to the group IV, which is characterized by males aged 16-34, a positive impact can be observed at 1% level of significance also in Connecticut. The same age groups in New Jersey and Georgia are negatively impacted and significant at 5%.

Regarding the age group 35-64 for females, the results are diverse. The average state tax rate shock has a positive influence on unemployment rate at 10% significance in Utah and 1% in California, while in Louisiana and in Iowa it has a negative effect at 1% and 10% levels correspondingly.

Interestingly, Kentucky's group V: males aged 35-64 has a negative indirect dependence and this is the only observation for this age-gender group[3]. In particular, the tax shocks negatively influence the participation rate and consequently the participation rate negatively affects the unemployment rate at 1% significance.

Figure 1: Unemployment response to tax shocks among males aged 16-34

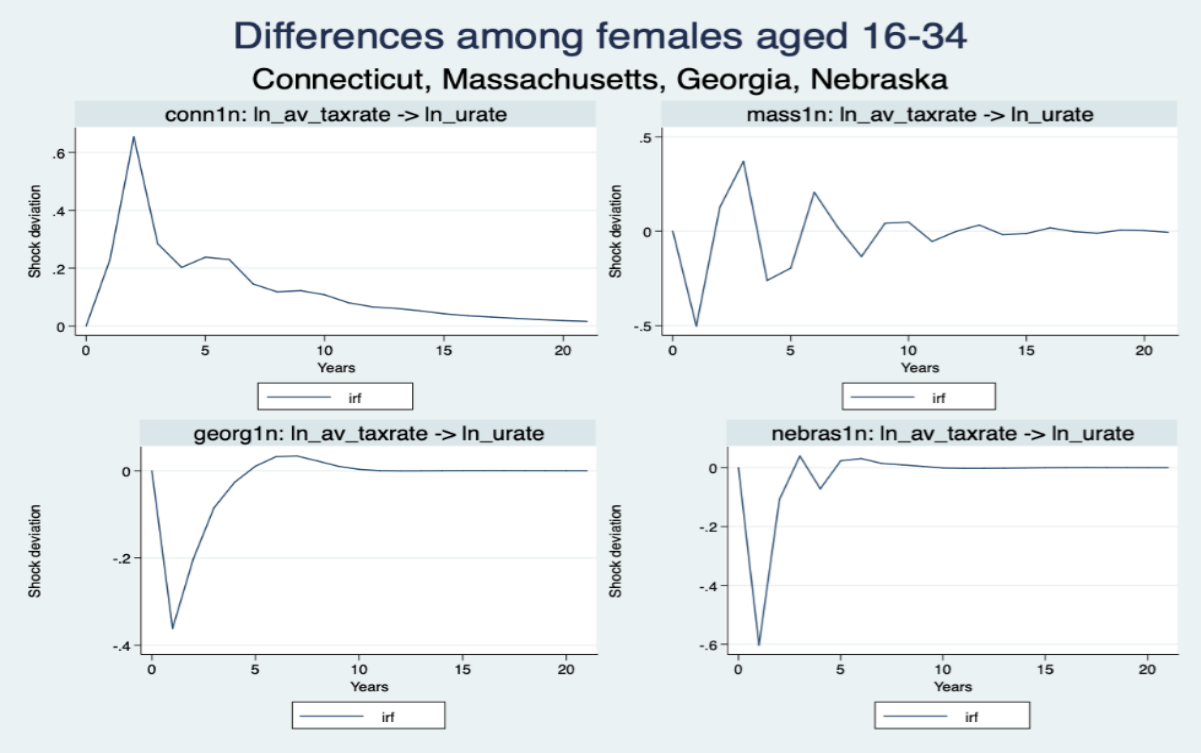


[3] The other states were not significant or did not perform well during diagnostic tests.

To turn to impulse response functions, the Figure 1 represents the IV group: males aged 16-34 for Connecticut, New Jersey and Georgia. Exceptionally, when comparing all the Figures it can be clearly seen that one standard deviation shock caused the unemployment rate in Connecticut (top left) to increase for some years and it almost reached 2 points, while at period 5 it relatively stabilized. To turn to New Jersey, which is on the right side, an explicitly opposite situation can be observed at the same time period: its unemployment rate dropped and recovered rapidly in 5 periods. As for Georgia, one standard deviation of a tax shock caused unemployment rate fluctuations for 21 periods and it did not stabilize at its initial level by the end of the period but stayed at -4. This observation proves the sensitivity to tax shocks as unemployment rates cannot recover to the primary position.

Despite Georgia's tax rate falling between 1.0% and 5.75%, the tax shocks cause extensive fluctuations in the unemployment rate. It means that additional macroeconomic factors also affect this group's sensitivity in Georgia. According to the Federation of tax administrators (2020), New Jersey has the highest state tax reaching 10.75% among the three states, nevertheless, the recovery after tax shocks was rather swift, while Connecticut's maximum state tax rate totals 6.99%. This result leads to the question of determining the causes of swifter recovery in New Jersey than in others, which is suggested for further research.

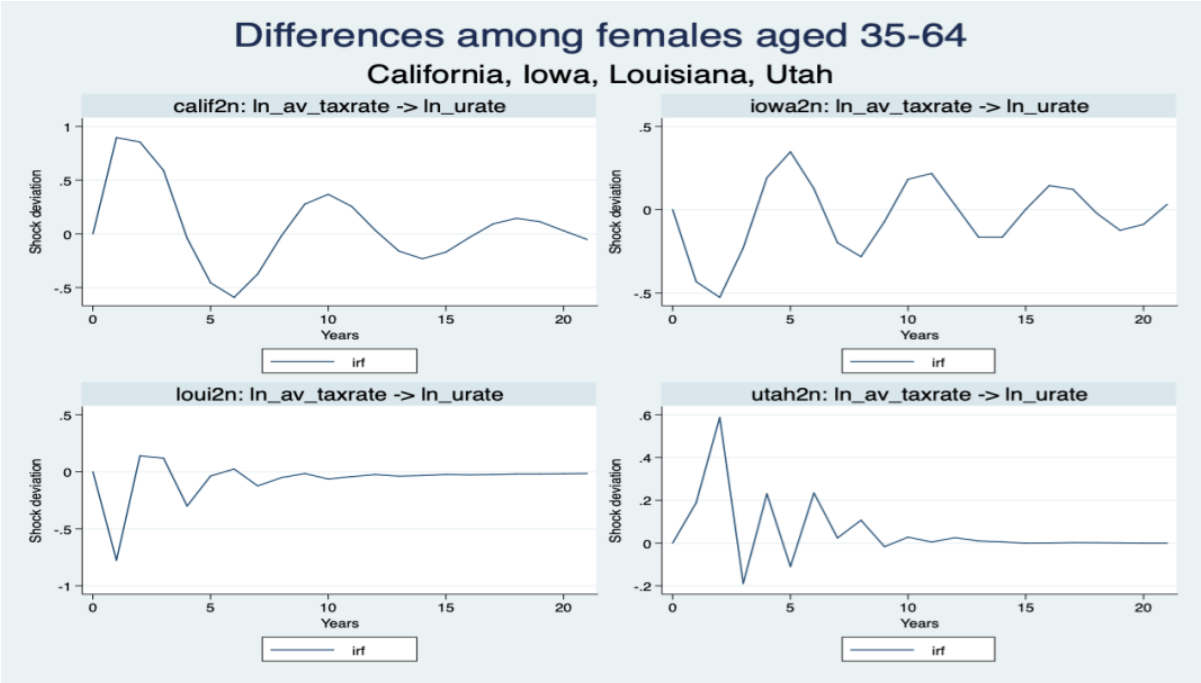
Figure 2: Unemployment response to tax shocks among females aged 16-34



In contrast, the Figure 2 represents unemployment rate response differences for group I in Connecticut, Massachusetts, Georgia and Nebraska. Notably, the reaction to tax innovations in Nebraska and Georgia are characterized with an abrupt dip and then a relatively quick recovery within 5 periods. However, the extent of the shock deviation is more negative for the state of Nebraska (-0.6) than for Georgia (less than -0.4). Consistently with the male group, Connecticut's unemployment rate demonstrated an opposite response to the tax shock by skyrocketing to 0.6 points and then closely reaching its original position in 20 periods. The state of Massachusetts is the only flat-rate tax state (5%) and attests peculiar behavior. One standard tax shock deviation results in steep drop to -0.5 points and is followed by 10 periods of fluctuations, until reaching the original position. This reflection indicates the sensitivity of this female group aged 16-34.

Also, it is important to note the differences between female and male responses to tax shocks within the same states of Connecticut and Georgia (see Figures 1 and 2). In the former, males' unemployment rate tends to deviate more dramatically than females' unemployment rate with peaks at near 1.8 and 0.8 respectively. Similar trend is observed for females' and males' response to tax shock in Georgia, where the response discrepancy compromises about 1.6 points. Apart from that, this steeper dip in male's unemployment rate response is followed by continuous fluctuations for 21 periods, while female's unemployment rate recovers in 5 periods.

Figure 3: Unemployment response to tax shocks among females aged 35-64



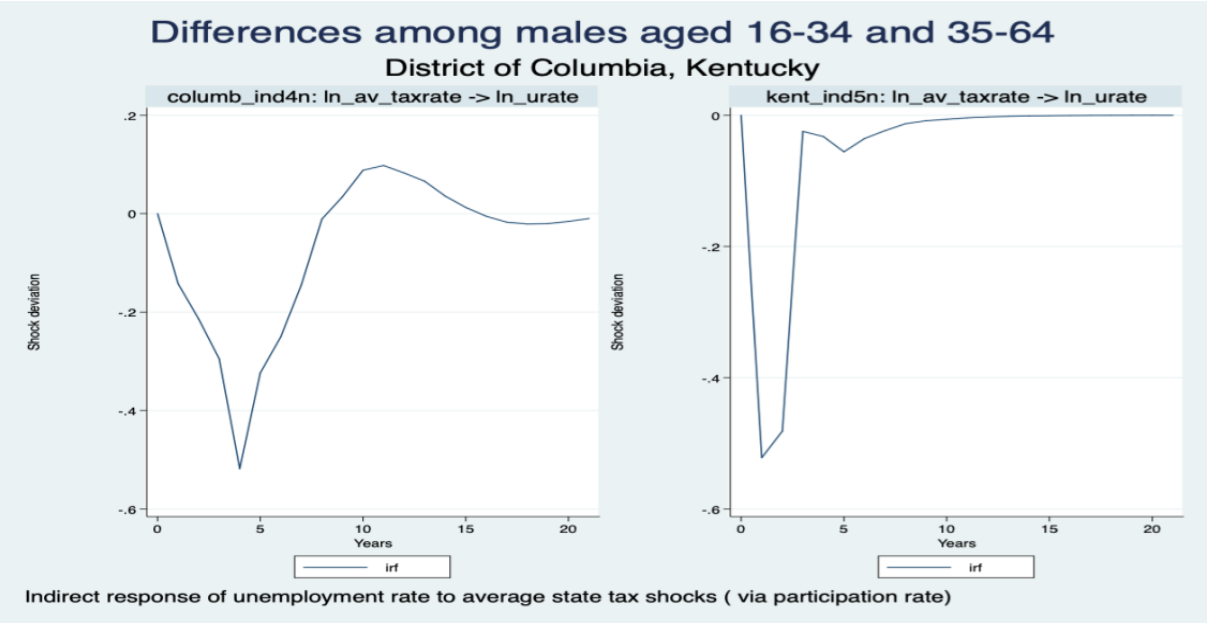
These findings for Georgia and Connecticut provide grounds to reject the Hypothesis II and confirm the opposite that at young age male unemployment rates tend to react to tax shock more dramatically than female unemployment rates.

The Figure 3 reveals the differences among females aged 35-64 for California, Iowa, Louisiana and Utah. Interestingly, for California's and Utah's impulse responses had positive initial values of 0.9 and 0.6 correspondingly. Afterwards, in Utah the rise was followed by relatively minor fluctuations, which stabilized at 10th period, while California's fluctuations lasted throughout the whole observed period and were more extreme, reaching maximum 0.8 and minimum at -0.6. As for Iowa and Louisiana, at the beginning, impulse responses fell to -0.5 for Iowa and -0.7 for Louisiana, and after some fluctuations, the unemployment rate in Louisiana stabilized at the 10th period. In contrast, Iowa's unemployment rate response rose and fell approximately every 5 periods.

California has the highest state tax 12.3%, while Iowa's tax rate is also relatively high, reaching 8.53% and this seems to contribute to the continuous fluctuations. In contrast, Louisiana's response to tax rate shock seems to recover faster, while Utah's fluctuations are relatively not that extreme and flatten quicker than in other states because these states have state tax rates at 6% and 4.95% respectively (Federation of tax administrators, 2020).

Alternatively, an indirect response of the unemployment rate to average tax shocks was verified through participation rate. In detail, average state tax had a significant impact on participation rate and in its turn, participation rate had a significant effect on unemployment rate.

Figure 4: Unemployment response to tax shocks among males



This indirect response is presented in the Figure 4, where on both impulse response functions a dramatic drop and then a rather rapid rise is observed. However, the responses of the unemployment rate in the District of Columbia demonstrated slower recovery, potentially due to higher state tax rate of 8.95%.

While in Kentucky starting from the 10th period stability was obtained, as the state tax rate does not exceed 5% (Federation of tax administrators, 2020).

Considering the dissimilarities among females and males at different age groups (see the Figures 1, 2, 3 and 4) it should be stressed that the Hypothesis I about the youngest group (16-34) being the most sensitive to the tax shocks is only partially confirmed. In particular, the older (35-64) female groups' unemployment rates prove to be more unstable to the tax shocks if compared to young female groups, thus Hypothesis I is rejected for female groups. On the other hand, the opposite is true for males, as they turn out to be more resilient to tax shock at an older age than at a young age.

CONCLUSIONS

This paper explores how tax shocks impact the unemployment rates in the nine states across age-gender groups. Having used the VAR estimation model to isolate the shocks, it is established that at a young age there is a distinction between unemployment rates' responses of males and females to state tax shocks, the former reacting more dramatically. This finding allows rejecting Hypothesis II that states "at a young age, female unemployment rates would tend to react to tax shocks more dramatically if compared to male". Psylla et al. (2017) verified the flexibility of women in social exchange activities (barter) during the crisis times especially. As a consequence, female's flexibility might extend to the job market and be a potential explanation for Hypothesis II rejection. Nevertheless, this question requires further examination.

In contrast, at older ages the gender-based responses of unemployment rates reverses, making female groups more sensitive to state tax shocks, while male groups gain resilience. This finding is contradictory to Hypothesis I, which states that "the youngest group would be the most sensitive to the tax shocks", and thus it is only partially confirmed.

In accordance with Keynesian economic theory, when a level of tax is lowered, households would benefit from higher income. Consequently, aggregate demand will rise, and more consumption will

follow. In its turn, more consumption will stimulate economic activity. Therefore, the gender-age findings of this paper prove to be important for the process of designing fiscal policies.

The limitation of the study lies in a limited number of estimations for group V: males aged 35-64, due to the majority of states failing in diagnostic tests or turning out to have insignificant results. Although the findings of young group tax impulse responses across genders and states are both important and carry policy implications, these questions are left for further research.

REFERENCES:

1. Anderson, E., Inoue, A. & Rossi, B. (2016). Heterogeneous Consumers and Fiscal Policy Shocks. *Journal of Money Credit and Banking*, 48(8), 1877-1889.
2. Birol, O.H. & Gencer, A.H. (2014). The Keynesian system: Fiscal and Monetary Policy Guidelines. *GSTF International Journal on Business Review (GBR)*, 3 (3), 106-119.
3. Burriel, P., de Castro, F., Garrote, D., Gordo, E., Paredes, J. & Pérez, J.J. (2010). Fiscal Policy Shocks in the Euro Area and the US: An Empirical Assessment. *Fiscal Studies*, 31(2), 251-285.
4. European Commision. (2017). The gender pay gap situation in the EU. https://ec.europa.eu/info/policies/justice-and-fundamental-rights/gender-equality/equal-pay/gender-pay-gap-situation-eu_en . 27.04.2020.
5. Federal Reserve Bank of Kansas City. (n.d.). Weights in the CPS. https://www.kansascityfed.org/research/kcdc/cps/coreinfo/keyconcepts/weights . 27.05.2020.
6. Federation of Tax Administrators. (2020). State individual income taxes. taxadmin.org/assets/docs/Research/Rates/ind_inc.pdf . 14.05.2020.
7. Ferraro, D. & Fiori, G. (2020). The Aging of the Baby Boomers: Demographics and Propagation of Tax Shocks. *American Economic Journal*, 12(2), 167–193.
8. Gerber, C., Klemm, A., Liu, L. & Mylonas, V. (2018). Income Tax Progressivity: Trends and Implications. https://www.imf.org/en/Publications/WP/Issues/2018/11/20/Personal-Income-Tax-Progressivity-Trends-and-Implications-46332. 14.05. 2020.
9. Graf, N., Brown, A. & Patten, E. (2019). The narrowing, but persistent, gender gap in pay. pewresearch.org/fact-tank/2019/03/22/gender-pay-gap-facts/ . 27.05.2020.
10. Hayo, B. & Uhl, M. (2015). Regional Effects of Federal Tax Shock. *Southern Economic Journal*, Vol. 82, No. 2 , 343-360.
11. Kuznets, S. (1955). Economic Growth and income Inequality. *The American Economic Review*, 45(1), 1-28.
12. Mertens, K. & Ravn M.O. (2012). Empirical Evidence on the Aggregate Effects of Anticipated and Unanticipated US Tax. *American Economic Journal: Economic Policy*, 4(2), 145-181.
13. Owyang M.T. & Zubairy S. (2009). Who Benefits from Increased Government Spending? A State-Level Analysis. https://s3.amazonaws.com/real.stlouisfed.org/wp/2009/2009-006.pdf . 15.05.2020.
14. Psylla, I., Sapiezynski, P., Mones, E. & Lehmann, S. (2017). The role of gender in social network organization. *Plos one*, 12(12), 1-21.
15. Tenhofen, J.,Wolff, G.B. & Heppke-Falk, K.H. (2010). The Macroeconomic Effects of Exogenous Fiscal Policy Shocks in Germany: A Disaggregated SVAR Analysis. *Jahrbucher f. Nationalokonomie u. Statistik*, 230(3), 328-355.
16. Unal, U. (2015). The Unemployment Effects of Fiscal Policy in Netherlands. https://mpra.ub.uni-muenchen.de/81433/. 17.05.2020.
17. Yücel, M.K., Taylor, L.L. (1996). The policy sensitivity of industries and regions. https://d1wqtxts1xzle7.cloudfront. 15.05.2020.

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APPENDIX

Table A. Definitions of variables and descriptive statistics.

Variables	Explanation	Obs.	Mean	Stand. dev.
state/state_id	Identificator for a particular state in a dataset	3,360	24.01875	14.14312
female	A dummy for indicating the gender: male (0), female (1)	3,360	.4875	.4999181
age_g	It defined the 6 age-gender groups: 1- female 16-34, 2- female 35-64, 3- female 65+, 4- male 16-34, 5- male 35-64, 6- male 65+.	3,360	3.0375	1.580929
totpop	The total population defined for each state, age-gender groups and year.	3,360	979714.6	1130440
numb_nilf	Number of people not in the labor force.	-	-	-
labor_force	The number of people in labor force: total population minus people not in the labor force	3,360	732157.4	848565.4
part_rate	Participation rate is defined by labor force over total population *100.	3,360	75.02575	8.073614
sttaxbc	A state tax amount in dollars deducted from individuals.	-	-	-
taxinc	The total amount of individuals taxable income, which includes FICA, federal and state taxes.	-	-	-
state_taxrate	It is the state tax rate which = sttaxbc/taxinc*100	-	-	-
av_taxrate	Average state tax rate calculated by calculating the average of state tax rate.	3,197	9.521989	15.04456
unemployed	The number of unemployed people for every state year and age-gender group.	-	-	-
urate	Unemployment rate calculated by unemployed/ labor_force *100	3,360	6.493221	3.708498
ln_urate	Logarithm of unemployment rate	3,360	1.704425	.6017527
ln_av_taxrate	Logarithm of average state tax rate	3,197	2.012393	.5775035
ln_part_rate	Logarithm of the participation rate	3,360	4.311913	.1095263

Table B. Comparison of unemployment rates between states in percentages.

State	Data source	1998	2009	2018
California	*FRED*	5.9%	11.2%	4.3%
	CPS weight	6.5%	11.4%	4.1%
Connecticut	*FRED*	3.4%	7.9%	4.1%
	CPS weight	4.8%	7.6%	4.1%
Georgia	*FRED*	4.3%	9.9%	3.9%
	CPS weight	4.4%	8.9%	3.7%
Iowa	*FRED*	2.7%	6.4%	2.6%
	CPS weight	3.0%	7.7%	2.8%
Louisiana	*FRED*	5.7%	6.8%	4.9%
	CPS weight	4.7%	6.9%	4.7%
Massachusetts	*FRED*	3.3%	8.1%	3.4%
	CPS weight	4.8%	7.6%	3.97%
Nebraska	*FRED*	2.6%	4.6%	2.9%
	CPS weight	2.8%	4.6%	3.5%
New Jersey	*FRED*	4.6%	9.1%	4.1%
	CPS weight	5.66%	7.6%	4.9%
Utah	*FRED*	3.6%	7.3%	3.0%
	CPS weight	5.1%	6.8%	4.2%

Source: FRED Economic research website vs. own estimations based on CPS database.