

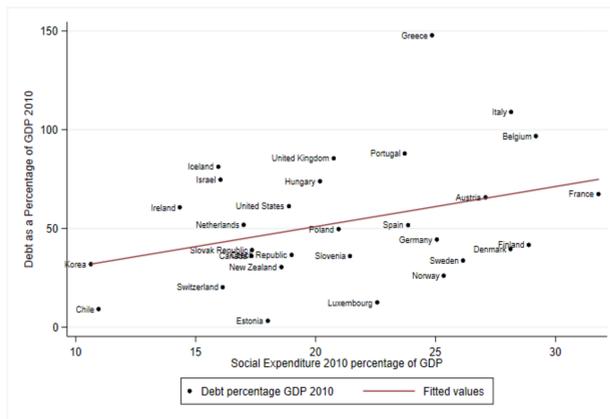
# Social Welfare Spending Good or Bad? An examination of OECD countries.

By Austin Rucker

## Hypothesis 1

### ***Welfare spending increases country debt.***

Scatterplot of the relationship between social expenditure and Debt percentage both of GDP in 2010.



Regression results of the relationship between social welfare expenditure as a percentage of GDP and Debt as a percentage of GDP in 2010 controlling for defense expenditure and GDP growth percentage.

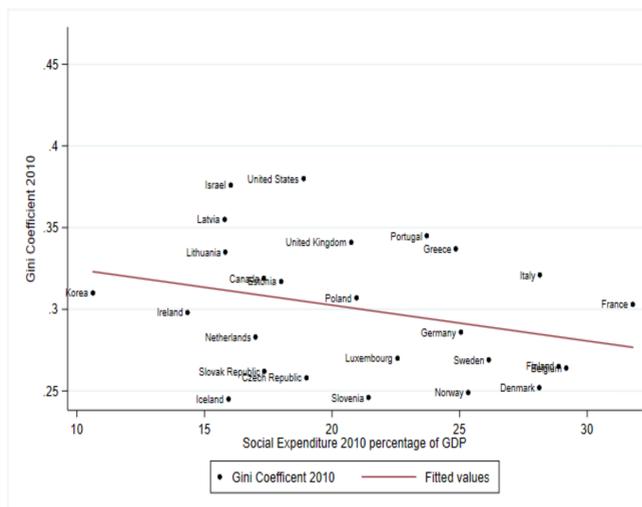
	Model 1	Model 2
Social Welfare Expenditure as percentage of GDP	2.028175* (1.0234)	1.860415* (.9383076)
Defense Expenditure as a percentage of GDP		9.777638 (4.138438)
GDP Growth Percentage		-7.108 ** (2.30021)
Intercept	10.39964 (22.45749)	8.904038 (25.06202)
N	30	27
R-Squared	.1230	.4842
RMSE	30.195	24.99

Note: coefficients and standard errors (in parentheses) are depicted \*p-value < .10 \*\*p-value < .05 \*\*\*p-value < .001.

## Hypothesis 2

### ***Greater spending on welfare programs decreases inequality between social classes***

Scatterplot of social welfare expenditure as a percentage of GDP and Gini Coefficient in 2010.



Regression results of the relationship between social welfare expenditure as a percent of GDP and Gini Coefficient in 2010.

Social Welfare Expenditure as a percentage of GDP in 2010	-.0021888 (.0014562)
Intercept	.3462858*** (.0319446)
N	26
R-squared	.0860
RMSE	.03984

Note: coefficients and standard errors (in parentheses) are depicted \*p-value < .10 \*\*p-value < .05 \*\*\*p-value < .001.

## Abstract

This project examines the theory that social welfare spending creates benefits to citizens. I specifically test three hypotheses. (1) Welfare spending increases budget deficits. (2) Greater spending on welfare programs decreases inequality between social classes. (3) The type of welfare state influences the quality of life. The first relationship examined is between social welfare spending and central government debt in 2010. The second relationship examined is between social welfare spending and inequality as measured by the Gini coefficient in 2010. The third hypothesis focuses on types of welfare state and life quality variables: life expectancy, long term unemployment rate, long term employment rate, and overall life satisfaction. The type of welfare state explains in a way how social welfare spending is allocated. The findings show that social welfare spending does not have statistically significant relationships with central government debt or inequality. The findings do show that the life quality variables do vary between the type of welfare state, however not at a statistically significant level.

## Conclusions

For hypothesis one central debt did grow slightly with social welfare spending. This relationship was significant at a 90% confidence level. Hypothesis two testing showed that social expenditure increased the Gini Coefficient which measures inequality decreased. However it is not a statically significant relationship at the 90% confidence level. Hypothesis three testing shows that there is a variation in the quality of life variables and the type of welfare state. However, not a 90% confidence level. Hypotheses two and three I was unable to reject the null hypothesis.

My theory was proven false because a good inference cannot be made that social welfare spending provides more benefits than negative consequences. The inference I would make is that social welfare spending does not provide either benefits or negative consequences.

This result is not what I expected because of the strong discourse the around the topic. The variables were hardly statistically significant, and the models had a poor fit. This suggest there are other variables that I did not account for that would show the causation central government debt, inequality, and the quality of life variables. I believe there are more confounding variables than I was able to show here. Therefore, I would suggest future experiments that have more controls than the ones I tested. I would also suggest viewing these variables over an extended period. With this paper the focus was on a snapshot in time, the years 2010 or 2017. This created a bias that can be seen, especially in the central debt portion with Greece and Italy. Following these suggestions, a more accurate look at the benefits and consequences of social welfare spending can be seen.

Special Thanks to faculty advisors: Jonathan "Vanya" Kriekhaus and William "Bill" Horner.

## Hypothesis 3

### ***The type of welfare state influences the quality of life.***

Regression results of the relationship between the types of welfare states and life expectancy in 2017. The Conservative group is the intercept.

Liberal	-.2166667 (.9612025)
Social Democratic	.1833333 (.9612025)
Liberal Subgroup	-.3833333 (.9612025)
Conservative Subgroup	.1833333 (.9612025)
Intercept	81.95*** (.5549505)
N	18
R-squared	.0305
RMSE	1.3593

Note: coefficients and standard errors (in parentheses) are depicted \*p-value < .10 \*\*p-value < .05 \*\*\*p-value < .001.

Regression results of the relationship between the types of welfare states and life satisfaction in 2017. The Conservative group is the intercept.

Liberal	-.2166667 (.3461325)
Social Democratic	.583333 (.3461325)
Liberal Subgroup	.1166667 (.3461325)
Conservative Subgroup	.3833333 (.3461325)
Intercept	6.916667*** (.1998397)
N	18
R-squared	.2893
RMSE	.48951

Note: coefficients and standard errors (in parentheses) are depicted \*p-value < .10 \*\*p-value < .05 \*\*\*p-value < .001.

Regression results of the relationship between the type of welfare state and employment rate percentage in 2017. The Conservative group is the intercept.

Liberal	5.166667 (3.49083)
Social Democratic	6.166667 (3.49083)
Liberal Subgroup	5.5 (3.49083)
Conservative Subgroup	9.5** (3.49083)
Intercept	67.5*** (2.015432)
N	18
R-squared	.3974
RMSE	4.9368

Note: coefficients and standard errors (in parentheses) are depicted \*p-value < .10 \*\*p-value < .05 \*\*\*p-value < .001.

Regression results of the relationship between the type of welfare state and the long-term unemployment percentage in 2017. Conservative group is the intercept.

Liberal	-2.00833* (1.044517)
Social Democratic	-1.705 (1.044517)
Liberal Subgroup	-1.308333 (1.044517)
Conservative Subgroup	-1.221667 (1.044517)
Intercept	3.008333*** (.6030522)
N	18
R-squared	.2784
RMSE	1.4772

Note: coefficients and standard errors (in parentheses) are depicted \*p-value < .10 \*\*p-value < .05 \*\*\*p-value < .001.