

The Enhancement of Social Protection and Economic Growth

- Analysis in Four Nordic Countries –

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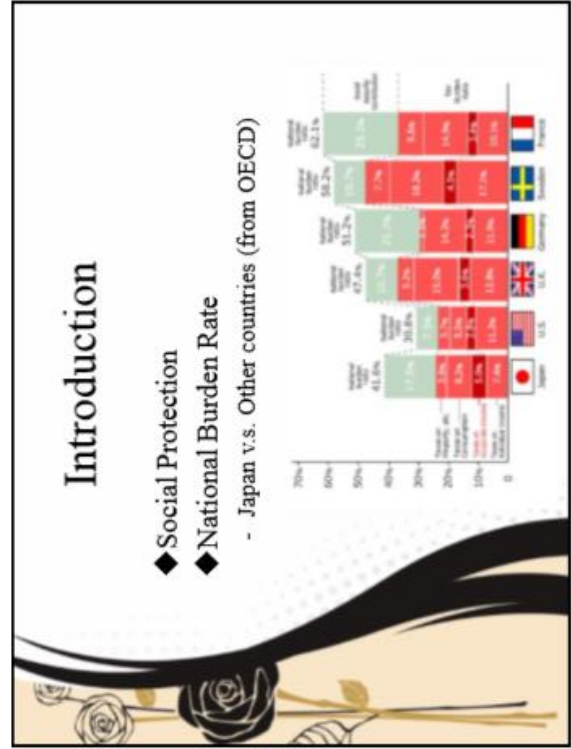
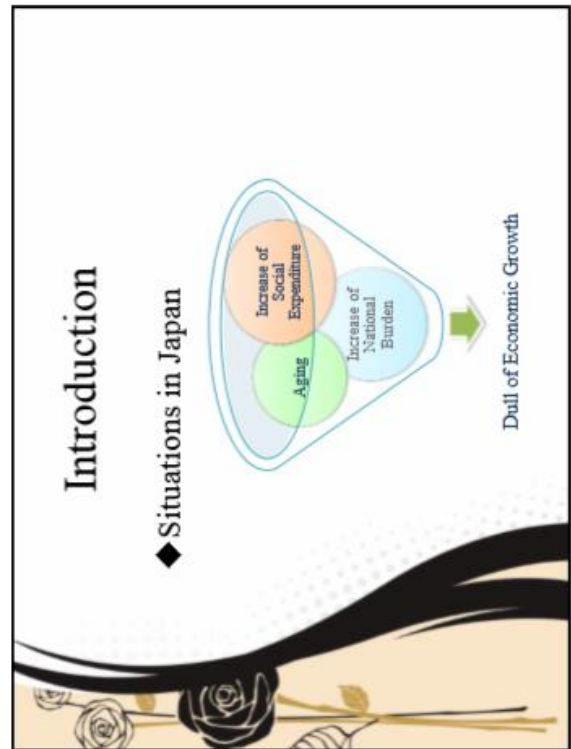
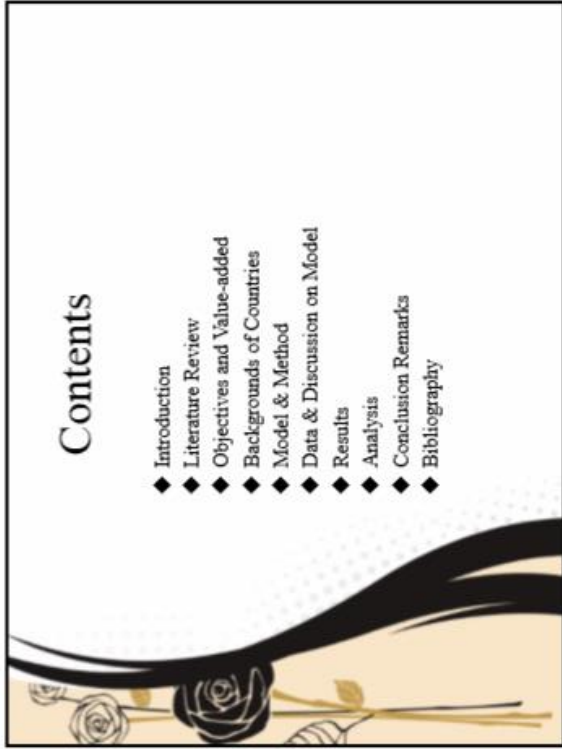
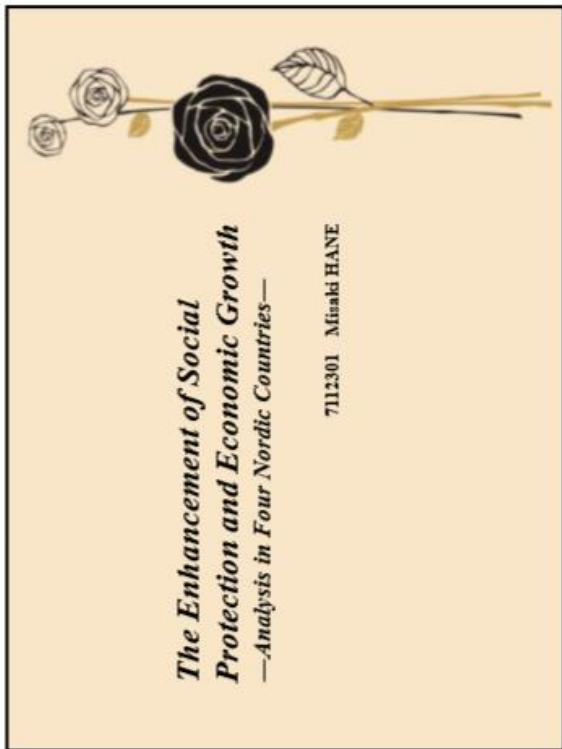
Abstract

In this paper, I examined the relationship between increases of public social expenditure and economic growth through analysis in four Nordic countries from years 1980-2014 using multi regression model modified from Moro (2004)'s model. Countries are including Finland, Norway, Denmark and Sweden. By country to country, the results are different. However, these four conclusion remarks are clearly revealed.

- i) The increases of public expenditure on social protection have negative impact on growth rate of GDP even among four Nordic countries.
- ii) Some of indicators such as Soc-AL (Social Expenditure on Active Labor Markets) have positive impacts on economic growth in almost all four countries.
- iii) The results differ from each Nordic country, and that occurs since economic situations in four countries are not the same.
- iv) The urgent problem Nordic countries face and need to deal with is about care for the increase rate of unemployment the reason is that the enhancement of public expenditure on unemployment has significantly negative impact on growth rate of GDP among all four Nordic countries.

Moreover, comparing size of GDP, high social expenditure countries like as Nordic countries have disadvantage to Japan or United States.(OECD, 2014) If four Nordic countries would like to catch up with two countries, they should consider to abandon the weak and to expend less upon social security such as care for family or unemployed.





Backgrounds of Countries

<p>Finland GDP (Current US \$): \$270.7 billion Population: 5,464 million</p>	<p>Denmark GDP (Current US \$): \$342.0 billion Population: 5,640 million</p>
<p>Norway GDP (Current US \$): \$500.1 billion (2014) Population: 5,136 million</p>	<p>Sweden GDP (Current US \$): \$570.6 billion (2014) Population: 9,690 million</p>

Model & Method

Model 1: $GDP(Y)_{i,t} = \alpha_i + \beta_1(Soc)Y_{i,t} + \beta_2(Bur)Y_{i,t} + \epsilon_{i,t}$

Model 2: $GDP(Y)_{i,t} = \alpha_i + \beta_1(Soc-Oldage)Y_{i,t} + \beta_2(Soc-Survivors)Y_{i,t} + \beta_3(Soc-Health)Y_{i,t} + \beta_4(Soc-Family)Y_{i,t} + \beta_5(Soc-Active Labor Market)Y_{i,t} + \beta_6(Soc-Unemployment)Y_{i,t} + \beta_7(Soc-Housing)Y_{i,t} + \epsilon_{i,t}$

GDP(Y): Annual Growth Rates in percentage
 Soc(Y): Net Public Social Expenditure, in % GDP
 Bur(Y): Tax Burden Rate (Including Social Protection Tax), in % GDP
 Soc-Oldage(Y): Public Expenditure on Old Age, in % GDP
 Soc-Survivors(Y): Public Expenditure on Survivors, in % GDP
 Soc-Health(Y): Public Expenditure on Health Care, in % GDP
 Soc-Family(Y): Public Expenditure on Family, in % GDP
 Soc-Active Labor Market(Y): Public Expenditure on Labor Market Programs, in % GDP
 Soc-Unemployment(Y): Public Expenditure on Unemployment, in % GDP
 Soc-Housing(Y): Public Social Expenditure on Housing, in % GDP
 i: country
 t: time
 ϵ : error

Data & Discussion on Model

◆ OECD database
- 1980-2014

Variable	Definition	Expected Results
GDP	Annual Growth Rate (%)	N/A
Soc(Y)	Net Public Social Expenditure, in % GDP	+
Bur(Y)	Tax Burden Rate (Including Social Protection Tax), in % GDP	-
Soc-Oldage(Y)	Public Expenditure on Old Age, in % GDP	+
Soc-Survivors(Y)	Public Expenditure on Survivors, in % GDP	+
Soc-Health(Y)	Public Expenditure on Health Care, in % GDP	+
Soc-Family(Y)	Public Expenditure on Family, in % GDP	+
Soc-Active Labor Market(Y)	Public Expenditure on Active Labor Market Programs, in % GDP	+
Soc-Unemployment(Y)	Public Expenditure on Unemployment, in % GDP	+
Soc-Housing(Y)	Public Social Expenditure on Housing, in % GDP	+

Results

	FINLAND	NORWAY	DENMARK	SWEDEN	ALL
SOC	(-)	(-)	(-)	(-)	(-)
BUR	(+)	(-)	(+)	(+)	(+)
SOC-O	(+)	(-)	(+)	(+)	(+)
SOC-S	N/A	N/A	N/A	(+)	N/A
SOC-HLT	(-)	(-)	N/A	N/A	(-)
SOC-F	N/A	N/A	(-)	(+)	(-)
SOC-AL	(+)	(+)	(+)	(+)	(+)
SOC-U	(-)	(-)	(-)	(-)	(-)
SOC-HS	(-)	N/A	(+)	N/A	N/A

*Soc(Y): In all cases, the increase of total public social expenditure has negative impact on growth rate of GDP.

Analysis

- ◆ Soc-Active Labor Market/Y
 - Active labor market is a subject directly affects productivity
- ◆ Soc-Family/Y
 - Childcare leave and productivity
- ◆ Soc-Unemployment/Y
 - Problems of unemployed and work share

Unemployment Rate

Conclusion Remarks

- i) The increases of public expenditure on social protection have negative impact on growth rate of GDP even among four Nordic countries.
- ii) Some of indicators such as Soc-ALM (Social Expenditure on Active Labor Markets) have positive impacts on economic growth in almost all four countries.
- iii) The results differ from each Nordic country, and that occurs since economic situations in four countries are not the same.
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Conclusion Remarks

GDP \$US vs. Social Protection

- Group 1: Small size of GDP and High social protection level (Finland etc.)
- Group 2: Large size of GDP and Middle social protection level (Japan etc.)
- Group 3: Large size of GDP and Low social protection level (United States, etc.)

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