The Impact of Macroeconomic Policies on Economic Growth, Poverty and Income Distribution Nexus

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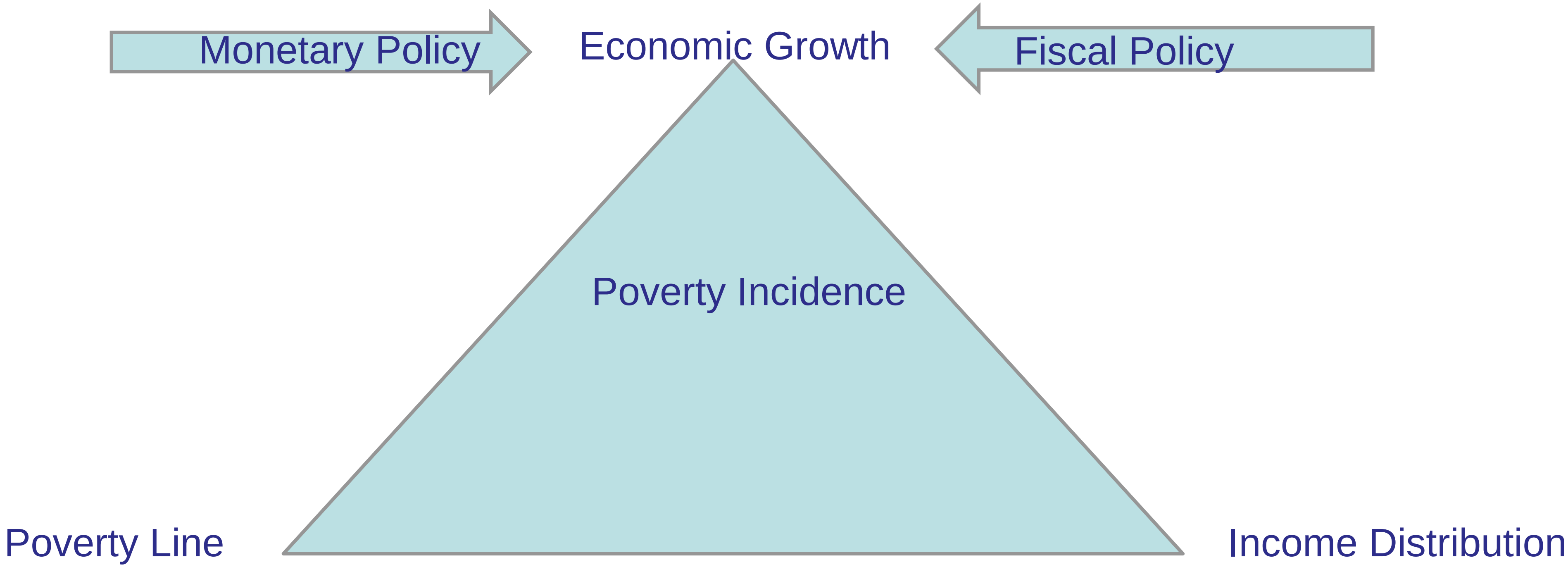
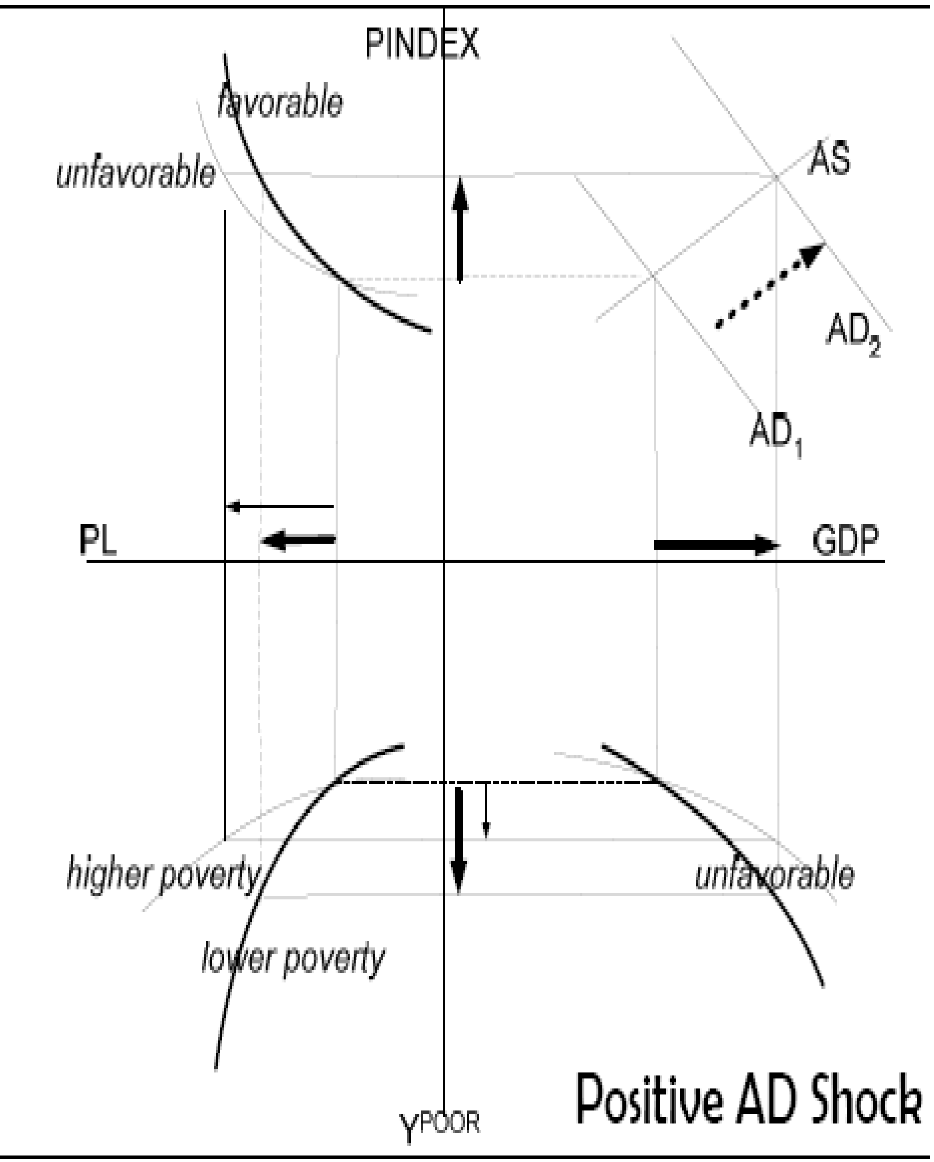
Outline

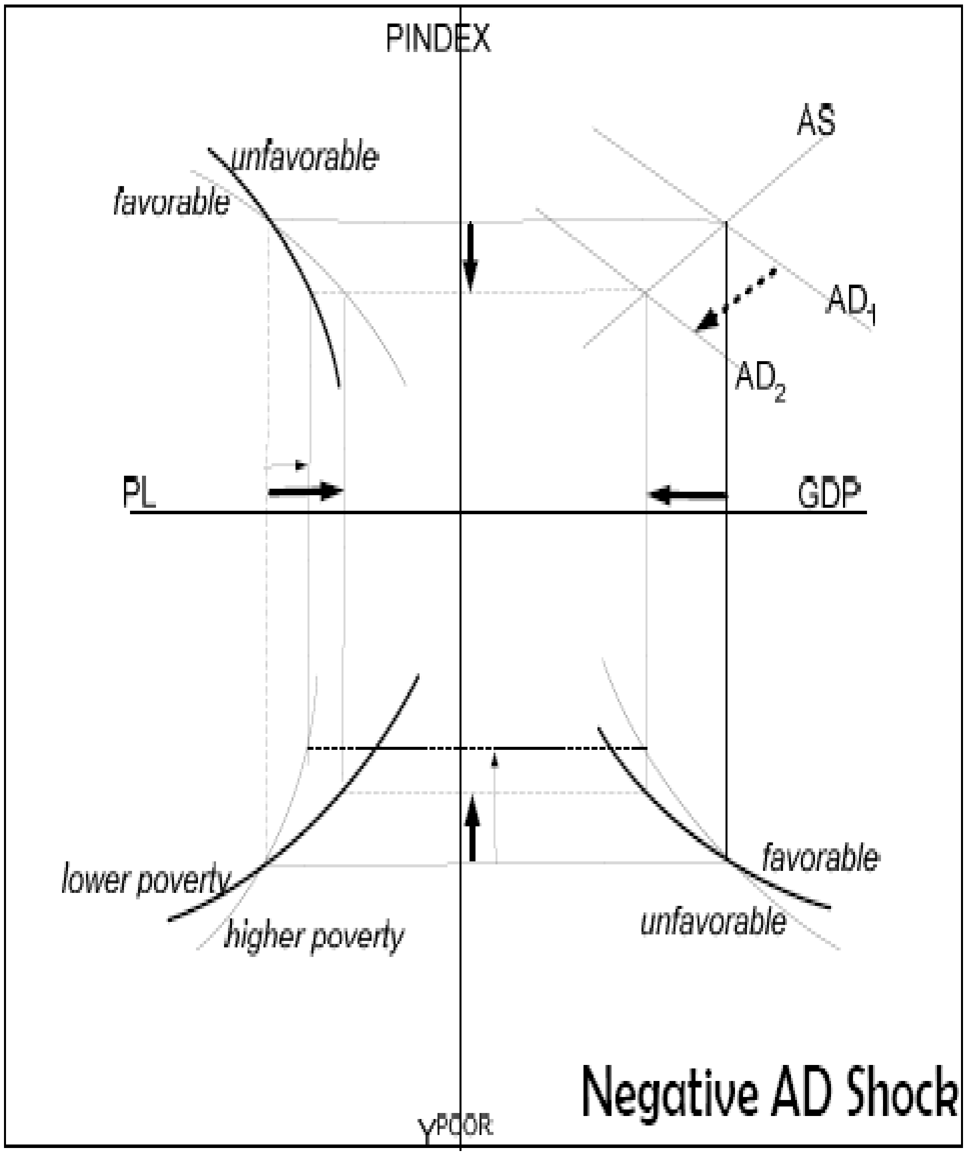
- Motivation
- Data and Methodology
- Results and Analysis
- Policy Recommendation

Motivation

- Oxfam study (2017): Richest 1% bagged 82% of the world wealth while 3.7billion people saw no increase in their wealth.
- This implies that thriving economic growth managed to produce more billionaires but question is can it actually work for everyone?




PINDEX
favorable
unfavorable
AS
AD$_2$
AD$_1$
PL
GDP
higher poverty
unfavorable
lower poverty
Y^{POOR}
Positive AD Shock


PINDEX
AS
unfavorable
favorable
AD$_1$
AD$_2$
PL
GDP
lower poverty
favorable
higher poverty
unfavorable
Y^{POOR}
Negative AD Shock

Azis, 2009

Data and Methodology

- **Data Source:**
  - Social Accounting Matrix, SAM 2005 (real sector- Agricultural, Manufacturing and Services; Institutions-Households, Government, Enterprise, Rest of the World; Factors of Production – Labor and Capital)
  - Flow-of-Funds, FoF Table 2005 (Institutional sector – BoT, Banks, HHs, Gov., Ent. And RoW; Financial Instruments- 12

    CH,LO,DE,RP,GB,BOTB,FIDFB,SOEB,CBOND,EQL,FA,OTH,EQNL,FIXED)
  - Extended the saving-investment account in SAM using the FoF table – FSAM
- **Methodology:**
  - Financial Sector + Computable General Equilibrium (CGE) = Financial Computable General Equilibrium (FCGE)
  - Market clearing mechanism is based on quantity clearing concept and Walras Law
  - Incorporate behavioural equations in the model
    - The monetary mechanism and credit channel
    - The balance of payment and exchange rate adjustment
    - Interest rate and asset pricing

Social Accounting Matrix (SAM)

	Production Activities (9)	Commodities (9)	Production Factors (4)	Institutions (4)	Capital Account (2)	Rest of the World (1)	Total (29)
Production Activities (9)		Domestic Sales					Total Supply
Commodities (9)	Intermediate Input						Total Domestic Demand
Production Factors (4)	Labor, Capital						Total Incomes
Institutions (4)	Social Security Payments, Taxes on Production	Sales Tax, Customs, Export Tax	Labor and Capital Incomes	Transfers, Taxes,		Remittances, Transfers	Factor Incomes
Capital Account (2)				Private Investment (Saving-Investment)			Source of Investment
Rest of the World (1)		Import		Transfers to Abroad			ROW Income
Total (29)	Total Production Cost	Total Domestic Supply of Goods and Services	Total Costs of Production Factors	Total Consumption	Total Investment	ROW Outlay	

Source: Telli (2004) and Erten(2006)

Capital Account and Current Account on Flow-of-Fund table

	BOT		BANK		HH		ENTP		GOV		ROW		
	UoF	SoF	UoF	SoF	UoF	SoF	UoF	SoF	UoF	SoF	UoF	SoF	TOTAL
CH		Eq. 120	Endo		Endo		Eq. 76		Eq. 105				Eq. 134
DE		Eq. 114	Eq. 115	Eq. 116	Endo		Eq. 62		Endo		Eq. 123		Eq. 134
LO	Fixed		Endo			Eq. 53		Eq. 63	Fixed		Eq. 122		Eq. 134
RP		Eq. 121	Endo										Eq. 134
GB	Fixed		Eq. 88		Eq .48					Eq. 100	Eq. 124		Eq. 134
BOTB		Eq. 106	Eq. 89		Eq .49								Eq. 134
FIDFB			Eq. 90	Fixed	Eq .50					Eq. 102			Eq. 134
SOEB	Fixed		Eq. 91		Eq .51			Eq. 67	Fixed				Eq. 134
CBOND			Eq. 92		Eq. 52			Eq. 69			Eq. 125		Eq. 134
EQL			Eq. 87		Eq. 47			Eq. 65			Eq. 126		Eq. 134
FA	Eq. 112		Eq. 97		Eq. 58		Eq. 74					Endo	Eq. 134
EQNL		Eq. 108		Eq. 93		Eq. 54		Eq. 70		Eq. 103			
OTH	Endo		Fixed			Endo		Endo			Fixed		
SAVING						Eq. 144		Eq. 145		Eq. 146		Eq. 147 -CA	
INV					Eq. 60		Eq. 61		Fixed		Fixed		
TOTAL	Eq. 135		Eq. 135		Eq. 135		Eq. 135		Eq. 135		Eq. 135		

Thai institutions' demand for foreign assets

Foreigners' demand for Thai assets

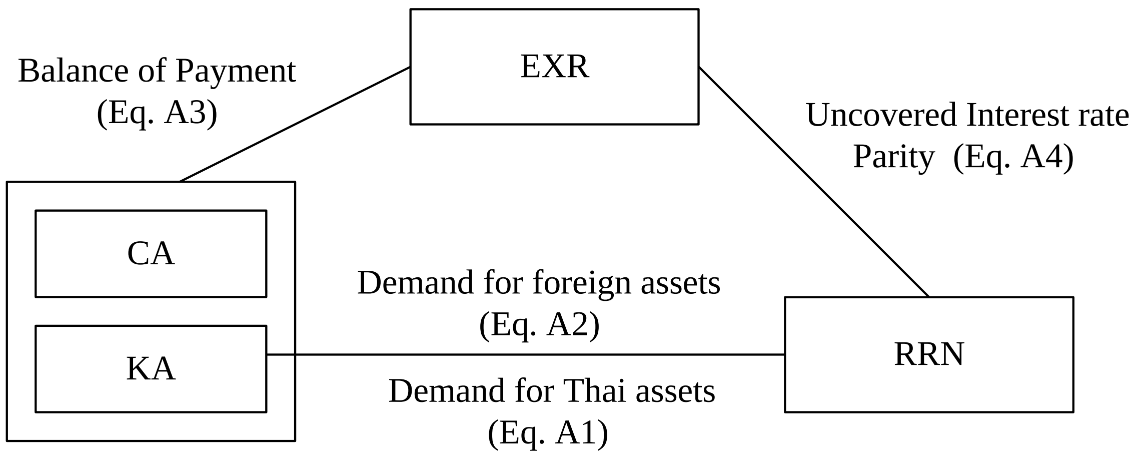
7

Financial Social Accounting Matrix

	Productions	Factors	HH	ENTP	Gov	ROW	Tariff	Taxes	KA.BOT	KA.BANK	KA.HH	KA.ENTP	KA.GOV	KA.ROW	Fixed Asset	Financial Assets
Productions	Intermediate Inputs		HH comsumption		Gov Consumption										Investment	
Factors	Value Added															
HH		Factor Income	Institutional Transfers													
ENTP																
Gov							Tariff Revenue	Tax Revenue								
ROW	Imports															
Tariff	Tariff															
Taxes	Indirect Taxes		Income Tax	Income Tax												
KA.BOT																BOT ΔLiabilities
KA.BANK																Bank ΔLiabilities
KA.HH			HH Saving													HH ΔLiabilities
KA.ENTP				ENTP Saving												ENTP ΔLiabilities
KA.GOV					Gov Saving											Gov ΔLiabilities
KA.ROW						ROW Saving										ROW ΔLiabilities
Fixed Asset											HH Investment	ENTP Investment	Gov Investment	Foreign Investment		
Financial Assets									BOT ΔAsset Portfolio	Bank ΔAsset Portfolio	HH ΔAsset Portfolio	ENTP ΔAsset Portfolio	Gov ΔAsset Portfolio	ROW ΔAsset Portfolio		

Mechanism of the Financial Module

- Capital Flows, Balance of Payment and Exchange Rate



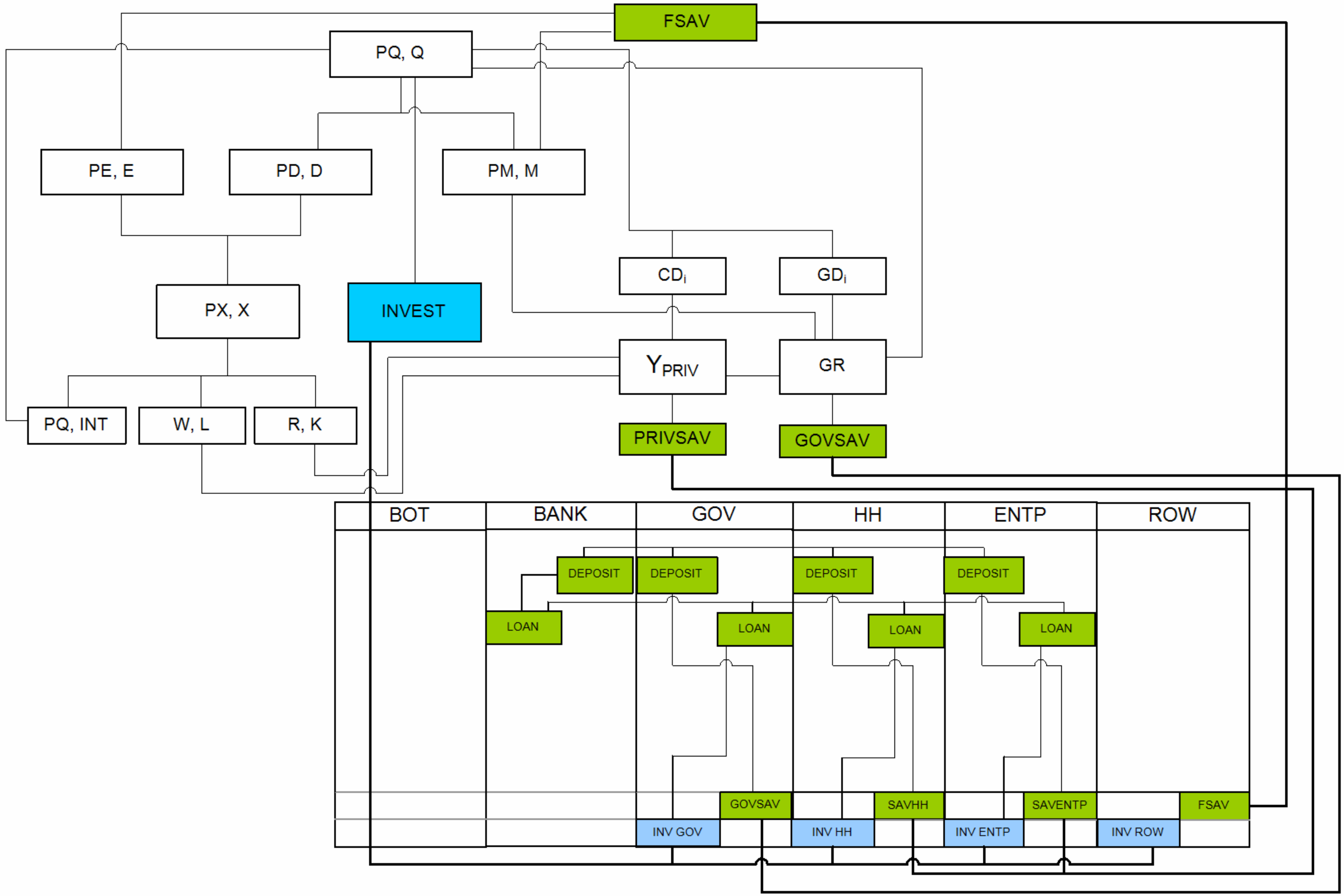
(A1) $UOF\_F_{asset,ROW} = f(\overline{RRN} - \overline{RNF}, \overline{EXPEXR})$

(A2) $UOF\_F\_D_{domin\,st} = f(\overline{RRN} - \overline{RNF}, \overline{RGDP})$

(A3) $\left(\sum_{asset} UOF\_F_{asset,ROW} \right) \cdot EXR + FSAV \cdot EXR = \left(\sum_{domin\,st} UOF\_F\_D_{domin\,st} \right) \cdot EXR$

(A4) $(\overline{RRN} - \overline{RNF}) = \left(\frac{\overline{EXPEXR}}{EXR} - 1 \right) - RISKP$

Figure 2.5: Connection between the core CGE and the financial module.



Simulation

- An increase and decrease in domestic interest rates – monetary shocks
- An increase and decrease in government spending – fiscal shocks
- An increase in reserve requirement – monetary shocks

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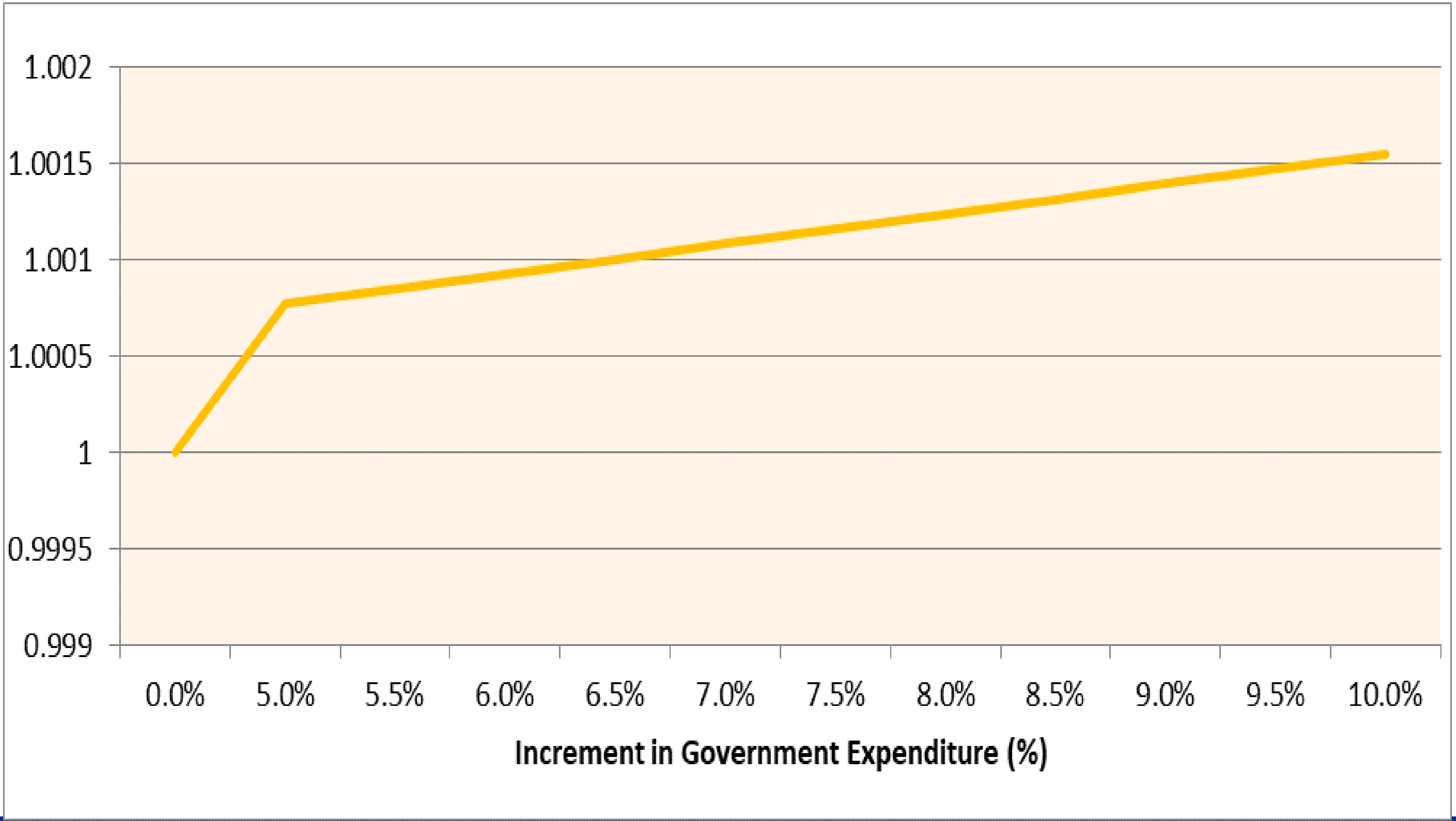
Empirical Results

Simulation	Elasticity of Price to GDP	Elasticity of Income of the Poor to GDP	Poverty Incidence
Increase in Government Spending (1%)	0.008%	0.200%	Improves
Decrease in Government Spending (1%)	0.022%	0.000%	Worsen
Increase in the Interest Rate (1%)	0.2639(%)	0.000%	Worsen
Decrease in the Interest Rate (1%)	Results are divided into 2 parts (150 basis points)		
Increase in the Reserve Requirement (1%)	0.2516(%)	0.000%	Worsen
Decrease in the Reserve Requirement (1%)	0.216	0.000	Worsen

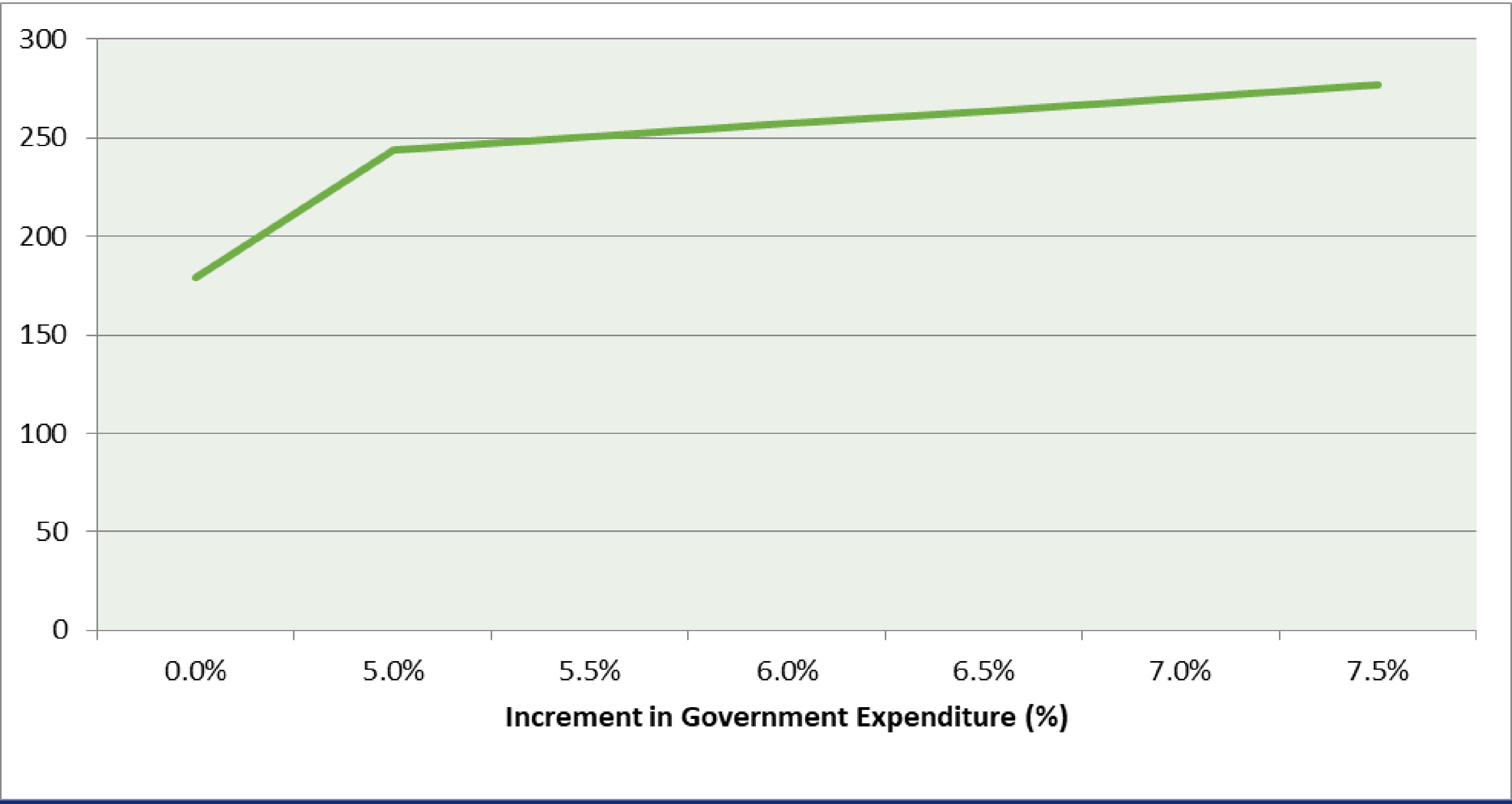
Results and Analysis: Government Spending

Thailand: Level of Poverty Line (Index)



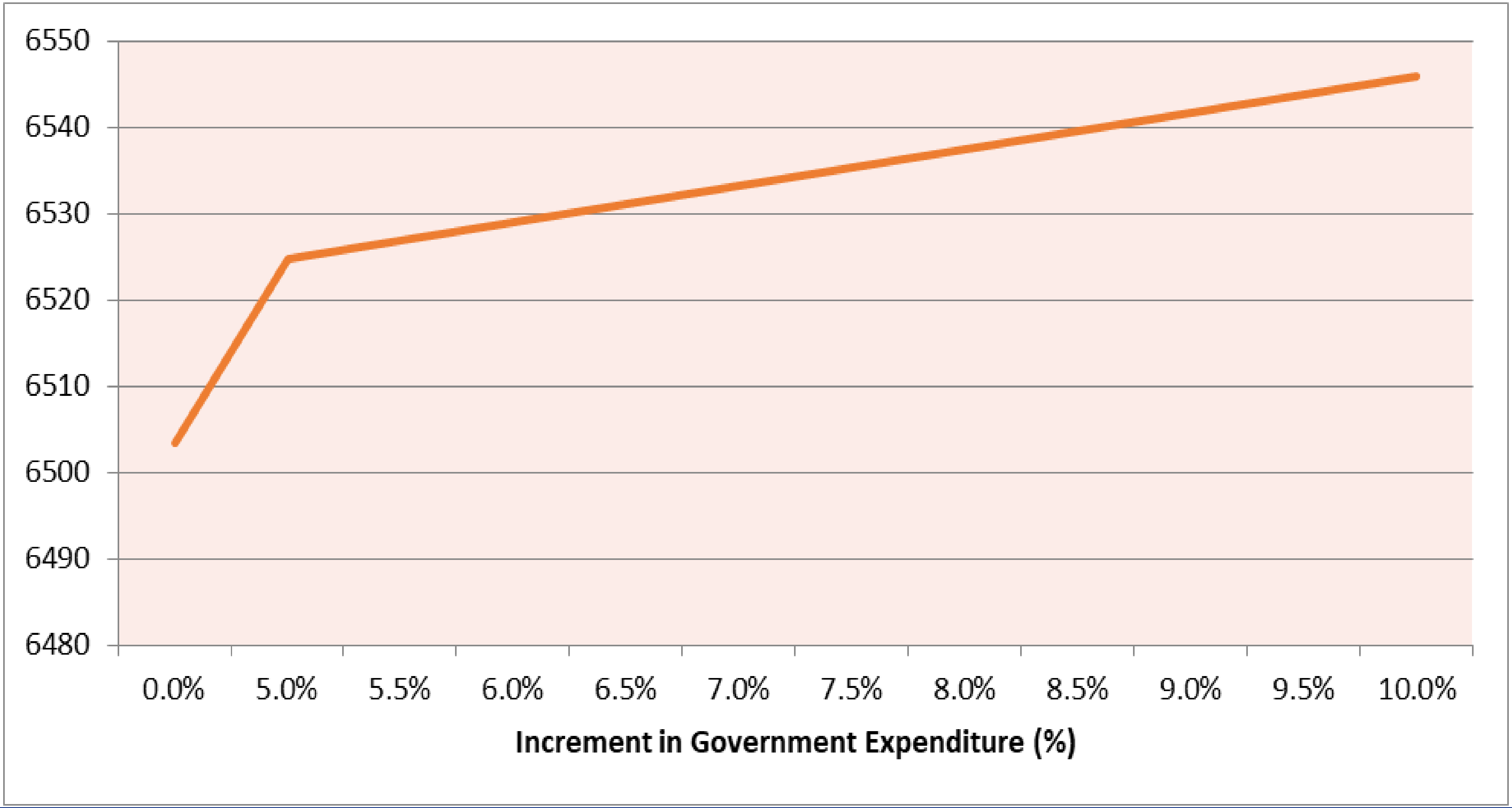
Results and Analysis: Government Spending

Thailand: Income of the Bottom 20% of the Population (billions of bath)



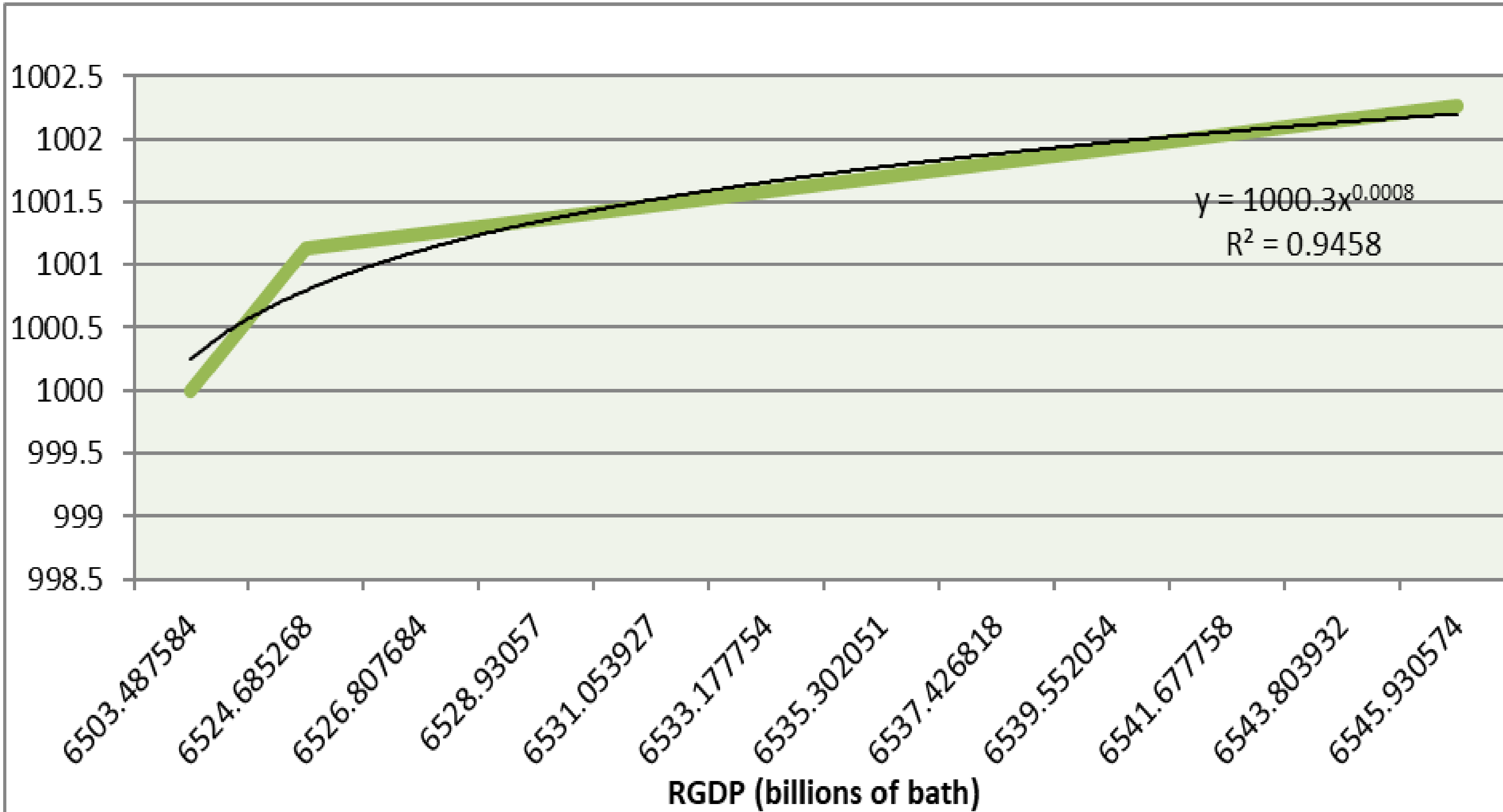
Results and Analysis: Government Spending

Thailand: The Level of RGDP as the Government Increases its Spending (billions of bath)



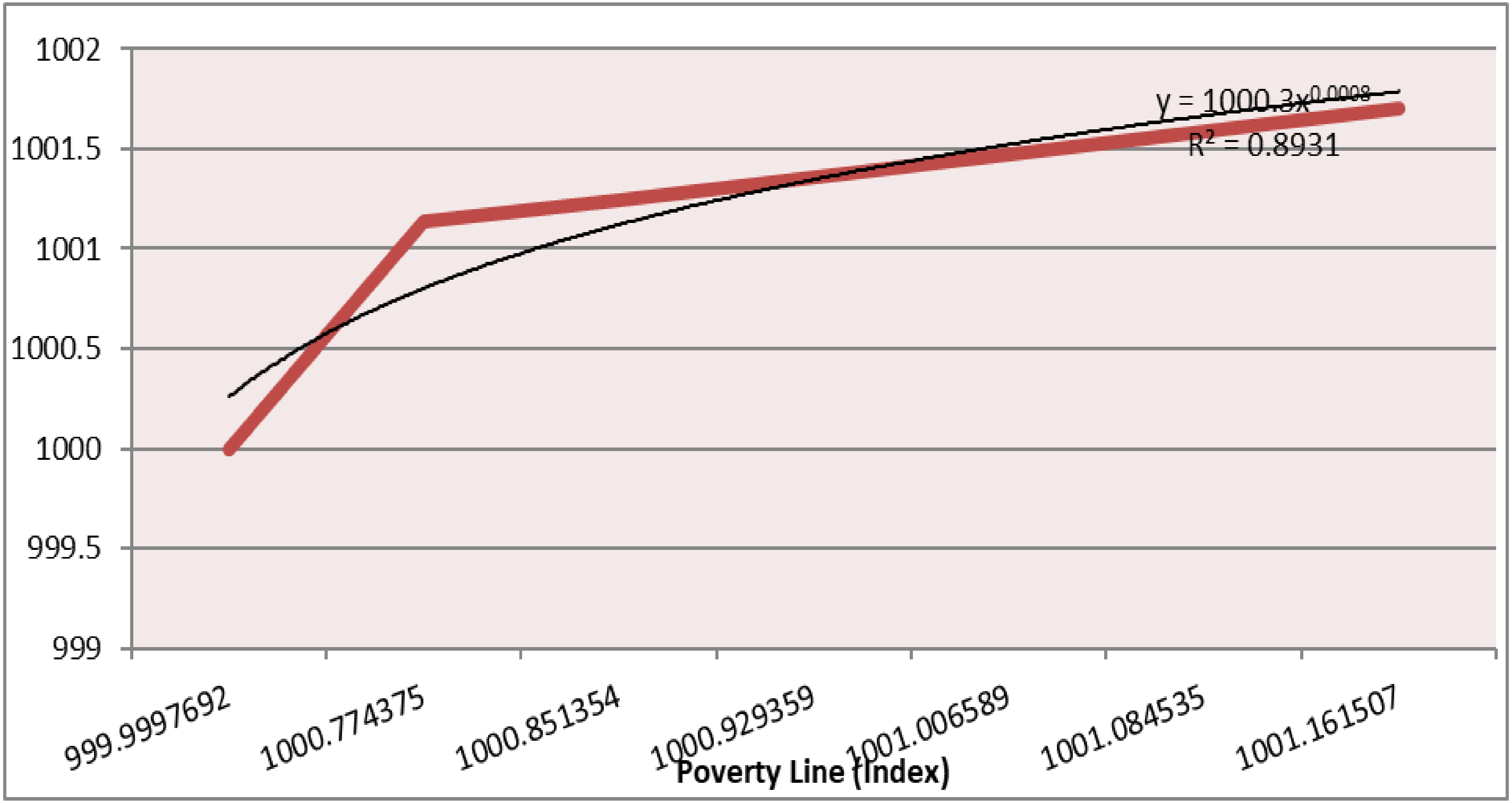
Results and Analysis: Government Spending

Thailand: Construction of Quadrant 1: Price Index Across Real GDP



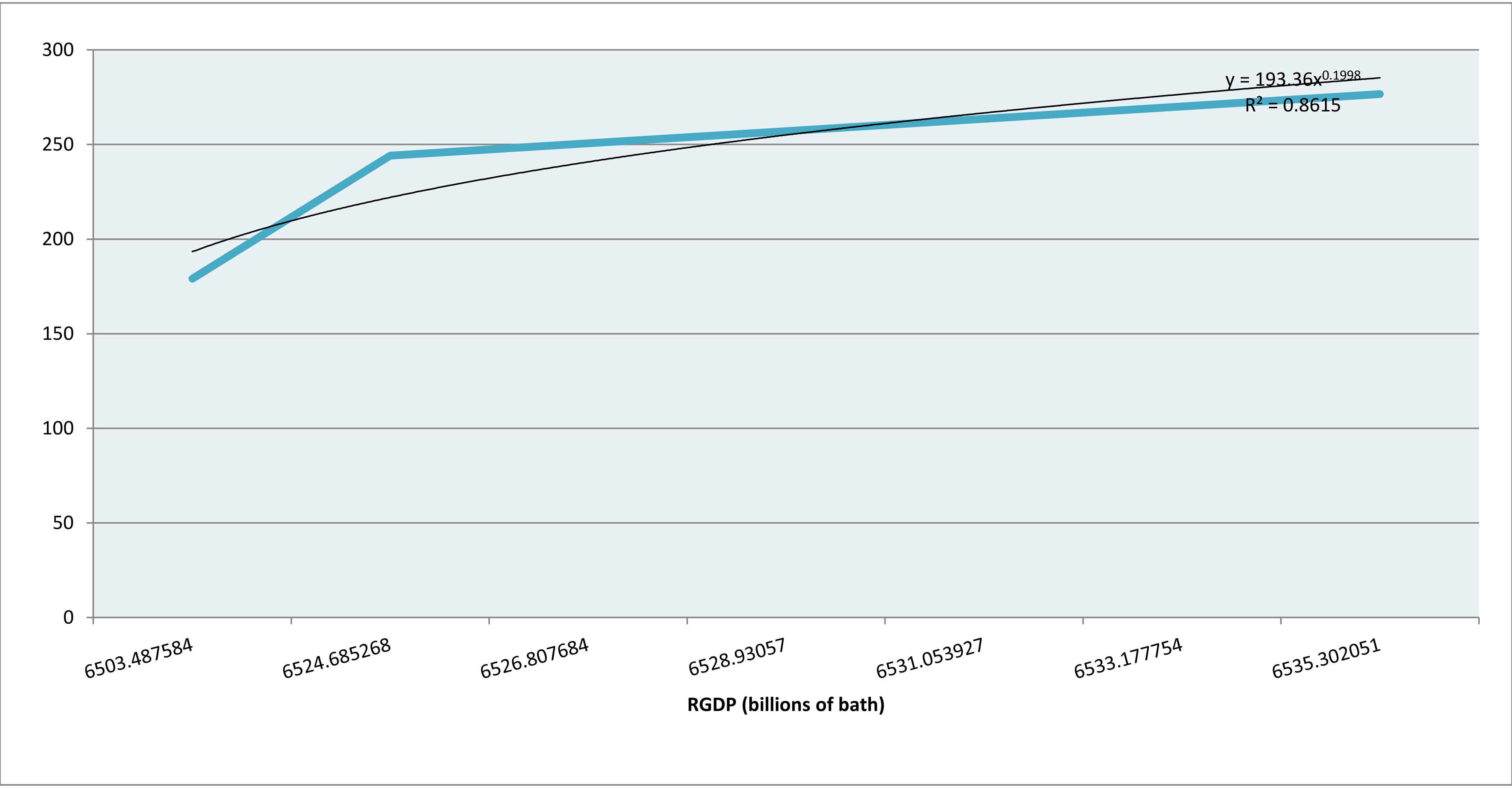
Results and Analysis: Government Spending

Thailand: Construction of Quadrant 2: Price Index across the Poverty Line

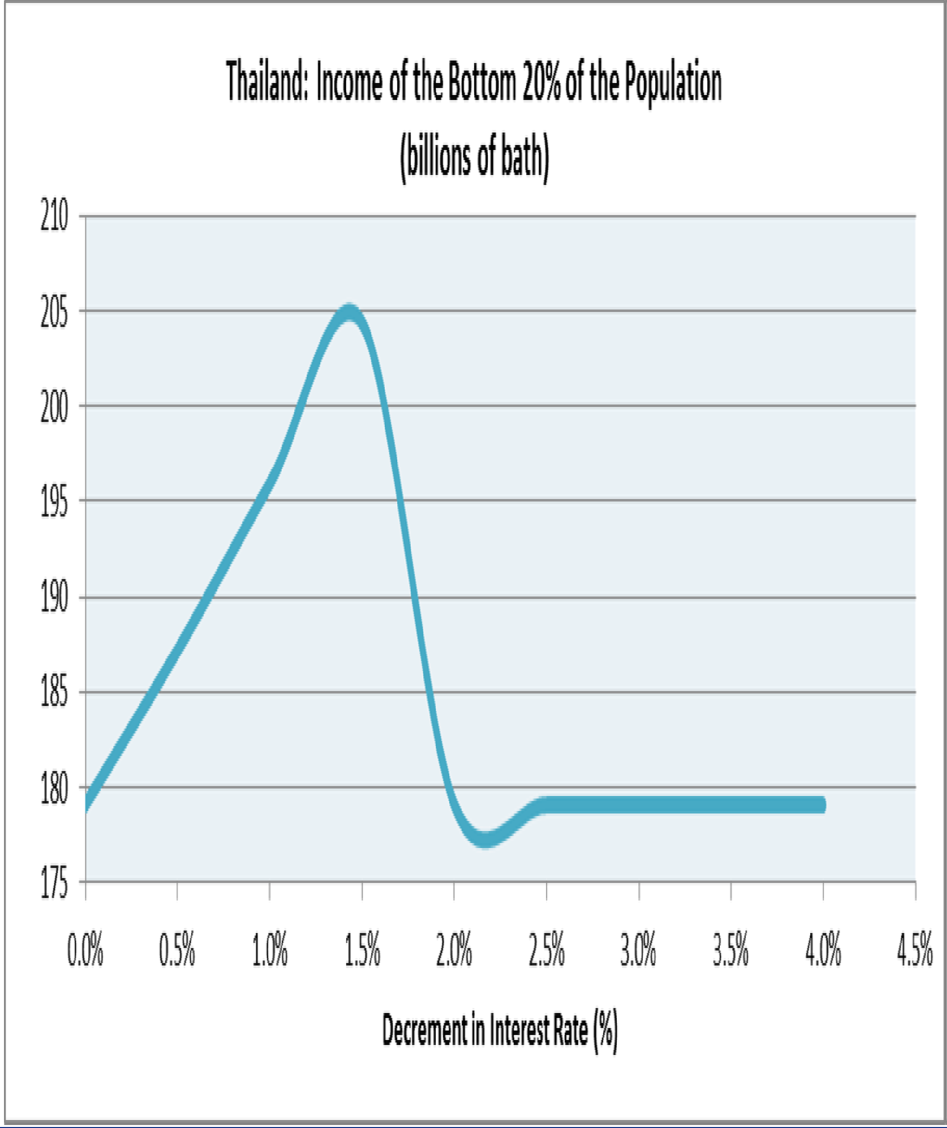


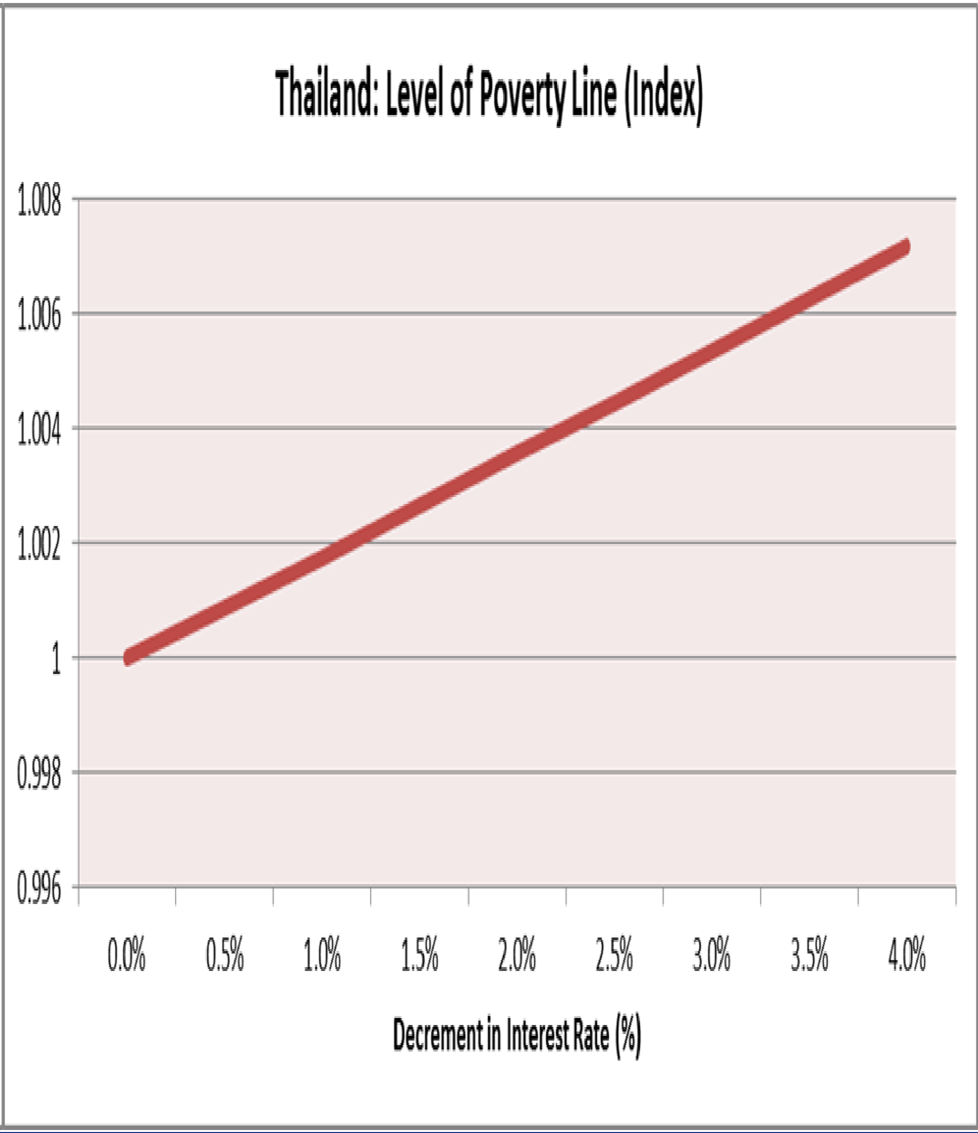
Results and Analysis: Government Spending

Thailand: Construction of Quadrant 4: Income of the Bottom 20% Across Real GDP (billions of bath)



Results and Analysis: Decrease in Interest Rate





Conclusion

- The impact of monetary and fiscal shocks are not symmetrical. Hence, which policy-making is effective in improving the poverty incidence?

- In Thailand, it seems the bottom 20% are marginalized groups – income unaffected but exposure to price changes

- Government spending, more targeted and accompanied by infrastructure projects can alleviate the poverty incidence (Fan et al., 2004)

- In the short run, fiscal policy works.

- Expansionary monetary policy improves the conditions of the poor in the short run due to the temporary cyclical boom but this effect is not permanent (Romer & Romer, 1998). In the long run, monetary policy that aims at low inflation and stable aggregate demand.

Thank You
Q&A