

OVERVIEW OF FISCAL STRUCTURE IN THAILAND

EE 460: Thai Economy

Semester 1 / 2018

Faculty of Economics, Thammasat University

Thailand's Tax System

Development of Thai Tax system

- Various types of taxes, tax bases and tax rates.
- Rely on indirect taxes.
- Direct taxes becomes more important.
- Declining trend of import duties.
- Emphasize more on domestic taxes.

Tax Structure

- **Taxes collected by National Authorities**
 - Income Taxes & Value Added Tax (VAT) & Specific business taxes collected by Revenue Department
 - Excise Tax collected by Excise Department
 - Custom duties collected by Customs Department
- **Taxes collected by Local Authorities**
 - Land and Housing Tax, Land Development Tax Signboard Tax, Slaughter Tax, Swallow Bird's nest Duty, Petrol Stations Tax, Hotel Tax and Retail Tobacco Tax

Income Tax

- **Personal Income Tax : PIT**

- **Tax Base** : net income earned during 1 yr. after deduction of expenses and allowances.
- **Tax rate** : Progressive Rate from 10 to 37 %

- **Corporate Income Tax : CIT**

- Tax base and Tax rate

Tax Base	Tax Rate
Net Profit after deductible expenses	30% *
Income before expense	3 - 10% (depend on income category)
Profit disposed out of Thailand	10%

Value Added Tax (VAT)

- VAT in Thailand was introduced on January 1, 1992
- Tax base and Tax rate
 - A consumption type with full tax credit and invoice base

Category	Rate (%)
- General goods and services	10 *
- Exported goods and services	0
- Small entrepreneurs with annual sale amount less than 1.8 mil. Baht - Some goods and services i.e. Unprocessed agricultural products, Domestic transportation and Amateur sports etc.	Exempt

Specific Business Tax (SBT)

- Basic Concepts

- Imposed on various commodities and services; Banking /similar business, finance, credit fancier, securities business, insurance, pawn brokerage, real estate business and sale of securities in the SET
- Imposed at flat rate from 2.5%-3.0% excluding 10% local tax on top
- Excluded from the VAT system

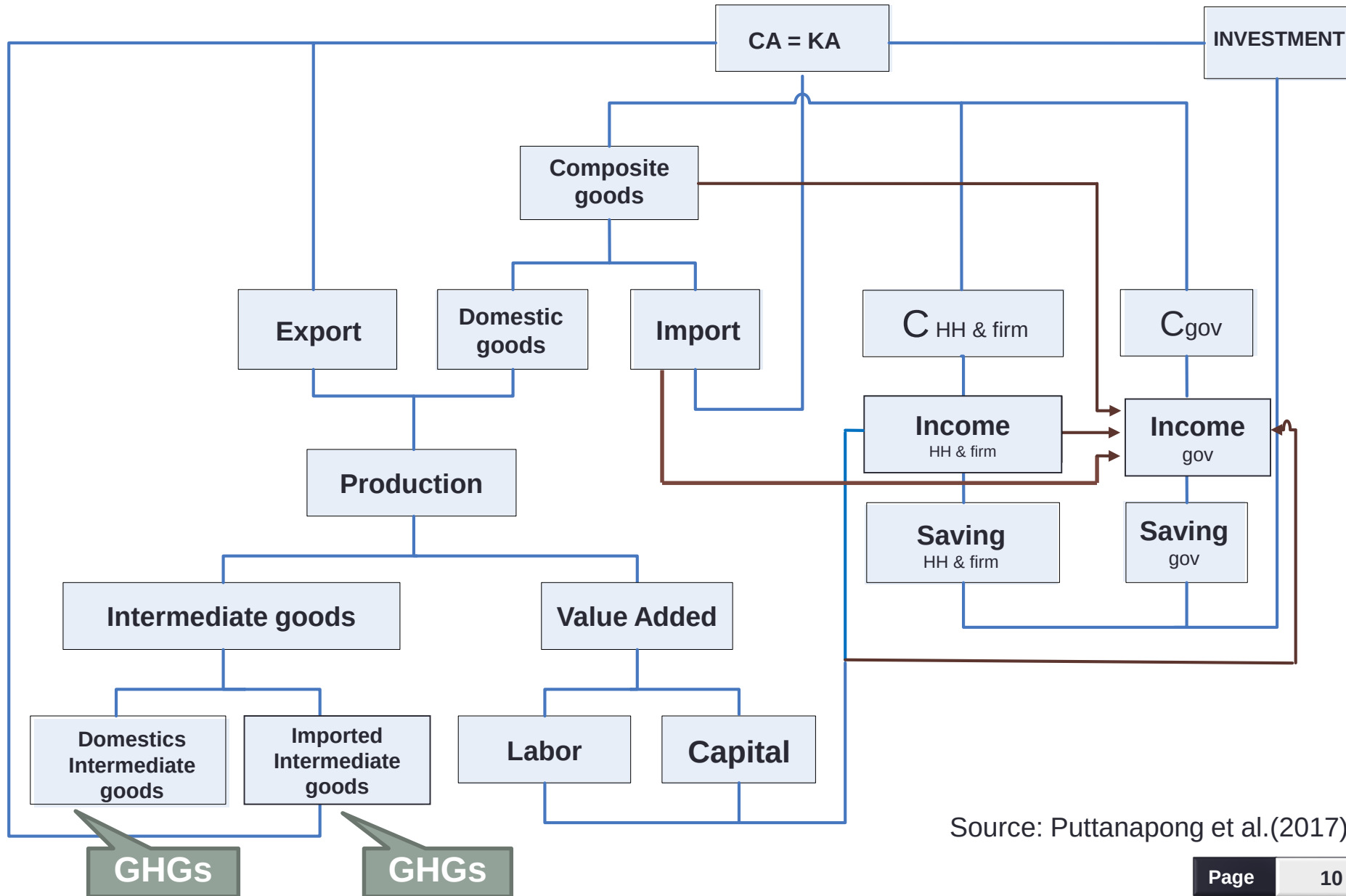
Excise Tax

- A selective / single stage sales tax
- Roles of excise: In line with conventional objectives of the excise
- 20 categories of goods and services are subject to tax
- Petroleum, Automobile, Tobacco, and Alcohol generating > 75% of excise tax revenue
- Tax base : ex-factory price (domestic products) and CIF + Import duties (Imported products)
- Tax rate: specific or ad-valorem rate

Customs Duties

- An indirect tax levied on both imported and selected exports
- Classification of imports based on the harmonized commodity description and coding system
- Duties are levied on a specific or an ad-valorem basis, whichever is higher
- Tax Base : the CIF Value
- Customs tariffs at present ranged between 0% - 80%, the highest rate being for passenger cars

Main structure of CGE model



Source: Puttanapong et al.(2017)

Model Validation



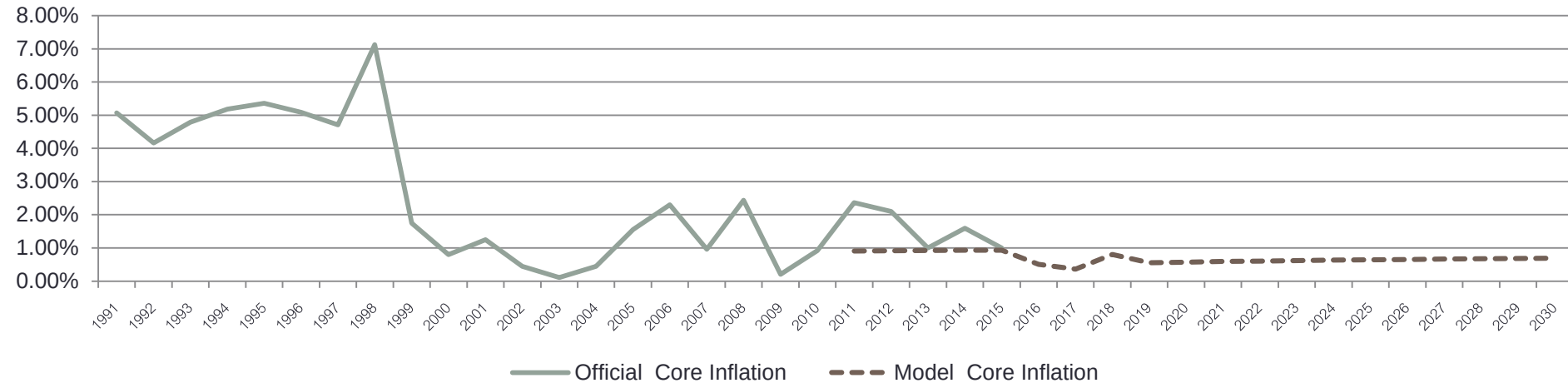
Source: Puttanapong et al.(2017)

Model Validation (Root-Mean-Square Error (RMSE))

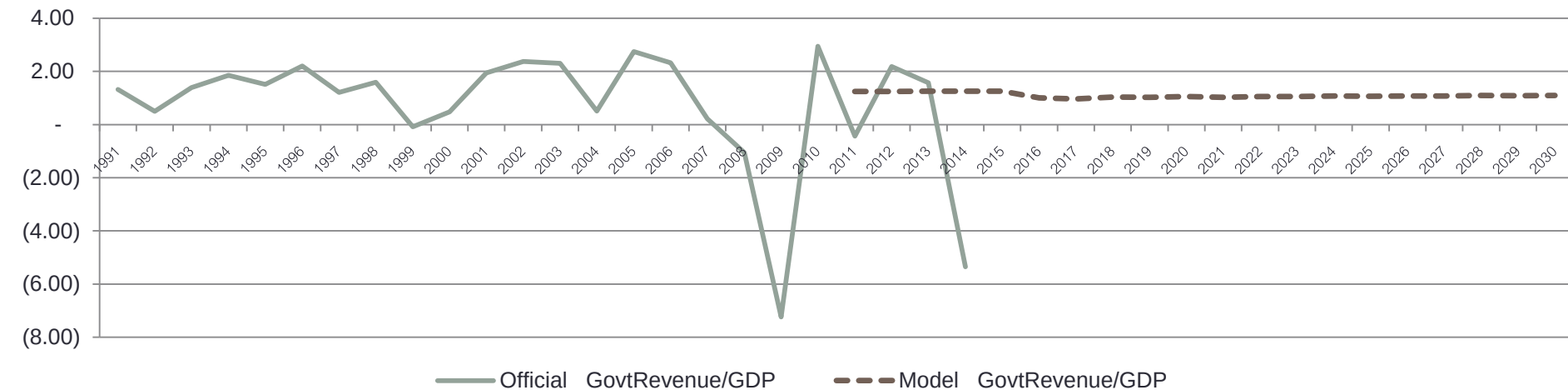
Real GDP at constant price	
Root-Mean-Square Error (RMSE) (unit: billion baht)	179.31
RMSE as % of the average of Real GDP during 2010-2015	1.54%
Total private consumption	
Root-Mean-Square Error (RMSE) (unit: billion baht)	106.61
RMSE as % of the average of private consumption during 2010-2015	1.76%
Total Gross Fixed Capital Formation (GFCF)	
Root-Mean-Square Error (RMSE) (unit: billion baht)	126.83
RMSE as % of the average of GFCF during 2010-2015	4.39%
Total Government Expenditure	
Root-Mean-Square Error (RMSE) (unit: billion baht)	31.45
RMSE as % of the average of government expenditure during 2010-2015	1.66%
Total Export	
Root-Mean-Square Error (RMSE) (unit: billion baht)	391.83
RMSE as % of the average of export during 2010-2015	4.82 %
Total Import	
Root-Mean-Square Error (RMSE) (unit: billion baht)	560.42
RMSE as % of the average of import during 2010-2015	7.52%

Model Validation

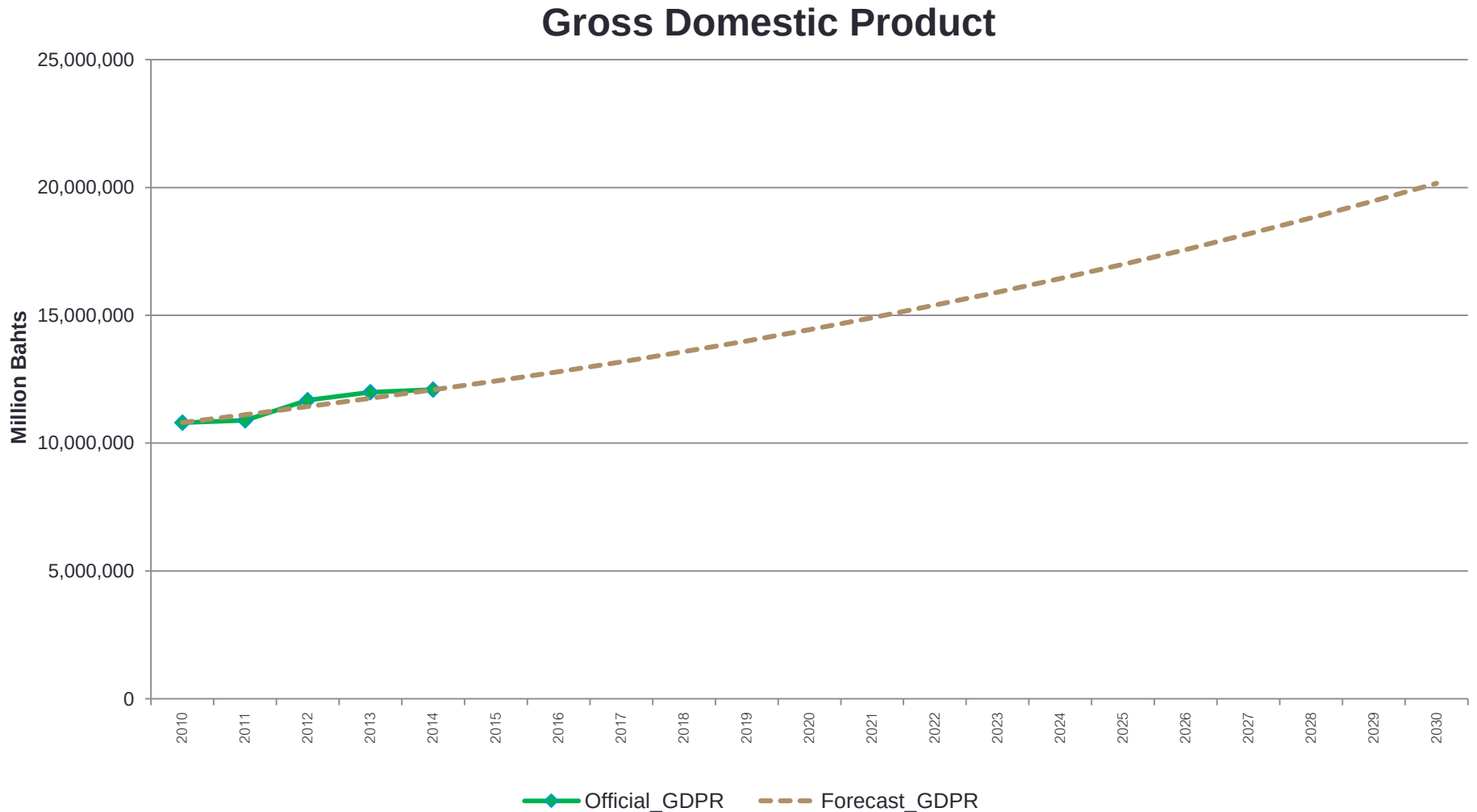
Inflation: Actual Data vs. Model's Forecast



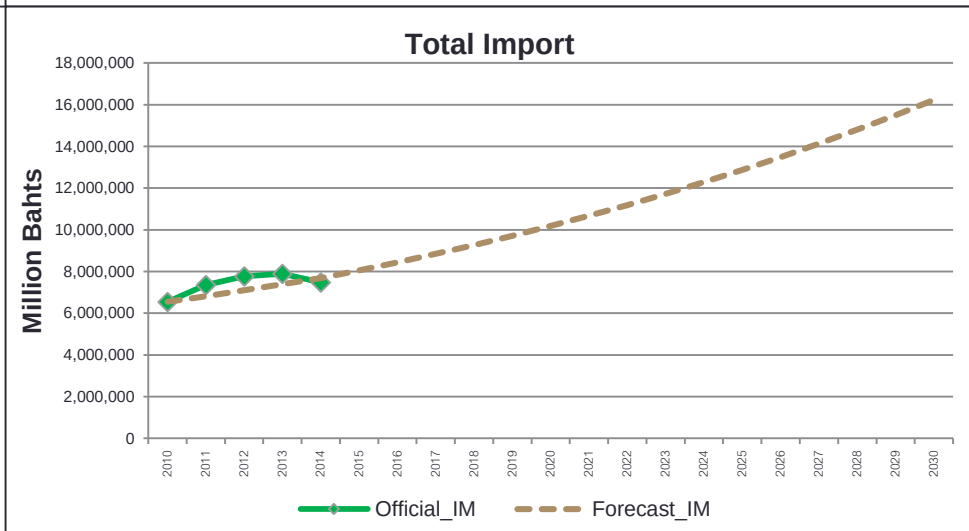
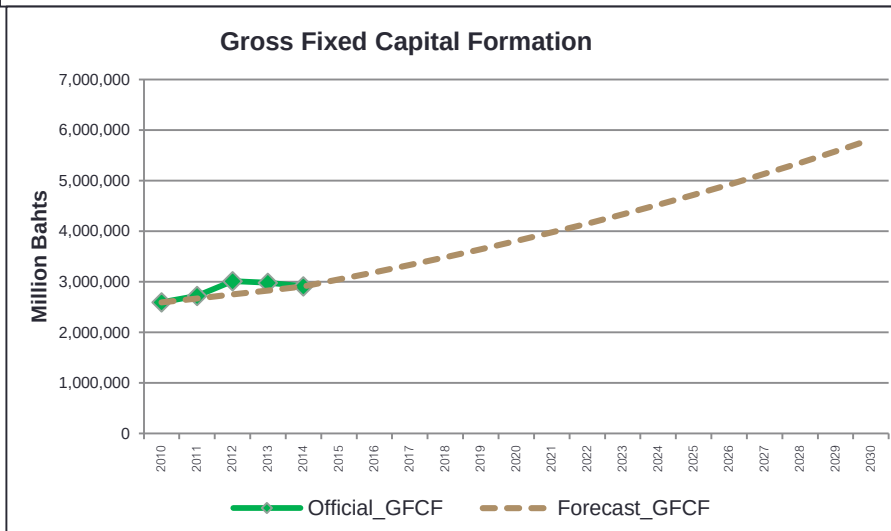
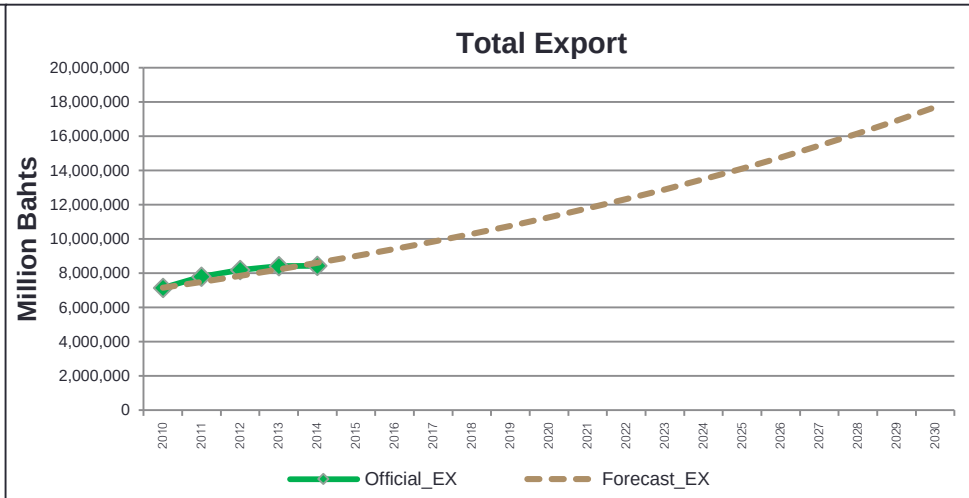
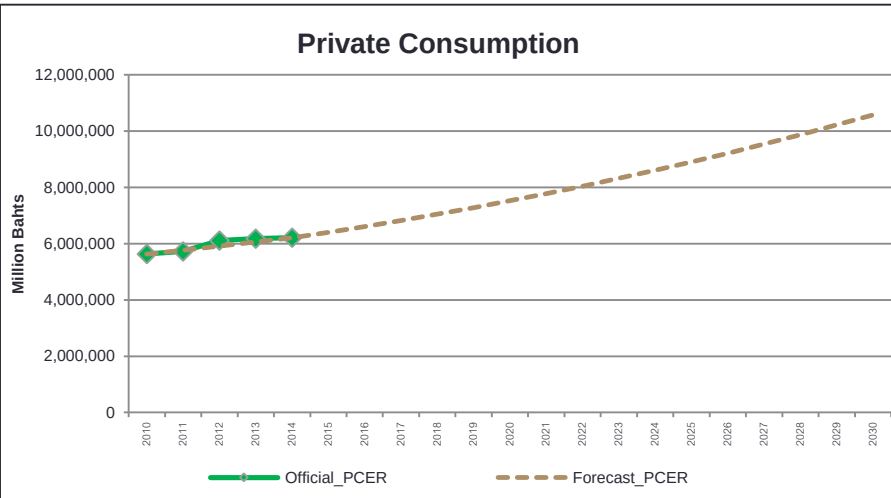
Fiscal Buoyancy (Govt Revenue/GDP): Actual Data vs. Model's Forecast



Forecasting result

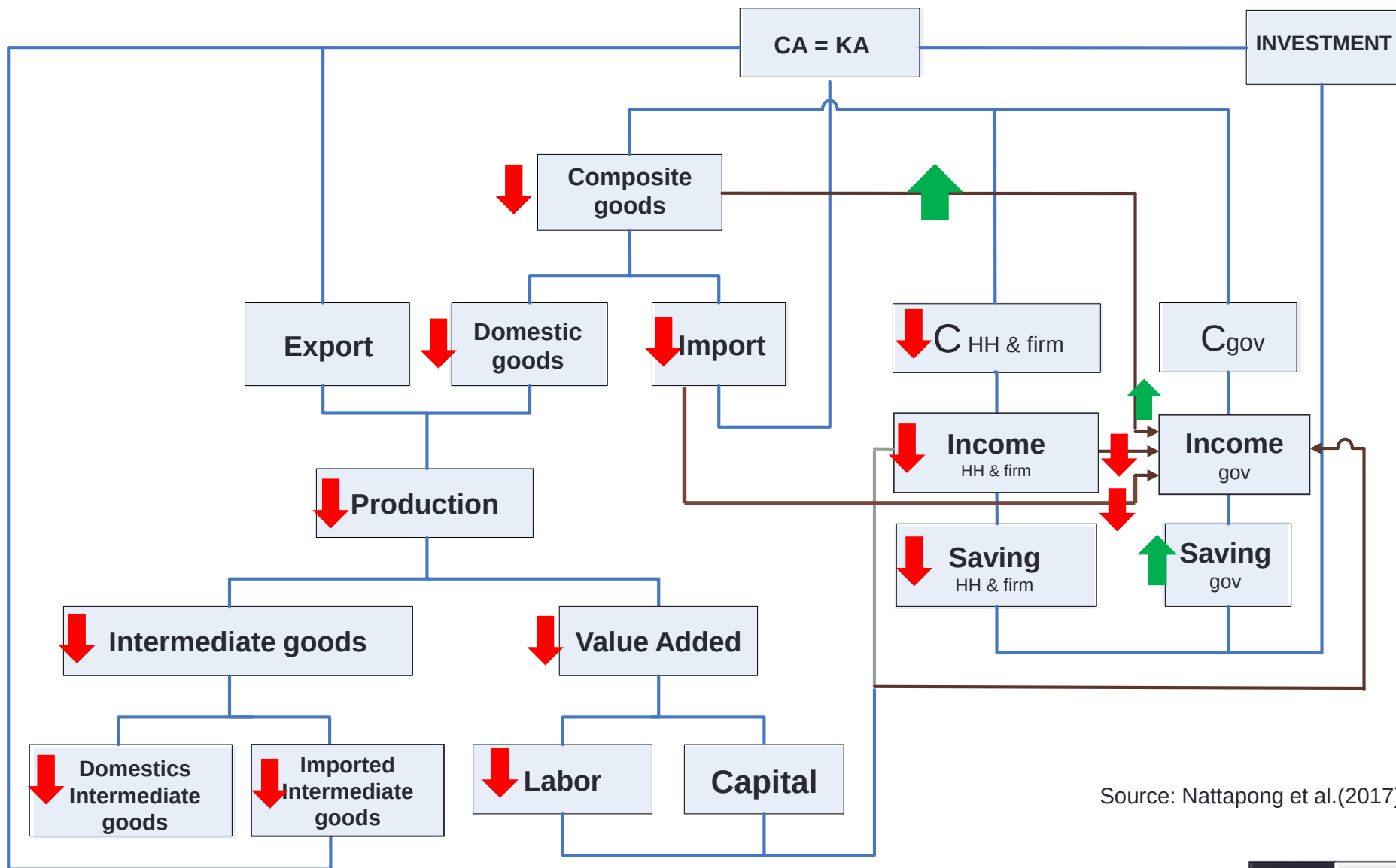


Forecasting result



Simulation Exercise: Economic Impact of Carbon Tax

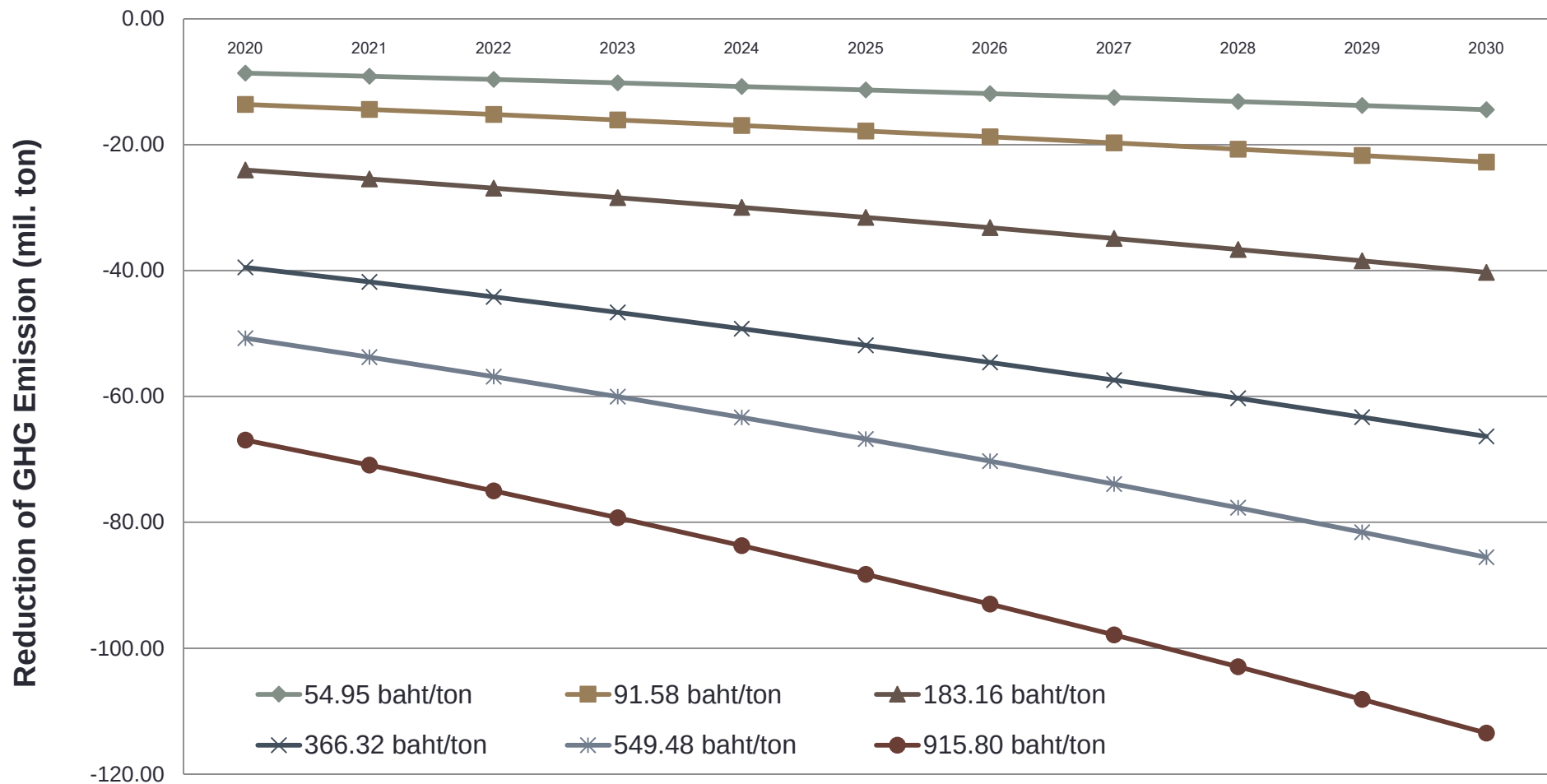
Economy-wide impact of carbon tax



Source: Nattapong et al.(2017)

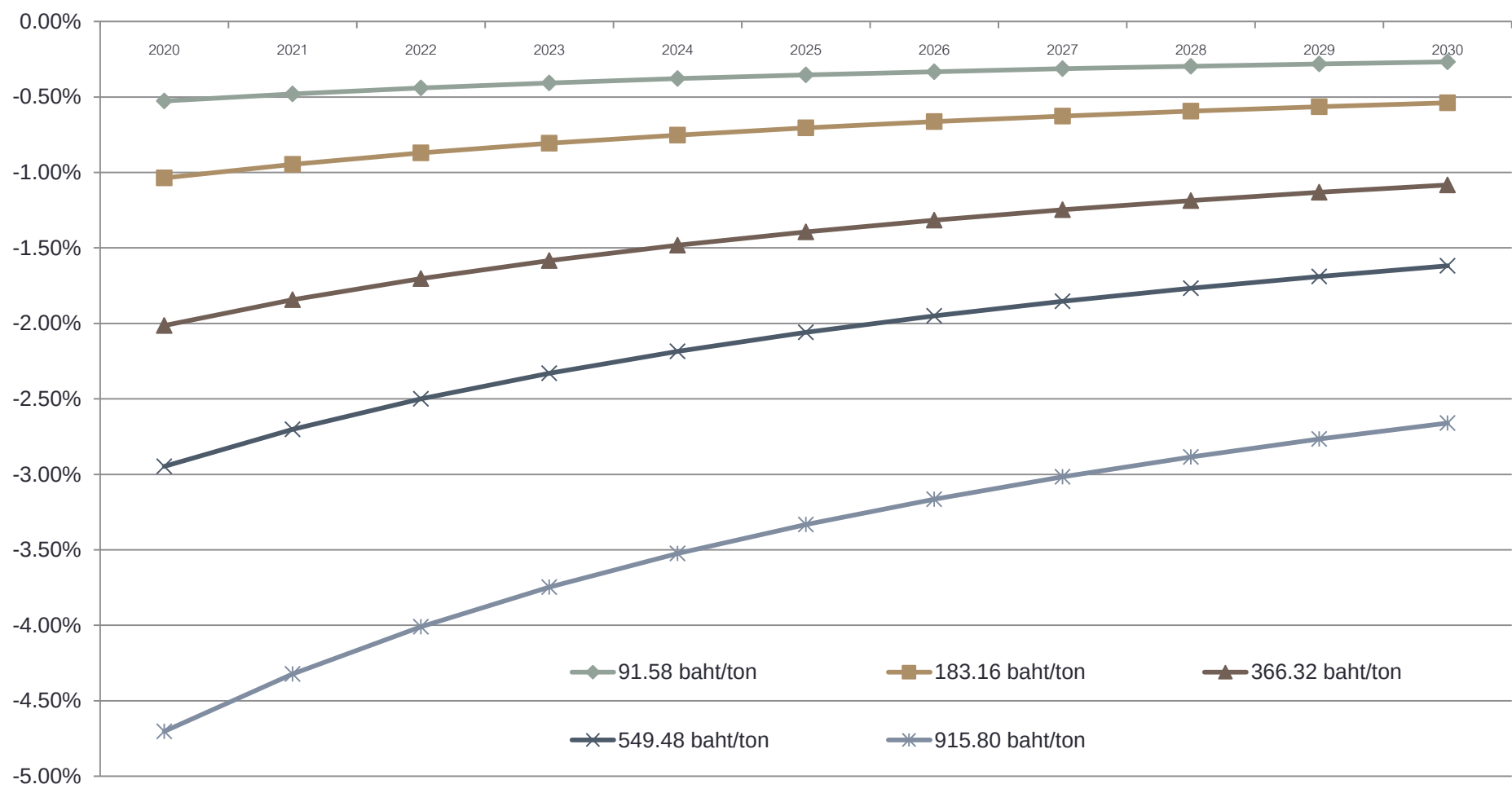
Economy-wide impact of carbon tax

Reduction of GHG emission caused by different rates of carbon tax



Economy-wide impact of carbon tax

Impacts on Welfares of Aggregate Household (% change from the basecase value)



Source: Puttanapong et al.(2017)

Government Revenue

<http://dataservices.mof.go.th/Dataservices/GovernmentRevenue>

Revenue Department	1,796,684.410
Personal income taxes	312,959.496
Corporation taxes	622,303.429
Petroleum income taxes	39,382.014
Value added taxes	751,627.071
Specific business taxes	55,719.617
Stamp duties	14,153.054
Others	539.730
Excise Department	561,483.000
Oil taxes	220,072.000
Tobacco taxes	66,666.000
Liquor taxes	61,021.000
Beer taxes	83,945.000
Car taxes	103,961.000
Beverage taxes	17,581.000
Electronic appliance taxes	5.000
Motorcycle taxes	3,559.000
Battery taxes	2,467.000
Others taxes	1,378.000
Miscellaneous	828.000
Customs Department	107,404.000
Import duties	103,425.000
Export duties	92.000
Miscellaneous	3,887.000
Other	337,384.000
Other government agents	163,702.000
Treasury Department	10,762.000
State Enterprise Reforms	n/a
State Enterprises	162,920.000
Total (Gross)	3,067,873.706

Expenditure

<http://dataservices.mof.go.th/Dataservices/GovernmentExpenditureEconomyMinistry>

Item Name	Budget appropriation 2018	Expenditure 2018
Current Budget	2,373,530.417	2,411,775.230
Central Fund	337,700.811	380,862.966
Fund and Revolving Fund	169,551.418	210,329.027
Independent Public Agencies	117,294.079	119,342.355
Ministry of Agriculture and Cooperatives	50,693.088	47,873.011
Ministry of Commerce	6,822.849	5,898.799
Ministry of Culture	4,856.994	4,825.639
Ministry of Defence	162,963.656	145,734.749
Ministry of Education	458,588.403	451,088.922
Ministry of Energy	1,677.091	1,606.798
Ministry of Finance	232,797.062	232,770.702
Ministry of Foreign Affairs	8,162.572	7,598.721
Ministry of Industry	4,797.151	4,573.360
Ministry of Information and Communication Technology	4,829.521	4,180.729
Ministry of Interior	325,110.888	318,773.946
Ministry of Justice	20,227.893	20,977.230
Ministry of Labour	51,124.935	49,415.523
Ministry of Natural Resources and Environment	18,664.417	18,302.399
Ministry of Public Health	112,678.102	114,998.609
Ministry of Science and Technology	9,584.803	10,422.575
Ministry of Social Development and Human Security	11,934.374	11,427.156
Ministry of Tourism and Sports	4,753.919	4,045.642
Ministry of Transport and Communications	12,251.349	12,460.664
Office of the Prime Minister	27,896.914	24,684.116
Other	68,465.271	68,465.271
State Enterprises	126,604.959	118,269.632
Thai Red Cross Society	5,194.578	5,241.565
Province	10,023.240	7,608.688

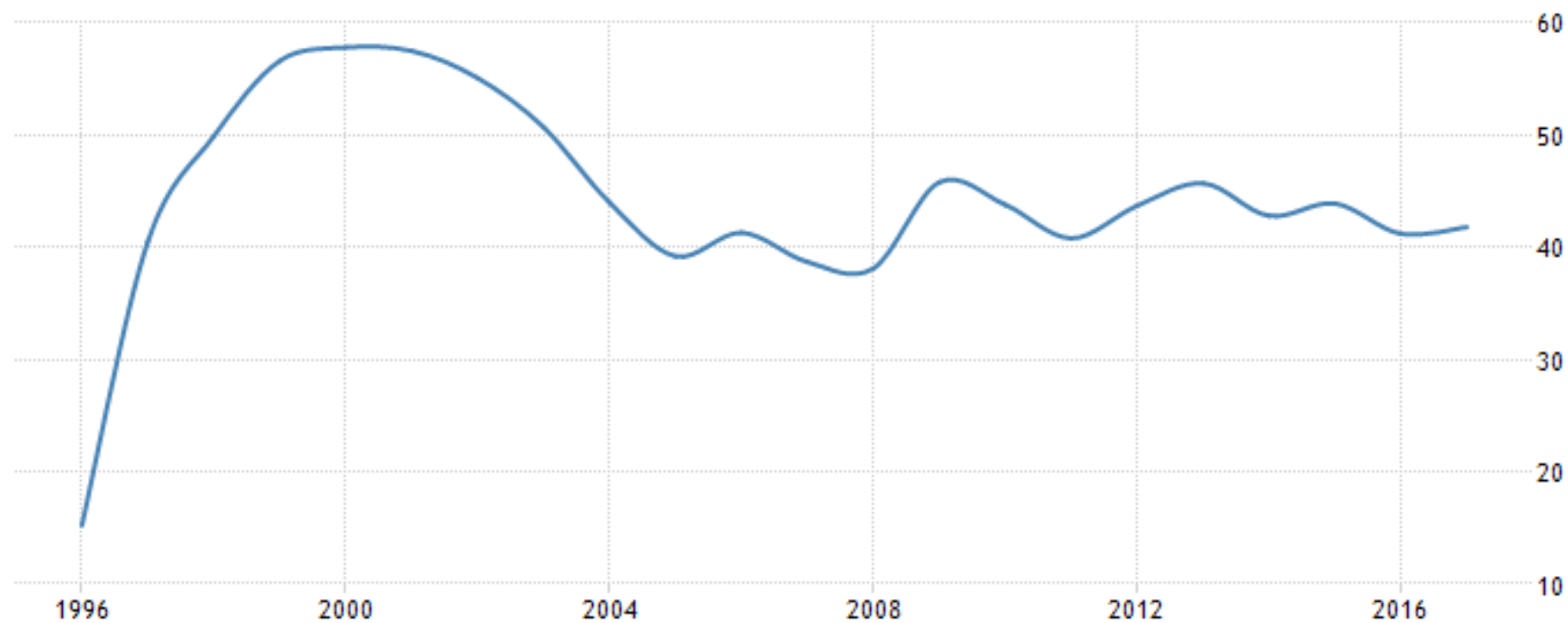
Item Name	Budget appropriation 2018	Expenditure 2018
Capital Budget	676,469.584	380,330.178
Central Fund	82,482.437	738.074
Fund and Revolving Fund	45,684.298	7,631.055
Independent Public Agencies	24,374.262	17,037.835
Ministry of Agriculture and Cooperatives	71,879.756	49,342.130
Ministry of Commerce	509.304	337.959
Ministry of Culture	3,313.456	2,146.165
Ministry of Defense	57,559.995	34,713.435
Ministry of Education	49,359.326	38,425.307
Ministry of Energy	544.044	449.035
Ministry of Finance	5,449.833	3,907.358
Ministry of Foreign Affairs	598.957	452.323
Ministry of Industry	949.630	311.074
Ministry of Information and Communication Technology	1,741.637	1,385.026
Ministry of Interior	61,068.461	32,220.402
Ministry of Justice	4,252.925	2,006.668
Ministry of Labour	554.799	458.585
Ministry of Natural Resources and Environment	15,052.238	8,322.447
Ministry of Public Health	22,215.904	15,063.320
Ministry of Science and Technology	4,690.580	3,648.429
Ministry of Social Development and Human Security	1,783.164	1,349.741
Ministry of Tourism and Sports	1,975.283	1,030.869
Ministry of Transport and Communications	156,516.648	120,602.239
Office of the Prime Minister	5,977.822	3,718.674
Other	2,888.609	2,888.609
State Enterprises	28,045.802	18,039.356
Thai Red Cross Society	3,138.691	1,951.567
province	21,742.131	12,055.060
Total	3,050,000.000	2,792,105.408

Public Debt

<http://dataservices.mof.go.th/Dataservices/PublicDebtOutstanding>

Public Debt Outstanding	2017
Direct Government	57,952,733.92
External Debt	1,161,807.73
Direct Government (Million of USD)	34,938.97
Domestic Debt	56,790,926.19
Deficit Financing and Debt Management	39,784,563.59
Government Bond	35,869,368.66
Promissory Note (PN)	2,947,659.93
Treasury Bill (T-bill)	624,535.00
Short-Term Loan / R-Bill	193,000.00
Bond to Compensate FIDF's Loss	
FIDF1	4,766,433.70
FIDF3	6,687,674.73
The Loan for stimulus Package No. 2, Thaikhemkang	4,543,588.54
Finanacing for Diaster Insurance Promotion Fund	359,853.00
Finanacing for Constructing the systems for Managing Water	0.00
Onlent	864,044.24
Development Policy Loan (DPL)	239,046.93
Non-Financial State Enterprise Debt	10,675,778.53
Guaranteed Debt	5,563,565.30
External Debt	1,359,886.66
Guaranteed Debt (Million of USD)	112,879.03
Domestic Debt	3,654,237.97
Non-Guaranteed Debt	6,356,490.43
External Debt	1,939,270.20
Non-Guaranteed Debt (Million of USD)	163,420.84
Domestic Debt	4,643,180.52
Special Financial Institutions Guaranteed Debt	5,204,757.76
External Debt	438,012.90
Guaranteed Debt (Million of USD)	598.25
Domestic Debt	4,769,832.13
FIDF Debt (Liabilities)	431,908.38
Government Guaranteed (FIDF 2)	0.00
Non-Government Guaranteed	0.00
Autonomous Agency Debt (VF & EFPO)	139,040.07
Government Guaranteed	14,643.50
Non-Government Guaranteed	124,396.57
Total (1+2+3+4+5)	74,404,218.66
Exchange Rate: Baht/USD	407.65
Estimated GDP (Million Baht)	178,520,688.89

THAILAND GOVERNMENT DEBT TO GDP



SOURCE: TRADINGECONOMICS.COM | MINISTRY OF FINANCE, THAILAND

Public debt Level to be capped at 50% of GDP

- Public Debt Policy Office (PDMO) will keep Thailand's public debt at **no more than 50 per cent of the nation's gross domestic product (GDP)** in the **next 10 years**, despite the government's planned investment in mega infrastructure projects worth over Bt2 trillion in the next four to five years.
- Jindarat Viriyataveekul, director of the Policy and Planning Bureau and deputy spokesperson at PDMO, said "the outstanding public debt is **estimated to peak at 46-47 per cent of the nation's GDP in 2025**, still below the sustainable fiscal framework of no more than 60 per cent of the GDP."
- She cited Thailand's estimated economic expansion, taking into account future potential, annual disbursement of borrowings for the mega infrastructure projects and mega investment through **public-private partnership** scheme to lessen the government's debt burden for the limit of the public debt.
- Besides, upward trend for global interest rates is expected not to affect PDMO's debt burden as **fixed interest rates are levied on 90 per cent of its debts**, she said. Next year, PDMO will consider bonds' average maturities following the upward interest rate trend.

Top Import Duty

<http://dataservices.mof.go.th/Dataservices/IETopImportDuty>

Rank	Har2	Group	May 2018	Apr 2018	Mar 2018	Feb 2018	Jan 2018
1	87	VEHICLE	1,501,690,350	1,208,926,937	1,305,241,293	1,187,250,572	1,276,628,630
2	85	ELECTRICAL MACHINERY AND EQUIPMENT	858,003,304	744,794,678	834,786,055	818,803,611	877,344,683
3	84	NUCLEAR REACTORS , MACHINERY	650,828,956	608,681,740	627,571,462	596,328,197	635,824,414
4	30	PHARMACEUTICAL PRODUCT	441,010,949	406,627,861	448,923,339	398,446,848	438,724,530
5	39	PLASTICS AND ARTICLES THEREOF	427,890,497	384,291,821	418,069,402	357,095,728	372,713,488
6	73	ARTICLES OF IRON OR STEEL	357,696,436	318,989,054	317,958,131	339,481,004	349,547,149
7	33	ESSENTIAL OIL PERFUMERY	288,535,256	275,527,339	308,278,068	237,507,791	296,114,803
8	23	WASTE FROM FOOD INDUSTRY	246,077,035	240,624,201	364,267,527	373,272,258	359,992,904
9	62	NOT KNITTED OR CROCHETED APPAREL & CLOTHING ACCESSORY	168,596,847	164,712,545	187,923,980	172,932,239	187,840,328
10	72	IRON AND STEEL	134,672,045	150,386,378	121,401,381	115,104,645	136,789,590
11	42	ARTICLE OF LEATHER	131,891,411	115,767,719	130,378,809	120,031,113	126,231,231
12	04	DAIRY PRODUCE BIRD EGG HONEY	128,727,293	112,099,427	134,667,511	88,250,999	100,551,521
13	90	OPTICAL PHOTO CINE APPARATUS	126,832,210	122,193,664	134,294,530	111,352,785	117,856,820
14	94	FURNITURE , LAMPS , PREFABRICATED BUILDINGS	120,435,465	116,735,447	109,313,093	114,892,535	115,228,605
15	40	RUBBER AND ARTICLES THEREOF	118,507,159	111,299,700	113,909,963	106,090,218	113,635,737
Total of 15 groups			5,701,395,213	5,103,576,053	5,573,578,591	5,213,946,532	5,602,975,959
Total of 99 groups			7,871,197,128	7,101,542,449	7,534,950,027	7,116,580,473	7,815,101,558

SOEs: The Top 10 Highest Profit

<http://dataservices.mof.go.th/Dataservices/StateEnterpriseTopProfit>

SOEs: The Top 10 Highest Profit

Rank	Name	Profit
1	Electricity Generating Authority of Thailand	31,178.88
2	PTT Public Company Limited	30,719.30
3	Krung Thai Bank Public Company Limited	28,493.77
4	Government Savings Bank	22,698.82
5	Provincial Electricity Authority	21,134.43
6	Airports of Thailand Public Company Limited	18,750.06
7	Metropolitan Electricity Authority	11,339.69
8	Bank for Agriculture and Agricultural Cooperatives	9,052.86
9	Government Housing Bank	8,699.78
10	Expressway & Rapid Transit Authority of Thailand	8,380.68
Total		190,448.29

The Top 10 Highest Loss

<http://dataservices.mof.go.th/Dataservices/StateEnterpriseTopLoss>

SOEs: The Top 10 Highest Loss

Rank	Name	Loss
1	Thai Airways International Public Co., Ltd.	-13,046.93
2	Public Warehouse Organization	-9,795.23
3	TOT Public Company Limited	-5,885.00
4	Bangkok Mass Transit Authority	-4,790.40
5	Islamic Bank Of Thailand	-4,594.94
6	Mass Rapid Transit Authority of Thailand	-1,170.80
7	Marketing Organization For Farmers	-119.22
8	Bangkok Dock Company Limited	-40.74
9	National Science Museum	-20.66
Total		-39,463.92