

FISCAL IMPACT ASSESSMENT

1. This supplementary appendix presents estimates of the overall fiscal impact on real gross domestic product (GDP) of Thailand's coronavirus disease (COVID-19) response packages, using published data on spending and tax multipliers for Thailand. Fiscal multipliers show the overall impact of government spending and tax cuts on stimulating output after 1 or 2 years. For example, a spending multiplier of 1.5 tells us that a \$1 increase in government spending will result in a cumulative increase in output by \$1.50.
2. For the purpose of our analysis, we employ Romer and Bernstein's approach to fiscal impact assessment whereby fiscal multiplier estimates for 1 and 2 years are used to calculate the overall fiscal impact on Gross Domestic Product (GDP).¹ The Bank of Thailand (2008) estimated fiscal multipliers from public investment spending and found that the spending multiplier was 1.36 after 1 year and 1.02 after 2 years.² Tang, et al. (2010) estimated the tax multiplier at 0.68 for the first two years.³
3. Using data currently available, the Thai COVID-19 fiscal package, in terms of fiscal spending and tax revenue foregone, accounts for 7.09% of GDP (Table 1). Government spending accounts for most for the fiscal package (91.0%), while tax cuts account for 9.0%. Note that the total cost associated with the cash handout program are still subject to change as the government responds to the evolving COVID-19 situation.
4. Column 1 of Table 1 shows the total cost of spending and tax measures. Columns 2 and 3 show the estimated fiscal impacts after 1 and 2 years, respectively. All fiscal impacts are computed using Thailand's fiscal multipliers for public investment and taxes.
5. Table 1 shows that incorporating the spending and tax multipliers, the Thai fiscal package of \$38 billion (7.09% of GDP) could lead to a cumulative increase in the economic output of \$51.7 billion after 1 year, and \$38.8 billion after 2 years, equivalent to 10.1% and 7.6% of GDP respectively.
6. The analysis has limitations. The multipliers are based on Thailand's historical data and therefore, may not reflect a fiscal impact for Thailand during the economic slowdown due to COVID-19. While there is strong evidence to show fiscal multipliers are above 1 for developing economies during a contraction, in the absence of recent estimates for Thailand, it is not clear whether these are close to 1 or 2. The analysis does not incorporate other effects that may lower the fiscal impact such potential for higher prices and higher imports of goods and services arising from increased government spending.

¹ Romer, C and Beinstern. 2009. *The Job Impact of the American Recovery and Reinvestment Plan*, reported in L. Mustea (2015).

² Bank of Thailand. 2008. *Fiscal Impulse and Fiscal Multiplier of Thailand*. Bank of Thailand. Bangkok.

³ Tang, Hsiao Chink, Philip Liu, and Eddie C. Cheung. 2010. "Changing Impact of Fiscal Policy on Selected ASEAN Countries". ADB Working Paper Series on Regional Economic Integration No. 70. Asian Development Bank. Manila.

Table 1: Thailand Stimulus Package - Potential Multiplier Effects (\$ millions)
 \$1.00 = B31.50 (as of 7 June 2020)

Items	(1) Amount	(2) Fiscal impact after 1 year	(3) Fiscal impact after 2 years
A: Social assistance programs	19,841.3	26,984.1	20,238.1
Cash handout program	7,619.0	10,361.9	7,771.4
Social assistance for farmers	4,761.9	6,476.2	4,857.1
Other social assistance programs (to be announced by the government)	7,460.3	10,146.0	7,609.5
B: Economic and social recovery programs	12,984.2	17,658.5	13,243.9
Infrastructure development projects at the local level support social enterprises and boost provincial economies	12,698.4	17,269.8	12,952.4
Social protection and subsidies to mitigate economic and social impacts on the provincial economies	285.8	388.7	291.5
C: Health-related expenditures for COVID-19 prevention and control	1,787.4	2,430.9	1,823.2
Public health relief (compensation to medical workers, procurement of medicine and medical equipment, disease control, and research and emergency measures) under Emergency Decree	1,428.6	1,942.9	1,457.1
Public health spending for the COVID-19 pandemic control	224.9	305.9	229.4
Procurement of surgical masks, PPE, and testing kits for medical personnel and the public	133.9	182.2	136.6
D: Tax relief programs	3,403.3	4,628.5	3,471.4
Income tax exemption for medical workers	4.0	5.4	4.0
Income tax deduction for super saving fund investment from B200,000 to B400,000	444.4	604.4	453.3
Corporate income tax deduction for 3 times (from 1 time) of wage expenses from April - July 2020 (not over B15,000 per month)	74.0	100.6	75.5
Import duties exemption for surgery mask, pollution mask, and raw materials for 6 months	0.4	0.6	0.4
VAT exemption on COVID-19 prevention and treatment products for one year	15.9	21.6	16.2
Reduce withholding tax rate from 3% to 1.5% in April–September 2020 (package 1)	2,730.2	3,713.0	2,784.8
1.5 times (from 1 time) tax deduction from interest expenses (package 1)	15.9	21.6	16.2
Increased tax deduction limit for health insurance from B15,000 to B25,000 (package 2)	79.4	107.9	81.0
Tax exemption and fee reduction for debt restructuring (package 2)	39.2	53.3	40.0
TOTAL	38,016.2	51,702.0	38,776.5
% of GDP	7.43%	10.11%	7.58%

Note: 2019 nominal GDP = \$511.52 billion

Source: Fiscal Policy Office, Revenue Department and Comptroller General's Department, Ministry of Finance.