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COVID-19: Severe blow to Thai tourism and supply chains

Recent news reports suggest COVID-19 may be transitioning from a regional public health crisis to a global pandemic. Although China seems to be effectively containing the pneumonia-like epidemic much sooner than expected, the number of infections and deaths outside China have soared in the past few days. Many countries are intensifying efforts to curb the spread of the virus but the measures could prevent domestic and international travel, and deal a severe blow to the tourism industry. As such, we now expect foreign tourist arrivals in Thailand to drop by 6.7% in 2020 (instead of -5%). Beyond this, it will also affect the airline, hotel and restaurant industries, as well as supporting industries and those along the supply chain such as petroleum refinery, power generation, business services, banking services, and resin and plastic manufacturers. The hardest hit would be petroleum refinery, business services, and power generation. The net impact of fewer foreign visitors could reduce Thailand's 2020 GDP by 0.36% (instead of -0.31%), split between -0.22% from the backward supply chain linkage and -0.14% from negative income effect. Including the impact of trade disruptions driven by slower GDP growth in China, we now estimate the outbreak could reduce Thailand's GDP by 0.53 ppt (instead of 0.44 ppt).

Earlier this month, we estimated the COVID-19 outbreak would hurt the Thai economy through three channels – tourism, supply disruption, and multiplier effect [see *Coronavirus Outbreak: Impact on Thai Economy*]. **This report provides (i) an update on our projections for the path of the outbreak and 2020 foreign tourist arrivals; and (ii) a deeper look at how the epidemic would impact the Thai tourism industry as well as supporting industries and those along the supply chain.**

◢ *Tracking the spread of the virus*

Before an in-depth analysis of the supply-chain linkage within the Thai tourism industry, we look at what we have learned from data released so far and how it has altered our baseline views. In this regard, we look at two pieces of evidence: (i) daily number of new confirmed infections; and (ii) frequency data for foreign tourist numbers. Our key findings are as follows:

■ Bumpy road ahead in containing the outbreak

There are mixed views on the direction of the coronavirus outbreak worldwide. On one hand, aggressive measures to isolate confirmed and suspected patients from the rest of the population has increased China's chances of containing the pneumonia-like epidemic much sooner than expected. The number of new confirmed infections in the country had peaked in mid-February and has dropped sharply since, and is now finding a steady state (Figure 1).

On the other hand, the transmission rate has been rising sharply in the rest of the world (ROW). On 26 February, the number of new confirmed infections outside China exceeded those in China for the first time. It worsened on 27 February, when new cases outside China exceeded that in the "patient zero" country (746 vs 439 cases).

Equally important, the mortality rates (Figure 2) have risen to new highs in both China (3.5%) and ROW (1.6%). This has put health authorities worldwide on high alert, and many countries are intensifying efforts to prevent the spread of the coronavirus.

Figure 1: New cases outside China have surpassed those inside China

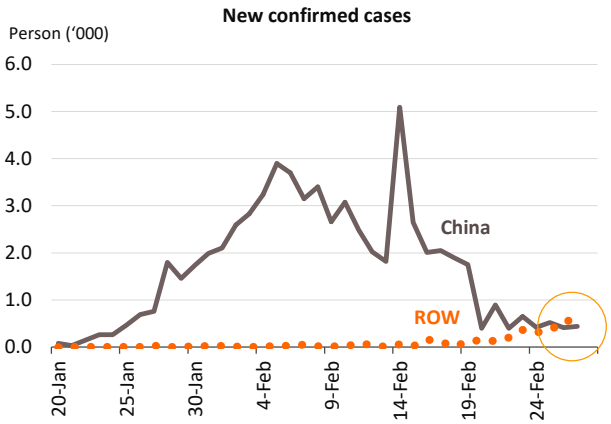
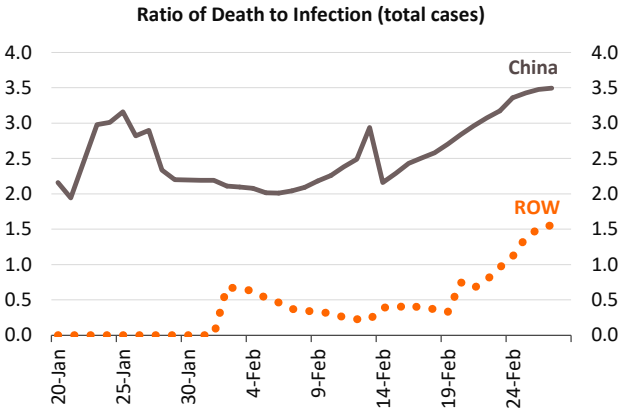


Figure 2: Mortality rates are rising to new highs for both in China and ROW

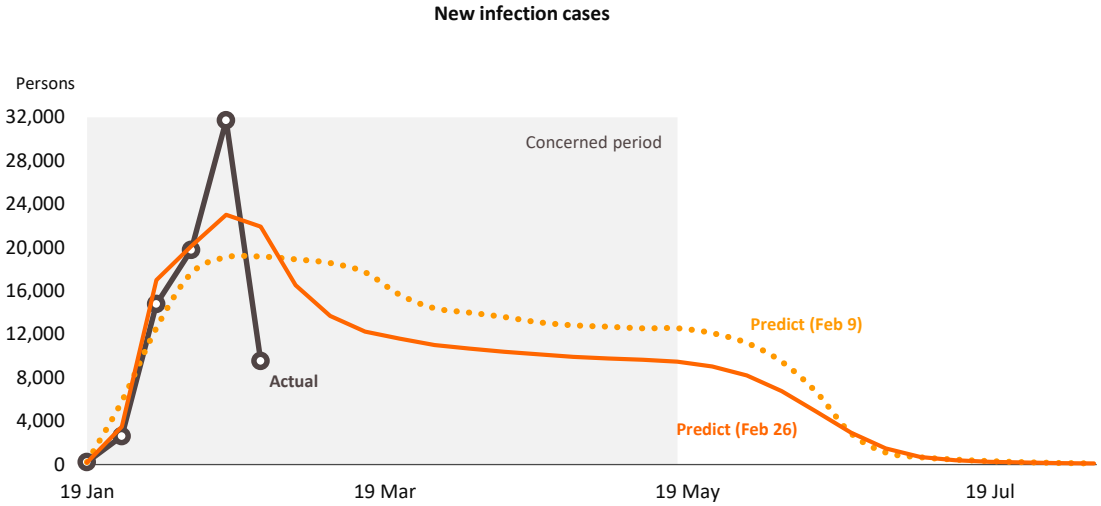


Source: World Health Organization (WHO), CEIC, Krungsri Research

■ Maintain view the outbreak would likely be contained by May

Following the latest information, we reviewed the outbreak situation and our projection for the path of the epidemic. The conclusion is that new cases seem to have peaked and would stabilize in March-April, and would be contained by May. Travel restrictions and flight cancellations could help to win the fight against the "devil" outbreak.

Figure 3: Expect situation to stabilize in March-April, and be contained by May



Source: WHO, Krungsri Research's estimate
Note: Data as of 26 February 2020

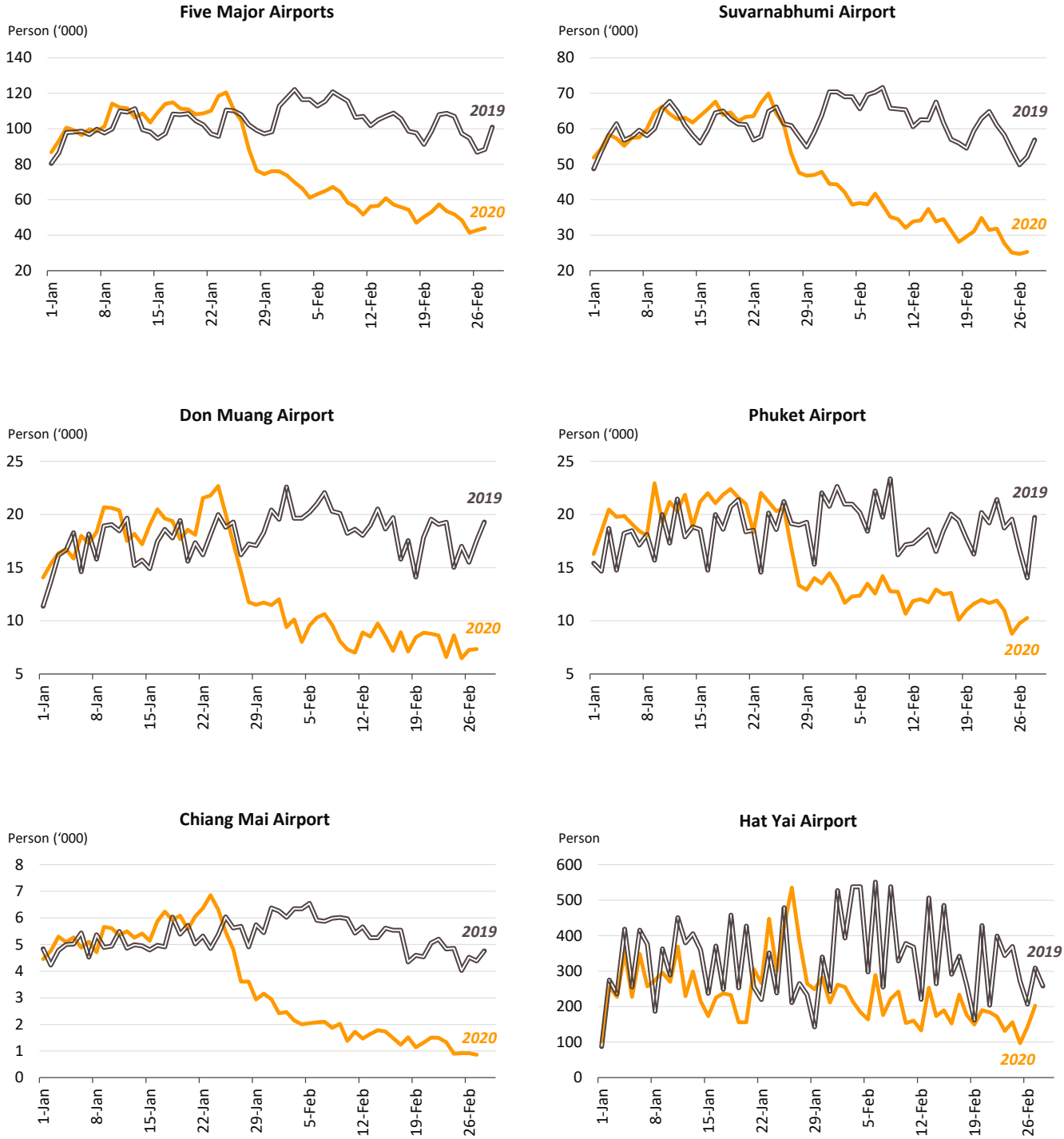
■ Immediate impact on inbound tourist numbers is sizable

Although China first reported the outbreak on 30 December 2019, airlines around the world only started to restrict flights starting from 23 January this year. As such, there was little impact on tourist arrivals in January, which rose 2.5% YoY, same as December. Chinese visitor numbers only registered a mild drop of 3.7% YoY. But there is a more worrying sign as tourist arrivals from India – the "emerging affluent" market – slipped 2.6% YoY, falling for the first time since September 2014.

Officials have yet to release February data, so we looked at alternative data provided by the Tourism Authority of Thailand (TAT). That is the daily number of international tourists arriving at five major international airports – Suvarnabhumi, Don Muang, Phuket, Chiang Mai and Hat Yai. Between 1 and 27 February, the total number of inbound travelers at the five airports tumbled 46.9% YoY, led by Chiang Mai Airport (-70.3%), followed by Don Muang (-54.1%), Hat Yai (-48.2%), Suvarnabhumi (-45.6%) and Phuket (-37.3%).

More than 50 countries have imposed travel restrictions in hopes of containing the outbreak, according to data compiled by the International Air Transport Association (Table 1). Stricter measures by many countries worldwide will likely keep the situation under control, but at the same time, it could prevent domestic and international travel, and deal a severe blow to the tourism industry. **As such, we now expect foreign tourist arrivals in Thailand to drop by 6.7% in 2020 (instead of -5%).**

Figure 4: Daily international tourist arrival data (as of 27 February 2020)



Source: Tourism Authority of Thailand (TAT), Krungsri Research

Table 1: Travel restrictions imposed by major Chinese outbound destination countries (as of 28 February 2020)

Country	Entrance restrictions	Visa suspension	Details
Hong Kong	✓	✓	• Bans travelers coming from Hubei and South Korea • Mandatory 14-day quarantine for other travelers from Mainland China • Bans entry from mainland China if stay is shorter than 14 days
Macau	✓	✓	• Bans travelers who have been in Hubei in the past 14 days, without a medical certificate
Japan	✓		• Bans travelers who have been in Hubei or Zhejiang in the past 14 days, who hold a passport issued in those provinces or who were on the Westerdam cruise
South Korea	✓	✓	• Bans travelers who have been in Hubei in the past 14 days, who hold a passport issued in Hubei, or who were on the Diamond Princess cruise
North Korea	✓	✓	• Bans all foreign tourists; mandatory 14-day quarantine for business travelers
Taiwan	✓	✓	• Bans Chinese nationals and travelers who have been in mainland China, Hong Kong or Macau in the past 14 days
Singapore	✓	✓	• Bans travelers who have been in mainland China in the past 14 days, who hold a passport issued in Hubei, or who were on the Westerdam, Diamond Princess or MV World Dream cruises
Malaysia	✓	✓	• Bans travelers who have been in Hubei, Zhejiang or Jiangsu in the past 14 days
Indonesia	✓	✓	• Bans travelers who have been in mainland China in the past 14 days
Philippines	✓	✓	• Bans travelers who have been in mainland China, Hong Kong or Macau in the past 14 days
Vietnam	✓	✓	• Bans travelers who have been in or transited through mainland China in the past 14 days
Myanmar		✓	• Suspends issuing of visa-on-arrival to Chinese nationals
Saudi Arabia	✓	✓	• Bans citizens and foreigners who live in the country from traveling to China • Expats who have been to China will not be allowed to return
Iraq	✓	✓	• Bans travelers who have been in mainland China in the past 14 days
US	✓	✓	• Bans travelers who have been in mainland China in the past 14 days
Italy	✓		• Bans flights from Mainland China, Hong Kong, Macau or Taiwan
Russia	✓	✓	• Bans Chinese nationals, as well as Hong Kong and Macau passport holders, from entry
Australia	✓		• Bans travelers who have been in or transited through mainland China
New Zealand	✓		• Bans travelers who have been in or transited through mainland China since 2 February
Thailand			• All arriving Chinese tourists must provide medical certificates to proof they are free of COVID-19
Canada			• Further examination of visitors with symptom
UK			• Stricter inspection of direct flights from Wuhan
Germany			• Temperature checks at Frankfurt airport for all passengers arriving from countries with reported cases
France			• Quarantine any visitor with high temperature

Source: National Immigration Administration, International Air Transport Association (IATA), Bloomberg, Krungsri Research

◢ *Assessing the impact of the outbreak throughout the entire supply chain of the tourism industry*

■ Drop in foreign tourist arrivals will have direct impact on air transport, hotel and restaurant industries

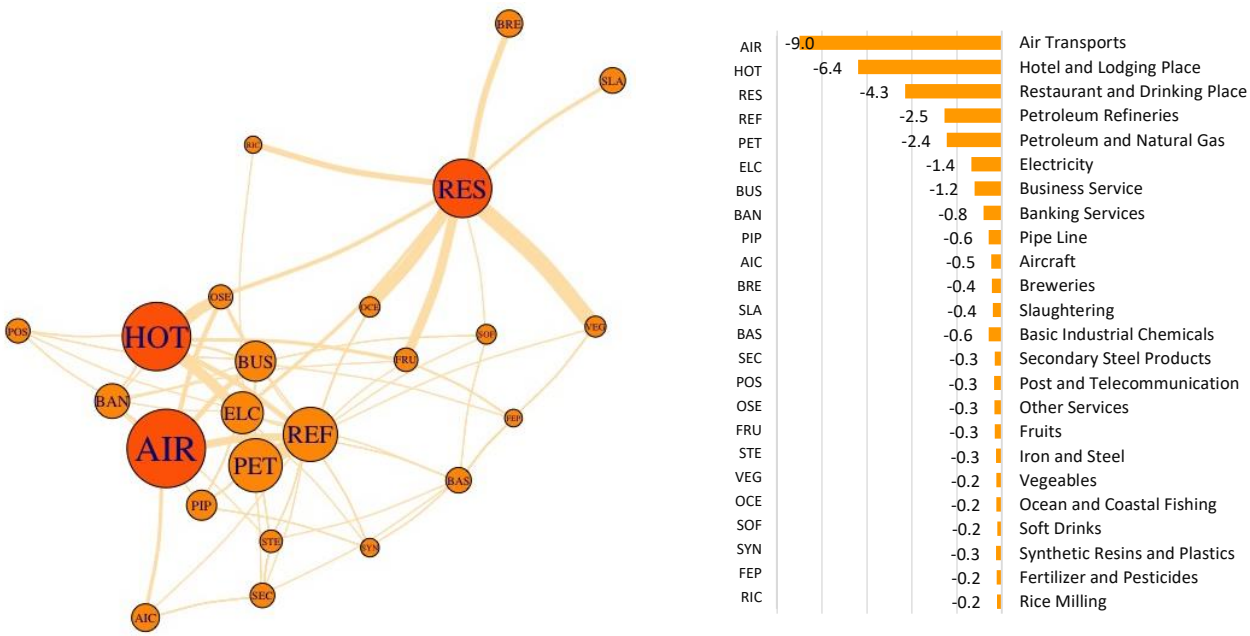
Following our revised projection of a 6.7% drop in 2020 foreign tourist arrivals, the airline, hotel, and restaurant industries would be directly affected. To quantify the impact on those industries, we applied the 2015 input-output table produced by the Office of the National Economic and Social Development Council. **Our findings suggest foreign tourists' contribution to those industries were as follows: air transport (50% of total demand), hotel (45%), and restaurant (30%). Hence, demand in those industries would drop by 3.4%, 3.0%, and 2.0%, respectively.**

■ It would also hurt supporting industries and those along the supply chain

This external shocks will also hit the entire supply chains of those affected industries and overall economic activity. The major impact would be lower income and purchasing power. **Hence, fewer foreign tourists will affect Thailand's economy through two channels: backward supply chain linkage and negative income effect.**

Backward supply chain linkage: The sudden drop in external demand would create a backward supply shock through the related industries. **Overall, output in the air transport, hotel and restaurant industries would drop by 9.0%, 6.4%, and 4.3%, respectively.** Meanwhile, **other sectors that would be heavily hit include petroleum refinery (-2.5%), power generation (-1.4%), and business services (-1.2%)** because of strong linkages to air transport, hotel and restaurant industries (Figure 5).

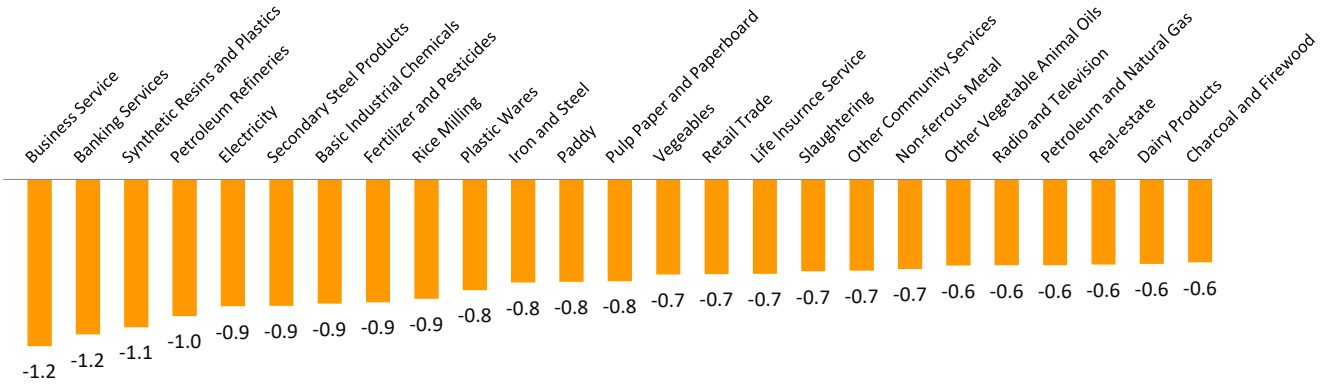
Figure 5: Supply Chain Linkage and the impacts



Source: NESDC, calculation by Krungsri Research
Note: Size of bubble indicates the impacts of supply disruption
Thickness of the connected line indicates the linkage between two connected sectors

Negative income effect: Several related industries will see slower demand for their good and services. This would reduce return of investment, and working hours or labor wages. These would, in turn, lead to weaker purchasing power. We estimate the demand shock would reduce private consumption by 0.41%. **The hardest-hit sectors would be business services (-1.2%), banking services (-1.2%), and resin and plastic producers (-1.1).**

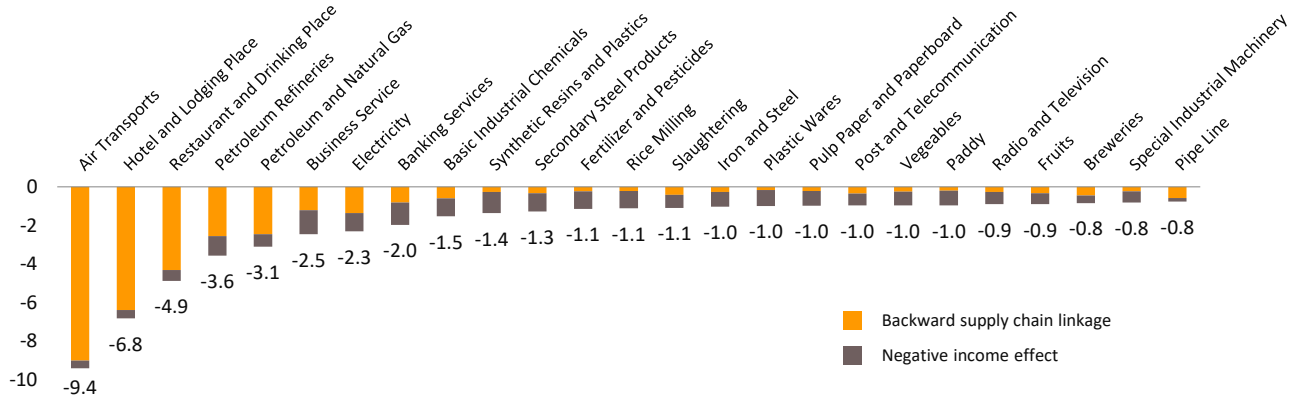
Figure 6: Impact via negative income effect (by sector)



Source: NESDC, calculation by Krungsri Research

Overall, we anticipate the petroleum, business services, and power generation industries to be hardest hit, as well as air transportation, hotel and lodging places, and restaurant (Figure 7). The anticipated drop in foreign visitors could reduce Thailand's 2020 GDP by 0.36% (instead of -0.31%), split between 0.22% from the backward supply chain linkage and 0.14% from negative income effect. **Including the impact of trade disruptions driven by a slower China economy, we now estimate the outbreak would reduce Thailand's GDP by 0.53 ppt (instead of 0.44 ppt).**

Figure 7: Overall impact (by sector)



Source: NESDC, calculation by Krungsri Research

Krungsri Research's view

All things considered, we maintain that global COVID-19 infections and deaths would peak in March and be contained by May. But the worsening situation outside China has led to more travel restrictions and flight bans, so we now expect foreign tourist arrivals in Thailand to drop by 6.7% in 2020 (instead of -5%). Beyond this, we estimate it will affect airline, hotel and restaurant industries, as well as supporting industries and those along the supply chain such as petroleum refinery, power generation, business services, banking services, and resin and plastic producers; the petroleum refining, business services, and power generation industries would be worst hit. The drop in foreign tourist arrivals could reduce Thailand's 2020 GDP by 0.36% (instead of -0.31%), split between 0.22% from backward supply chain linkage and 0.14% from negative income effect. Including the impact of trade disruptions driven by a slower China economy, we now estimate the COVID-19 outbreak would reduce Thailand's GDP by 0.53 ppt (instead of 0.44 ppt).

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