Trade Wars and Protectionism: Implications for Asia and the Philippines

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The current trade conflict has deep roots

• Donald Trump has long-held beliefs that bilateral trade deficits are a sign of a country’s weakness. In 1987, (citizen) Trump argued that America’s “vast” bilateral deficits (vis-à-vis Japan at the time) and the weak yen were unfair, and had to end.

• During his presidential campaign in 2016, (candidate) Trump accused China of dumping exports and devaluing the yuan, and said he would bring trade cases against China if elected.

• In August 2017, (President) Trump’s administration launched an investigation into Chinese intellectual property theft.
The trade conflict escalated and became more bilateral in late 2018…

PRC = People’s Republic of China, US = United States,

Note: *The $35.8 billion in retaliatory tariffs against US steel and aluminum tariffs were by Canada ($16.6 billion), India ($10.6 billion), the European Union (EU) ($3.2 billion), Mexico ($3 billion), Turkey ($2.31 billion), and the Russia Federation ($87.6 million). It excludes pending cases filed by EU ($4.1 billion) and Japan ($1.9 billion) via the World Trade Organization dispute settlement mechanism. **The PRC has so far retaliated tit for tat. Continued tit for tat would require retaliation by $17 billion. The PRC has not yet announced a list, but such tariffs are assumed under the bilateral escalation scenario.

***The $925 billion in total affected US imports as of October 2018 includes all US implemented and threatened tariffs against PRC and other countries.
…which is worrisome, because the PRC and the US serve as important hubs in the global value chains.

- The US and PRC have strong bilateral trade ties. They are also central to the international trading network as indicated by extensive connections with various economies.

- An escalated trade war between the two can potentially disrupt the existing network of global value chains, which could reduce global production and trade activity.

**Note:** Chart shows the top 35 countries in MRIOT in terms of GVC participation. Node size is based on GVC participation, measured by the sum of backward and forward participation. Blue nodes are the top 3 countries in terms of GVC participation; green nodes, the next 16; and orange, the following 16. Line thickness indicates the size of bilateral intermediate goods exports, where lines are only shown when these exports exceed $10 billion. Line color is based on color of source node.

**Source:** Authors’ calculations.
## Methodology

### Objective
- Evaluate the global, regional, country- and sector-specific impacts of the current trade conflict

### Channels
- Quantify the **direct impact of tariffs**, at the product level
- Examine **indirect impact via production linkages**, using international input-output data and models
- Allow for partial **trade redirection** toward suppliers not hit by tariffs

### Scenarios
- Examine impact of **current scenario**, which includes all implemented measures as of November 2018; **bilateral escalation scenario** where 25% tariffs are imposed on all US-PRC trade; and **“worse-case” scenario** that adds a 25% tariff on all autos/parts

### Data
- ADB Multi-Regional Input-Output Table (2017); covers whole economy (35 sectors) in 62 countries plus one that captures "rest of the world"; 90% of world GDP, 24 economies in developing Asia*
- Also use UN COMTRADE Database, BACI Database

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* Bangladesh, Bhutan, Brunei Darussalam, Cambodia, the People’s Republic of China, Fiji, Hong Kong, China, India, Indonesia, Kazakhstan, Republic of Korea, Kyrgyz Republic, Lao People’s Democratic Republic, Malaysia, Maldives, Mongolia, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Taipei, China, Thailand and Viet Nam
Global effects: current tariffs would have a small impact on world GDP; but escalation presents substantial risks.

Note: The blue bars represent the estimated GDP impact under the current scenario. The subsequent two peach bars represent the incremental impact brought about by the US-PRC trade threats (25% on all bilateral exports) and the auto sector (tariffs on all auto and auto parts traded globally) escalation respectively. The red bars represent the sum of all the impacts under the worse-case scenario.

Source: Staff calculations.
For the protagonists: the PRC and the US are negatively affected in each scenario, with a larger impact on the PRC.

Note: The blue bars represent the estimated GDP impact under the current scenario. The subsequent two peach bars represent the incremental impact brought about by the US-PRC trade threats (25% on all bilateral exports) and the auto sector (tariffs on all auto and auto parts traded globally) escalation respectively. The red bars represent the sum of all the impacts under the worse-case scenario.

Source: Staff calculations.
Important caveat: hard-to-quantify effects through confidence and market uncertainty can be potentially large.

Potential effects through confidence and market uncertainty:
Comparison of IMF and ADB simulation results

- IMF
- ADB
- US
- PRC
- World

% deviation from no-conflict scenario

Baseline scenario
Bilateral escalation scenario
With market uncertainty and confidence effects

Source: October 2018 IMF World Economic Outlook, September 2018 ADB Asian Development Outlook Update, authors’ calculations.
Regional impact: effects through direct (tariff) and indirect (prod. linkages) channels is negative and small…

Note: DA = developing Asia; PRC = People’s Republic of China; G3 = European Union, Japan, and United States; EU = European Union; HKG = Hong Kong, China; INO = Indonesia; JPN = Japan; KOR = the Republic of Korea; MAL = Malaysia; PHI = the Philippines; SIN = Singapore; TAP = Taipei, China; THA = Thailand; USA = United States of America; VIE = Viet Nam. Other here refers to Bangladesh, Brunei Darussalam, Bhutan, Cambodia, Fiji, Kazakhstan, the Kyrgyz Republic, Lao People’s Democratic Republic, the Maldives, Mongolia, Nepal, Pakistan, and, Sri Lanka.

Source: Staff calculations.
...and is offset by potential redirection of trade and production.

Impact by major economic region, Current scenario

![Diagram showing impact by major economic region]

Note: DA = developing Asia; PRC = People's Republic of China; G3 = European Union, Japan, and United States; EU = European Union; HKG = Hong Kong, China; INO = Indonesia; JPN = Japan; KOR = the Republic of Korea; MAL = Malaysia; PHI = the Philippines; SIN = Singapore; TAP = Taipei, China; THA = Thailand; USA = United States of America; VIE = Vietnam. Other here refers to Bangladesh, Brunei Darussalam, Bhutan, Cambodia, Fiji, Kazakhstan, the Kyrgyz Republic, Lao People's Democratic Republic, the Maldives, Mongolia, Nepal, Pakistan, and Sri Lanka.

Source: Staff calculations.
Under the worse-case scenario the patterns are similar, but the magnitudes are larger.

Impact on GDP by major economic region, Worse-Case scenario

Note: DA = developing Asia; PRC = People's Republic of China; G3 = European Union, Japan, and United States; EU = European Union; HKG = Hong Kong, China; INO = Indonesia; JPN = Japan; KOR = the Republic of Korea; MAL = Malaysia; PHI = the Philippines; SIN = Singapore; TAP = Taipei, China; THA = Thailand; USA = United States of America; VIE = Viet Nam. Other here refers to Bangladesh, Brunei Darussalam, Bhutan, Cambodia, Fiji, Kazakhstan, the Kyrgyz Republic, Lao People's Democratic Republic, the Maldives, Mongolia, Nepal, Pakistan, and, Sri Lanka.

Source: Staff calculations.
For the Philippines: manufacturing stands to gain from the trade conflict…

Impact on Philippine Major Sectors (% change in sectoral GVA)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Current</th>
<th>Bilateral Escalation</th>
<th>Worse-Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>0.03</td>
<td>0.06</td>
<td>0.05</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.41</td>
<td>0.67</td>
<td>0.53</td>
</tr>
<tr>
<td>Services</td>
<td>0.06</td>
<td>0.09</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Source: ADB staff calculations using 2017 ADB Multi-Regional Input-Output Table.
...though within ASEAN, Malaysian and esp. Vietnamese manufacturers stand to gain most from trade redirection.

Impact on Manufacturing, ASEAN-5 (% of manufacturing GVA)

**Source:** ADB staff calculations using 2017 ADB Multi-Regional Input-Output Table.

**Note:** Manufacturing sector includes Basic and Fabricated Metal; Chemicals; Electrical and Optical Equipment; Food Manufacturing; Leather and Footwear; Machinery, Nec; Manufacturing, Nec; Recycling; Other Non-Metallic Mineral; Petroleum and Fuel; Pulp, Paper, and Publishing; Rubber and Plastics; Textiles; Transport Equipment; and Wood Products.
Philippine exports gains will be primarily driven by the increase in electrical and optical equipment exports.

Impact on Philippine Manufacturing Exports (% of manufacturing exports)

Source: ADB staff calculations using 2017 ADB Multi-Regional Input-Output Table.
Note: Others include Food, Beverages and Tobacco; Machinery, Nec; Other Non-Metallic Mineral; Basic Metals and Fabricated Metal; Manufacturing, Nec; Recycling; Pulp, Paper, Paper, Printing and Publishing; Rubber and Plastics; Wood and Products of Wood and Cork; Coke, Refined Petroleum and Nuclear Fuel
A closer look at the manufacturing sectors that stand to gain and lose, under the current scenario...

### Top Gainers

<table>
<thead>
<tr>
<th>HS Code (2012)</th>
<th>Description</th>
<th>Share to total domestic gain in net exports</th>
<th>Change in exports*</th>
</tr>
</thead>
<tbody>
<tr>
<td>84</td>
<td>Nuclear reactors, boilers, <strong>machinery and mechanical appliances</strong>: parts thereof</td>
<td>49.3%</td>
<td>+2.8%</td>
</tr>
<tr>
<td>85</td>
<td><strong>Electrical machinery and equipment</strong> and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles</td>
<td>27.9%</td>
<td>+0.5%</td>
</tr>
<tr>
<td>94</td>
<td><strong>Furniture</strong>: bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, n.e.c.; illuminated signs, illuminated nameplates and the like; prefabricated buildings</td>
<td>7.3%</td>
<td>+10.1%</td>
</tr>
<tr>
<td>42</td>
<td><strong>Articles of leather</strong>: saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)</td>
<td>6.9%</td>
<td>+6.9%</td>
</tr>
<tr>
<td>90</td>
<td><strong>Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus</strong>: parts and accessories</td>
<td>1.5%</td>
<td>+0.5%</td>
</tr>
</tbody>
</table>

### Biggest Losers

<table>
<thead>
<tr>
<th>HS Code (2012)</th>
<th>Description</th>
<th>Share to total domestic exports loss</th>
<th>Change in exports*</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>Iron and steel articles</td>
<td>95.8%</td>
<td>-3.6%</td>
</tr>
<tr>
<td>72</td>
<td>Iron or steel</td>
<td>4.2%</td>
<td>-0.6%</td>
</tr>
</tbody>
</table>

Source: ADB staff calculations using 2017 data from UN COMTRADE.

Notes:
1. Only commodities which account for more than 1.0% of total net gain in exports are shown in the table.
2. Numbers here reflect estimates under the current scenario with trade redirection.

* Change in exports to world (HS 2012 classification). Numbers reflect change from 2017 levels.
...and under the worse-case scenario.

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<tr>
<th>HS Code (2012)</th>
<th>Description</th>
<th>Share to total domestic gain in net exports</th>
<th>Change in exports*</th>
</tr>
</thead>
<tbody>
<tr>
<td>84</td>
<td>Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof</td>
<td>35.3%</td>
<td>+5.3%</td>
</tr>
<tr>
<td>85</td>
<td>Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles</td>
<td>22.8%</td>
<td>+1.0%</td>
</tr>
<tr>
<td>94</td>
<td>Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, n.e.c.; illuminated signs, illuminated name-plates and the like; prefabricated buildings</td>
<td>9.9%</td>
<td>+35.5%</td>
</tr>
<tr>
<td>42</td>
<td>Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)</td>
<td>6.5%</td>
<td>+16.9%</td>
</tr>
<tr>
<td>95</td>
<td>Toys, games and sports requisites; parts and accessories thereof</td>
<td>4.6%</td>
<td>+35.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HS Code (2012)</th>
<th>Description</th>
<th>Share to total domestic exports loss</th>
<th>Change in exports*</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>Iron and steel articles</td>
<td>89.4%</td>
<td>-1.3%</td>
</tr>
<tr>
<td>72</td>
<td>Iron or steel</td>
<td>10.6%</td>
<td>-0.6%</td>
</tr>
</tbody>
</table>

Source: ADB staff calculations using 2017 data from UN COMTRADE.

Notes:
(1) Only commodities which account for more than 1.0% of total net gain in exports are shown in the table.
(2) Numbers here reflect estimates under the worse case scenario with trade redirection

* Change in exports to world (HS 2012 classification). Numbers reflect change from 2017 levels.
The Philippines’ top gaining sectors will be competing with goods produced by ASEAN neighbors, esp. Malaysia, Thailand, and Viet Nam.

Source: ADB staff calculations using 2017 data from UN COMTRADE.

Notes:
(1) Numbers here reflect estimates under the current scenario with trade redirection.
(2) HS codes in the x-axis correspond to commodities that will potentially reap the greatest gains under the current scenario with trade redirection.
Much of the export gains of PH from trade redirection is associated with increased exports of intermediate goods to the US.

Source: ADB staff calculations using 2017 data from UN COMTRADE.
Note: Numbers here reflect estimates under the current scenario with trade redirection. RoW = rest of the world.
### Potential gainers and losers within priority industries

<table>
<thead>
<tr>
<th>Aerospace Parts</th>
<th>Electrical &amp; Electronics</th>
<th>Auto &amp; Auto Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ parts of aircrafts and helicopters</td>
<td>+ electronic integrated circuits</td>
<td>+ parts and accessories of tractors and motor vehicles</td>
</tr>
<tr>
<td>+ aircraft turbojets</td>
<td>+ ignition wiring sets</td>
<td>+ car seats with metal frame, not upholstered</td>
</tr>
<tr>
<td></td>
<td>+ transistors</td>
<td>+ parts used with spark ignition internal-combustion piston</td>
</tr>
<tr>
<td></td>
<td>+ diodes for semiconductors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- solar washers</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tool &amp; Die, Iron &amp; Steel</th>
<th>Chemicals</th>
<th>Agri-business</th>
<th>Furniture, Garments, Creative</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ steel (not cast)</td>
<td>+ activated carbon</td>
<td>+ crabmeat</td>
<td>+ wooden, plastic or metal furniture</td>
</tr>
<tr>
<td>+ casing, tubing and drill pipe</td>
<td>+ sodium sulfates</td>
<td>+ pizza and quiche</td>
<td>+ wooden chairs</td>
</tr>
<tr>
<td>- alloy steel</td>
<td>+ carbonates</td>
<td>+ pineapples</td>
<td>+ headwear</td>
</tr>
<tr>
<td>- iron or non-alloy steel (seamed or welded)</td>
<td>+ personal deodorants and antiperspirants</td>
<td>+ soy sauce</td>
<td>+ hats and headgear</td>
</tr>
<tr>
<td></td>
<td>+ insecticides</td>
<td>+ frozen tuna fillet</td>
<td>+ gloves, mittens and mitts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ mayonnaise</td>
<td></td>
</tr>
</tbody>
</table>
Summary and Conclusions

• The trade conflict has escalated and broadened, and is not likely to end soon.

• Currently tariffs have negative effects on the US and PRC, reducing GDP by 0.1% and 0.5%, respectively. Escalation of the US-PRC trade war will double these losses. Confidence effects and uncertainty amplify risks.

• Developing Asia will feel only a small drag through production linkages, and potential gains from trade/production redirection can more than offset this.

• Philippine manufacturing could see a boost of 0.4-0.7%, primarily in electronics and machinery.

• ASEAN peers, including Malaysia and esp. Viet Nam, stand to gain even more from trade redirection.
Maraming salamat!