

Trade Wars and Protectionism: Implications for Asia and the Philippines

Joseph Mariasingham

Paul Neilmer Feliciano

Asian Development Bank

April 2019

The views expressed are those of the author and do not necessarily reflect the views and policies of the ADB, its Board of Governors, or the governments they represent.

The logo of the Asian Development Bank (ADB), consisting of the letters 'ADB' in a white serif font on a dark blue square background.

Key Results

1. Philippine manufacturing could see a boost of 0.2-0.7%, primarily in electronics. The assumption is that PH economy is able to attract more trade from tariff affected economies.
2. The trade conflict directly affects PH exports that are highly integrated in global value chains, i.e. electronics
3. ASEAN peers, including Malaysia and esp. Viet Nam, stand to gain even more from trade redirection.

Why examine the trade conflict?

IMF's Lagarde warns trade conflicts dimming global growth outlook

David Lawder

5 MIN READ



WASHINGTON (Reuters) - International Monetary Fund Managing Director Christine Lagarde said on Monday that trade disputes and tariffs are starting to dim the outlook for global growth, calling on countries to resolve their differences and reform global trading rules.

Asian markets hit by global trade war fears

Concern over China undermines equities from Tokyo to Mumbai.

World in 'deep kimchi' if trade war lasts: Philippines finance minister

Marc Jones

4 MIN READ



LONDON (Reuters) - The world economy will be in "deep kimchi" if the current trade war between the United States and China drags on, the finance minister of the Philippines has warned, acknowledging his country is one of the first in the firing line.

Search

Markets

Bloomberg

Philippines Most at Risk in Asean From China-U.S. Trade War

By [Karl Lester M Yap](#)

April 6, 2018, 11:15 AM GMT+8

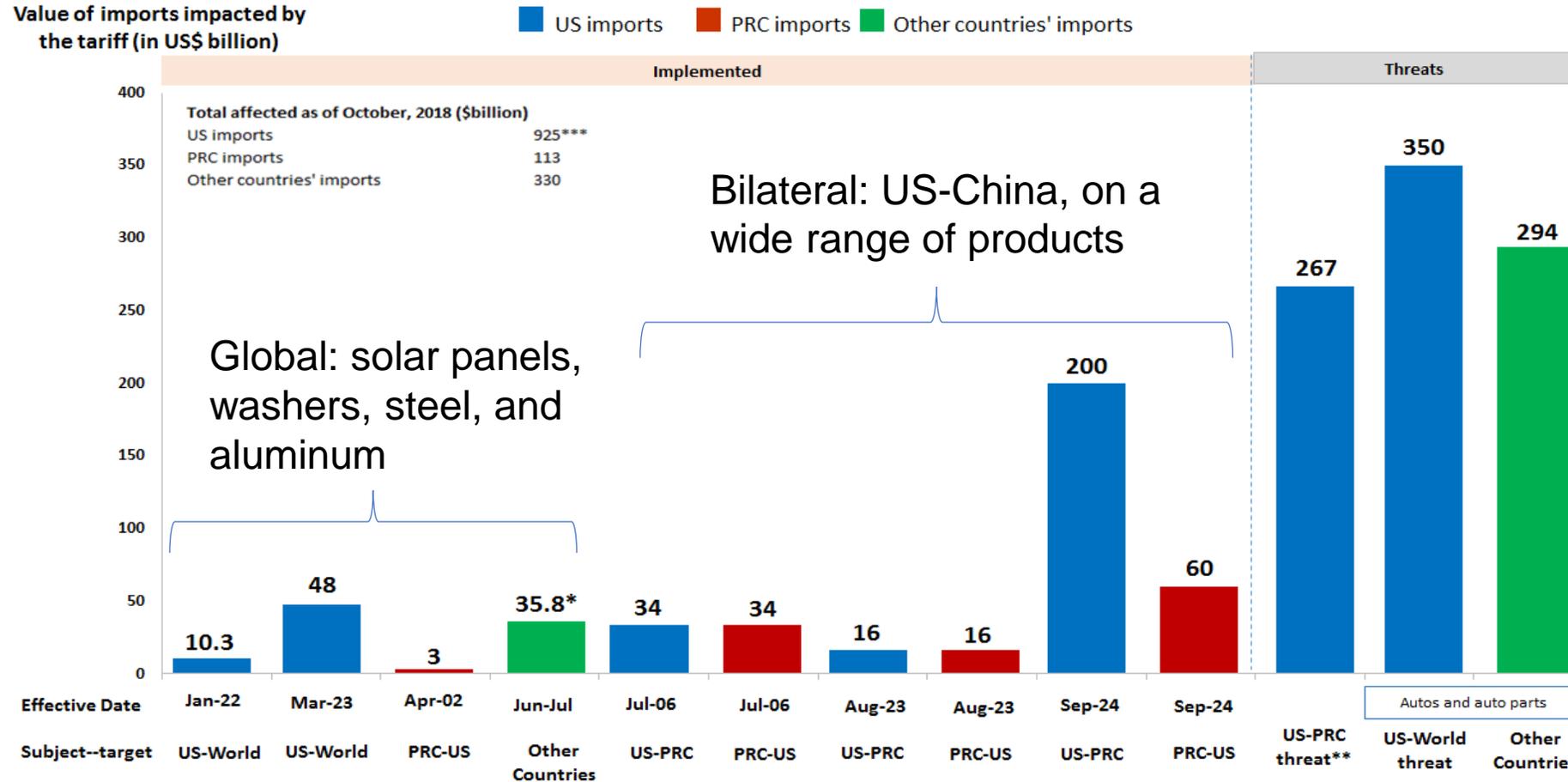
LISTEN TO ARTICLE



The Philippines could be the most at risk in Southeast Asia from the worsening trade conflict between China and the U.S.

LIVE ON BLOOMBERG
Watch Live TV >
Listen to Live Radio >

The trade conflict escalated and became more bilateral in late 2018...

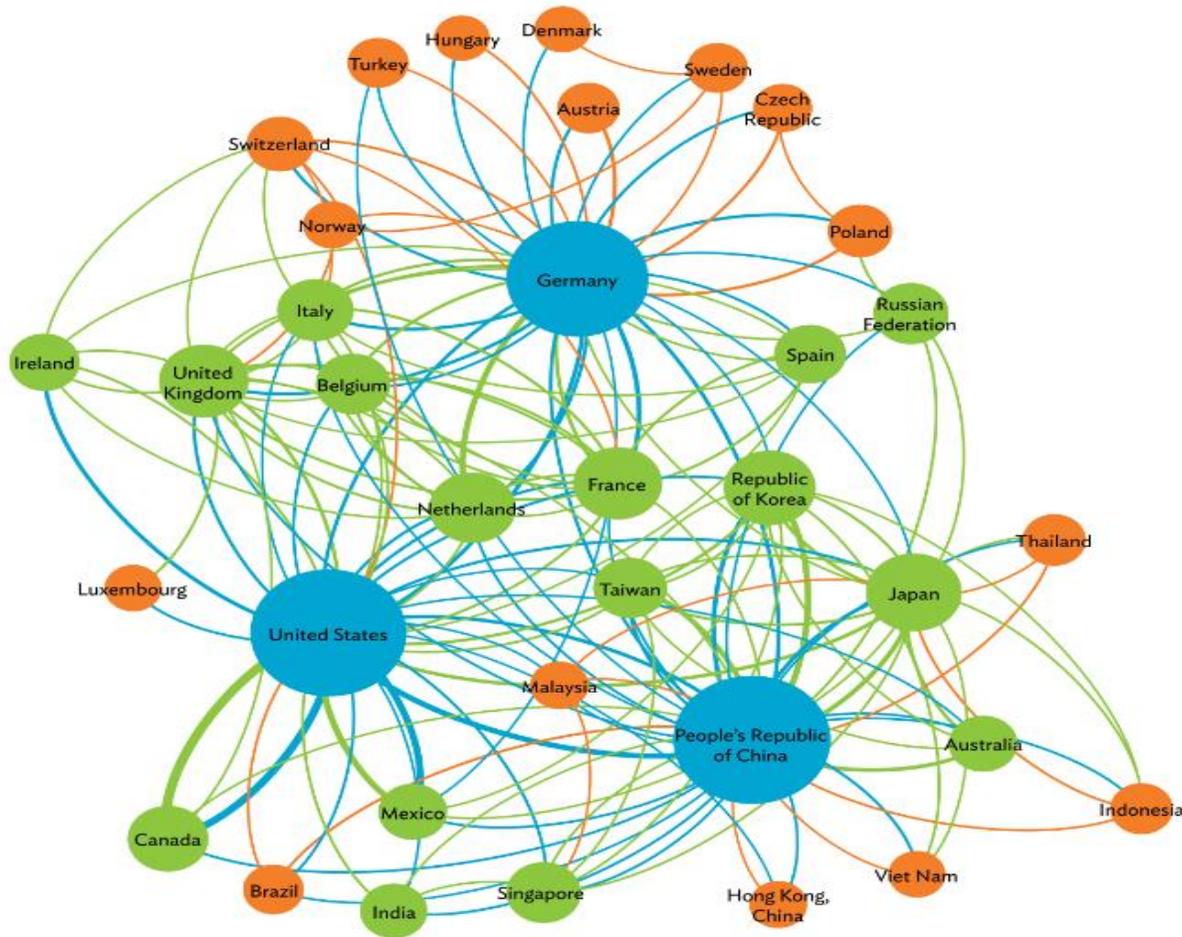


PRC = People's Republic of China, US = United States,

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 global value chains.



- The US and PRC are two of the three global manufacturing hubs for global value chains.
- 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 possible **trade redirection** toward suppliers not hit by tariffs

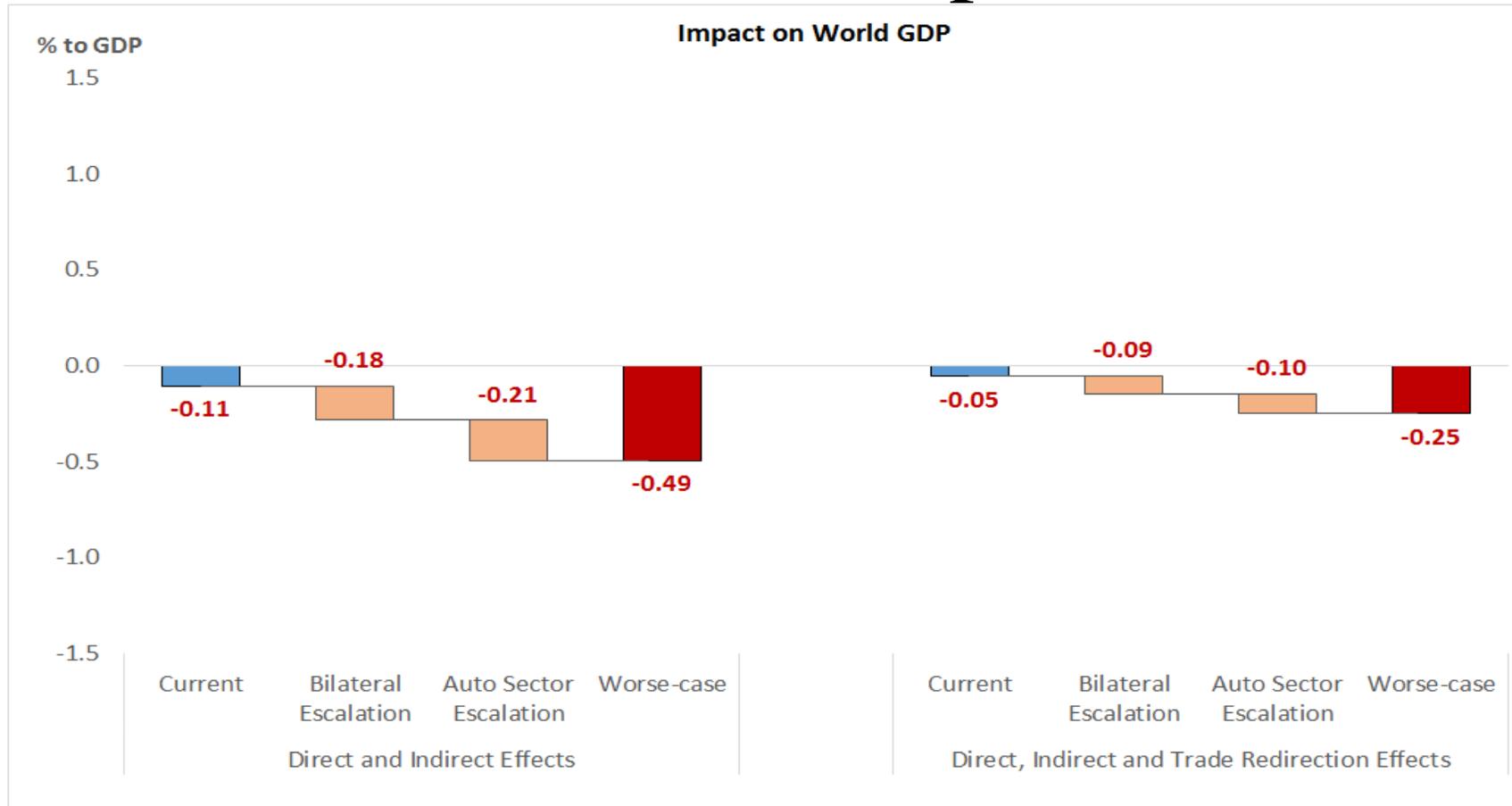
Scenarios

- Examine impact of **current scenario**, which includes all implemented measures as of March 2019; a **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*

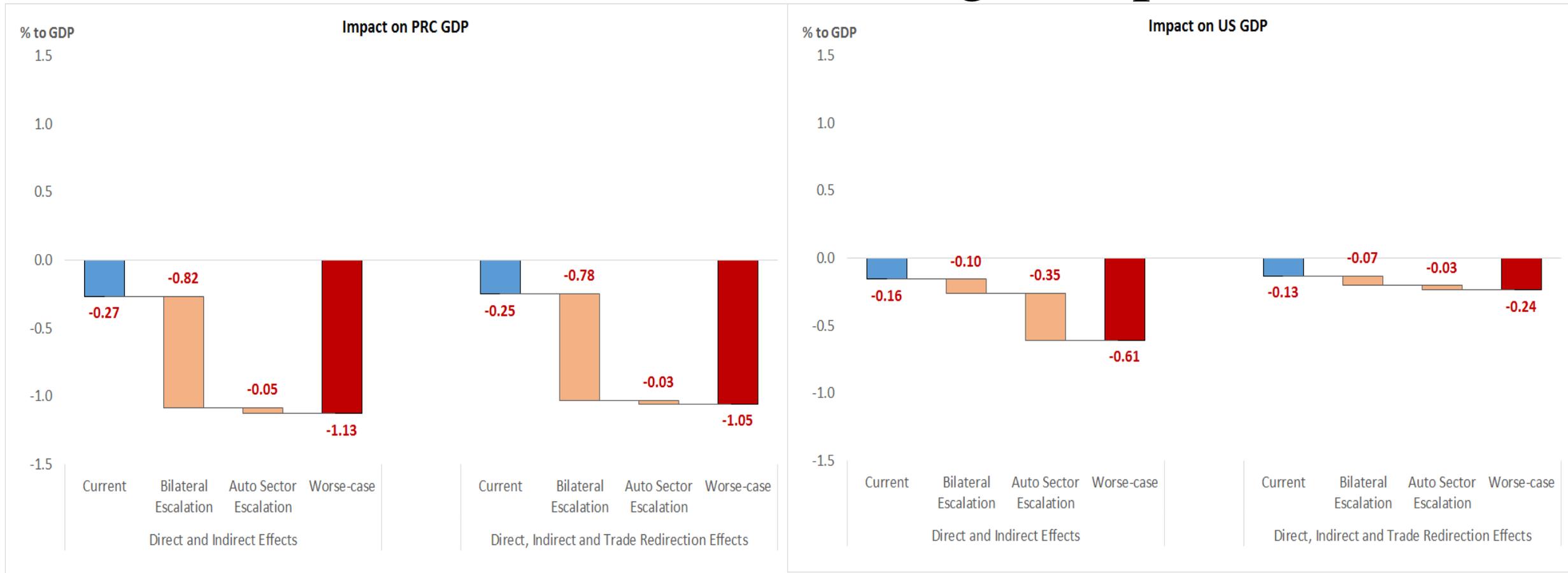
Global effects: current tariffs would have a small impact on world GDP, but escalation presents substantial risks



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.

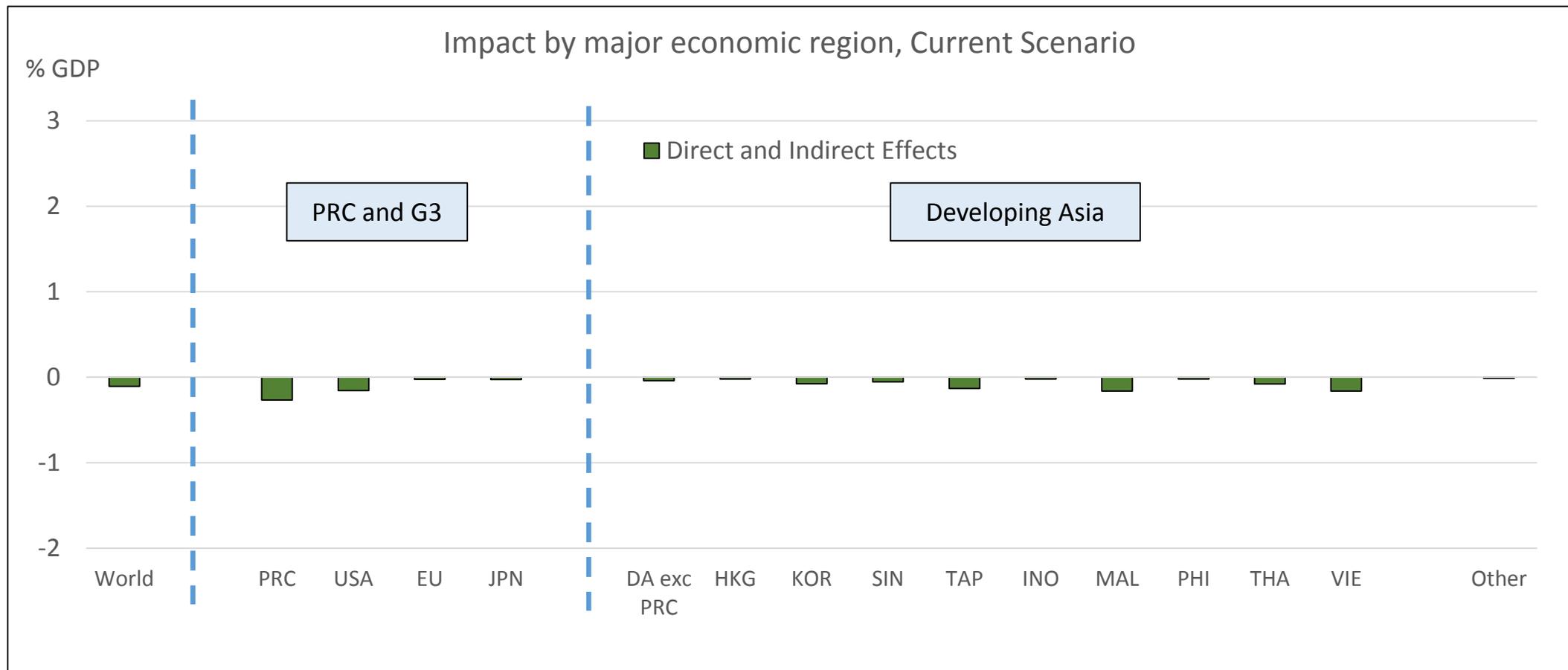
The protagonists: the PRC and the US are negatively affected in each scenario, with a larger impact on the PRC



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.

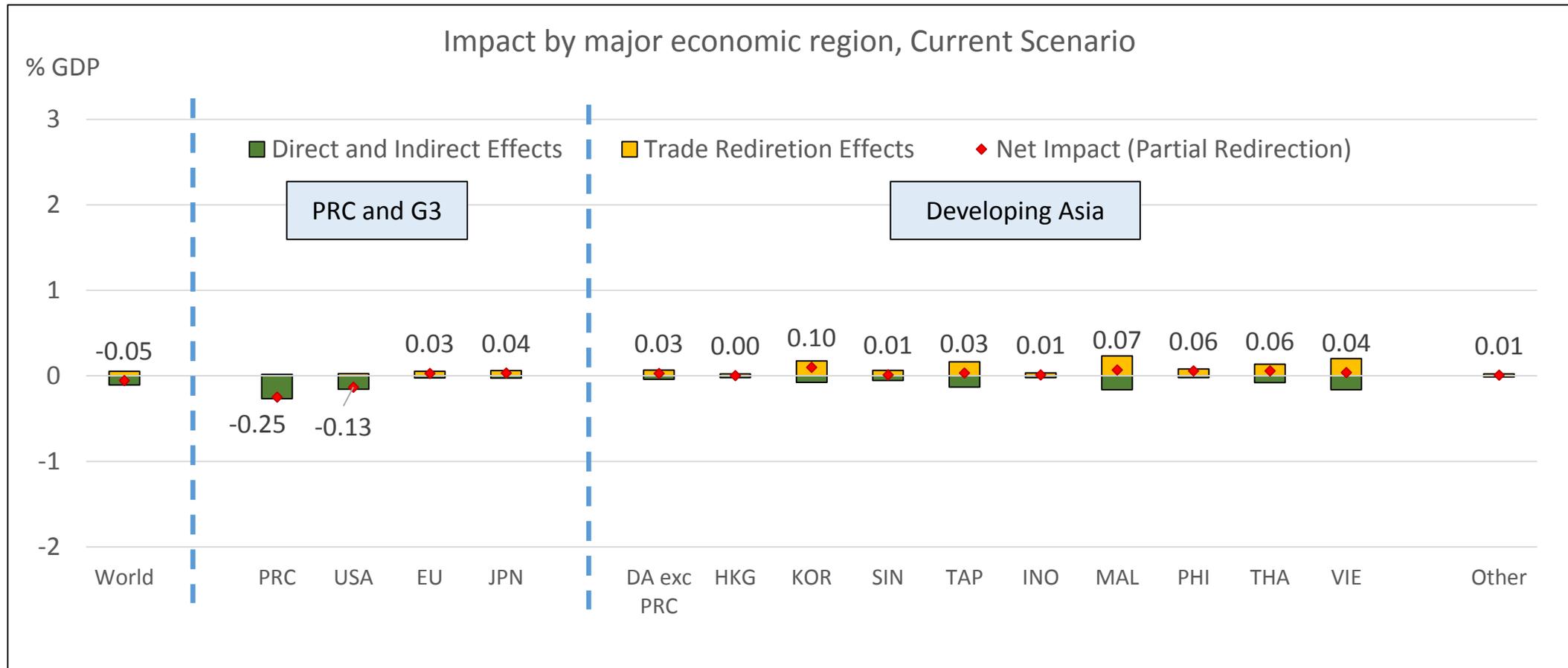
Source: Staff calculations.

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.

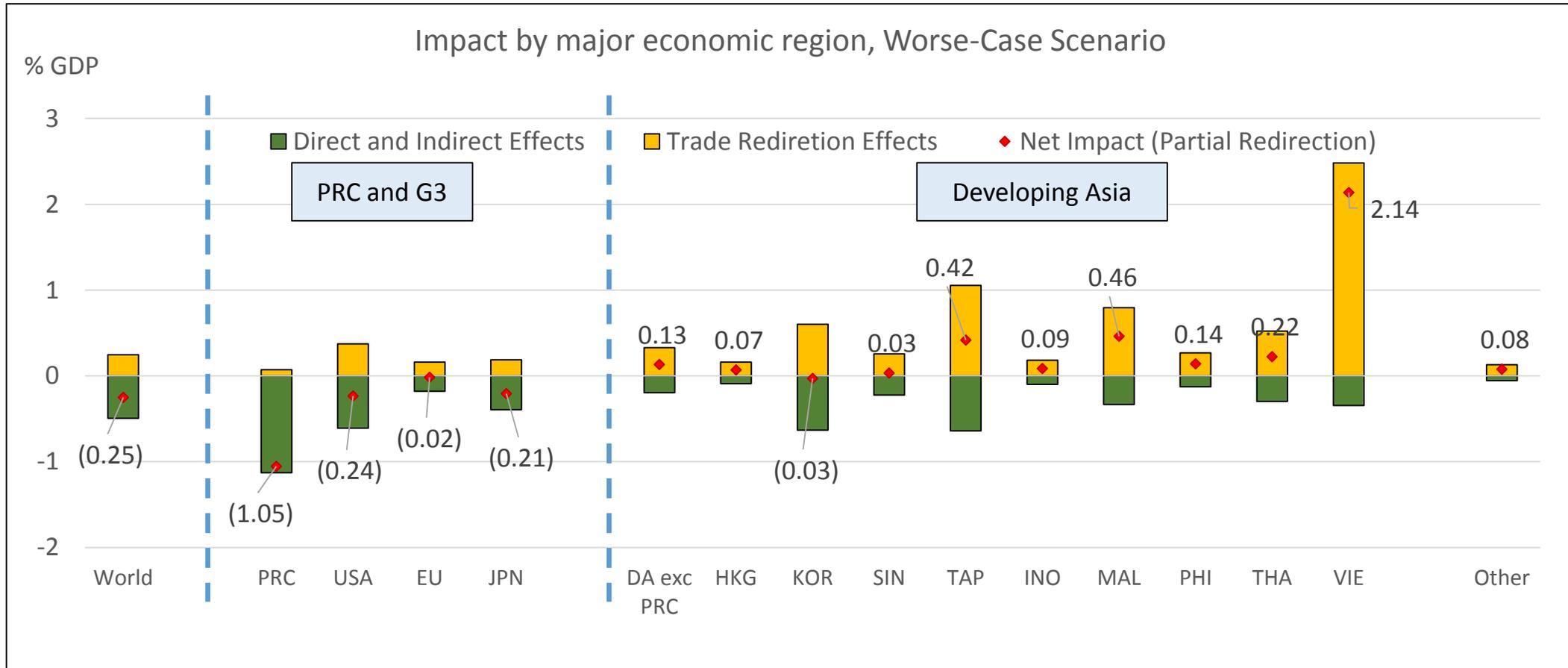
...and can be offset by potential redirection of trade and production.



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.

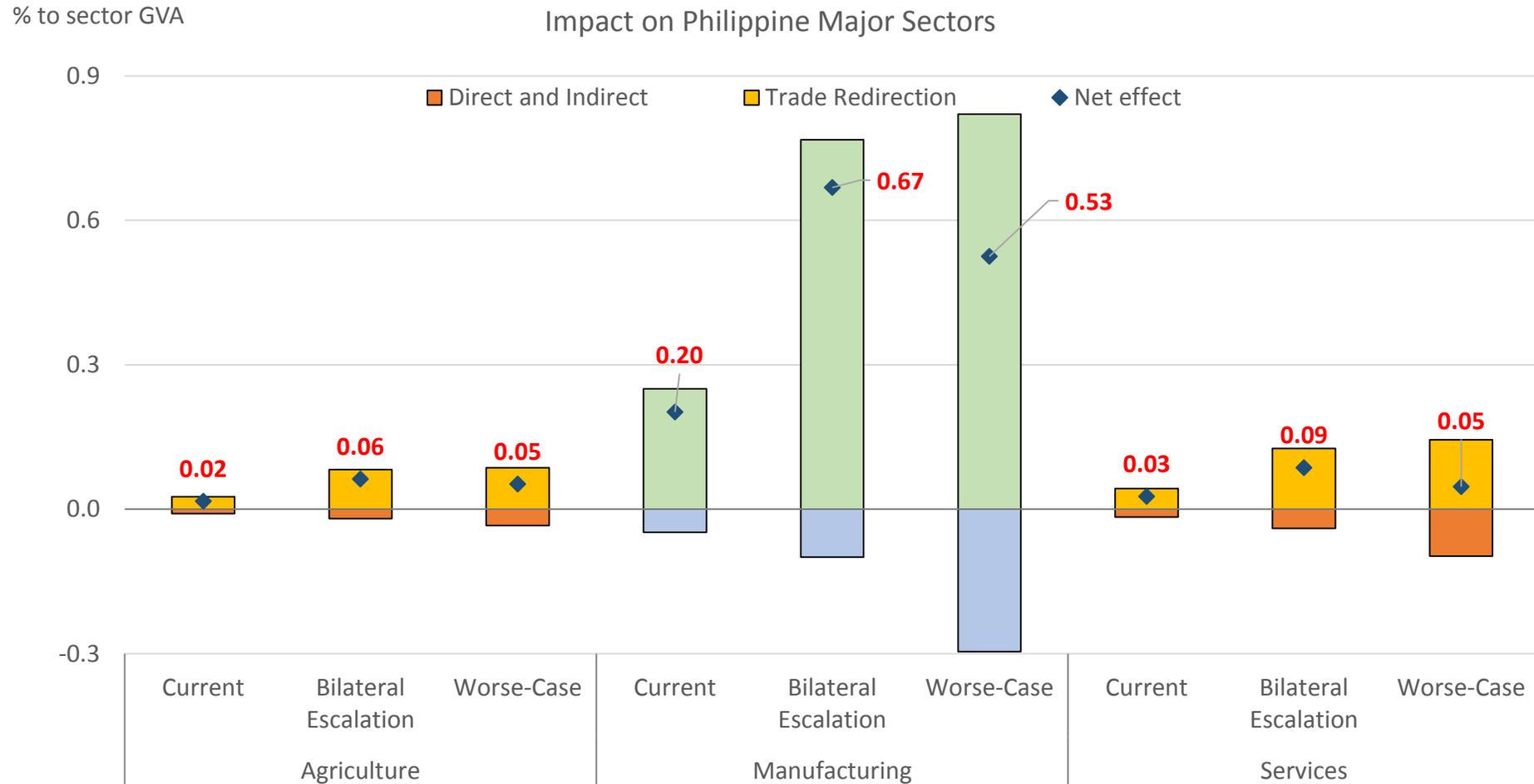
Under the worse-case scenario the patterns are similar, but the magnitudes are larger.



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.

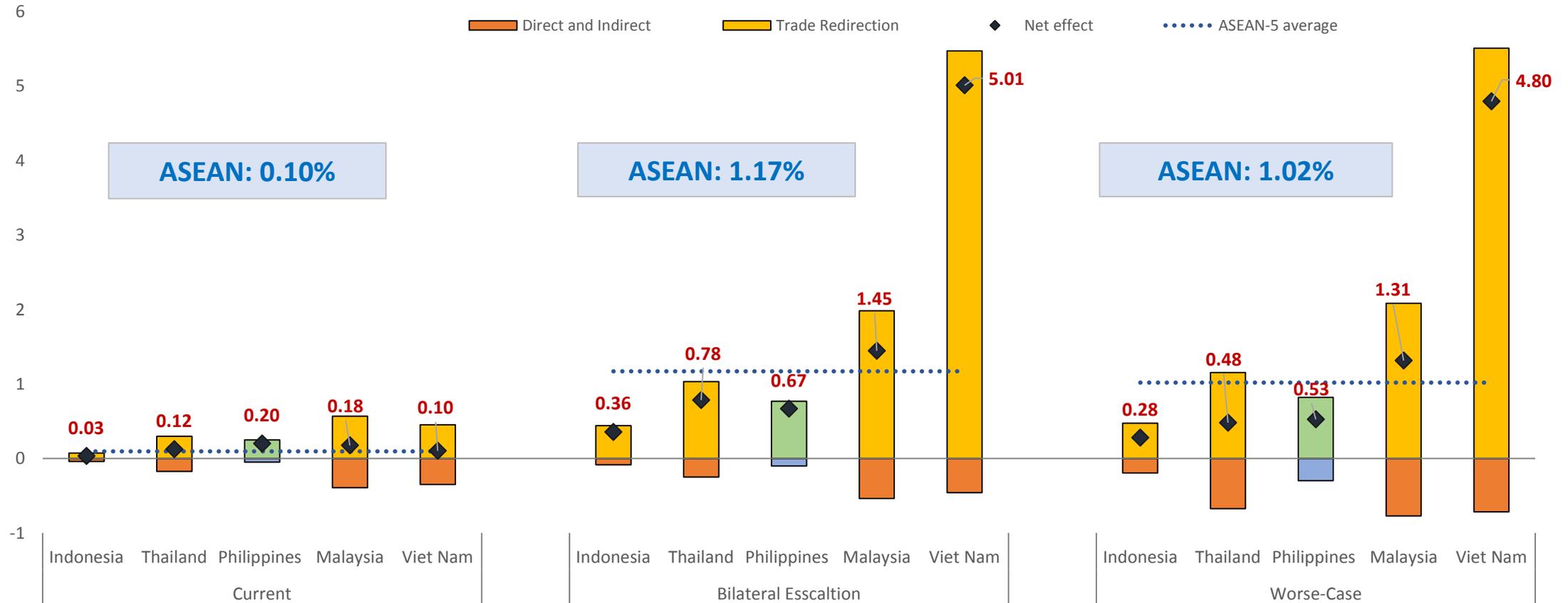
For the Philippines: manufacturing stands to gain from the trade conflict...



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 on selected ASEAN economies (% manufacturing GVA)



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

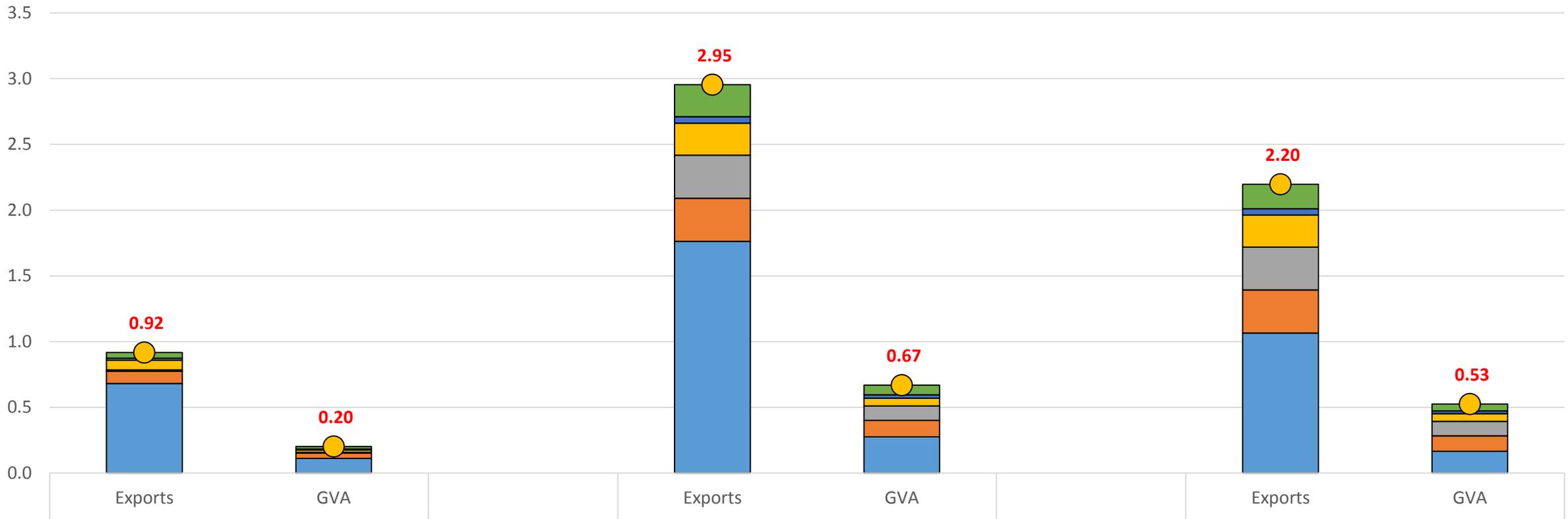
Note: Manufacturing sector includes Basic and Fabricated Metal; Chemicals; Electrical and Optical Equipment; Food Manufacturing; Leather and Footwear; Machinery, Nec; Manufacturing, Nec; Recycling; Other Non-Metallic Mineral; Petroleum and Fuel; Pulp, Paper, and Publishing; Rubber and Plastics; Textiles; Transport Equipment; and Wood Products.

Gains in manufacturing GVA will be driven by the expansion in electronics, plus a few others sectors.

Impact on Philippine Manufacturing Sector

- Electrical and Optical Equipment
- Chemicals and Chemical Products
- Textiles and Textile Products
- Leather, Leather and Footwear
- Food, Beverages and Tobacco
- Others
- Total

% to manufacturing total



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

Note: Others include Coke, Refined Petroleum and Nuclear Fuel; Transport Equipment; Machinery, Nec; Basic Metals and Fabricated Metal; Manufacturing, Nec; Recycling; Pulp, Paper, Paper, Printing and Publishing; Other Non-Metallic Mineral; Rubber and Plastics; and Wood and Products of Wood and Cork.

At product-level, the trade conflict directly affects PH exports that are highly integrated in global value chains

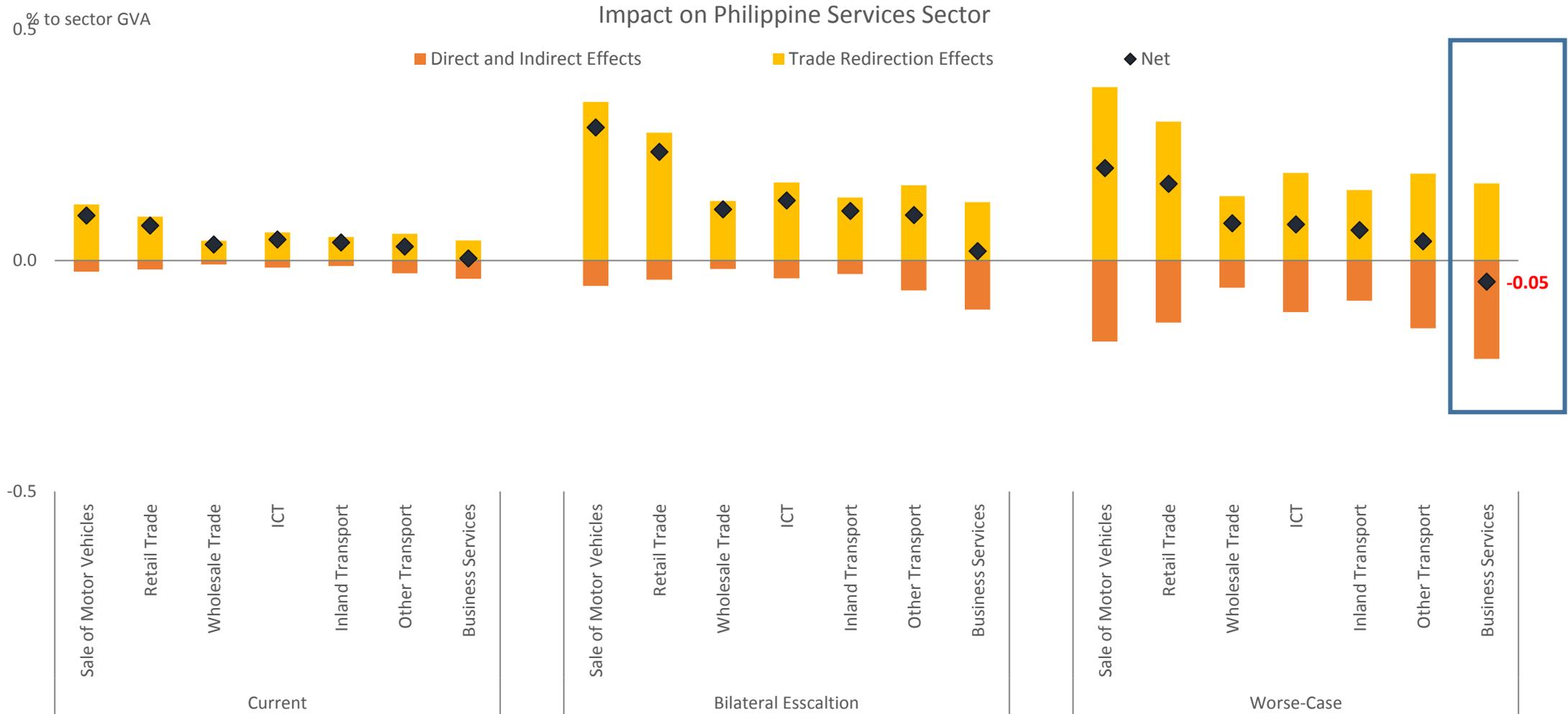
Top PH Exports to PRC		
HS 2012 (Code)	Commodity Description	% Share to PH exports to PRC
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	54.9%
84	Nuclear reactors, boilers, machinery and mechanical appliances ; parts thereof	19.5%
26	Ores , slag and ash	8.1%
74	Copper and articles thereof	3.2%
8	Fruit and nuts , edible; peel of citrus fruit or melons	2.8%
90	Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus ; parts and accessories	2.6%
27	Mineral fuels , mineral oils and products of their distillation; bituminous substances; mineral waxes	1.9%
39	Plastics and articles thereof	1.4%

Top PH Exports to US		
HS 2012 (Code)	Commodity Description	% Share to PH exports to US
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	35.0%
84	Nuclear reactors, boilers, machinery and mechanical appliances ; parts thereof	25.1%
15	Animal or vegetable fats and oils and their cleavage products; prepared animal fats; animal or vegetable waxes	4.8%
61	Apparel and clothing accessories ; knitted or crocheted	4.3%
90	Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus ; parts and accessories	3.7%
42	Articles of leather ; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)	3.1%
62	Apparel and clothing accessories ; not knitted or crocheted	2.8%



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

Impact on Philippine services sector is positive but small. Business services is negatively affected if conflict escalates.

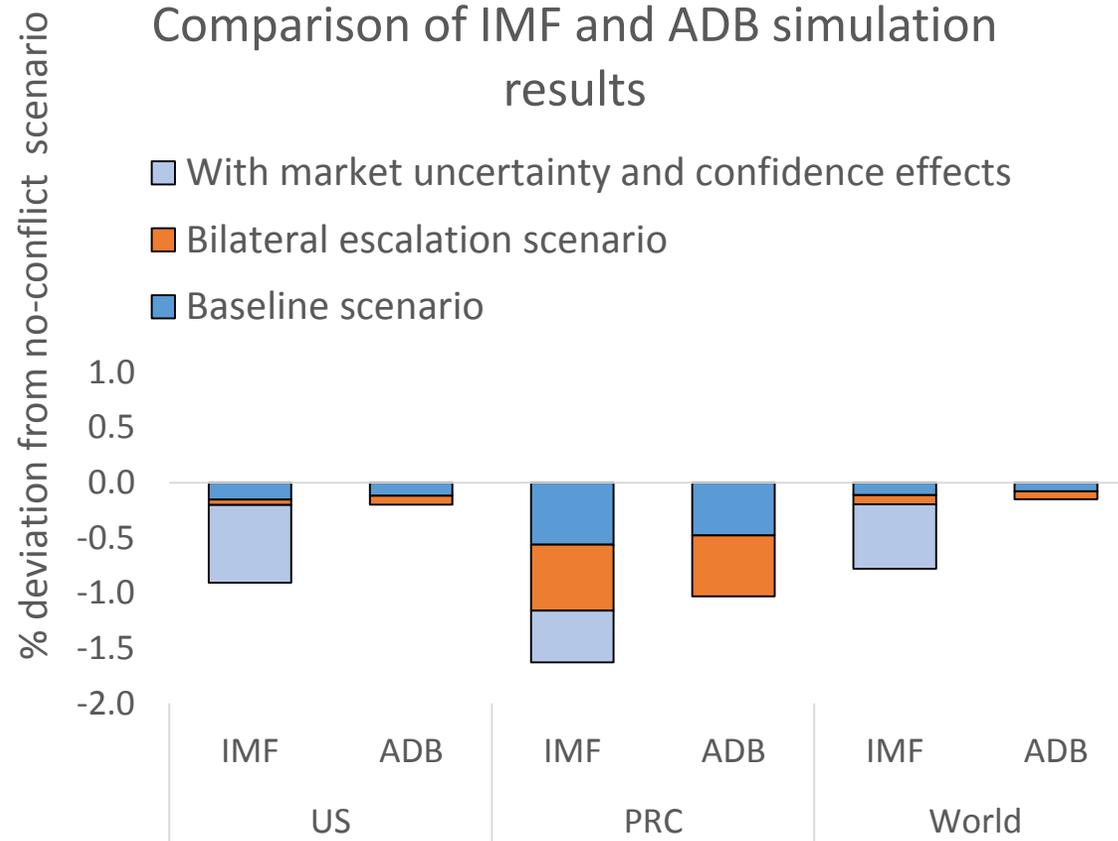


Source: ADB staff calculations using 2017 Multi-Regional Input-Output Table.

A few important caveats, to avoid complacency

- Gains from trade redirection are not automatic or assured—need to compete with others
- Some of these effects may take a while to play out
- New trade arrangements (RCEP, APTA, CPTPP)
- Analysis does not account for effects via confidence and market uncertainty, which are potentially quite large

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



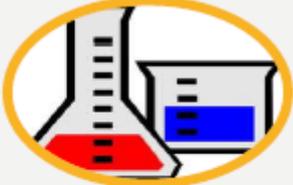
Source: October 2018 IMF World Economic Outlook, September 2018 ADB Asian Development Outlook Update, authors' calculations.

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 0.13% and 0.25%, respectively. Escalation of the US-PRC trade war will magnify 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 0.2-0.7%, primarily in electronics.
- ASEAN peers, including Malaysia and esp. Viet Nam, stand to gain even more from trade redirection.

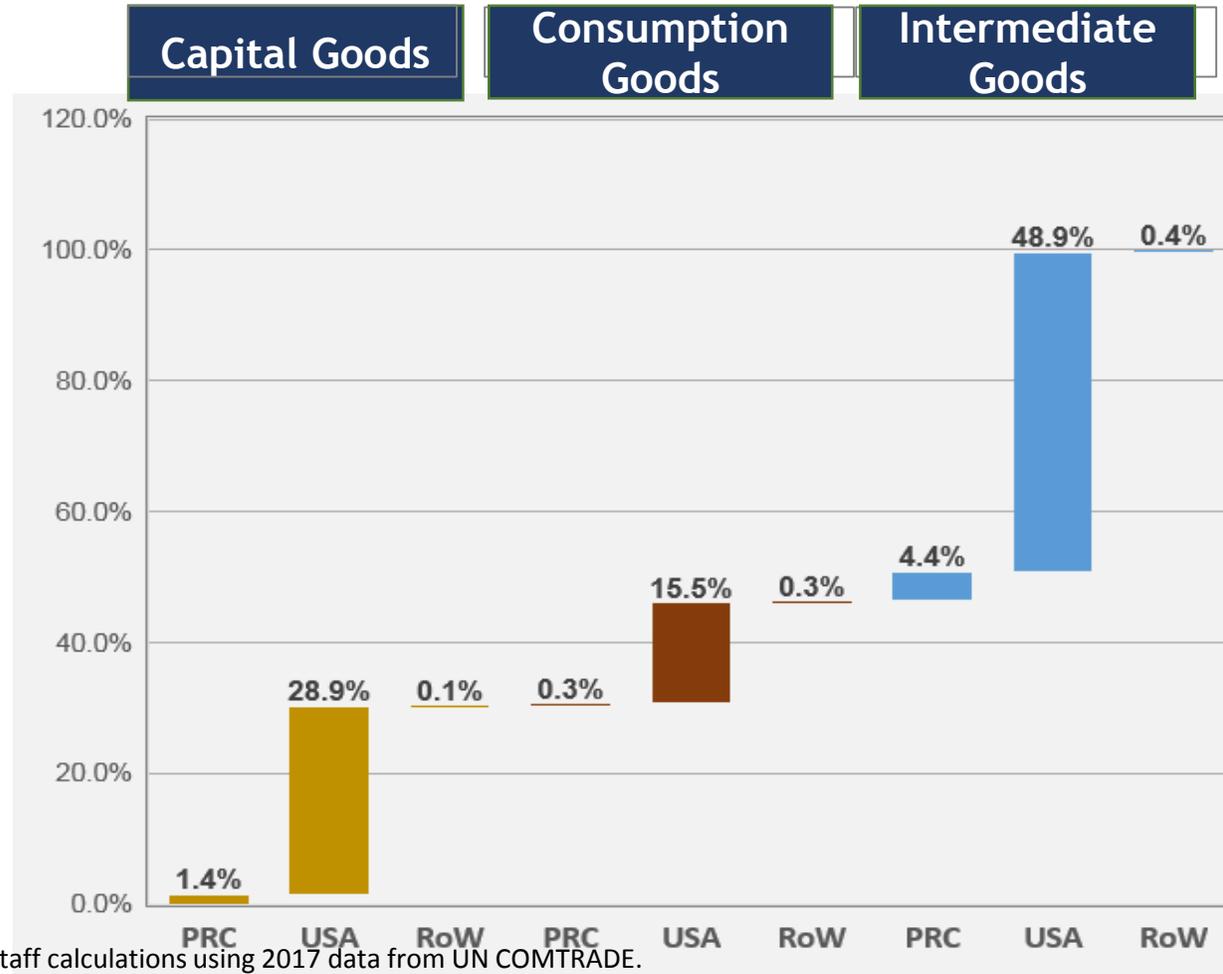
Maraming salammat!

Potential gainers and losers within priority industries

 <p>Aerospace Parts</p>	 <p>Electrical & Electronics</p>	 <p>Auto & Auto Parts</p>	
<ul style="list-style-type: none"> + parts of aircrafts and helicopters + aircraft turbojets 	<ul style="list-style-type: none"> + electronic integrated circuits + ignition wiring sets + transistors + diodes for semiconductors - solar washers 	<ul style="list-style-type: none"> + parts and accessories of tractors and motor vehicles + car seats with metal frame, not upholstered + parts used with spark ignition internal-combustion piston 	
 <p>Tool & Die, Iron & Steel</p>	 <p>Chemicals</p>	 <p>Agri-business</p>	 <p>Furniture, Garments, Creative</p>
<ul style="list-style-type: none"> + steel (not cast) + casing, tubing and drill pipe - alloy steel - iron or non-alloy steel (seamed or welded) 	<ul style="list-style-type: none"> + activated carbon + sodium sulfates + carbonates + personal deodorants and antiperspirants + insecticides 	<ul style="list-style-type: none"> + crabmeat + pizza and quiche + pineapples + soy sauce + frozen tuna fillet + mayonnaise 	<ul style="list-style-type: none"> + wooden, plastic or metal furniture + wooden chairs + headwear + hats and headgear + gloves, mittens and mitts

Almost half of export gains of PH are exports of intermediate goods to the US.

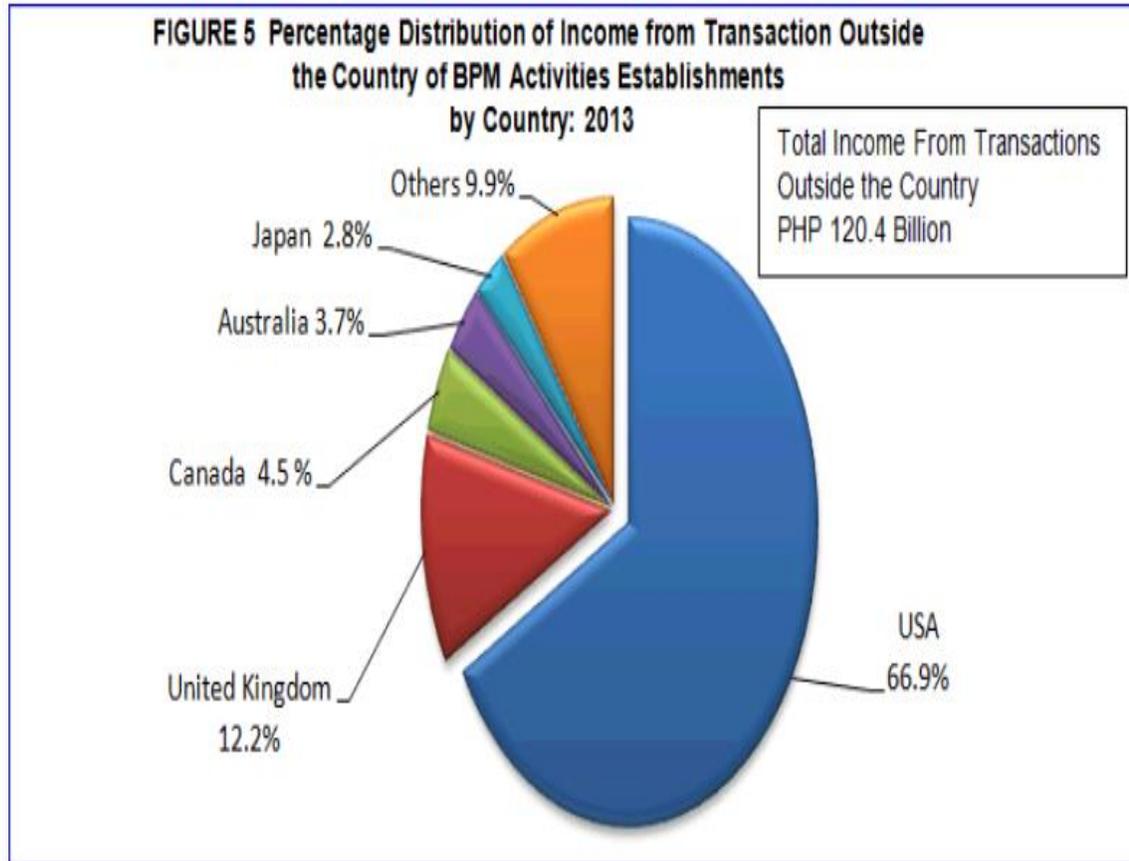
Net export gain of PH under the current scenario, goods classified by type of use



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.

Under worse-case scenario, lower GDP in developed economies may affect demand for PH business services.



Destination of BPM Services	GDP Impact under worse-case
USA	-0.24
United Kingdom	-0.04
Canada	-0.58
Australia	0.02
Japan	-0.21

Source: ADB staff estimates.

Source: Philippine Statistical Authority.



Note: BPM= Business Process Management. It is defined as the leveraging of technology or specialist process vendors to provide and manage an organization's critical and/or non-critical enterprise processes and applications

With trade redirection under the current scenario, PH **machineries and electronics** will reap most of the domestic export gains; **iron and steel** will see a contraction in exports.

Top Gainers

HS Code (2012)	Description	Share to total domestic gain in net exports	Change in exports*
84	Nuclear reactors, boilers, machinery and mechanical appliances ; parts thereof	49.3%	+2.8%
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	27.9%	+0.5%
94	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	7.3%	+10.1%
42	Articles of leather ; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)	6.9%	+6.9%
90	Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus ; parts and accessories	1.5%	+0.5%

Biggest Losers

HS Code (2012)	Description	Share to total domestic exports loss	Change in exports*
73	Iron and steel articles	95.8%	-3.6%
72	Iron or steel	4.2%	-0.6%

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.



The same result is obtained when we look at the **worse case scenario**; but the positive impacts to exports are now much more noticeable

Top Gainers

HS Code (2012)	Description	Share to total domestic gain in net exports	Change in exports*
84	Nuclear reactors, boilers, machinery and mechanical appliances ; parts thereof	35.3%	+5.3%
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	22.8%	+1.0%
94	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	9.9%	+35.5%
42	Articles of leather ; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)	6.5%	+16.9%
95	Toys, games and sports requisites ; parts and accessories thereof	4.6%	+35.2%

Biggest Losers

HS Code (2012)	Description	Share to total domestic exports loss	Change in exports*
73	Iron and steel articles	89.4%	-1.3%
72	Iron or steel	10.6%	-0.6%

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.

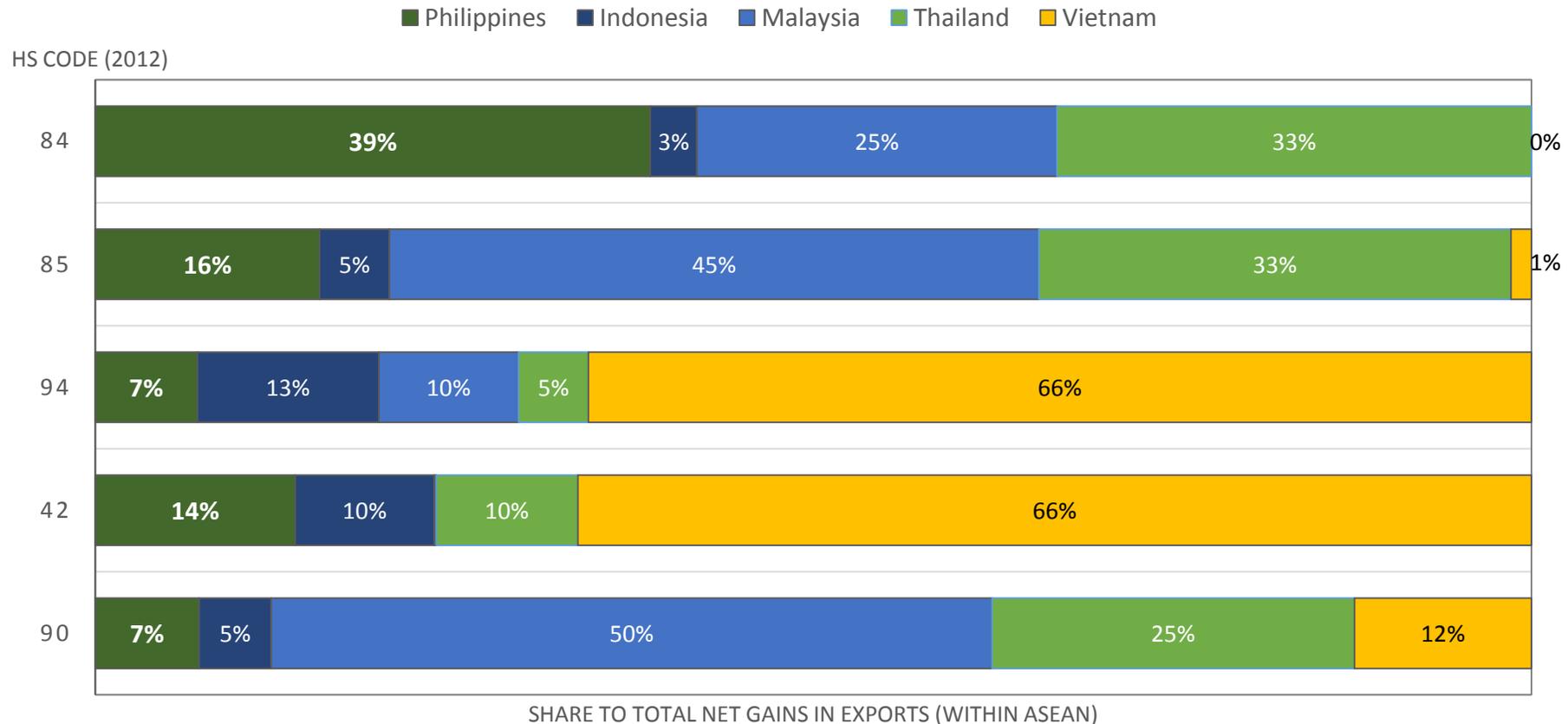
(2) Numbers here reflect estimates under the worse case scenario with trade redirection

* Change in exports to world (HS 2012 classification). Numbers reflect change from 2017 levels.



Other countries may also benefit from trade redirection.
 PH's top gainers **will compete** with similar goods produced
 by ASEAN neighbors.

EXPORT GAINS IN ASEAN (CURRENT SCENARIO)



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

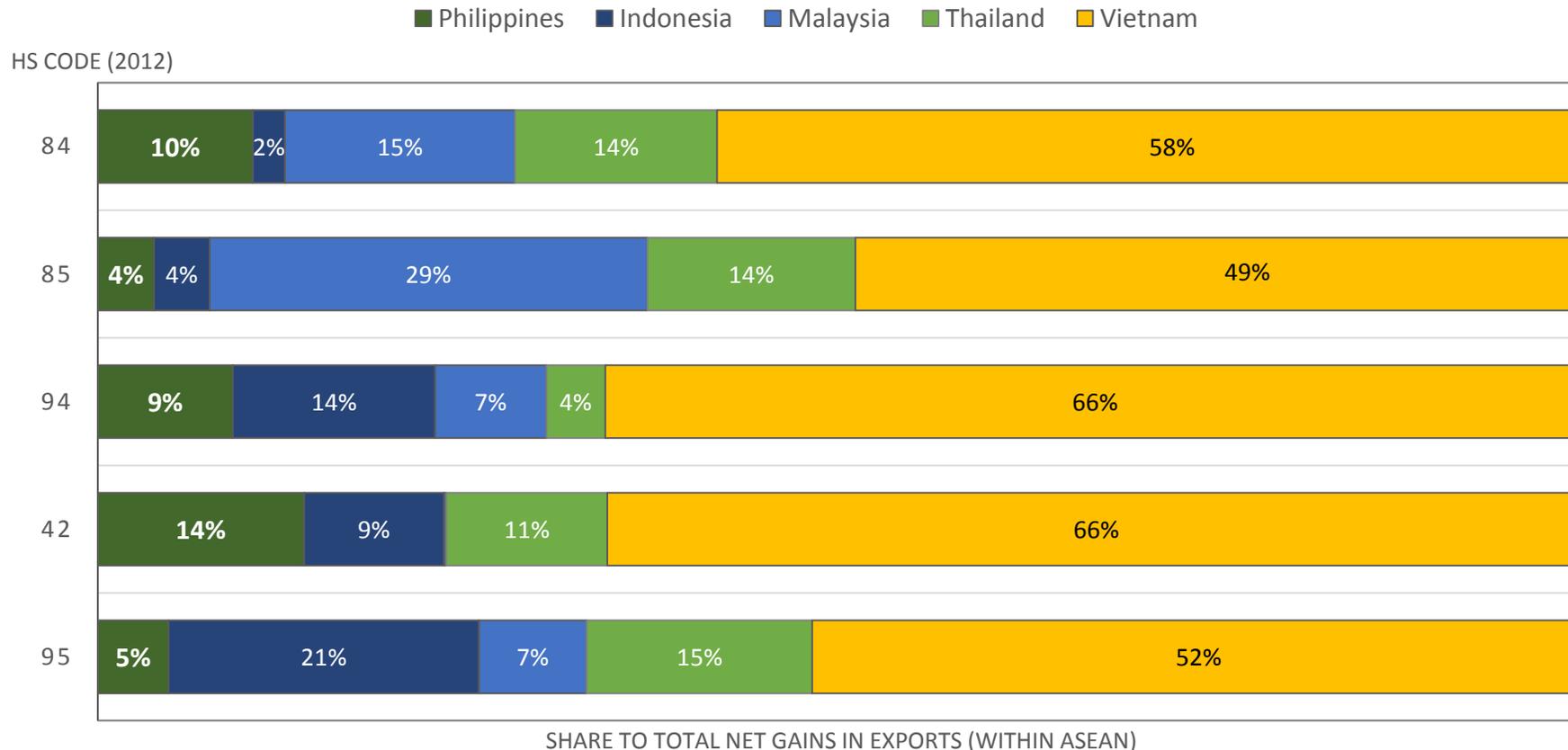
Notes:

- (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.



Under the worse case scenario, **Vietnam** captures sizeable export gains.

EXPORT GAINS IN ASEAN (WORSE-CASE SCENARIO)



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

Notes:

- (1) Numbers here reflect estimates under the worse case scenario with trade redirection.
- (2) HS codes in the x-axis correspond to commodities that will potentially reap the greatest gains under the worse case scenario with trade redirection.

