CAREC Regional Integration Index: Measuring Extent of Regional Cooperation

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Asian Regional Integtration: Summary

- **Regional integration in Asia-Pacific:** Significant progress has been made, but the degree of regional integration varies across different subregions and socioeconomic dimensions

- **Advanced trade and investment integration:** Asian regional integration has been largely driven by trade and investment integration which is as advanced as that in EU; but progress has been slow in institutional and social dimension

- **Regional integration is multidimensional process:** Some dimensions (especially, money and finance/institutional and social framework) require greater attention to promote regional integration

Asian Regional Integration: Open Questions

- Economic benefits of regional integration include expansion of markets, better allocation of resources and risk sharing.

- Costs: Potential contagion, income inequality ?

- Are all dimensions of integration equally desirable ?

- Intraregional integration versus across regions. Does intraregional integration imply inward orientation ?

- APRII can assess not only the state of regional integration, but the economic analysis of costs and benefits, and optimal extent of regional integration.

Asian Regional Integration Index: Suggestions on methodology

- Robustness checks to determine optimal composition of dimensional indicators

- Assess contribution of each dimensional index to the overall index

- Construction of historical series for comparison over time.

- Consider the normalization technique (panel or annual) to utilize in constructing the historical series for APRII
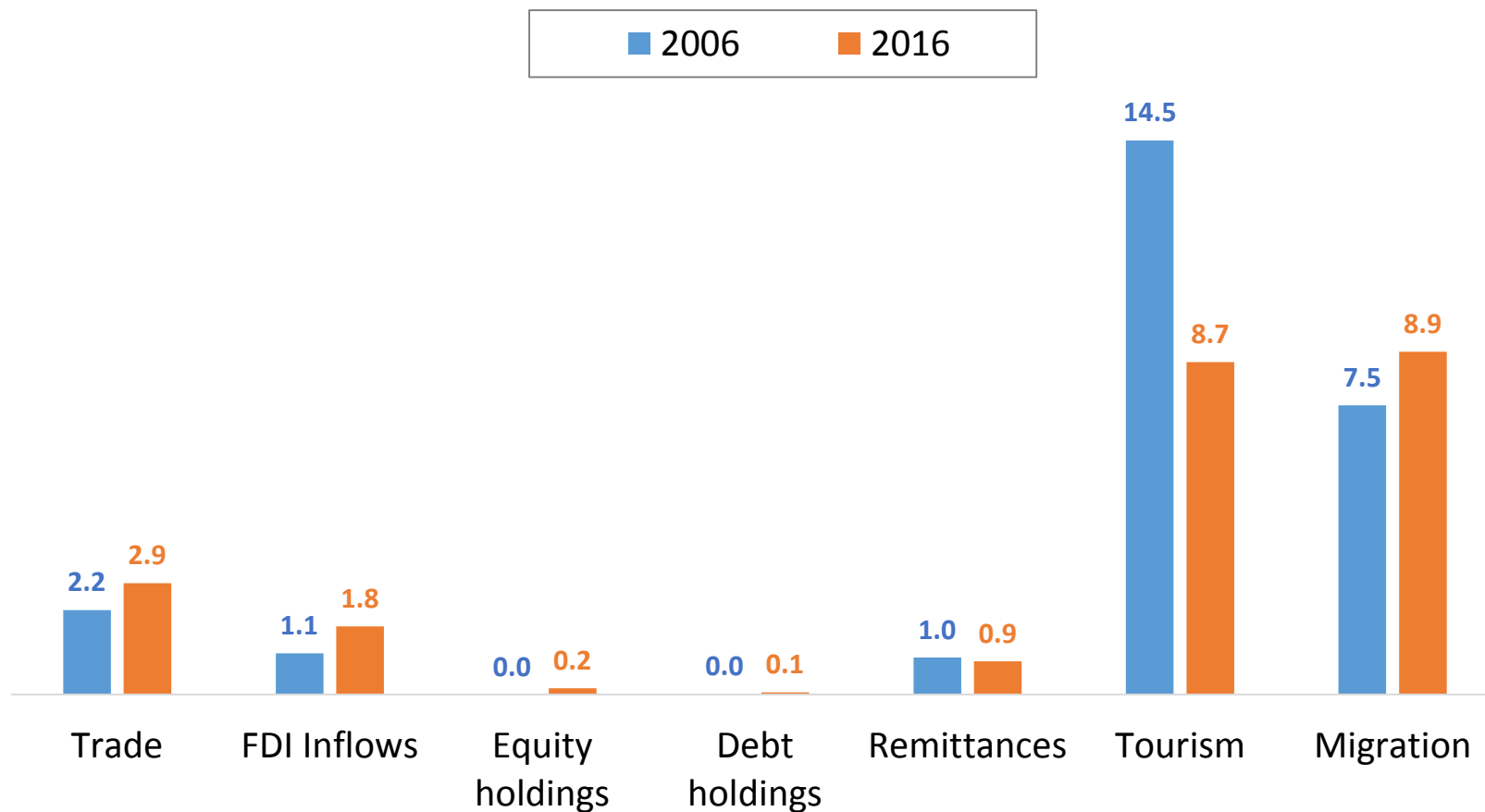
CAREC Regional Integration

Regional Integration Indicators: Asia (% share)
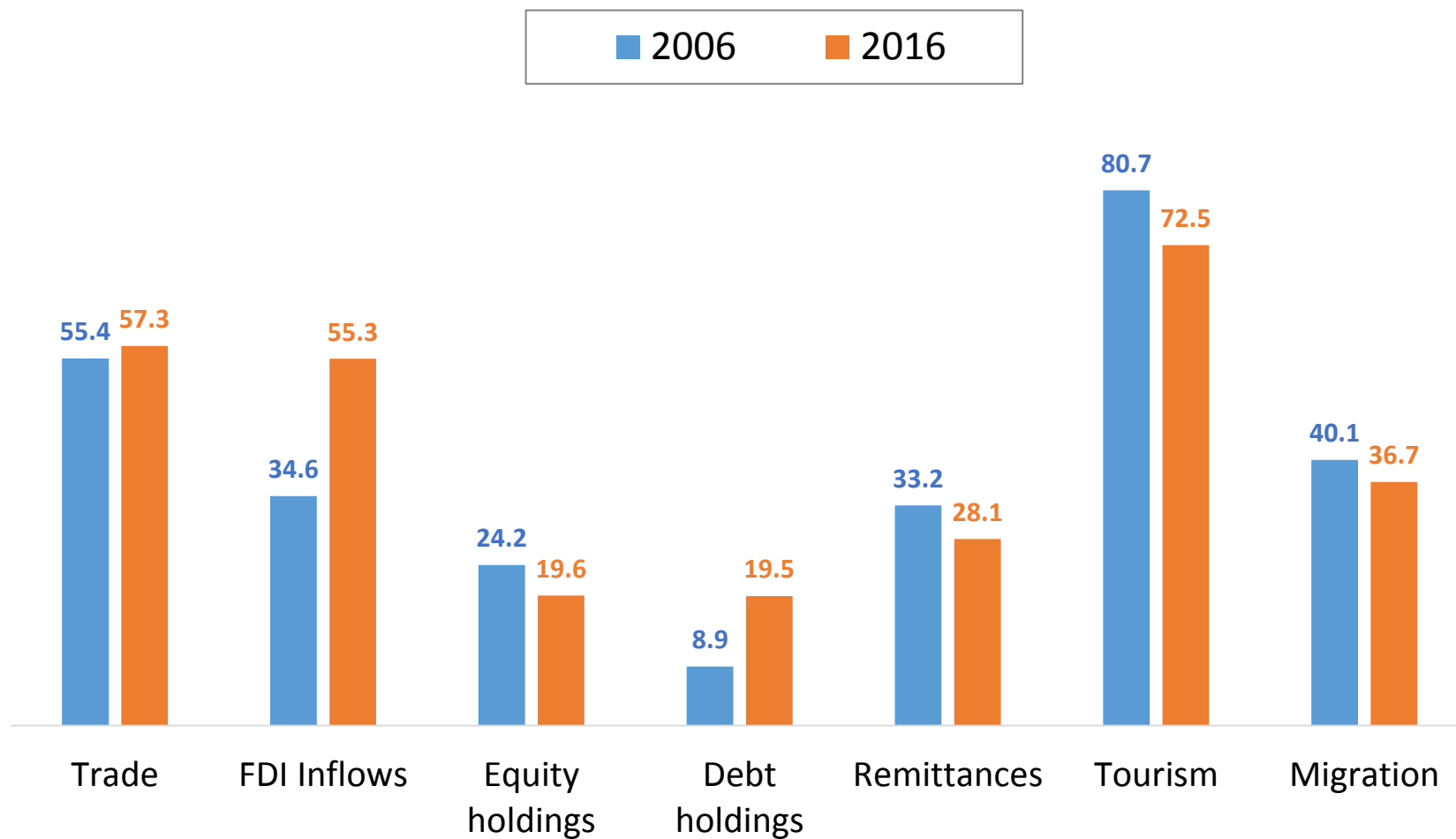
Legend: ■ 2006 ■ 2016

Indicator	2006	2016
Trade	55.4	57.3
FDI Inflows	34.6	55.3
Equity holdings	24.2	19.6
Debt holdings	8.9	19.5
Remittances	33.2	28.1
Tourism	80.7	72.5
Migration	40.1	36.7

Note: Equity and Debt – as of June 2016. Remittances -- data starts 2010. Tourism -- latest available data is up to 2015 only. Migration --- data is available on 5 year interval (2005 and 2015 figures are used).
Source: ADB calculations using preliminary data from ADB. *Asian Economic Integration Report 2017*. Forthcoming.

Regional Integration Indicators: Within CAREC
(% share)

Legend: ■ 2006 ■ 2016

Indicator	2006	2016
Trade	2.2	2.9
FDI Inflows	1.1	1.8
Equity holdings	0.0	0.2
Debt holdings	0.0	0.1
Remittances	1.0	0.9
Tourism	14.5	8.7
Migration	7.5	8.9

Note: Equity and Debt – as of June 2016. Remittances -- data starts 2010. Tourism -- latest available data is up to 2015 only. Migration --- data is available on 5 year interval (2005 and 2015 figures are used).
Source: ADB calculations using preliminary data from ADB. *Asian Economic Integration Report 2017*. Forthcoming.
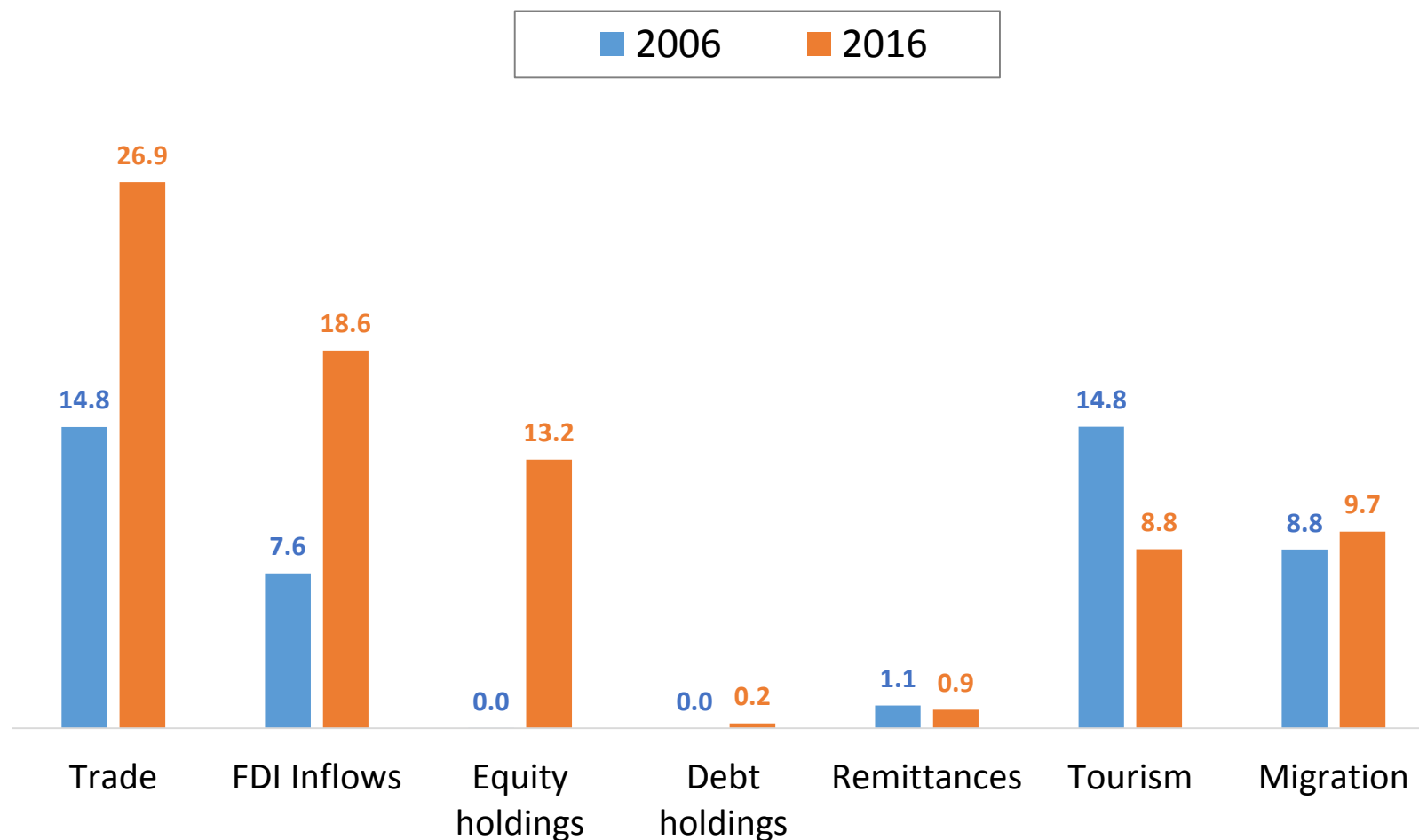
Intrasubregional Integration Indicators: Within CAREC ex-PRC
(% share)

Legend: ■ 2006 ■ 2016

Indicator	2006	2016
Trade	14.8	26.9
FDI Inflows	7.6	18.6
Equity holdings	0.0	13.2
Debt holdings	0.0	0.2
Remittances	1.1	0.9
Tourism	14.8	8.8
Migration	8.8	9.7

Note: Equity and Debt – as of June 2016. Remittances -- data starts 2010. Tourism -- latest available data is up to 2015 only. Migration --- data is available on 5 year interval (2005 and 2015 figures are used).
Source: ADB calculations using preliminary data from ADB. *Asian Economic Integration Report 2017*. Forthcoming.
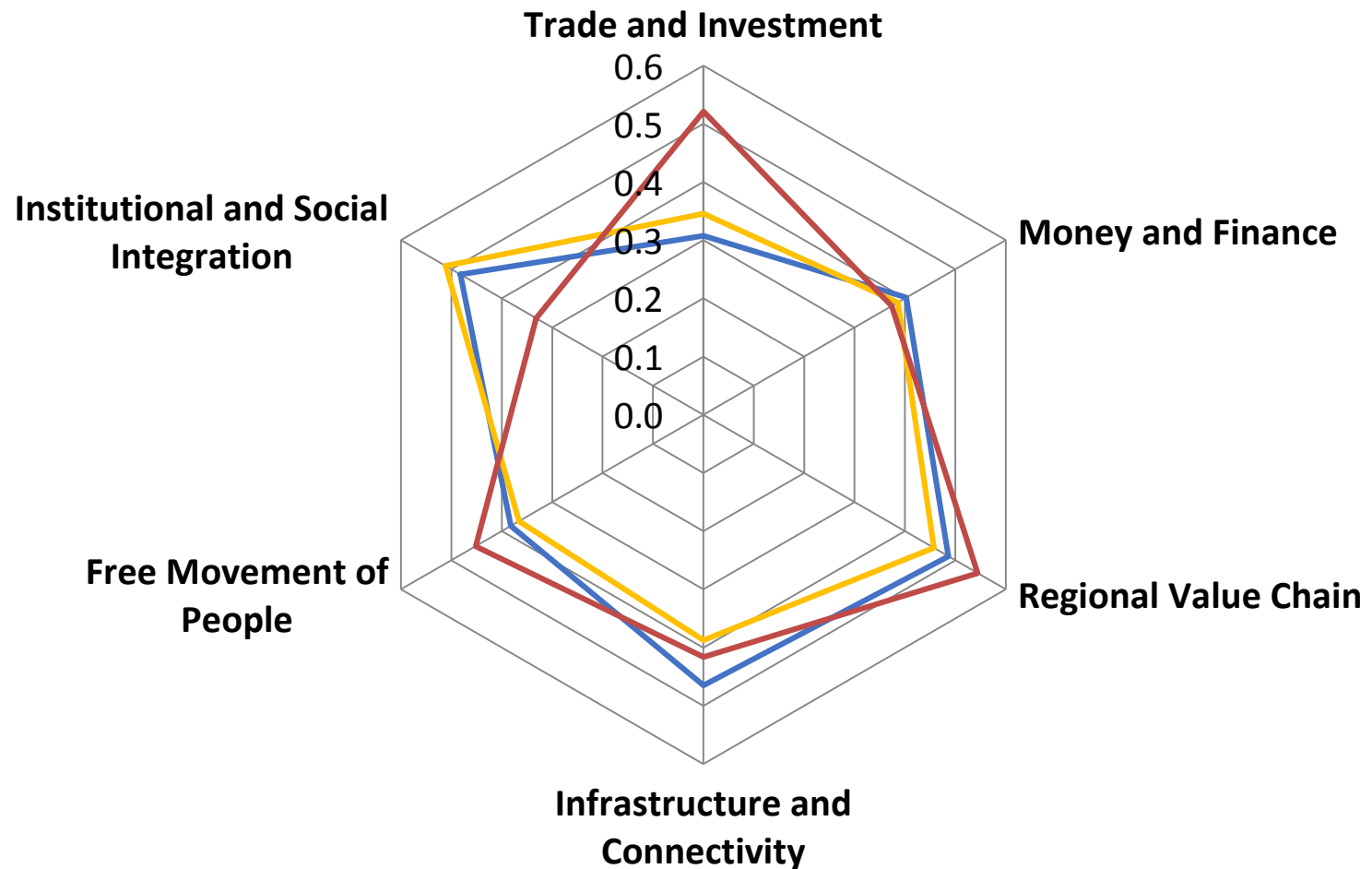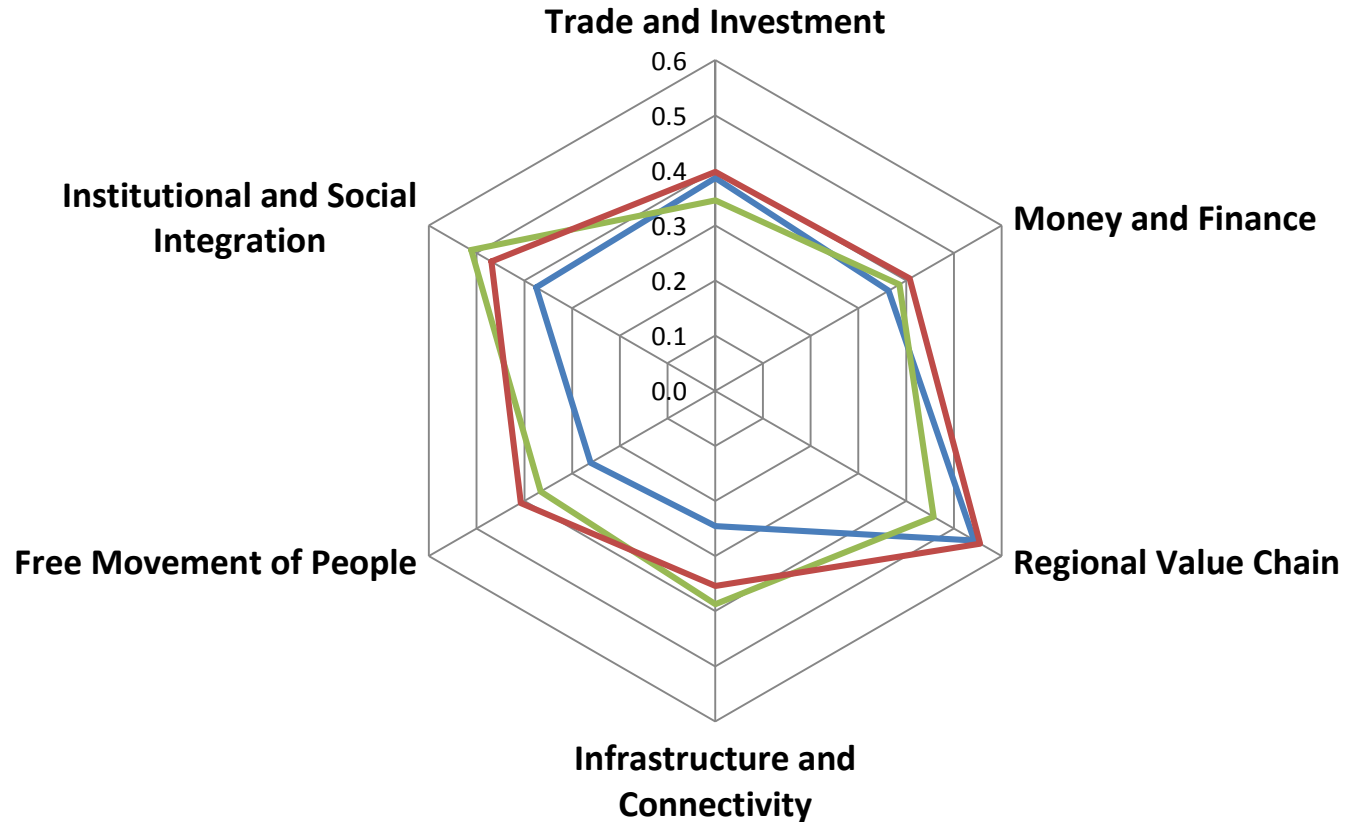
CAREC Integration Indicators, 2013

Legend:
- Intrasubregional RII: CAREC ex-PRC
- Intrasubregional RII: CAREC
- Intraregiona RII: Asia

Integration Indicators—CAREC with Asia, 2013

Trade and Investment

Money and Finance

Regional Value Chain

Infrastructure and Connectivity

Free Movement of People

Institutional and Social Integration
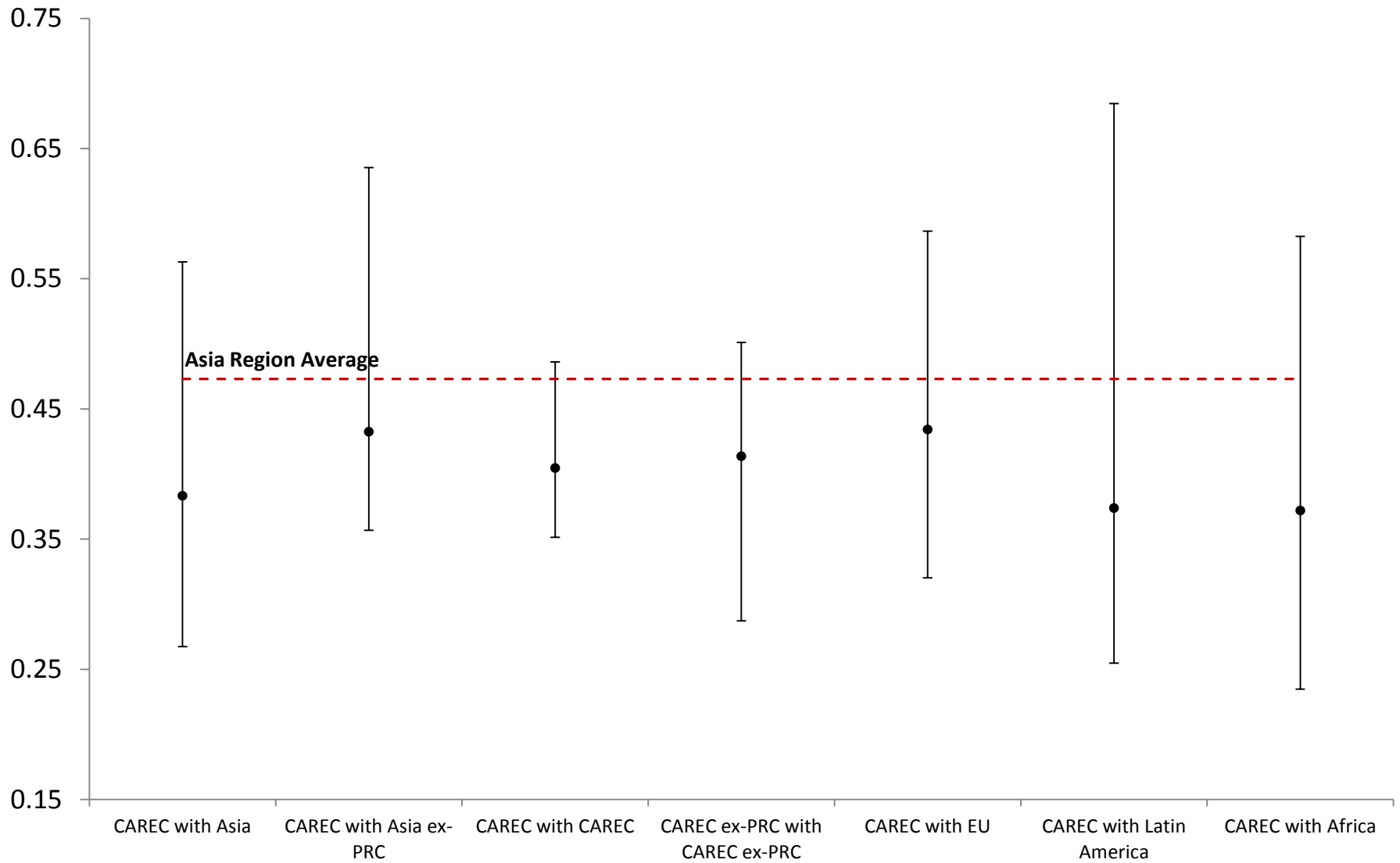
0.6
0.5
0.4
0.3
0.2
0.1
0.0

—— CAREC with Asia   —— CAREC with CAREC (intrasubregional)   —— CAREC with Asia ex-PRC

CAREC Overall Integration Indexes

Data Availablility: CAREC's Intrasubregional RII

	Country	R1: Trade and Investment	R2: Money and Finance	R3: Regional Value Chain	R4: Infrastructure and Connectivity	R5: Free Movement of People	Overall Integration Index
1	Azerbaijan	🟧		🟩	🟥	🟪	
2	Georgia	🟧	🟦	🟩	🟥	🟪	🟨
3	Kazakhstan	🟧	🟦	🟩	🟥	🟪	🟨
4	Kyrgyz Republic	🟧	🟦	🟩	🟥	🟪	🟨
5	Tajikistan	🟧		🟩	🟥	🟪	
6	Turkmenistan			🟩		🟪	
7	Uzbekistan	🟧		🟩	🟥	🟪	
8	PRC	🟧	🟦	🟩	🟥	🟪	🟨
9	Mongolia	🟧	🟦	🟩	🟥	🟪	🟨
10	Afghanistan	🟧		🟩	🟥	🟪	
11	Pakistan	🟧	🟦	🟩	🟥	🟪	🟨

CAREC Regional Integration: Summary

- CAREC is more integrated within than with Asia except for the dimension of trade and investment, and regional value chains. CAREC ex-PRC is more integrated than with Asia except for the dimensions of infrastructure connectivity, and institutional and social integration.

- CAREC's RII is below that of Asia RII in trade and investment, regional value chain, and free movement of people. It is substantially above the Asia RII in the area of institutional and social integration. These observations are also true for CAREC ex-PRC.

- For infrastructure, CAREC RII is below Asian but the opposite is true for CAREC ex-PRC.

- Both CAREC and CAREC ex-PRC RIIs are a bit higher than that of Asia in the area of money and finance. However, based on a limited sample (excludes Afghanistan, Azerbaijan, Turkmenistan, Tajikistan and Uzbekistan)

Way Forward on CRII

- For further improvement, CAREC Institute might help fill in the data gaps (i.e. mostly for Turkmenistan and financial indicators for many CAREC economies).

- Due to data limitations, the infra and connectivity dimension includes non-bilateral data (LPI and Doing Business). The quality of data used for this dimension could still be improved by utilizing the bilateral data from the CPMM.

- CAREC Institute may want to explore constructing a historical series.

Trade facilitation indicators in CAREC

CARECCPMM
CORRIDOR
PERFORMANCE
MEASUREMENT &
MONITORING

|	
TFI1	**Time taken to clear a border crossing point (hours)** Average length of time (hours) it takes to move cargo (20 tons) across a border from the exit point of one country to the entry point of another; to capture both the complexity and the inefficiencies inherent in the border crossing process.
TFI2	**Cost incurred at border crossing clearance ($)** Average total cost ($) of moving cargo (20 tons) across a border from the exit point of one country to the entry point of another; Both official and unofficial payments are included.
TFI3	**Cost incurred to travel a corridor section (per 500 kilometer per 20-ton cargo)** Average total cost ($) incurred for a unit of cargo (a cargo truck or train with 20 tons of goods) traveling along a corridor section within a country or across borders. Both official and unofficial payments are included.
TFI4	**Speed to travel with delay on CAREC corridors (kilometers per hour), (speed with delay)** Average speed (kilometers per hour) at which a unit of cargo travels along a corridor section (a stretch of road 500 kilometer long) within a country or across borders. The total time taken for the entire journey. Distance and time measurements include border crossings. An indicator of the efficiency of border crossing points along the corridors.
TFI5	**Speed to travel without delay on CAREC corridors (kilometers per hour)–(speed without delay)** Traveling speed only. A measure of the condition of physical infrastructure (such as road and railways).

Trade in Services

Intra-Asian FDI by sector, mode of entry Number of Projects, 2011-2015

(a) Greenfield
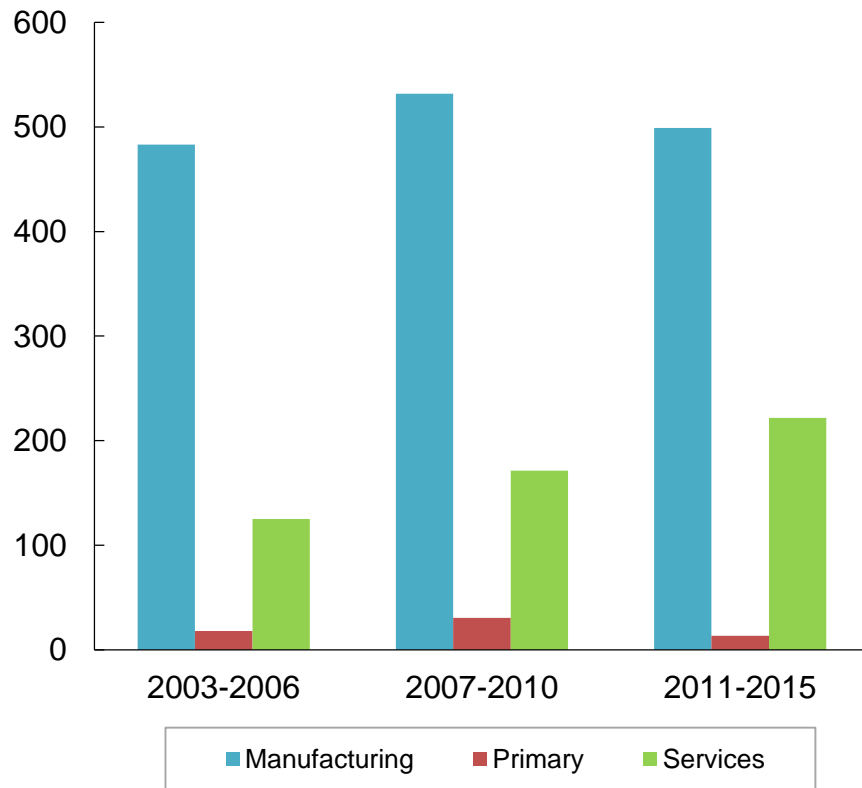
(b) M&A
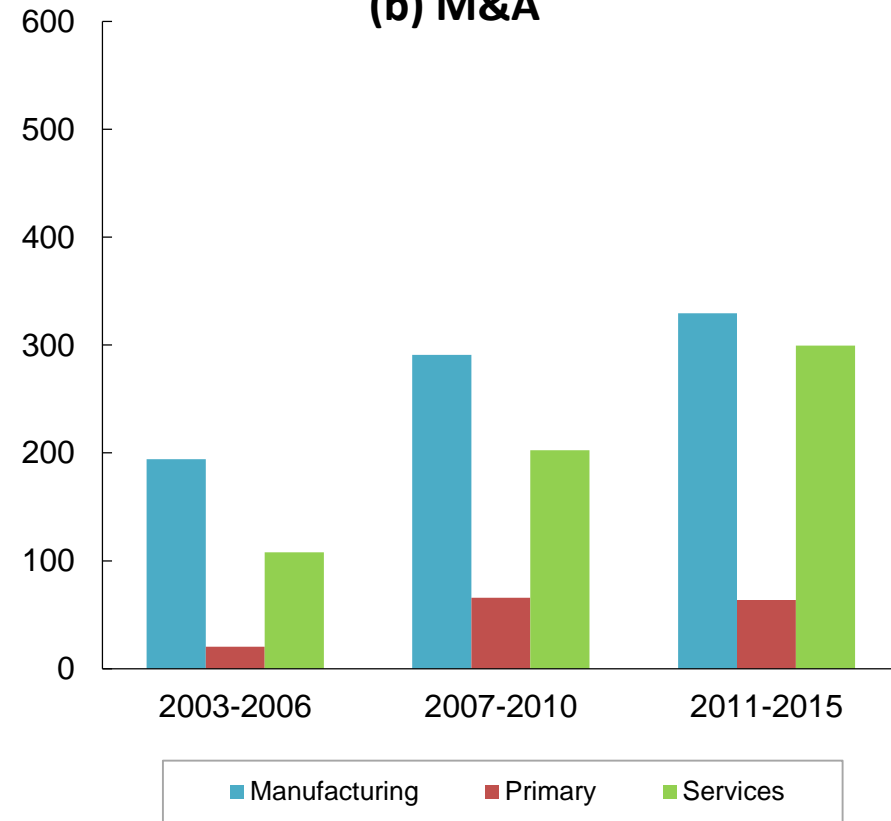
Source: ADB calculations using M&A data from Zephyr database, and fDi Markets, Financial Times.

The CAREC Trade Policy Strategic Action Plan recognizes the expansion of trade in services as a core policy goal to help reduce barriers faced by landlocked Central Asian economies.

Some crucial actions for promoting services exports include:

- developing human capital for skilled services
- enhancing cultural endowments that attract tourists
- improving infrastructure (especially telecommunications networks that facilitate service delivery)
- raising institutional quality

**Reference** Aid for Trade in Asia and the Pacific: Promoting Connectivity for Inclusive Development

Services Trade to GDP Ratio

Source: ADB calculations using data from International Trade Centre Trade Map. http://www.trademap.org (accessed June 2017).
International Monetary Fund. World Economic Outlook April 2017 Database. https://www.imf.org. (accessed April 2017).

The State of Play in Digital Infrastructure

Internet Users and Mobile Cellular and Fixed Broadband Subscriptions in CAREC and ASEAN, 2000–2015 (per 100 people)

a. Mobile cellular subscriptions
b. Fixed broadband subscriptions
c. Internet users

Legend: CAREC — CAREC ex-PRC — ASEAN
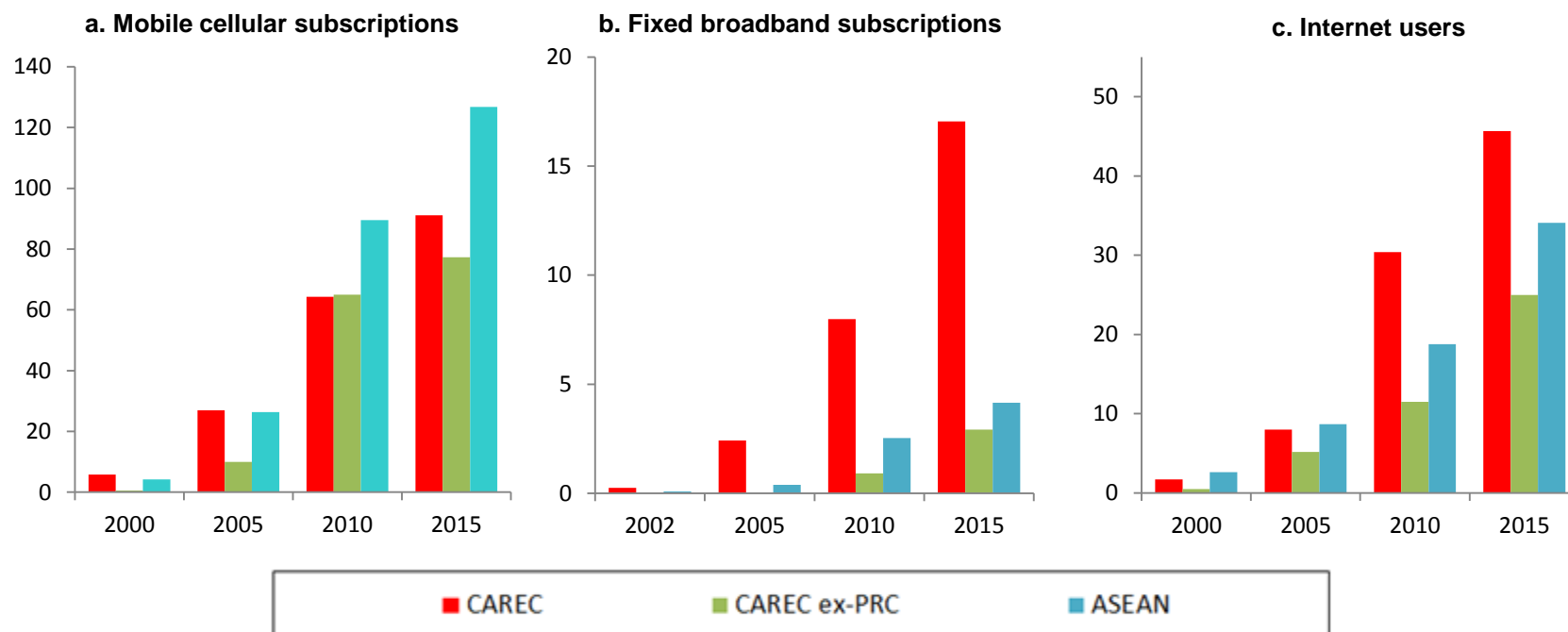
Note: For fixed broadband subscriptions, 2002 reported the required (earliest year) data for the largest number of constituent countries in each subregion.
Source: World Bank. World Development Indicators. http://www.data.worldbank.org (accessed April 2017).

State of Play:
Trade Facilitation in CAREC in a comparative context

Stock Taking: Distance to Frontier in the Ease of Trading Across Borders, 2014 and 2016
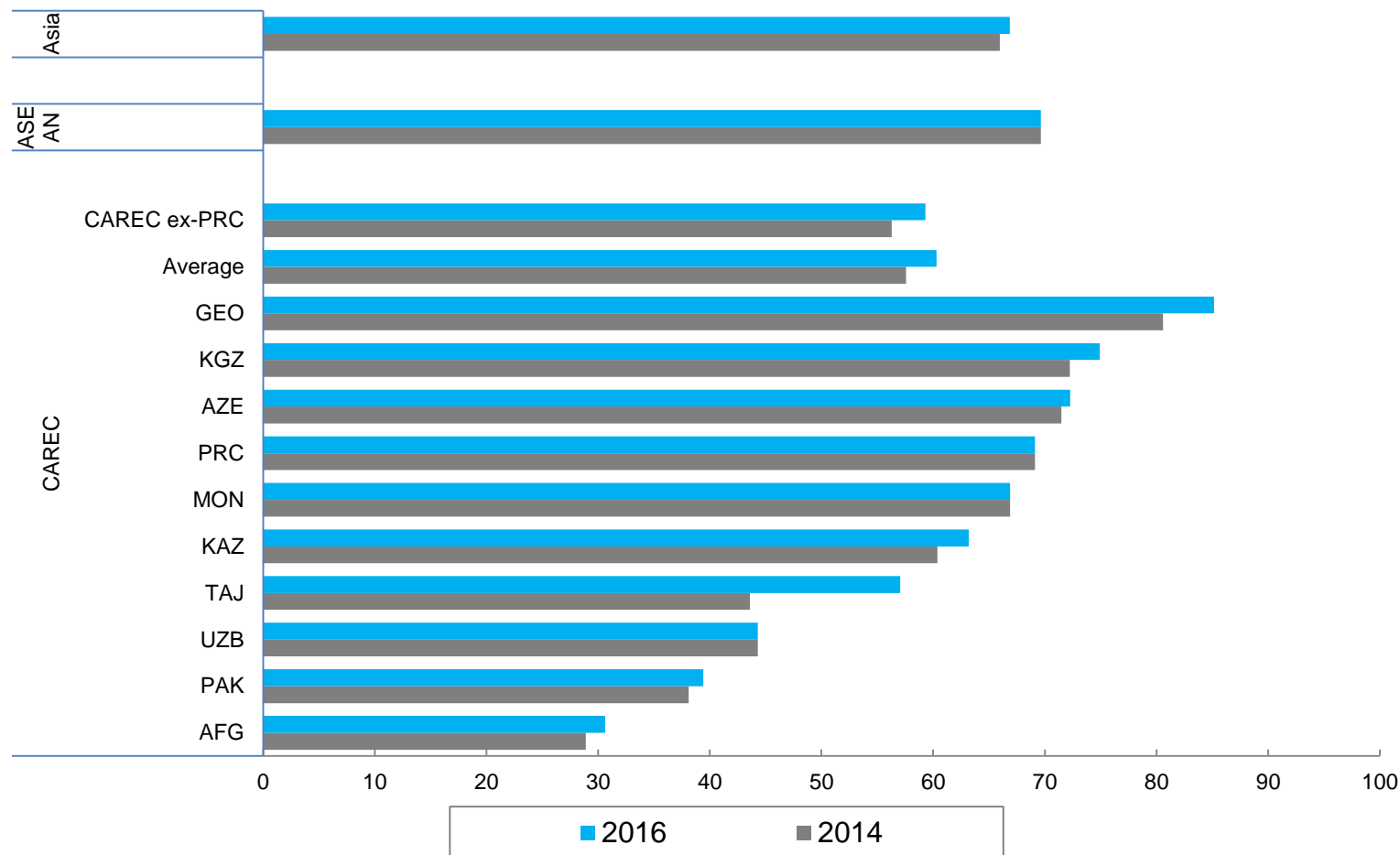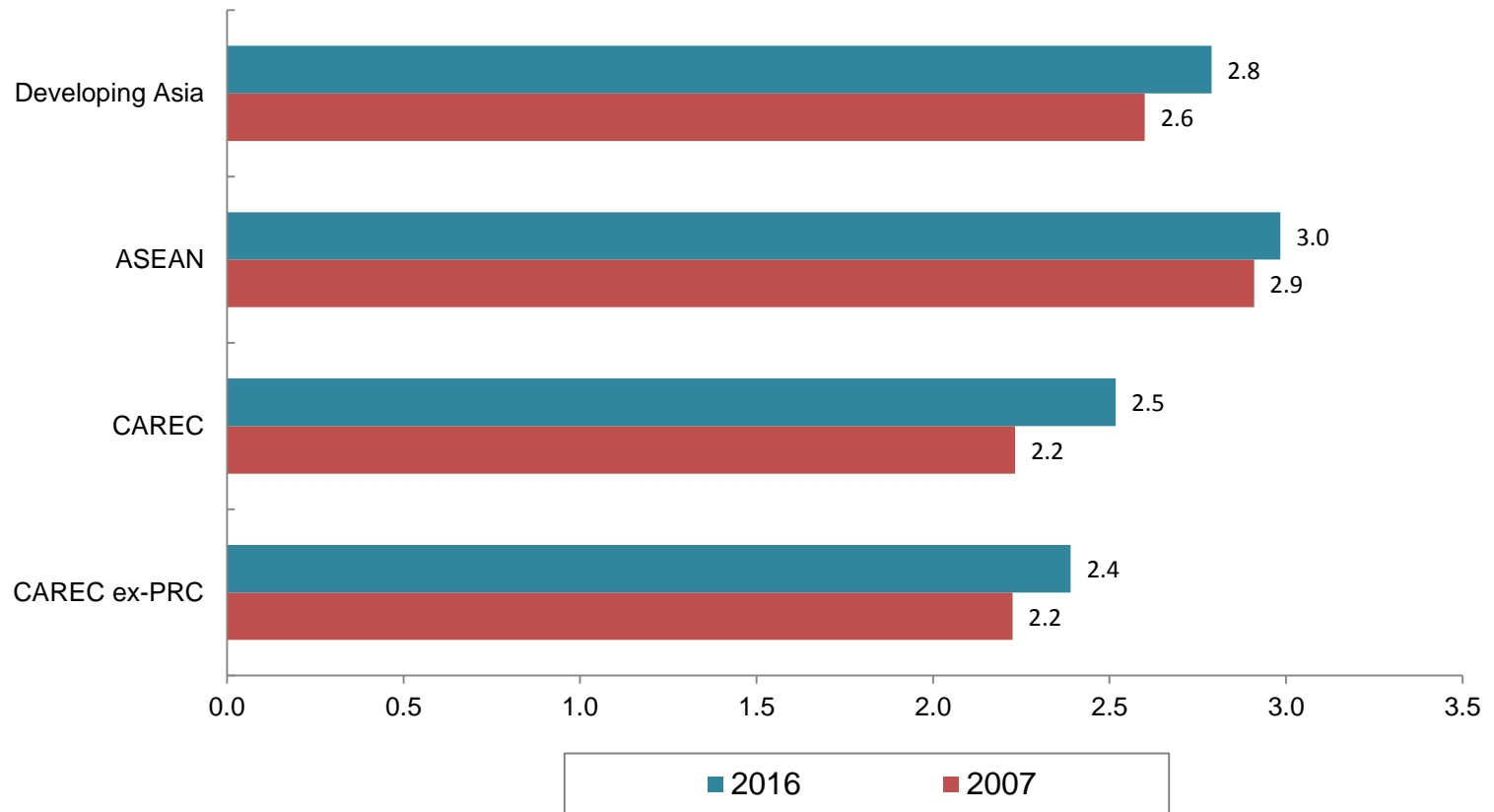

AFG = Afghanistan, AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, UZB = Uzbekistan.
Note: Data in Doing Business 2015 are for June 2014 (covering June 2013–June 2014) and June 2016 (covering June 2015–June 2016) for Doing Business 2017. Asia refers to Developing Asia.
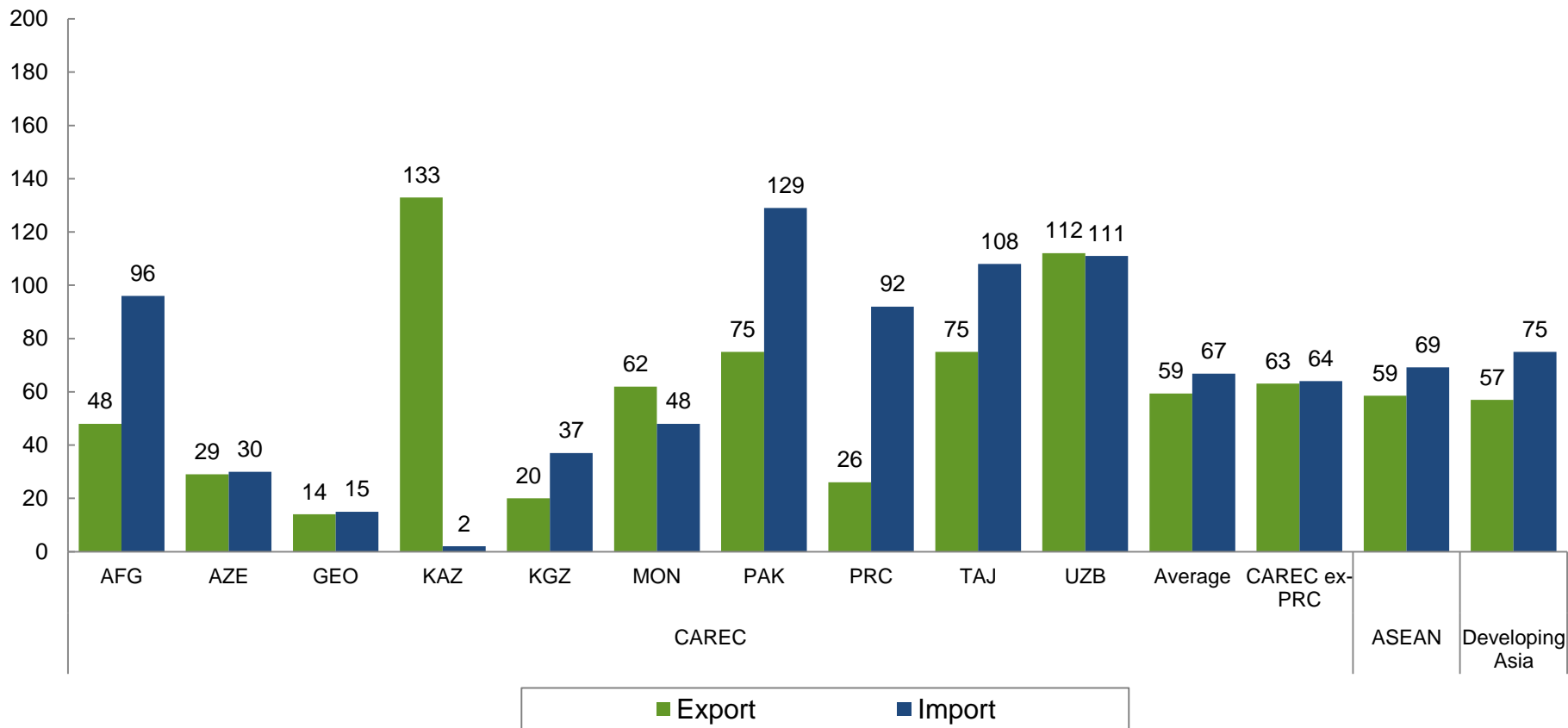Source: World Bank. Doing Business Database (accessed March 2017).

Logistics Performance Index in CAREC, ASEAN and Developing Asia, 2007 and 2016

Source: World Bank. Logistics Performance Index Database. http://lpi.worldbank.org/ (accessed May 2017).
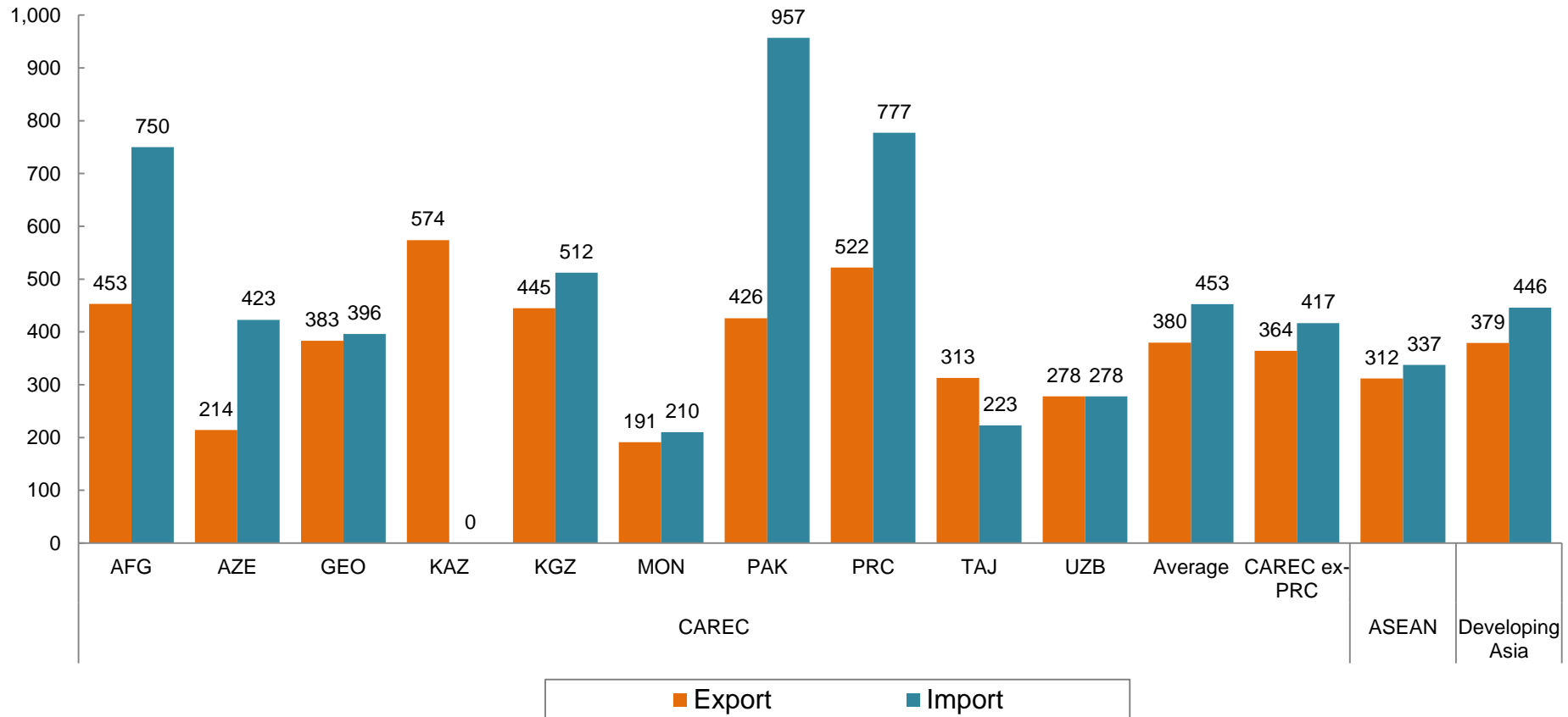
Time to Export and Import—Border Compliance, 2016 (hours)

AFG = Afghanistan, AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, UZB = Uzbekistan.
Source: World Bank. Doing Business Database (accessed March 2017).

Cost to Export and Import—Border Compliance, 2016 ($)

AFG = Afghanistan, AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, UZB = Uzbekistan.
Source: World Bank. Doing Business Database (accessed March 2017).