



**POLICY OPTIONS AND CHALLENGES
FOR DEVELOPING ASIA—
PERSPECTIVES FROM THE IMF AND ASIA**
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**RISING INEQUALITY
AND POLARIZATION IN ASIA**

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Rising Inequality and Polarization in Asia

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Outline

- I. Trends and Patterns of Inequality and Polarization in Asia
- II. Determinants of Inequality and Polarization
 - A. Economic Growth
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- III. Policy Implications

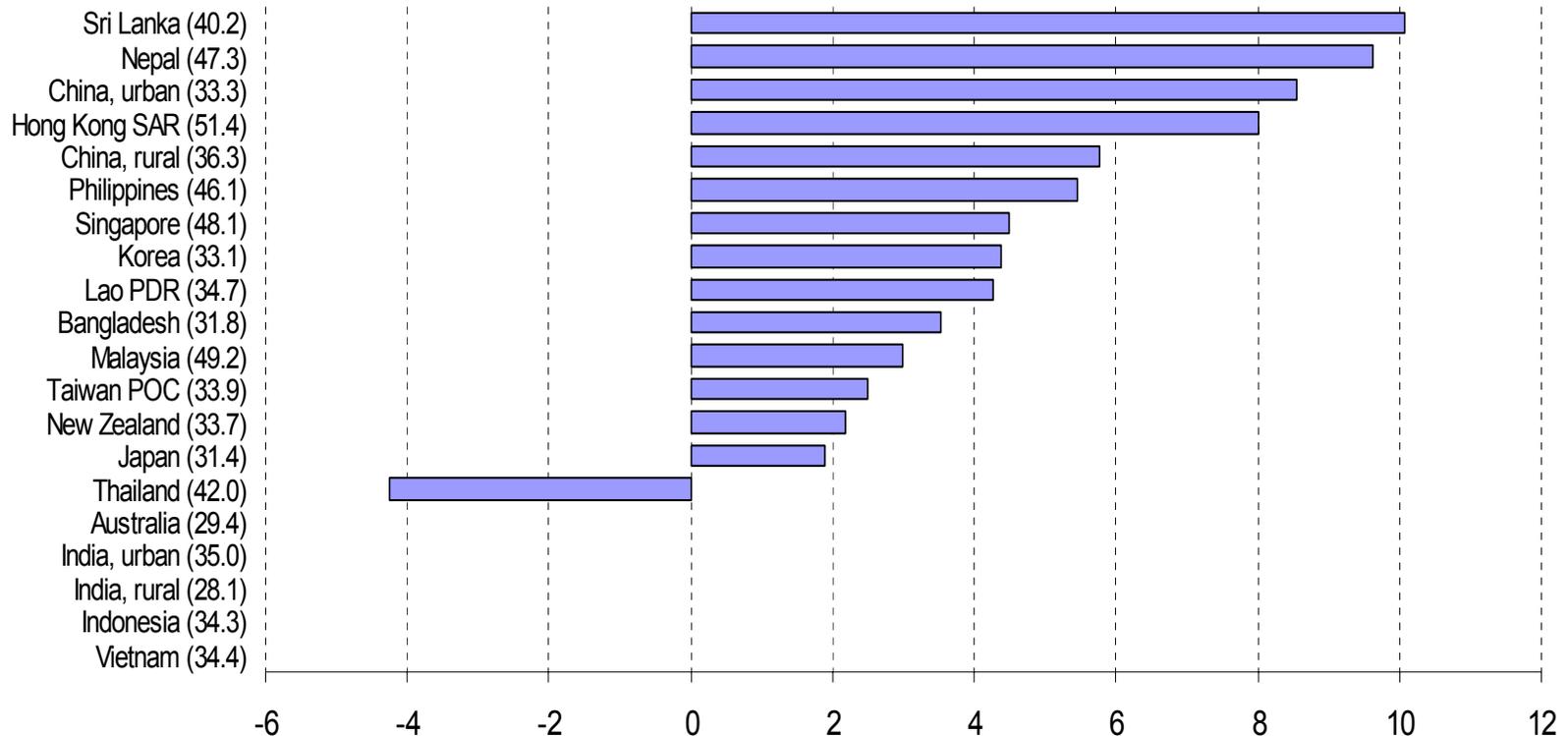
I. Trends and Patterns of Inequality and Polarization in Asia



Income inequality has picked up in a broad and diverse set of countries

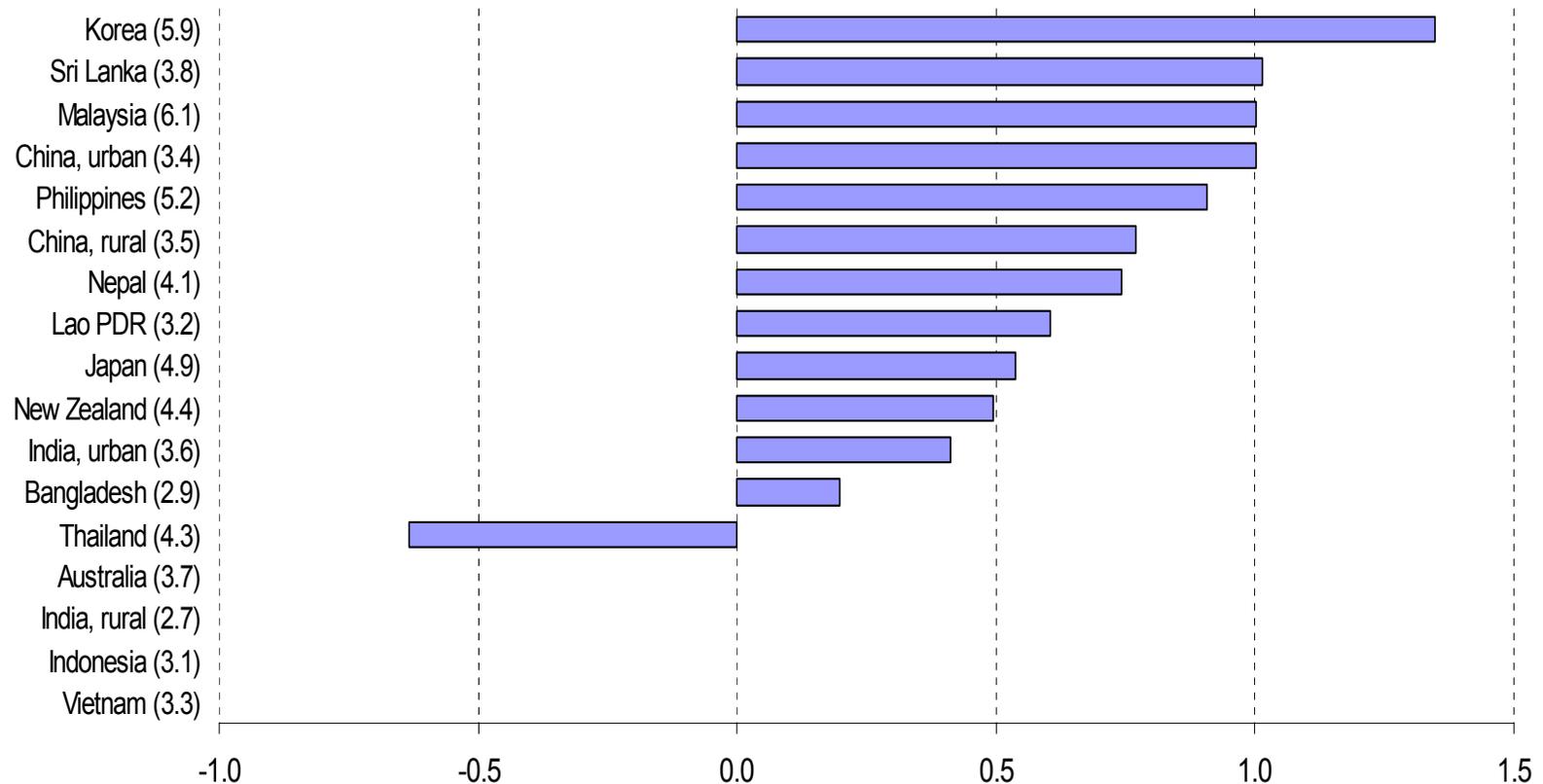
Change in Gini Index, Last Ten Years

(Gini Points)



The income gap between rich and poor is widening

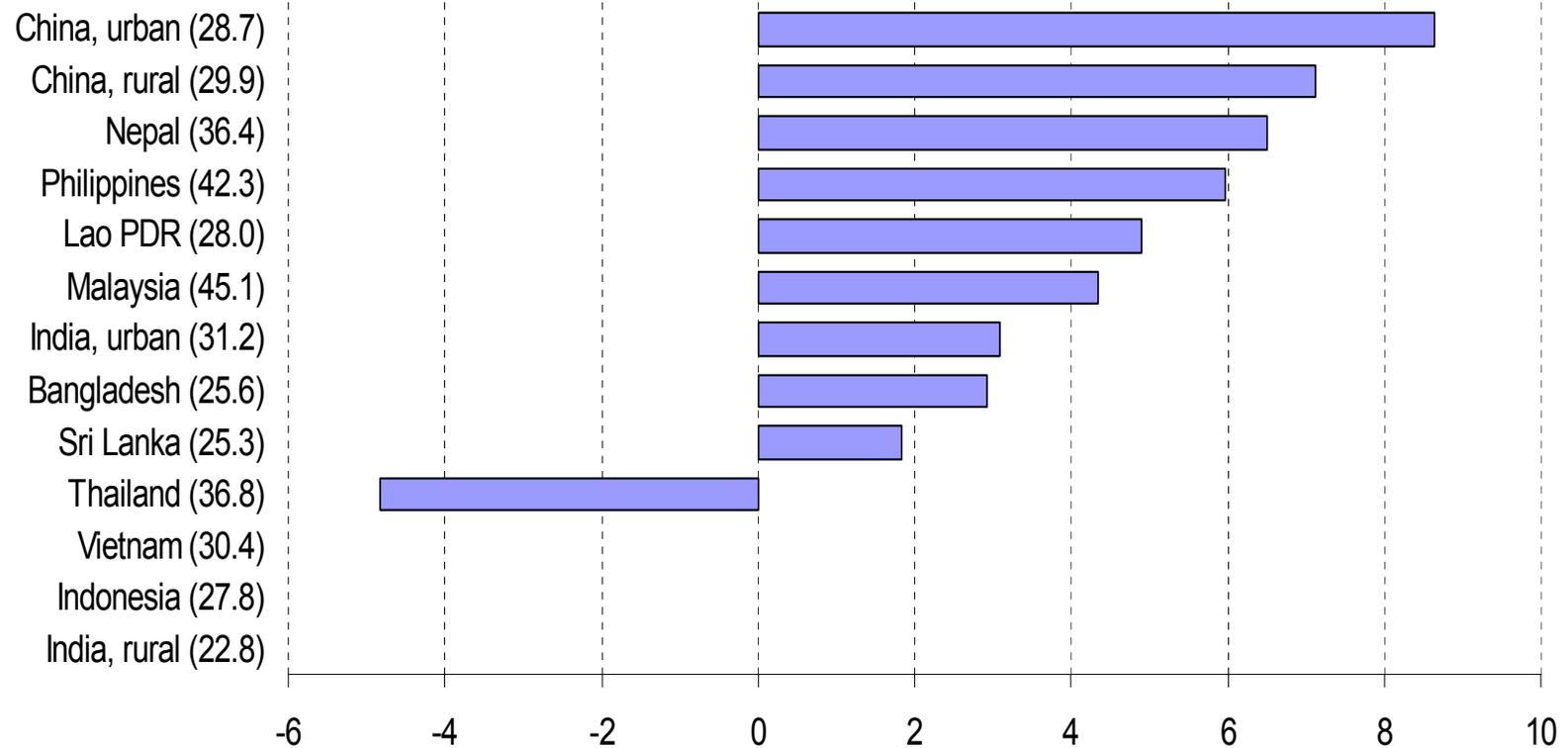
Change in Decile Mean Ratio (D9/D2), Last Ten Years



Economies have become more polarized with respect to income

Change in the Polarization Index, Last Ten Years

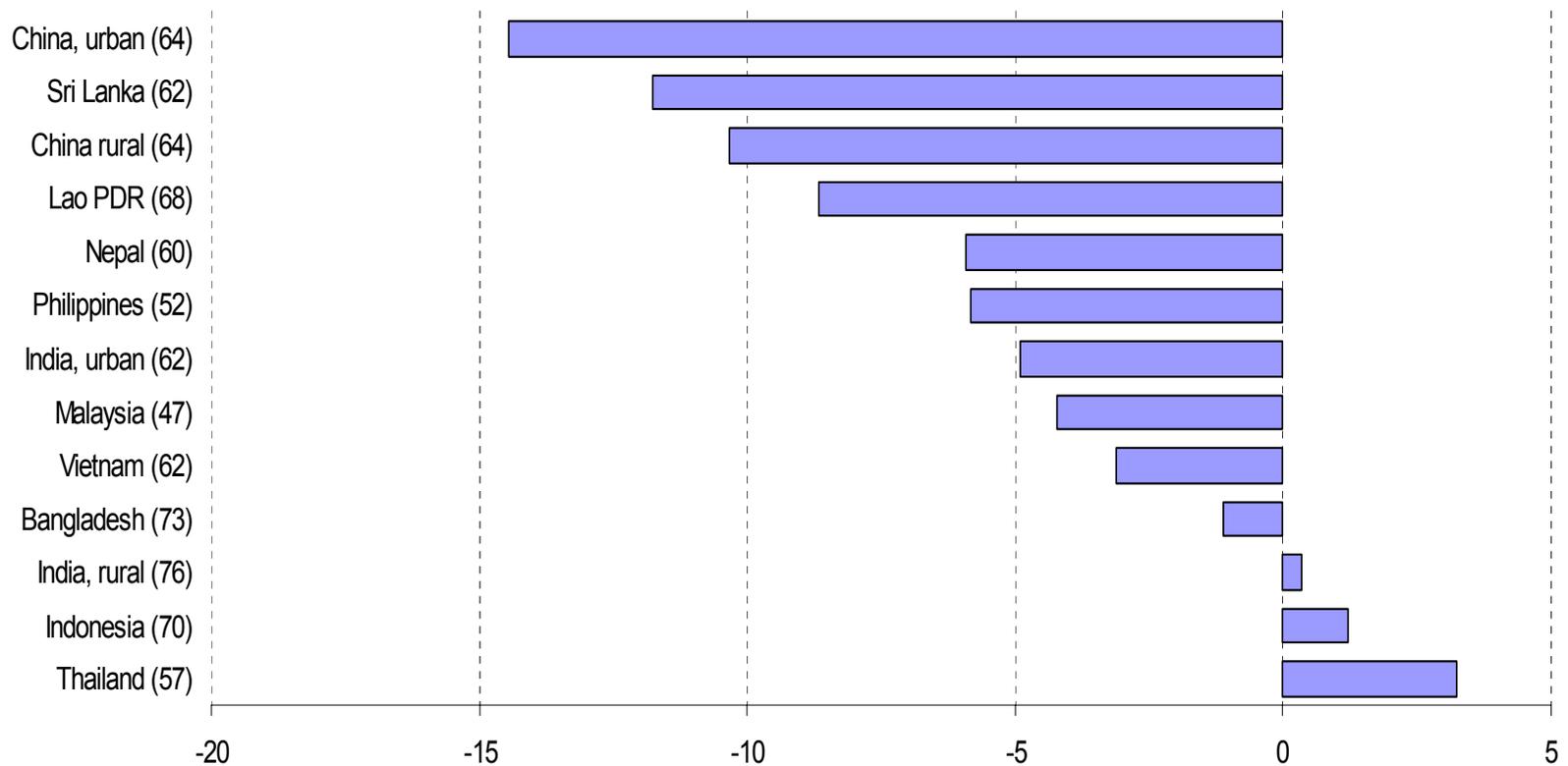
(Percentage points)



The middle class is shrinking in terms of income

Change in the Size of the Middle Class, Last Ten Years

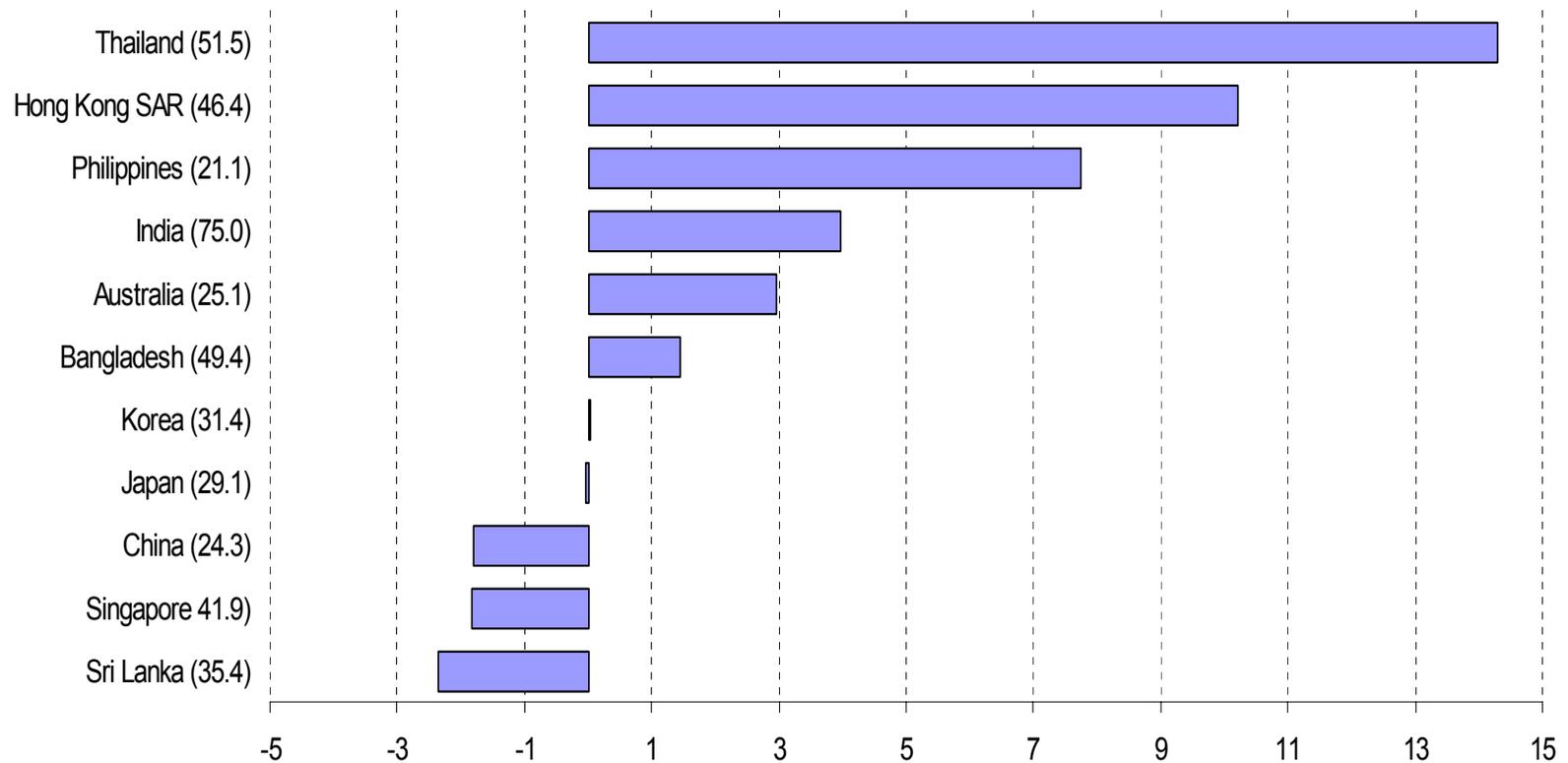
(Percentage points of population)



Wage dispersion is also on the rise

Change in Wage Dispersion, Last Ten Years

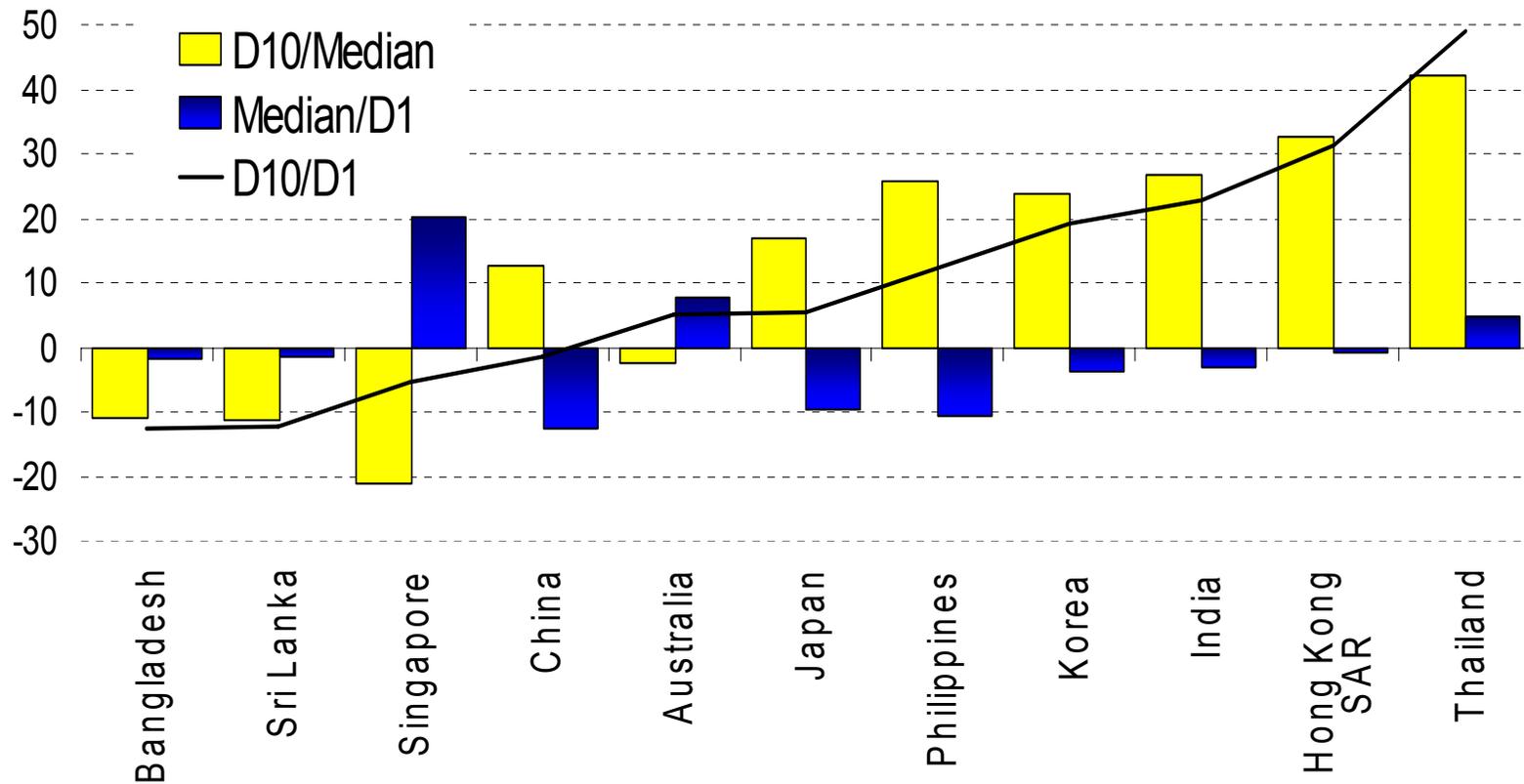
(percentage points)



The rich get richer, rather than the poor getting poorer

Breakdown of Rising Wage Disparities, Last Ten Years

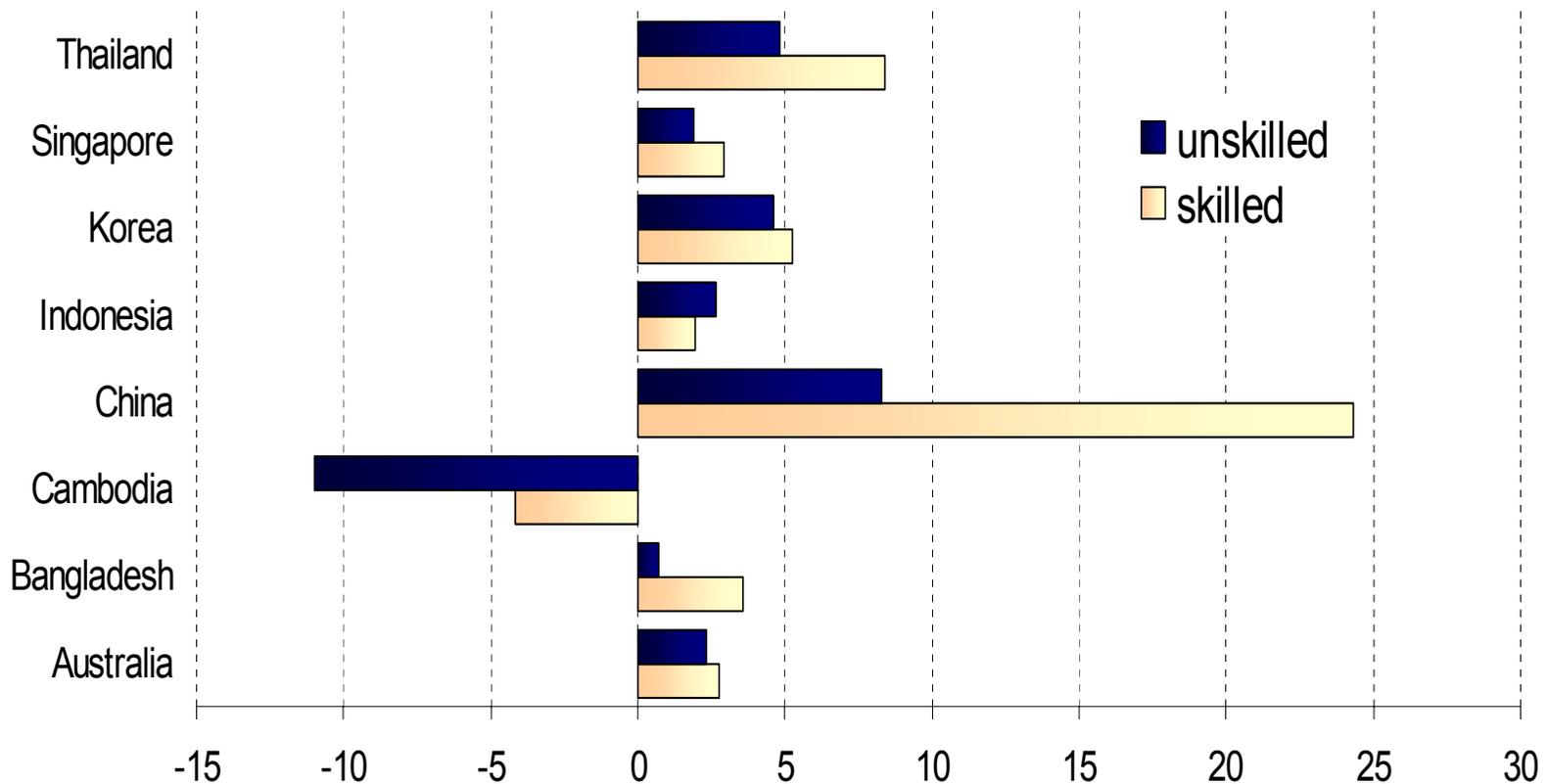
(Percentage change)



Rising skill premia seem to account for the rise in wage inequality

Annual Growth of Real Wages by Skill or Education, Last Ten Years

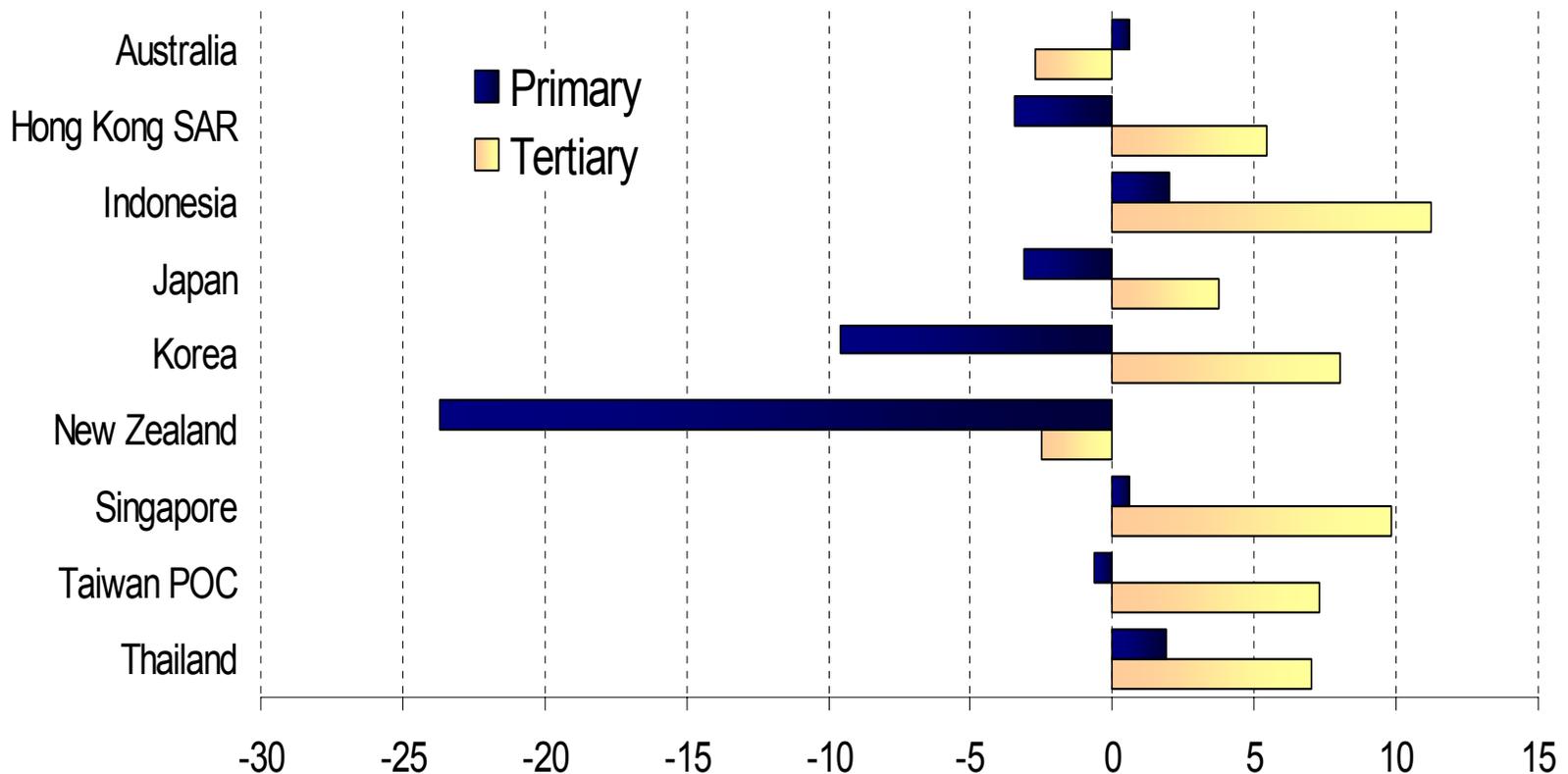
(In percent)



Rising demand, not falling supply seems to be driving up skill premia

Annual Employment Growth by Education Level, Last Ten Years

(In percent)



II. Determinants of Inequality and Polarization

A. Economic Growth



Inequality follows an inverted U-curve according to Lewis/Kutznets (1954/55)

- As people move from the agricultural to the industrial sector, inequality and polarization rise. They decline as the majority of people find employment in the high-income sector.
- In the modern sector (human) capital accumulation raises incomes; in the tradition sector incomes stagnate because of surplus labor. Only when the pool of surplus labor is exhausted, do incomes converge.

The inverted U-curve is confirmed for a subset of Asian economies

Panel Regressions for the Gini Index and Wage Dispersion with Country Fixed Effects¹

	Gini Index	Wage dispersion
Constant	-146.83* (74.78)	-457.71*** (112.92)
Log (per capita GDP)	45.04** (18.93)	116.08*** (25.47)
Log (per capita GDP) ²	-2.72** (1.19)	-6.64*** (1.43)
Number of observations	50	170
Number of countries	11	13
R-square	0.36	0.06

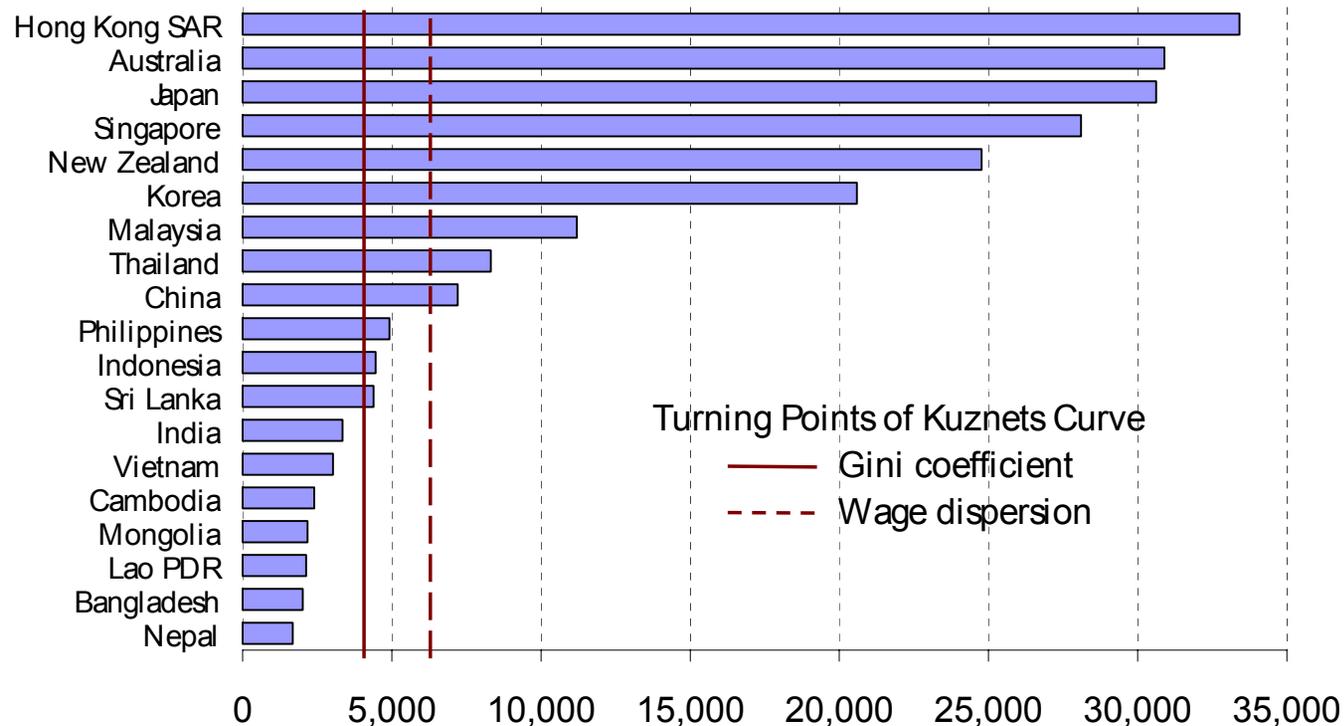
Source: IMF staff estimates.

¹ Standard errors in parentheses. One, two, and three stars indicate significant at the 10, 5, and 1 percent level, respectively.

Some countries approach the turning point of the estimated U-Curve

GDP Per Capita of Sample Countries, 2005

(Purchasing Power Parity)



Source: World Bank, *World Development Indicators*.

Initial conditions may explain the less favorable growth-equity tradeoff in the latest growth episode?

Initial Conditions of Fast-Growing Economies^{1 2}

	GDP per capita (current US\$)	Urbanization (percent of population)	Agriculture (percent of GDP)	Human Capital (Percent of popu- lation with tertiary education)
Japan	259	39	...	8.0
NIEs	454	74	11	5.2
ASEAN-4	350	28	31	4.2
Newly emerging economies	232	21	34	3.4
China	276	19	31	4.7
India	285	24	36	3.4
Bangladesh	269	20	30	2.2
Vietnam	98	20	39	3.2

Sources: World Bank, *World Development Indicators*; and IMF staff calculations.

¹ The time of the growth take-off is 1955 for Japan; 1967 for the NIEs; 1973 for the ASEAN-4; 1979 for China; 1982 for India, and 1990 for Bangladesh and Vietnam.

² Simple averages for country groupings.

II. Determinants of Inequality and Polarization (cont.)

B. Trade openness



Standard trade theory at odds with the findings

- The standard Heckscher-Ohlin model predicts rising inequality in industrialized countries and falling inequality in developing countries.
- No study finds that income inequality falls with trade liberalization
- A consensus has emerged that wage dispersion increases with trade liberalization, and more so in developing countries.

In Asia the impact of trade on inequality is modest at best

Panel Regressions for Gini Index and Wage Dispersion with Country Fixed Effects¹

	Gini index	Wage dispersion
Constant	-152.72* (76.54)	-275.06** (119.86)
Log (per capita GDP)	46.93** (19.52)	69.21** (28.43)
Log (per capita GDP) ²	-2.88** (1.25)	-4.13** (1.67)
Trade	0.01 (0.23)	0.79*** (0.20)
Trade* GDP per capita		-0.05** (0.02)
Number of observations	50	170
Number of countries	11	13
R-square	0.38	0.05

Source: IMF staff estimates.

¹ Standard errors in parentheses. One, two, and three stars indicate significant at the 10, 5, and 1 percent level, respectively.

Why openness might increase wage dispersion in developing countries

- Relatively unskilled workers by industrial country standards may be skilled workers by developing country standards. Specialization in manufacturing may still benefit the better-off in developing countries.
- FDI and trade in goods produced by unskilled labor may need the support of high-skilled labor, which is scarce in developing countries



III. Policy Implications



Policies that enhance equal opportunities and reduce inequality

- Spending on education
- Spending on infrastructure
- Reforming labor markets
- Access to financial markets
- Improving the investment climate