

Telecom Regulatory Environment, 2006

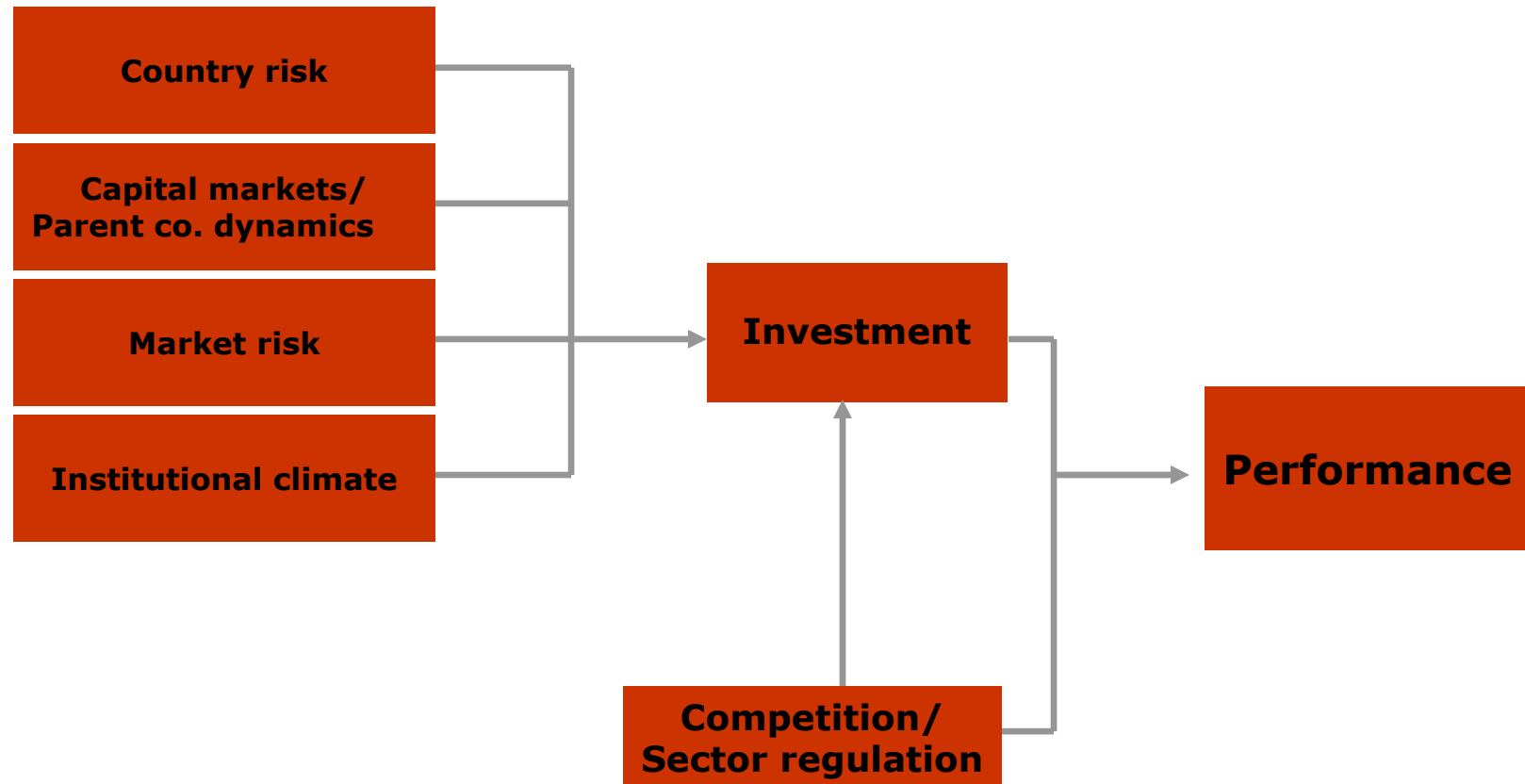
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Agenda

- Telecom Regulatory Environment explained
- Analysis of six components across six countries
- Overall results, including comparison of top three: India, Pakistan and Philippines
- Discussion
 - Investment effects
 - Next steps



Causal chain



Open system, where it is not possible to hold other things constant; competition/sector regulation affects investment AND industry performance

Investment and TRE

- Necessary condition for good performance = investment
- Significant and controllable factor that affects investment = sector-specific regulation
- What really matters in investment decisions is **perception** of risk
- Instead of looking at objective measures of regulatory performance (which is quite difficult) why not go straight to perception?
 - As an investment driver, perception is not second best, **it is the first best**



How are investor perceptions formed?

- Primarily from the symbolic environment constituted by
 - Investment research reports and investment firms
 - General and specialized media
 - Opinion leaders
 - Intra industry; intra-firm
 - NOT by public opinion
- Secondly from direct observation of regulatory entities



Method

- Panel studies using as small a number of questions as possible
 - Effective perception studies based on one question alone
 - Need to make minimal demands on time of senior respondents
- Use a large number of respondents to balance out the biases
- Use traditional social-science perception instrument: 5-point Likert scale
- Focus on telecom **regulatory environment not regulatory agency per se**
 - In India, three dimensions reflect TRAI performance; three reflect DoT performance
 - In Pakistan, PTA controls all six



Method

- Five dimensions from GATS regulatory reference paper (document with greatest international legitimacy) + price regulation
 - Others under consideration
 - Service quality regulation
 - Consumer protection
- TRE studies completed in Latin America and Caribbean and being conducted in Africa
- Asian study conducted in August-October 2006



Panel composition

	PK (40)	IN (50)	ID (58)	LK (101)	PH (52)	TH (31)
Operators/equip. suppliers/industry assns	18 (45%)	16 (32%)	37 (63.8%)	30 (29.7%)	19 (36.5%)	18 (58%)
Educ./research orgs/telecom consultants/law firms	16 (40%)	18 (36%)	13 (22.4%)	21 (20.8%)	16 (30.8%)	1 (3.2%)
Journalists/ telecom user groups / civil society	2 (5%)	14 (28%)	2 (3.5%)	16 (15.8%)	12 (23.1%)	8 (25.8%)
Fin. institutions & private investment houses/banks & credit rating agencies	1 (2.5%)	2 (4%)	4 (6.8%)	17 (16.8%)	2 (3.8%)	0 (0%)
Fmr. members/ senior staff of reg. agencies/ other government agencies	3 (7.5%)	0 (0%)	2 (3.5%)	17 (16.8%)	3 (5.8%)	4 (12.9%)

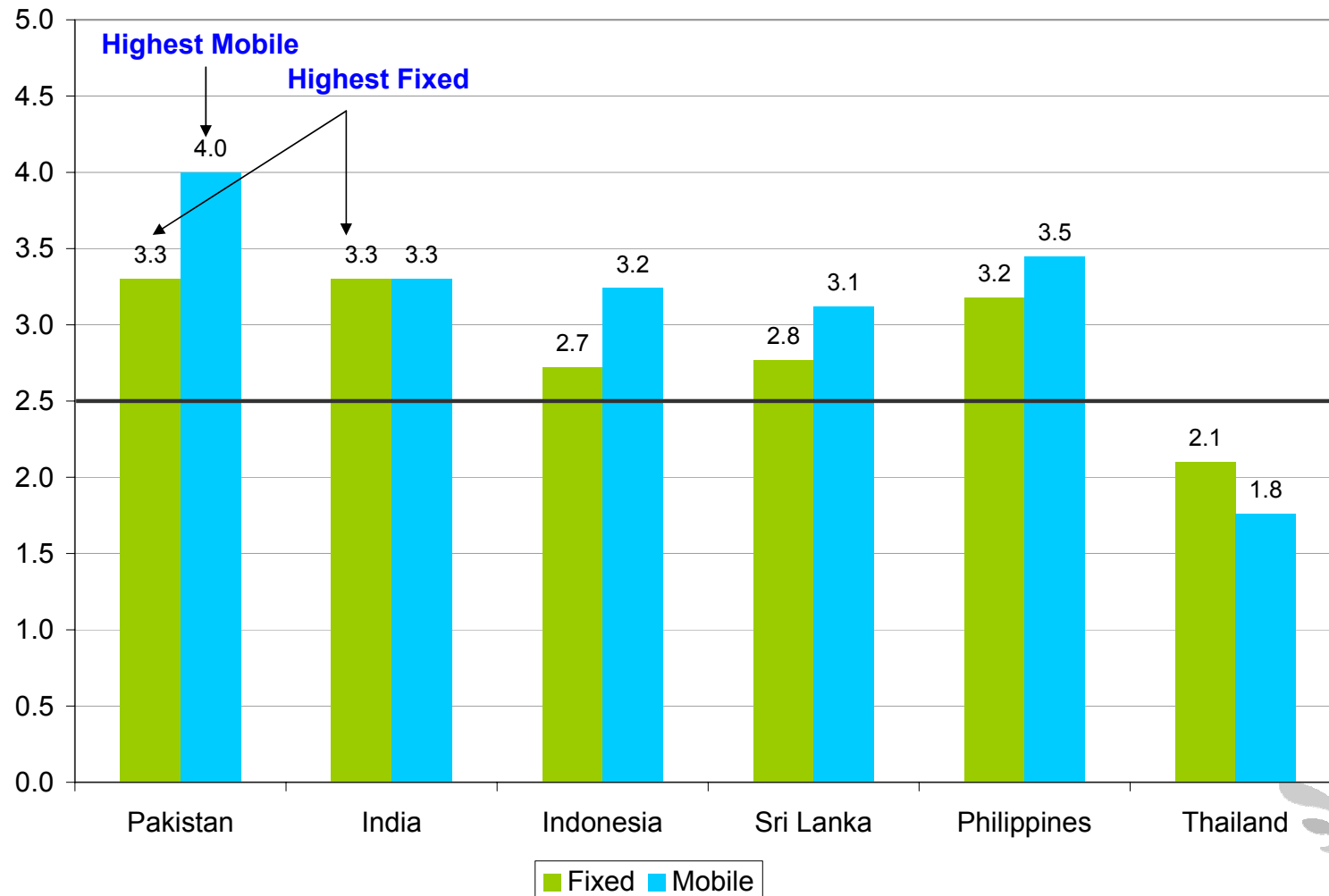


Detailed analysis, across each of six dimensions

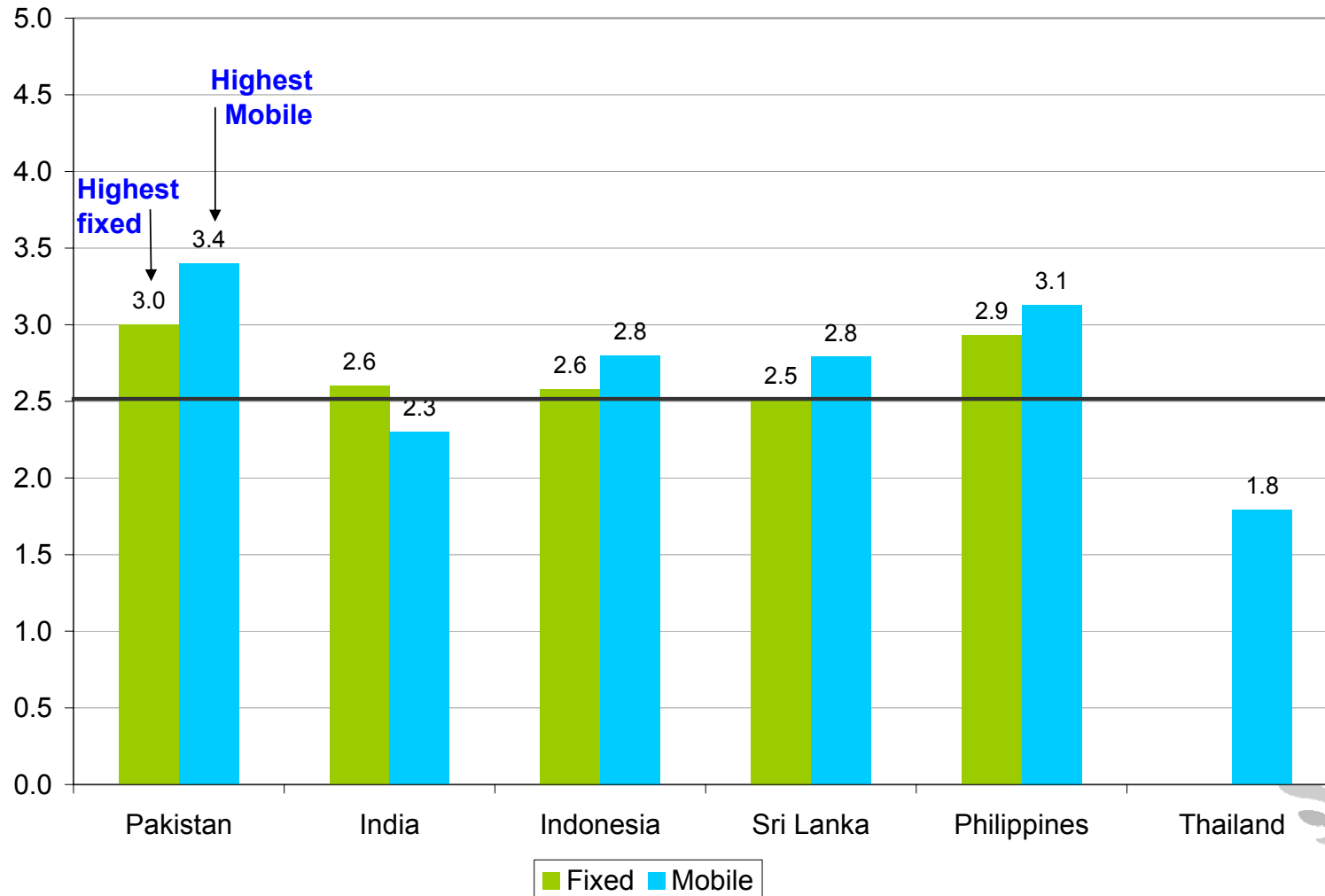
- Countries arranged in order of per capita GDP (Purchasing Power Parity), with Pakistan (PK) lowest and Thailand (TH) highest
- Mid-point in the scale (2.5) highlighted
 - Below 2.5 is unsatisfactory
- Numbers reported are average scores, rounded to one decimal



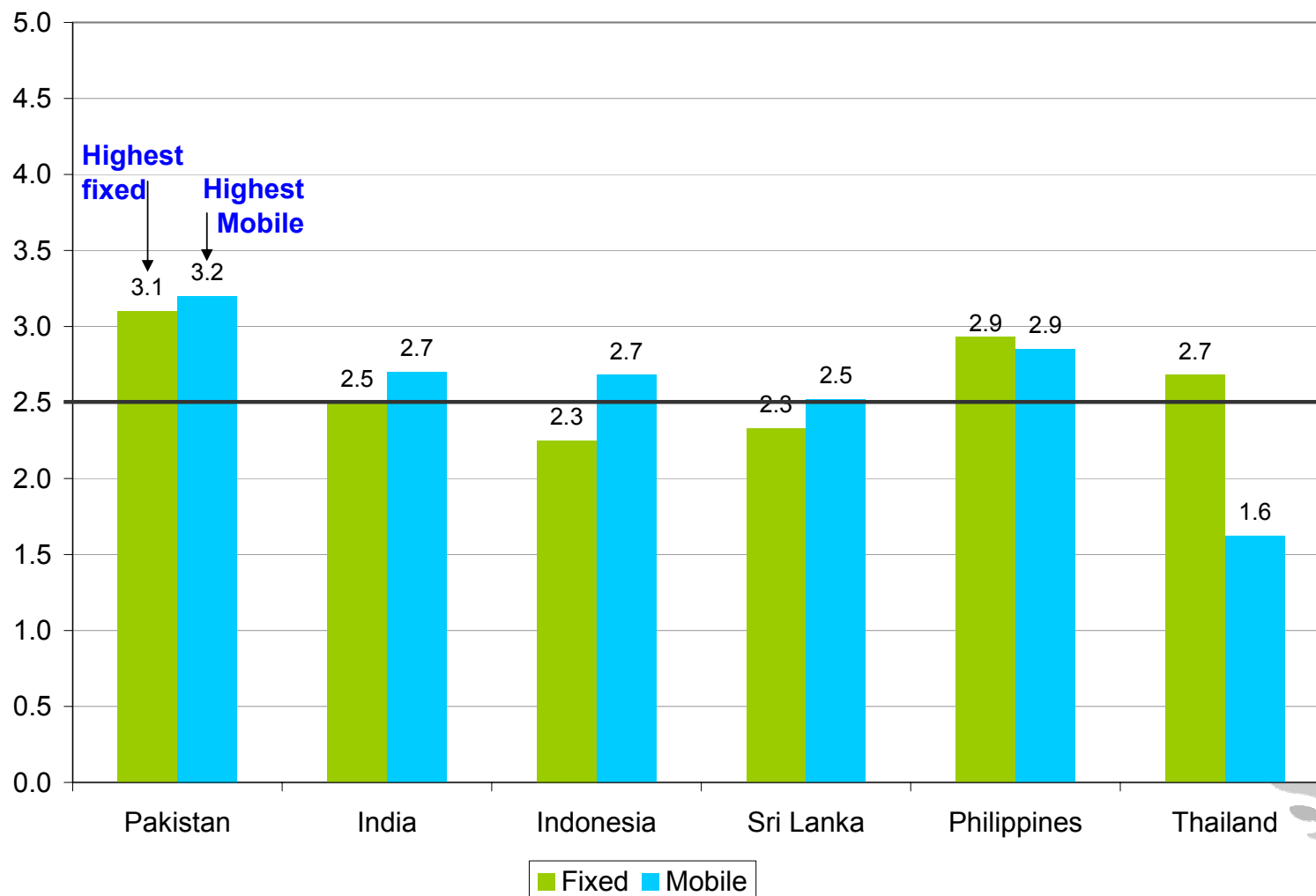
Market entry (fixed and mobile)



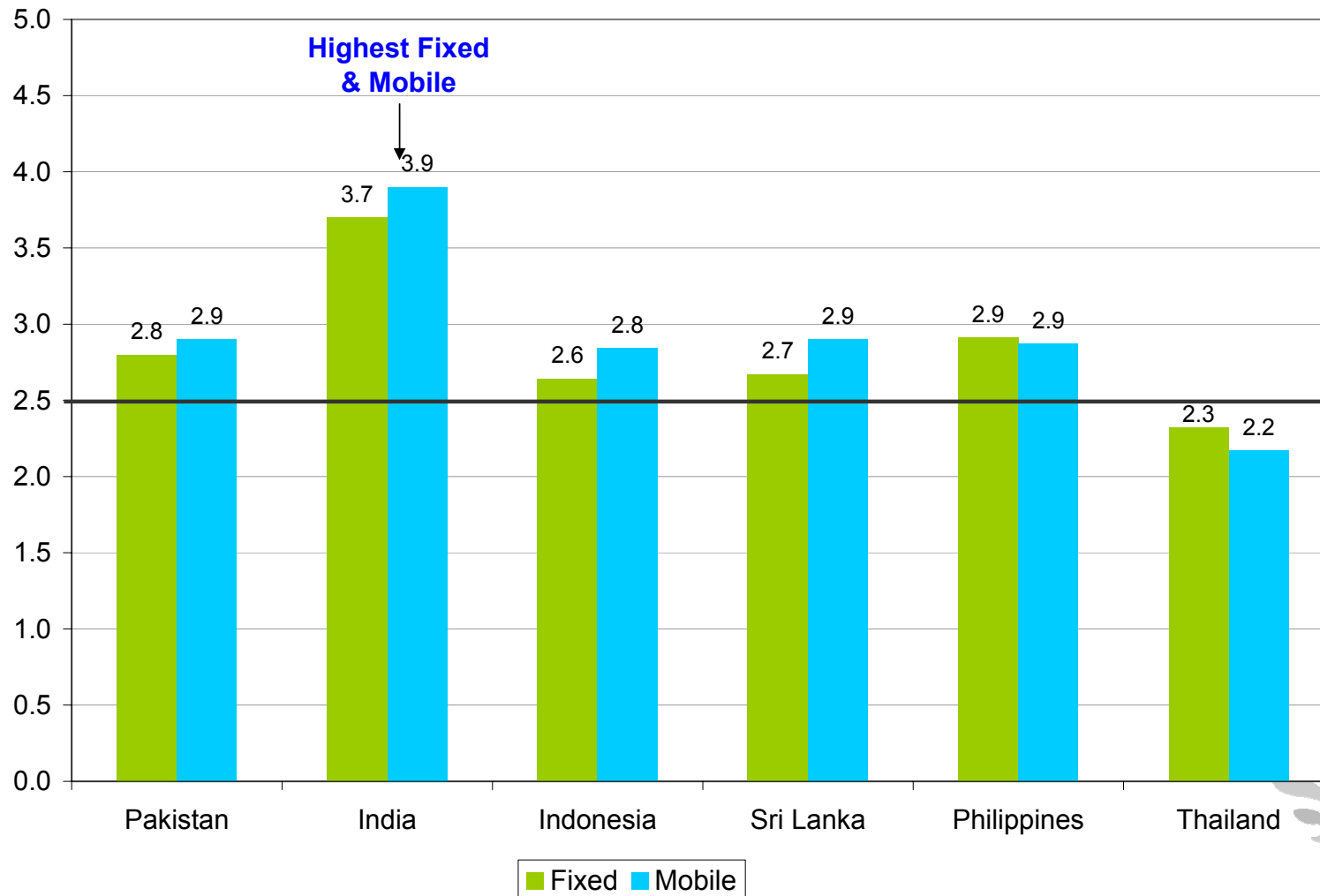
Scarce resources (fixed and mobile)



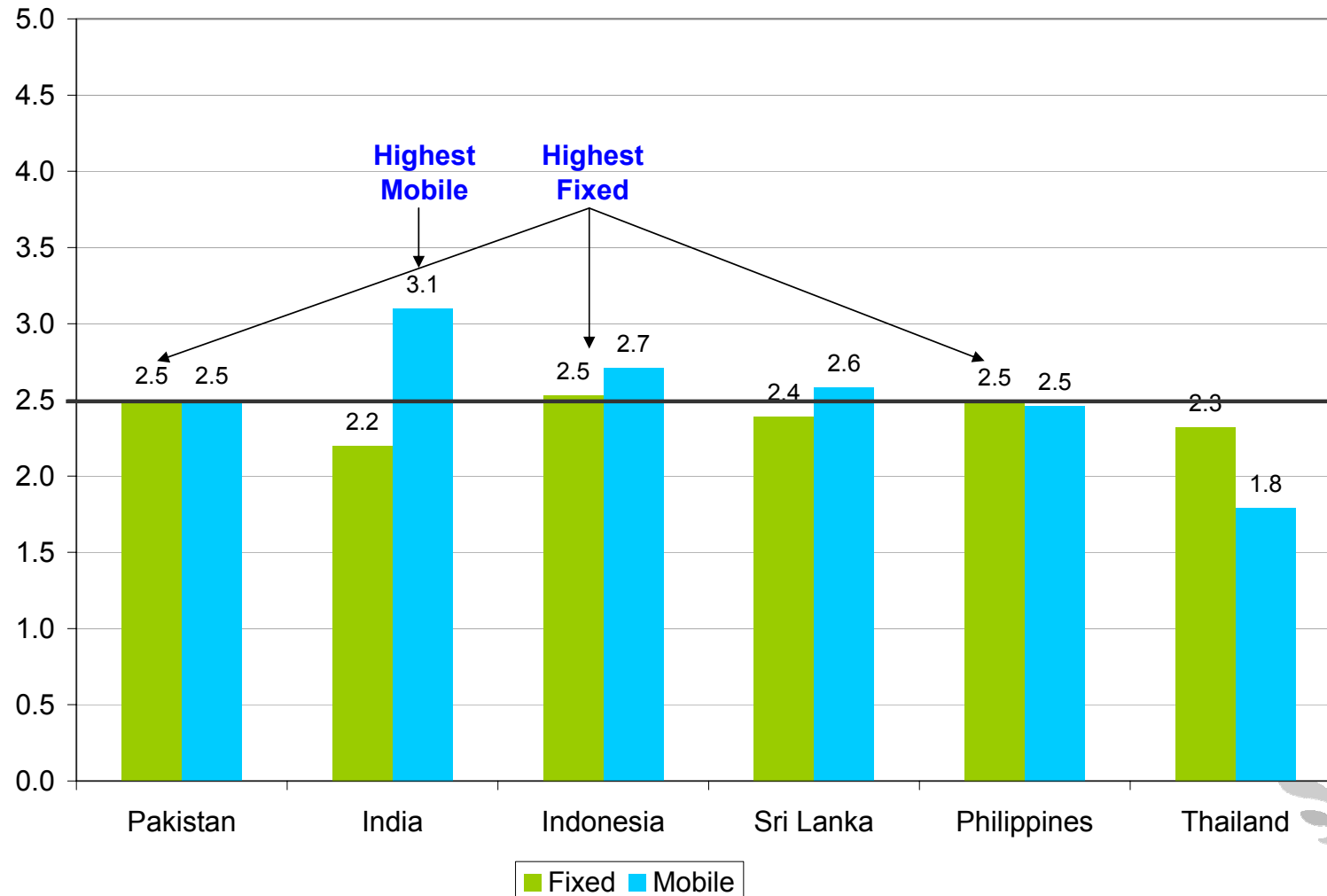
Interconnection (fixed and mobile)



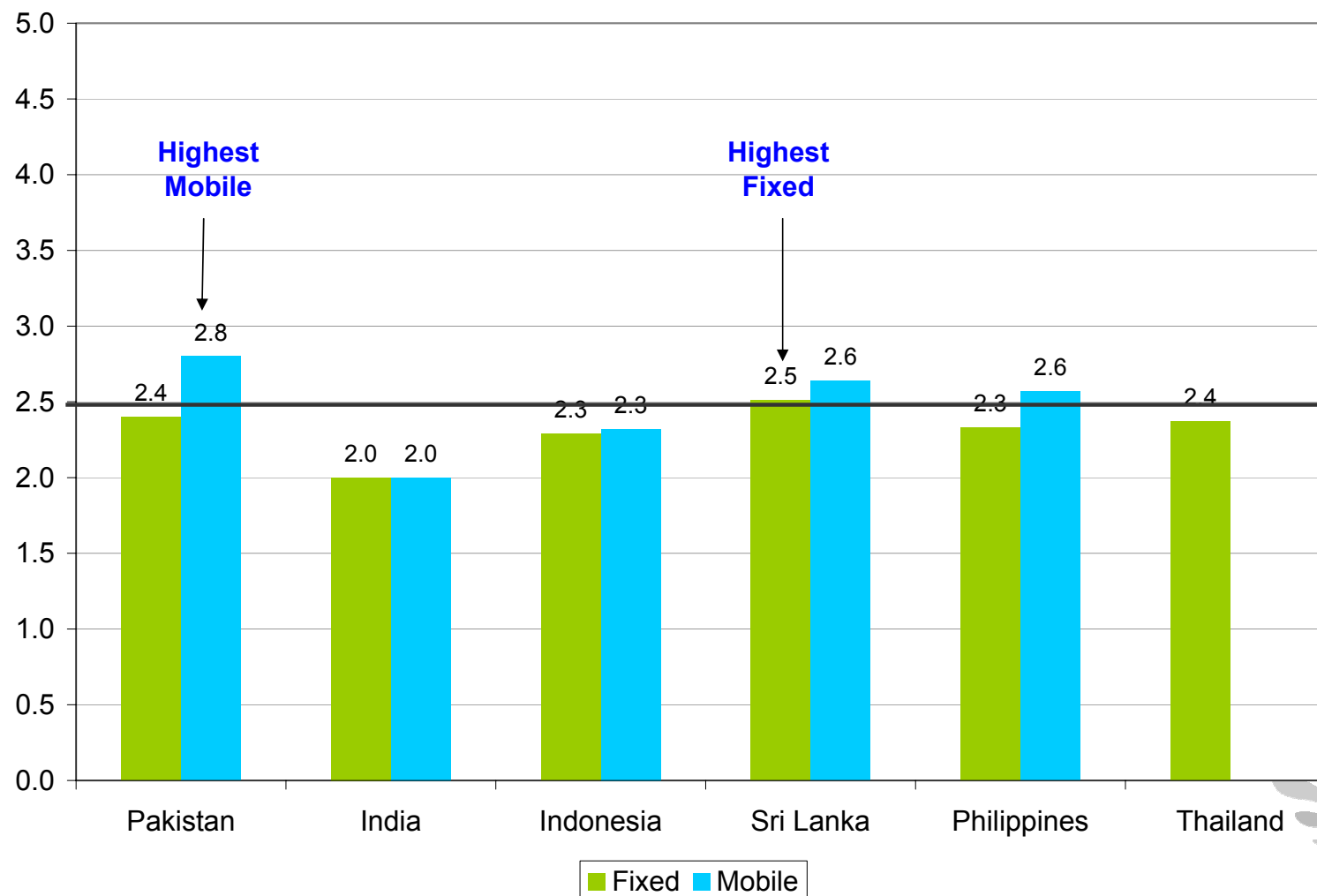
Price (fixed and mobile)



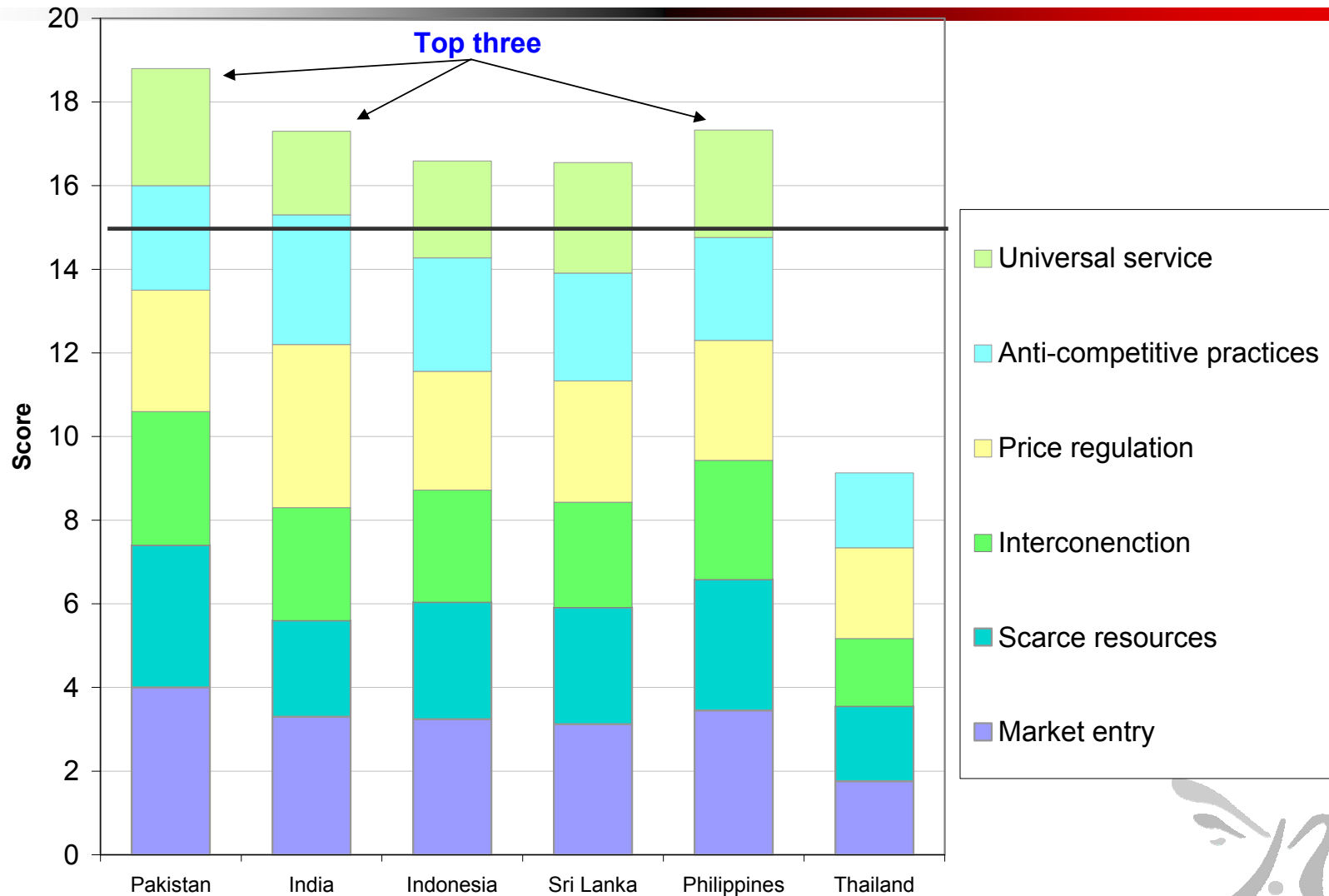
Anti-competitive practices (fixed and mobile)



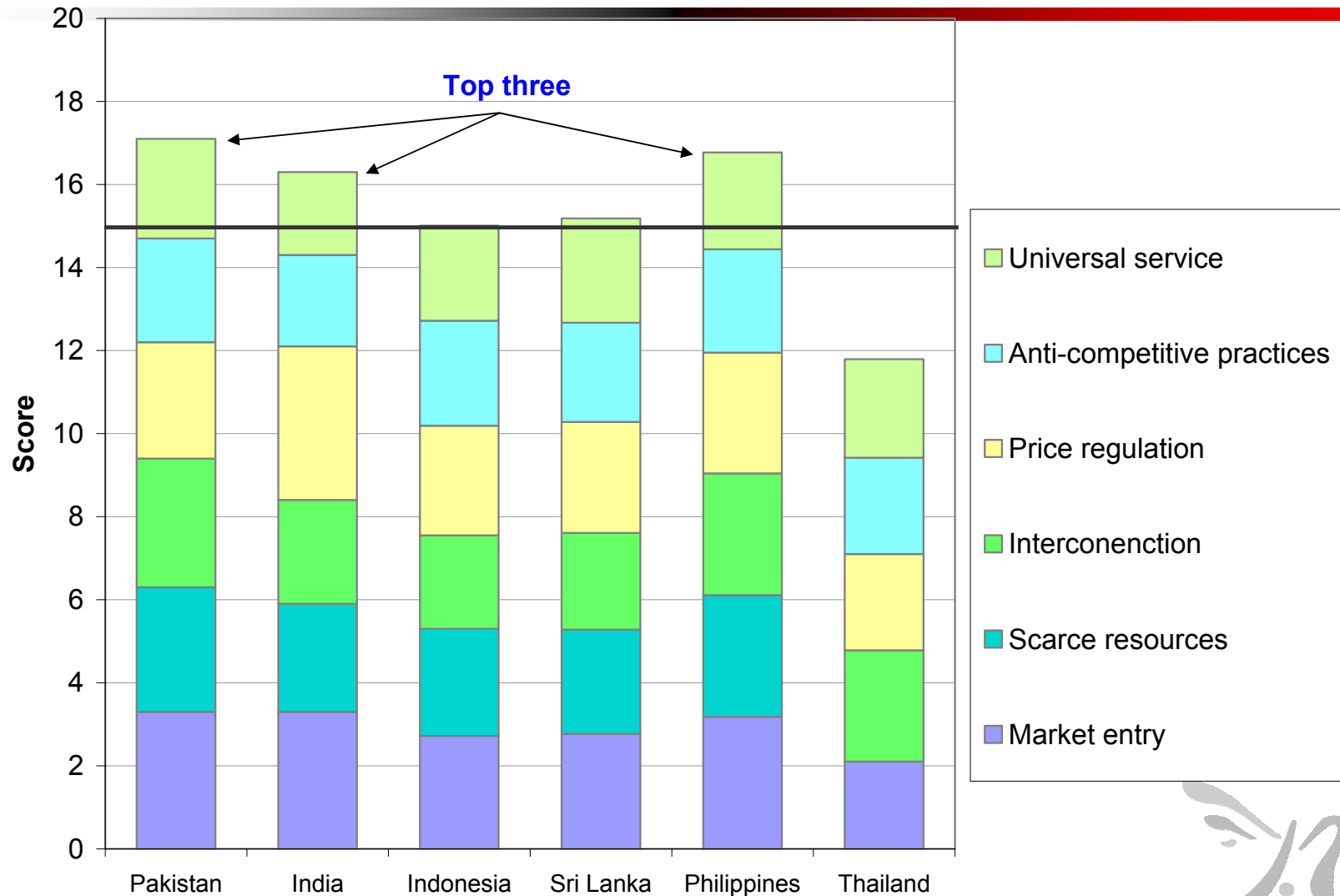
Universal service (fixed and mobile)



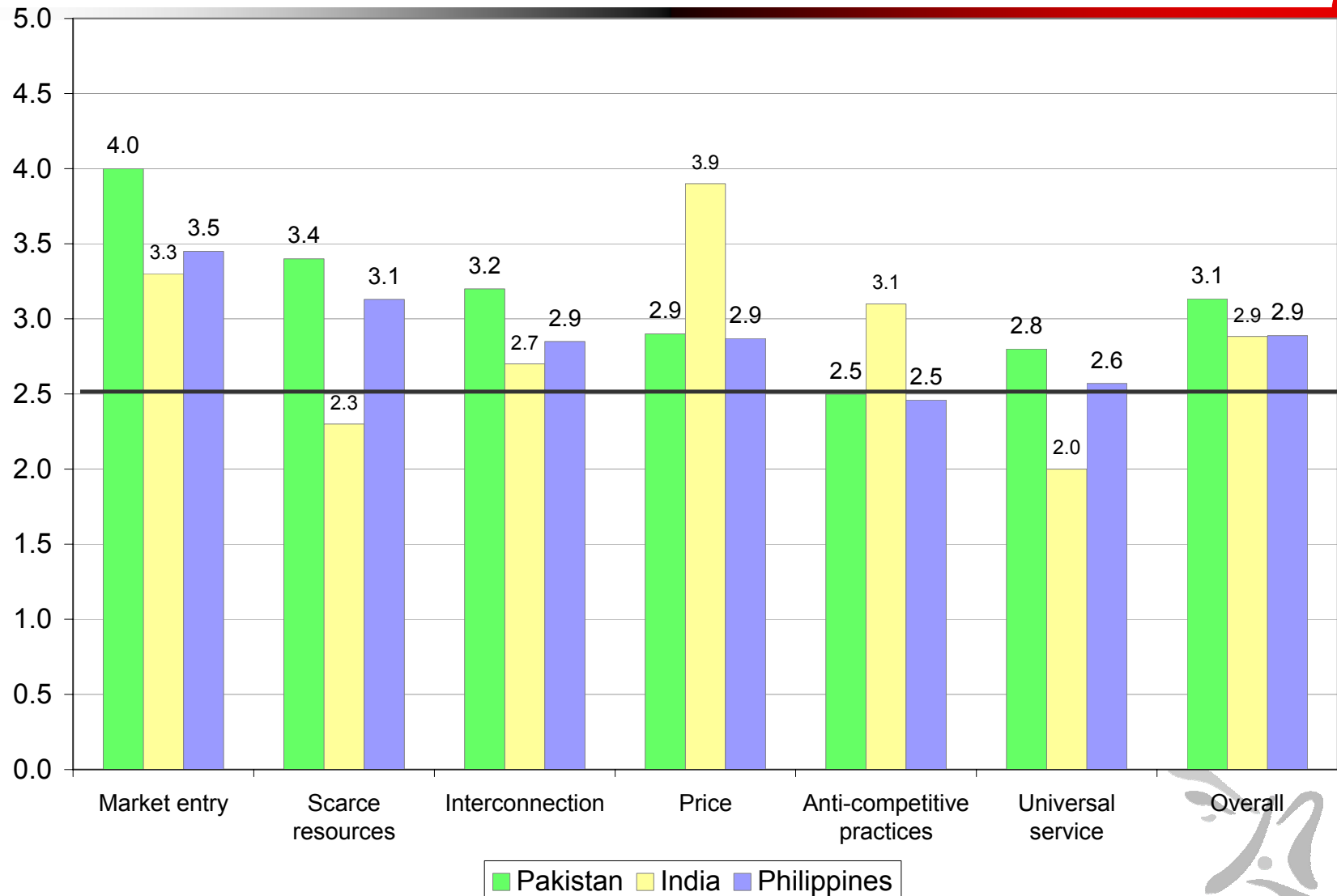
TRE component score comparisons: Mobile



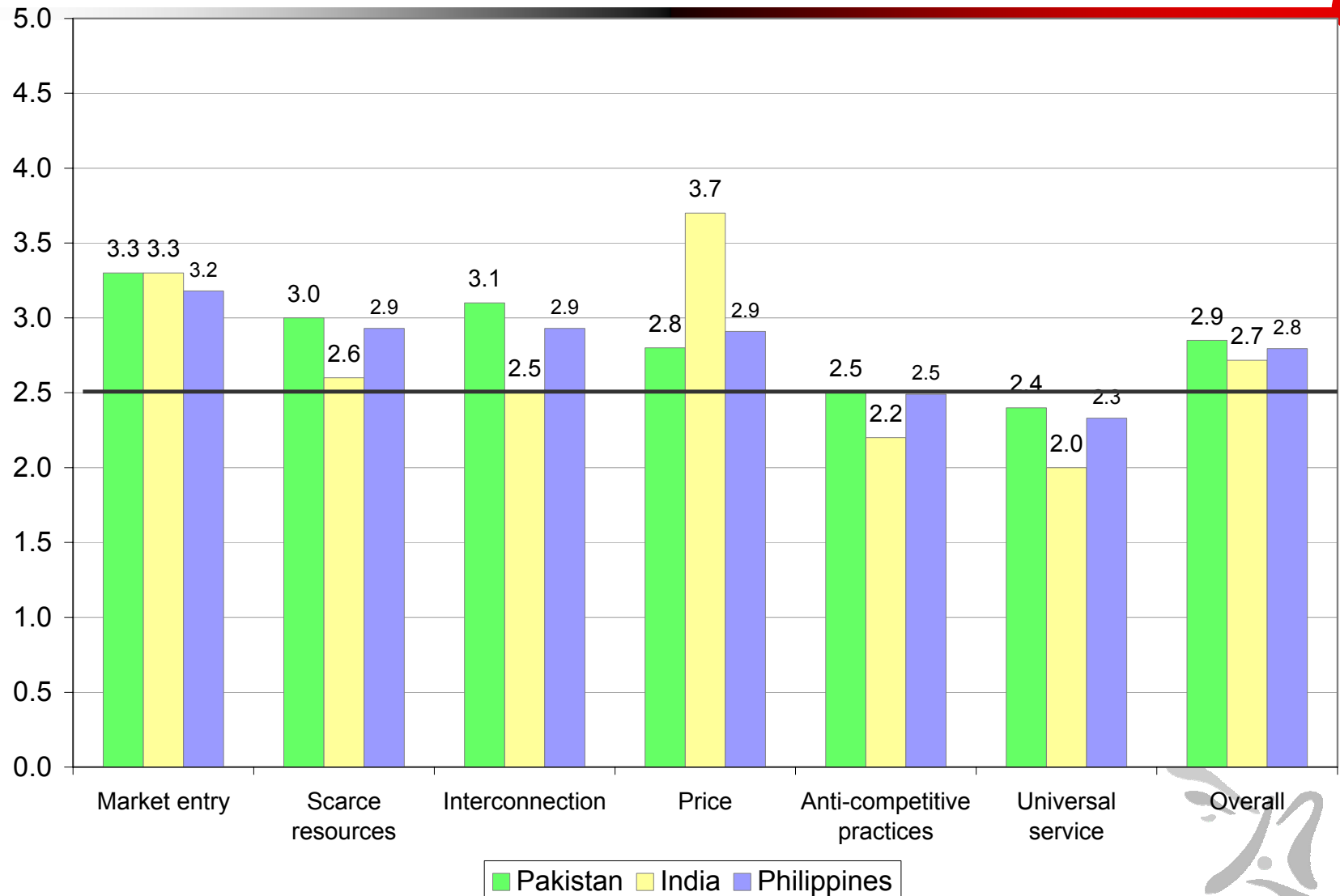
TRE component score comparisons: Fixed



Mobile TRE compared: Pakistan, India and Philippines



Fixed TRE compared: Pakistan, India & Philippines



Discussion

- All countries can do better
 - Most converge on 2.5/5 (neither good nor bad) with exceptions of
 - TRE market entry (big-bang reform) and
 - TRE price (driven up by India's forbearance)
- Pakistan is best performer, good across the board
 - India and Philippines form second tier
 - Indonesia and Sri Lanka next
 - Thailand last



Discussion

- Thailand is the most prosperous country in the set with highest sector performance indicators, yet
 - It has abysmal TRE indicators
- Possible explanations
 - Demand side: Thailand has highest per-capita income of all six; even higher before Asian Economic Crisis
 - There may be perceptual difference re the questionnaire
 - Survey conducted in the period of controversy surrounding the sale of the then Prime Minister's families' share of a leading mobile company to Temasek Holdings of Singapore
 - The Statute does not allow the regulatory agency to override concession contracts which makes Thai regulation extremely weak



Discussion

- Pakistan which overtook both India and Sri Lanka in basic telecom measures (fixed+mobile per 100 people) within the last two years shows that
 - **Correct “big-bang” reforms (transparent and broad market entry; privatization) followed by credible, effective implementation by a motivated regulatory agency can make a huge difference**
 - Regulatory agency controls all six dimensions of TRE and plays powerful role in policy as well
 - Investment effects?



India invests more? Pakistan FDI greater?

	Total telecom investment (USD billions)	Telecom FDI (USD billions)	FDI as percentage of total telecom investment	Telecom FDI as percentage of total FDI
India	4.85	0.02	0.43	7.80
Pakistan	2.14	1.90	89.11	54.11



Less privatization proceeds

	Total telecom investment less privatization proceeds (USD billions)	Telecom FDI less privatization proceeds (USD billions)	FDI as percentage of total telecom investment	Telecom FDI as percentage of total FDI
India	4.850	0.020	0.43	7.8
Pakistan	0.954	0.721	75.59	20.0

Corrected for population: $PK = IN + 1/3rd$
(investment); $PK = 220 \times IN$ (FDI)

	Per capita investment in telecom (USD)	Per capita FDI in telecom (USD)	Population (millions)
India	4.43	0.02	1,096
Pakistan	5.82	4.40	164



Investment & FDI per added subscriber?

	Investment per added subscriber (USD)	FDI per added subscriber (USD)
India	116	0.5
Pakistan	42	32.0



India investing more but adding less subscribers?

- ☐ Lag not factored in correctly?
 - Data availability
 - Calculation of the lag
- ☐ Possibly over-investment in duplicate backbone, because government not compelling sharing of BSNL fiber



PK, IN, LK basic data

	Pakistan	India	Sri Lanka
Population	165 million	1,095 million	19.6 million
GNI per capita (2005), USD (Atlas)	690	720	1,160
GNI per capita (2005), USD (PPP)	2350	3460	4,520
Population below Poverty Line	32% (est. 2001)	25% (est. 2001)	23% (est. 2005)
Fixed teledensity (2006)	4.16	4.58	7.5
Mobile teledensity (2006)	25.22	8.82	21.5
Internet Users	7.5 million	50.6 million	0.3 million

Sources: PTA, TRAI and TRC websites. Data as of September 2006; actual numbers may be higher.



Next steps

- LIRNEasia plans to conduct annual TRE surveys and publicize them in order to help improve regulatory environments
 - Hopefully covering additional countries
- Ensure mix of respondents consistent across countries
- Broaden the scope using balanced score card

