The Getting of Wisdom

Using ICTs Innovation and Knowledge Drivers for a Superlative Industry Role

Joint Foreign Chambers of Commerce in Thailand

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Keynote Address at ICT Excellence Awards

28 May 2013

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Synopsis 1

The ICT sectors are strategic: an efficient, effective, innovative and attractive info-comms sector can have a multiplier effect on the rest of the economy. IT / ITES are the great enablers. Through commitment to a shared vision for excellence, overcoming barriers and working to overcome the often negative effect of vested interests, the ICT sectors represent the machinery to take us beyond a knowledge-based economy to an economy and society *and a region* of wisdom.

But how are we doing? What is the status of the info-comms industry? Of the IT sector? What are the institutional and societal support factors, innate strengths and positive developments and what are the roadblocks? Are we ready for a regional, inter-connected role? What do we need to do to be really excellent and make us shine so that we better service the Thai economy and play a contributive and leading regional role?

Synopsis 2

The Joint Foreign Chambers of Commerce represents some 29 foreign chambers with members which have put down roots in Thailand over many decades. Its ICT Group has been working with its members and government for well over a decade on local and foreign trade and investment issues with the objectives of helping to make the economy more competitive and strengthening it, especially in a regional context. JFCCT works with EABC closely on ICT and other matters, and with local ICT industry groups.

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Agenda

1. Regional Connectivity & how we appear in the region
2. Role of ICT; Telecoms in the economy
3. About the Services Sector
4. Snapshot of telecoms issues in Thailand – status, issues, policy & private sector action
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Connectivity

Masterplan on ASEAN Connectivity 2010

Physical

Institutional

People-to-People

ASEAN ICT Masterplan (AIM)

"Towards an Empowering and Transformational ICT: Creating an Inclusive, Vibrant and Integrated ASEAN"

Core Objectives

1. **Economic Transformation**
   To promote trade, investment and entrepreneurship in the ICT sector, and to build an ICT engine for sectorial transformation
2. **People Empowerment & Engagement**
   To enhance quality of life through affordable and equitable ICT
3. **Innovation**
   To nurture a creative, innovative, and green ICT sector

Necessary Foundation

4. **Infrastructure Development**
   To provide the next generation infrastructure backbone, and enabling policies and legislation
5. **Human Capital Development**
   To develop a skillful ICT workforce and knowledgeable community
6. **Bridging the Digital Divide**
   To elevate countries and people through ICT capabilities

ASEAN Broadband Corridor (ABC) – what is it?

Physical network – eg like Acacia Sdn Bhd's or a cable consortium's? - No, it does not need to be.

Overlay network with specific applications and services (eg G to G tool and reaching out to citizenry?)? – No but it could support that

An agreement to identify cities / locations with reasonable propensity for broadband take up? – Yes

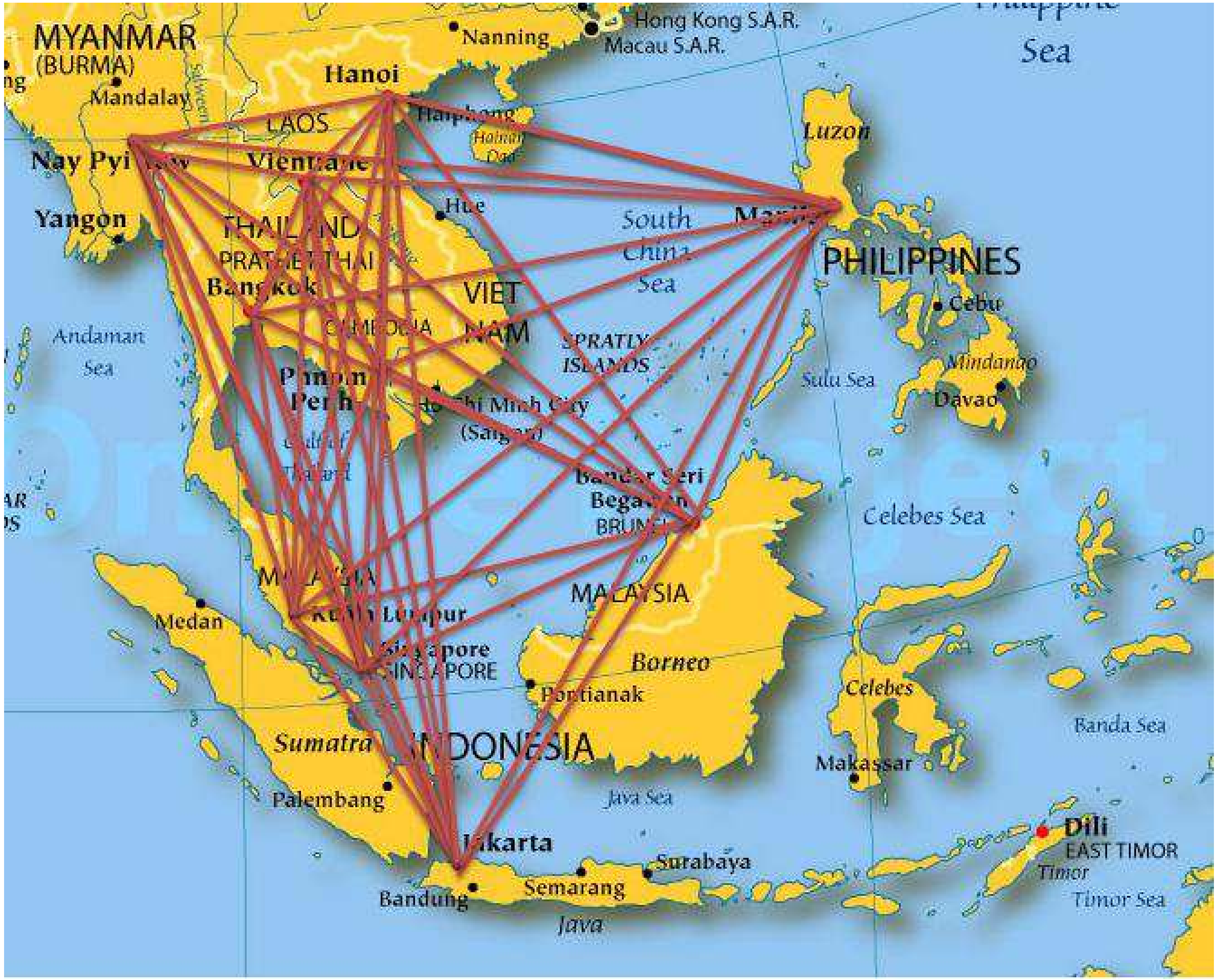
A way of connecting them and encouraging use of broadband? - Yes

A way of accelerating broadband penetration? – Yes

A policy intention, leading to a policy instrument? - Yes

Source: Author's presentation on ABC at ASEAN ICT Masterplan (AIM) conference 2012

Inter ASEAN / multi-local / intra ASEAN ?



Broadband penetration

Fixed Broadband Internet Subscribers

Fixed broadband Internet subscribers per 100 inhabitants	ITU (2010)[1]	World Bank (2010)[2]	Government targets
Brunei	5.44%	5.44%	
Cambodia	0.25%	0.25%	
Indonesia	0.79%	0.79%	30% Broadband penetration by 2014
Laos	0.19%	0.19%	
Malaysia	7.32%	7.32%	75% Broadband penetration by 2015
Myanmar	0.03%	0.03%	15% Teledensity for fixed line and broadband by 2015
Philippines	1.85%	1.85%	-
Singapore	24.94%	24.77%	95% Household and commercial coverage by mid-2012
Thailand	4.61%	3.87%	95% Broadband penetration by 2020
Vietnam	4.13%	4.18%	20-30% Broadband penetration by 2015

Source: Author's presentation on ABC at ASEAN ICT Masterplan (AIM) conference 2012

Source: TRPC Background paper, using ITU and World Bank data

Recognise vast differences

Networked Readiness Index (2012) published by WEF & INSEAD (Global IT Report). NRIs for ASEAN: (of 142)

Brunei	**54**
Cambodia	**108**
Indonesia	**80**
Laos	**NA**
Malaysia	**29**
Myanmar	**NA**
Philippines	**86**
Singapore	**2**
Thailand	**77**
Vietnam	**83**

Broadband penetration – also vast differences (see 2013 later)

See also BSA scorecard

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Dual Role of Telecommunications Services

Telecommunications -- dual role in the economy. See GATS telcoms Annex & FTAs with telecoms chapters.

(i) Telecommunications (and ICT) in its own right as an industry – a productive and attractive industry

(ii) The rest of the economy needs many services – key include efficient, high quality and cost effective telecommunications infrastructure and services;

Thus telecoms - key 'strategic' industry; its proper functioning, regional competitiveness and effectiveness -- vital to the economy overall and regional cohesion and hegemony

Multiplier effect

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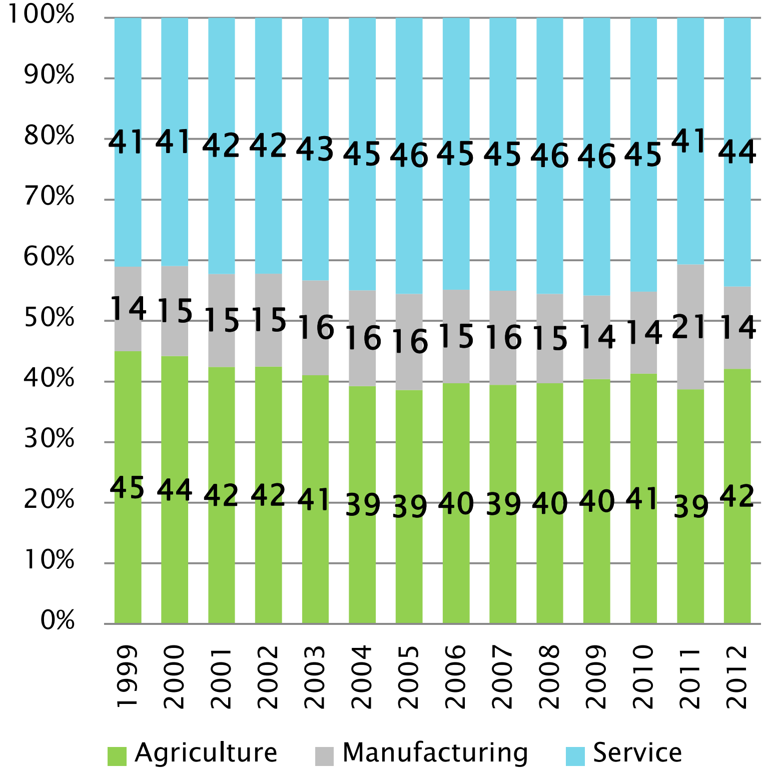
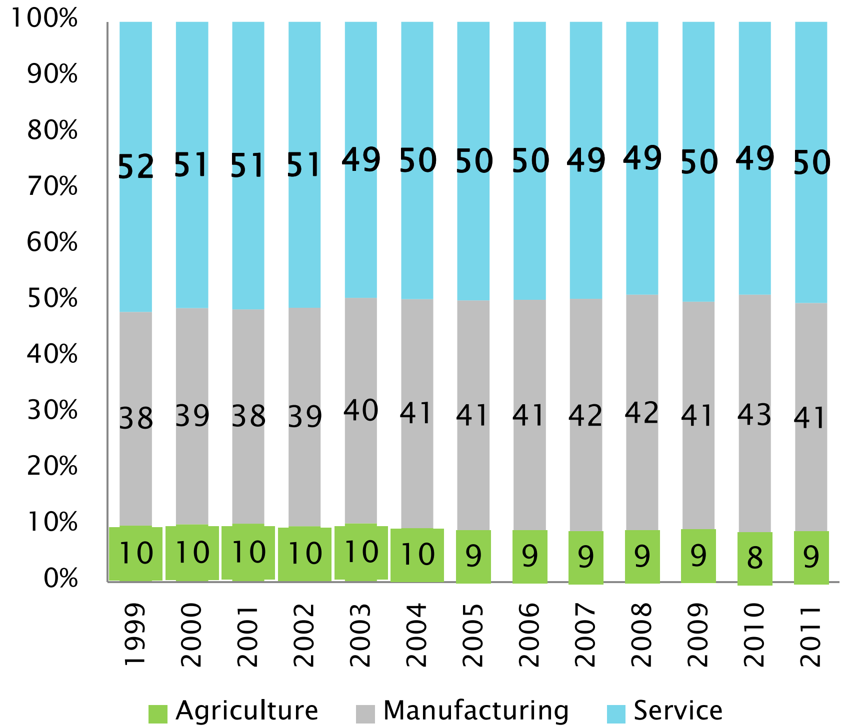
Service sector productivity needs improvement

The service sector employs 44% of the labour force compared to 14% for manufacturing

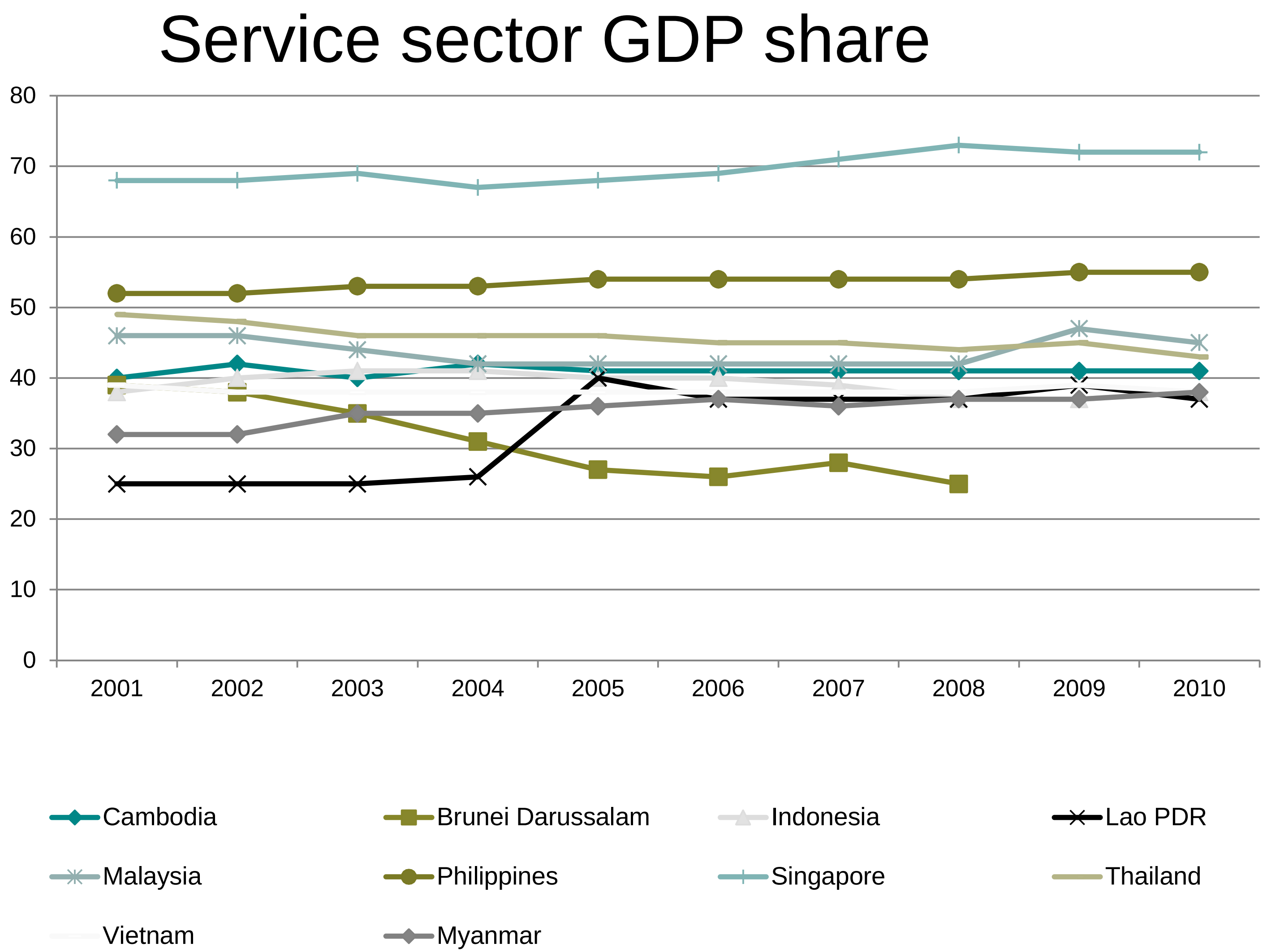


50% of GDP comes from the service sector compared to 41% from manufacturing



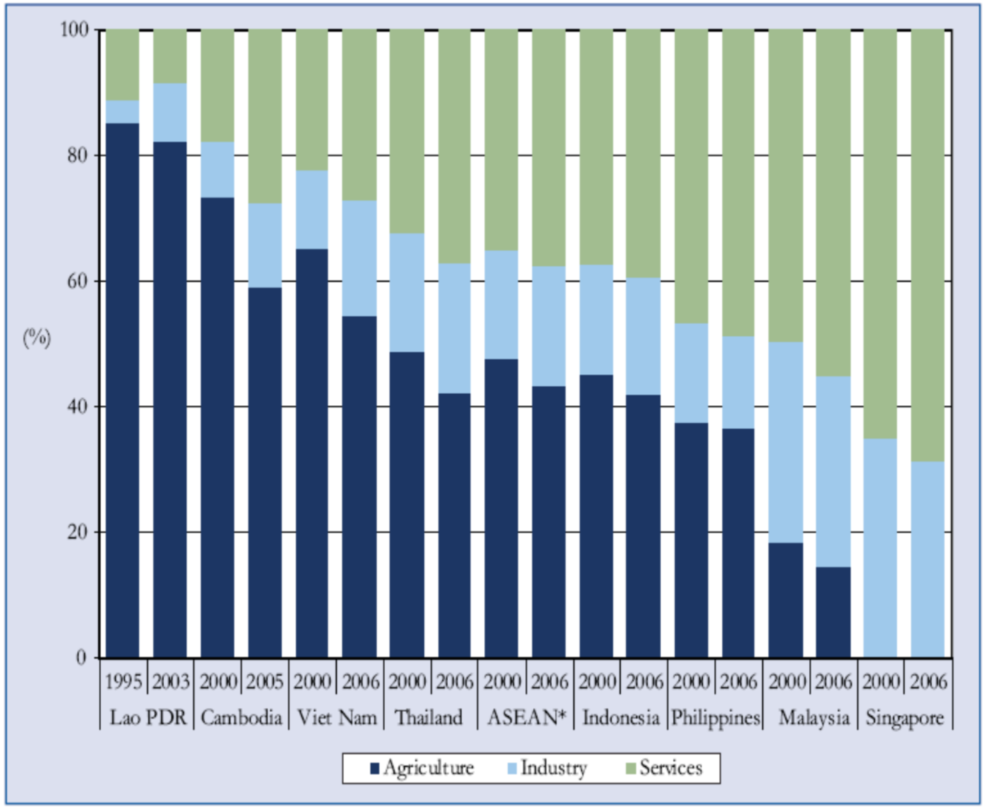
Source: NESDB

How important is service sector ?



Source: TDRI May 2012

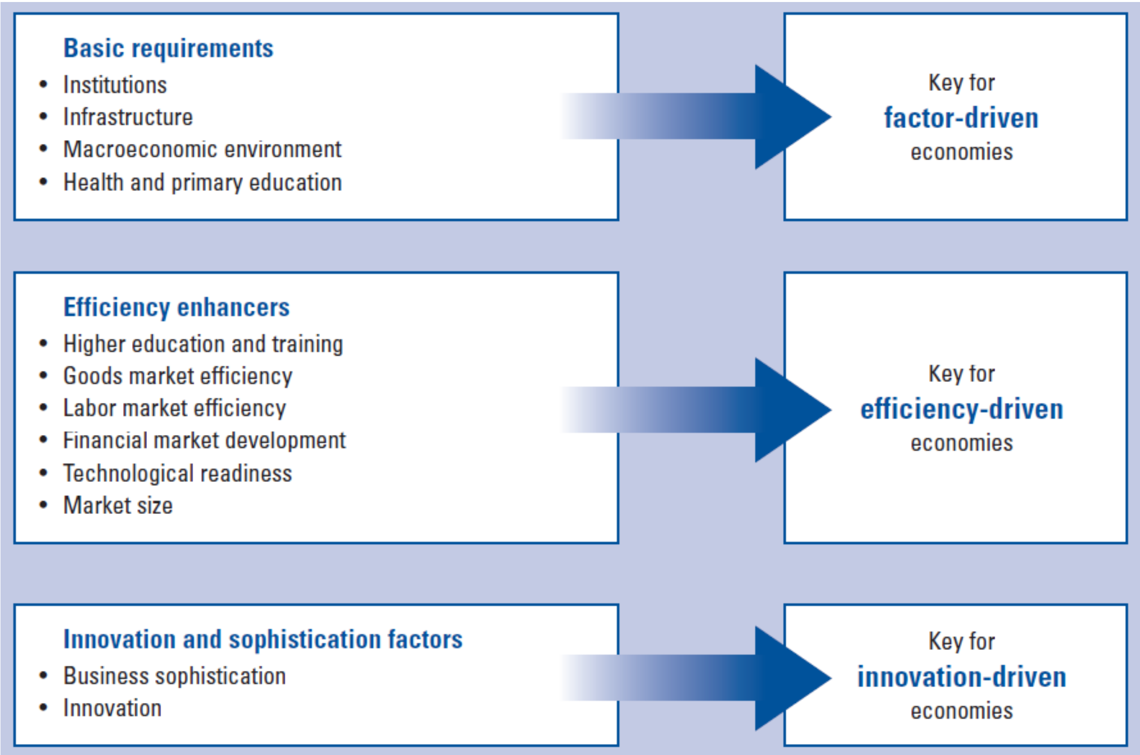
Service sector employment share



Service sector employs more labour than does industry. Growth in service sector can contribute to employment and national income.

Source: TDRI May 2012

Most developed economies = innovation-driven



Factor driven	**Bangladesh, Cambodia, Nigeria, Pakistan, Vietnam, Zimbabwe**
Transition from 1->2	**Brunei, Philippines**
Efficiency driven	**China, Colombia, Indonesia, Malaysia, Thailand, South Africa**
Transition from 2->3	**Argentina, Brazil, Chile, Mexico, Russia**
Innovation driven	**Australia, Canada, Singapore, Hong Kong, Korea, Japan, EU, US, Taiwan**

	STAGES OF DEVELOPMENT				
	Stage 1: Factor-driven	Transition from stage 1 to stage 2	Stage 2: Efficiency-driven	Transition from stage 2 to stage 3	Stage 3: Innovation-driven
GDP per capita (US$) thresholds*	<2,000	2,000–2,999	3,000–8,999	9,000–17,000	>17,000

Key AEC Principles and instruments

Principles: ***Free(r) flow of goods, investments, capital, skilled labour, services***

Instruments: ***ASEAN Charter***

ATIGA (Trade in Goods)

ACIA (Comprehensive Investment)

AFAS (Services)

Overall: Skewed around goods; Tariff barriers almost all removed – NTBs aplenty

AFAS – Expected foreign equity levels

	Air Transport. e ASEAN. Healthcare. Tourism.	Logistics	All remaining Service sectors
2008	51%	49%	49%
2010	70%	51%	51%
2013		70%	51%
2015			70%

-------Priority sectors----------

Competition for skills and capital – will we be ready?

2013 – slow progress with eGov (eASEAN) but Thailand leading a co-ordinated effort.

AEC Blueprint & Scorecard

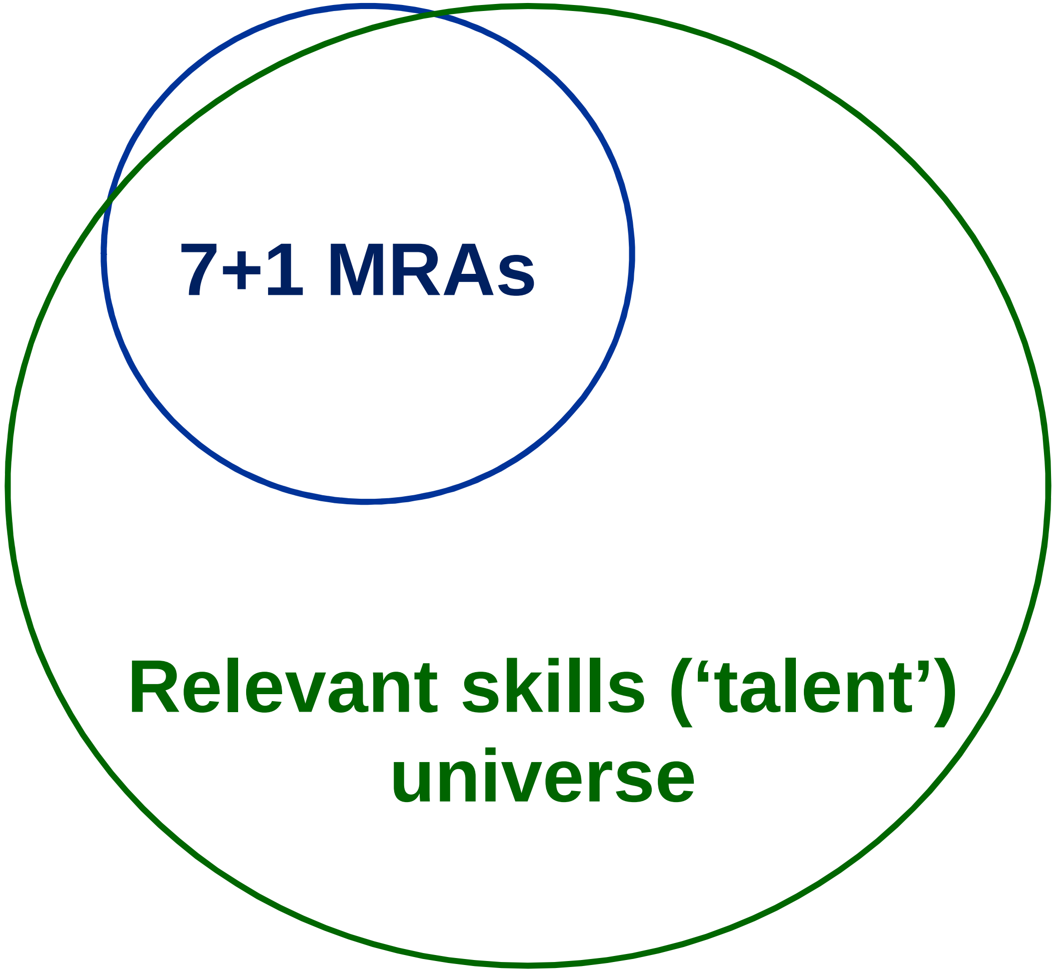
The measure is “implemented”

Is it?

Liberalisation of services – applied to ICT

General	***ICT – esp Info-Comms***
Liberalise foreign equity limits	Probably in a structured way
Free movement of skills (talent).	Especially specialist skills (technical and non technical)
Sector specific changes and mandates	Permits, licences and operating rules not skewed against new entrants (local or foreign); remove targeted anti-foreign laws
Other sector-specific reforms	Structural change – access to facilities, query role of SOEs.

Skills ('Talent') - 1



Mode 4 (people) approach.

Little on mode 3 (commercial presence) – people needed to work the investment

MRAs are currently almost completely irrelevant to ICT skills universe. Even within MRAs, barriers (beyond competency tests) and gaps exist

Skills (‘Talent’) - 2

Licensing of IT skills is not recommended – not necessary as the marketplace is quite effective

IT Competency framework is useful however.

Work permit and visa issues impair skills effectiveness in the economy – anti-knowledge economy barriers.

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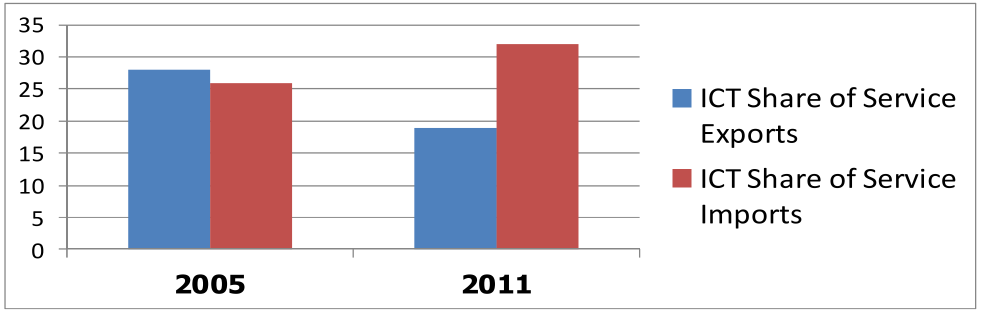
Unlocking ICT – telecoms focus

- ICT - 10% of Thailand's GDP
- Engine of innovative growth

= productivity ⇑ knowledge ⇑ business efficiency ⇑

Mobile pen >110%, broadband 5%

- Thailand



NRI Rankings – Thailand

59th (2011) → 77th (2012) → 74th (2013)

Networked Readiness Index 2013 74th (out of 142)

A. Environment subindex..60
1st pillar: Political and regulatory environment ....81.....
2nd pillar: Business and innovation environment ....52....
B. Readiness subindex 63
3rd pillar: Infrastructure and digital content ....71... ...
4th pillar: Affordability ....45....[slipped from 33].
5th pillar: Skills ....76....
C. Usage subindex..83
6th pillar: Individual usage ....88......
7th pillar: Business usage ....63.....
8th pillar: Government usage ....86. ...
D. Impact subindex 88
9th pillar: Economic impacts ....108..[near bottom].
10th pillar: Social impacts ....67. ..

Source: 2013, WEF, INSEAD

NRI is quoted in gov't reports

NRI - 2013

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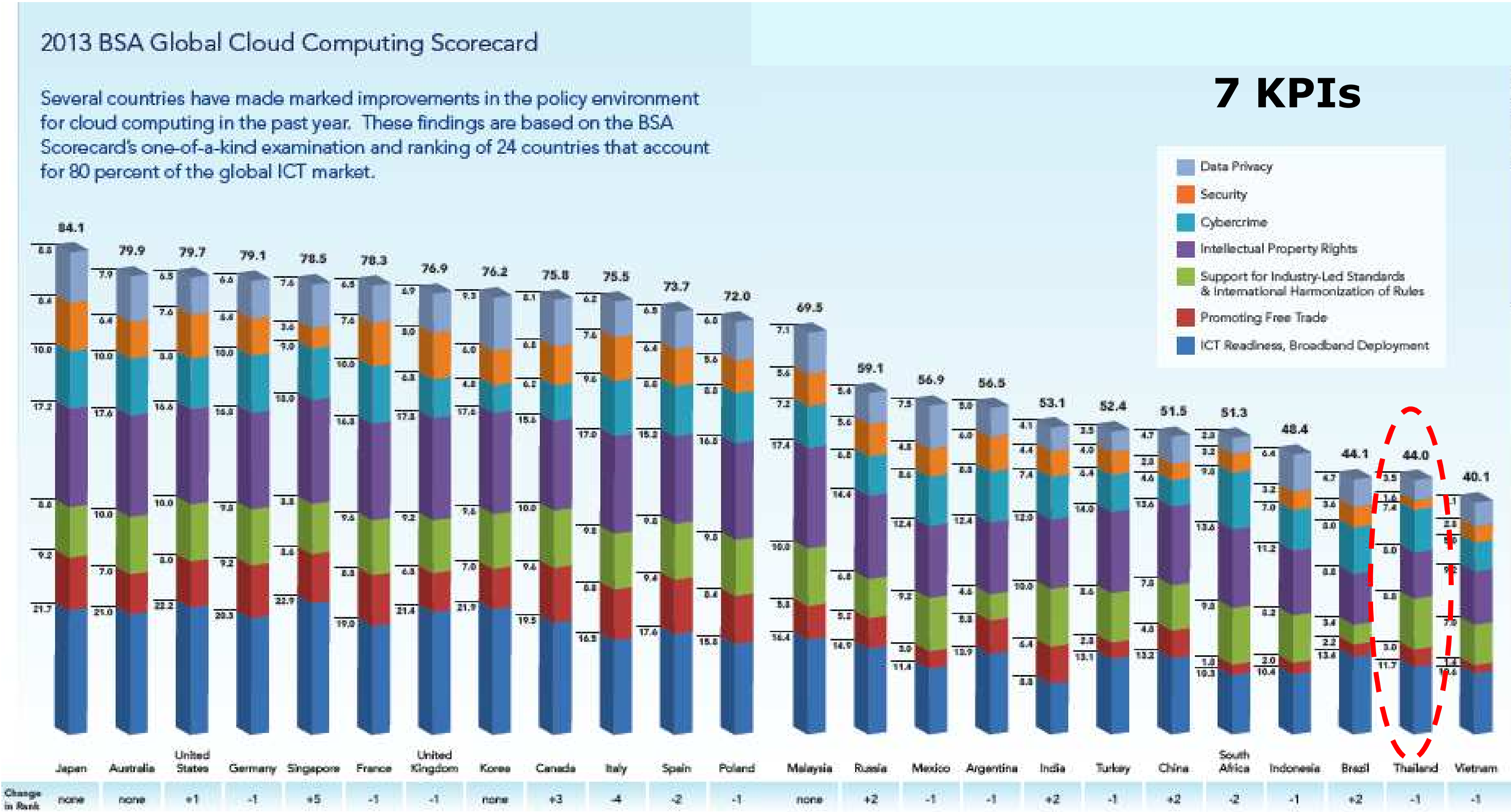
Within ASEAN, Thailand (74th) leads a group of four members that do not leverage ICTs to their full potential. Trailing by more than 70 and 40 places behind Singapore and Malaysia, respectively, Thailand exhibits a number of weaknesses across the board. The highlights of its performance are the relative affordability of ICTs (45th) (2012 33rd), in particular mobile telephony, and the quality of its business and innovation environment (52nd). However, in this latter category as elsewhere, Thailand alternates good and poor assessments. Aside from mobile telephony, other technologies remain relatively scant, translating to a middling 88th rank in the individual usage pillar. Also the institutional environment does not seem to be particularly conducive (81st) and the government does not appear to be particularly ardent at pushing the digital agenda nationwide (86th). In this dimension, the satisfactory ranks obtained in both the Government Online Service Index (64th) and E-Participation Index (46th) conceal relatively low marks (0.51 and 0.32, respectively, on a 0-to-1 scale).

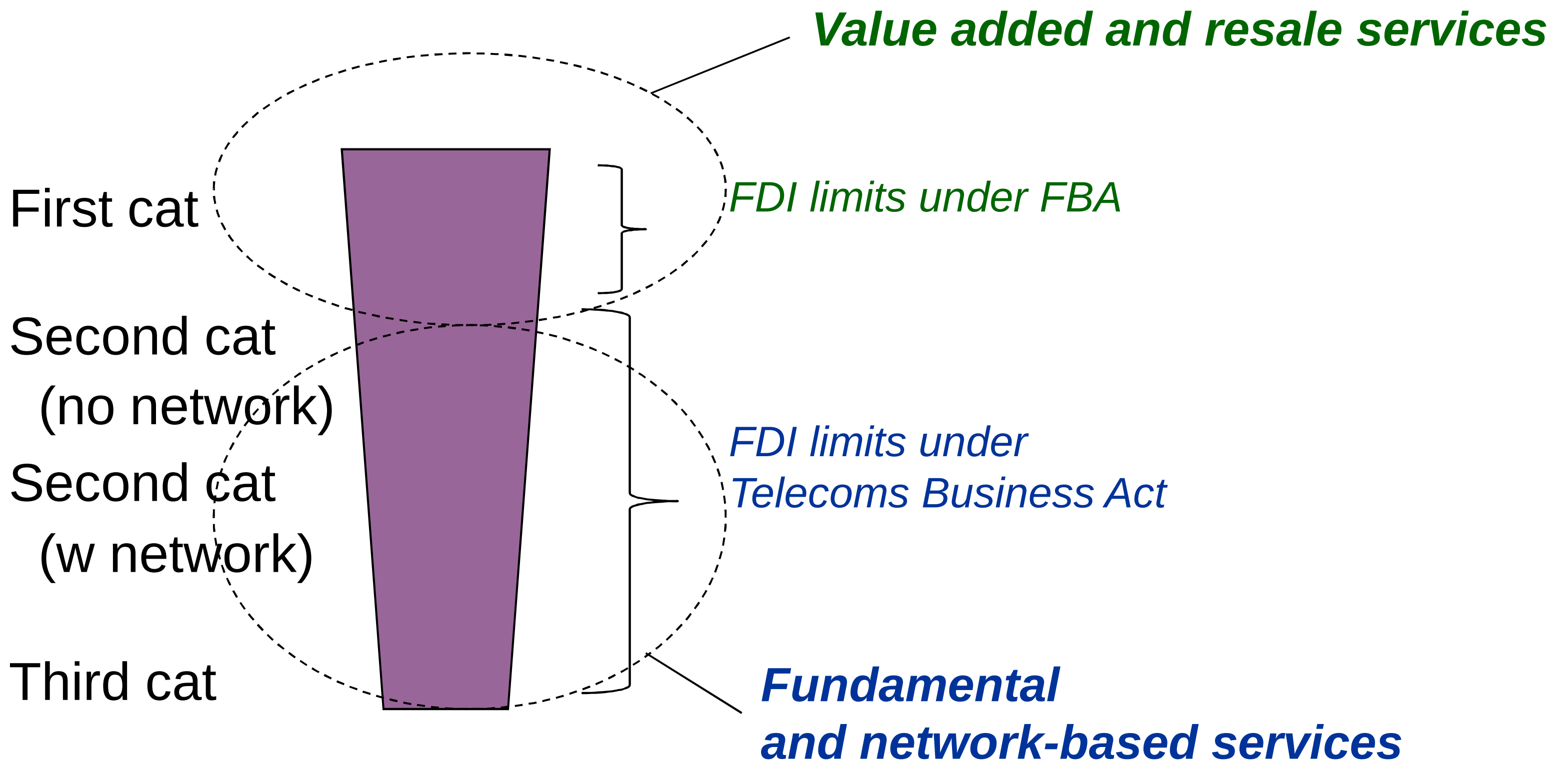
BSA Cloud Scorecard



24 economies representing 80% of the world's IT spend

Source: Business Software Alliance 2013

TBA Distinction between categories



Structure anticipated by the TBA is sound

Telecoms status

Progress with

- 3G issuance – direct licensing
- Regulations for operator interworking
- Frequency management legislation – move away from concession era

Telecoms status

BUT:

Industry structure an impediment:

- No real wholesale market
- SOEs aiming to keep spectrum, prolong concession era . Ministry supports this; NBTC?
- SOEs not evolving to be competitive contributors
- Price competition but lacking in service & innovation competition

SOE Evolution

1. Government department
2. Corporatisation (we stalled here early this century)
3. Ownership & operation not linked to any government dept/agency
4. Privatisation (at least partial)
5. Transform & reform to become competitive, contributive players

Pain in the process, cannot be avoided in long run

SOE Evolution & The Industry

Strengthen: nimble, competitive

Invest overseas.

Examples: BT, TM (Telecom Malaysia), Singtel, Telstra, Q Tel (Oredoo), PLDT, AT&T

Policy = about industry as a whole, not about SOEs just because state-owned. They cannot be the implementers of policy – whole industry must be

Foreign Dominance Notification

Applies to all cat 2 and cat 3 TBA licensees. Originally made by NTC in last few days in office (Aug/Sep 2011), revised by NBTC – reissued July 2012.

September 2012: Norway, supported by US, EU & Japan – action in the GATS Council for Trade in Services

Message: *"Foreign investment not really welcome in the sector"*

Two main reasons for lack of additional bidders in 3 auction 2012:

- Regulatory certainty missing at the time
- Foreign Dominance Notification

Timelines to early Oct 2010

Frequency Legislation
- House version
- Senate version
- Joint deliberations
- Law
- Form NBTC (later=2011)

Foreign Dominance
- 2006 version
- 2010 version Released 4 August
- Public hearing 20 August
- Not Implemented until 2011

Concession Conversion
- CTC formed July ≈ 20 'K2'
- CTC reports 24 Aug
- On-going – deal w b'band also
- Stalls

3G
- IM issued early June
- Public hearing 25 June
- New unattractive terms early July
- Int'l Roadshow late July to early August
- Pub hearing – misc items 30 Aug
- EOI 30 Aug
- Auction – 16 Sep Admin Court - injunction
- Auction – 23 Sep Sup Admin Court confirms

New policy
- 1-2 Oct Cabinet Re-engage SOEs
- 4 Oct BKK Post ed

BKK Post editorial 4 Oct 2010

"The government has set back national telecommunications policy more than a generation. The cabinet decision to re-engage the TOT-CAT Telecom duopoly marks a retreat in the treatment of taxpayers, consumers and business investment. Far from a step ahead, this decision moves us backwards. "

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BSA Cloud Computing Scorecard 2013

7 indicators to rank the world's 24 nations representing 80% of the global ICT market ranks Thailand at 23rd / 24. (Vn = 24)

Indicators include broadband deployment, data protection regime, security, services etc.

NRI and BSA scorecard (see earlier)

show Thai economy is growing but ICT continues to lag relatively

IT

A thriving sector

Creativity vs Innovation

But :

IT competence
Skills
Employment & Immigration
IT Start Ups
Procurement practices
Low % of GDP on R&D

IT – issues - 1

IT competence:
Technical, Soft skills (problem solving, project management), Business Strategy

Skills & education/training **: is the English good enough? – Rote learning an impediment? Innovation**

IT Start Ups **– availability of funding? (good initial development but funding and IPR issues means that the venture often goes offshore. We need the "Made in Thailand' brand**

R&D**: Thailand well under OECD average and low globally**

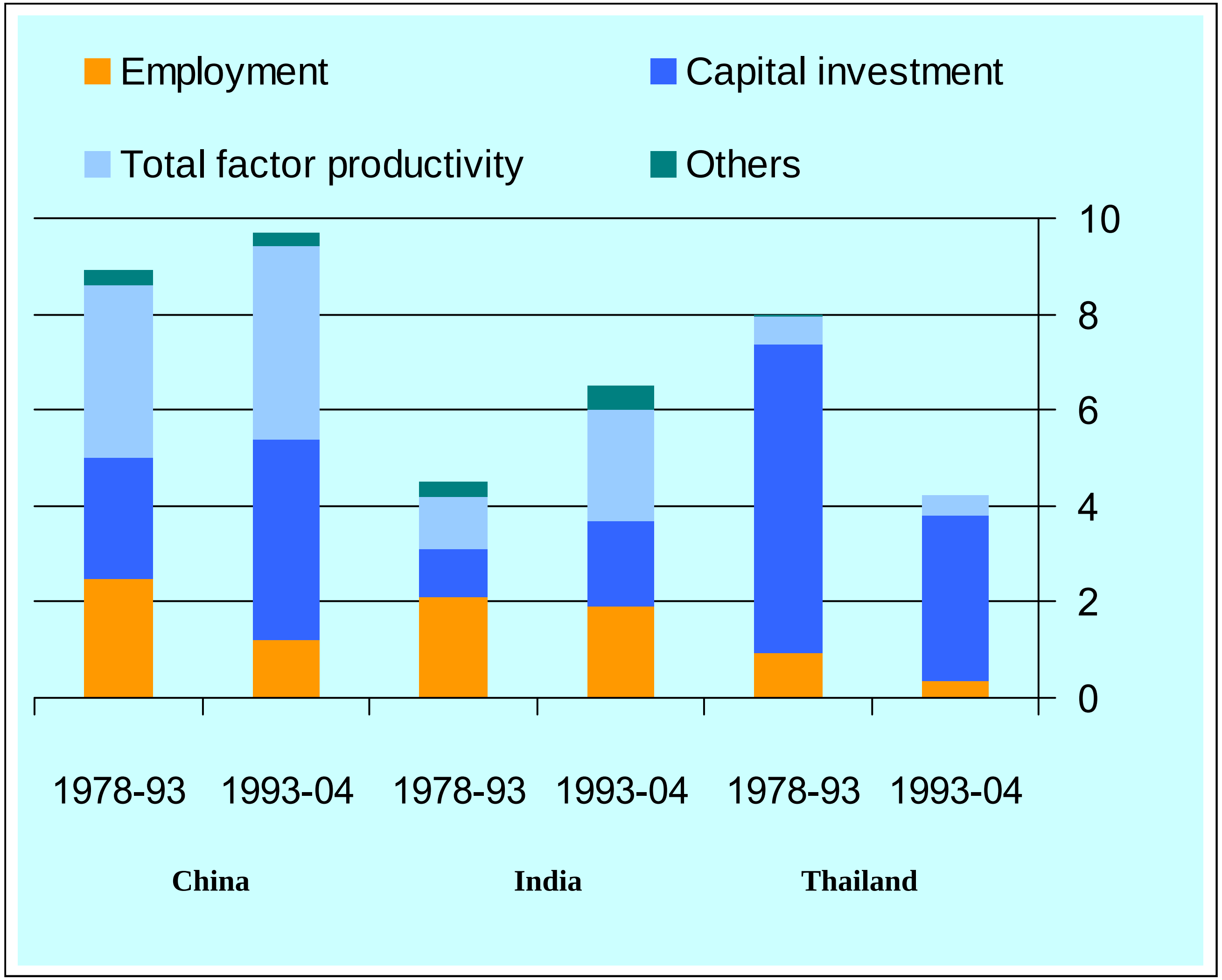
Employment & Immigration: restrictive work permit, visa rules

IT – issues 2

Procurement practices:

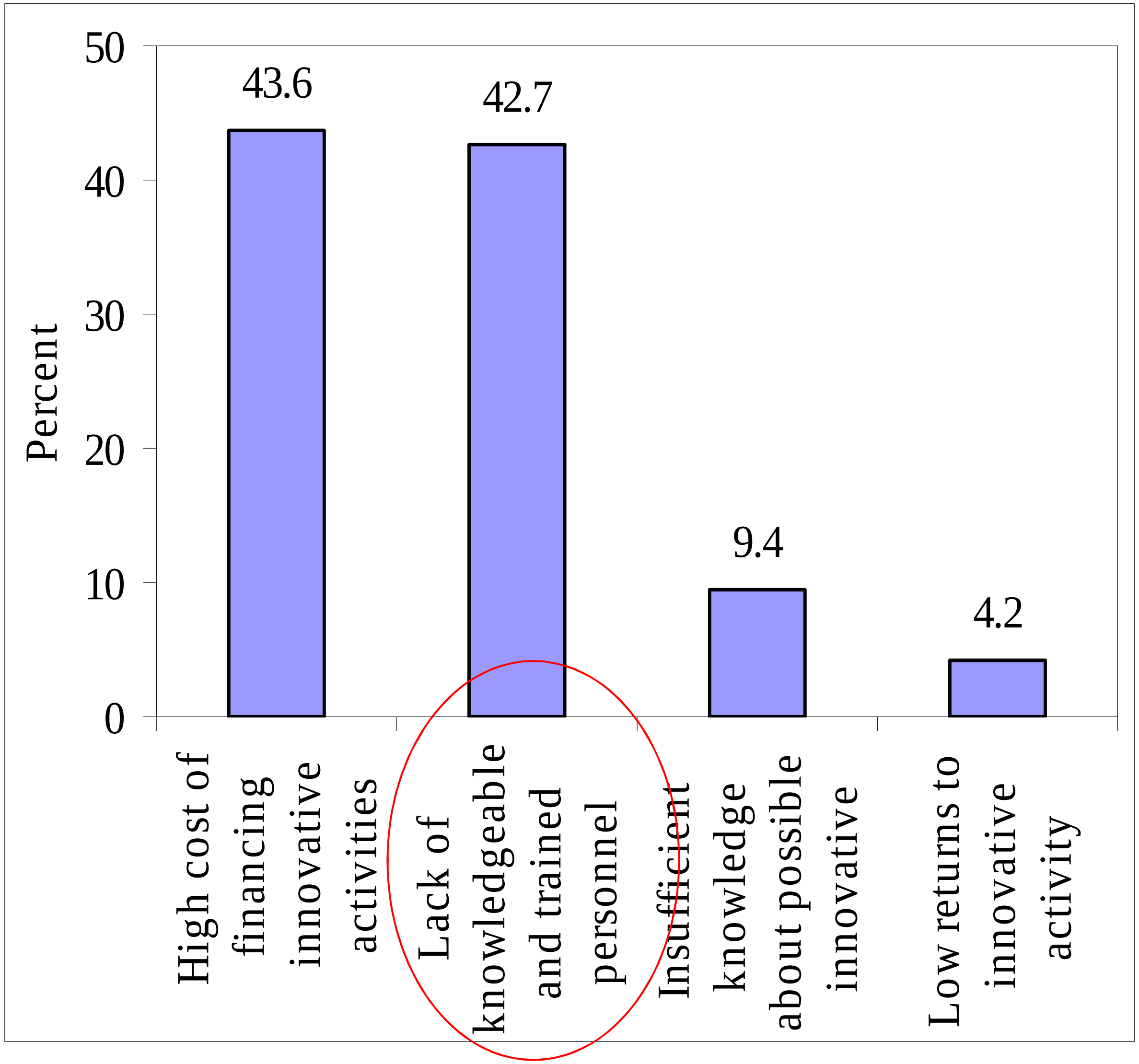
- **eAuction (allowing price performance evaluation)**
- **Unlimited liability in govt procurement**
- **Clear KPIs for acceptance (transparency)**
- **Open standards and interoperability**
- **Type Approvals – recognise global labs' certs.**

Capacity in Economy – source of GDP growth



Source: World Bank Thailand – investments seminar July 2008

Why innovation actions not taken



Source: World Bank Thailand – investments seminar July 2008. Thailand study - % of firms

Innovation – measured how?

Number of patents registered –
(eg Global Innovation Index, others)

Value of Patents realised

Qualitative, anecdotal and 'brand' factors –
eg recognition of ground breaking innovations.

Creative industries' output is not all reflected in recognised forms of IP, but much will be

Centres of Innovation - hubs

Good soft and hard infrastructure

- ports, airports, communications, real estate, local transport
- Sound legal and financial systems, IP protection, sound regulation and procedures, fair playing fields promoting free and fair competition

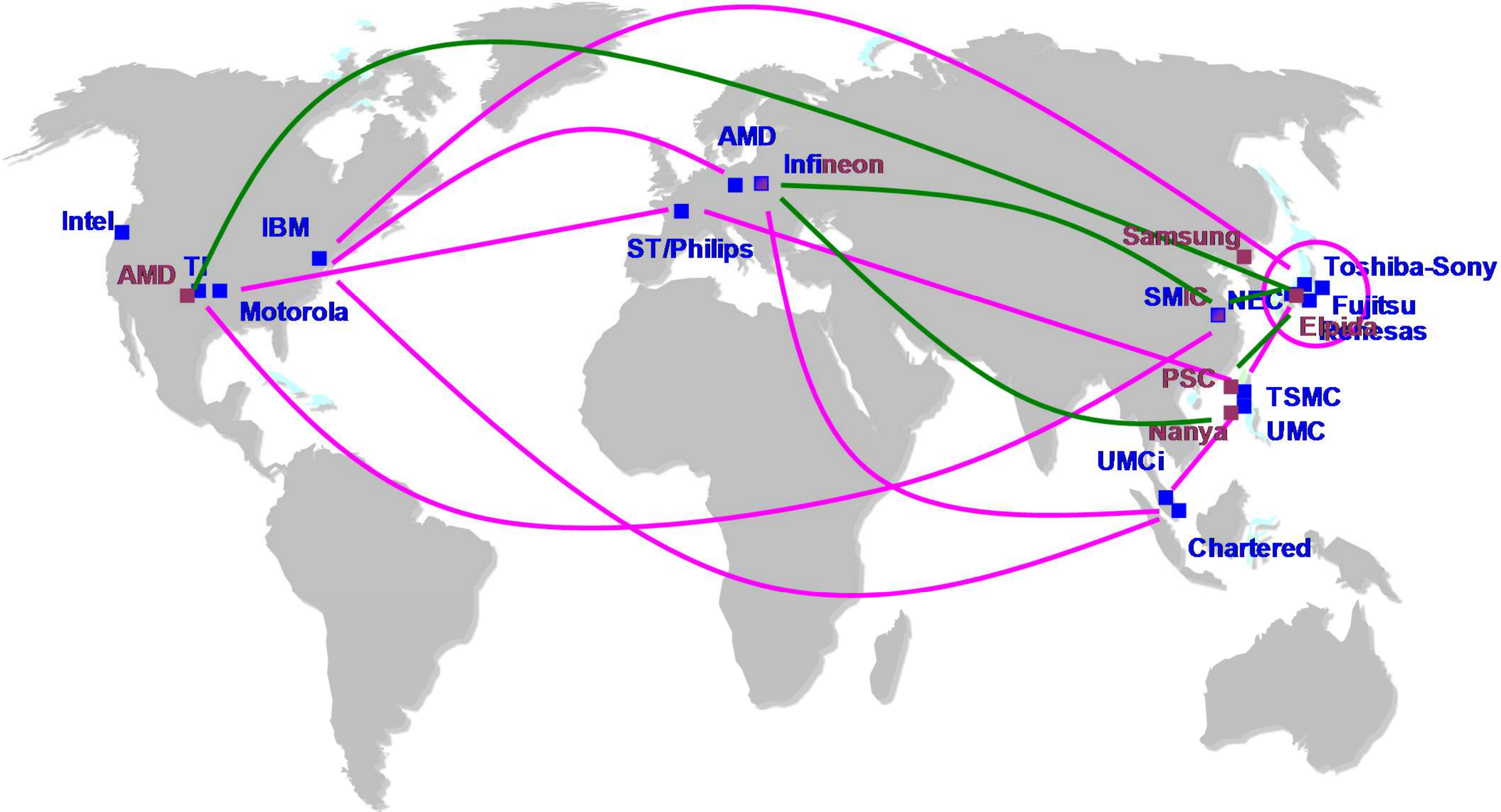
Pro-business polity; Favorable government policies, economic stability

Skilled, educated workforce

Global linkages with low cost, efficient logistics

- Specialized business service infrastructure: VCs, lawyers, dispute resolution, accountants, etc.
- High quality of life (safety, education, personal development) and creature comforts for families; stimulating cultural offerings

Multi-region production partnerships
(example of the need to collaborate and locate multi-locally)



Logic Technology/Production Partnerships/Consortia

Memory Technology/Production Partnerships

Source:
William F Miller - Herbert Hoover Professor of Public & Private Management Emeritus,Stanford University
President and CEO Emeritus,Stanford Research Institute (SRI) International in 'New Regions of Talent & Innovation '

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Getting wisdom 1 - Recommendations

1. Fundamental structural issues in telecoms – SOEs, wholesale, NBTC independence, competition, foreign dominance regulation
2. Politically and socially tolerant – being innovative, creative, taking risks is OK
3. Low cost reliable broadband; , good services through sector liberalisation & resolution of industry structural issues.
4. IT as an industry and IT as a tool
5. Funding – especially private equity and VC – welcome the money and talent – a "Made in Thailand" brand. Away from 'lazy capital'
6. Free movement of skills – labour & immigration roadblocks; liberalise some service sectors ("Made in Thailand" brand)
7. Education - Teach IT soft and hard skills, national or regional IT competency framework. English as the language of IT at secondary level, not as the rich kid's language.

Source: JFCCT/Presenter

Getting Wisdom 2 - Recommendations

9. Procurement practices reform
10. A Data Protection Law dealing with cross border flows
11. Fully liberalise international gateways
12. Collaboration : university – industry – (teaching *and* research dimensions); peer-to-peer collaboration; regional collaboration; massive large scale global collaborations on large projects; smaller local collaborations
13. IP protection
14. A sense of urgency – waiting for ASEAN economic integration – reactive only, will not work. Proactive about AFAS, ASEAN ICT Masterplan, Connectivity
15. A change to mindset about the industry as a whole "Bring your skills and capitial here - a "Made in Thailand" brand.
16. A change of mindset away from rent-seeking. Government as policy maker, independent regulator (NBTC).
17. Wisdom about how to interoperate, collaborate, compete. This sector can shine!

Source: Presenter

Source: JFCCT/Presenter

Thank you

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