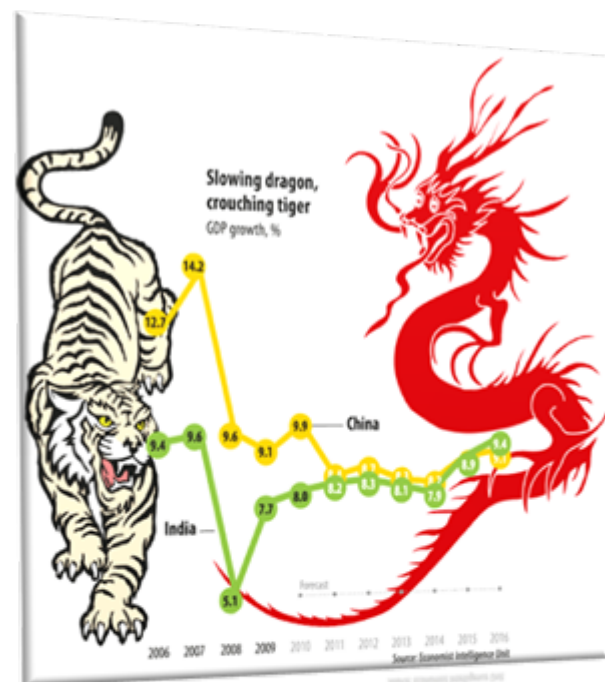




# What are driving global ICT Growth: Asia, China, India...

Rasheda Sultana  
Bangladesh

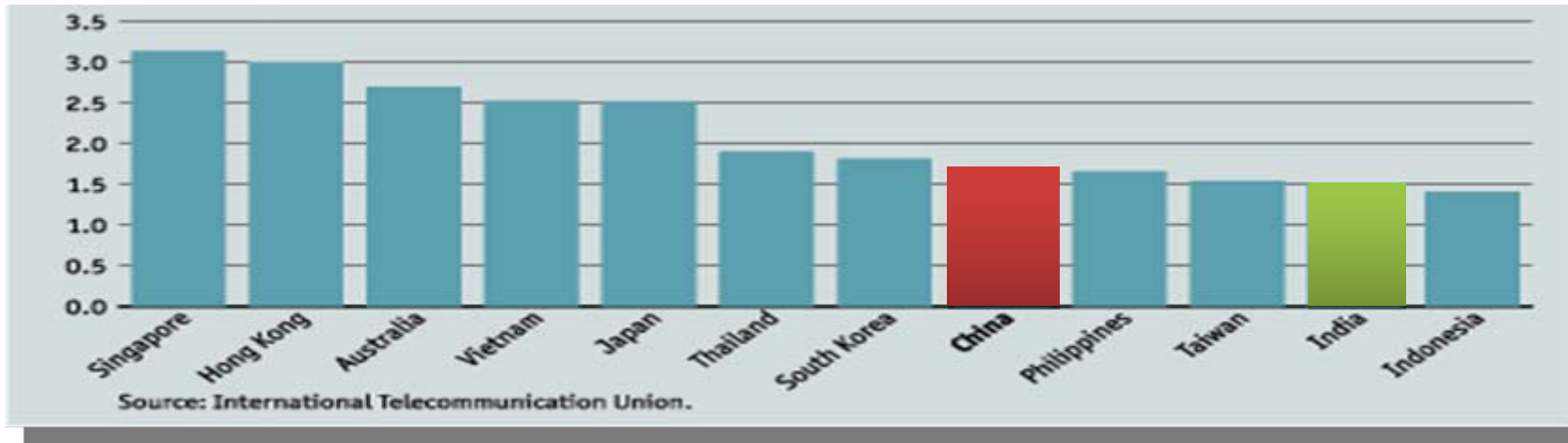
# Two economies were resilient during recent recession



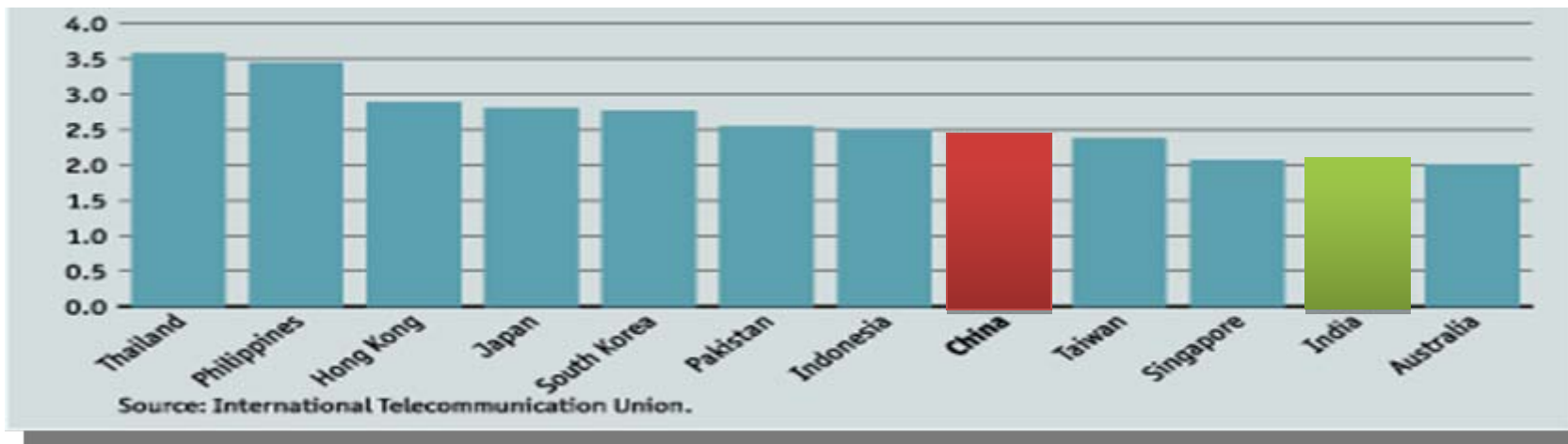
Region	2003	2004	2005	2006	2007	2008	2009	2010	2011 (E)
World	2.7	4.1	3.6	4.1	4.0	1.7	<b>-2.1</b>	3.9	3.1
US	2.5	3.6	3.0	2.6	2.1	0.4	<b>-2.6</b>	2.9	2.3
Japan	1.4	2.7	1.9	2.0	2.4	-1.2	<b>-6.3</b>	4.0	-0.4
EU	1.4	2.5	2.0	3.2	3.0	0.5	<b>-4.2</b>	1.8	1.9
Brazil	1.1	5.7	3.2	4.0	6.1	5.2	<b>-0.6</b>	7.5	4.0
China	10.0	10.1	11.3	12.7	14.2	9.6	<b>9.1</b>	10.3	9.4
India	8.4	8.3	9.3	9.4	9.6	5.1	<b>7.0</b>	8.6	8.1
Russia	7.3	7.2	6.4	8.2	8.5	5.6	<b>-7.9</b>	4.0	4.4
South Africa	2.9	4.6	5.3	5.6	5.5	3.7	<b>1.8</b>	2.8	4.0

Source: UNCTAD secretariat calculations, based on United Nations, Department of Economic and Social Affairs (UN/DESA), National Accounts Main Aggregates database, and World Economic Situation and Prospects (WESP) 2011: Mid-year Update; ECLAC, 2011; OECD.Stat database; and national sources.

## IT spending: regional comparison, 2010(%of GDP)



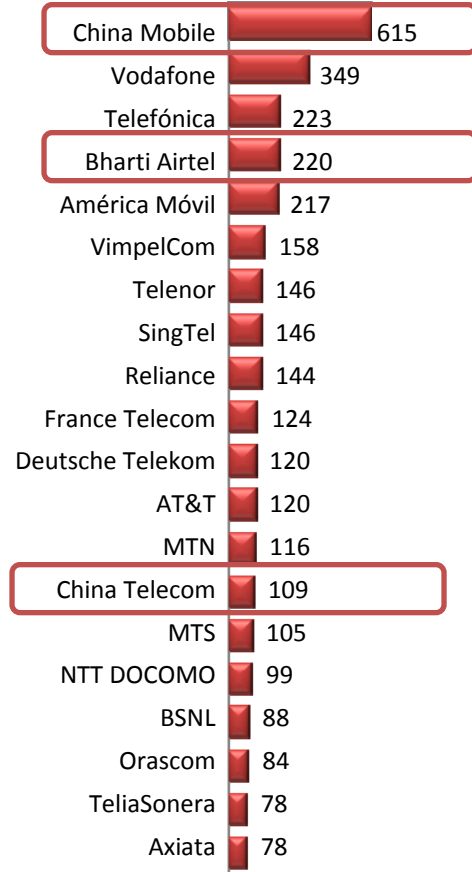
## Telecommunications revenue: regional comparison, 2010(%of GDP)



# Global telecom giants

**Among Global top 20, Chinese operator has the largest subscriber base and Indian Company has 4<sup>th</sup> largest**

**Mobile subscribers (pro rata)<sup>1</sup>,  
Millions subscribers; Q2 2011**



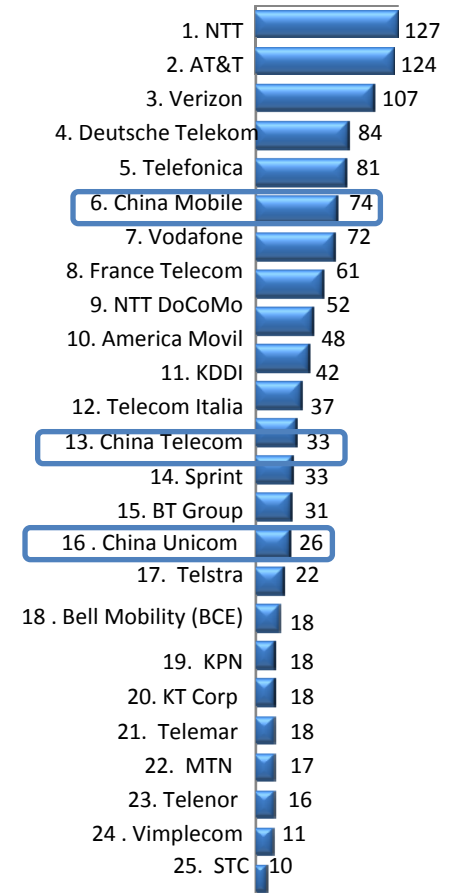
**China Mobile(China)  
584mn (94% of total)**

**Bharti Airtel (India)  
152.5mn( 70% of total)**

**China Telecom(China)  
90.5mn (83% of total)**

**Among top 25 revenue earners, Chinese operators have secured several positions**

**Revenue  
USD billions; 2010**



<sup>1</sup> Mobile subscribers calculated by GSMA, using (ownership %) x (# of subscribers)

# What're fueling the growth in India and China...



## Economies of Scale

- Population base
- Size of Economy

## Innovative business model to cater target group

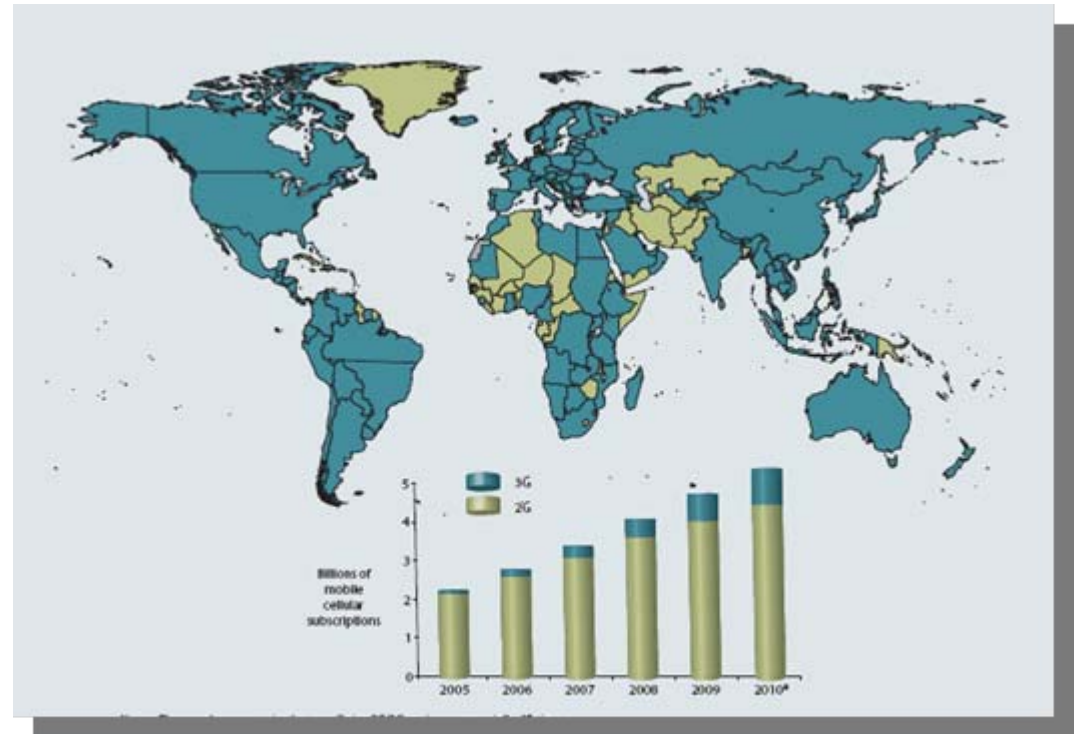
- Affordability

## Growing educated mass

- More science and engineering students
- International knowledge and experience

# Rise of 3G

- First commercial launch of 3G-
  - Global -NTT DoCoMo in Japan on Oct'01
  - Europe - Telenor on Dec'01
- Out of 5.8bn GSM and WCDMA worldwide subscribers, 1.4bn are WCDMA or 3G subscribers (as of Sept'11)
- 143 countries are offering 3G services





# Market started growing with China and India

3G connections have crossed 1bn mark in Q2 '11

- 25% of total mobile connections are 3G
- It reached 1.4bn in Sept'11
- Early adopters in Asia also started to pick in 2010-11
- Subscriptions in other country will rise fast with growth in China and India

Growth Driven By affordable equipment/ devices/ terminal

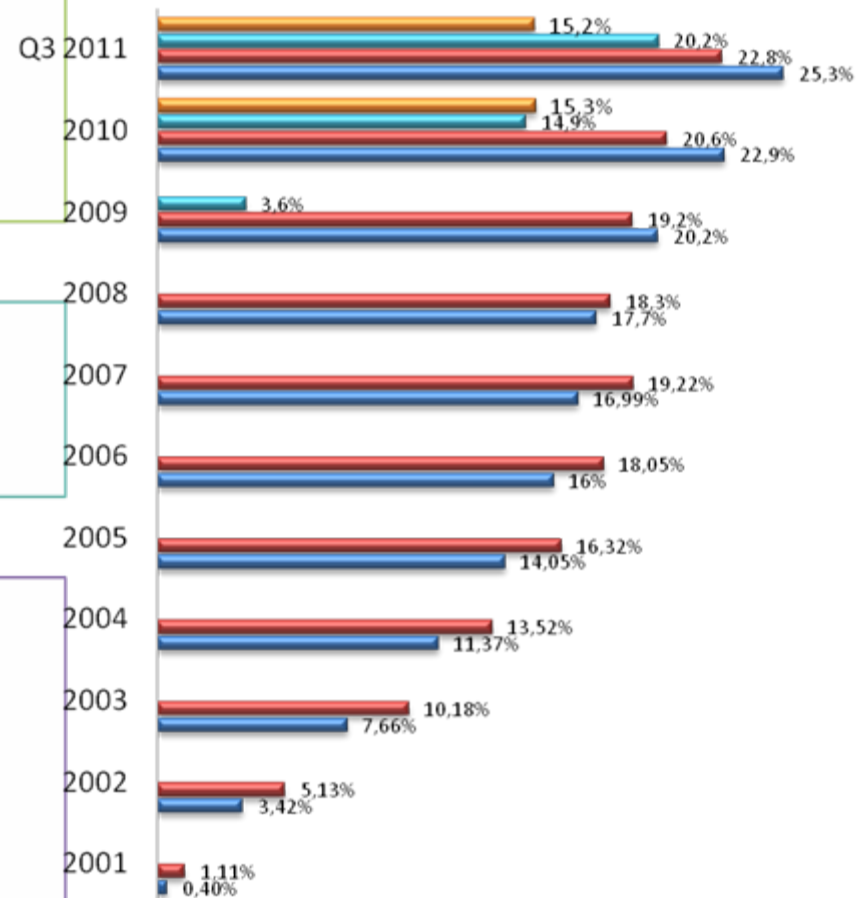
- Feature phone starting price USD 30 onwards
- Laptop starting price USD 250 onwards

Development of innovative, affordable , convenient and relevant services depend on up-front cost of operators

- Irrational/ very high 3G license /spectrum price can hinder fast roll out, relevant R&D and adoption of services
- Govt. earned USD 14.6bn in India with 3G auction
- China gave 3G license for free
- Development of local content is crucial

## 3G Penetration growth (2001-11)

India China Asia Pacific World



# Driving innovation

## Telecom operator's challenge

- ARPU
  - Traffic growth outpaces revenue increase
  - How to enhance revenue?
- Bandwidth
  - Fast evolution of technologies and networks
  - How to establish advantages in BW
- Cost
  - Cost of Telecoms don't follow Moore's Law
  - How to restrain cost hikes?

## Subscriber's challenge

- Convenience
- Affordability
- Reliability

### Customer centric Solutions by vendors – Huawei

- Global No.2 telecom solution provider
- 2/3 of the sales are from the international market
- The only telecom supplier with-
  - Comprehensive strengths in fixed, mobile and IP technologies
- Ranked No.1 in mobile broadband devices

### Operators' strategy

- Business model
- Infrastructure sharing and tower company
- Dynamic pricing- Grameenphone(GP), Uninor
- Cell Bazar
- Community Information Center



# Huawei-Customer centric innovation

## •Innovation milestones

- 42k+ patent applications in total, 15k+ are granted
- No 1 in 4G (LTE) patents applications
- Deployed the world's first LTE network of TeliaSonera in Sweden

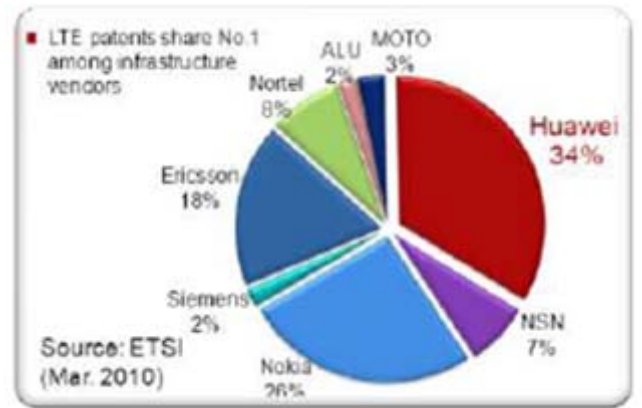
## •Innovation investments

- Invest 10%+ revenue on R&D annually
- 46% of total employees are focused on R&D

## •Innovation institutes

- 20 R&D centers, 20+ innovation centers

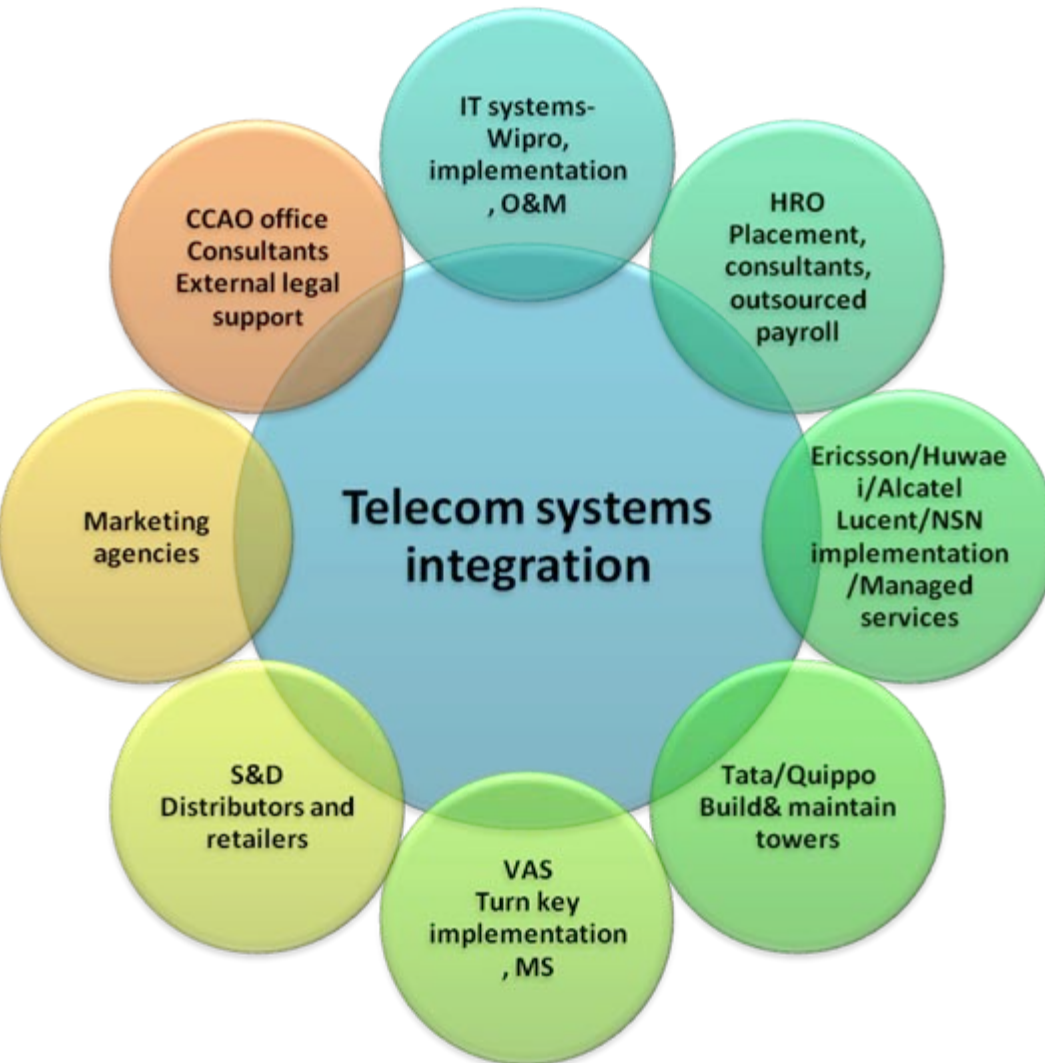
## Ranking No.1 in terms of 4G/LTE patents application



## Huawei R&D center presence



# Business model for future: Uninor



## More efficiency, flexibility and velocity

- Cost efficient model based on outsourcing principles
  - IT outsourcing
- Facilitates faster adoption of evolution
  - 100% tower sharing
- Leverage expertise in the ecosystem at competitive costs
  - Low upfront cost
  - No legacy issues
  - Optimal control on outsourced projects

# Dynamic pricing



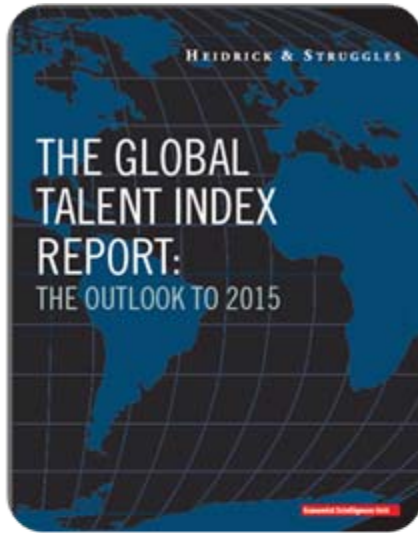
- 2 Telenor affiliates introduced (Uninor and GP ) dynamic pricing

- Their customers can save with the 24x7 Discount Plan which put the customer in control of the costs

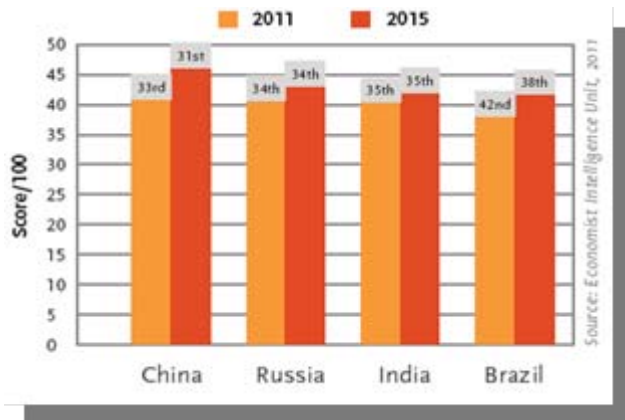
- The offer is available at any given time, and is visible at all times on the screens of handsets that display cell broadcast

- The discount that is displayed on the screen at the time of a call will be applied throughout the call
  - When the call ends, the discounted cost will appear on the screen
  - Discounts from 5%-60% in Uninor and 10-83% in GP network, depending on time and location

# Towards a Meritocratic society: GTI



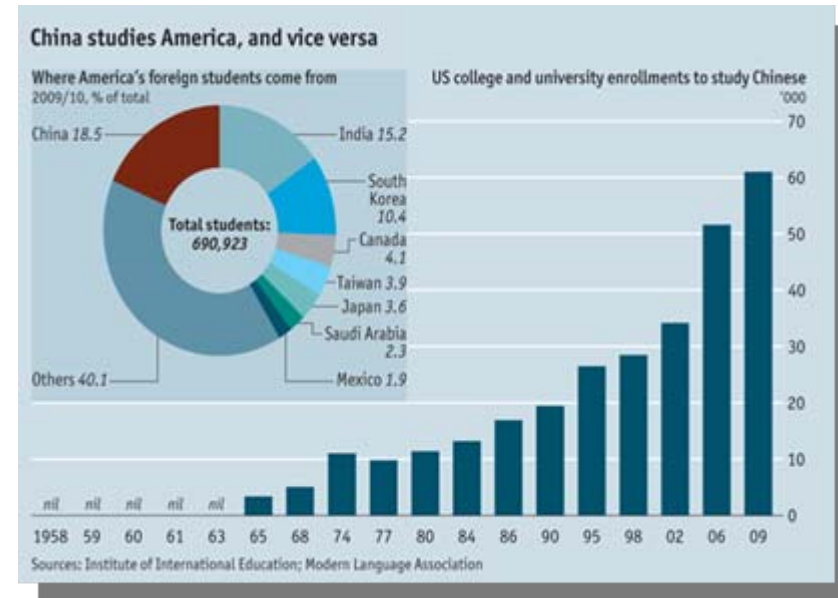
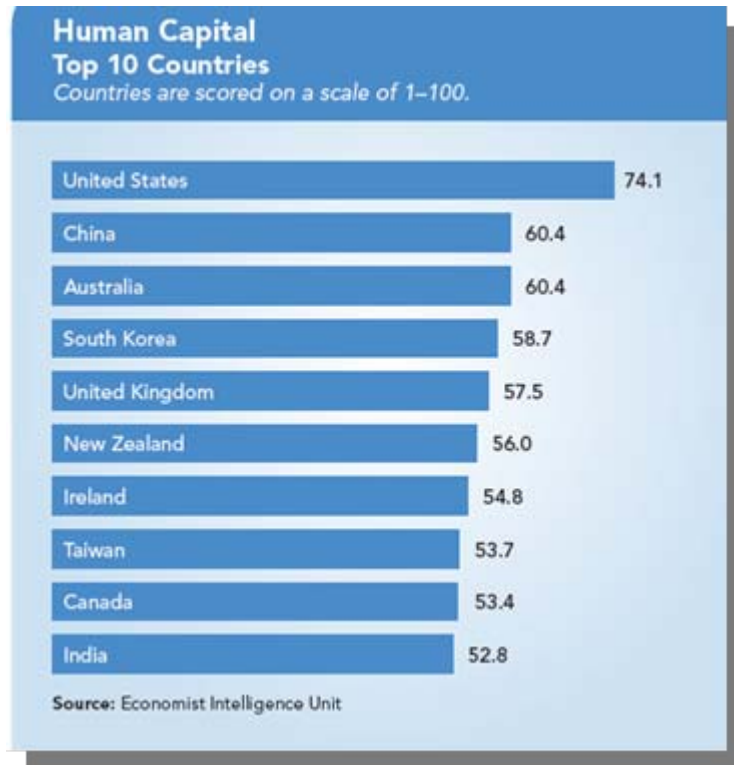
BRIC performance 2011-15



- The Global Talent Index (GTI) Report by the Economist Intelligence Unit benchmarks 60 countries
  - Capacity for developing, attracting and retaining talent, both in 2011 and projected to 2015 and
- The US is the stellar GTI performer ranking first in 2011 and 2015
- **China and India are ranked 33 and 35 respectively in 2011**
- **None is growing as rapidly as China and India**
- **China 's growth outperforms other countries in the Index**

# Future talents are more in to ICT sector

- China and India dominates the foreign students pool in West
- Chinese students are more in to engineering, mathematics, medicines studies
- India produces over 500K engineers every year



- Human Development Index of BSA
  - Enrolment in Higher education
  - Enrolment in Science & IT
  - Quality of Technology Skills



# Asia will lead the way with China and India as forerunners ....



## **Driving ICT Revolution**

- Future technology uptake
- Economies of scale



## **Driving innovation**

- Budget business model
- Affordable equipments / CPEs/high end hand set
- Affordable services



## **Driving Human Capital Development**

- Increase competitiveness
- Future talents
- Meritocratic society
- Working population- more hands on ploughs and keyboards



# THANKS

