

Competition policy and mobile services

The role of open access



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Ground to be covered

- **Mobile services - big picture**
- **Services providers – the theoretical benefits**
- **The Hong Kong experience**
 - ⇒ Background on the markets
 - ⇒ What's happened with MVNOs and mobile competition
- **Conclusions about regulating for open access**



Mobile services are part of NGN era

- **NGN implies convergence, mobile services are being deeply affected**
- **Value is shifting from infrastructure layer towards the application layer**
- **Peering relationship between networks and service providers are emerging**
- **Two-sided markets – operators need content and applications to attract subscribers**
- **There are market incentives for adoption of open access so regulating for access should be restrained**



What service providers can contribute

- **Static efficiency**

- ⇒ Arbitrage where prices are not competitive
- ⇒ Roaming is a classic example of weak competition

- **Dynamic efficiency**

- ⇒ Innovate on top of the network operators' investments and efforts
- ⇒ Being entrepreneurial flexible and focused, an advantage for innovation
- ⇒ Innovation important for sustained growth

- **Consumer choice**

- ⇒ But not a substitute for fundamental competition between rival networks



The Hong Kong experience

- **Some background info:**

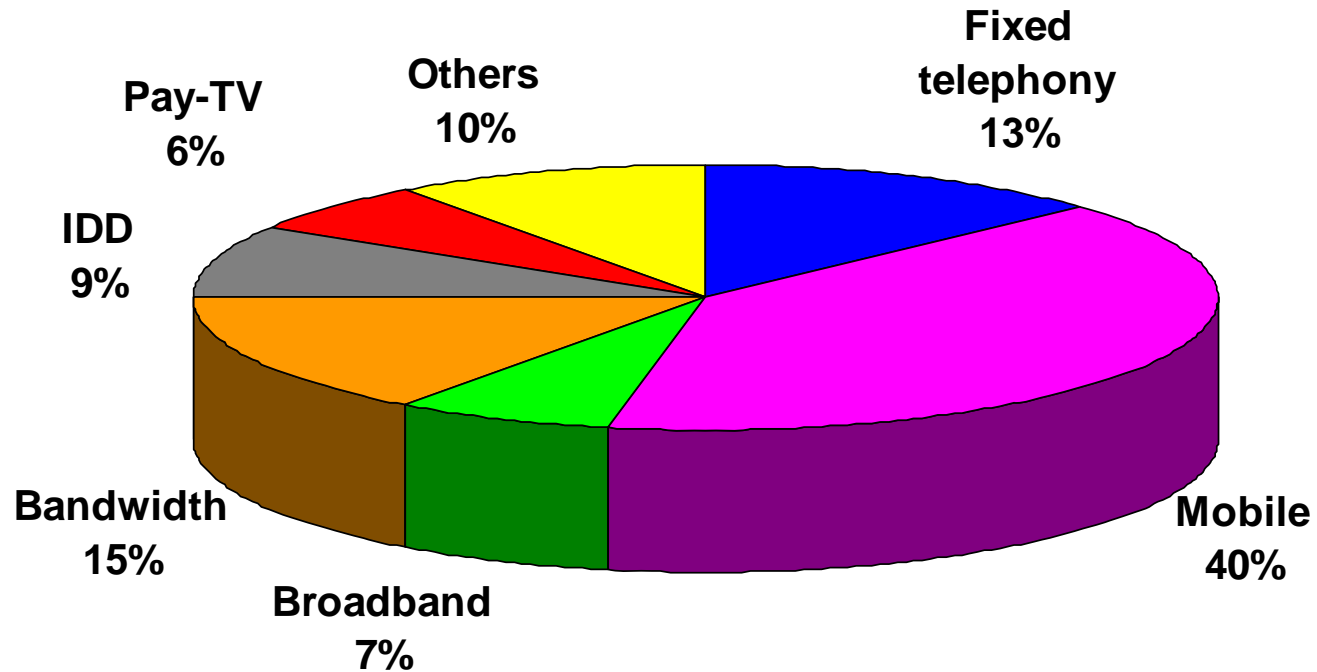
Main statistics	2003	2004	2005
Population (million)	6.845	6.916	6.971
Avg household size (# persons)	3.15	3.10	3.05
Nominal GDP per capita (US\$)	23,254	24,059	25,546
Population density (persons per sq. km, exclude reservoirs)	6,300	6,380	6,420

High population density

- This is how we live:



Background info: telecom revenue composition



Background info: penetration rates

Per household	2003	2004	2005
Residential fixed telephony	98%	95%	93%
Residential broadband access	52%	61%	66%
Pay-TV	37%	49%	60%
PC	68%	71%	70%
Internet access	60%	65%	66%

Per population	2003	2004	2005
Mobile	106%	119%	123%
3G mobile	n.a.	3%	9%

Background info: telecoms market structure (2005)

Segment	#key players	HHI by volume	HHI by turnover
Fixed telephony	5	4,893	6,239
Pay-TV	4	4,482	5,543
Broadband	4	3,155	3,693
Local bandwidth	5	2,870	6,074
External bandwidth	6	2,567	2,735
Mobile	5	2,134	2,390
IDD	~12	1,727	1,883
Overall	7	n.a.	2,640

Background info: service prices

Monthly ARPU (US\$)	2003	2004	2005
Residential fixed telephony	16	15	14
Business fixed lines	18	18	18
Mobile	23	22	22
Broadband	27	25	20
Pay-TV	27	23	22

Price index	2002	2003	2004	2005
IDD outbound	100	82	56	42
Local bandwidth	100	67	47	33
External bandwidth	100	44	35	28

Background info: industry profitability

EBIT margin	2003	2004	2005
Maximum	23%	19%	18%
Minimum	8%	-6%	-14%
Simple average	15%	10%	4%
Weighted average	14%	13%	9%
Median	14%	10%	4%



The 'converging' market in HK

- **Numerous bundling offers in the market:**

- ⇒ 2 x triple players (fixed, broadband, pay-TV)
- ⇒ Different incumbents for different 'plays'
- ⇒ Package prices @US\$30~40/mo.

- **Operators aggressively embracing VoIP:**

- ⇒ Two CLEC's have launched broadband phone products (one of which is software phone)
- ⇒ Two CLEC's and one mobile operator have formed strategic partnerships with Skype and Yahoo! Messenger respectively



Mobile sector

- **Five network operators (four 3G)**
- **Two of them are quadruple players**
- **Mobile penetration 123% (10% for 3G)**
- **Monthly ARPU @ ~US\$25**
- **Data = ~10% ARPU (including SMS)**
- **7 MVNOs, combined market share @ 6%**
- **Interconnection markets continue to be deregulated**
 - ⇒ Commercial negotiation first - Market failure required for intervention
 - ⇒ Effective countervailing power exists against termination monopolies



Hong Kong's experience (cont.)

- **2001 regulatory dilemma:**

- ⇒ Six 2G operators, four 3G spectrum blocks
- ⇒ High auction valuations in Germany & UK
- ⇒ Solution: mandatory open network access (30%)

- **2006 outcome:**

- ⇒ No 3G MVNO in the market
- ⇒ The two 2G operators without 3G licences have been acquired
- ⇒ Plenty of independent mobile content and application providers



Hong Kong's experience (cont.)

- **Facilities-based competition is keen – little room for MVNO to arbitrage against mobile connectivity prices**
- **If content and applications come, they come – regulation can't improve things**
- **Network operators have behaved pro-competitively to content and application providers, because incentives are there**
- **Roaming may be an exception**



Mobile roaming

- **A classic situation of tacit collusion**
- **A test to effectiveness of competition regimes**
- **Hong Kong's solution:**
 - ⇒ International call forwarding service (ICFS) – a service-based arbitrage
 - ⇒ A contrarian view on value of roaming alliances
 - ⇒ Approval to cross border mergers



ICFS – how it works

- **A ‘one-stop-shop’ for the following steps:**
 - ⇒ subscribe to ICFS and obtain a local number
 - ⇒ buy an overseas SIM card (one card, multiple numbers for popular destinations)
 - ⇒ register your overseas SIM card numbers to the ICFS provider
 - ⇒ call forward your mobile phone to the local number provided
 - ⇒ use your SIM card to receive calls from overseas



ICFS regulation

- **Similar to callback in the 90's, OFTA held that ICFS is a legal operation**
- **In 2003, OFTA determined an access charge for ICFS because airtime charge is zero for retail call forwarding services in Hong Kong**
- **All fixed network operators, IDD operators and even some mobile network operators are now offering competitive ICFS services**



Sample roaming vs ICFS rates

- **ICFS prices include the following components:**
 - ⇒ Call-forwarding air-time charge in Hong Kong (zero)
 - ⇒ ICFS access charge (regulated, otherwise zero)
 - ⇒ IDD rate (competitive)
 - ⇒ Local air-time charge from overseas (competitive?)

(USD/minute)	Roaming	ICFS	% saving
China	\$1.64	\$0.15	91%
Germany	\$1.59	\$0.73	54%
UK	\$1.13	\$1.01	11%
US	\$2.26	\$0.31	86%



Mobile roaming alliances

- **The historical situation in the roaming sector is one of weak competitive pressure at the borders**
- **Any upset to the status quo is likely to yield positive results**
- **Formation of new roaming alliances may shake up the existing cartel**
- **A positive reason behind OFTA's clearance of China Mobile's acquisition of CR Peoples**



Conclusions from the Hong Kong Experience

- **Market works better without intervention**
- **Service providers are playing their role, both in terms of innovation and arbitrage**
- **Mobile operators must embrace spontaneous open network access to stay competitive**
- **Some residual market power may exist in roaming, but consumers have options**



Thank you
