Market Analysis of Mobile Handset Subsidies

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Definition of Handset Subsidy

- Bundling of handsets and subscriptions involves subsidies which appear to consumers as
  - commitment to subscription for a fixed period of time (1-2 years)
  - handset locked to the operator (subsidy lock, SIM lock)
  - reduced handset price
  - increased tariffs in service plans (due to cost recovery)

- Regulator may allow full or time-limited locking of handsets

- Amount of subsidy = operator’s loss per handset
Subsidy and Market Equilibrium

• If one operator starts subsidizing, the others must follow (or, no single operator can alone stop subsidizing)

• A competitive market allowing subsidies is likely to have an operator that decides to use the first mover advantage

• Thus, regulator holds the effective power to start and stop handset bundling and subsidy
Subsidy and Market Power

No bundling (e.g. Finland)
- Vendor manages multiple retail channels
- Operator focuses on basic services
- Unclear who orchestrates the user experience

Strong bundling (e.g. Japan)
- Operator manages services and handsets
- Operator exploits buying power for
  - Brand visibility
  - Handset volume discounts
  - Handset features and configurations
  - Managing content providers
  - Pushing from pre-paid to post-paid
Handset Subsidy vs Operator Budget

• Lower handset prices speed up demand and bring new subscribers to the market ⇒ bigger subscriber base
• Cost recovery raises tariffs ⇒ usage per subscriber goes down ⇒ less traffic per subscriber
• ARPU may go up or down!

• Subsidy increases the cost of winning a subscriber (free handset) but often decreases the cost of keeping a subscriber (low churn)
• Cost per subscriber may go up or down!
Time Window for Subsidy

- Handset subsidy has biggest impact in the fast growth phase
- Subsidy helps achieving the critical mass for network effect

**Hypothesis**: handset subsidy can be useful in adopting the regulator’s target if the subsidy can be limited in time (growth phase) and technology (e.g. WCDMA)
## Comparison of Case Markets

<table>
<thead>
<tr>
<th></th>
<th>Finland</th>
<th>UK</th>
<th>Japan</th>
<th>Korea</th>
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</thead>
<tbody>
<tr>
<td>Handset bundling allowed</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>3G?</td>
</tr>
<tr>
<td>Degree of subsidy</td>
<td>0</td>
<td>High</td>
<td>High</td>
<td>0</td>
</tr>
<tr>
<td>Churn rate (%)</td>
<td>c.30</td>
<td>c.30</td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>Prepaid (%)</td>
<td>4</td>
<td>65</td>
<td>6</td>
<td>2</td>
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<td>3G spectrum auctions</td>
<td>-</td>
<td>2000</td>
<td>-</td>
<td>2001</td>
</tr>
<tr>
<td>3G penetration (%)</td>
<td>0</td>
<td>3</td>
<td>c. 20</td>
<td>c.20</td>
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</tbody>
</table>
Case Japan

- Handset subsidies are in full use and considered business-as-usual
- Operators orchestrate the end-to-end service (technology and business)
- Penetration is still in the fast growth phase and operators compete only on new subscribers (churn is low)
- For 3G, both WCDMA and CDMA2000 are adopted, which makes regulator-driven focused subsidies unlikely
Case South Korea

- CDMA handset subsidies allowed from 1997 to 2000 for rapid take-up of the new CDMA technology
- Regulator has punished operators for illegal subsidies (e.g. 20-40 days temporary stoppage in accepting new subscribers)
- Government strategy in 3G is to promote both CDMA2000 and WCDMA due to global prospects ⇒ both licences have been auctioned
- Handset deal between government (ETRI) and Qualcomm
  - 20/80 license profit sharing for CDMA handsets in Korea
  - government likely to receive 200 MUSD royalties by 2008
- In April 2004 subsidies were again allowed
  - WCDMA handsets: max 40% subsidy allowed
  - PDA handsets (min 2.7” screen): max 25% subsidy allowed
Case UK

- Regulator (Ofcom) has allowed handset subsidy but assumes cost-based unlocking of handset
  - prepaid subscription: when operator has recovered subsidy
  - postpaid subscription: when the handset is min 12 months old

- Operators focus subsidies on handsets related to postpaid packages of new services => consumer price of high-end postpaid handset is close to that of low-end prepaid handset

- Operator 3UK tried to sell high-end handsets for full price (c.600e), but within six months was forced to cut prices in half
Case Finland

- GSM subsidies and provider lock prohibited since 1997
- Instead of handset subsidies operators attract new subscribers with packages of “free talk time” or other bundled goods (e.g. digital camera, backpack, DVD player)
- Competition due to mobile number portability and new VMNOs is focused on voice and SMS (keeping data tariffs high)
- Slow progress of WCDMA and new data services has raised the question of allowing subsidy on regulator’s table
- One operator (Elisa) supports the acceptance of bundling (assuming SIM lock) while two others (TeliaSonera, DNA) want to keep the prohibition
Conclusion

• South Korea brought CDMA above critical mass with a *focused subsidy*
• Japan ramped up an operator-centric mobile data market with an *non-focused subsidy*
• The UK allows *non-focused subsidy* to promote competition between operators
• Finland is reconsidering the subsidy policy. Three main paths are being analyzed
  a) Continue prohibiting handset bundling
  b) Go for focused subsidy to ramp up new data services
  c) Go for non-focused subsidy to speed up the operator-centric adoption of new value systems
Thank you