Mobile Data Service Industry Structure: Walled Garden vs. Horizontal Integration

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Outline

- Mobile data service and industry definitions
- Main industry structures
- Theoretical industry structure models
- Country overviews
  - Japan
  - Finland
  - UK
- Comparison of the three markets
- Conclusions
Mobile data industry and services

• Mobile data service industry
  – complex, adaptive system linking together several industries
  – dynamic

• Mobile data services
  – content and data access services excluding SMS-based mobile data services
  – complex products consisting of many subparts
Mobile data service industry structures

- Horizontally integrated structure
  - market-driven
  - product architecture modular
  - e.g. Finland
- Vertically integrated structure
  - ecosystem-based
  - product architecture integrated
  - "walled garden"
  - e.g. Japan
Industry structure models (1)

• Moore: Ecosystem thinking
  – evolutionary development of the industry
  – company’s dependence of its environment

• Fine: Double Helix Model
  – given industry oscillates between vertical/integral and horizontal/modular structure
  – two main drivers for the shift in industry structure
    • technological innovation
    • competitive intensity
Industry structure models (2)

- **Vesa: Dynamic Ecosystem Model**
  - industries oscillate between ecosystem-based/integrated and market-driven/modular structure and product architecture
- **Three forces drive the shift**
  - competitive intensity
  - technological and service innovation
  - organizational structure

![Diagram of INTEGRAL PRODUCT ARCHITECTURE BUSINESS ECOSYSTEM]

- **Birth**
- **Leadership**
- **Expansion**
- **Self-renewal**
- **New ecosystem**
- **Death**

**Arrow connections**:
- Modular product, the market
Japan

- **Regulation**
  - handset subsidy allowed
  - SIM lock allowed
  - operators don’t have to provide access to their networks with fair price

- **Ecosystem / vertically integrated market**
  - mobile operator controls all levels of the value chain
  - product architecture highly integrated
  - operators provide a total service package, SIM lock used
  - co-operation: operators don’t provide all the necessary elements themselves
  - user experience critical
  - terminals subsidized

- **Mobile data services success**
  - 86% of the mobile phone users subscribe to data services
  - non-SMS mobile data revenue 15%
Finland

- **Regulation**
  - handset subsidies forbidden
  - SIM lock forbidden
  - SMP operators have to provide access to their networks with fair price
  - long contracts **not** banned

- **Horizontally integrated market**
  - market-driven
  - modular and standardized products
  - service discovery difficult
  - content providers have to make agreements with all the service operators and over all different technology interfaces

- **Mobile data services not a success**
  - 5% of the mobile phone users subscribe to data services
  - non-SMS mobile data revenue 1%
UK

• Regulation
  – Handset subsidy allowed
  – SIM lock allowed
  – SMP operators have to provide access to their networks with fair price

• Hybrid market structure
  – horizontal -> vertical
  – product architecture modular -> integrated
Evolution in the Mobile Service Industry in Europe

Adapted from J. Vesa (2004)
Comparison of the three markets

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>Finland</th>
<th>UK</th>
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</thead>
<tbody>
<tr>
<td>Population</td>
<td>128 mill.</td>
<td>5 mill.</td>
<td>60 mill.</td>
</tr>
<tr>
<td>Non-SMS data revenue</td>
<td>15 %</td>
<td>1 %</td>
<td>2 %</td>
</tr>
<tr>
<td>Product Architecture</td>
<td>Integrated</td>
<td>Modular</td>
<td>Hybrid</td>
</tr>
<tr>
<td>Industry structure</td>
<td>Vertically integrated</td>
<td>Horizontally integrated</td>
<td>Hybrid</td>
</tr>
<tr>
<td>Handset provider</td>
<td>Network &amp; service operator</td>
<td>Dealers</td>
<td>Service operator</td>
</tr>
<tr>
<td>Portal provider</td>
<td>Network &amp; service operator</td>
<td>Independent portal providers</td>
<td>Service operator</td>
</tr>
<tr>
<td>Content provider</td>
<td>Independent content providers</td>
<td>Independent content providers</td>
<td>Independent content providers</td>
</tr>
<tr>
<td>Handset subsidy</td>
<td>Yes, 90% of the price</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>SIM-lock</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Conclusions

• Vertically integrated market structure has proven to be more successful because of the complexity of the products

• This industry structure not applicable to the Finnish market because of the regulation
  – Finnish regulatory framework was optimized for voice services
  – Prevents operators on the Finnish market from implementing the most business-wise business models

• Can cause remarkable losses in industry
  1. delayed and minor data service usage
  2. investors unwillingness to invest in the stagnated market
     – incumbents
     – foreign operators