Diffusion of Technology Products in Complex Markets

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Research Issue

Top 10 Tech by Market Cap Nov 2019

- What type of **Strategic Direction** leads to **Market Dominance**?

- Which **Market Conditions** protect the **Competitive Environments**?

Research Issue

Market Share Dominance & Quasi Monopoly

Similar Market Share & Competitive Environment

Research Issue

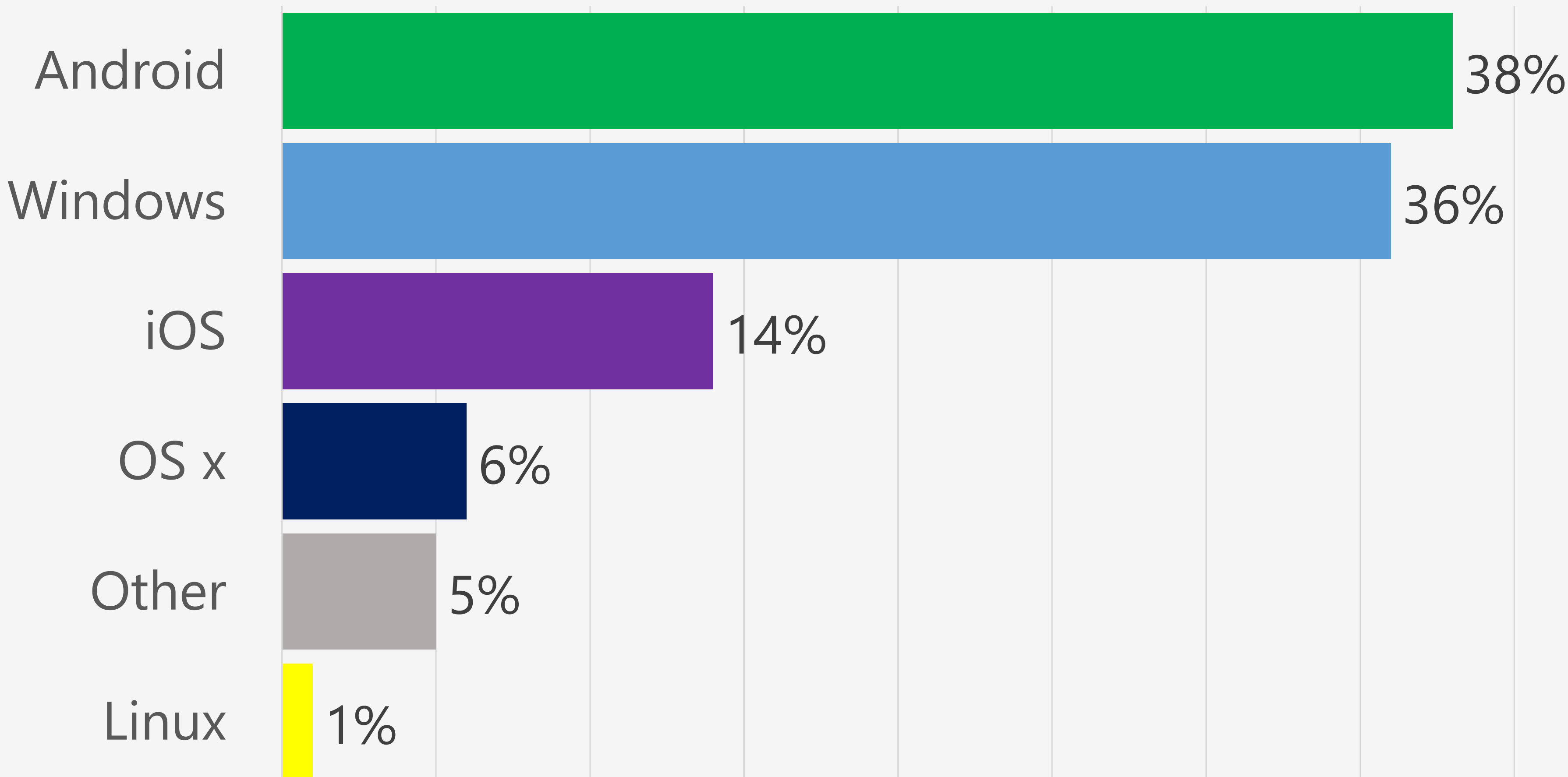
Market Share Dominance & Quasi Monopoly

- First mover advantage
- Winner takes all
- Increasing returns
- Network effect
- Critical mass
- Lock in

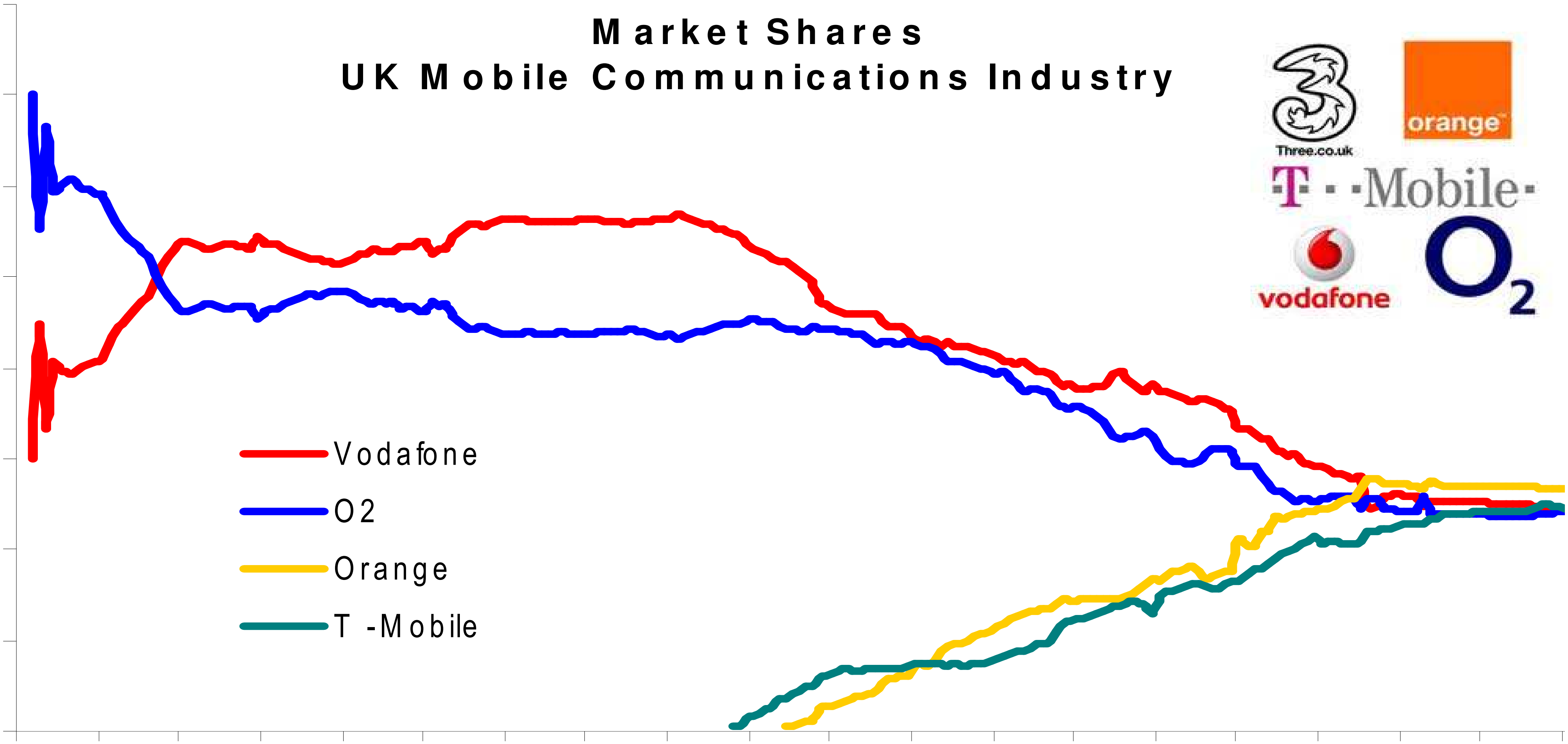
Similar Market Share & Competitive Environment

- Homogenous products
- Similar technology platform
- Many firms (eg MNOs, MVNOs)

Market Share Dominance (August 2019)



Similar Market Shares



Research Framework

Network Economics, Complexity

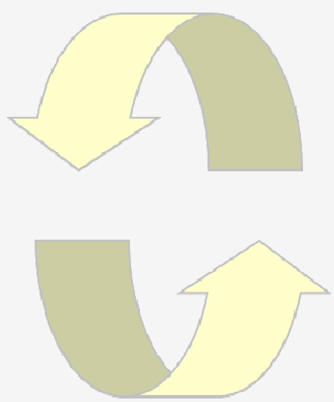
Varian, Shapiro, Alexrod, Kaufman, Cohen, Stewart

18 Years

Subscriber Acquisition Statistics

Mobile Operators

(2,420 data points)

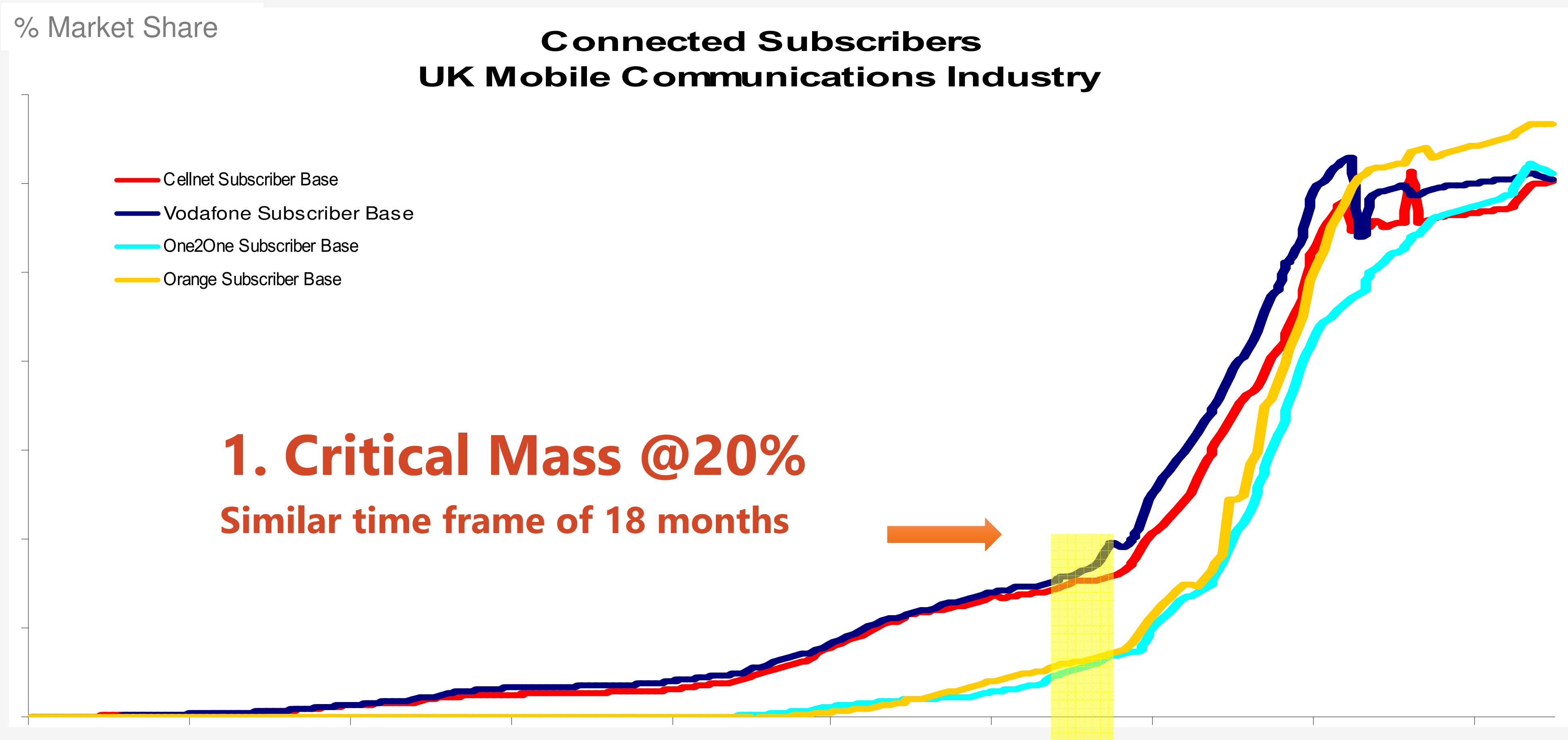


Marketing Events

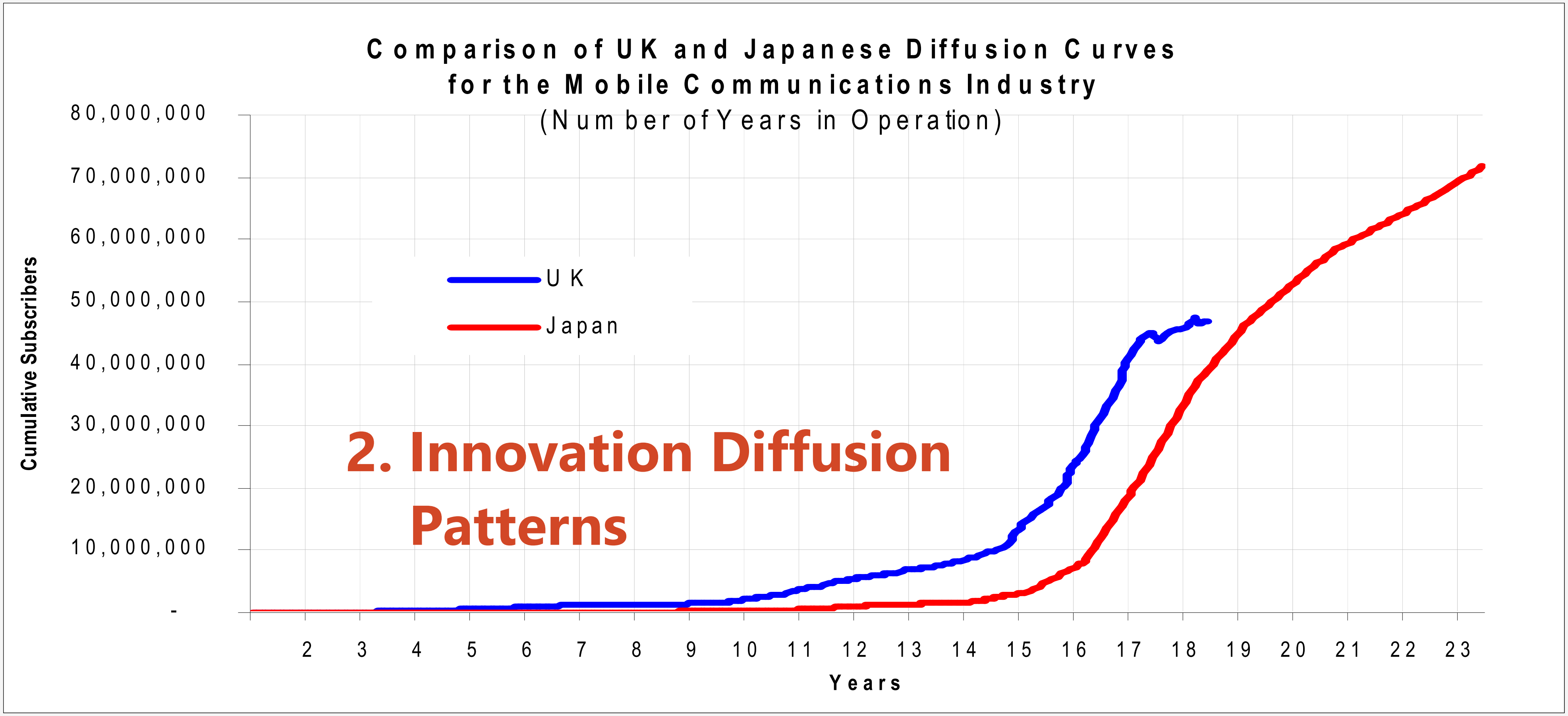
Mobile Operators

(3,000 coded events)

Research Results



Research Results



Research Results

3. NETWORK EFFECTS

- Growth fuels growth,
  more subscribers attract
  even more subscribers

	Network Size in Month (t-1) from Installed Base				
New Subscribers in Month (t)	Industry	O2	Vodafone	T-Mobile	Orange
Industry	0.8	0.8	0.8	0.7	0.6
O2	0.7	0.8	0.8	0.7	0.7
Vodafone	0.6	0.7	0.7	0.5	0.5
T-Mobile	0.7	0.7	0.7	0.6	0.6
Orange	0.6	0.6	0.6	0.6	0.5

- Companies benefit equally
  from each other's growth in subscribers

- No correlation between one provider's new users and its strategic marketing activity

Research Results

4. COMPLEX ADAPTIVE CONSUMER BEHAVIOUR

- No industry leader, shifting patterns of leadership
- Last entrant can achieve the highest market share
- Regulation as an enabler, number portability

5. ISOMORPHIC (COPY-CAT) STRATEGIES

- Tacit complicity for risk reduction
- Homogenous strategic behaviour
- Reduction of strategic differentiation
- Interconnectivity, common technology standards

Research Results – Complex Adaptive Behaviour

6. Self-Reinforcing Mechanisms

Market Share Dominance & Quasi Monopoly

First Mover Advantage

Supply Chain Control

Lock In

Individual Network Effects & Critical Mass

7. Balancing Factors

Similar Market Share & Competitive Environment

Risk Reduction:
Isomorphic Strategies
Homogenous Standards
Sharing of Technology Platforms

Mutual Shared:
Network Effects and Critical Mass

Last Entrants share advantage