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Three Private Firms and an Independent Regulator

Three Private Firms and an Independent Regulator are Sufficient for Rapid Mobile Network Penetration

BACKGROUND

- In the context of a growing market with consumer network externalities, the speed of a new product's market penetration (that is, the rate of diffusion) is an important summary measure of how well the market is performing for potential consumers. Delays in uptake can result in large welfare losses.
- When the market is regulated, it is particularly important to understand how the various potential regulatory levers affect the speed of penetration.
- Mobile network penetration has expanded rapidly in recent years and is reaching maturity in the advanced countries.
- The previous empirical literature has typically found that opening the market beyond monopoly is beneficial, but it provides little guidance for important competition policy issues, such as the optimal number of operators to be licensed or merger regulation. It also has little to say about regulatory institutions.

METHODOLOGY

- The authors seek to identify those structural features of the market that provide the best competitive environment to maximise the market penetration of mobile telephony. The focus is on three features:
    - the number of firms
    - the nature of ownership, and
    - the existence of an independent industry regulator.
- The authors draw on data from 29 OECD countries plus China. They investigate the 16 years (1991-2006) in which average penetration rose from 2% to 97% of the population. This covers is the core period of the diffusion process.

KEY FINDINGS

- The analysis confirms the benefit of moving from monopoly to duopoly.
- The analysis also reveals that triopoly is a major competitive improvement on duopoly but that there is no further improvement in diffusion with additional firms.
- The independence of the regulator also has a positive role to play in diffusion, and this role is more effective when the regulator is able to observe a greater number of rival operators.
- Privatisation is a strongly significant and positive influence on mobile diffusion, particularly in the absence of independent regulation.
- Further results show that the market structure effect works only partially through the level of prices. Competition is multidimensional and the price level is only one element of the product offer that influences consumer uptake. It appears that market structure affects consumer uptake mainly through competition in non-price-level factors (e.g. reliability, price structure).

POLICY ISSUES

- Findings are consistent with the view that a balance needs to be struck between investment incentives for network industries characterised by large sunk costs and the

CCP Policy Briefing

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E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL benefits of an apparently more competitive market structure. This is particularly relevant when determining the number of spectrum licenses to be granted, but it is also relevant for merger policy.

- Findings are consistent with the view that three private firms are sufficient to maximise the incentive to invest in a network. However, in the absence of an effective threat of entry, independent regulation is also necessary to guard against collusion possibilities or unilateral market power.
- As the market matures, consumers become more interested in usage and product developments. It is possible that competition in these dimensions has a different dynamic to that in the diffusion period so different structural features of the market may be desirable.

THE CCP

The ESRC Centre for Competition Policy (CCP), at the University of East Anglia, undertakes competition policy research, incorporating economic, legal, management and political science perspectives, that has real-world policy relevance without compromising academic rigour.

FOR MORE INFORMATION

The full working paper (11-1) and more information about CCP and its research is available from our website: www.uea.ac.uk/ccp

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