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Incumbency and market share within European mobile telecommunication networks

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ABSTRACT

The structure of mobile telecommunication markets varies considerably across Europe, ranging from monopolies with a handful of subscribers to markets with five operators and many millions of subscribers. Where competitive markets occur, there is also an incumbent operator possessing substantial first mover advantages. This paper explores these advantages, asking whether the incumbent has remained the largest operator as the market has developed. This question is investigated using data from 49 European countries. The analysis finds that in most countries the incumbent continues to be the largest operator measured by market share. In some countries, later entrants into the market have struggled to gain market share, contributing to the highly concentrated nature of many mobile markets. The extent to which the geographical footprint of an operator influences its market share is also examined.

1. Introduction

Throughout the world, most countries have liberalised their telecommunications markets. As a result, competition has been introduced into markets with all that this entails. As a consequence of this competition, new technologies and services have been developed, prices have fallen and mobile telecommunications have reached an ever-larger share of the population. Although these benefits have been, and remain, significant, the development of competition in mobile markets has taken longer than many expected, with the first operator to launch often retaining a significant portion of the market long after it has been joined by two or three other operators.

While there are several reasons why incumbents have continued to dominate mobile markets, it has been argued that they posses significant first-mover advantages that later entrants have found difficult to overturn (Bijwaard, Janssen, & Maasland, 2008; Whalley & Curwen, 2006). Given these advantages and the well-documented difficulties that some later entrants have experienced, an interesting question to ask is in how many markets is the incumbent still the largest mobile telecommunication operator? In contrast to previous research that has relied on a small sample size (for example, Bijwaard et al., 2008) or sought to explain developments within a single country (for example, Liu, Chou, Wu, & Shih, 2009), this article asks whether the incumbent mobile operator is still the largest across 49 countries in a broadly defined Europe.

With this in mind, the remainder of this article is structured as follows. In the following section, the relevant literature in two areas is discussed. The first of these areas identifies the advantages associated with being a first-mover in general, whereas the second examines previous research relating to first-mover advantages within the telecommunications

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industry. In Section 3, the sample and methodology adopted is outlined while in Section 4 the analysis is undertaken. The analysis is divided into two parts, covering firstly whether incumbents have remained the largest operator in their respective markets and, secondly, whether it is possible to discern any market share benefits from operating in contiguous markets. Conclusions are drawn in Section 5, and areas for future research are suggested.

2. Literature review

This section presents the relevant literature in two areas. In the first sub-section, the focus is on first-mover advantages with the literature drawing on a range of markets. By drawing on a broad array of literature, this first sub-section highlights the scope of first-mover advantages that have been observed and the difficulties encountered by later entrants into various markets. In the second sub-section, the focus switches to the telecommunications industry. After differentiating between the two different categories of first-mover that are observable within the telecommunications industry, the remainder of the sub-section recounts the relevant literature. This literature addresses the timing of entry, highlighting the challenges that later entrants encounter in mobile telecommunication markets.

2.1. First-mover advantages

The advantages that arise from being the first into a particular market have been discussed in the literature—see, for example, Kerin, Varadrajan, and Peterson (1992), Lieberman and Montgomery (1988, 1998), Urban, Carter, Gaskin, and Mucha (1986) and Stickel (2001). Lieberman and Montgomery (1988, p. 41f) identified three different types of first-mover advantages: technological leadership, pre-emption of assets and buyer switching costs. With regard to technological leadership, they identified two different types of first-mover advantage. One advantage was based on the learning that occurred over time, while the second was based on the research and development (R&D) that companies undertook. As companies learned how to produce their products more efficiently or to use feedback from the market to enhance these products, barriers to entry were created that sustained the competitiveness of the first-mover.

This competitiveness could also be sustained through the use of patented technology, although this was largely determined by the extent to which a company had engaged in R&D. Interestingly, Lieberman and Montgomery (1988) drew attention to patent races and the reasons why these were not winner takes all occurrences and were limited to just a handful of industries. In practice, patents could be circumvented and provided only temporary advantages due to the pace of technological change.

Another set of first-mover advantages arose from the ability of one company to acquire scarce assets before its rivals. As a result of being better informed than its rivals, the first-mover could acquire natural resources or property before its rivals (Lieberman & Montgomery, 1988, p. 44). First-movers might also be able to squeeze out their rivals by targeting the most profitable parts of the market in terms either of geography or market niche. If the products were similar, later entrants could also be deterred from entering market niches by the threat of price competition. Market entry might also be deterred where the first-mover pre-emptively invested in plant and equipment, with the resulting larger productive capacity then being used to enable it to compete on price. Stickel (2001) also drew attention to the importance of information, albeit within the context of a duopoly with homogenous products. The better informed company could determine whether first-mover advantages existed, and thus whether or not to invest in the market.

Switching costs and buyer uncertainty also provide companies with first-mover advantages. Lieberman and Montgomery (1988, p. 46) identified a broad range of switching costs, with their presence requiring subsequent entrants to invest additional resources in order to attract customers away from the first-mover. In contrast, in attempting to overcome brand loyalty, later entrants needed either to possess a superior product or to advertise more frequently or creatively than the first-mover.

Drawing on several studies, Kerin et al. (1992) identified a range of first-mover advantages that were similar to those suggested by Lieberman and Montgomery (1988). However, they questioned the extent to which these were achievable in practice. For example, they suggested that there were cost and differentiation advantages associated with being the first-mover but that these depended on the first-mover's management making the appropriate investment decisions. If the first-mover needed to invest in equipment to gain the advantage, but was unlikely to do so in the face of uncertainty over future demand, this uncertainty might prevent the first-mover's management from making the appropriate investment, thereby denying the company its first-mover advantages.

Another reservation expressed by Kerin et al. (1992) was the extent to which the first-mover's cost advantage was influenced by whether it had engaged in related or unrelated diversification. If the first-mover had engaged in related diversification it would enjoy economies of scope, which it would not do if it had engaged in unrelated diversification. In other words, there were cost advantages associated with related diversification. While Kerin et al. (1992, p. 45) argued that proprietary technological innovations did provide first-movers with an enduring competitive advantage, they went on to state that this was not the case for other innovation sources. Moreover, major changes in technology might work against first-movers burdened with large investments in old technologies.

Drawing on consumer product data from the United States, Urban et al. (1986) investigated whether market share benefits accrue from being first into a market. They found that although the market share of the pioneering brand does decline as other brands enter the market, there are still market share benefits associated with being first into the market.