

Creating Player Appeal

Management of Technological Innovation and Changing
Pattern of Industrial Leadership in the U.S. Gaming Machine
Manufacturing Industry, 1965-2005

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ABSTRACT

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The gaming machine market has been growing rapidly in the U.S. for the last three decades, following a period of deregulation and an increasing share of gaming machines on casino floors. Gaming machines themselves have undergone major innovations largely made possible by the shift from electromechanical to digital technology during the second half of the 1970s and the 1980s. These innovations have expanded the gaming machine market from one consisting of electromechanical spinning-reel machines to a more heterogeneous market in which video-poker, WAP-games, video-reel machines and digital spinning-reel machines compete.

Bally Manufacturing from Illinois was the dominant U.S. manufacturer of spinning-reel machines with over 4/5 of the domestic market until the beginning of the 1980s. However, the late 1970s saw the advent of a new company, IGT, which soon became the entrepreneurial firm in the new market segment for video-poker and WAP-games, subsequently also capturing the digital spinning-reel machine market.

Creating Player Appeal is the first business history of the U.S. gaming machine manufacturing industry covering the period 1965-2005. The general aim of this investigation is to study the management of technological innovation in the U.S. gaming machine manufacturing industry in an effort to explain the changing pattern of industrial leadership that took place during the period. Suggesting that management of technological innovation has been central for the long-term competitiveness of U.S. gaming machine manufacturers, this thesis analyzes how the shift to digital technology has changed the conditions for the management of technological innovation. Each major technological innovation in the U.S. gaming machine industry during the period is studied. The investigation identifies the player appeal of a gaming machine as the most important factor of its market competitiveness. The shift to digital technology in the industry has enabled new innovative opportunities to introduce the player-appealing performance attributes of gaming machines in an increasingly heterogeneous market. Applying theories from the management of technological innovation, the empirical findings suggest that the shift to digital technology made it difficult for the incumbent firm, Bally, to deal with the disruptive nature of the video-poker innovation and to revisit established cognitive views of what constitutes the player appeal of gaming machines. An analysis of the specific entrepreneurial conditions for IGT's growth, following the new innovative opportunities of digital technology, indicates that the ex-ante uncertainties and complexity of player-appealing design have been the most difficult aspects of the management of technological innovation for incumbent gaming machine manufacturers.

KEYWORDS: Management of technological innovation, Technological change, Digitalization, Disruptive innovation, Technological frames, Competence-destroying innovation, Entrepreneurship, Player Appeal, Gaming machine industry, Gaming machines, Slot machines, Video-Poker, Spinning-reel machines, WAP, Virtual-reel, Class III, Casino gambling, Bally Manufacturing, Bally Distributing, Bally Technologies, IGT, International Game Technology, Universal, WMS Gaming.