

SMART CARDS IN PUBLIC TRANSPORTATION – GLOBAL DIFFUSION, LOCAL PLATFORMS

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Abstract:

Public transportation has focal importance to meet demand for mobility in urban environment in sustainable way. ICT development is transforming public transportation and ticketing and fare collection is in transition from cash, paper tickets and magnetic stripe technology to contactless smart card technology. Global diffusion of smart cards in public transportation has been driven by increasing number of separate spatial smart card platforms, and their diffusion. Thus, a most prominent and proven global scaling-up mechanism has been replication of successful platforms into other locations and contexts. The transition towards contactless payment has progressed slowly after the launch of Octopus card system 1997 in Hong Kong as the first successful large-scale implementation.

This study uses multi-sided platform as a theoretical frame to analyse four successfully diffused smart card platforms in public transportation, Octobus, Oyster, Easycard and OV-chipkaart. The results show that analysed cases share common strategies for designing and expansion of multi-sided platforms. Furthermore, the study identifies focal platform characteristics to facilitate comparison of smart card platforms in later studies, and discusses replication opportunity of smart card intermediary platforms.

Keywords: intermediary platform, smart card, public transportation, diffusion, technology management, operations management