

Riding the Saddle: How Cross-Market Communications Can Create a Major Slump in Sales

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Abstract

Using data on a large number of innovative products in the consumer electronics industry, we found that between one third and one half of the sales cases involved the following pattern: first an initial peak, then a trough of sufficient depth and duration to exclude random fluctuations, and eventually sales levels that exceeded the initial peak. This newly identified pattern, which we call a *saddle*, is explained by the dual-market phenomenon that differentiates between early market adopters and main market adopters as two separate markets. If these two segments – the early market and the main market – adopt at different rates, and if this difference is pronounced, then the overall sales to the two markets will exhibit a temporary decline at the intermediate stage.

We employ *cellular automata*, an individual-level complex system modeling technique for generating and analyzing data, to investigate the conditions under which a saddle occurs.

Our results show that a dual-market model creates saddles similar in nature to those found in the real data. Furthermore, our model highlights the importance of cross-market communication in determining the existence of a saddle. At low levels of this parameter, more than 50% of the cases of new product growth involved a saddle. This percentage gradually decreased as this parameter increased, whereby at values that are close to the within-market parameters, the proportion of saddle occurrences dropped to below 5%.

Managerial implications of our analysis as well as empirical estimation of the model are also discussed.