The links between internal organization, technology, and product market strategies

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Motivation

There is long-standing interest in the effect of information technology on how firms operate among managers, policy makers, and academics. IT has a clear effect on productivity, but also can change the skills the firm needs in its workers, the hierarchy or autonomy that is most appropriate, the incentives that are most effective, the efficient ownership of assets, and so on.

The diffusion of Internet use across multiple US auto dealerships provides an opportunity to empirically document and measure this phenomenon. The IT adoption we study is widespread and uniform: the adoption of a dealership website with varying capabilities. The setting is particularly conducive to research because car dealers are very similar to one another in their retailing methods. They all have showrooms and salespeople who attempt to match a customer to a car. They all have parts, service, and sales departments and a manager for each department. It is even the case that compensation schemes are similar across dealerships and nameplates. However, the internal organization of the firm (dealership) will vary in the way it takes advantage or matches the new technology.

A dealer's website allows that dealer to be found by a consumer searching with a search engine. Once a consumer arrives at the website, he or she looks at the information there and decides whether or not to visit the dealership or contact it by phone or email. Dealers can put contact information, such as email addresses and phone numbers on their sites; they can allow past customers to schedule repairs; they can allow prospects (who may become customers if they decide to buy) to view dealer inventory of vehicles; they can provide driving directions and hours of operations; and they can allow a prospect to make an appointment with a salesperson. However, to get the full benefit of visits to the site, the dealership must make appropriate organizational change within the dealership. For example, if no one is made responsible and given incentives for answering email in a timely fashion, messages will not be answered, and prospects will buy elsewhere. Some dealerships will have a dedicated person to answer email enquiries, some will have an Internet department, and some will have an Internet service manager.

By combining output data, including prices and margins, from a major provider of auto industry data (hereafter MPAD) and organizational data from a survey of dealers in three states, we will be able to measure the productivity gains accruing to dealerships who adopt websites and implement organizational change relative to a sample of those who adopt the website without the organizational change, and perhaps relative to those who adopt a less functional website. Thus, varying levels of technological change occur across dealerships, and is accompanied by varying amounts of organizational change. Changes in productivity across dealerships are relatively easy to measure with data on sales and prices combined with knowledge of FTEs.