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Software Alone Does Not Create Value: How Small Home-Service Firms Can Capture Returns From Field Service Management Platforms

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Abstract: Small home-service companies, such as residential electrical, HVAC, and plumbing firms, are increasingly adopting cloud-based field service management (FSM) platforms to handle scheduling, dispatch, job records, and invoicing. Vendors often present these tools as a quick path to efficiency, yet research on information technology (IT) and productivity suggests that returns depend on the organizational changes that come with the technology. This conceptual article connects the IT-productivity literature, the technology-organization-environment (TOE) framework, and the DeLone and McLean information systems success model to explain why two small firms using the same platform can see very different results. It proposes three propositions about process redesign, data integration with accounting, and owner-manager capacity, and it suggests practical indicators that small firms can track. The article is based on the literature and on my own observations as an MBA intern in accounting and financial records support, and it is meant as a starting point for empirical testing.
Keywords: field service management, small business, information systems, complementary investments, cloud computing, process redesign

Introduction

A plumber arrives at a house, fixes the problem, and writes the details on a paper form. Back at the office, someone types those details into the accounting system, and a few days later an invoice goes out. For decades this was how many small home-service companies worked. Today, cloud-based field service management (FSM) platforms promise to replace this chain with a single digital record that follows a job from the first phone call to the final payment. The software is affordable and easy to buy, and it is no longer limited to large firms.

But buying software is not the same as getting value from it. This is the central point of this article. Researchers have argued for a long time that information technology (IT) pays off mainly when firms change how they work around it (Brynjolfsson et al., 2002). Small firms are an especially interesting case because they have less money, less time, and fewer specialists to manage the change. If the same FSM platform can help one company and disappoint another, then the question that matters for managers is not which software to buy but what has to change around it.

The purpose of this article is to build a simple framework that explains this gap. It combines three well-known streams of research: the IT-productivity literature, the technology-organization-environment (TOE) framework, and the DeLone and McLean information systems success model. It then offers three propositions that future studies can test, and it gives small-business managers a short list of indicators to track. My perspective comes partly from my MBA coursework in management information systems and partly from an internship at a residential electrical, HVAC, and plumbing company, where I supported accounting and financial records. Before my MBA I worked in rail project management, where schedules, handoffs, and documentation decided

whether a project succeeded. I mention this because the same pattern shows up in both settings: a tool helps only when the people and routines around it are ready.

Background

What FSM platforms do

FSM platforms are usually delivered as cloud services, which means the firm uses software hosted by a vendor over the internet instead of running its own servers (Mell & Grance, 2011). For a home-service company, the typical functions include scheduling and dispatching technicians, giving technicians a mobile app for job details, recording work done and parts used, creating invoices, and sharing data with accounting software. In other words, the platform sits between the customer, the technician, and the financial records, which makes it a good example of a networked business system.

Technology pays off through complementary change

The idea that technology alone does not raise productivity has strong support. Brynjolfsson et al. (2002) studied large U.S. firms and found that computer investment was linked to a much higher market value than other kinds of physical assets. When they controlled for organizational practices, the computer effect became much smaller. Their explanation was that computers are tied to hidden organizational assets, such as new work structures, decentralized decision-making, and training. Firms that had both IT and these practices did better than firms with only one of them.

Brynjolfsson et al. (2017) made a related point about general purpose technologies. They argued that such technologies do not deliver gains right away, because firms need time to build up the technology and to develop complementary innovations such as new processes and skills. During this period, spending on training and reorganization can even make measured performance look worse before it improves. This is sometimes called a productivity J-curve. For a small company, this matters because an owner who expects results in the first month may decide the software failed, when the real issue is that the change work has not been done yet.

This view also matches an older argument about business process redesign. Hammer (1990) warned managers not to simply automate old processes and advised them to rethink the process itself. If a company uses an FSM platform only to copy its paper forms onto a screen, it keeps the old delays and adds a new subscription fee.

Why small firms are different: the TOE framework

The TOE framework says that whether and how a firm adopts a technology depends on three contexts: the technology itself, the organization, and the external environment (Tornatzky & Fleischer, 1990). For small home-service firms, the organizational context is often the deciding one. The owner usually makes the buying decision, a few office staff handle many roles, and technicians may have little time or interest in learning a new app. The environment matters too, since customers now expect quick scheduling, text reminders, and digital payment options. These pressures push firms toward adoption even when they are not fully ready.

Measuring success: the DeLone and McLean model

To judge whether an FSM platform actually works, we need a clear idea of success. DeLone and McLean (2003) describe information systems success through system quality, information quality, service quality, use, user satisfaction, and net benefits. This is helpful because it shows that benefits come at the end of a chain. If technicians do not use the app, or if the information they enter is incomplete, then good software still produces few net benefits. It also supports the resource-based view that sustained advantage comes from capabilities a firm builds, and not from tools that any competitor can also buy (Barney, 1991).

A Framework and Three Propositions

Putting these ideas together, I suggest that the value a small home-service firm gets from an FSM platform depends on how well the platform is matched with changes in processes, data practices, and management capacity. Table 1 shows how specific platform capabilities connect to the changes they require and to indicators a manager can track.

Tale 1

Linking FSM Platform Capabilities to Complementary Changes and Performance Indicators

Platform capability	Complementary change needed	Possible indicator
Digital scheduling and dispatch	Clear rules for who assigns jobs, how emergencies are handled, and when schedules are updated	Jobs completed per technician per day; schedule adherence
Mobile job records and photos	Technicians trained and expected to close out every job in the field	Share of jobs with complete records on the day of service
Invoicing and payment tools	Invoices issued from the job record, not retyped in the office	Days from job completion to invoice
Link to accounting system	One agreed set of job codes, parts lists, and pricing shared by field staff and the office	Gap between estimated and actual job cost

Note. The table is the author's synthesis of the literature reviewed in this article and is not based on a statistical test.

Proposition 1: Process redesign

Firms that redesign their job workflow when they adopt an FSM platform will see larger gains in efficiency than firms that only digitize existing paper steps. This follows from the complementarity findings of Brynjolfsson et al. (2002) and the process redesign argument of Hammer (1990). A practical example is the end of a job. If the technician must complete the record and attach the work details before leaving the site, the office can invoice the same day. If the technician finishes the paperwork later, the platform is simply a faster way to be late.

Proposition 2: Integration with accounting

The benefits of an FSM platform will be greater when its job data is integrated with the firm's accounting system and uses consistent job codes, parts lists, and prices. In the DeLone and McLean (2003) model, information quality is a core part of success. From my work on financial records, I saw how much effort goes into matching what was done in the field with what is recorded in the books. When the two sides use different labels or formats, the office has to fix the differences by hand, and the promised time savings shrink. Integration also gives owners a more reliable view of job profitability, since actual costs can be compared with estimates.

Proposition 3: Owner-manager capacity

The success of FSM adoption in small firms will depend on the owner-manager's ability to lead the change, set clear expectations, and provide training. This follows from the organizational context in the TOE framework (Tornatzky & Fleischer, 1990) and from the lag effect described by Brynjolfsson et al. (2017). In a small firm there is no separate change-management team, so the owner's time and attention are the main resources. A realistic plan expects a learning period and treats early disruption as normal.

Discussion and Practical Implications

For managers, the main message is to treat an FSM platform as a process project that happens to include software. Before buying, the firm should write down how a job currently moves from request to payment and decide which steps will change. During rollout, it should train technicians on the mobile app and set a simple rule for completing job records. After rollout, it should track a few indicators, such as those in Table 1, for several months instead of judging the platform on early impressions.

The framework also has value for students and researchers. It shows how IT-productivity theory, which was developed mostly with data from large firms, can be applied to the small service firms that make up much of the economy. It also suggests specific, measurable variables for future studies, such as days from job completion to invoice or the gap between estimated and actual job cost, which could be compared across firms using the same platform.

Limitations and Future Research

This article has clear limits. It is conceptual, so the propositions have not been tested with data. My practical observations come from a single internship setting and from the accounting side of the business, and they should not be taken as representative of all home-service firms. I also did not evaluate any specific vendor's product. Future research could use case studies or surveys of small firms to test the propositions, compare firms with different levels of process change, and follow performance over time to see whether the J-curve pattern appears in small businesses.

Conclusion

Cloud-based FSM platforms are easy for small home-service firms to buy, but the returns depend on what the firm does around the software. The research reviewed here points in a consistent direction: technology pays off when it is paired with redesigned processes, reliable data, and capable management. Small firms that plan for these complements are much more likely to turn a monthly subscription into a real operating advantage.

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