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Outsourcing of IT

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We have spent several years studying the adoption of health IT systems in U.S. hospitals. As a result, we have collected and merged several hospital datasets with information about investment in IT, outsourcing behavior, and financial performance. The leveraging of these unique datasets has given us insight into the relationship between IT outsourcing and financial performance in hospitals. Thus, we want to briefly summarise the findings of our previously published scientific work and discuss their implications to hospital managers interested in the outsourcing of IT functions.

Pros and Cons of IT Outsourcing

Over the past decade, hospital managers have faced an important decision regarding whether or not to outsource IT functions. Traditionally, hospitals have outsourced IT functions less frequently than in other industries and, as a result, many hospital managers have little experience in this domain. Despite the growing trend of hospital IT outsourcing, few comprehensive studies have examined the financial impact that these decision have on the bottom line.

Proponents of IT outsourcing frequently cite the potential for cost minimization. Financial benefits may stem from the need for a smaller IT staff, reduced overhead, and lower acquisition costs of capital equipment. Conversely, opponents of the practice claim that IT outsourcing cedes control of an important function to an outside firm that may have little or no experience with the hospital's strategic plan and organisational culture. Moreover, IT outsourcing creates a situation where longterm dependence on vendors is necessary and in-house "liaison" staff are needed to enforce the outsourcing contract (when and) if vendors are unresponsive. Overall, despite the known benefits and drawbacks of IT outsourcing, the lack of studies makes evidence-based managerial decision making difficult for hospital directors.

The Evidence: Does IT Outsourcing Translate into Financial Benefits?

We examined the financial performance of hospitals in Florida (the 4th largest American state with approximately 200 acute care hospitals and an economically diverse population including major metropolitan areas and seaports as well as rural and suburban locations) by focusing on those that outsourced a relatively large number of IT functions to determine if cost savings is empirically supported. Specifically, we examined several well-validated financial metrics including net inpatient revenue, net patient revenue, hospital expenses, total expenses, cash flow ratio, operating margin, and total margin. Our statistical analyses, which categorized hospitals based on their outsourcing behavior, controlled for confounding hospital characteristics such as overall investments in IT, average patient acuity, organisation size, and geographic location.

Our findings suggested that the decision 3 to outsource IT functions was not related to any of the financial measures examined. Thus, hospitals that were outsourcing a relatively large number of IT functions were not financially performing better or worse than other hospitals. The analysis suggests that IT outsourcing is not necessarily a costlowering strategy, but instead a cost-neutral decision with other strategic implications.

The IT Outsourcing Decision

Given the evidence from our studies, it would appear that the IT outsourcing decision is broader and considerably more complicated than originally thought. We believe that the decision should be driven by the "strategic situation" of the hospital and not the promise for cost savings. The strategic situation, and thus the decision to outsource IT functions, is determined by four strategic factors. The first two factors are internal in nature; specifically the nature of the strategy, the extent of strategic resources availability (e.g., finances, HR, existing IT capabilities). The next

two factors are external in nature and include: the rate of environmental change, and the volatility of the service area (market).

The Nature of the Strategy

Strategic decision makers in hospitals with aggressive growth or prospector (constantly seeking new markets) strategies generally have an external orientation that demands most of their attention. With such strategies, building strong internal systems is less of a priority than opening new facilities and penetrating new markets. Thus, the decision to outsource IT would be preferred. On the other hand, hospital managers pursuing defender strategies (defending market share) have an internal focus and typically focus on streamlining and improving processes and internal systems. In this scenario, managers should opt against outsourcing in order to retain maximum control and decision making regarding information systems management.

Strategic Resources Availability

Beyond their core business of providing care, modern hospitals manage a number of complex and time consuming "businesses" including but not limited to food services, marketing, public relations, parking facilities, and security. Of these, the management of information systems is the most demanding. Therefore, the extent of a hospital's strategic resource availability is particularly influential of the IT outsourcing decision. Successful IT management in hospitals requires considerable capital investment, implementation leadership, and technical expertise. Individual hospitals and hospital systems that have extensive strategic resources (financial and human) can afford to internally support all the necessary IT functions. Typically, larger well financed hospital systems opt for in-house IT services while smaller hospital with fewer resources often select outsourcing or cooperative IT arrangements.

The Rate of Environmental Change

When considerable fluctuations are expected in regulation, the political environment, economic conditions, or technology availability, the outsourcing of IT functions is often the preferable strategic option. Significant environmental change tends to complicate the IT function and often calls for considerable investment in new programming, equipment, and facilities. However, when the general external environment is expected to remain stable, hospital strategic managers are advised to develop the necessary in-house capabilities to perform the organization's IT functions.

The Volatility of the Service Area

Similarly to environmental change, when potential customers in a hospital's service area are experiencing major demographic shifts, emerging types of diseases, new life styles, and /or competitive pressures, managers must focus their efforts on coping with market changes thus making the decision to outsource IT functions is an attractive strategic alternative. However, in mature service areas where market share has been established, patient demographics are stable, and competitive rivalry is relatively low, strategic managers should focus on building internally maintained information systems.

Conclusions

Evidence suggests that outsourcing of IT functions is not associated with cost savings (or revenue generating) in a large sample of U.S. hospitals. Instead of expecting cost reductions, managers should consider IT outsourcing in the strategic context of their organisations. In general, for organizations with highly aggressive growth strategies, limited strategic resources, a rapidly changing healthcare environment, and a relatively volatile service area, outsourcing of IT functions is the preferable strategic option. Conversely, organisations with defender strategies, ample strategic resources, a fairly stable external environment, and a static service area, are advised to avoid outsourcing and develop in-house IT management capabilities.

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