IT does matter

Enrique Dans
IT Professor and Area Chair
INSTITUTO DE EMPRESA
Maria de Molina 12, 4
28006 – Madrid, Spain
Enrique.Dans@ie.edu
http://www.ie.edu/Enrique_Dans

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Abstract

Some articles lately have hypothesized about IT being a commodity from which firms cannot extract a true competitive advantage anymore. Therefore, according to those authors, the competitive edge would be now in carefully managing IT to reduce costs and avoid overspending. The author rebates these viewpoints using Swanson's Tri-Core model and proposes a different way to look IT management in the future in order to avoid the current pitfalls.

1. Introduction

The good and bad thing about Management is that is no science at all. In order to come up with a new theory in a "real" science, such as Biology or Mathematics, a scientist has to conduct thorough studies, test the ins and outs of his or her theory, submit the work for close inspection by peers and colleagues, who will try to find any small detail that could have escaped from our scientist's attention and, finally, publish it and make it known. With exceptions, the rewards for the scientist are somehow scarce, and come mainly as *prestige*, a reason why most of the scientists have a true vocation and love for

what they do. In Management, for good or bad, it just doesn't work that way. Any person, almost independently of her background, can put together her "view of the world", write it down, spice it up with a couple of cases, and publish it, usually in the shape of a book or a magazine article. When the article gets released, the rewards for that person can be huge: suddenly, she gets a lot of attention, teaches classes, gives talks and conferences, travels all over the world in first class, talks to CEOs and presidents and bills large amounts of money for her advice to companies. But… has anybody put some thought in the inception of the process? Where is the validation? Where are the thorough studies? Where are the peers and colleagues trying hard to trash the person's work of many years, criticizing and bitching about her research capabilities? Well, the system is, I agree, a little bit harsh for innovators, but… don't you see any danger in just stepping over, getting rid of it?

Periodically, we see the so called "influential" articles appear in newspapers, books and magazines, and spread their effects on whoever reads them. Or even among those who haven't read them, but claim to have done so. How do these articles get to be influential? Sometimes is the author, who might have a previous history of success or reputation. In other cases, it is the outlet, which provides them with a certain visibility. Or it can be just out of randomness: an article is released, is read by a prominent person who speaks about it, and achieves popularity in the way Seth Godin, former VP of Marketing at Yahoo! once baptized as "viral marketing".

2. Going back to the "Productivity Paradox"

A decade ago, there was a Nobel Prize laureate, Robert Solow, who suddenly decided there was no way to prove that technology had an influence on productivity. He was looking at industry statistics, and comparing IT-intensive industries to others that were not, and he realized that those industries where investment in IT in previous years had been huge, had not gained productivity in any measurable way over industries where IT investments had been comparatively low. Therefore, IT does not contribute to productivity. Those words, put in the mouth of a Nobel Prize laureate in Economics, caused, as you might imagine, a huge commotion. Particularly among firms who were, at the time, investing large sums in computers, IT personnel, etc. Imagine the average IT professional of that time, probably he or she wasn't precisely a happy camper, what do you think? Witnessing one's life and career being questioned by a Nobel Prize laureate is probably not the best scenario for anyone. But what happened then? Was it the demise of IT as we know it? Did it signal the end of those expensive investments in technology? After all, who wants to keep throwing money into something that is not going to contribute to productivity in any measurable way? It would have been absolutely logical to just cut all those investments, fire all IT professionals, avoid all their potential contributions to the gene pool, and be certain about it just because a Nobel prize laureate said so. What happened then? Well, it just turned out that Solow, being a Nobel Prize laureate, was wrong. Yes, he was dead wrong. It just happens, great people gets things wrong sometimes. It took a while to demonstrate it, but it has been demonstrated. It is interesting to note that Solow's original article was published in a newspaper, a place where anyone, particularly Nobel Prize laureates, can publish anything they want, anytime. I do, personally, write a lot of articles in newspapers, and I am not even a Nobel Prize laureate just yet. But, interestingly enough, the proofs against Solow's arguments were published in journals such as Management Science,

Communications of the ACM, MIS Quarterly or Information Systems Research. Those outlets where nobody, with or without a Nobel Prize, can publish unless he or she passes through the careful (and anonymous) review of at least three colleagues, who judge the work in a very thorough and hard way. Anyone can go to those journals and realize why Solow was dead wrong: he just missed the way the effects of technology should be measured. He thought technology was something with an immediate effect, a sort of magic spell you can just cast over a company, and it works right away, fantastically improving productivity. Of course, now that we are a little bit more experienced with technology investments, we know the truth. We know technology is hard to implement, requires big changes in training, mentality and even complete redesigns of processes in order to squeeze out the profits from it. Hard, but true.

3. What constitutes a commodity?

Now, in 2003, another guru comes and tells us that IT doesn't matter. Pretty much like Solow, but some fifteen years later and without a Nobel Prize. He claims that IT is now a commodity, and that it's not necessary to treat it any differently from any other commodity. One plugs something into a socket, and there is power, and you barely think about where the power is coming from, from which power plant or even from which company. You don't plan any strategic way of supplying power to your premises, nor try to squeeze a competitive advantage out of it. Is just power, it's ubiquitous, and anyone can get it from any socket. There is no need for electricians within your company, even though they were necessary some years ago. If power doesn't work, you just pick up the phone, and someone from outside your company will take care of it. And that's all the essence of the article in a paragraph, which means that either my summarizing abilities are fantastic, or the article itself does not have a lot of essence to squeeze from. But anyway, let's give it the benefit of the doubt… after all, great ideas are sometimes extremely simple.

Of course, if told in that way, I couldn't agree more with the conclusions. Let's not worry about things that have been commoditized, let's simply try to get them from an inexpensive source, outside the company, like any utility. We outsource whatever appears to be related to technology, kick out those expensive (and weird) computer geeks, and we can go back to concentrate in our core business. But unfortunately, it is not so simple, as we'll see.

One of the tasks that one has to perform carefully in order to publish in most journals is the so-called literature review. The literature review consists in going back to whatever has been written in the field or related disciplines about a certain topic, summarize it, judge to what extent it fits with our theories, and make sure we make enough of a contribution to justify being published. Of course, the author of "IT doesn't matter" did not bother to go back to the literature. If so, he would have found that investment and innovation in IT is a much more complex phenomenon, and there are several ways to understand it. One of them is the so called "tri-core model", proposed by E. Burton Swanson, from UCLA, in the nineties. The tri-core model establishes three levels of innovation in IT. The first one, the most internal one, is the so-called technical core. Innovations at that level affect only the way technical tasks are performed by the IT department, things such as an operating system migration, a new database or a revamped computer architecture. Nobody in the company has to necessarily realize

about that, although it can sometimes bring very interesting consequences. The second layer, II, is what Swanson called the administrative core. Innovations in such layer affect, obviously, the way administrative tasks are performed in the company. Typical examples here could be ERP packages (Enterprise Resources Planning) like SAP, PeopleSoft, etc. Finally, there is a third layer, the so-called business core. This layer recovers the other two, and allows innovations that change the nature of the business. Examples of this could be, for instance, Amazon's decision to collect opinions from readers, and then making them available to other potential readers, thus creating an informational product that improves Amazon's value proposition. Of course, firms can interpret IT investment as belonging to different layers. One can implement electronic commerce as a way to reduce administrative tasks with strategic customers, and will probably place it in layer two, whilst other could consider it a way to open itself to new markets and types of customers, then considering it what we usually call "strategic" decisions, thus placing it in the business core.

Now that we have Swanson's tri-core model in a nutshell, what do you think? From my perspective, it flows from common sense: one can (and probably should) outsource all technology investments that fall in the inner, technical core, and probably should do the same with investments in the administrative core. Why? Simply, because it looks efficient. It would be hard to compete with Microsoft, IBM or the Linux community when it comes to put together an operating system. Or with Oracle if you want to come up with a database. It also appears hard to try to do better than the likes of SAP or PeopleSoft when it comes to optimize administrative chores according to the so-called "best practices". But what happens to the third layer, the business core? If we try to buy that, to outsource it or to copy it from an external source, we would be denying the true essence of competitive advantage. We would all be trying to do all things the same way. Does that make any sense? Therefore, the true value of an IT professional would be to be able to discern which investments fall in which category, thus treating some of them as "pure efficiency" and others as "the name of the game". It is not easy, and it requires a deep knowledge of IT and a solid knowledge of the business, that's probably why good CIOs are now climbing up the organizational food chain and getting to places like the Board of Directors where their voice can be heard.

You can, of course, read "IT doesn't matter", and choose to be one of this companies where, in fact, IT doesn't matter. It's your choice. It will mean that you will concentrate on your business, and deny any possibility of extracting a true competitive advantage from technology. It will probably mean that, all of a sudden, a competitor or a newcomer will come up with of these technology innovations that truly hit the bull's eye, and you won't be able to follow, because it normally takes a while to get adapted to those innovations. But you can do it anyway; again, it's your call. It's important to have good examples to tell to all these MBA students in business schools all over the world. After all, some firms succeed, and some firms fail. It is part of the beauty of capitalism.