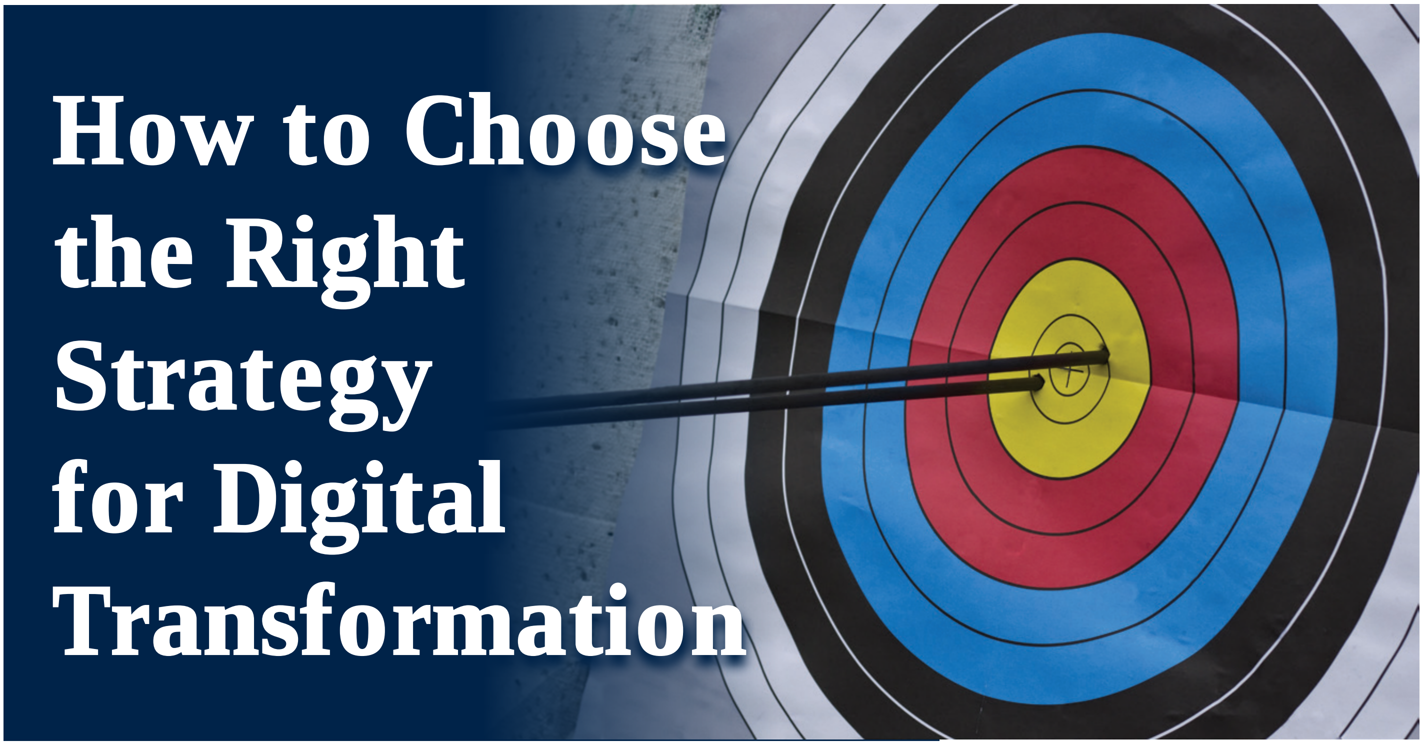
How to Choose the Right Strategy for Digital Transformation



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Many executives believe that, in digital transformation, they must pursue either revenue growth or cost reduction, but not both. Sunil Mithas and Roland Rust explain how companies can invest in information technology to pursue both goals.

Choosing a digital strategy and deciding how much to invest in digital resources are among the most critical decisions that face today's firms. We all know that digital entrants such as Netflix, Amazon, and Uber have challenged established businesses like Blockbuster, Barnes & Noble, and conventional taxi services. Similarly, the increasing digitization of the economy is driving firms to question some of the strategic choices and tradeoffs they have taken for granted for at least the last three decades.[1]

Our research suggests that, faced with increased digitization, managers will best succeed by rethinking some of the conventional strategies which forced them to choose between two rabbits, revenue growth and cost reduction, and to be satisfied with the one they caught. That choice no longer makes sense now that digital technologies can help firms to overcome conventional tradeoffs and use more complex strategies to enrich the customer value proposition.

Indeed, a high investment in information technology (IT) that targets both revenue expansion and cost reduction can be profitable. Using data from US companies, we found that, increasingly, strategies that focus solely on either revenue or cost are giving way to dual strategies which leverage IT investments. About 45 percent of firms in our sample follow a dual strategy, while the remaining 55 percent use a strategy with a single focus, with 45 percent focusing on cutting costs and 10 percent on revenue-growth. Over the last decade, we have conducted a series of studies to understand how digitization is driving dual strategies and performance. We tracked down rare archival data on the digital investments of hundreds of firms in developed and developing economies so that we could link their digital moves with their performance. We have learned that it is time to rethink traditional strategies.

By analyzing the data from more than 300 US firms we discovered a great deal about how dual and single strategies affect a firm's performance depending on its investment in IT (see Sidebar).We conclude that firms whose strategy has a dual emphasis are more profitable and have a higher market value the more they invest in IT. Meanwhile, firms which invest less in IT do better to choose a strategy that emphasizes either revenue expansion or cost cutting. Because adopting a particular strategic emphasis can affect a firm's market value without affecting its profits, managers should carefully consider how their strategic choices will affect market value even if they do not seem likely to affect profitability.

Why Digitization Drives the Need for Dual Strategies

There are a number of reasons to take a fresh look at conventional either/or strategies that assume the need for a tradeoff between revenue growth and cost reduction.[2] Today's digital technologies allow firms to devise more complex strategies which pursue many competitive advantages simultaneously. These complex strategies often rely upon a portfolio of IT systems, combinations of technologies that may not be externally apparent and are therefore difficult for competitors to replicate. Such an IT portfolio can thus sustain a firm's competitive advantage even when the underlying hardware and software is commoditized. In other words, firms can create internal IT complexity that will prevent their competitors from replicating their systems, while retaining external simplicity to attract customers. These configurations allow them to achieve both revenue growth and cost reduction while retaining the agility necessary to reconfigure their internal IT portfolio when they need to make new competitive moves.

> Firms that carefully devise a portfolio of IT applications which emphasizes both revenue enhancement and cost reduction reap greater rewards than those which pursue a singular focus.

In order to execute their dual digital strategies flexibly, however, firms must appropriately govern their IT systems and manage IT projects. Although IT assets tend to be generalized, customization and corresponding changes in business processes, training, and incentives will allow them to be targeted at specific strategic objectives. While any individual IT system has the potential to reduce costs or enhance revenue, or even both, a tailored IT portfolio allows firms to put their strategic emphasis into operation by configuring individual IT applications accordingly. Firms that carefully devise a portfolio of IT applications which emphasizes both revenue enhancement and cost reduction may reap greater rewards than those which pursue a singular focus. A dual focus gives firms digital ambidexterity, which can propel them to a competitive advantage.

Netflix, for example, uses its carefully crafted IT infrastructure and recommendation system to differentiate itself and to drive high revenue growth while lowering costs. Meanwhile, part of the digital strategy of Starbucks is a mobile order and pay tool that allows its customers to skip lines when picking up their coffee. Through this tool, Starbucks has achieved a significant growth in sales compared to its peers. Bank of America and other banks now use mobile apps to power a high quality banking experience at a fraction of the cost of using a physical branch. And such successes abound in digital space, with Amazon, Airbnb, and Uber as prime examples.

In assessing competitive advantage, conventional strategies often focused exclusively on profit margin, a measure of the difference between the opportunity costs of the seller and what consumers are willing to pay. Such profit metrics are of limited use to entrants or start-ups, many of which focus on growth or market valuations in the early stages. As Amazon.com demonstrated, some continue to pursue revenue growth and market valuations for years in order to justify their existence.

Moreover, as they consider their strategic choices, firms need to ground their thinking in evidence-based guidance and empirically valid frameworks such as Baldrige, instead of anecdotal case studies of just a few firms. Our data-based insights, drawn from a large sample of firms, show that dual strategies often perform far better than traditional ones. As a result, digital entrants and even established businesses are now pursuing dual strategies that focus simultaneously on revenue growth and cost reduction.

The Performance Implications of Dual Strategies and Digital Ambidexterity

Our research reveals at least three reasons why dual strategies are more profitable and more valued by the stock market.

First, a dual-emphasis strategy can be far more complex, allowing a firm to surpass competitors who use a single-focus strategy. The dual strategy also requires a complexity and breadth of applications that competitors have a hard time replicating. By thus limiting competition, firms with a dual strategic emphasis are more profitable and more valuable.

Second, a dual emphasis creates more options for profitable growth by opening access to "low-hanging" investment opportunities with a positive return. Firms with a dual emphasis are likely to enjoy lower cycle times in product development and in managing supply chains and customer relationships, which will allow them to more quickly realize their revenue and cost targets and thereby accelerate their cash flows. Those cash flows may also be less variable than those of single emphasis firms because they are drawn from two sources, revenue growth and cost reduction, rather than just one.

Our research revealed that firms use "disciplined autonomy" to manage the inherent tensions of pursuing multiple objectives.

Third, a dual strategic emphasis, being more ambitious in its scope, may allow employees and partners to reach stretch targets, those which require entirely new approaches, for higher revenues and lower costs. The firm will thereby improve its chances of getting more without changing its investment levels which, in turn, will increase its cash flows, profits, and market value.

How to Achieve Digital Ambidexterity

We suggest several practical ways for firms to adopt a dual focus and, through it, achieve superior performance.

Pursue multiple strategic objectives: Dual strategy firms do not pursue just one metric to the exclusion of all others. Instead they manage the tensions that duality creates in such a way as to spark creativity. Our research revealed that firms use what we call "disciplined autonomy" to manage the inherent tensions of pursuing multiple objectives. The idea is that overarching IT systems, such as agile software development, can provide discipline, giving business units or teams the autonomy and discretion to apply selected methods within that framework.[3]

Firms which pursue multiple strategic objectives and ambidextrous governance should be able to create a portfolio of IT systems that simultaneously targets both revenue growth and cost reduction.

Despite the challenges of a simultaneous focus, Tata Consultancy Services (TCS) uses its IT systems to manage its dual strategies of arbitrage and aggregation. TCS's global IT platform, Ultimatix, is a key component in its Global Network Delivery Model, which helps the firm fulfill its dual strategies. Ultimatix combines a diversity of IT systems to create a seamless interface through which its more than 300,000 employees around the world share information about projects, clients, colleagues, and customers. It also gives them access to analytical tools to aid in decision making. As the competitive environment becomes more complex and turbulent, firms must be able to immediately respond to several emerging challenges at once. To do so, they may have to shift their strategic posture on short notice or be able to assume different postures for different functions. Firms which are, in this sense, ambidextrous will be more likely to succeed. SAP provides another example of this vital flexibility. It uses a framework of agile methodologies to rapidly deliver software that is Google-fast, Apple-simple, and yet industrial grade, like GE's jet engines.

Another example is Zara, which uses its robust but simple IT systems to sell high fashion at significantly lower costs than its competitors. Narayana Health uses IT to produce a daily profit and loss report by minutely tracking its activities. It also uses telemedicine to provide high quality service to patients over a broader area and at much lower costs.

Ambidextrous governance: The hidden DNA of dual emphasis firms is the ambidextrous governance systems they create in order to strike the right balance between revenue and cost focused projects.

Because a company's governance is central to its culture, practices, and resources, competitors are hard put to replicate its influence. For example, before 2008, Starbucks used a DOS point-of-sale system which made barista training fairly lengthy. Moreover, its managers did not communicate by email because the store computers were locked down for compliance reasons. To achieve a successful digital transformation, Starbucks did far more than hire a CIO and tweak its reporting structure. It established new routines and actively involved its CEO, Howard Schultz. These new governance processes helped it to overcome the technology debt it had incurred by long neglecting in-store IT infrastructure.[4] With support from Schultz, the then CIO Stephen Gillett started a new business unit called digital ventures whose purpose was to introduce new digital services to customers who were increasingly using smartphones, tablets, and laptops to interact with the company. These moves helped Starbucks to become a retail leader in mobile payments, improve its loyalty card system by developing related smartphone apps, and offer free in-store Wi-Fi and content throughout the United States.

Agile Management of IT Systems and Projects:

Firms which pursue multiple strategic objectives and ambidextrous governance should be able to create a portfolio of IT systems that simultaneously targets both revenue growth and cost reduction. A digital portfolio of sufficient complexity can use customer relationship management (CRM) to provide a differentiated customer experience while lowering costs through end-to-end enterprise resource planning (ERP) systems or supply chain management (SCM) systems.

IT portfolios differ depending on their firms' digital strategies. In our research, we found that firms which focused on revenue used more CRM systems, while those that focused on cost had more end-to-end and supplier-facing ERP and SCM systems. Dual focus firms, on the other hand, tended to have a combination of CRM systems and ERP and SCM systems, which was consistent with our theory that diverse IT systems help dual emphasis firms to improve their performance through digital ambidexterity. The dual emphasis firms in our sample also spent the most on IT salaries, while revenue focused firms spent the least. This finding reinforced our belief that, in order to manage diverse IT resources, dual emphasis firms must hire more IT employees or more employees with managerial and technical expertise in supervising diverse projects.

What makes these firms' project portfolios inimitable is their interdependence. Project 3 may, for example, rely upon the earlier projects 1 and 2. Progressive firms multiply their options by undertaking a variety of IT projects and arranging them carefully in terms of must-do and may-do elements so as to retain the flexibility necessary to deal with technical and market uncertainties.

Some go so far as to consider Starbucks as much a tech company[5] as a coffee company because of its smart digital moves. It is important to remember, however, that it has traveled a long path and negotiated a maze of interdependencies in order to access previously unavailable options. In 2001, Starbucks started with a simple prepaid card to speed the checkout process. It then scaled up, offering online registration and reloading of the card, and allowing customers to view their transaction history. Next, the company chose a growth option, awarding loyalty points and conducting sales promotions based on the resulting data. It then went on to cobrand the card with Visa so that it would also function as a credit card. Finally, it built on all of these earlier initiatives by creating a smartphone app to manage the whole process.

In 2013, Starbucks worked on about one hundred IT projects, thirty-five of them customer- or employee-facing, another thirty-five to forty aimed at reducing costs, and the rest comprising a broad portfolio concerned with resilience, security, and productivity. The company's aim was to complete more IT projects sooner, rather than executing fewer projects for a multiyear big bang delivery. It completed thirty-seven projects in 2011, fifty-nine in 2012, and its target of one hundred in 2013. Other companies can learn from the example of Starbucks. Some of the recent methodologies for software development, like agile and Scrum, will allow them to experiment with a variety of projects while incurring less risk than they would have with earlier waterfall methods.

Some Caveats on Planning Dual Strategies

Although a powerful tool when used correctly, dual strategies are not for all organizations. It is more difficult for firms to follow a dual strategic emphasis than a single one because the former requires the firm to manage greater complexity and risk in ensuring that all its decisions align. Focusing on two goals simultaneously can confuse efforts to set targets and assess performance across a range of business units. Dual-emphasis firms should also beware of ending up with a portfolio of IT systems that does not seamlessly integrate the flow of data and information. Focusing on two goals simultaneously can make it difficult for managers to agree to prioritize IT projects. We therefore advise that some firms which are unwilling to invest in digital resources may do best to continue using binary strategies.

> Managers need not choose between two rabbits, revenue growth and cost reduction; instead they can chase and catch both rabbits.

Conclusion

Smart managers know that changes in time and technology call for new strategies. We have found that, in order to succeed in the face of new challenges from startups and competitors, managers must synchronize their digital strategies with appropriate governance systems and a flexible portfolio of IT applications. In a shifting digital context, dual or ambidextrous strategies are not only more rewarding, they also gain power when synchronized with appropriate governance and digital investments. Managers need not choose between two rabbits, revenue growth and cost reduction; they can chase and catch both rabbits by adjusting their strategies, governance, and IT management. ■

ABOUT OUR RESEARCH[6]

Our research into how today's firms should approach strategy has produced data and evidence based insights. Figures 1 and 2 show a summary of our key findings to help managers to make informed choices when they synchronize IT and strategy to improve their firm's profits and market value. Figure 1 shows that with high IT investment, dual-emphasis firms can significantly outperform single-emphasis firms. Conversely, with low IT investment, single-emphasis firms (i.e., revenue or cost) are more profitable than dual-emphasis firms. Figure 2, which uses market value as a measure of firm performance reveals a different pattern. It shows that, when firms spend more on IT, the stock market values dual-emphasis firms more highly than single-emphasis ones. This finding is similar to that in Figure 1. However, the market values of dual-emphasis firms are more than those of single-emphasis firms even when they invest little in IT and therefore have lower profitability.

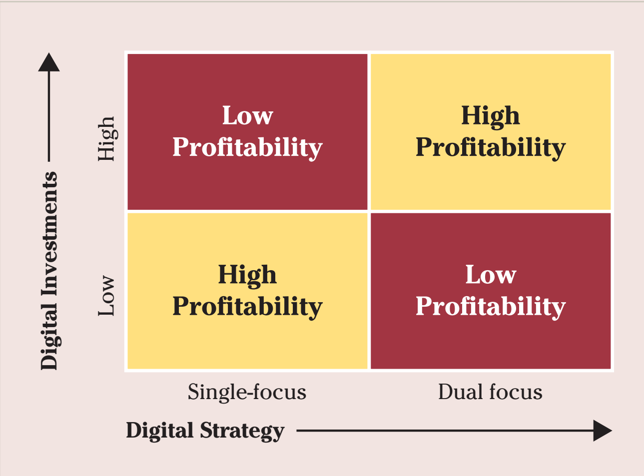

FIGURE 1: Synchronize Digital Strategies with Digital Investments for Profitability

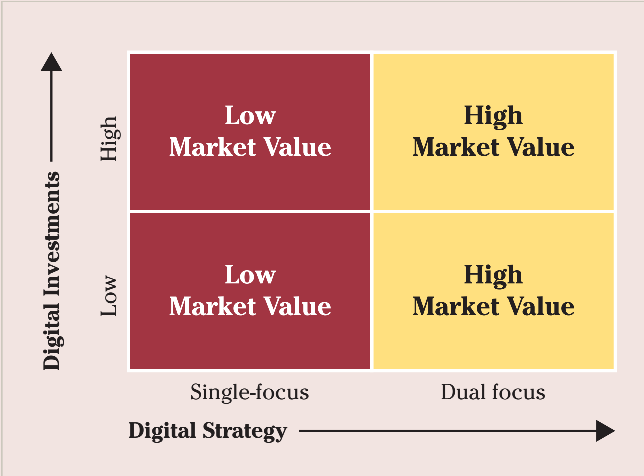

FIGURE 2: Synchronize Digital Strategies with Digital Investments for Market Value

Author Bios

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Endnotes

1. We use the phrase digitization to describe the deployment of digital resources and technologies to transform a business process or an organization. Although some authors prefer the term digitalization to digitization, and distinguish between the two, we consider these terms to be roughly equivalent in practice based on our experience in corporate settings.
2. Prior research reported that revenue expansion and cost reduction could be achieved simultaneously only in certain sectors, such as manufacturing, but not in service where high-quality human labor tends to be more expensive - Anderson, E. W., Fornell, C., and Rust, R. T. 1997. "Customer satisfaction, productivity, and profitability: Differences between goods and services," *Marketing Science* (16:2), pp. 129-145.. These reports argued for focusing on revenue expansion or cost reduction, but not both Rust, R. T., Moorman, C., and Dickson, P. R. 2002. "Getting return on quality: Revenue expansion, cost reduction, or both?," *Journal of Marketing* (66:4), pp. 7-24..
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4. See Adamy, J. 2008. "Starbucks moves to cut costs, retain customers, http://www.wsj.com/articles/SB122843860851281643," in: *Wall Street Journal (Dec 5, 2008)*. Washington, DC: p. B3. Brotman, A., and Garner, C. 2013. "How Starbucks Has Gone Digital, available at http://sloanreview.mit.edu/article/how-starbucks-has-gone-digital/," *MIT Sloan Management Review* (April). Murphy, C. 2011. "Chief of the year, http://informationweek.us/news/global-cio/interviews/232200549," in: *InformationWeek (12 Dec 2011)*. pp. 21-31., and Jargon, J. 2014. "Starbucks CEO to focus on digital, http://online.wsj.com/news/articles/SB10001424052702303519404579351140320955988," in: *Wall Street Journal (30 Jan 2014)*. Washington, DC: p. B6..
5. See Brotman, A., and Garner, C. 2013. "How Starbucks Has Gone Digital, available at http://sloanreview.mit.edu/article/how-starbucks-has-gone-digital/," *MIT Sloan Management Review* (April). and Elgan, M. 2014. "Forget coffee, Starbucks is a tech company, http://www.computerworld.com/article/2490746/retail-it/forget-coffee--starbucks-is-a-tech-company.html." *ComputerWorld (14 June 2014)*, from http://www.itworldcanada.com/ViewArticle.aspx?url=sas-introduces-social-media-analytics-to-enterprises .
6. More details about our research can be found in an article in the March 2016 issue of MIS Quarterly Mithas, S., and Rust, R. T. 2016. "How Information Technology Strategy and Investments Influence Firm Performance: Conjecture and Empirical Evidence," *MIS Quarterly* (40:1), pp. 223-245. The current article is based on the authors' research documented in various articles cited in this article and related ongoing work: Yang, Y., Liu, C., and Mithas, S. 2021. "Dual Information Technology Strategy and Firm Performance: Insights from a Deep Learning Approach," *Academy of Management Annual Meeting (29 July-4 August 2021)*, Virtual, Mithas, S., Park, Y., and Saldanha, T. 2020. "Digital Strategy, and Discretionary Expenditures: Novel Insights From a Configurational Approach," *Academy of Management Annual Meeting (7-11 August 2020)*, Vancouver, Canada..