

Using Disruptive Innovation Theory to Guide Investment Decisions | By Scott D. Anthony

One of the most pressing challenges many CFOs face is allocating scarce investment dollars among innovation opportunities. It's a tough challenge. Opportunities that seem to have a high probability of creating growth often flop. Acquisitions produce frustratingly inconsistent but

typically negative returns. In general, innovation just seems to be random and unpredictable.

Addressing this challenge requires CFOs to use a tool that may seem unfamiliar: theory. The right theories can help them identify when it makes sense to curtail investment in historically important areas, pinpoint threats incubating far outside the core business, and find acquisition targets that have a high probability of creating blockbuster returns. In short, theory can help CFOs improve their return on innovation investment.

The Disruptive Innovation Theory: Simple, Cheap, Revolutionary
The core theory that CFOs should add to their toolkit is the disruptive innovation theory. First described by Clayton Christensen in the 1997 book *The Innovator's Dilemma*, this theory explains how the principles of good management cause well-run companies to fail. A key tenet is that companies innovate faster than people's lives can change to absorb the new products and services made available to them. What that means is that what wasn't good enough yesterday is good enough today and will be

more than good enough in the future.

This phenomenon happens for valid reasons. When a product or service isn't good enough, demanding cus-

tomers pay handsome rewards to companies that close the gap between what customers need and what is available. But in the rush to serve the most demanding customers in the industry, companies end up overshooting increasing swaths of a market.

When overshooting occurs, customers grow increasingly unwilling to pay for improvements along dimensions that used to be quite important to them. For example, in the 1990s, com-

panies continued to invest to produce higher-quality compact disk technology, but products were already more than good enough for what customers needed. How did companies create new growth? By using a simple, convenient technology called MP3 that actually had lower audio quality than existing solutions but had new benefits related to customizability and convenience.

MP3 is a classic *disruptive* technology. Even today, it continues to have limitations along important dimensions such as audio quality. Yet it is so flexible that people



can consume music in entirely new ways, using MP3 players as portable jukeboxes. Companies such as Apple used the simple, convenient technology to create booming growth.

Curtail Investment in Overshot Dimensions

CFOs can use the model in three ways to improve their return on innovation investment. First, they should continually monitor whether their company has overshot a customer segment. How can you identify an overshot segment? Overshot customers begin to complain that products are too complicated and expensive. They stop using and valuing new features. They also begin to pay less for new innovations. Declining prices and margins in a given market tier are often signs of overshot customers.

There are many signs that enterprise software providers have overshot much of the market. A January article in *The Wall Street Journal* described how companies are growing increasingly unwilling to pay for expensive software upgrades because they find that old versions of the software are good enough for their needs. They are increasingly turning to low-cost providers such as Salesforce.com. These signals indicate that customers are overshot.

CFOs should consider curtailing investment that promises improvements along overshot dimensions. A company is unlikely to realize the full rewards from an innovation effort because customers won't value the enhancements. These kinds of proposals will usually contain data showing the fantastic returns from historical investments to improve products for this product segment. But that data explains what happened in the past, not what will hap-

pen in the future.

Of course, if the analysis illustrates that a company's current customers are *undershot* along important dimensions, CFOs should feel comfortable allocating resources toward innovations that promise improvements along those dimensions.

Scan Proactively for Disruptive Developments

Second, the model implies that CFOs should make sure that they continuously scan for threats emerging *outside* their core market. When companies have to name their most daunting competitor, they often point to the leading incumbent in their marketplace. Thirty years ago, GM would point to Ford. Twenty years ago, minicomputer giant Digital Equipment Corporation would point to Prime, Wang, and Nixdorf. Today, Boeing would point to Airbus; Harvard Business School would point to Stanford Business School.

These are all *sustaining* rivals, where companies are fighting for existing customers in existing markets. These battles are important, but companies also need to watch for disruptive innovations incubating outside the core market. Today, GM's largest threat comes from Toyota. The personal computer killed DEC. Regional jet manufacturers such as Embraer and Bombardier pose a bigger threat to Boeing than Airbus. Corporate training providers and the University of Phoenix threaten the hegemony of leading business schools.

Keeping tabs on sustaining competitors involves watching so-called "lead" customers and carefully analyzing market data. Watching for disruptive developments involves looking for companies targeting the low

end of existing markets and customer groups seemingly in the market's fringe. It involves looking for companies that fit an established pattern of disruptive innovators.

When companies identify a legitimate disruptive development, they can of course invest to create a rival offering. Doing so must be managed quite carefully, however, because the established ways in which the core business operates often get in the way of creating viable disruptive entrants. Alternatively, a company can acquire one of the emerging disruptive attackers to capitalize on its growth potential.

Use the Model to Guide Acquisition Targets

Using the disruptive innovation model to help identify high-potential acquisition targets is the third way in which CFOs can improve their return on innovation investment.

Why a company would ever expect to create profitable growth through acquisitions is a mystery to many academics. Study after study has shown that, on average, acquisitions destroy value—the price paid for the acquisition doesn't justify the subsequent performance of the acquired company.

Many companies find that large acquisitions provide stable but lackluster returns, whereas small acquisitions typically have highly variable outcomes, occasionally producing blockbuster returns. Screening for small targets that match identified disruptive patterns can, in essence, cut the tail off of a returns distribution curve, allowing companies to capture disruptive growth before the marketplace fully understands it.

For example, Johnson & Johnson's Medical Device and Diagnostics

business unit acquired four separate disruptive businesses in the 1980s: Cordis (stents), Lifescan (blood glucose monitors), Vistakon (disposable contact lenses), and Ethicon (endosurgery). Those four acquisitions grew at a compound annual rate of more than 40% during the 1990s, accounting for almost all of the division's growth. Similarly, in the early 1990s, the Washington Post Company recognized that there were disruptive trends that were poised to change the education industry as education moved beyond the classroom. It acquired Kaplan and a number of other training companies. The training and education part of the Washington Post Company now accounts for more than 50% of its revenue.

New Growth

By using disruptive innovation theory, CFOs can help their companies grow by making better use of their investments in innovation. They can curtail investment in improvements along overshot dimensions. They can scan for disruptive developments that are incubating far away from the core business and either invest to counter the disruptive development or snatch up one of the emerging attackers. ■

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