Alliance Activity as a Dynamic Capability in the Face of a Discontinuous Technological Change

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Alliance Activity as a Dynamic Capability in the Face of a Discontinuous Technological Change

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Major changes in technology, customer tastes and regulations force companies to develop radically new capabilities in order to compete. Some managers attempt to develop new technologies in-house while others seek alliances to access those technologies. However, many managers choosing to develop technologies in-house do not realize that existing technologies can be a handicap. Managers seeking alliances may not know that successful alliances require more than connecting technological capabilities.

These are some of the findings from the study “Alliance Activity as a Dynamic Capability in the Face of a Discontinuous Technological Change”. It is the first to look at how companies determine whether to enter new domains to adjust to technological changes, and how they choose to enter those domains. Anand co-authored the study with researchers Raffaele Oriani at the LUISS Guido Carli University in Italy, and Roberto Vassolo at the Universidad Austral in Argentina.

The researchers used findings from their study of the pharmaceutical industry’s shift to biotechnology. The industry had to shift from its chemistry-based business to one focused on molecular biology and biochemistry. Between 1989 and 1999, the 19 largest pharmaceutical firms worldwide made 876 entries into biotechnology. Forty-five percent of those entries were through internal development and 55 percent through alliances.

The study found that firms with capabilities in traditional technologies do not have an advantage in entering emerging technological fields through internal development. In fact, capabilities in the traditional technology not only decrease the likelihood of entering new domains, but also might have a negative effect, the study says.

Technologically disadvantaged companies also are less likely to enter new domains. Those firms that do enter choose to create alliances to expand resources and speed entry into new markets, the study says. Firms with good complementary capabilities are more likely to find
competent partners and access their capabilities. These alliances build the “give-and-take” relationships that effective alliances require. For instance, creating alliances in the pharmaceutical industry gave companies the technology they needed in exchange for testing, marketing and distribution.

Firms with stronger technological capabilities are more likely to enter new domains, the study says. Those firms often choose to develop products internally. Although they are not creating external relationships, they still need complementary capabilities to create viable commercial products. For instance, firms with the ability to assimilate and apply technology are more proactive in seeking new technologies, the study says. Companies with strong internal development research are able to take advantage of external scientific information.

Ultimately, the research shifts the focus from “how” to “should” for companies needing to overcome the handicaps created by emerging technologies. That means focusing on both technological capabilities and complementary capabilities.

Lacking the technical skills needed to adapt to technological changes does not preclude technologically disadvantaged companies from entering new domains. However, having those technical skills does not guarantee that technologically strong companies will enter new domains.

Technologically strong companies that create products in-house need complementary capabilities to commercialize products. Technologically disadvantaged companies may be able to access new technologies, but they also have to have the complementary capabilities to know what resources they can bring to the table.

Original article


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