Continuous Innovation

How can companies create a long-lasting competitive advantage?

Introduction

Innovation has proved for many organizations a vital source of growth and a significant determinant of competitive advantage. Therefore, in order to sustain competitive advantage and drive growth in the long run, organizations need to continuously innovate. Achieving this requires the coordinated efforts of various stakeholders and a seamless integration of activities across all organization functions. Continuous innovation has been defined as the ability to combine exploitation and exploration capabilities through operational effectiveness and strategic flexibility that have traditionally been regarded as antithetical. Organizations can seize and sustain competitive advantage by exploiting opportunities in existing markets and market niches by aligning the firm’s strategy to efficiently utilize its basic resources and capabilities while also exploring opportunities in emerging and new markets through research, risk-taking, experimentation, flexibility, discovery, and self-disruption. In other words, continuous innovation is not a destination rather a journey of continuous incremental improvement, the interaction between operations, learning and radical innovation with the aim of successively combining exploitation and exploration activities.

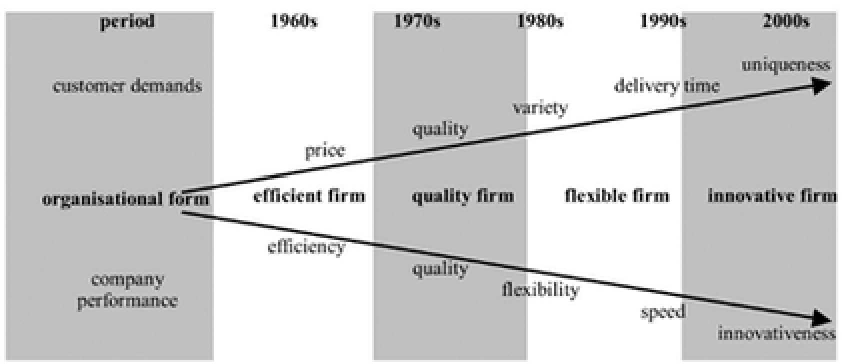
Why continuous innovation?

The several reasons why companies need continuous innovation can be grouped into four main reasons as follows;

Changing customer demands

Figure1: Evolution of customer demands

Figure 1 The evolution of market demands and (required) competencies of firms



Source: adapted from Bolwijn and Kumpe [1]

Bolwijn and Kumpe deduced that, with the evolving customer demands through the years, after the efficient firm of the period until 1975, the quality firm of the late 1970s and the early 1980s, and the flexible firm of the late 1980s and the 1990s, now is the era of the innovative firm. Every stage appends the strengths of its antecedent. Consumers demand a high variety of unique quality products that are affordable and timely service. Therefore, companies need continuous innovation in their product and services development in order to remain relevant to customers’ needs.

Rapid technological development

The emergence of the fourth industrial revolution has kindled rapid technological change such as; the internet of things, artificial intelligence, big data, blockchain technology, 3D printing, nanotechnology, virtual and augmented reality, satellite and drone technologies. All these add notable complexity to companies' pursuits to remain competitive. These complexities include automation, cybersecurity, altered productivity models and a short-lived comparative advantage, more so, customers have more information and options. These realities prompt companies to manage both opportunities and threats presented and continuously innovate to satisfy their customers’ demands.

Globalization and new competitors

Globalization creates a dynamic and complex business environment where companies compete nearly with all companies on the globe. The nature of competition has tremendously been transformed with changes in investment, production and distribution patterns as customers, suppliers and enterprises interact differently. For example, a new clothing company in Korea could acquire raw materials from Egypt, sell to customers in Europe and compete in the US clothing industry. Companies, therefore, need to out-perform their competitors through continuous improvements and reinvention to maintain the global standards and make timely delivery to global clients.

Environmental policies

Environmental regulations on carbon emissions, pollution, natural habitat and biodiversity conservation induce high indirect input costs and trigger different responses by firms which increases competition. Responses include price, output, and investment changes which lead to productivity innovations notably in pollution and energy-intensive sectors . Environmental regulations foster innovation in clean and renewable technologies which increasingly impact competitiveness therefore companies need to continuously innovate amidst new circumstances.

Evidence documents that many firms operate in increasingly dynamic and complex environments, where disruptive forces such as changing consumer demands, rapid technological development, globalized competition, and environmental policies operate with amplified frequency . Consequently, all companies must continuously modify their structures and processes through exploitation of core competencies and exploration of new domains in order to sustain competitiveness and satisfy or initiate future demand.

Why companies fail?

In order to achieve successful continuous innovation, it is crucial to understand why companies that once experienced innovation success failed to remain competitive – only 12% of the Fortune 500 companies included in 1955 were still listed 62 years later in 2017 and the shift index shows that the average lifespan of S&P 500 companies declined from an average of 75 years half a century ago to 15 years in 2010 (Diem, 2017). The main reason is that majority of the firms focused on exploitation of their successful business model as most old competitive theories stated such as Porter's three strategies of cost leadership, focus and differentiation and Skinner's argument of a narrow product mix for a market niche and failed to explore any new areas. Management was incentivized to fully exploit the one successful model through targets and KPI's which means that focus, resources and culture were geared towards the usual low risk ventures that easily became obsolete.

According to Clayton Christensen, in his book 'The Innovator's Dilemma', reigning companies can lose their leadership status to new innovations when they only gratify their current customers' needs and fail to adopt new innovations and technologies which will answer their future needs. Examples include; Blockbuster - film and video game rental company that ran bankrupt in 2010 was disrupted by on-demand streaming sites like Netflix because it didn't adapt to the new online business model, Yahoo failed to take the risk to invest in google and Facebook and ended up losing its market share, Kodak invented the digital camera but still filed for bankruptcy in 2012. Nokia was one of the pioneers of the smartphone but lost significant market share to the iPhone, and many more.

The challenge to continuous innovation for many of these companies was that most new disruptive innovations did not fit their current structures and business models and therefore posed a high risk to their investments if adopted. Considering that the current business model is what most companies are designed to deliver on, any new disruptive innovation would require substantial changes to the current business model which creates a misalignment, therefore, the extent of the changes required and the disposition of leadership to navigate that change fundamentally dictates the success of continuous innovation.

Nokia, and Kodak failed to develop and adopt new innovative technologies despite having resources and foresight. Their leadership was not willing to execute the right business models to take the new technologies to market therefore successful continuous innovation requires active corporate leadership participation in changing current structures to aid the continuous development of innovative new business models.

How can companies stay competitive?

Achieving continuous innovation is quite tough and many attempt and fail, however, drawing from successful continuously innovative companies such as Google, Facebook, Microsoft, Amazon, P&G, Pfizer, Sony, Apple, BMW and many more we learn that the following four approaches can drive continuous innovation.

Strategic partnerships for shared risks and strategic options as the case with Procter and Gamble, Oracle and IBM. The downside to partnerships is shared returns and loss of control. Secondly, recruiting, developing and retaining superior human capital to enable organizational flexibility and human resource management like Google, Goldman Sachs and Research in Motion. The weakness of this approach is slow growth and the challenge of identifying and valuing superior human capital. Thirdly, internal research & development spending to cultivate a culture of risk-taking, organization flexibility and long-term commitment for example Apple, Hewlett-Packard, and BMW. The limitation to this approach is full risk exposure, long-term and uncertain returns. Lastly, identifying and assimilating acquisition targets to obtain innovative technologies before startups become competitors and enable faster growth as the case with Pfizer, Microsoft and General Electric. The disadvantage of this approach is the risk of overpaying, cultural integration concerns and dependence on others for innovation.

There is no one-size-fits-all formula for successful continuous innovation. For example, the ambidextrous organization can behave organically when the circumstances require the introduction of new models, and the punctuated equilibrium organization can assume long periods of small and incremental change interrupted by short periods of discontinuous radical change and the innovative organization is one in which radical systematic change is followed by long periods of maintenance and incremental improvement. In general, continuous innovation requires an organizational balance of exploitation and exploration activities and it takes time to achieve the balance.

The examples of failures and successes of continuous innovation evince that knowledge acquisition and management is crucial in building an enduring company culture of innovation and sustainable competitive advantage. Gianmario Verona and Davide Ravasi outline three vital capabilities namely; creation and absorption of knowledge, knowledge integration and knowledge reconfiguration required across the organization in order to acquire continuous innovation.

First, companies needs to generate and absorb knowledge from the market by committing to long-term investment in potential technological and market applications, building a risk tolerant and experimentation culture, training and empowering employees, fostering open communication, designing customer-oriented solutions, challenging the conventional management thinking, and facilitating open innovation to absorb knowledge from the external sources.

Secondly, after acquiring knowledge, companies need to integrate the knowledge into the company processes and strategic plans by building the dynamic capacity of employees and resources across all functions needed to quickly implement new ideas, fostering strategic partnerships with suppliers and customers and reducing bureaucracies.

Lastly, knowledge needs to be continuously reconfigured by creating an organic structure that enables the redefinition of roles and relationship patterns in a flexible way making it easy to continuously reintegrate resources by eliminating processes that don't work and adjusting to new business environment changes.

These three capabilities steer companies towards the continuous generation of new products which constantly renews their competitive advantage. Research indicates that company culture, structure and systems and physical resources support the three dynamic capabilities and together they can create continuous innovation. There must be internal resource coherence for the capabilities to fulfil their function.

Conclusion

In conclusion, companies to be ready for a different future than the one they are now experiencing as the business environment gets more dynamic, complex and challenging. Companies need to continuously innovate in order to stay ahead of the competition and not fall into failure cases. Large companies are most likely going to be unexpectedly disrupted by new companies because they focus on their current customer demands instead of their future demands for example the unexpected disruption of the hotel industry by Airbnb. Sustained competitive advantage and growth in the long run for organizations requires continuous innovation due to evolution in customer demands, rapid technological change, globalization and new policies.

Case studies suggest possible approaches for acquiring continuous innovation through strategic partnerships, recruiting, developing and retaining superior human capital, internal research & development and identifying and assimilating acquisition targets but they are also encountered by various challenges. Ultimately, through knowledge acquisition, management and organization experimental learning, companies need to balance exploitation and exploration capabilities in order to continuously innovate and stay ahead of the competition.

Continuous Innovation does not exist in a vacuum, it requires active leadership participation across all organization functions, innovative organizational culture, dynamic company structure, strategic partnerships and lobbying existing resources and technologies in order to satisfy and create future demand. Change is irresistible, but so is innovation. Therefore, it is best to embrace its opportunities, threats, find solutions and keep up with new technologies while ensuring proper leadership and continuous innovation strategies are set.

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