

## **When is Imitation the Best Strategy?**

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*Innovation through investments in R & D has been associated with competitiveness. However, recent studies have found mixed results. Imitation undermines the benefits of innovation. This study develops conditions under which imitation is an effective strategy, when pioneering is disadvantageous and may not necessarily create sustainable competitive advantage. Transaction Cost Economics provides a foundation for explicating environmental hazards that lead to imitation including incremental technology that cannot be easily safeguarded, weak legal environments and underdeveloped property rights regimes. General purpose technology, with its complementary applications and externalities, provides opportunities for imitation. Consequences of imitation as strategy are discussed.*

### **INTRODUCTION**

One of the critical challenges facing organizations is a need to constantly make strategic choices in the context of a complex, hypercompetitive, and uncertain global environment. To effectively manage this environment, and arrive at effective strategic choices, many organizations aim at sustaining competitiveness through innovation and alignment of their strategies with the dynamic environment. A firm may choose a conventional form of innovation through research and development (R & D), strategic alliances or acquisitions. However, the path to achieving sustainable competitive advantage can take other forms. The firm may opt for a contested strategy of imitation. The relative performance benefits of R & D versus imitation are dependent on many variables, and research findings are mixed. This paper focuses on imitation, with the purpose of developing a case for imitation as strategy. The study develops conditions under which imitation is an effective strategy, when pioneering is disadvantageous and may not necessarily create sustainable competitive advantage.

Pioneering involves being the first to innovate by developing or bringing to market new products, technologies, or processes. Extensive research has been done to demonstrate pioneering advantages and disadvantages. Such studies have demonstrated mixed results. While pioneering has advantages, it may lead to negative performance outcomes in some situations. Because of this, it is worth exploring whether imitation is a more effective strategy under certain conditions. New products and technological innovations often involve considerable investment in R & D, time, and sometimes necessitate structural changes in the way the organization is designed. It would be assumed that most organizations make strategic risk assessment through real options, discounting methods, or other metrics, to determine expected returns from innovation. However, the process of innovation is fraught with risks, with many

innovations even failing to commercialize. Due to uncertain environmental conditions, dynamic customer preferences and competition, projected earnings from new discoveries are largely based on guesstimation.

Most conventional theories hold that investment in R & D leads to sustainable competitive advantage (Teece, 1986; Helfat, 1997, 2000), organizational learning through a deep absorptive capacity (Cohen & Levinthal, 1990), as well as alignment and adaptation to dynamic market conditions and pioneering advantages, among other strategic benefits. From this perspective, R & D is an essential component of strategizing, more so for firms competing in knowledge economies and high technology industries. However, contrarian evidence is beginning to emerge.

While some firms are competitive, they do not have a formalized way of linking R & D strategies to eventual customercentric strategies. Studies have found that some firms are able to maintain competitiveness, even in the absence of formal R & D programs. Cohen, Levin, and Mowery's (1987) study of large U.S. firms reported that 24 percent of the firms did not invest in formal R & D. Other studies have shown a negative correlation between R & D expenditures and basic measures of firm performance such as profitability. Bound, Cummins, Griliches, Hall, and Jaffe (1984) showed that 40 percent of U.S. firms did not report positive R & D expenditures, while Del Canto and Gonzalez (1999) revealed that 71 percent of companies did not undertake formal R & D. The findings suggest that R & D does not have to be a calcified strategy. There are alternative way of achieving innovation, adaptation to externalities, and consequent competitiveness, without necessarily investing in R & D, such as imitation. Elements of imitation include counterfeits, clones, design copies, and creative adaptations, among others. While imitation may not be the strategy of choice for many credible firms, externalities and other environmental constraints may limit the firm's options leading to imitation as their most effective strategy. The main purpose of this paper is to analyze these unique situations that lend themselves to imitation rather than innovation as the most effective strategy.

Two types of imitation, tactical imitation and strategic imitation are distinguished. Tactical imitation involves mimicking short-term actions that do not involve substantial commitment of resources and time. Strategic imitation, the main focus of this paper, is concerned with commitment of substantial resources and long-term strategies to match strategic actions of the pioneer. A clearer picture begins to emerge by looking at innovation versus imitation findings. Mansfield, Schwartz, and Wagner (1981) found that 60 percent of patented innovations are imitated within four years of introduction. Schnaars (2002) documents the prevalence of firms choosing an imitation path in several industries (e.g., beverages, fashion, pharmaceuticals, software) as a deliberate competitive strategy. In the fashion industry imitation is frequently seen. Due to the quick turnaround of products, styles, and seasons, as well as the limited opportunities to make revenue, companies often "borrow" design ideas from others. Some designs are modified (e.g., a v-neck versus a rounded neck), but others are almost exact copies. This is seen in the high-end designer to mass market direction, laterally between levels (high-end to high-end or low-end to low-end), and even from the low-end mass market to the high-end designers. Indeed, Mansfield, Schwartz, and Wagner (1981) found that, on average, imitation costs are 35% lower than innovation costs. The positive data from imitation accrue against a backdrop of risk and mixed returns from R & D investments. While imitation as strategy has known deleterious effects on pioneering firms and overall societal innovation, imitation may in fact be *beneficial* to first mover firms and society in general, under given conditions. A framework will be developed to demonstrate when first movers and product pioneers are likely to benefit from imitation strategies and are better off encouraging such imitation.

## RELEVANT LITERATURE

Studies have been done to demonstrate the advantages of pioneering products, technologies, and markets (Lieberman & Montgomery, 1988; Makadok, 1998; Robinson & Min, 2002). Other studies have highlighted the costs and benefits of imitation (Shankar, Carpenter, & Krishnamurthi, 1999; Boulding & Christen, 2003; Schnaars, 2002). Some studies have found mixed results on pioneering advantages (Boulding & Christen, 2008; Kopel & Loffler, 2008; Lee, Smith, Grimm, & Schomburg, 2000).

Pioneering involves efforts by the first firm to be the first to bring to market new products, technologies, and strategies (Schnaars, 2002).

One of the core pioneering advantages is in technology. The significance of technology goes back to the work of Arrow (1962); pioneers have less incentive to conduct innovation than imitators would have. Technological innovation offers critical first mover advantages such as improved efficiency, quality, alternative use of products, and new products. Over time however, learning curve and scale economy effects are diminished as inter-firm diffusion of technology and other firm resources such as trade secrets, patents, and knowledge diffusion via human resources mobility, negate the pioneering advantages (Mellahi & Johnson, 2000). In a complex world where firms utilize external agents in procurement, management services, and even production processes, trade secrets are constantly leaked and shared, with or without intent. The supplier may gain by sharing trade secrets, as their product sales may increase if a new competitor enters the market, and they are able to expand their product's customer base.

Significant amounts of innovation also permeate through firm boundaries along other value chain processes. While integrated global supply chain processes in global firms have facilitated logistical efficiency, suppliers have also been given unfettered access to internal firm processes and may even have an understanding of the firm's dynamic capabilities. This may create conflicting goals of maintaining the integrity of intellectual assets, on the one hand, and seeking seamless integration of production processes. It is not uncommon to find suppliers that have turned into competitive foes through forward integration. Ultimately, other firms will find ways of imitating or leap-frogging the existing technology, consistent with Schumpeter's (1942) gales of creative destruction.

Although innovation can still be protected with property rights, this is becoming increasingly challenging especially in the new economy that is largely dominated by service industries (Hipp & Grupp, 2005) where competences are easily identifiable and imitable. Legal remedies are also often not stringent enough, or are hardly determined in a timely fashion to protect the pioneering firm from financial damage. It is not helpful that service industries form the bulk of most western economies, as many western firms race to offshore their production functions to more cost-competitive destinations. The situation is no different in high technology industries where product innovations allow imitators to erode pioneer advantages more easily (Golder & Tellis, 1993). These developments have led some scholars to conclude that pioneers can rarely prevent imitation (Lieberman & Montgomery, 1988). Due to globalization and environmental uncertainty, many imitators tend to benefit disproportionately than pioneers (Bolton, 1993). The situation is further aggravated by the arising asymmetric information and market failure between emerging economies where most goods are produced and western markets where the goods are sold.

Pioneering risks can be discerned along the product development process beginning with R & D through the marketing stage. Previous research has shown that pioneering firms spend considerably more resources on original innovations than imitations of such innovations. Studies on relative innovation costs found that imitations of innovations only cost 65% of pioneering costs (Schnaars, 1994). Even after committing such resources, it is not always guaranteed that the innovator's emerging products will be commercialized successfully (Kerin, Varadarajan, & Peterson, 1992). If the new product reaches the market, additional risks arise due to failure to gain traction. The rate of success for new product launch has been variously estimated at 80 – 95 % (Berggren & Nacher, 2000), 50% (Ogawa & Piller, 2006; Sividas & Dwyer, 2000), and as low as 10% (Duboff, 2008). While these statistics do not point to specific areas of weakness in the process of innovation, they point to inherent risks and a need for more effective strategic innovations. For a firm that cannot effectively engage in new innovation, the only option available to sustain competitiveness in a hypercompetitive environment is to seriously consider the often contested strategy of imitation.

Imitation can take many forms including counterfeits, clones, design copies, and creative adaptation (Schnaars, 2002). Schnaars demonstrates how first entrants in the market come in last and last entrants come in first. Studies on imitation as strategy have focused on benefits through externalities. Conner and Rumelt (1991) found that when network externalities exist, imitation would increase the user-base of customers who would otherwise not buy. Imitation in this case appears to be a means of increasing the

customer base with the expectation that more savvy customers would prefer authentic or better quality products. Conner (1995) demonstrates a unique Nash equilibrium in price setting where the innovator responds to the price chosen by the clone. The model shows how earnings of an innovative firm can increase, under conditions of perceived quality differences and network externalities, if its products are cloned by competitors. The general idea is to use imitation to develop the market for non-users and lower-end users as the pioneer focuses on further innovation and premium customers, leading to a win-win situation. Imitation in this case serves a critical role of attracting the mass market to the product. A prime example of this is the personal portable media market. In 2001, Apple launched the first iPod. In 2006, Microsoft launched Zune, a portable media player similar to the iPod, but it also offered wireless media transfer as well as FM radio. Other companies, both big names like Sony and small startup companies got in the game. Not only did these other companies, which intended to be Apple's competition, bring new consumers to the market, but they may have helped Apple in the long run when the consumer found they enjoyed the benefits of portable media, but found the cheaper imitations didn't have the functionality or features of the Apple iPod. Therefore, the imitators increased the amount of consumers for this type of product in the market, but also may have created customers directly for the more expensive brand leader, Apple. Another example comes from the fashion industry. Even in the 1950s, designers like Dior and Chanel, would have exclusive salon presentations of their newest fashions for their best female clients. At the same time, they also sold their exclusive patterns for these designs to certain store buyers, while retaining control of the spin-offs. When the product was mass-made and mass-marketed, the end product was not as high quality as the original product (Frankel, 2007). Today, design information spreads even faster through television, satellite, the internet, and print media. While this may be perceived as suicidal by some in the fashion industry, others believe the publicity created is valuable to all involved, from "small independent designers to major conglomerates" (Frankel, 2007, p.2). Ultimately, smart pioneering involves weighing the costs of innovation against a backdrop of instant imitation.

Innovation also has intra-firm spillover benefits. An intra-firm example is in car manufacturing. Technology is often developed by a company, such as Toyota, and then reworked or at least rebranded for their other product offerings. In this way, a company uses their R & D expenditures, but is able to profit from attracting higher-end customers to one brand, such as Lexus, as well as to medium-priced offerings such as Toyota, and even lower-priced options such as Scion. Without extra investments in R & D, the company is able to gain much more market share. Other automotive companies have done the same. Ultimately, there is better technology across product lines and a convergence of industry standards that are usually beneficial to the customer.

Imitators do not always leave money on the table. Through imitation, late movers can apply incremental innovation to overtake the pioneer (Shankar, Carpenter, & Krishnamurthi, 1998). For example, Gillette eclipsed Star razor products (Carpenter & Sawhney, 1996; Golder & Tellis, 1993), Ampex video cassette recorders were overtaken by Matsushita, and Samsung dominated the microwave market earlier pioneered by Amana. Carpenter and Nakamoto (1996) found that imitators are able to exploit buyer preferences by identifying more profitable market positions. Lee, Smith, Grimm and Schomburg (2000) have highlighted the significance of timing of market entry. Looking at timing of market entry, Boulding and Christen (2003) found that at the business unit level, being first to market, on average, led to a long-term profit disadvantage. This implies that product innovation must be grounded in sound marketing strategy.

The literature suggests that imitation often leads to different outcomes for competitive rivals and the competitive environment in general. Imitation may be beneficial to the pioneering firm, the imitator, and even other stakeholders such as customers and suppliers. However, these benefits have to be weighed against potential loss of intellectual capital by the pioneer(s). It follows that effective imitation and innovation lie along a continuum where different strategies lead to superior competitiveness. On one end of the spectrum, if a company has unlimited funds and facilities for R & D, unlimited time to get a product to market, in house creativity, legal support and knowledge, and stakeholders who expect the firm to be innovative first-movers, as well as strong corporate governance, it may be best to lean towards innovation. On the other end of the spectrum, there are many companies who do not have these

capabilities available to them and need to lean towards imitation in order to be successful. These companies may have more resources for marketing since they do not invest heavily in R & D, their creativity may be based in their marketing and promotion departments, the firm's legal expertise may be in how to navigate patent and other legal issues, or they may be based in an area with decreased legal oversight, such as China. There are also firms that may fall between these two extremes.

An example of an industry where imitation is increasingly profitable is the pharmaceuticals. A generic drug hits the market, mostly after the original drug's patent has lapsed. The generic company therefore has a lag time, when no profits are able to be made, but they also do not have the rather expensive amounts of R & D including the expense of drug trials, legal issues, and other hurdles encountered by the pioneering firm. The imitating firm also benefits from time in such a way that if there are problems with the drug such as side effects, those issues may have already come to light, and the pioneering firm held responsible for the legal actions before the imitating firm even begins drug production. Therefore, the pioneering firm incurs more risk. Once the generic drug is commercialized, it often sells at a lower price, and pioneering firms have to reduce prices further in order to remain competitive.

### **TCE JUSTIFICATION FOR IMITATION**

Innovation is not always the best strategy and is only effective under certain conditions. Assuming the ideal conditions of capitalism such as private property rights, laissez-faire, and the invisible hand of the market, pioneering through innovation would be well-rewarded and lead to sustainable competitiveness. However, these conditions rarely obtain in reality. Competitive markets constantly demonstrate imperfect conditions with frequent market failure. Such conditions are best illustrated through a transaction cost framework. Transaction cost economics (TCE) is especially suitable for this analysis because of its characteristics and assumptions. TCE has undergone substantial evolution following Ronald Coase's (1937) seminal paper. Coase demonstrated fundamental flaws with the economic theory of price mechanism: there is a cost to using the price mechanism, transaction costs. Coase sought to understand why it was sometimes more efficient to use the firm rather than the market to conduct business. The theory is well-described and refined by Williamson (1985). Boerner and Macher (2003) and David and Han (2004) provide a detailed analysis of different extensions to the theory. Since there is no paradigm consensus or cohesive empirical support for core areas of the framework (David & Han, 2004), most studies have continued to cite and apply Williamson's formulation. Arrow (1969) defines transaction costs as the costs of running the economic system. If the organization is an engine, then friction is the transaction cost.

Williamson distinguishes ex ante and ex post costs. Ex ante costs relate to the costs of seeking information, drafting contracts, and designing safeguards. Such sunk costs are not easy to mitigate in the event of misalignments. Ex post costs arise after implementation of the contract. While it may be theoretically possible to retrospectively review ex ante costs, efficiency gains to contracting can be best realized from economizing transaction costs through ex post incentives. The ex ante situation arises when the firm has already incurred innovation costs and has to make market/product entry decisions. The emergent strategy will depend on many factors including; characteristics of the market, characteristics of the consumers, the nature of the innovation (discontinuous or incremental) and availability of competing technologies.

Williamson uses the lens of governance modes, associated with a variety of contracting forms, to explicate the TCE problem. Where transactions can be efficiently supported by general-purpose assets, identity of the parties is irrelevant with little need for protective governance structures. High-powered market incentives are adequate and such activities can be conducted outside the firm within the realms of contract law. Similarly, complex firm-specific innovations are easier to protect than standardized, incremental, general-purpose technologies. Through TCE lens, innovation can be characterized as either specific or general-purpose. An example of general-purpose technology is digital audio technology that saw a wide range of applications and complementary uses. On the other hand, more specific digital audio

discovery of iTunes has idiosyncratic application, with stronger legal and proprietary protections around it.

Hierarchical structures (internal organization) are suitable where there is significant exposure and safeguards against exposure cannot be effectively implemented. Activities without safeguards must be conducted within the firm where the contract law of forbearance obtains. Evidently, each structure seeks to minimize governance costs while simultaneously guarding against threats of opportunism. Innovators have a variety of credible commitments such as patents, copyrights, or outright trade secrets at their disposal. However, these safeguards are only as good as the institutional structures in which they are embedded. Imitation is most effective where there are weak legal and regulatory structures to enforce the law.

The second governance structure is the hybrid mode that has autonomous parties but a given level of dependency. Such transactions are supported by a neoclassical contract that is 'elastic' and offers a threshold for renegotiation of maladaptations and misalignments. From a perspective of innovation, a hybrid structure would include strategic alliances such as equity joint ventures, bilateral and multilateral agreements for the development of R & D. Joint R & D would be suitable where there is a need for substantial investments and considerable environmental uncertainty (Sampson, 2007). Robertson and Gatignon (1998) found that alliances for innovation were characterized by uncertainty, asset specificity, and capability of technological performance. Besides the need for a strategic fit, each partner should be in a position to offer and secure credible commitments. This implies that the expected alliance benefits and apportionment should be in a measurable form.

The third governance mode is market governance. Under market governance, there is freely available information and market forces are effective within existing legal structures. Markets are efficacious where there are more frequent interactions, leading to standardization, as well as incentives for parties to behave responsibly (Williamson, 1985). Market governance is analogous to innovations that, for a variety of reasons, are quickly diffused and become industry standards or best practices, therefore freely available for imitation. Imitation is likely to be perverse in this environment due to isomorphic pressure to adapt, legal or regulatory requirements, or a need to fulfill expected consumer expectations. However, wide adaptation and imitation will undermine sustainable arbitrage gains for both the imitators and pioneers. Through TCE lens, innovation can be characterized as specific (to industry, product or process) or general-purpose (with wide application across different industries or products). An example of general-purpose technology is digital audio that has a wide variety of uses. On the other hand iTunes is a more specific digital audio application that has stronger legal and proprietary protections around it.

*Proposition 1: Imitation will be more effective where there is general-purpose technology than where the technology is specific to the product or industry.*

Different forms of complexity are bound to affect the effectiveness of imitation as strategy. Complexity has many elements that include knowledge (Winter, 1987), innovation (Zander & Kogut, 1995), new products (MacMillan, McCaffery, & Van Wijk, 1985), and process. Rivkin (2000) further makes a case for overall strategic complexity arising out of the number of elements in a strategy and the interconnectedness of those elements. Complexity is caused, in part, by existing contextual factors such as causal ambiguity, tacit knowledge, and social complexity. These factors have often been used for explanatory support of resource-based view. Firms can also calculatively design complex products and processes that would escalate the cost of imitation. Modular technology (Pil & Cohen, 2006; Takeishi, 2002) and tight coupling (Sorenson, 1997) are deliberate efforts to make imitation unattractive. Modularity also increases flexibility in alignment with the external environment (Galunic & Eisenhardt, 2001). This allows pioneers to stay ahead of competitors by rapidly adjusting their technology and also responding quickly to changes in consumer preferences. Complexity is at its highest when the factors interlock to sustain competitive advantage. On the other hand, simple, standard, often non-specific technology with limited asymmetric information between the imitators and pioneers is quickly imitated.

*Proposition 2: Imitation will be more effective in incremental, standardized technology than complex technology.*

One of the fundamental characteristics of the market is the institutional setting. This has significant effects in the incentive to innovate and transaction costs involved (Coase, 1988). The legal and regulatory structures that are in place affect right arrangements and the extent to which imitation is effective. Western markets generally have effective institutions such as patent and copyright protections that guarantee protection of new innovation and technology. Pioneering firms tend to recoup their R & D investments in these markets due, in part, to low transaction costs. Unfortunately, pioneering firms have to also compete in emerging and developing markets, with less-developed institutional settings but faster growth. In addition to underdeveloped institutions, many emerging economies have a different threshold for intellectual capital and technological diffusion (regardless of how it is achieved) is perceived as a legitimate vehicle for economic development.

Firms have to develop pragmatic strategies that minimize transaction costs in emerging and developing markets. This may include delaying the launch of latest technologies and innovations in such markets as was the case of Apple's launch of the iPhone in China. A second option is to use second tier technology. A third option would be to imitate the most dominant technology in such markets. Focusing on imitation carries less transaction costs.

*Proposition 3: Imitation as strategy will be more effective where there are weak institutional settings than where there are strong institutional traditions.*

A fundamental TCE assumption is uncertainty. External uncertainty is the degree to which an absence of a pattern, unpredictability, and unexpected change characterizes a firm's competitive context (Canella, Park, & Lee, 2008; Dess & Beard, 1984). External forces are bound to have positive or negative effect on the firm's competitiveness and viability. Consequently, strategic choice strives to align the organization and its environment. The chosen strategy will be partly determined by the level and type of external environmental uncertainty (Desarbo, Benedetto, Song, & Sinha, 2005; Hambrick, 1983). Weak legal structures and property rights regimes are likely to increase conditions of environmental uncertainty. Stable competitive environments are predictable, and offer comfort to pioneering firms as they are able to project returns from sunken investment in R & D. Stable environments are also more likely to be dominated by incremental rather than discontinuous innovations. A high level of uncertainty is likely to manifest itself through asymmetric information within the competitive environment. While the problem of uncertainty under the TCE framework leads firms to design adaptive governance structures that have the capacity to 'work things out' (Williamson, 1985), uncertainty acts as a catalyst that leads firms to be innovative and aspire for creative destruction (Schumpeter, 1942). Uncertainty creates asymmetric information among competitive rivals that may influence some firms to imitate others. Lieberman and Asaba (2006) note that a significant amount of imitation in uncertain environments is likely to be information-based. Asymmetric information is likely to cause imitation of pioneers through herd behavior (Banerjee, 1992), referent others or fashion leaders (Bikhchandani, Hirshleifer, & Welch, 1992), and mimetic isomorphism (DiMaggio & Powell, 1983).

*Proposition 4: Imitation as strategy will be more prevalent in uncertain competitive environments than stable environments.*

Several behavioral assumptions are necessary in explaining TCE. Opportunism arises because of the human tendency of self-interest seeking with guile (Williamson, 1985) and self-believed threats and promises (Williamson, 1996). A strategic posture that is grounded on promise is naïve and should be supported by credible commitments and other hazard-mitigating safeguards. In a perfect world devoid of opportunism, rivals are unlikely to exploit asymmetric information. Opportunism creates an incentive to exploit weak institutional structures and loopholes other privately held information. Opportunism is the

force behind imitative behavior even when faced by ambiguity, potential lawsuits and other business-related risks.

*Proposition 5: The more opportunistic firms will recognize and exploit opportunities more than the less opportunistic rivals.*

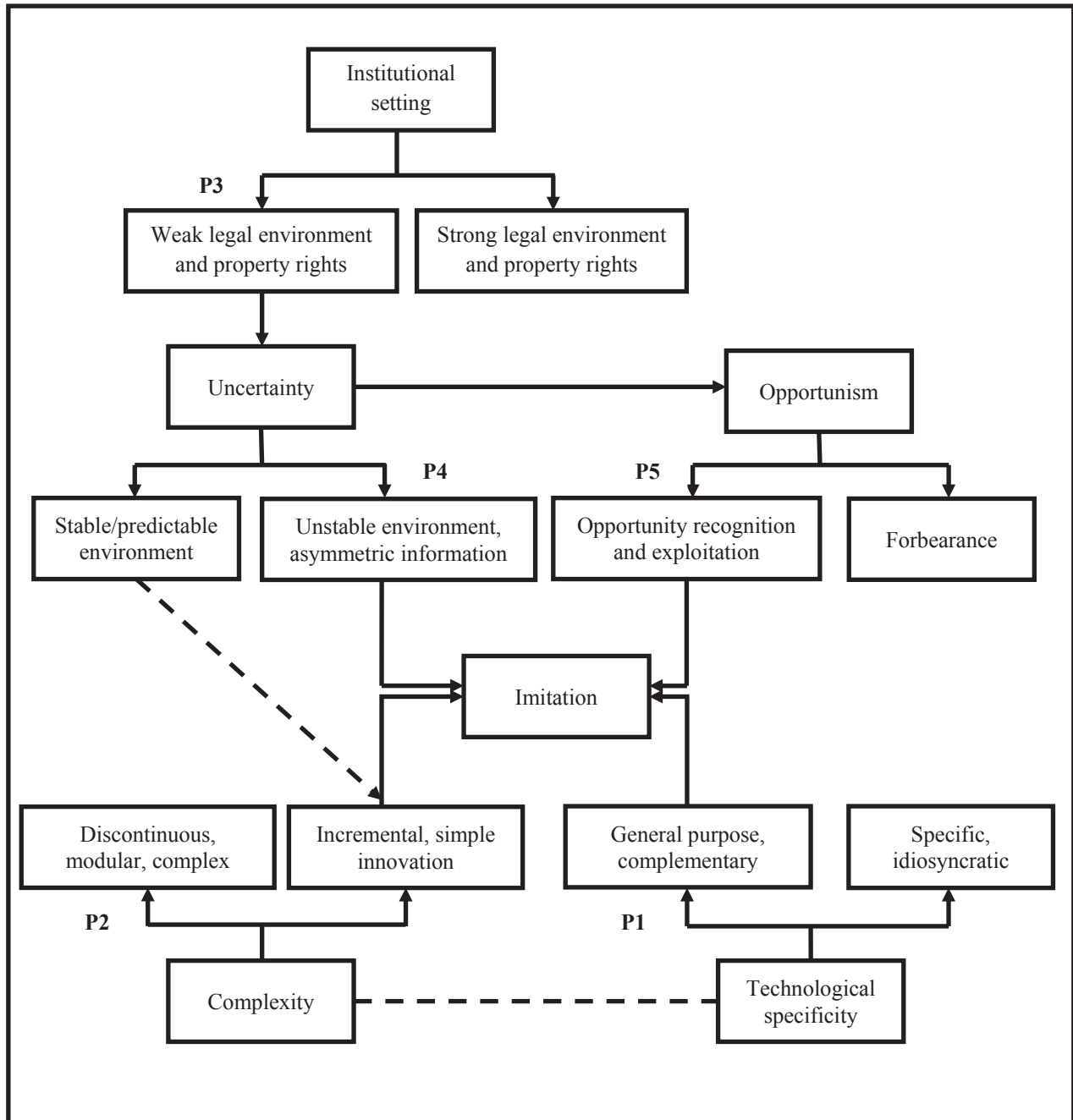
Imitators may also benefit where there are externalities such as inter-organizational dependence, rendering in-house R & D safeguards ineffective or sub-optimal. One of the fundamental TCE assumptions is that firms perceive transactions from a long-term strategic perspective. For potential innovators, due consideration should be made regarding investing in R & D to develop specific technologies if strategic credible commitments cannot be guaranteed. This is because the economic value of new innovation, to a large extent, depends on the cost of enforcing exclusive ownership rights (Eggertson, 1990; Mahoney, 2005). Such rights are also not constant (Barzel, 1989) but a function of owners' efforts at protection of other organizations' imitation attempts and existing government protection. Where there are sufficient externalities, expending transaction costs on protection may not be worth the effort. Network effects and externalities will even be more enhanced if there is presence of aggressive imitators. Xie and Sirbu (1995) demonstrate how an innovating firm can achieve faster diffusion of its product and gain a higher profit by having a compatible competitor enter the market at an early stage rather than by being a monopolist. Economides (1996) suggests that an innovator may have incentives to share or even subsidize its technology with competitors. In this context, it matters less that there may be ethical and credibility concerns with the imitating firm. The main objective is to minimize transaction costs through pragmatic arrangements between pioneers and imitators. Such strategic positions would include the realization of a need to share resources and create customer awareness of the new technology/product's existence. This has the effect of liberating the pioneering firm's resources to concentrate on further innovations rather than mundane marketing activities. Imitators may also discover other unrelated uses that expand, rather than contract the market. A basic assumption of TCE is the long-term strategic view of the organization that deems all contracts as incomplete and therefore renegotiable. From this perspective, pioneering firms can proactively work with imitators to grow a supplier network in order to minimize supplier power. Pioneering firms can also use the presence of imitators to negate anti-trust challenges or push for the development of an industry standard.

*Proposition 6: Both imitation and innovation will be effective strategies where benefits from externalities outweigh ex ante transaction costs associated with protecting intellectual property.*

The figure below (See Figure 1) shows the relationships among the various forces that drive imitation.



**FIGURE 1**  
**CONCEPTUAL RELATIONSHIPS BETWEEN DETERMINANT FACTORS OF IMITATION**



**DISCUSSION**

Imitation as strategy has continued to shape the emergence of the modern corporation. Strategies that are largely based on imitation have seen the shakeout and emergence of new innovations and dominant technologies over time. Imitation of products, process, and technology has also led to industry standards. From a utilitarian and macroeconomic societal welfare perspective, imitation has resulted in diffusion of important innovations that are available to a wide section of the population. It has also created an indirect

pricing mechanism which allows for more complete competition. Diffusion of technology from advanced economies to the rest of the world is often viewed as an important ingredient for economic growth for the less-advanced economies. Others have pointed to strategic benefits of imitation such as complementary use network effects and increased consumer choice. One might also argue that some innovations are developed with tax dollars and should be licensed to industry competitors through competitive bids rather than benefiting a few firms with private information. However, opportunity-seeking and exploitation is part of the strategizing process that leads to value creation. From a marketing strategy standpoint, imitation can be beneficial in a number of ways. It could reduce the need for marketing for the imitator, as they benefit from the first-movers heavy advertising budget, which improves the imitator's bottom line. For the imitator, this also enables more money to be available that can be funneled into other product offerings. For the first-mover, the imitator's advertising will act as a signal to the attractiveness of the product category.

Criticism of imitation is well documented. The main point is that imitation undermines innovation and subsequent investments in R & D. While imitation offers increased consumer choice, there may be quality concerns, especially when the imitator has to grapple with imperfect knowledge, complexity, and causal ambiguity. Imitation, at least for capitalistic societies, may also undermine private property and intellectual capital; critical foundations of the free market enterprise. Imitation may also shorten the product life cycle from what would have been, had there been no competition through imitation. Products may mature and decline much sooner due to market saturation, resulting to a premature end of cash flow streams. Therefore, the bottom line of the pioneer may suffer. Quick market saturation may also affect the imitator, as even though they are not spending as much time on R & D, it still takes considerable research, time, and equipment to copy a product or process convincingly. This suggests that imitators also incur investment costs; costs that are mainly related to minimizing asymmetric information with the innovators.

This study has analyzed key factors that are likely to encourage imitation as strategy. These factors include the institutional setting, prevailing environmental uncertainty, and opportunism. The complexity and specificity of the innovation also affect the attractiveness of imitation as strategy. These factors are not isolated but have causal relationships with each other. Poor legal and regulatory structures are likely to lead to various forms of environmental uncertainty including technological, regulatory, and market uncertainty. Uncertainty creates conditions of asymmetric information among competitive rivals and between the firms and regulators. Due to ineffective legal and regulatory structures, firms competing in these environments have to resort to privately-ordered systems such as secrecy as a means of protecting their intellectual capital. Even well-intentioned firms that are seeking to register patents or licenses have to contend with bureaucratic challenges and leakages of their innovations throughout the process.

An important factor that, in part, causes the exploitation of poor legal structures is opportunism. The more opportunistic firms will make a strategic calculation to pursue imitation as strategy while avoiding pioneering risks. Even where there are copyrights, patents, and other safeguards, imitators may find it worthwhile to face the legal risks of imitation rather than forgo profits. A related corollary is the opportunistic registration of patents and copyrights with the intention of not exploiting the intellectual property but, benefiting from frivolous litigation against imitators.

Imitation as strategy has potential benefits, but sometimes attracts considerable costs. Due to asymmetric information between the innovators and imitators, causal ambiguity and complexity, imitation often leads to costly production functions that may undermine the overarching strategy. Quality issues with attendant reputational damage may also arise. This can have deleterious effects on consumer health and safety. Herd behavior by imitators via information cascades is sometimes based on faulty market signals, leading imitators to mimic products or technologies that have limited potential. Herd behavior can also lead to overcrowding and consequent glut in the market. Even as firms imitate, timing matters. First followers are well-positioned to cream substantial profits from the market while the laggards are left with saturated and declining markets. In recent times, first followers in the banking industry were able to mimic pioneers in developing mortgage-backed securities and offloading them to prospectors. However, late entrants had to content with saturated markets, mass defaults, and subsequent scrutiny from regulators.

The current global environment has been characterized by increased interconnectedness of technologies, to the extent that boundaries of imitation and innovation are increasingly becoming blurred. Unlike physical property, intellectual property rights are not easy to define. Bessen and Meurer (2005) found that among the factors accounting for patent litigation explosion was technological proximity. Among the litigants, patent defendants were not classical imitators, but innovators themselves, spending as much on R & D as the plaintiffs. While discontinuous technologies are frequent, many discoveries are realized along the imitation-innovation continuum. In the foreseeable future, continued improvements in communication technology are likely to further blur imitation-innovation boundaries.

Many firms, relying on imitation as strategy, often exploit asymmetric information among consumers or lopsided pricing as a customer value proposition. Underdeveloped and emerging markets with poor institutional structures and bottom-of-the-pyramid consumers are especially vulnerable. In the recent past, increased pressure from multinationals and multilateral trading bodies have forced host countries to start policing intellectual capital infringements. Such token acts cannot stop illegal imitation. However, increased proportions of consumers in these markets are joining the middle class with demand for better quality, authentic products. Ultimately, such market pressures are more effective in discouraging imitation.

## CONCLUSION

This study has made a case for imitation as strategy. A framework has been developed that shows conditions under which imitation is an effective strategy. TCE provides a foundation for explicating environmental hazards that lead to imitation. Various conditions converge to negate generic benefits of innovation while creating possibilities for imitation as an effective strategy. A weak legal environment and property rights regime leads to environmental instability and inability to estimate the cost benefits of innovation. Simple, incremental technology cannot be secured with technical safeguards such as modularity. Similarly, general-purpose technology with complementary applications and externalities provides opportunities for imitation. Opportunism leads some firms to pursue imitation as strategy even where there are legal and environmental risks. Consequences of imitation as strategy were also discussed. In many industries, information technology and real-time communications are increasingly blurring the boundaries between original discoveries and imitation, resulting in litigation as a potential transaction cost on both parties.

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